

INTRODUCTION

GM Interview with Ian Kendall. If you can give me your age and date of birth?

IK My name is Ian William Kendall, my date of birth is [REDACTED].

GM Your current contact details what we have on file [REDACTED]

IK Yes. My address [REDACTED]

GM 1. How did you come to work for TIE?

IK I came to work to TIE through an interview process. It started with me finishing my assignment Amey plc in London where I was Managing Director of Light Rail and Metro for Amey which I had been for three years previous to. In the middle of 2003 I had a phone and a discussion with Martin Buchan from Partnerships UK in London who knew me through my activities on Croydon Tram Link and also in Amey and recommended that I make contact with Michael Howell who would speak to the Edinburgh tram project which was going through feasibility and Parliamentary Bill process. I then had a meeting with Michael and at that time there was a process going on for Transport Initiatives Edinburgh, as it was then called, to appoint a permanent Chief Executive Officer that came up. I applied and was interviewed here in Edinburgh, I was unsuccessful but I had made enough impression, I suppose, that Michael called me after he was appointed as the permanent Chief Executive of Transport Initiatives Edinburgh and I then met with him again and thereafter with Graeme Bissett and Alex Macaulay, Alex was the tram Project Director at that time and that is how the process happened and following that it was agreed that I would join TIE on a consulting basis so the second question who recruited you? The answer is Michael Howell.

GM Recruited initially was that about 2003 I think you had it about September time?

IK Yes. I recall that it was generally September 2003.

GM 2. Who recruited you? Answered in question 1.
3. What role were you recruited to perform?

IK At that point in time the appointment of the operator, the early tram Operator Contract was coming along and it was that assignment that I was primarily tasked with delivering. Alex was the Project Director, I had had experience in Croydon of not only being involved with the PFI project which included an operations contract of 30 years which was won by First Group down there,

therefore I had the best experience I suppose and was assigned to run the procurement process for the Operations Contract and that was something that I did throughout, I suppose, until about May of 2004 when that contract was awarded to Transdev so we went through a tendering process, we went through an evaluation process, we went through an evaluation process, we went through an award process, a negotiation process and finally we reached the decision that of the four bidders we preferred two of the four, those two being Transdev and First Group, we excluded Keolis and Serco from the four and we eventually made the award recommendation to Transdev, that was accepted by the TIE Board and in the end Michael entered into a contract with Transdev.

GM At that time your initial title was Procurement Director?

IK It was probably at that stage Operations Director more than Procurement although when I first thought about this I was going to say Procurement Director but I noted on TIE Board minutes that I was referred to earlier on as Operations Director and then Procurement Director.

GM 4. What experience and qualifications did you have at the time that were relevant (a) to your appointment, and (b) to your role as it developed?

IK At the time I would have said that I was one of the few people in the country who had had the experience of being involved through the tendering process, the negotiation process, financing process, award process and delivery process and then into operations of tram system and that was through Croydon Tram Link. I came to this country in 1995 and was asked to run a bid for eight weeks and we were successful in that bid and we were named the preferred bidder and ended up negotiating that through. What that was was the Consortium Model PFI Tram Delivery – 28 kilometre tram system in South London, generally running between Wimbledon and Croydon and Beckingham so around the South-East of London and in that we had a Design and Construct Contract, an Infraco, which was Sir Robert McAlpine and Amey plc in joint venture. We had a Tram Supply Contract that was Bombardier that was sub-contracted to the Infraco. We had an Operations Agreement that was separate to the Infraco. All of those contracts came into a Consortium company called Tram Track Croydon Ltd and I was a Director of TCL and as the Project Director on the delivery files.

GM 5. What experience did you have of (a) contract procurement in and (b) project management of both infrastructure projects generally and light rail projects in particular?

Your experience in relation to contract procurement, project management of infrastructure projects and light rail projects would be specifically to the

Croydon Tram Link and that has been from the tendering process right through to operations?

IK Right the way through to the operations process when I had a 12 month gap just before the system came into operation I left that company and worked for (07.37) in the city for that 15 months before I then joined Amey and became the Managing Director of the Light Rail and Metro which was to manage the ongoing operation of the Croydon Tram Link. I then managed that as a Director of the operating Tram Company, Concession Company for the next three years.

GM What about prior to the Croydon project?

IK Prior to the Croydon project I had been working in Australia and New Zealand and I was working over the last three years before I came over here for a company called John Holland which is the largest Australian railway construction contractor. I was working primarily on the business development front in civil engineering and the rail division fitted underneath us in civil engineering and so I was involved with the track maintenance works in central Melbourne where a significant tram system is there in operation and also on heavy rail around the country particularly in Queensland and Western Australia so those were the types of things that I had been working on but that was not solely what I was working on. Really I suppose then the heavy lifting experience in light rail came with Croydon Tram Link.

GM You mentioned civil engineering is that your background as a civil engineer?

IK Yes. In terms of my qualifications I have a BNCivil which Honours to A which I got in 1979/80 from (9.26) University of Technology in Brisbane, I then did a Master of Engineering Science which I graduated in in 1987 and technical engineering from the University of New South Wales and finally I got a Master of Business Administration from Deakin University in Victoria which I then graduated in 1993. Those three degrees and an experience in working on PFI-type delivery from 1990 through until when I came here in 1995 was the previous experience that I carried into the bid for a PFI delivery project.

GM 6. What was the scope of your role when you first joined TIE? You mentioned Operations Director.

IK It was that with respect to the procurement of the Operations Contract but also, at the same time, I carried with me in my head and in my bag of tricks, I suppose from previous experience, I knew the way in which the Croydon project had performed financially from top to bottom, inside out and upside down, that is I knew how much the bid for the construction price was, I knew

how much the construction contractor had lost, I knew how much they tried to claim from the concession company, I knew how much they did not win, I knew therefore the strength of the contracts that were existing there and I remember being asked pointedly by Mark Bourke and Geoff Duke who were working for Alex on the aspects of the project and with Andrew Callender at that stage, about the costs of utilities diversions in city centres and how long things take and so I gave them some specific information which could only have come through my roles and helped, if you like, in that benchmarking process, however I would not have said that that was primarily the bulk of the work. Obviously Michael was interested in understanding what I could do and how I could fit and they were talking about “when we move in can you be Construction Director basically looking at how the organisation could evolve”. Obviously the primary focus was on Parliamentary approval and the passage of the Bill through Parliament but until that happened, there was not, as yet, no overall procurement strategy, there was no overall budget funding for the project going forward. In fact after Michael signed on behalf of now TIE, or it became TIE, the Operations Agreement with Transdev, we had to effectively not start it because we did not have funding for it do there was a bit of a hiatus before that process the contract would be enabled.

7. How, and why, did your role evolve during your time at TIE? You started as Operations Director ...
- Consultancy contract (**CEC01710958**).
 - Email announcing your appointment as tram project director, and to the TIE Executive Board (**TIE00706589**).
 - Team organisation chart (26 October 2005)(**CEC01856773**).

IK When I became involved in the development of the procurement strategy which had been worked on in outline and Alex Macaulay chaired that working group, as the procurement working group was established, and really within going through that process, it had started really with Partnerships UK talking to me, even before I came into TIE, about how I would think that it might be a good way to go about getting this tram project to come together and what we would do to get the best risk transfer and the affordable project at the same time and to minimise the overall delivery of the overall project. I had been sitting up, sitting up and believing or not in Peterhead before I came to Edinburgh tram and had worked out the nuts and bolts of most of the procurement strategy that then got deployed, sitting up there at Stoneyhill Waste Management where I was running it. That then unfolded over a number of months, it was not a five minute exercise, there were regular meetings, which Alex chaired, there was Katie Howatt from Grant Thornton, James Papps from Partnerships UK, Alex Macaulay was there, Andrew Fitchie from DLA Piper, Sharon Fitzgerald also from DLA Piper, worked

through the, and set up an evaluation strategy in a risk methodology to review the impacts of the attributes, I suppose, the pros and cons for different procurement approaches, whether that be an NEC-type contract, whether that be a (14.51) PFI bid and all of the shades of grey in the middle were what we were reviewing and discussing and tried to find those attributes. Partnerships UK was a key ally and supporter of TIE.

GM The role evolving so it is Operations Director?

IK Procurement Director which was the title until July of 2005. A transition point had come really, not just the Operations Contract got into place, but now with the Systems Design Services or SDS Contract coming into place, we are moving from a Parliamentary process-driven operation in the main which was excellently run by Alex Macaulay and Barry Cross through to a project delivery time methodology where the skillset, that I possess, became more, I suppose, compelling in terms of now we needed to project into the market place, deal with contractors, deal with engineering companies and it was considered that I would be the satisfactory candidate to move into that position.

GM What was the title of that position?

IK Project Director at that point. Alex relinquished the Project Director title, went off to do other things in TIE.

GM Did that take you as Project Director until ...

IK Until I left that was my title.

GM 8. Who did you mainly work with at TIE? You have mentioned some names before Alex Macaulay, Partnerships UK and the staff there from DLA Pipe.

IK Obviously I had lots of interactions with Michael and Alex with Graeme Bissett, Barry Cross less and after he came into the company Stewart McGarrity so it changed over the time and Michael was more involved in and interested in the Operations Agreement, Alex had his head down with Barry on the Parliamentary process when we were doing the Operations Agreement so it was Michael Howell who I was talking to mostly. When we were doing the procurement it was a lot with Alex and then when I assumed the Project Director role then it became directly with Michael on a reporting upwards basis and also then with others – Graeme Bissett, Barry Cross, Stewart McGarrity, Jerry Henderson, Willie Fraser.

- GM 9. To whom did you report, and who reported to you?
- IK I reported to Michael. The staff reporting to me Barry Cross was the Depute Project Director and Barry's focus was on the completion of the Parliamentary process, and the management of the Council in all of its facets for the project. That was his strength and that was what he was doing. Willie Fraser was managing the closure of the Parliamentary process and the objections removal process which we had 300 objections that had to be removed and that is what he was managing. Stewart McGarrity was the tram project Finance Director. Stewart had a lot of input as did I with Graeme Bissett who was TIE's Finance Director so there was a specific Tram Finance Director reporting to me and a TIE Finance Director and Stewart had a dual reporting role on that.
- GM 10. Did you deal with parties external to TIE and, if so, which organisations and individuals?
- IK There were two other direct reports to me – David Ramsay and Gerry Henderson. Other external parties – DLA Piper that was Andrew Fitchie and Sharon Fitzgerald; Partnerships UK that was Martin Buck and James Papps; working relationship with James, this was one of his projects; Grant Thornton that was Katie Howatt as I have said and they were financial advisors. The Arthur Anderson accountancy side business renamed after Arthur Anderson fell to pieces that is Grant Thornton.
- GM Their responsibility within TIE were they external financial advisors?
- IK Yes. They were financial advisors to TIE. Mott MacDonald – David Hand. Faber Maunsell.
- GM Who did you deal with in Mott MacDonald?
- IK David Hand. Faber Maunsell was a guy called (21.29). Procurement and operations became Transdev and their Project Director was Andy Wood until he left the project. With the SDS Parsons Brinkerhoff – David Hutchinson. TSS was Scott Wilson and Turner and Townsend. At CEC I dealt with Keith Rimmer a lot and with Andrew Holmes.
- GM What dealings did you have with Keith Rimmer and what area of business?
- IK A lot. We explained procurement strategies, we explained design strategies, we explained how we were getting on, how the project was going, what our progress was and what the expectations of the programme and project were going to be with respect to the Council and it comes up later.

GM What department in the Council was Keith Rimmer working in?

IK Transport.

GM What direct dealings did you have with Andrew Holmes?

IK City Development Director for CEC.

GM What direct dealings did you have with him?

IK Board level and after I became Director I had, I think it was a monthly meeting directly in his office.

GM What about the Scottish Executive?

IK There was certainly interaction with Scottish Executive – Damian Sharp.

GM Transport Scotland and that team there?

IK Yes.

GM Price Waterhouse Cooper did you have any direct dealings with them at all and who was the contact there?

IK Yes.

GM What about TEL and Lothian Buses?

IK Neil Renilson.

GM 11. In general terms, what work did you do with them?
12. Insofar as it had a bearing on the success of the project, what worked well in those relationships, and what did not work?
If we start with CEC what was the positive and negative things in relation to that relationship?

IK Let us take the previous question 11 quickly. Development of the procurement strategy and its execution and then directing the completion of the Parliamentary process including the review of the engineering safety management, cost management, revenue forecasting and affairs and contract preparation.

What worked well in the relationships and not? I would say that all worked well albeit that there were times of extremely high demand and stress but the relationship with Lothian Buses was challenging from the beginning.

GM Let us explore the CEC – you would refer back to your previous statement then Transport Scotland anything else that you would want to add?

IK We tried to make sure that we were able to explain the delivery strategy and we were subjected to a lot of revue by Scottish Executive Transport Scotland and its advisors as to whether or not we had understood and assessed the project to a level of their satisfaction. In other words could we demonstrate factually that we were on top of it and that happened throughout the process and therefore I was involved with meetings.

GM Quite a lot of scrutiny at that time by Transport Scotland?

IK Absolutely as there was an increasing level of scrutiny. It was light scrutiny in 2004 and by 2005 it had become heavy scrutiny.

GM DLA Piper?

IK DLA Piper worked well when they were managed well and the Operations Agreement, for example, and the preparation and processing for the TSS procurement and the SDS was a good relationship. A bit of stress in the SDS work volume was coming up, two principal people working on it – Andrew and Sharon. The SDS gave a touch of ... by now we had more people also feeding in, it is more difficult, broader concept, bigger project however they delivered what we expected of them at the end of the day.

GM Partnerships UK. You mentioned you had early contact with James Papps from there. How did their relationship go was it a supportive relationship?

IK Good, helpful.

GM Grant Thornton, financial advisors?

IK Had gone well too but there became a time that there was a review, their contract had run out, I cannot remember exactly what the reason was, but it then went to a new procurement process that is when Grant Thornton did not win the next stage and PWC did.

GM Transdev – fine ?

IK Yes.

GM SDS?

IK SDS was the cause of a pretty serious concern which comes out through a whole series of questions. I would say the relationship was professional and they knew they had a problem and I knew they had a problem and it was trying to get over the top of the problem.

GM You said that Lothian Buses was quite challenging.

IK I think you should go back and review the evidence given to the Parliamentary Inquiry by Lothian Buses to determine exactly what they thought of the tram project.

GM What would be your thoughts on it?

IK They did not want it to happen at all.

GM Was that a thing you felt right at the start?

IK I think I felt that in 2003. The first day I came in and somebody said "my God you have allowed First Group through into the four competitors for the Operating Contract, do you not understand Mr Kendall the antipathy and animosity between Lothian Buses and First Group" and I said "I am not interested in that what I am here to do is to deliver a project the tram".

GM Was it a particular challenge that you felt right throughout that may have caused particular difficulties?

IK Yes.

GM Would you like to give some context around that?

IK I think you come to the questions later on. I think I should do my level best to give you everything and then that towards the end.

GM 13. What regime of bonuses, incentives and targets was in place in relation to the tram project when you were at TIE (for you and others)?

IK In terms of my contract. In September it was straightforward and there was not an incentive through to 2004 then I had a gap and then I came back later in 2004, probably around up to summer time and I was not working even on a full time basis. Then it became a full time basis and then Michael was wanting to institute a bonus regime. However, in my case, it turned out to be

very simple if Michael and I agreed I think my day rate was £850 a day, something like that and Michael said “fine – what we will do is I will pay you £700 a day until you hit a series of targets at the end of the year then I will give you the £150 if you have made them” and I said “okay”.

GM How did you decide on what the targets would be?

IK I was then asked to agree that a series of targets with Alex Macaulay was the Project Director of the tram because we were working on the tram and they related to things I am sure they related to award of the TSS contract, award of the SDS contract, getting those things in place in 2005. That is when I think it really would have happened and that is what they were. They were related to milestones within the programme to be achieved in the programme in the calendar year that we were working on.

GM What about for others are you able to comment on that?

IK I do not know. I can tell you that the direct staff reporting to me who were TIE employees did not have a bonus scheme. Barry Cross was seconded into TIE from the Council and his details were not known to me, Alex was not in the project, I engaged and employed David Ramsay, Gerry Henderson, Geoff Duke had transferred in from the Council, Willie Fraser was employed by TIE. I did not get involved with the structuring or the establishment of the frameworks for the staff.

GM 14. Did you receive any bonus? If so, what, and what was it for?

15. Was the incentive regime appropriate and/or effective?

- See (**TIE00706512** and **TIE00706513**).

IK It was for me so long as I achieved it which I did. My bonus is driven towards achieving things, getting things done, parts of the programme.

GM How about your staff that reported to you with no bonuses?

IK It is not uncommon for people to work in that basis. TIE was being pitched as a company where you could come and were going to do multiple projects, it was not going to be a one show pony, whatever, one trick pony and obviously at that stage there were multiple projects going on. The congestion charging scheme which Alex was project managing as well, there was the Edinburgh Airport Rail Link which was going on and the tram project the third one and some other smaller projects, project management projects and we spent time as the Management Team in TIE under Michael, myself, others, Graeme, Alex, Susan working on strategy for what TIE could be, not that TIE would just be these projects and collapse and finish, we were all interested in TIE being

developed and it was discussed that I would in 2006 it was very much on the agenda for Michael to have me transfer from a contracting basis on to a staff basis within TIE which did not occur but that was the situation.

16. How would you describe the culture, during your involvement, in TIE and the other bodies involved in the project?

IK TIE was evolving, TIE was a small company which was evolving and developing because it was project specific. It was largely developing and being operated initially in silos but as those projects moved forward then we had to evolve into a project management culture and I know I was challenged to develop a safety management plan and safety approach for the whole of TIE not just for my tram project which I was happy to do and employed an external consultant who was one of Her Majesty's Railway Inspectors to come in and to work with this and to do that. We were developing through 2005, I would have said that that was, in 2004, if you like, we have got the projects now starting to run, we have more people coming in, we realised that the management systems to be able to run any of the projects needs to be further enhanced and developed so we better get on with developing that and it was certainly one of the things that I knew I needed to pull in to improve skills through the technical support services supply contract for the tram project but it was crossing over between tram and other projects but tram was going so fast and our project was growing bigger and our team was growing bigger and we were starting to dominate. However, you cannot dominate Susan Clark, she is a good project management person and she was in charge of EARL so we worked together and we did some off-sites with the staff, we did some top management team getting to know you type things, trying to develop camaraderie spirit culture trying to develop that, we were a bunch of individuals.

GM Did that work?

IK Mostly. It was working through 2005 and then the wheels started to come off in 2006.

GM Why was that?

IK The imposition of TEL.

INITIAL PROPOSALS

Cost Estimates

GM 1. What role (if any) did you play in:
a. producing cost estimates for the project?

b. discussing them, either internally in TIE, or externally with others?

IK As I said earlier what I did was I initially provided a suite of cost information which was private and confidential information regarding Croydon Tram Link which had a number of factors in it. The types of things would be 'how much does it cost on average per kilometre utilities diversion in a main street', I had 3½ kilometres that was diverted in Croydon – 'how would that play against other cost estimates?'. I gave that sort of benchmarking information that came out of Croydon Tram Link. I was not directly involved in the production of the estimates. Internally and externally the discussions were together with myself through and with Mark Bourke and Geoff Duke, in particular Mark Bourke because Mark was handling all of the risk management and the approach to the Optimism Bias and that budgetary process that Treasury inspired budgetary process and that was Mark. Those buys were working for Alex and I was in the main handling the procurement strategy and other things and that process was running in parallel. They had obviously consultants working to them those being Mott McDonald and Faber Maunsell and Faber Maunsell's experience, in particular, had been very recent on the Nottingham tram project where they were the design engineers for Carillion and Carillion had done a PFI project on Nottingham and they lost a lot of money on Nottingham and Faber Maunsell knew that. They did not know exactly how much Carillion lost and will not be public knowledge however, the point is, that they had relevant experience on them, the overall cost associated with and the engineering of trams in the UK.

GM Your fundamental role was sharing some of the benchmarking information that was obtained through your experience in Croydon Tram Line but predominantly preparation of estimates were done by Mark Bourke and Geoff Duke.

IK Under the direction of ... I suppose it was Alex Macaulay who had a Deputy Project Director called Andrew Calendar, Geoff and Mark were working for either of, I cannot remember whether they were working for Andrew and Willie Fraser was in that team as well and those guys had consultants who were producing reports one of which would have been a cost estimate.

GM Throughout the period of your involvement at TIE, the capital cost estimates were set at the values for the second quarter of 2003.

1. Who prepared these cost estimates?
2. Are they the subject of a formal report, and if so, by whom?
3. What was the basis for these cost estimates, and how 'solid' were they? For example,
 - a. What sort of design were they based on?
 - b. What source data was used to build them up?

- c. To what extent were assumptions made about the scope and design of the Edinburgh project in calculating them?
4. Was it these same estimates which formed the basis for the capital cost figures in the Outline Business Case, March 2006 see (**CEC01856896**) at 5.3.1 to 5.3.3?
5. Were the estimates updated during your time, and if so, when and by whom?
6. (**SCP00000011**), especially at _296 (capital costs) may be relevant here.
- IK It must have been under Alex Macaulay's team. This of course predates my involvement, I am not here yet so to speak. I believe that my statement is: I believe Michael Howell was the interim Chief Executive Officer, Alex Macaulay was Tram Project Director. Mott MacDonald and Faber Maunsell, who were engaged to support the development of the bills for line 1 and line 2 and that that the budgets will have come from them.
- GM 2. Are they the subject of a formal report, and if so, by whom?
- IK Yes. In terms of that absolutely I believed that that formal report will be found and to have come from Motts and Fabers.
- GM 3. What was the basis for these cost estimates, and how 'solid' were they? For example:
- a. What sort of design were they based on?
 - b. What source data was used to build them up?
 - c. To what extent were assumptions made about the scope and design of the Edinburgh project in calculating them?
- IK The only comment I could make here today without going back to finding those reports and going through a fable as I have said. Faber Maunsell was a designer on Nottingham LRT and had relevant previous current experience and they had that and in terms of the general business that they do they should have known.
- GM c. To what extent were assumptions made about the scope and design of the Edinburgh project in calculating them?
- IK Primary assumptions about the route, primary assumptions about the number of stops, the number of trams, the run times, primary assumptions about how many bridges would be necessary, how much on street track works were there and therefore how much the utilities budget would be and estimates of, in the programming sense, in terms of delivery times for an overall

programme, in other words could it be done? How long was it going to take to get this job built?

GM 4. Was it these same estimates which formed the basis for the capital cost figures in the Outline Business Case, March 2006 see (**CEC01856896**) at 5.3.1 to 5.3.3?

IK By that stage other work has gone on and by this stage additional estimating has been carried out in terms of that, therefore they are not the same figures – no. In fact by March 2006, this is on my watch now, and in fact a long time before that, I cannot remember precisely when, we had solved and changed a number of things in the tram scheme which required those budgets to have been relooked at in terms of capital costs and by now we already had parts of that capital cost in contracts.

GM What you are saying is that it was not the same estimates which formed the basis of the capital cost figures in 2006. How was the difference then in these cost estimates between 2003 and 2006? How were these updated and who did that?

IK We had the cost estimates, in particular, one of the things that we had to do was we had to revise the estimate of inflation and put an estimate of inflation into capital cost estimates early on but I did not have them and what that meant was that the Government grant that had been committed by Ministers subject to everything else coming into place, had been committed on an index basis and that was in 2002 or thereabouts and by 2006 we had construction costs inflation which has risen by 5% to 8% per year compounded over five years and by the time we finish and get the project up and into even the mid-point of the construction cost estimate, another two years so you are talking about a substantial difference between what £325m could afford in 2002 pounds and what it could actually afford in the middle of this construction, or at the end of this construction, delivery process and that was something that I picked up and did myself in working together, in particular, with Jerry Henderson and with Mark Bourke and when I found it I brought that to the attention of the Board and that was the day one of the Board meetings, I cannot remember which one, where I first brought this to the attention of the boys being a major problem which basically meant that the cessation of line 2 from Murrayfield.

GM I picked something out of that document at the bottom that in November 2003 the project cost report, the Faber Maunsell then was line 2 was £282m with an Optimism Bias of 31% and they are obviously basing that on a combination of benchmarking previous experience and engineering judgement. These

estimates were updated during the time was there a person that was specifically had ownership of it?

IK From July/August those estimates would have been under the watch of Jerry Henderson and his people. He had a couple of quantity surveyors working for him, he was my commercial manager and Stewart McGarrity was involved in revising the Business Case going forward.

GM Did Stewart report at that time and Jerry reported directly to you?

IK Yes.

GM 5. Were the estimates updated during your time, and if so, when and by whom?

IK The Board – the TIE Board.

GM Was Michael Howell still the CEO at that time?

IK Yes. He was the CEO throughout my tenure.

GM TIE carried out benchmarking of these capital costs against other operational tram schemes in the UK (eg STAG 2 Appraisal: Line One, Northern Loop, New Transport Initiative (8.3.4, **CEC00632759_215**); STAG 2 Appraisal for Line 2 (September 2004) (9.3.5, **TRS00000043_141**).

1. What did that benchmarking exercise involve?

2. Who carried it out?

Paragraph 8.3.4 of the line one report, and 9.3.5 of the line 2 report, note that these other projects had cost overruns of “up to 25% of award construction cost”, and overruns of three to six months.

1. What is meant by “award construction cost”?

2. To what extent was that a useful comparison for TIE, whose project was at that time some distance away from identifying such a cost?

A later version of the STAG Appraisal for line 1 (**CEC00551591**, 10 September 2004) includes this (at _31; see also the STAG appraisal for Line 2, **TRS00000043_140**):

“The technical teams engaged to advise upon the estimation of costs have extensive experience in the development of tram schemes in the United Kingdom and abroad and are thus cognisant of the likely factors and risks that will impact upon outturn costs.”

1. Who was referred to, and what was their experience?

Reservations about the benchmarked data were noted:

“The capital costs of light rail / tram schemes vary due to the uniqueness of each scheme and this creates challenges when building up cost estimates for

future schemes. [LISTED]”, Draft Interim Outline Business Case, 30 May 2005, (CEC01875336_111)

“It is important to acknowledge that in various projects, significant costs and risks have been avoided through the application of a PFI/PPP contracting methodology and, as a result **reference to out-turn costs is difficult to achieve.**” (Preliminary Financial Case, Line 2, 4 December 2003, TRS00000016_51).

2. To what extent were these reliable foundations for TIE’s cost estimates?

1. What did that benchmarking exercise involve?

IK A lot of it was to do with Croydon because that was what was available. Mott MacDonald had worked and knew a lot about Manchester and Faber Maunsell had done a lot and knew a lot about Nottingham there you have the three of the only four operating tram schemes so we had, I think, as much as we could get.

GM That benchmarking – who carried it out?

IK The benchmarking must have been carried out by Maunsell and Fabers, however, I provided information into them from, and that would have come through either Mark Bourke or Geoff Duke to them.

GM Were these full benchmarking reports submitted to the Board in full or were they shortened into the Draft Business Case?

IK No. The outturn cost estimates were the high level numbers was what was primarily given to the Board not the nuts and bolts, the nuts and bolts were contained in the reports and they were obviously available but I cannot remember that they went.

GM Some of the benchmarking reports that we’ve recovered make reference to cost overruns of “up to 25% of award construction cost” and Counsel are just wondering if you knew what award construction actually meant?

IK The original contract sum on the face of the contract.

GM Therefore it would be the original contract sum – yes?

IK Yes. Do you want to know where they came from?

GM Yes. That would be helpful.

IK 25% because that was very interesting. The construction value on the Croydon tram link to the Infracore were a complete delivery including 24 trams in November 1996 was £180m. They overran by six months but the overrun on cost was £40m on £180m is 22% while 25% was a slightly conservative view on that performance and I knew that project intimately and I knew that you could build it better than they did, that is where it came from.

DF A later version of the STAG Appraisal for line 1 (**CEC00551591**, 10 September 2004) includes this (at _31; see also the STAG appraisal for Line 2, **TRS00000043**_140):

“The technical teams engaged to advise upon the estimation of costs have extensive experience in the development of tram schemes in the United Kingdom and abroad and are thus cognisant of the likely factors and risks that will impact upon outturn costs.”

1. Who was referred to, and what was their experience?

IK They are talking about Mott and MacDonald.

GM And their experience was Nottingham did you say?

IK Both Mott MacDonald and Faber Maunsell are international consulting engineers. We had working for us as the Head of the Mott MacDonald team, David Hand. David Hand runs the Global Light Rail/LRT Project Team or Teams, engineering services for Mott MacDonald from Altrincham in Manchester and his team had, I know, previous experience internally and/or Manchester, in particular, and he had been involved in doing feasibility work, I am sure, for West London tram and maybe some other tram schemes. Faber Maunsell, again, an international consulting company which has now been subsumed into AECOM and they are similar, that's where that that come from.

Reservations about the benchmarked data were noted:

*“The capital costs of light rail / tram schemes vary due to the uniqueness of each scheme and this creates challenges when building up cost estimates for future schemes. [LISTED]”, Draft Interim Outline Business Case, 30 May 2005, (**CEC01875336**_111)*

*“It is important to acknowledge that in various projects, significant costs and risks have been avoided through the application of a PFI/PPP contracting methodology and, as a result **reference to out-turn costs is difficult to achieve.**”* (Preliminary Financial Case, Line 2, 4 December 2003, **TRS00000016**_51).

2. To what extent were these reliable foundations for TIE's cost estimates?

IK This is not flippant. The only available basis and they provided good guidance and my own personal experience, on Croydon tram line, I walked in with the information that only the contractor could know. I walked in with the information that only the Consortium company could know. My Consortium model was exactly in parallel and equivalent to TIE, in Croydon I was TIE, only I was called Tramtrack Croydon Ltd, a concession company that arranged external finance under a headline agreement with London Transport and underneath me all the delivery and operations and maintenance on a 30 year projection under a 99 year concession. What I carried was information that could only have come from someone like me and that was given across to the guys to attempt to get an improvement on it because the engineering guys they know it depends on the individual contracts that they are working on but they won't necessarily know exactly how it turned out, they will not know its detail, however people do know, people do know what the average cost of shifting a cubic metre of dirt is and they do know what the average cost of a square metre of a bridge deck is and a concrete slab is and the relative proportions between the civil works component and the mechanical, electrical, signalling, overhead line equipment systems. The problems in the tram project not that piece of it. The problems come with fitting that into the street, fitting that into the city. How far out from the track slab is affected under the tram project to get planning permission and how much is that? Street works can be 20% of the total project costs. Those types of things were still variables.

GM Did you feel that the extent that the information you were getting from the benchmarking data was part of the reliable foundations for cost estimates?

IK It was part of the reliable foundations of the cost estimate – yes.

Optimism Bias

GM TIE addressed the matter of Optimism Bias in preparing their cost estimates and business cases.

1. To what extent were you (a) involved in, or (b) aware of TIE's treatment of Optimism Bias?

2. Which individuals were primarily responsible for TIE's treatment of Optimism Bias?

IK Certainly well aware of it. Not only was it reported, it was reported on a monthly basis to the Board where I was in attendance but generally within the Project team that whole process was being run by Mark Bourke firstly and mostly until I was Project Director for Alex Macaulay and thereafter but we had many many meetings and interactions with Partnerships UK, with Grant Thornton and with PWC and thereafter with Scottish Executive and

KPMG about Optimism Bias and what we are trying to do here, is we are trying to get a budget that works. That's what the whole thing is about, it's about trying to predict what it is that your cost of delivery is going to be and how much your first estimates – those are the estimates that we have just been talking about, can be wrong because of historical contractual performance and basis. What I could do and what I did do was I obviously tried to bring my experience which came really, again primarily, from the Croydon experience I tried to bring that to bear and to see whether or not the things that were being said and predicted and projected were consistent with that or inconsistent with that and I found them to be consistent with that and that's what my input was.

DF .2. Which individuals were primarily responsible for TIE's treatment of Optimism Bias?

IK Mark Bourke.

DF The HM Treasury and (separate) Department for Transport guidance on Optimism Bias which are referred to below were introduced in 2003 and 2004 respectively – after planning for the Edinburgh tram project was already underway (Treasury Green Book, **CEC02084256**; Treasury Supplementary Green Book, **CEC02084818**; Department for Transport guidance, **CEC02084257**).

1. To what extent were you aware of that guidance when you were at TIE?

2. How did it come to your notice?

3. Was the substance of that guidance new (in requiring an increase in projected costs to counteract a systematic tendency for optimism)?

4. To what extent did it require TIE to modify its approach in planning for the tram project?

5. As far as you are aware, had Optimism Bias been taken into account when the Scottish Executive set its grant funding of £375m?

See, eg, (**TIE00090576_9**)(Progress Report to the Scottish Parliament dated November 2005, and considered by the Tram Project Board on 22 November 2005): "Had this [ie, Optimism Bias] been applied to the 2002 PBC estimates, the capital cost presented to the Executive would have been some £150m higher."

1. To what extent were you aware of that guidance when you were at TIE?

IK We certainly knew that it had changed and it had been updated so the answer is aware

- DF 2. How did it come to your notice?
- IK I can't remember exactly how it came through in the first instance but, again, we were having discussions with Partnerships UK with Alex Macaulay and Grant Thornton was still around the team at that time before PWC that is in 2003 and 2004, Price Waterhouse took over the discussions later. Graeme Bissett was aware of it certainly. When he came Stewart McGarrity became very much aware of it and we knew, at the end of the day, we were seeking to get an approval from Scottish Executive and Scottish Transport and they knew of this and we had to satisfy them at the end of day as their client that that what we were doing was satisfactory.
- DF 3. Was the substance of that guidance new (in requiring an increase in projected costs to counteract a systematic tendency for optimism)? Would you agree with that?
- IK I certainly think it's a good guide.
- DF 4. To what extent did it require TIE to modify its approach in planning for the tram project?
- IK We knew we had to have a very strong risk management approach to it to be able to convince, and then to manage, the overall Optimism Bias and Business Case into a position that was we thought deliverable at the time. We didn't try and do anything other than to manage on a professional basis.
- DF 5. As far as you were aware had Optimism Bias been taken into account when the Scottish Executive set its grant funding at £375m?
- IK I believe the answer is no. You better say I believe.
- DF Can you give me some narrative around your thought process regarding that?
- IK The grant funding of?
- DF The fact that Optimism Bias hadn't been taken into account when the Scottish Executive set its grant funding?
- IK I can't.
- DF It is almost suggesting that there has been some sort of unwelcome budget pressure there.

IK The answer is no, it's (1.03.52). What we knew was Optimism Bias is by other names – its cost overrun in the construction process, it's additional land acquisition costs, it's all sorts of things, it's a poor contract, it's a not well administered contract, it's a change of scope, or a misunderstanding of the scope of works contained within the contract. Therefore it is a basket of things which causes a project to go from an original contract sum up to something at the completion which is more and that basket of things we have to try and work on each one of those things so it can come into that basket and do our best in each one of those pieces.

GM Your note in your narrative there that Council's referred to [TIE00090576](#) and it's a progress report to Scottish Parliament in 2005 and considered by the Tram Project Board on 22 November 2005 and the quote from that is "Had this (ie Optimism Bias) been applied to the 2002 estimates, the capital cost presented to the Executive would have been some £150m higher". You obviously were consulted about that document. It's just to give your thoughts in relation to this.

IK That's right. I was obviously consulted about that document because that progress report would have come from me and Stewart McGarrity will have been working on that. Therefore the answer is "no". Given the Council position on funding, which was well known, we knew that unless the Scottish Executive would index the grant to current prices from 2002, we had no project, it couldn't be financed.

GM Could it be suggested then that the fact that Optimism Bias wasn't taken into account when that grant was agreed at £375m and we are looking at the implication of Optimism Bias not being on that could be £150m higher do you think that that treatment of that Optimism Bias generally was to avoid unwelcome budget pressures? If the Scottish Executive were refusing at that time to increase their grant from £375m?

IK We had brought these types of things to their attention but there was approval process, at all, with respect to that. They would only approve the Business Case. We had to work to square the circle, that's what we were trying to do.

GM A note of actions from the Tram Project Steering Group meeting on 9 October 2003 ([CEC01885972](#)) records the action point (paragraph 2.6) that Grant Thornton and TIE were assigned the task of determining how Optimism Bias was to be treated.

1. What prompted this?
2. What, if anything, about OB was discussed at the meeting?
3. What was done in response?

1. What prompted this?
- IK Very good question. I wasn't at that meeting and I certainly don't recall it because I wasn't there. The proper answer to that is I've suggested that this question should be referred directly to Alex Macaulay.
- GM 2. What, if anything, about OB was discussed at the meeting?
3. What was done in response?
Did you see the minutes were they circulated to you? The minutes of the Tram Project Steering Group?
- IK Yes. I did that's when I knew I wasn't there.
- GM You are reading the minutes of the meeting because obviously prompting the fact that ...
- IK I understand your question. As far as I am concerned I wrote down here, I imagine that this arose because of concerns with respect to the Scottish Executive approval and Grant Thornton as financial advisors were asked to review the process.
- GM Was there fear that if Optimism Bias, I know it was relative new at that time, if that figure was actually put on estimates that were already in hand therefore it would increase it substantially, £150m is mentioned and that might jeopardise the project full stop because obviously it's going to significantly take that £375m significantly higher.
- IK Whether that was a concern at the time you should directly ask Alex Macaulay.
- GM So it wasn't a matter that was discussed with you that would maybe bring unwelcome (1.09.27).
- IK No.
- DF A number of documents, including the STAG 2 Appraisals and the various iterations of the business case, contain detailed provisions on TIE's approach to Optimism Bias.
See, for example, the Draft Outline Business Case, March 2006, (CEC01856896), especially 5.3 (including table 5.1), 8.4.3.
1. Can you explain TIE's approach to Optimism Bias in broad overview?
 2. In particular, how was it linked to TIE's management of risk?
 3. TIE reduced the Optimism Bias factors from those recommended in the guidance. What was its basis for doing so?

1. Can you explain TIE's approach to Optimism Bias in broad overview?
- IK As a broad overview I would say we understood that we had received cost estimates, we understood what the Treasury guidelines were saying and that Optimism Bias had to be applied and we tried to take cognisance of any mitigating factors but in the knowledge that the job had to be run correctly and then to provide a professional substantiation for our approach to Optimism Bias consistent with what we knew benchmarking on other tram projects had turned out.
- GM 2. How did it link into TIE's management of risk?
- IK The person who was in charge of the Optimism Bias calculation was Mark Bourke and he was the risk manager and he was in charge of risk matrix and the review of the risk matrix on all of TIE's projects.
- DF 3. TIE reduced the Optimism Bias factors from those recommended in the guidance. What was its basis for doing so?
- IK I think the most accurate thing that I can say is that based on reviews of my benchmarking information, I think Mark and I will have discussed that and arrived at the position early on and as we went forward I am sure Mark then worked that independently.
- GM Could you give me any idea why it differed from those recommended in the guidance? It is a general question that the Optimism Bias factors were reduced and it was different from the guidance. I wonder if you could me some facts around that?
- IK I think if we come back to it. I think the numbers put in the estimates for Optimism Bias were based on what we believed we knew at the time about how the project would turn out.
- GM In the STAG 2 Appraisal in November 2003 (**CEC00632759**, **CEC00642726**, 28 November 2003), there is a detailed discussion of Optimism Bias (see especially pages _100 and _208 to _224.)
- o This refers to TIE having considered the new Green Book Guidance issued by HM Treasury, and having discussed it with Partnerships UK and the Scottish Executive (8.4.1, _215). TIE were said to be following "the Optimism Bias process as required by Scottish Executive". TIE's risk manager was said to have taken "control of the process" and to have consulted both the Scottish Executive and the report originators to discuss its application to ETN (ibid.).
 - a. Were you involved in these discussions?
 - b. What was the nature and extent of these discussions?

- c. What was the process “as required by the Scottish Executive”? Various ‘steps’ in assessing Optimism Bias are set out in 8.4.1 (_216).
 - a. Where did these come from?
 - b. How were they used by TIE?
- o TIE expressed the view that the appropriate starting factors for Optimism Bias were those appropriate for a “standard civil engineering project”, ie, 20% on duration of works and 44% on capital expenditure (8.4.2, _216).
 - a. This appears to be a reference to the HM Treasury Supplementary Guidance (**CEC02084818**) which distinguishes between standard and non-standard civil engineering projects for the purposes of Optimism Bias.
 - b. How, and by whom, was the decision reached to classify the tram project as a non-standard civil engineering project?
 - c. Having regard to the Supplementary Treasury Guidance (especially paragraphs 3.6 to 3.10), can you explain whether, and if so why, that classification was appropriate?
- o At 8.4.2 (_216), it is stated that:

“Optimism Bias does not appear to account for the rigorous capital costing methodology employed by TIE’s technical advisors, that is, determining the cost from the out-turn costs of a number of recent tram schemes. It is, therefore, considered that the capital costs (net of contingency) include for a portion of Optimism Bias. It has not been possible to quantify this portion and therefore it may be considered that the Capital Cost Optimism Bias is conservative.”

 - a. Please explain this passage.
- o At 8.5.5 (_221), it is said:

“TIE has ensured that clear and tangible evidence has been observed prior to reducing the Optimism Bias” to 31% for capital cost and 14% for works duration

 - a. Can you explain the basis on which TIE was reducing the Optimism Bias factors?
 - b. What was that “*clear and tangible evidence*” referred to here?
- o At 8.5.5, it is stated that TIE intended to use the risk register as a “*live risk management tool*” (8.5, _221).
 - a. Can you explain whether, and if so how, TIE used its risk registers in that way?
 - b. Was that connected, and if so how, with TIE’s treatment of Optimism Bias?
- o The “Projects Director” was said to have delegated responsibility for risk (8.7.1).
 - a. Who held that role at the time?
 - a. Were you involved in these discussions?

- IK I suspect that I would have been consulted. I don't believe that I was involved in a detailed sense and I believe this question must be referred to Alex Mackay.
- GM b. What was the nature and extent of these discussions?
- IK I can't help. In October I was pretty much locked in DLA Pipers offices doing the operating agreement.
- GM c. What was the process "as required by the Scottish Executive"? Would I need to speak to Alex Macaulay?
- IK Yes please.
- GM Various 'steps' in assessing Optimism Bias are set out in 8.4.1 (_216).
a. Where did these come from?
b. How were they used by TIE?
- IK I am going to say really and truly at this point, at this time this has to be referred, this whole block, the questions on Optimism Bias has to be referred to Alex and Mark.
- GM TIE expressed the view that the appropriate starting factors for Optimism Bias were those appropriate for a "standard civil engineering project", ie, 20% on duration of works and 44% on capital expenditure (8.4.2, _216).
a. This appears to be a reference to the HM Treasury Supplementary Guidance (**CEC02084818**) which distinguishes between standard and non-standard civil engineering projects for the purposes of Optimism Bias.
b. How, and by whom, was the decision reached to classify the tram project as a non-standard civil engineering project?
- IK I believe that that decision will have been reached by Alex and Mark.
- DF What would be your opinion about that? Did you consider yourself as a non-standard civil engineering project?
- IK Yes. I did.
- DF c. Having regard to the Supplementary Treasury Guidance (especially paragraphs 3.6 to 3.10), can you explain whether, and if so why, that classification was appropriate? Basically the question is did you think that was right? You say you agreed but what did you base that sort of decision on?

- IK Let's pull that document up for me. This is referred to the document that was produced by Motts?
- GM Obviously you agreed that with your colleagues it was a non-standard civil engineering project and it was just to get some more clarity.
- IK Is the tram project non-standard civil engineering? Yes. It's non-standard civil engineering in its civil engineering components, it's not a building, it is in fact the system. The tram project is like a railway project, a combination of civil and mechanical analytical engineering. However, in this classification and under this table that's what it would be classified as.
- GM At 8.4.2 (_216), it is stated that:
"Optimism Bias does not appear to account for the rigorous capital costing methodology employed by TIE's technical advisors, that is, determining the cost from the out-turn costs of a number of recent tram schemes. It is, therefore, considered that the capital costs (net of contingency) include for a portion of Optimism Bias. It has not been possible to quantify this portion and therefore it may be considered that the Capital Cost Optimism Bias is conservative."
Do you think it was conservative?
- IK No. I don't think it was. I think it was too early to say that. There was a belief, but this is the problem, there is a common belief isn't there on every project that your advisors have done a good job and you have taken the best information that you have got from the market which was the information that I have got and then this report has been compiled by and written by Mark. There is a belief that it could be done underneath this level of factoring.
- GM And that's based on the information you were getting from Mott MacDonald?
- IK Motts, Fabers.
- GM And from your staff that there were specifically tasks with that and it says:
"TIE has ensured that clear and tangible evidence has been observed prior to reducing the Optimism Bias" to 31% for capital cost and 14% for works duration:
a. Can you explain the basis on which TIE was reducing the Optimism Bias factors?
- IK The calculations you are going to have to get to Alex and Mark.
- GM b. What was that "clear and tangible evidence" referred to here?

- IK What I can say the clear and tangible evidence would have been the type of thing that the evidence that I would have been providing them with respect to Croydon.
- At 8.5.5, it is stated that TIE intended to use the risk register as a “live risk management tool” (8.5, _221).
 - a. Can you explain whether, and if so how, TIE used its risk registers in that way?
- IK What you will see as we have gone forward is that in Mark Bourke’s risk reporting he has got a risk matrix but he has also got a graph of the Optimism Bias and he has got a projection of it reducing as time goes on. It was being updated by Mark on a regular basis so his risk registers were being used in the assessment of modification to the Optimism Bias.
- GM The “Projects Director” was said to have delegated responsibility for risk (8.7.1).
 - a. Who held that role at the time?
- IK This is Alex.
- GM There was further discussion of Optimism Bias in the Preliminary Financial Cases (4 December 2003, **TRS00000016** (line 2), **TRS00000054** (line 1)).
- *“For the purposes of the assessment of the required funding the costs do not include the Optimism Bias element which is designed to accommodate more general contingent risk based on non-project specific factors.”* (1.2, _9).
 - a. What does this statement mean?
 - At 2.4 (_14 and _15), there is reference to considerable discussion, including with the Scottish Executive, on the methodology applicable to the latest Treasury Green Book guidance. An agreed basis for applying it had been established for the purposes of the Preliminary Financial Case, but would *“need to be kept under review and revisited in the Business Case as a final view on how to treat the Optimism Bias adjustment is awaited from the Scottish Executive Financial Partnerships Unit”*.
 - a. What further consideration was being given to OB by the SE Financial Partnerships Unit, and why?
 - b. What did they decide?
 - The Treasury Green Book guidance was said recently to have been revised and its methodology to be still subject to development and testing (4.4, _24, _25)
 - a. What was the *“development and testing”* referred to here?

a. What does this statement mean? Are they looking at Optimism Bias as being more of a contingency?

It's the last line there – For the purposes of the assessment of the required funding the costs do not include the Optimism Bias element which is designed to accommodate more general contingent risk based on non-project specific factors.” (1.2, _9). What does that mean that statement?

IK It appears implying and states I believe is that the estimates by the advisors here, with respect to the capital cost and contingencies, like for example, five months in terms of prolongation of construction duration. “Have been included in the estimate for the funding but the Optimism Bias elements have not.”

GM What are your thoughts on that?

IK The overall budget should have included an assessment of that Optimism Bias within the overall financial Business Case.

GM You obviously understand the question that the Optimism Bias hasn't been taken into account?

IK That's what that statement is. When you read the whole paragraph that's just what it says. Capital costs are sitting here – contingency is sitting there – Optimism Bias is sitting there – there's the title. Life cycle costs that monitoring and maintenance costs. Operating costs per annum.

GM So you are referring there just to the summary of cost revenues which is just the Executive summary previous to that?

IK Yes. “The capital (1.32.29) quoted above with the exception of Optimism Bias are derived from the ???? by favours. There you see an Optimism Bias calculation sitting there £57m on 278.

GM Do you think the Optimism Bias is an element for contingent risk on non-projected specific factors? Would you agree with that statement?

IK I am not sure that that is true. What the Optimism Bias was talking to, it wasn't, it was more to do with the difference between the 'as awarded cost' and the outturn cost, the finished cost.

GM Can you give me any sort of reason why that statement would be in there?

- IK No. I cannot. I am not responsible for that statement. You have to ask one of three people to explain that – Alex, Mark and/or Graeme Bissett who would have been involved.
- GM At 2.4 (_14 and _15), there is reference to considerable discussion, including with the Scottish Executive, on the methodology applicable to the latest Treasury Green Book guidance. An agreed basis for applying it had been established for the purposes of the Preliminary Financial Case, but would “need to be kept under review and revisited in the Business Case as a final view on how to treat the Optimism Bias adjustment is awaited from the Scottish Executive Financial Partnerships Unit”.
- a. What further consideration was being given to OB by the SE Financial Partnerships Unit, and why?
- IK I don’t know. I can’t answer that.
- GM b. Would you be aware of what did they decide?
- IK No.
- GM Had you had any dealings with the Scottish Executive Financial Partnership Unit?
- IK No.
- GM Have you heard of it before?
- IK At this time the answer would certainly have been ‘no’.
- GM The Treasury Green Book guidance was said recently to have been revised and its methodology to be still subject to development and testing (4.4, _24, _25)
- a. What was the “development and testing” referred to here?
- IK That’s been an interpretation of what is written on the face of the Green Book about its methodology. If it isn’t I don’t understand it.
- GM Who would make that interpretation?
- IK It must be written on the Green Book itself.
- GM The discussion about Optimism Bias continues in the Preliminary Financial Case Update, September 2004 (**CEC01868589** – line 2):

- At _44, it is stated that the Treasury Green Book had set out major changes for the assessment and quantification of risk for major capital projects. In response, TIE is said to have reviewed its risk assessments to ensure they were interpreting it accurately.
 - a. What did that involve?
- The detailed treatment of Optimism Bias is in section 5.6 (_53 onwards).
- At 5.6.2, there is reference to the even more recent guidance from the Department for Transport on Optimism Bias specifically in relation to transport planning (_53; that guidance is **CEC02084257**).
 - a. Presumably this guidance had not been available when the Preliminary Financial Cases were first prepared in December 2003. Is that correct?
 - b. What, if anything, had TIE done to take account of the distinct DfT guidance?
 - c. It is noted that TIE reduced its Optimism Bias factors from those used in the Preliminary Financial Case. Can you explain the basis for that having been done?
 - d. Please explain the statement that: "*As the project develops in terms of specification and design the overall level of Optimism Bias should reduce further, towards the level of contingency calculated by TIE's technical advisers*" (final sentence of 5.6.2).
 - a. What did that involve?

IK I believe that these go to Mark Bourke who will be able to tell you what he had developed in that time.

- The detailed treatment of Optimism Bias is in section 5.6 (_53 onwards).
- At 5.6.2, there is reference to the even more recent guidance from the Department for Transport on Optimism Bias specifically in relation to transport planning (_53; that guidance is **CEC02084257**).
 - a. Presumably this guidance had not been available when the Preliminary Financial Cases were first prepared in December 2003. Is that correct?

IK Yes. I believe it is otherwise that sentence doesn't make sense.

GM b. What, if anything, had TIE done to take account of the distinct DfT guidance?

IK Generally I can say that TIE had engaged, by this stage, I believe September 2004. I think PWC was now in the (1.38.55)

GM Do you think the guidance was taking cognisance of?

IK Yes.

- GM What would give you that comfort that it was?
- IK What gives me the comfort is that the statements being made here indicate that the process has been in hand and has been worked on with due regard to changes in the guidance.
- GM c. It is noted that TIE reduced its Optimism Bias factors from those used in the Preliminary Financial Case. Can you explain the basis for that having been done?
- IK No. I cannot.
- GM Could you give any sort of reasoning in your experience why Optimism Bias factors were being reduced at that time?
- IK Because there was a belief that the validity of the information was growing stronger in the expectation that there will be an asset test which comes when each of the contracts goes into pricing and a price is received.
- GM Did you believe that the Optimism Bias factors that caused that reduction was in fact the contract was ...
- IK In hindsight it was not a good enough reason to be changing them down because the overall delivery of the project hadn't been moved to a substantively different position. I don't know that I was responsible for that nor I don't know that I was paying a hellava lot of attention to it and at this point of time the answer is I won't have been responsible for it. However, it is clear that Mark has been working through that. The real question here to my mind that anybody must be able to be interested in is going to be if the Optimism Bias had been approached on a different basis, in other words, there hadn't been any reductions whatsoever, would the outturn projection that happened on the streets of Edinburgh because of this project been predicted? I suspect that is one of the underlying questions that has to be there.
- GM The question would be that if Optimism Bias was being reduced contrary to the guidance, was that an attempt to influence the capital figure that had been put forward?
- IK I don't think. The quantum that we are talking about here by virtue of a 1% reduction in Optimism Bias against the 10% escalation per annum assumption, it's not material.

GM d. Please explain the statement that: “As the project develops in terms of specification and design the overall level of Optimism Bias should reduce further, towards the level of contingency calculated by TIE’s technical advisers” (final sentence of 5.6.2). Is that back to what you said about as it goes to contracts and the pricings more sure of?

IK Basically what we have got here is a statement which is saying that “as the scope of the project is improved and greater definition occurs in terms of that scope of project then this statement says that the Optimism Bias should equate eventually to the contingency calculation from the technical advisors”. I would think that that is not necessarily prudent and at the time we are talking about ...

GM Why would that be?

IK Because there are things outside, perhaps, of what the contingency assessment of the consultants are but they might not have been aware of or included that were TIEs only that had to be factored in to an overall assessment of risk. Ultimately what we should have got down to by the time the contracts were all awarded and, in particular, the Infracore was a quantitative risk assessment which would have replaced the Optimism Bias calculation, which would have modified the contingency element that the consultants had, considered all of the baskets of risk within that and added the things which were not considered into that which could have been specific to TIE such as extraneous legal costs, it could have been dispute resolution costs, it could have been something in the nature of a streetscape quantum change or something in that that could have still been an outstanding planning consent not achieved with the Council. All of those types of things should have replaced it and ultimately the overall quantum in terms of the quantitative risk assessment in TIE’s hands would have been greater than, always, that which came in from the consultants. However, it would have approached, yes, certainly. The key problem is that nobody but nobody under any circumstances will have said “I am going to cause a delay of three years in this construction project” because nobody would have believed it could be possible and that would not have been contained within a quantitative risk assessment.

DF The ARUP Scotland report to the Scottish Parliament: Edinburgh Tram Line 2, Review of Business Case, October 2004 (**CEC01019126**) made some critical remarks about TIE’s treatment of Optimism Bias.

1. What are your comments in response to these points?
2. Did TIE address them and, if so, how?

Please explain your understanding of, and provide your response to, the following passages:

- “The Project would seem to place great store by encouraging an effective risk management culture and by drawing on the performance of comparable light rail projects. In the absence of QRA, CAPEX and programme contingencies are based on Optimism Bias (OB) uplifts. These have been estimated using the guidelines in HM Treasury’s Green Book. The DfT’s recent related guidance is mentioned, **but no comparative assessment is made. It is considered that the OB uplifts would increase, if DfT’s guidance were to be followed. Similarly, the Project’s averaging of mitigation factors is likely to have lead [sic] to underestimating OB uplifts.** Further justification of the likely cost of mitigation strategies should be provided.” (_5; emphasis added)
- At 7.11: “The [DfT] guidelines have additional project categories to those in HM Treasury’s Green Book. As well as ‘standard civil engineering’ **it has dedicated ‘rail’ and ‘road’ categories. The 80th percentile OB uplift to rail projects’ capital expenditure spot estimates is 57 per cent.** This scheme’s P80 value, using DfT guidance, is therefore £400.4 million (ie £255 million x 1.57). Even the 50th percentile is 40 per cent uplift of the spot cost (ie £255 million x 1.4 = £357 million). The DfT recommends its OB uplifts be applied **at the time of decision to build, which typically equates to business case submission. Given Tram Line 2 is yet to reach outline Business Case stage, it is considered that current OB uplifts may have been underestimated.**” (Emphasis added)
- At 7.12: “DfT guidance does allow for OB to be adjusted downward **if strong evidence of improved risk mitigation can be demonstrated.** This may be the case if advanced risk analysis has been applied. As already mentioned, neither cost nor programme QRAs have been undertaken for this scheme. **On this basis, the justification for reduced DfT OB uplifts would appear to be weak.** However, DfT guidance also allows for downward adjustments of OB uplifts when warranted by firm empirical evidence.” (Emphasis added)
- ARUP also expressed concerns about TIE’s use of mitigation factors, with the recommended approach leading to a higher OB uplift (7.14 to 7.16), and about the unexplained figure of 1% for mitigation of capital expenditure risk (7.17).

NB: there was discussion of the ARUP report at the TIE Board meeting on 22 November 2004 (minutes, **TRS00018651_4**, papers, **TRS00018648**)

1. Do the papers for the meeting fully and accurately record the discussion?

2. Was there any discussion about the treatment of Optimism Bias? If so, what?

1. Do you have any comments to that or would you refer that to Mr ????

- IK I think a lot of what I just referred to, and what I just said, I was not really disagreeing with parts of, certainly parts of, what ARUP Scotland were saying. The QRA that they have written there is what I said in my talk of connotative risk assessment without referring actually to the question below.
- GM 2. Were they addressed
- IK The bottom line is that Arup are saying that having reviewed it they think that TIE has pushed it too low, that's what they are saying?
- GM Did TIE address that?
- IK Yes.
- GM How did TIE address it?
- IK I refer again to Alex and Mark. The main thing is that ultimately there is a process which is clear, understandable, can be explained and you can see the effects of their calculation whether it be contingency or Optimism Bias translating into Business Case models, that's what you need to see, that's what needs to be there and reviewed, Mark did that with Alex and with Graeme Bissett.
- GM Let's look at some passages in there and you can see the narratives been extracted from it.
- "The Project would seem to place great store by encouraging an effective risk management culture and by drawing on the performance of comparable light rail projects. In the absence of QRA, CAPEX and programme contingencies are based on Optimism Bias (OB) uplifts. These have been estimated using the guidelines in HM Treasury's Green Book. The DfT's recent related guidance is mentioned, **but no comparative assessment is made. It is considered that the OB uplifts would increase, if DfT's guidance were to be followed. Similarly, the Project's averaging of mitigation factors is likely to have lead [sic] to underestimating OB uplifts.** Further justification of the likely cost of mitigation strategies should be provided." (_5; emphasis added.)
What is your understanding of that?
- IK My understanding of the statement is that ARUP is suggesting that the Optimism Bias has been underestimated and, therefore, they have then said further justification of the likely cost should be provided. That would have been addressed by Alex and Mark.

- GM Is this bringing back memories to you? Do you remember these issues and how they were addressed?
- IK No. I don't.
- GM Did they fall into risk registers or action plans?
- IK They will have fallen into risk registers and they should be sitting in there and the mitigation factors should be being looked at and reviewed on this basis.
- GM Would that have been a risk register that you would have seen and had discussions over going through that if these risks were on the register at the time or is that something you recall?
- IK I cannot remember if that ever happened.
- GM At 7.11: "*The [DfT] guidelines have additional project categories to those in HM Treasury's Green Book. As well as 'standard civil engineering' it has dedicated 'rail' and 'road' categories. The 80th percentile OB uplift to rail projects' capital expenditure spot estimates is 57 per cent. This scheme's P80 value, using DfT guidance, is therefore £400.4 million (ie £255 million x 1.57). Even the 50th percentile is 40 per cent uplift of the spot cost (ie £255 million x 1.4 = £357 million). The DfT recommends its OB uplifts be applied at the time of decision to build, which typically equates to business case submission. Given Tram Line 2 is yet to reach outline business case stage, it is considered that current OB uplifts may have been underestimated.*" (Emphasis added)
Again, there is that suggestion that you might just want to refer to your previous answer.
- IK I think that is the answer remains is the same thing. This is an absolutely valid justified statement by Arup as there is nothing on the statement probably and it needed to be taken into consideration.
- GM At 7.12: "*DfT guidance does allow for OB to be adjusted downward if strong evidence of improved risk mitigation can be demonstrated. This may be the case if advanced risk analysis has been applied. As already mentioned, neither cost nor programme QRAs have been undertaken for this scheme. On this basis, the justification for reduced DfT OB uplifts would appear to be weak. However, DfT guidance also allows for downward adjustments of OB uplifts when warranted by firm empirical evidence.*" (Emphasis added)
- IK It was 2005 when we started having meetings directly with Scottish Executive and Cyril Sweett who they appointed as a risk advisor and we had specific

meetings on the tram project by now, I remember them, where risk were discussed, absolutely discussed so there was an increase through 2005 on this time in response to perhaps a general appreciation that, as a group, that's the whole project, the programme, including the funder, and sponsors should be more active in this and that happened, that is what happened.

GM Again, there is another narrative here at 7.12 on this basis: **the justification for reduced DfT OB uplifts would appear to be weak**. I guess it's just reiterating what has been said?

IK I guess it really is a professional judgement which has been made by Arup in this case, they have feelings that they haven't seen and read sufficiently strong empirical evidence to allow this and I have said so.

GM Arup also expressed concerns about TIE's use of mitigation factors, with the recommended approach leading to a higher OB uplift (7.14 to 7.16), and about the unexplained figure of 1% for mitigation of capital expenditure risk (7.17).
Would you give any more clarity around that?

IK No.

GM NB: there was discussion of the Arup report at the TIE Board meeting on 22 November 2004 (minutes, **TRS00018651_4**, papers, **TRS00018648**).

1. Did the papers for the meeting fully and accurately record the discussion?

2. Was there any discussion about the treatment of Optimism Bias? If so, what?

I will check this later.

(**CEC01686226**) appears to be a response to the Edinburgh Tram (Line 2) Committee concerning the Arup Scotland Review of the Preliminary Financial Case.

(**CEC01705043**) is an equivalent for Line 1 (although the paragraph numbers are slightly different).

1. Who drafted these documents? Did you see them at the time?

2. Are you able to confirm what these documents are? Do you know whether they were in fact sent to the Parliamentary committees?

3. What was their context, in terms of progress of the Tram Bills through the Parliament?

4. Can you explain the basis for TIE's disagreement with the Arup view that an additional contingency was required (para 6/7)?

1. Who drafted these documents? Did you see them at the time?

- IK This would have been drafted underneath Alex Macaulay but who did it precisely ...
- GM It is weird how nothing is signed, that is a general statement. Usually in a document you usually put your initials somewhere down the line. Did you see these documents at the time at all?
- IK I am quite certain I did not see all of the documents that went to Edinburgh Tram Committees. I think the answer is "no".
- GM Do you think Alex Macaulay would be his ...
- IK Alex and Barry.
- GM Therefore they would be the ones that would confirm what the documents are and where they were sent?
- IK They would confirm that it is on to the Committee, if they remember or if your documentation gives the answer.
- GM 3. What was their context, in terms of progress of the Tram Bills through the Parliament?
- IK Barry Cross has got the answer to that question.
- GM 4. Can you explain the basis for TIE's disagreement with the Arup view that an additional contingency was required (para 6/7)?
- IK It is a paragraph which is essentially giving a partial defence for the assumptions that have been made. The reasons are there. The reasons are that obviously that this report written to a Parliamentary Committee is to make sure that the Parliamentary Committee knows that we have considered the Arup, or that TIE has considered the Arup Report and has essentially stood by its figures that it has put forward, that is what it is saying.
- GM What do you think the basis for the disagreement with the view that additional contingency was required?
- IK The basis for the disagreement what do I think it is?
- GM Yes.

- IK TIE believes in this report that its methodology is an adequate justification for reduction and that it provides sufficient evidence and this is what it is trying to do, pull the aspects that lead you to that conclusion out and make a defence for that calculation.
- GM Would that be discussed at TIE because obviously a Parliamentary Report offsetting suggestions that had made in Arup Scotland Review?
- IK It would have been discussed in TIE. This discussion would have been with Graeme Bissett, Alex, Mark and Barry Cross.
- GM If Graeme Bissett, Mark and Barry Cross did the discussion and came to that paper who in TIE would sign it off?
- IK Barry or Alex, really it should have been Alex.
- GM So Alex would sign that paper. It is quite a significant paper would that go to the Board at TIE for discussion before it went outwith it? I guess it would if it was going to go to Parliament, it is going to be a Parliamentary Brief?
- IK It should have done and that is where I should have seen it.
- GM Did you see them at the time?
- IK I cannot recall them.
- DF TIE's defends its approach to Optimism Bias at paragraphs 60 to 90, including a denial of Arup's assertion that OB uplifts had been underestimated (paragraph 86).
1. Can you explain this?
 2. At 60 to 64, TIE appear to argue against following the DfT guidance. Is that correct? Can you explain that approach? Who took that decision?
 3. Can you explain the passage on procurement risk, and its impact on capital cost (paragraphs 83 to 86)?
 4. Paragraphs 87 to 89 are difficult to understand. Are you able to explain what they mean?
1. Can you explain this?
- IK No. I cannot explain that.
- GM I have the document on the screen. TIE and their advisors do not accept Arup's assertion that the OB uplifts have been underestimated the soundness

of TIE's approach has been reflected in the relatively higher cost estimates of the Edinburgh system completed for the planned schemes in the UK.

IK It is certainly the case that Edinburgh was coming through and would have been a higher cost in comparison to all previous tram schemes in any instance. This is a statement that says that "high cost estimates have been put into the cost base and therefore, combined with ..." what it means is combined with the empirical evidence and other considerations whatever they might have been. This statement says "TIE believed that it was going to be able to justify a lower value of overall than what Arup would say should come out of a rigid analysis or rigid application of the guidance".

GM What would be your opinion about that? You have got Arup saying that "OB uplifts had been underestimated" and TIE is saying "that's not the case".

IK That's right. My view of it is that Arup being right and TIE being wrong needs to have been reviewed and sensitivities undertaken on the Outline Business Case to reflect what that meant.

FIRE ALARM BREAK FOR LUNCH

GM This the afternoon session and I think we had finished the Arup's Report though I may come back to it.

The Draft Interim Outline Business Case, 30 May 2005 (**CEC01875336**) contains comments on Optimism Bias, including the following.

- At 6.4.3 (_92), it is stated that: "*TIE's technical advisors have carried out an initial QRA validation of the potential maximum increased capital cost for Phase 1 for the project risk register to confirm the potential extent of Optimism Bias. The results of this exercise support the reduction in Optimism Bias as estimated with a 'very high' certainty (95% percentile) that the potential risk exposure is approximately £50m that equates to an increase of approximately 22% above 2Q2003 base costs ... The comfort to funders is that the proposed £375m grant would provide a total 'headroom' of 70% above base costs or 54% above base costs allowing for specified contingencies for 2Q2003 prices ... This allowance is clearly greater than the starting values proposed by HM Treasury guidance (44%) and provides a 'high' degree of certainty to the Scottish Executive and CEC that the overall committed grant will not be exceeded. Further, when reviewed in conjunction with Optimism Bias studies conducted on behalf of the Department for Transport that these allowances within the overall grant lies at the upper percentiles of probability (between 80-90% percentile).*"

a. What is the "QRA validation", and who carried it out?

Optimism Bias is also considered in the appendices (**CEC01875335_103** onwards).

- At 1.1.4, it is noted that *“TIE support the need to address the issues giving rise to Optimism Bias and have identified a number of potential reasons for reducing the ‘starting values’ estimates of Optimism Bias compared with experience on previous schemes”,* which are then listed.
 - a. Do you agree with these reasons?
 - b. Who identified them?
- At 1.1.6 (_105), there is discussion of the 2004 Department for Transport Guidance. *“Procedures for Dealing with Optimism Bias in Transport Planning”* (July 2004). It states that *“This later study recommends the use of 40% uplift to capital estimates based on the following.*
 - *Where there is an acceptance that the scheme will be one of the 50 (out of 100 projects) that will be brought in within budget;*
 - *Where a portfolio view of projects is taken;*
 - *Where there is an above average appreciation of risk with supporting analysis and corresponding implementation of mitigation actions; and*
 - *Where there is a desire to drive tighter cost control within projects.”*

TIE have applied a ‘starting value’ of 44% uplift to capital estimates, in accordance with the 2003 HM Treasury guidance. Through effective risk mitigation, this is now assessed at 24% ...”

 - a. What is your understanding of the stated factors for using an uplift of 40%?
 - b. To what extent did each of them apply to the tram project?
 - c. In your view, was it consistent with the DfT guidance to reduce the OB uplift below 40% to 24%?
- The final paragraph of 1.1.6 states: *“The new guidance stresses that there may be a need for an ‘outside view’ of schemes as it is not really appropriate for the project team to take definitive views on Optimism Bias. Accordingly, it is recommended that the Scottish Executive consider their ‘portfolio’ of projects and decide if additional risk reserve is required at ‘funder level’, with reference to this guidance. TIE will bring an ‘outside view’ to mitigate the ‘agent/principle’ problem resulting in bias to project costs, programme and revenues through the input of Technical Support Services and supplemented with a Peer Review Group drawn from independent industry experts.”*
 - a. What is your understanding of the reference to “an outside view”?
 - b. Did TIE obtain one and, if so, from whom?
 - c. What “risk reserve” did the Scottish Executive require?
 - d. Was CEC asked for its views on a risk reserve?
- At _108, there is reference to TIE’s approach having been verified by the original authors of the Mott MacDonald guidance.
 - a. Who was that, and what discussions took place?

- a. What is the “QRA validation”, and who carried it out?
- IK QRA – Quantitative Risk Assessment.
- GM It says that TIE’s technical advisors have carried that out. Would that be the companies that you mentioned before?
- IK Yes. It would have been Mott MacDonald and Faber Maunsell.
- GM Optimism Bias is also considered in the appendices (**CEC01875335**_103 onwards).
- At 1.1.4, it is noted that “*TIE support the need to address the issues giving rise to Optimism Bias and have identified a number of potential reasons for reducing the ‘starting values’ estimates of Optimism Bias compared with experience on previous schemes*”, which are then listed.
 - a. Do you agree with these reasons?
 - b. Who identified them?
- IK Let’s pull that document up.
- GM We are looking at document number (**CEC01875335**) and at 1.1.4 that extract in relation to ‘starting values’.
- IK I agree it is hard to quantify – 6 ‘yes’ – 7 ‘yes’. May I don’t know is the answer. It may or may not so that is less likely. And 8 is ‘yes’.
- GM Who identified these reasons?
- IK This is a report that has been done by Mott MacDonald. However, no doubt it will have been in consultation with us but they wrote it. The question answered regarding the Scottish Parliament – that comes up later.
- GM Who would have transferred that into the ...
- IK This would have come under the management of David Hand. He would have reported that to either Mark or to Alex, this one probably was important enough that it would have come to Alex. This is just before I came.
- GM At 1.1.6 (_105), there is discussion of the 2004 Department for Transport Guidance. “Procedures for Dealing with Optimism Bias in Transport Planning” (July 2004). It states that
“This later study recommends the use of 40% uplift to capital estimates based on the following.

- IK That's an interesting statement there – "This guidance built on previous studies reported by Mott MacDonald on behalf of HM Treasury indicating Mott MacDonald has got a history of working in this area, in this field and has done reports before. (11.19) have moved it forward. From my memory I think Mark came from Motts.
- GM And related to the stated factors so that would be
- *Where there is an acceptance that the scheme will be one of the 50 (out of 100 projects) that will be brought in within budget;*
 - *Where a portfolio view of projects is taken;*
 - *Where there is an above average appreciation of risk with supporting analysis and corresponding implementation of mitigation actions; and*
 - *Where there is a desire to drive tighter cost control within projects."*
TIE have applied a 'starting value' of 44% uplift to capital estimates, in accordance with the 2003 HM Treasury guidance. Through effective risk mitigation, this is now assessed at 24% ..."
- IK The double canny of risk comes in that paragraph above the bull points.
- GM These stated factors what would be your understanding of that that's 1, 2, 3, 4 stated factors being highlighted by Counsel?
- IK Where there is an acceptance that the scheme will be one of the 50 (out of 100 projects) that will be brought in within budget – I would say that we should be one of those. Where a portfolio view of projects is taken – no this is a one off. Where there is an above average appreciation of risk with supporting analysis and corresponding implementation of mitigation actions – it should have been true. There should have been a desire to drive tighter cost control within projects – yes.
- GM b. To what extent did each of them apply to the tram project?
- IK That is where you are dealing with multiple projects, here we are dealing with one.
- GM The first one is what extent did each of them apply so look at the first one where there is an acceptance that the scheme will be one of the 50 so how did that apply to the tram project?
- IK He replied to the tram project in that we expected to have a highly developed design by the time the contracts were awarded and an approvals process substantially complete. Therefore the risks associated with us in this delivery should have been such that we would have expected to be within the 50%.

GM So you would expect it to be within budget for these reasons? You have explained about the portfolio view of projects has taken that this is a one off so would you say that that wouldn't apply to the tram project then?

IK No. I don't think so.

GM And the third one is: Where there is an above average appreciation of risk with supporting analysis and corresponding implementation of mitigation actions.

IK I think we were driving to achieve that.

GM And: Where there is a desire to drive tighter cost control within projects?

IK Yes.

GM c. In your view, was it consistent with the DfT guidance to reduce the OB uplift below 40% to 24%?

IK It wasn't consistent.

GM Consistent with the guidance?

IK Yes. It can be argued that it isn't.

GM What would be your consideration in relation to that?

IK At the time or in hindsight?

GM Maybe both would be helpful.

IK I think that there was justification for bringing it down to 24% but it would have been the case that 24% would have applied really and truly after the contracts were certainly awarded in terms of an overall that would have been 100%, in fact less than 24% I would have said, but 24% would have been arguable and prudent at that stage. I think it is probably a bit tight. To get to 24% from 40%, I think that was being pushed.

GM Who was pushing that?

IK Mark had a good deal of experience in working with this and he was leading this aspect of it.

GM Why would he be doing this?

IK Based on his view and his view of the strength of the information that was before us and the relevance of the market information that we were able to assemble.

GM On memory, were you aware of this desire to reduce it to 24% in light of the other guidance?

IK Yes. Generally I would have supported that myself because of my experience in Croydon where construction cost overrun was effectively, as I said before, 22%.

- The final paragraph of 1.1.6 states: *“The new guidance stresses that there may be a need for an ‘outside view’ of schemes as it is not really appropriate for the project team to take definitive views on Optimism Bias. Accordingly, it is recommended that the Scottish Executive consider their ‘portfolio’ of projects and decide if additional risk reserve is required at ‘funder level’, with reference to this guidance. TIE will bring an ‘outside view’ to mitigate the ‘agent/principle’ problem resulting in bias to project costs, programme and revenues through the input of Technical Support Services and supplemented with a Peer Review Group drawn from independent industry experts.”*

IK Yes. They are mine.

GM The outside view then would that be the independent industry experts?

IK Yes.

GM Is that where the outside view was taken from?

IK It was taken by a combination of TSS people and the Peer Review Group.

GM Describe the Peer Review Group? Is that a group you put together?

IK It is a group of people I brought together. People who were personally known to me and people who had worked, in the main, with me in some part of the team delivering the tram link project in London in Croydon.

GM You selected these people?

IK I did – yes.

GM Who were they?

- IK One was Graham Cunningham and he was Engineering Manager from Amey, the second one was Paul Dawkins, Paul was the Engineering Director for Gibb who is now Jacobs on this rail project, Tim Jones who was previous to what he now is doing, he was a Project Director on the West London tram project, he had done all of the Parliamentary processes and transport and (19.54) for and was associated with the Croydon Tram Link, those are three of them who come to mind.
- GM Therefore you put this Peer Review Group together. Did you take any other, sort of independent advice because you are using your skill base to get in people who would be able to advise accordingly? However, did you use a completely independent outside view? You would obviously argue they were independent, did you use another consultancy firm?
- IK No. We used the Technical Support Services Group who hadn't previously been involved in the project and the Peer Review Group, none of those guys had been involved in the project until they came the first time.
- GM What about this 'risk reserve' that's spoken about.
c. What "risk reserve" did the Scottish Executive require?
- IK Additional risk reserve above the 24%.
- GM So that is the gap between 24%?
- IK Yes. If they want anything above 24% that would be what that is referring to.
- GM So that is 24% to 40% difference in Optimism Bias?
- IK If they wanted another 5-10% or 16% they should say, that's what that is asking them.
- GM In essence that is asking Scottish Government to ...
- IK Yes. Because the difference being that now if the Scottish Government, or the Scottish Executive is considering they do have a portfolio of projects, albeit that this one is a mega project and probably mitigates against the acceptance of a portfolio argument where you have got one thing which is not average but that's what it invites them to look at and to view and it must have been about this time that Cyril Sweett was engaged by the Scottish Executive and working, not just on the tram project but they working on all of Scottish Executive projects to my knowledge.

GM d. Was CEC asked for its views on a risk reserve?

IK I don't know other than this information at some level this stuff was being reported to the Board and there were Council members on the Board, obviously, but I do not recall discussing this with Keith Rimmer or Andrew Holmes – no I don't remember that. Barry may have so refer to Barry please.

- At _108, there is reference to TIE's approach having been verified by the original authors of the Mott MacDonald guidance.
 - a. Who was that, and what discussions took place?

IK No. I don't know is the answer but Mark Bourke will tell you who that is for sure, because what that is referring to is where we were reading in that document that Mott MacDonald had previously worked for HM Treasury. This is referring to those authors obviously, but do I know them? From memory no.

GM (TIE00090576), Supplementary Progress Report to the PBU [is that a reference to the Private Bills Unit of the Scottish Parliament?], 11 November 2005; included in the papers for the Tram Project Board on 22 November 2005.

- At 1.5: *"If the principles of Optimism Bias were to be applied in making a funding decision now it is almost certain further phasing of the construction would need to take place."*
 1. Was there a concern that following the Treasury Guidance would make the project unaffordable?
- At 1.7: *"Although it may be important to make a short term decision with regard to the assumed first phase of Lines 1 and 2 to be constructed ... it remains sensible that the final decision should be taken in the period up to Financial Close in late 2006/early 2007 at which time the decision will be better informed by: □ Firm tender prices for the vehicles and infrastructure contracts..."*
 1. To what extent was this approach (of waiting for firm tender prices before deciding on phasing) influenced by the impact that applying an Optimism Bias factor would, at this time, have had on the viability of the project?
 2. What would have been the impact of Optimism Bias on the Cost Benefit Ratios which supported the case for the trams?
- At 4.2: *"TIE's capital cost estimates are inclusive of a specified contingency of c10% and these estimates are the control budgets for management of the project. For the purposes of informing affordability considerations only, as explained in the September 2005 progress report, under HM Treasury*

guidelines consideration must be given to the impact of Optimism Bias which could currently add up to 14% of the base cost estimate to TIE's capital cost estimate."

1. What was meant by "the control budgets for management of the project"?

2. Why was that distinguished from "affordability considerations"?

3. Why was Optimism Bias taken into account for *affordability considerations only*?

- At 4.3: "*The background or implications of Optimism Bias are not in any way disregarded here, but to be consistent with the historical development of funding and cost estimates on the project it is assumed for the purposes of this analysis that the tender prices received next autumn are comparable with TIE's control budgets. The conditions precedent for this eventuality include timely receipt of approvals to proceed with the project, the execution of TIE's procurement strategy in accordance with programme and the effectiveness of the project's governance procedures in controlling the scope of the project. Note that at the point of financial close the calculated level of Optimism Bias might be expected to be contained within the level of the specified contingency included in TIE's control budgets.*"

1. Can you explain this passage?

- At 1.5: "*If the principles of Optimism Bias were to be applied in making a funding decision now it is almost certain further phasing of the construction would need to take place.*"

1. Was there a concern that following the Treasury Guidance would make the project unaffordable?

IK Yes. At this stage, November 2005, this is under my watch, and the situation is is that when we might have started in 2003 with £375m of grant, there was an expectation that had previously been established to do line 1 and line 2, Leith to Granton, but during this period between 2003 and 2005 where we have got to at this point is that, whereas we can afford to get the Parliamentary process complete, we cannot afford line 2 from Murrayfield down to Granton and we also cannot afford from Leith up to Granton along the seafront. Therefore the project has been affordable only and capable of being funded under the numbers that had been discussed between the Airport and Leith this, if applied, would further impact upon that.

GM Do you think it could be the case that TIE were playing down Optimism Bias in an effort to persuade the Parliament to ...

IK There can be an assertion of that. Was it a policy to do that? The answer is 'no'. There was no stated policy to try and massage the numbers down but there was definitely an attempt to try and, by valid argument, make it clear

that it should be adjusted down, or could be adjusted down. The opportunity to do so was challenged obviously and it was challenged by the Scottish Executive and this is what we are reading about.

GM Did you take that opinion at the time that there is a playing down of Optimism Bias?

IK I knew for a fact that the project was at risk of not being funded at all or at some time. However, what I was attempting to achieve was consistent, was to implement consistent with the development strategy so as to achieve a risk and mitigation approach which would comply with this situation. By now this is what I was attempting to do.

GM At 1.7: *“Although it may be important to make a short term decision with regard to the assumed first phase of Lines 1 and 2 to be constructed ... it remains sensible that the final decision should be taken in the period up to Financial Close in late 2006/early 2007 at which time the decision will be better informed by: □ Firm tender prices for the vehicles and infrastructure contracts...”*.

1. To what extent was this approach (of waiting for firm tender prices before deciding on phasing) influenced by the impact that applying an Optimism Bias factor would, at this time, have had on the viability of the project?

IK A further 16% kick on the capital cost estimate, that being between 24% uplift and 40% uplift adds another £45/50m to the total budget. Clearly this is written with the presumption that we may get more than what we have expected; we might not of course, we might get less. When it is written the first phase of lines 1 and 2 we are obviously, at this stage, now seriously in a situation where the whole project has been truncated from a total line 1 and line 2 and now we are talking marginally about what more or less we can get when the (29.30) it does make sense to me for that final decision on how much is done to be taken at a time when a lot of these arguments about Optimism Bias have been overtaken by the reality of tender pricing, albeit that after tender prices are received, there is still a quantitative risk analysis that has to be done on that to establish then a proper budget in total.

GM Do you think there was an extent of that approach of waiting for these figures before the impact of applying the Optimism Bias?

IK No. It was more a matter of confirming what the overall numbers were going to run at rather than anything else I believe. This is a “please play along and we will see what the real picture is”.

GM 2. What would have been the impact of Optimism Bias on the Cost Benefit Ratios which supported the case for the trams?

IK Cost Benefit Ratio would have gone down pro rata to the increase.

- At 4.2: *“TIE’s capital cost estimates are inclusive of a specified contingency of c10% and these estimates are the control budgets for management of the project. For the purposes of informing affordability considerations only, as explained in the September 2005 progress report, under HM Treasury guidelines consideration must be given to the impact of Optimism Bias which could currently add up to 14% of the base cost estimate to TIE’s capital cost estimate.”*

1. What was meant by *“the control budgets for management of the project”*?

IK The capital cost estimate plus the specified contingency = the control budget.

GM 2. Why was that distinguished from *“affordability considerations”*?

IK Simply put, if you like, you have got a control budget which have been assessed by the engineers and the advisors as being an adequate budget and you have got an Optimism Bias which then, if applied, including the extra 14% to the 1.4 to the 40% would be considered we would believe to be an upper bound so it could be used sensibly a sensitivity case in a review in terms of whether the project should be totally shutdown I guess affordability consideration, is it going to happen at all. There was no consideration at this stage of there being a Leith to virtually St Andrew Square truncation, never, as being a necessary outcome.

GM 3. Why was Optimism Bias taken into account for affordability considerations only?

IK The team believed that we probably had it right with the specified contingency and a lower estimate and so it was being proffered as a sensitivity rather than something that should become the budget as such.

GM So Optimism Bias was taken into account for affordability considerations only why?

IK Because it was not supported by any other piece of information other than the guideline. The information that had been produced supported the budget and a contingency as written there.

- GM The Treasury guidelines then so it was taken into account for affordability considerations only not part of the complete control budget management?
- IK No. That is right.
- GM Is that a bit odd or are you happy with that decision or view?
- IK The actual view that is relevant is whether or not the specified contingency is of a satisfactory level and, at this stage, with the work outstanding you could argue that it wasn't, but that we were not going to put a contingency in there of 50% because we knew that if we put that in as the control budget then the project is not fundable at all.
- GM At 4.3: *"The background or implications of Optimism Bias are not in any way disregarded here, but to be consistent with the historical development of funding and cost estimates on the project it is assumed for the purposes of this analysis that the tender prices received next autumn are comparable with TIE's control budgets. The conditions precedent for this eventuality include timely receipt of approvals to proceed with the project, the execution of TIE's procurement strategy in accordance with programme and the effectiveness of the project's governance procedures in controlling the scope of the project. Note that at the point of financial close the calculated level of Optimism Bias might be expected to be contained within the level of the specified contingency included in TIE's control budgets."*
- IK "It is assumed for the purposes of the analysis that the tender prices received are comparable with the TIE control budget" – yes. "The conditions precedent for this eventuality include timely receipt of approvals to proceed with the project" – correct. "The execution of the procurement strategy in accordance with programme" – meaning that there is a complete package of tenders. "The effectiveness of the project's governance procedures in controlling the scope of the project" – yes a definition of the overall scope and through the approvals process the delineations of it.
- GM Because you could read into that that the Optimism Bias might be expected to be contained within TIE's control budgets however, the previous paragraph seems to suggest it should only be in the affordability considerations only?
- IK This passage says "We hope that the numbers come in within the control budget and, further, the calculated Optimism Bias may be expected to be contained within the level of the specified contingency considered in the control budget" which means that any further QRA will fit within the Optimism Bias. The Optimism Bias will be reduced to the control budgets contingency. This is an optimistic statement.

GM You mentioned the word “optimistic” I just picked up on you saying “we hope numbers come in” it could be interpreted as quite optimistic.

IK It is not written in that manner is it? It is written in a positive manner that the conditions precedent for this statement are those things being done and we have got to start from the purpose of these tender prices being received within the control budget. Therefore, given that that happens then the statement makes sense.

GM Do you think it is good practice then to base it on such an optimistic interpretation of it?

IK It is pretty strange to think that when you know a tram costs £1.5m that somebody is going to come along and charge you £2.25m or £3m which is the equivalent of putting an Optimism Bias factor of 40% on a known supply item so there is actually, within the budget, there are different things which are not going to add to a requirement for a 40% increase at all and if we have got our market, and our understanding of the costs of a vehicle correct, then it should be well within the control budget and it should be adequate within the contingency that we have allowed for that particular element. On the other hand there will be other elements which are not so well known, not so well understood or predicted so in the round, we still have to back that the budget is a correct budget and that we have effectively managed the delineation and the scope of this project so as that we understand what it is and we understand what it costs.

GM (**TRS00002045** and **TRS00002043**) draft answers to questions from the Line 2 committee of the Scottish Parliament in November 2005 (see (**TRS00002043**, **TIE00027141** and **TIE00027142**) for the context.

1. These are draft answers. Were these, or a different version, in fact sent to the committee?

2. Please explain the answers to questions 4, 5 and 6.

IK This is a Barry Cross question.

GM We will need to go and have a look at that.

IK I can try but Barry will be the only person who can. Of course Dundas & Wilson have you got all the database and times and everything? You must have?

GM We do – yes. These are draft answers so get the version control that would go to Parliament we would need to clarify that with Barry. Did he deal with Amur?

IK Barry dealt with the whole of the Parliamentary process full time.

GM It is explain the answers to questions 4, 5 and 6. The question is if the Treasury's requirements are for an Optimism Bias – this is question 4 – of 24% why did the promoter assume a specified contingency of approximately 10%? You can see the answer is "Optimism Bias was developed by Treasury as a means of mitigation against tends to under-estimate the capital cost of works. TIE has always considered that because the cost estimates for the tram project are well developed and in the most part based upon the outturn costs on a similar project" we have spoken about that, and "the specified contingency of 10% advised by our technical advisors will be adequate to deliver the project. In the absence of any significant changes scope of the project or the timetable we would anticipate the calculation of Optimism Bias under Treasury guidelines will fall to 10% or less". You have explained this as well once the tenders for the main infrastructure works have been received in the autumn of 2006.

Just to explain the question is specifically to explain that answer there.

IK This is now a stronger perhaps statement isn't it?

GM It is – yes.

IK This is saying that the writer here is expecting that we would come to a position whereby the Optimism Bias will be replaced by a contingency estimate at, or less, than 10% once the tenders have been received.

GM So your thoughts around that?

IK Aggressive. I think I am pretty certain that the writers had been sold on a procurement strategy which should actually have achieved this. However, it is 10% of the, or less of the actual prices that have been returned.

GM Obviously they are justifying the reduction based on the outturn costs on similar projects. Would that be the Croydon tram project that they are mentioning there?

IK Once that contract was put into place, as far as the final completion cost to the Government, did not go up by 10%, it did not go up by 10%, it is certainly much much less than that, once the contracts were in place.

- GM If it worked out that way at the end – are you talking about the Croydon one?
- IK Yes. In terms of what happened within the Consortium there was a 22% cost overrun in the hands of the contractor.
- GM Was Optimism Bias, I know it is a relatively new phenomenon.
- IK It wasn't considered then. What was considered was a fixed price and a fixed lump sum grant which was delivered by Government to partially fund the development of a tram scheme so it is a bit of a different model. Therefore whatever the Optimism Bias was will have been contained within the estimates within my budget and by the individual contractors who are delivering parts of it.
- GM Perhaps the guidance in relation to Optimism Bias wasn't relevant in those days anyway?
- IK No.
- GM Question 5 was the extent to which this contingency proves to be necessary will be dependent on the number and value of changes to both scope and programme. Can any indication be provided of the likelihood of these contingencies being required? They are anticipating the requirement to increase the specified capital costs of the project including this 10% contingency would have resulted in significant changes to the scope or timetable so looking at a change in service level changing, quality and materials and significant new costs and they mention timetable changes etc. Could you just explain the kind of thought process behind that answer? They are looking at the changes to scope programme but they are looking at predominantly timetable changes, quality rather than anything else or a speed limit.
- IK If you have started with a presumption that the contract has been awarded part or in almost part to be awarded on a basis of a fixed price approach then variations are going to come for the use of this contingency based on one of the risks that you are running or something that you change in the delivery requirements and performance risk speculation that the Infracore is working to. Therefore these are just examples of what could be a multiplicity of reasons rather than being the most likely even or driving reasons but they are examples.
- GM Question 6 is: What are the consequences of the financial viability of the scheme if the Scottish Executive and the Edinburgh Council decides that there should be visible funding in respect of the additional contingency and

the answer is the strategy now being followed is that Edinburgh Council and Scottish Executive will not make a final determination on funding until after the initial tenders for the main infrastructure and vehicle contracts and explain the answer to the previous question at a time we will have a degree of certainty with regard to final cost of the project such as the level of Optimism Bias required under Treasury guidance should have fallen to that or below TIE's specified contingency. It is almost against what Optimism Bias is saying, it is almost having this optimistic view that once tender costs come in etc then the recommended Optimism Bias figure might be negated to 10%.

- IK This is adding up to the fact that it is going to be at or below TIE's specified contingency which is 10% and that by the time the bids have been received based on those previous conditions precedent, that you would be in a position whereby you would be able to justify by Optimism Bias simple or by quantitative risk analysis so that you have got a risk contingency which is at or below this specified contingency of 10%.
- GM Were you happy with that optimistic view? It is almost like you are holding your breath and hoping that it is going to come in.
- IK This is to the Parliament and if the answer becomes 'no' then somebody is in contempt of Parliament and that is not going to happen from my lips. Is it unnecessarily optimistic? I don't think it is. Is it fundamentally wrong by virtue of exaggeration? No I don't think it is that either. Is it difficult to achieve? Yes. Were the authors at this particular time believing that we could achieve it? Yes, I am certain of that. Why were they believing it? Because we had every right to expect that we could deliver something in this project and that I could specifically deliver something in this project at or equal to what I delivered in Croydon tram line without funding and that was the belief, not that anybody could do it but that I could deliver. That is my view anyway.
- GM Were you happy at this assessment of Optimism Bias?
- IK Where I think the argument is perhaps weakest is that the capital cost budget, excluding contingency, was accurate enough to reflect the final construction price. There are so many variables that come into that and unknown risks still in the hands of contractors, the market place hasn't responded, we do not whether we have got four competitors or one competitor. If it is one competitor of course this is going to be a different price than if we have got a good set of competition but we have the expectation of things at this stage in getting this through in terms of we are taking a positive view of the outcomes.
- GM The Draft Outline Business Case, March 2006 (**CEC01856896**) also discussed Optimism Bias.

- *It noted that “CEC and SE determined that there should be visible funding in respect of the incremental Optimism Bias when assessing the affordability of the phase 1 of the project as described at section 5.6 below” (5.3.6, _32).*

The OBC estimated the cost of the line from Leith to Edinburgh Airport at £484m, including £54m for “incremental Optimism Bias”.

a. Can you explain this?

What do you think the Scottish Executive and the City of Edinburgh Council meant by determination that there should be visible funding in respect of incremental Optimism Bias?

IK I think that they should see the reasons and be associated with the approval process for any part of the incremental Optimism Bias ie the 14%.

GM Why do you think they were determined that there should be visible funding in respect of this?

IK Because I think they were wanting to be careful about the public money.

GM Do you understand that?

IK I understand what would have been behind it – yes. The desire not to let that further 14% being in any way used in an uncontrolled manner.

GM Did you have comfort then in your own organisation that there was visible funding, ie there was awareness ... you’ve got CEC and SEC determined that there should be visible funding in respect of this incremental Optimism Bias. Did you accept that and were you confident that in your organisation there was visibility on that matter?

IK Yes.

GM Who would have the hands on?

IK The commercial management.

GM Who would be in charge of that?

IK At this stage it would have gone up through Stewart McGarrity.

GM TIE maintained risk registers which included analysis of Optimism Bias see, eg, (**CEC01854568**, from June 2004; **CEC01881851** and **CEC01881852**) from February 2005)

1. Are you familiar with documents like this from your time at TIE?

2. Who prepared them, and how were they used?
3. Who was responsible for the parts of the document which concern Optimism Bias?
4. What was the particular function of the documents in relation to Optimism Bias?
5. What was your understanding of the analysis in the document about Optimism Bias?
6. According to these documents, you were responsible for all of the "Procurement Group" risks. What did that responsibility entail? What work did you (or your team) do in relation to them?
7. Were the risk registers used by TIE management? In what way?
8. TIE engaged a full time risk manager. Can you explain the role of the risk manager? What was his expertise? Why was he engaged?
9. Do you consider TIE's approach to risk to have been appropriate and effective?

1. Are you familiar with documents like this from your time at TIE?

IK Yes.

GM 2. Who prepared them, and how were they used?

IK Mark Bourke.

GM How were they used?

IK In meetings, in reviews, in discussions, in review of mitigation methods and what we were going to be doing and in documentation preparation.

GM 3. Who was responsible for the parts of the document which concern Optimism Bias?

IK Mark was.

GM 4. What was the particular function of the documents in relation to Optimism Bias?

IK To set out a documented basis for our understanding and knowledge associated with risk management which bore against the question as to what the actual percentage of Optimism Bias would be and you can see in these documents that in 2006 not in 2004 and 2005 but now what we have got is we have in this last one we have reviewed which is **CEC01856896** we have acceptance, we have achieved acceptance now of the Optimism Bias at 25% including 14% above the specified contingency. Therefore we have actually

got in March 2006 through, albeit this is a draft document, we have got through to agreement. How was it used? It was used to convince ourselves and anyone else looking at us that we had a professional approach to it.

GM Therefore just to convince yourselves the professional approach was also used as a control measure?

IK It was used proactively not just to convince ourselves it is to be used.

GM 5. What was your understanding of the analysis in the document about Optimism Bias?

IK No comment made to this question. Do you want me to carry on with number 6? According to these documents, you were responsible for all of the "Procurement Group" risks. What did that responsibility entail? What work did you (or your team) do in relation to them? Them being these – [CEC01854568](#), [CEC01881851](#), [CEC01881852](#). Basically the responsibility for the Procurement Group risks was to identify and to work with the team to determine whether the level of risk it was and what seriousness it was, which is produced by compiling the various views as to how serious the risk would be and how likely the risk would be.

FI That's just referring to that table – page 16 on this document [CEC01854568](#) and what work did you or your team do in relation to them?

IK The team went through the risk matrix or through the list of the risks and worked to agree what each of those risks would be and what seriousness and what likelihood it would have and whether the risk would be mitigated or not and whether it could only be partially or fully mitigated and a judgement call was made on each one of those risks.

FI 7 was ...

IK Were they used?

FI Were the risk registers used by TIE management?

IK They were used by TIE management in terms of several things. One is they developed and confirmed the group understanding of the risks associated with the project – number one. It meant that there was a genuine and increasing appreciation of what those risks would be and what the mitigation potentials and options would be. TIE engaged a full time Risk Manager – Mark Bourke. Can you explain the role of the risk manager? What was his expertise? Why was he engaged?

FI 8. You are saying TIE engaged a full time risk manager. Can you explain the role of the risk manager? What was his expertise? Why was he engaged?

Was that his area of expertise?

IK It was his area of expertise and, from memory, he actually came from Mott MacDonald. The only question I have in my head is whether or not he did come from Motts before he came to ... If you bring up Mark Bourke we'll check his background but his role is to develop and document in accordance within a pro-risk management system and risk management procedures which were being developed and unfolding as we were moving forward and his expertise previous was that he had done that before. Why was he engaged? Because every prudent project management team should have an element of risk management whether he needed to be full time for the tram project – answer 'no' – but across the portfolio of TIE projects the answer is 'yes'.

GM 9. Do you consider TIE's approach to risk to have been appropriate and effective?

IK It was consistent at the time with industry practice and now I would suggest that it would still be consistent with industry practice until we got further into the definition and qualification of the aspects of the project at a slightly more detailed level. At the end of preliminary design, let's say 30/40% through the design process, by that stage a very very rock solid big connotative risk analysis can be conducted because you are working on real quarts quantities. Until that time you have still got some flex in those quantities and therefore it is not as useful and reliable in terms of the upper extremes of the risk analysis.

GM (TRS00004270_7) is a response by CEC to Transport Scotland's comments on the Draft Final Business Case, dating from May 2007 (TRS00004269) – after you left TIE, but it refers to matters which took place when you were there.

It includes the following remark:

"TIE and Transport Scotland undertook an exercise in July 2004 to ascertain how OB should be applied and agreed that, as the guidance contains insufficient data to confirm that light rail schemes can be grouped with other rail projects and as an enhanced procurement strategy was being undertaken, OB would be eradicated or very low at the time of scheme investment. Instead of using OB, Transport Scotland decided to adopt a very high confidence figure of 90% in the estimate of risk allowances to cover for specified risk, unspecified risk and Optimism Bias. Hence the unknown risks are taken into account by applying the P90 confidence level to the QRA".

1. What was the “exercise” undertaken by TIE and Transport Scotland?
2. Were you involved?
3. Is the summary of the discussions at (TRS00004270_7) accurate? If not, what else was discussed?
4. Can you expand on what is summarised about the outcome at (TRS00004270_7)?
5. Do you have any comment on this approach to Optimism Bias?
 1. Was there a view in TIE that, one way or another, the provisions for Optimism Bias had to be reduced if the project was to be financially viable?
1. What was the “exercise” undertaken by TIE and Transport Scotland?

IK I believe I can recall the process of the advisors to TIE and TIE. I am not certain with Cyril Sweett in play yet at this time but I am almost happy to say some of our peer review as being – no it is too soon, no peer reviewers weren’t there. This exercise in its detail I think you need to get to Mark Bourke to answer.

GM Do you remember the exercise?

IK Yes. I knew that it was going on and I will have been involved in some parts of it but Mark was managing it.

GM The summary of the discussions are in the document (TRS00004270) that I am just bringing up just now – page 7.

IK I undertook this exercise in July 2004 to ascertain how OB should be applied and agreed that.

GM I can research that and bring that up tomorrow to save time.

CEC ultimately bore the risk of a cost overrun in the infrastructure contract. Various documents suggest CEC had a very low appetite for risk. Eg, the Draft Interim Outline Business Case, 30 May 2005, (CEC01875336_14) proceeded on the:

“key funding assumption” that “CEC does not have the capacity to contribute to the capital expenditure in relation to any element of the project unless and until the receipts from projected surpluses from operations and property development are realised. Further, CEC does not have the capacity to assume the risk of borrowing against those future revenue streams ...”

1. What was CEC’s attitude to the risk of a cost overrun? Did it differ from the attitude of the Scottish Executive/Transport Scotland?
2. Were the views of CEC sought on the treatment of Optimism Bias?
3. If so, what were they? If they were not consulted, why not?

1. What was CEC's attitude to the risk of a cost overrun? Did it differ from the attitude of the Scottish Executive/Transport Scotland?

IK I think generally the view of the risk of the cost overrun was "please try and make sure doesn't happen and/or minimise it and please be clear that we do not have the capacity to fund it".

GM Do you think it differed from the Scottish Executive?

IK No. I think the CEC was trying to get a marker down in the sand that there was a limitation as to how much they could fund and that anything else would come from the Scottish Executive.

GM Did they have a marker in the sand as well?

IK The majority of the conversations about the budgetary provisions from CEC were conducted by Graeme Bissett and also Barry Cross would have been around and conducted with Andrew Holmes and I think Council Treasurer and they were discrete packages of more or less certainty adding up to a sum of, I cannot remember precisely, I think it was £50m, part of which would have to have come through development gains that Andrew Holmes was able to achieve in certain locations.

GM Development gains do you mean contributions by developers?

IK By developers.

GM 2. Were the views of CEC sought on the treatment of Optimism Bias?
3. If so, what were they? If they were not consulted, why not?

IK CEC, in their way, was an expert on Optimism Bias, it was a Central Government and the Scottish Executive type area and the Scottish Executive was working with them. I think the CEC's views, if they were sought, would have been sought and discussed by Graeme Bissett and Barry Cross. What were they? The evidence should come from those two I think.

PROCUREMENT

The Procurement Strategy

GM 1. To what extent had a procurement strategy for the tram project been developed by the time you joined TIE?
2. Which individuals or organisations had been involved in that process?

The procurement of Infracore appears to have been under consideration and the subject of advice, eg (**CEC01868299** and **CEC01868300**)(Draft paper by Grant Thornton entitled “Infrastructure Procurement and Funding Options Evaluation”; sent to you on 29 September 2003 (**CEC01868298**)).

1. Can you explain the thinking about procurement of the infrastructure contract at that time?

2. What were the key factors influencing it?

3. It appears that all procurement structures under consideration were variants of design and build. Why was that so, and why did it change?

4. There is reference to a “partnering” or “framework” type contract, under which a “firm bid and price is agreed”. Can you explain this?

What was your role in relation to the procurement strategy after you arrived at TIE?

What organisations and individuals did you work with in that regard (both at TIE and externally)? What role did they each play in developing the procurement strategy? For example:

- Grant Thornton
- Price Waterhouse Coopers
- The Procurement Working Group
- Scottish Executive
- CEC
- Partnerships UK
- DLA
- Others?

1. To what extent had a procurement strategy for the tram project been developed by the time you joined TIE?

IK It had been discussed, there was an outline procurement strategy, the involvement of DLA Piper and Grant Thornton and PUK, together with TIE, was in that procurement strategy, had been working along for some time under Michael Howell and Alex Macaulay and they had arrived at one fundamental building block which was already then being actioned which was the engagement, purely operator engagement, through the Parliamentary process, through the procurement process in support and construction process and then into the operations and maintenance and that building block had been set in motion. The remainder, at a detail level, of the procurement strategy had not been finalised and agreed when I came along.

GM 2. You mentioned a few organisations and certain individuals there however was there one individual that was kind of leading the process?

IK It was being led under Alex Macaulay.

GM The procurement of Infracore appears to have been under consideration and the subject of advice, eg (**CEC01868299** and **CEC01868300**)(Draft paper by Grant Thornton entitled “Infrastructure Procurement and Funding Options Evaluation”; sent to you on 29 September 2003 (**CEC01868298**)).

1. Can you explain the thinking about procurement of the infrastructure contract at that time?

IK Partnerships UK what are they? That was a joint venture, an independent group set up independently by Treasury and private sector investors to guide and to advise Government authorities, such as the CEC, on aspects of procurement and PFI and/or PPP, it could be called then and then later strategies, and came with a *raison d'être* that best value for money is achieved through PFI and what does that achieve? It is a fixed performance specification. It allows the maximum transfer of risk and, therefore, the minimum likelihood of cost overruns which have been seen before on previous projects. One of the early options was “could this be done as a PFI”? The answer is “yes it could have been done as a PFI”. The model would have been very very similar to what I did in Croydon. If it was done as a PFI the utilities diversion would have had to be done by the CEC, by TIE. Why? Because the only tram company, tram consortium, that attempted to do that was Carillion in Nottingham, they lost their shirt and everyone in the market place knew it and it was unnecessary for the private sector to get involved in that and they were unwilling to get involved in that so it would not have happened but, yes, it was possible. The outturn total cash flow on a PFI deal would have been significantly greater to Government than the cash of the funding of project model but that comparator was run in Business Cases going forward for at least two or three years. Inbetween a lower bound risk transfer of an NEC-type standardised contract with a whole lot of schedules and/or but with high variability and fairly soft transfer of risk right the way up to a full PFI transfer with “this is the performance specification do it and don't come back to me until you have finished”. Within there was, if you like, variable options that were then being worked on and developed in an evaluation framework and that is what I took the part in under the still Chairmanship of Alex.

GM The thinking about the procurement of the infrastructure contract at the time – PFI was looked at or together with the funding of project model.

IK But in all cases a design and construct risk transfer model was the minimum starting point.

2. What were the key factors influencing the design and construct risk management model that was the basis of the funding of the project model that was eventually?

IK A genuine belief that the public service in the public sector has not been typically very good at managing itself and therefore gets itself into all sorts of trouble and what we should do is set it up and establish a platform for the private sector to come along and do it but make sure you have got it right before you get them to come otherwise it will just be a mess.

3. It appears that all procurement structures under consideration were variants of design and build. Why was that so, and why did it change?

IK It didn't change.

GM I will summarise it. You have got the PFI v the funding of project model and these variable options inbetween were discussed and design and construct risk management model was the starting point would that be design and build?

IK Yes.

GM Variants of the design and build were then discussed?

IK Because the operation part had already been taken away. The operations had been ceded from a design build and operate model to a consortium model including and operated to in favour of having an operator involved in the promotion and procurement of the construction and the trams and the vehicles so that the system could be operated better and more would be delivered more cost-effectively. Therefore there was no design build, finance and operate because the operate was away. The transference of the design and construction, the systems integration and the vehicle commissioning testing, all of those things as an integrated package was exactly what everyone wanted either with or without finance and that was the difference between a PFI and the rest and then the contract form, whether it be specifically bespoke, performance specification or whether it be all the way back through to, it would be an NEC 2 at that stage, which would have been a different approach, softer approach, could have been were the options that were considered on top.

GM 4. There is reference to a "partnering" or "framework" type contract, under which a "firm bid and price is agreed". Can you explain this?

IK That would be something along the lines of an early contractor involvement type contract where a contractor is engaged and provides a service at the same time as the development and the budget is further developed and refined over a period of say 12 months or so and at that point you would be able to close the budget and have the contractor then continue to do the things within the budget and those things that were not within his budget could have continued to do so it would have been that sort of a model.

GM What was your role in relation to the procurement strategy after you arrived at TIE?

IK In principle I could take then promoter of it.

GM What organisations and individuals did you work with in that regard (both at TIE and externally)? What role did they each play in developing the procurement strategy? For example:

- Grant Thornton
- Price Waterhouse Coopers
- The Procurement Working Group
- Scottish Executive
- CEC
- Partnerships UK
- DLA
- Others?

In relation to developing the procurement strategy Grant Thornton?

IK Grant Thornton that was John Watt and Katie Howatt; James Papps from PUK, sometimes Martin Burke, but little really, and I have forgotten the Deputy Chief Executive of PUK, he came to some Board meetings; DLA Piper which was Andrew and Sharon; Doug Blankey from Faber Maunsell and David Hand from Mott MacDonald. Therefore we had the technical engineering people in there and, of course, at a later stage, then we had the opportunity to bring in Transdev but we kept Transdev mostly out of this but that was then.

GM The only one that I didn't get was Price Waterhouse Coopers.

IK PWC weren't really involved, no, Grant Thornton was involved and that's the evaluation team.

GM What role did each of these and we will start with Grant Thornton?

- IK Grant Thornton each to their specialisation, each to their skillset but working as a multi-disciplinary team to evaluate elements of risk associated with different options so comments on financial risk, when we are rating them between an NEC project and a PFI project, of course everyone knows that maximum financial risk transfer funding is over on the PFI side and you need a pretty significant contingency up your sleeve if you are going to go for an NEC 2 model whether it is 10% or 24% or 40%, you need one, therefore you have those things going on and certainty of funding and transfer of risk. Those things, as a group, were being worked on, not so much specialist advice, a high level evaluation methodology and matrix.
- GM PWC in relation to the development of the procurement strategy?
- IK No. They weren't around, PWC weren't around at the time.
- GM When did they come on the scene?
- IK They came later when Grant Thornton left, I don't remember the precise timing of that but that is what happened.
- GM The Procurement Working Group?
- IK Those people together were the Procurement Working Group.
- GM Scottish Executive their involvement in developing the procurement strategy?
- IK They were involved in reviewing it a lot and that was Damian Sharp and KPMG were engaged through them.
- GM CEC?
- IK Andrew and Keith and the Board.
- GM And their contribution in developing a procurement strategy?
- IK Was to review the reports and approach in the documentation and to generally agree that they couldn't see any reason why not or anything better.
- GM Partnerships UK?
- IK Was involved in the agreement in the evaluation of it and once the evaluation of it was done they really stepped back from the development of the documentation and engaged to do that.

- GM DLA?
- IK DLA once we got through to the procurement then we put them on the job in a directed fashion.
- GM A TIE procurement policy recommended by Mark Bourke was approved at the TIE Board on 25 October 2004 (minutes: (**TRS00018648**_4; papers **TRS00018644** at _26) (policy at _198).
1. What is this and what was its purpose? (Paragraphs 1, 2, 3 and 7 are probably most relevant.)
 2. Who drafted it and what were its origins?
 3. What use was made of it within TIE during your time there?
 4. Was it followed during your time at TIE?
- IK When Price Waterhouse Coopers were engaged they set about doing an independent review of all aspects of the procurement strategy and they are right under my skin because by now we were doing stuff and they really did try very hard to test every single aspect of it and they took me to task in no uncertain terms but I survived and we moved forward. As a further gloss to the answer but the group was and then TIE ... we did it to ourselves.
- GM That sort of peer review type thing?
- IK Yes. Involving PWC.
- GM That is the TIE Board meeting – I am hoping this is the right one. It refers to the minutes (**TRS00018648**) – page 4 when the TIE procurement policy was recommended by Mark was approved at the Board. Why would Mark be recommending that? I think that could just be general minutes.
- IK At page 26 this is Mark Bourke's risk report. It is appropriate that Mark is producing a risk report and as part of that risk report he is reporting on the procurement policy, I don't believe it is the first time that the procurement strategy and approach has been talked about, but at this point he has produced a policy rather than a strategy for a project so that is different, that is company-wide, that is not project specific.
- GM The procurement policy (**TRS00018644**) and TIE have developed a procurement policy to capture the following areas and it is procurement strategy, value for money, competition, legal obligations ...
- IK And as you can see it has got things well and truly outside of just one project – insurance advisory, Optimism Bias, and Mark's hobbyhorse.

- GM 1. What is this and what was its purpose? (Paragraphs 1, 2, 3 and 7 are probably most relevant.)
- IK Mark has put it in to the Board to get an agreed approach for procurement policy associated with company activity. Who did it? Mark did it and what were its origins? Mark has got a view across. You have got to remember besides Michael only Mark and Graeme Bissett probably have got an overview across the four projects that we were doing – Stirling/Alloa/Kincardine, congestion charging, the EARL and the tram and then we had other projects that are there, the ITI stuff.
- GM 3. What use was made of it within TIE during your time there?
- IK High level policy is something that you simply do not, generally speaking, violate, it is not how to do things, it is not a procedure, so what the use of it was one of the things that was considered going forward.
- GM 4. Was it followed during your time at TIE?
- IK It is a high level policy – the answer is most likely as in I would say “yes”.
- GM And 198 kind of details it a bit more I think. That is actually the policy there and some of the passages that came out of it 1.4 it was “TIE will review the procurement options available to ensure that suitable delivery mechanisms are adopted fit for purpose and appropriate for the individual project needs” is that acceptable – yes.
- IK You can’t (24.02) tried to do that.
- GM 2.1: “TIE undertake to identify the most appropriate procurement strategy that transfers and shares design, development, supply, construction and operational risks with the Private Sector. TIE plan to undertake this decision making process through involvement of Project Sponsors and by taking due account of supporting professional advice from legal, financial, technical and other advisors as necessary.”
- IK There is a specific example where 1.3 the question is asked “was use made of it?” The answer absolutely when we come to the award questions on SDS where Mott MacDonald v PB, of course with the others, were evaluated on a basis to normalise the evaluation to actually achieve a selection based on most economically advantageous, that is what we had to do and did do on the SDS one. That’s one specific example so answer ‘yes’.

GM 2.2: "TIE will select procurement strategies with clear understanding of risks retained (and shared) by the public sector and potential grounds for claim under the Contract, TIE's Project Managers should additionally have a clear understanding of the advantages and disadvantages of the preferred procurement route. This Policy is supported by TIE's procedures for the Development of a Procurement Strategy."

2.6: "TIE will engage advisors, suppliers, contractors and operators who are suitably experienced with the procurement method selected, TIE will assess staff training needs to ensure staff awareness in emerging forms of procurement."

3.1: "TIE consider that an understanding of the Project Sponsor's requirements is fundamental. To ensure best VFM in procurement the relevant factor is whole life cost, not lowest short term price. Whole life cost takes into account all aspects of cost over time, including capital, maintenance, management and operating costs, whenever they fall."

Would you argue with any of these?

IK No.

GM We would like your explanation of TIE's procurement strategy, especially the following features:

1. (briefly) the early appointment of the operator, Transdev;
2. (briefly) the separation of the infrastructure contract from the operation and tram supply contracts;
3. early development of design;
4. early diversion of utilities by a contractor other than the main infrastructure contractor;
5. the objective of a firm or fixed price for infrastructure works;
6. procurement of the infrastructure contract in parallel with the development of the design, rather than subsequent to its completion;
7. TIE's retention of control over design and utilities diversions pending the award of the infrastructure contract;
8. the 'dis-aggregation and re-aggregation' of the contracts
9. the novation of the design contract to Infraco.

These issues are addressed below in relation to particular documents. There will be an unavoidable element of repetition but, at the outset, can you please address the following:

10. What were the perceived advantages of the procurement strategy?
11. Had it been used on projects prior to the Edinburgh tram project?
12. Has it been used on subsequent projects?
13. Were there features of the strategy which required particular care or planning if the strategy was to work?

14. Were there particular risks or pitfalls with the strategy, both which TIE had identified in advance, or with the benefit of hindsight?
15. Were those risks or pitfalls recorded, and if so, where?
16. What had to be achieved if the design contract was to be successfully and smoothly novated to the infrastructure contractor?

1. (briefly) the early appointment of the operator, Transdev.

IK I wouldn't necessarily have done that in the first instance but it was already decided. The early it has benefits, the benefits are associated with having credible people committed to the project, sit before the Parliamentary Committee and Committees and provide convincing evidence from their worldwide transportation and tram operations experience just exactly to assist in the removal of objections and the removal of spurious thoughts and questions and issues. That was highly valuable in the process and I know Barry Cross will reinforce that 100% and it was therefore for that plus then the ability in the procurement process for them to have a view in the design and important assets, the control room, the maintenance facilities, the depot, the depot marshalling and the impact on the design in terms of making sure that the performance of the scheme and run time end to end would be met, they got that capability themselves, were primary examples where, if they didn't come along until later at the end of the tender process, all you would be doing is looking at a multiplicity of variations going forward if you wanted to optimise it. Therefore we wanted all of the good stuff that we could get from the operator up front and into it. It was particularly important that the early operator had experience because none of those things that I have just said would have been possible to be advantages unless the people who came were of that quality. Therefore, the four that were shortlisted were First Group who ran, for me, my tram system, Croydon tram link in London; Transdev who was running Nottingham; Serco who was running Manchester and Keolis, who weren't running anything yet, but were running a lot in France – those four. Was I at any stage to put someone from this township called Lothian Buses anywhere near this competition they would never have come anywhere close to being a participant in this project whatsoever and, at least, at one level, and at that time I believed that that was for valid reason and understood. We wrote a long-term contract with the operator in different stages to reflect the contract passing from Parliamentary process to design to construction and into operation and each of those stages I put all of the experience that I had plus that of the team and we worked very hard to get a very good long-term contract, very good. Better than TFL has now got in Croydon because TFL bought the private sector business, that I had set up, from the shareholders. Better than First Group's deal, 100% better, not 100% better but better.

GM There were more benefits in having the early appointment of the operator Transdev?

IK We already had competition and competition in terms of pricing. There were price elements in this and going forward. There was a framework that was established. The transfer of risk was achieved with a five year rebasing strategy in terms of, for example, wage costs which was the primary cost of the operator is their drivers and they are security people and they are conductors, more a labour business than it is anything else and that is what we did and that was based on what I had already done in Croydon. That was why we did it and how we did it.

2. (briefly) the separation of the infrastructure contract from the operation and tram supply contracts?

IK Why was there a separation? The separation between the operator and the infrastructure. The only that they could not have been separated would have been to have an infrastructure and operations contract going forward and at that point you would have had a consortium, including a tram supplier, that is what I had in Croydon. I did have Sir Robert McAlpine and Amey, together with Bombardier and together with West London buses then taken over by First Group, that is what I had and worked with and that team. The decision to take the operator out of that meant that then you could only ever have either an infrastructure and tram supply separate or that you would have them (31.59) as a tram supplier subcontracting to an infrastructure. Once the first decision was taken then they had to be separated and that is in fact what the situation was so the question Michael Howell asked me "do you want an operator upfront" I was in two minds at the beginning and then I realised the benefits of going with the operator and was then happy to keep them separate. The reason and the rationale for there to be separation in the first instance between the Infraco and the tram supply contract is market place competition and price. Fundamentally 100% that.

GM Can you elaborate on that?

IK I can elaborate specifically. If I can have a tram manufacturer from ten different manufacturers or 15 in the world if I want and if I convince them to come they will all come. All the local boys and European boys will come but don't forget the rest of them, the people from Eastern Europe, the people from China, the people from Japan, even from Australia there are manufacturers of trams and tram vehicles. The depth in the market place for tram supply contracts is greater than the depth of supply or contractors who would be prepared, under any circumstances, given the previous experience of light rail contracting in the UK, in particular with more 10, 15 – 2, 3, 4 no more, maybe

one or two or three, no more. If I allowed myself the situation where I combined Infracore and tram supply what then I have is Bombardier joining forces with (34.00) I am just going to throw names – Bombardier with ????; Siemens with Bilfinger Berger with their vehicle, CAF comes together with ???? from Spain; Alstom they come together with ???? don't they from France ???? and that is what happens and each of them finds Morrison and somebody else who is local or Alfred McAlpine or Robert McAlpine who has got enough history here and suddenly you have got a consortium. Therefore the availability of the Bombardier tram is linked to the availability of the consortium or group that they are working with only. If I find, for one reason or another, that the best tram happens to be the Bombardier tram but that the worst contractor is the group that they are with, what do I do? What if I find that the combined price is the highest but the Bombardier tram could have been cheapest and it is the one I want what do I do? This is where I like to just explain it in one way and that is this strategy was all about building our own consortium. We procure tram supply independent, I could have had the 15 who were shortlisted to the four and CAF got it. If we would have had five it would have been Ansaldo from Italy, probably as number five, the reason is that Bombardier trams were in Croydon, my system, Ansaldo went to Birmingham, a derivative of Bombardier who was taken over, that was the original Nottingham trams. The point of it is that I am trying to make, the beauty of the separation of the three was having separated already the operator, recognising that there was extremely limited competition in the Infracore market, the ability of separation but recombination later for other reasons, the ability of separation meant that I could get the best tram that I wanted and that was important to me. One of the things, you will hear this name come up later in the Peer Review Group, who eventually came in, Mike Heath. Mike was my counterpart and worked for London Transport, he privatised the bus companies and then he did the PFI deal for Croydon tram link so he had a lot of relevant and useful and past and previous experience to bring to bear and he was therefore involved in the Peer Review Group and readiness review groups later. He said to me "I just want to tell you that you have got the most expensive construction pricing and Bombardiers the most expensive tram by about 10/15% over the others", "thanks very much Mike". How did I square that circle? By having the most optimistic revenue forecast, that's it. If I didn't have the most optimistic revenue forecast I wouldn't have won the deal but here we have a consortium made up of well-thinking, good people and Bombardier we know they put a couple of million extra on to each vehicle and five on the total sum of the project over what I could have got had I been able to ask another supplier. We then Amey and when we were in joint venture for Bechtel after I finished Croydon tram link went through (38.29) I went to Amey, as I explained. We were running the bid for Manchester phase 3 extension, Amey and joint venture with Bechtel. What were we to do? We wanted a procurement strategy to self-purchase trams after the client

had approved us as the contractor. After we had signed the Infraco deal then we would go into the market place and buy the trams and we would take the risk on the fact that our price we got wrong – why? – because it is something we term in the industry ‘better buying’. You can get a better price the day after you have a deal than you could have the day before you have got that deal because you can put the screws on the supplier to give you their best and final offer. It is simple trading mentality but it is absolutely true. What were we trying to do? We were trying to select the best package and supplier of a tram and the best supplier of an Infraco, maximise market competition to get the best price in the tram and then hand the integration of that tram into the rest of the infrastructure to the Infraco and that is why it happened for those reasons.

GM 3. early development of design;

IK The simple question is firstly answered by the fact that Mott MacDonald and Faber Maunsell, who had been engaged back in 2002 or 2003, 2002 I think, was for the support associated with the prosecution of the Bills, it was for nothing downstream of that. Once the Bill was passed the contract ceased and there was no way that we could negotiate on the terms of that which was effectively a (44.55) cost + type arrangement – free spaces – because the open-ended nature of the Parliamentary process ‘how long do you sit in a committee?’ I can’t give you a lump sum for that can I and no right thinking legal practitioner whoever gives a lump sum to anybody pretty much for anything for the same reason. The point being that that was not available to us going forward and had the designers taken us far enough in the prosecution of the design for the process of the Bills to enable us to get the best price from the Infraco the answer is ‘no’. What is missing? Some things weren’t always immediately apparent to me sitting in the procurement cell and the details of the Parliamentary Bill going forward and the process, I wasn’t involved on a daily basis, obviously I had a general overview and I had a complete understanding of what the Croydon Tram Link Act had in it and one of the things that was not sitting in the Bill, in one case I can say to you quite honestly, pick it up early enough myself, in terms of it to affect a change in the process because I was focussed mostly on engineering aspects rather than general powers aspects. Those things which were critical, and became critical, to get SDS to do was things like the Permanent Traffic Works Orders and all of the engineering associated with that. The traffic modelling in Edinburgh that was going to convince Keith Rimmer and his good thinking traffic engineers, that the streets of Edinburgh were not going to be clogged to high heaven when a tram got priority down on one of the Princes Street intersections and that all of the buses and please convince Mr Renilson that “there will be no time change, no increase of journey time on any bus in Princes Street”, “mmm nice, impossible”. Those are the types of things that

were not solved by taking powers in the Bill. The Temporary Traffic Management Orders, ultimately there was a difference between what they had seen in Croydon and the powers that had been taken up here and this is piece that I picked up too late but there was no other way other than to get it done through the SDS. It wasn't in the scope of works for Mott MacDonald, it wasn't in the scope of works for Faber and without it you cannot get to undertake a utility diversions process at all so you have to get it done somewhere. Plus the reason for the planning permissions requirement coming through was that a lot of the money that was lost by my contractor in Croydon came through the process, whereas the Bill said that there was a planning permission granted for the tram system in Croydon and four burghs that we ran through, it did not give a detailed planning permission for any aspect of it so, for example, tram stop. What is the furniture on a tram stop? It requires a planning permission, in my mind it is a complete piece of bullshit, it should never be required for a planning permission because what is a tram shelter there. The point is that unless that was there it burned McAlpine and Amey and really burned Carillion in Nottingham and I knew that they were going to have a hell's own job in this city. I had learned just exactly how political this city actually is and how difficult, if I had a difficulty in Croydon, then I was going to have a difficulty to the power of two to ten times here. The only thing to do was to advance the design and get the planning permissions and do the traffic management and Keith Rimmer to accept the traffic engineering model, which Edinburgh didn't have, which London did have to start off with and there were pieces that were missing in the overall Council engineering repertoire which had to be created. Basically to derisk the project, we had to take the design further than the design had been taken under the contracts for the Bills for the reasons that I have mentioned plus one more, those plus two more. The first one, the planning permission, in Croydon and in Nottingham and to a lesser extent, in Manchester and Birmingham not really, but in Croydon and in Nottingham. The planners in the Councils, after the PFI deals had been done, took it upon themselves to imagine that what they could get for this planning permission was a re-engineering of the street scene, which pretty much for a tram system that is here and a stop that is here, but which goes out actually to building to building and up the side street and half way down the pedestrian mall and all sorts and you end up with instead of worrying about resurfacing the road adjacent to the track and across where the pedestrian crossing is and a new set of traffic lights, which obviously you do, you end up repaving half the bloody city. Without a delineation and demarcation on where that was going to start and finish the risk in the cost and the programme associated with that in Edinburgh was high, therefore, that had to be taken away. The last piece of it was we could never get the infrastructure contractors ever in a million years to take the utilities diversion risk and this I have now moved to point 4.

GM 4. And you are dropping on to 4 which is the procurement strategy in relation to early diversion of utilities by a contractor other than the main infrastructure contractor?

IK Yes. Market soundings had been taken the PUK had spoken to us actually was pre-dating my involvement and part of it was the outcome that was get the operator on early and the other part of it was "Don't you try to shove utilities diversion risk down our throats on a design risk basis. Don't tell me because I won't do it, because I cannot price it to divert a set of utilities undiscovered in your street, by the way, when I don't have any way that I can price that and certainly under no circumstances, at all, make it a lump sum". Therefore the market place point blank refused and they were correct to point blank refuse it, if I was a contractor I would have said exactly the same thing. In fact, going back to my Croydon experience, London Transport with Turner and Townsend as their project manager, the same Turner and Townsend that came here, the same Bill Woolgar, who wrote his letter, some week or so after I left, on various points, had diverted the Sheffield super tram utilities for the contractor and had diverted and project managed the £25m + of utilities diversion that London Transport had on their side of the deal in Croydon. The PFI deal was done excluding utilities diversions. Nottingham Carillion in their stupidity accepted that risk, for whatever combination of reasons, and they lost their shirt and because they lost their shirt, Carillion hasn't and, probably won't, build another tram system ever, or they will in about ten years because the management will have changed and their corporate memory has gone so they will have another go. However, that's, the point, the point is that you have got to understand that it was, in my view, and in the market place and every single sounding and source of information, it will not be done by the private sector and cannot be done on a lump sum basis. Can it be done on the basis of the outline design by Mott MacDonald? No – well it can be, it can be but it shouldn't be. It can be if you think that the utilities companies know where all of their assets are and that they can redo a design in all of the streets that we were going to go through and affect themselves and organise to get that done on a lump sum basis and organise to do it all at the same time, 12 utility companies or something, at the same time, in the same street, once after the other, but who is going to manage that and then some aspect of the design changes and suddenly what they have done doesn't work and we have got to change it again, or worse miss the opportunity by modifying the track design to avoid the massive sewer diversion, that if you put down "it's got to be like this – four metres, one metre and you can only have side entry manholes one metre away from the four metres on a double track" then you walk into a blank cheque situation. To optimise that process you have got to have the two working (53.50). If you have already accepted that the Infracore will not price all the risks that it is pricing plus the utilities, and the utilities have to be designed and re-modified before the Infracore comes along to build his

track, then you realise that you have got to have to optimise that and get that out as cheap as possible. You have got to have a design capability for the modification of the track to avoid the big sewer, and you have got to have the utility contractor and companies all working together in a project managed way which doesn't stop and gridlock the streets of Edinburgh in that most critical street where you have got all of the festivities and the other restrictions that happen here in a manner which will get you out and finish on a date certain to enable the contractor to come in because you have committed to him to come forward and to have it clear by now, that is why. That is why you needed SDS and why you needed MUDFA to go and they needed to work together. I engaged the best utilities diversion project managers who were working with Scott Wilson, their name is Turner and Townsend, it is Bill Woolgar and his team, I know them and I have known them since 1995, I knew what I was supposed to be getting. We will talk about later what actually happened. You put the project manager on utilities diversion with the best Scottish contractor on utilities diversion with a designer who has got a traffic management plan that works and with an engineer who can redesign the track to avoid utilities problems, where possible, therefore the total outturn budget is the lowest, then you have a marriage made in heaven which turned into a marriage, at some stage, clearly, by somebody's management, into a marriage which didn't work. I am talking about when I was there because I put the building blocks in place and I absolutely truly believed that that was the best possible way to do it with some of the best people, companies that could do it.

GM 5. The objective of a firm or fixed price for infrastructure works?

IK The objective was to get as close to that as was possible. Why? Because I think in my £180m contract down in Croydon in 1995/96, I think probably I had about £2m of additional payments, maybe £5m, total to the contract end £180m, it can be done, could be done, has been done, why do you want to do it different? You don't want to do it different because actually the CEC doesn't have any more money and you know that you have already asked the SEC to index it but that isn't it, the point is it can be done and it has been done and this procurement group established that it could be done again on a performance specification basis but without project finance, or with it, if that is what ultimately the business decided to do. It could be done and it can be done.

GM 6. The procurement of the infrastructure contract in parallel with the development of the design, rather than subsequent to its completion?

IK Time. The procurement process from start to finish, I can't remember whether it was six or nine months, six months at least, preparation time, procurement

time, OJEU notices, two sets of evaluations to get up a designer, then to get to the right place in the design process to have taken away these risks and to work hard on getting the platform for the Infraco to come in. How long would that all take to do the design across the project from end to end? – two years. Therefore we were looking to cut that two years down to be less than that and to hold on to the lump sum risks that we have got, we know that there is innovation. In parallel to was an ability to undertake what we needed to undertake and then get rid of them so that the rest of the stuff that we didn't need to really do because the contractor can happily do it, like the track out beside the Gogar Roundabout in the alignment, that is easy “go and do that, I don't give a shit” but I have to establish for you the platform in Princes Street otherwise I know we are both screwed. The point is that that is blindingly obvious to everybody, blind Freddie can see it, that if you didn't do it that way and you did everything up to a certain point which would have been the only other way to do it, it was going to stop the process until you had got to that point.

GM So time was an issue in that regard and:
7. TIE's retention of control over design and utilities diversions pending the award of the infrastructure contract?

IK No. That's not pending. The point is it would always have been under the control of TIE because as we have just said, but that doesn't mean all of them either. It was never going to be all of them. Even in Croydon when I said that London Transport, using Turner and Townsend, diverted the utilities, they didn't divert all of them, they diverted the things that were necessary to divert but the things where the design had not yet been finalised, for example pole bases, overhead line equipment, pole bases, you see the poles in the street, there is a lump of concrete underneath them – ye by ye by this deep – in each and every case and along the buildings, unless the overhead wire is connected to the building, which is obviously what we wanted to do in any event, but along the centre poles in the centre of Princes Street, there is all sorts of stuff in that street. It was the middle of Princes Street and all of that stuff had to be cleared but if it was not in the middle of the road like that, and it was a pole base to the side, then the contractor can look after that because it is small beer, or not, you can do it all. The thing is that there was opportunity but we had opted for “let's go for all of it and get it all done and packaged”. In the 3½ kilometres of on-street diversions in the centre of Croydon, that was done in 18 months in London so there was no reason in my mind that that could not be done here because there was no evidence that had come from Mott MacDonald, from the initial investigatory process that happened in line 2, analysis through here and down to Leith Walk and/or from the early information that was coming out of Parsons Brinkerhoff under the SDS, there was no indication that the whole thing would blow up, not yet.

GM 8. The 'disaggregation and re-aggregation' of the contracts?

IK I think it is a misstatement. I don't think they were disaggregated, they were procured separately and then combined. Under the concept and take this to your heart because it is what I used to say to everybody day in day out "we are building our own consortium and we are doing it to get the best value for Edinburgh, that is what we are doing and that is why we are doing it".

GM 9. The novation of the design contract to Infraco?

IK There is only two ways that you could go. We could have gone a separate way. The separate way would have been to separate the design contract and even fragment it further and only do the work for the SDS that was associated with, if you like, the optimisation of the utilities diversion process but they would not have been able to design the track so they could have done the design for the utilities diversion process but it would not have come to the best answer. The best answer is where you avoid this big sewer replacement or realignment entirely by engineering the (1.04.38) scheme around it, over it, bridging it, whatever whatever. The word of engineering is ingenuity and that is what I was trying to get the ingenuity to optimise that process and reduce the utilities diversion process.

GM In relation to novation of design contract to Infraco?

IK The point was we decided we would get it in one package and go as far through that process as we could, allowing a design freeze to happen, allowing the good practical work that needs to be done to initiate with MUDFA but getting the documentation up to a point where quantities become very very good, costs become very solid but then continuously improve through an initial tender, our pricing and then our best and final offer so hopefully we get four, then we cut to two, improved detail, final price. When the Infraco comes, transfer the SDS and leave all of the liability for the design associated with the track that you have needed to do without him because you couldn't afford him to come earlier, because you couldn't afford him to come earlier, get the liability underneath him and walk away.

GM These issues are addressed below in relation to particular documents. There will be an unavoidable element of repetition but, at the outset, can you please address the following:

10. What were the perceived advantages of the procurement strategy?

IK The procurement strategy should have given us a risk managed, cheap as possible, best solution for the delivery of the overall scheme.

- GM 11. Had it been used on projects prior to the Edinburgh tram project?
- IK When you got to the point where you had the Infraco with the SDS underneath, with the tram underneath, with the operator separate and with the utilities being diverted – guess what? It is exactly what I had in Croydon only I was taking the dual role of the BFI contract and my concession company and London Transport but I was getting the same position ultimately.
- GM 12. Has it been used on subsequent projects?
- IK I don't think, at the moment, many people are going to copy Edinburgh and I don't think, at the moment, there is going to be very many trams and that this was a problem before Edinburgh became a nightmare.
- GM 13. Were there features of the strategy which required particular care or planning if the strategy was to work?
- IK You needed to know what you were doing; you needed to integrate the contracts; you needed to understand planning; the big thing that can go wrong is the obvious interface risk between MUDFA and Infraco. The big thing that can go wrong is the City of Edinburgh Council planning permissions; the big thing that can go wrong is the traffic management scheme that allows MUDFA to divert the utilities to enable the Infraco to come in and all of those things have got TIE written all over them in terms of these are the risks.
- GM 14. Were there particular risks or pitfalls with the strategy, both which TIE had identified in advance, or with the benefit of hindsight?
- IK Every single one of them had been done before. Not only that, I brought the whole suite of documentation from the Concession Agreement and performance specification, the Infraco contract, the tram supply contract and maintenance contract and the Operations Agreement with the agreement of the concession company in Croydon. I brought them and I handed them to DLA Piper and I handed them to everybody who needed to see them and the whole performance specification is written off of the back for the SDS and the Infraco. It is written off of the back of that documentation and it worked so why didn't it here? I had no reason to believe that it wouldn't work here.
- GM Do we ask that question now then why didn't it work here or do I ask that at the end?

IK I think you should ask that later. If you want a two-way conversation on that, I will give you my view otherwise I can only say "it looks like it might have been because I read the press" which I did.

GM 15. Were those risks or pitfalls recorded, and if so, where?

IK Yes. Everywhere.

GM 16. What had to be achieved if the design contract was to be successfully and smoothly novated to the infrastructure contractor?

IK You had to know where the designer was and you had to know what the ultimate cost to complete was going to be in the design contract so as to be able to manage that transfer, the novation transfer, we really needed to know exactly where it was and there might have been some slippage in that but let's be reasonable or realistic or maybe you just need to know, £23m was the contract price for Parsons Brinkerhoff, I think, from memory, it might have been £23.5m, it might have been £24m, something in that order. You might have written about maybe £4m or £5m of variations on the way through, 60% or 70% of it is finished, you had said to £7m to £10m left what if the contractor puts £5m on it in £500m, it is nothing, really nothing. Therefore if there had to be a little bit of additional design risk margin put in by the contractor well it wasn't going to be a lot really in that transfer process but also then at the transfer point the pre-existing claims needed to have been resolved so you could have a clean handover. Therefore TIE needed to manage that SDS so those things could be achieved.

GM 1. Was the objective of the procurement strategy to obtain a "firm, fixed price bid" for at least the first phase of the infrastructure construction?
2. What exactly was meant by that?
3. Did that require the design, and advanced utilities works, to be wholly complete before the award of the infrastructure contract?
4. If not, why not? And what proportions, and elements, of those works did TIE envisage would be completed by the award of the infrastructure contract?

1. What was the objective of the procurement strategy to obtain a "firm, fixed price bid" for at least the first phase of the infrastructure construction?

IK What was the incentive? To have enough price certainty so that you could actually get funding from the parties and not have massive contingent overrun funding which we have seen where they got to with respect to the visible funding on the additional Optimism Bias 14%. We wanted the 14% to evaporate.

GM 3. Did that require the design, and advanced utilities works, to be wholly complete before the award of the infrastructure contract?

IK No. Not wholly. It did not require it to be 100% complete.

GM Can you describe your thought process with that?

IK When we say not 100% complete, the big pipe underneath Princes Street which is blocking the whole of the traffic when you are getting it diverted and they are doing it on the weekends and all the rest of it and overnight and all the rest of it and receiving protests that has to be finished. The small electrical substation just past the Edinburgh depot, just near the Ingliston Park and Ride out there, I don't care about because it will be done later because it is not on the critical part of the construction programme. The critical part of the construction programme which was one of the things that SDS and ourselves and TSS had to work out and fundamental building block coming back from the Infraco bidder, was "how are you going to build this". The fundamental input to that Infraco was "when are you going to be able to build it" meaning "when are we going to assure you that the utilities are going to be clear and it isn't end to end Princes Street, it is parts of Princes Street, so the whole project was carved up and then really as MUDFA went on and on it should have been refined and refined and then together agreed with Keith Rimmer and the CEC traffic management that "yes okay you can build this half of Princes Street between here and here and you can do this piece of Princes Street – 500 metres down – but the piece in the middle you have to leave for the cars to weave through. Therefore the construction and traffic management has to work in sync and that has to be there so that you can explain to the contractor how it is that he is to build his light rail scheme.

GM 4. If not, why not? And what proportions, and elements, of those works did TIE envisage would be completed by the award of the infrastructure contract?

IK In the centre of the city and knowing that the design process had been advanced in that precise area, the truth has to come that the majority of those diversions would have to have been done before, if you were going to truly derisk, that Infraco coming on top of you because he will see it the other way.

GM It is almost like if parts of design utilities work remained incomplete when infrastructure was awarded then obviously risk could ...

IK As I said we had 3½ kilometres in Croydon, I think it was 9 kilometres all the way down to Leith and to where the job actually finished to the top of the Leith

Walk you have only got up to Haymarket which is what we are really talking about, that can only be 3 kilometres, maybe 4. Therefore you have got something equivalent, the utilities diversion process start to finish was 18 months in Croydon and there were 12 utilities companies involved project managed by Turner and Townsend. We had restrictions which were known by the contractor but basically what it came down to is London Transport said they will give utilities free underneath the track between point A and point B by this date; between point C and point D this date and between point B and point C that date. As long as you have specified how that is and which pieces you are going to get by what date, in a schedule of handover dates then you are okay. If you have the ability to have completed to those handover dates and it is on an individual basis. If you didn't have the ability to complete it well you shouldn't have contracted to that date. When do you assess that risk? The truth is we should have been assessing that risk a year into a MUDFA construction process and 1½ years of a design process before we were ever contemplating awarding an Infraco contract.

GM Would that sort of issues regarding the risks carrying on to infrastructure would that involve then a risk premium or TIE holding the risk?

IK If you started from the situation that your contractor has priced to not do this work then you have got two choices. If it is actually going to happen you have got two choices you can only assume that you have to vary the infrastructure contract and for the contractor to accept this as a delay event to his programme or that you have to somehow miraculously engineer the contract which is somehow going to take over as a variation an aspect of the utilities diversion works but if he is not able to take over that work by virtue of him being registered with the specific utility company that you were trying to solve the problem with, then recognise that he needs to find a subcontractor who is. In other words all things are manageable but the thing is it will have started from a perspective, and should have started from a perspective, as I said A to B, C to D, X to Z and then all the rest of it in a table with dates and then in a programme, that programme has a schedule of handover dates, those would have replicated into the Infraco and it needed to have been, and was being, set up in that way.

INTERVIEW ENDED FOR DAY

GM The Outline Business Case (March 2006 **CEC01856896**) sets out a reasonably full description of the procurement strategy, and the decision-making behind it (for example, _9 onwards and _42 onwards).

1. Does it fully and accurately state the key features of the procurement strategy as it stood at the time?

- IK Yes.
- GM The OBC includes discussion about problems which had arisen on previous light rail schemes and the private sector's wariness of such projects (eg, _42 onwards).
1. Please explain your understanding of these issues, and the way in which they influenced TIE's procurement strategy.
The OBC also refers to the "first-hand experience" on which TIE was able to draw (6.2.1, _43), and the "individuals ... with breadth and depth of experience of other light rail projects" recruited by TIE (6.2.1, _43).
 2. Who was this referring to, and what experience did they have?
 3. Please explain why the procurement routes used for projects such as airports, ports and roads (eg, DBFO – design, build, finance and operate – contracts) were not regarded as appropriate for urban rail schemes in general, and for the Edinburgh scheme in particular.
(See, for example, the Preliminary Financial Case, 4 December 2003 – Line 2 (**TRS00000016**_27 onwards)).
1. Please explain your understanding of these issues, and the way in which they influenced TIE's procurement strategy. It is problems which had arisen on previous light rail schemes and the private sectors wariness.
- IK "Consultation confirmed utilities diversions and design risks causing both cost and time overruns through, in particular, planning permission issues. The primary causes of little appetite for the industry to build the tram scheme." In other words the collective risk was not worth the effort because it could not be priced and was too uncertain to do those things within a construction contract.
- GM How did they influence TIE's procurement strategy?
- IK It meant that these particular issues had to be addressed by the procurement and they had been addressed by separation of the utilities diversion process and by separation and prosecution of the planning permissions process through the SDS via TIE
- GM The OBC also refers to the "first-hand experience" on which TIE was able to draw (6.2.1, _43), and the "individuals ... with breadth and depth of experience of other light rail projects" recruited by TIE (6.2.1, _43).
2. Who was this referring to, and what experience did they have?
- IK As much as anything else that was referring to me.
- GM So the "first-hand experience" which TIE was able to draw on, that was yourself, and individuals with breadth and experience of other light rail

projects recruited by TIE. That was broadly you and you have explained in relation to your Croydon experience what that was.

IK Yes.

GM 3. Please explain why the procurement routes used for projects such as airports, ports and roads (eg, DBFO – design, build, finance and operate – contracts) were not regarded as appropriate for urban rail schemes in general, and for the Edinburgh scheme in particular.

IK Contract to finance or the inclusion of finance by the contractor the DB and the DBFO was not regarded ... contract to finance did not represent a Business Case that could be financed or was best value given the Scottish Executive funding limitations under any circumstances. The actual novation of the SDS, as it was envisaged, would create a design and build so that is to go through a DB process and to achieve it. Early operator involvement was seen as good value in the Parliamentary process in the optimisation of the scheme and the Business Case and so that was why the 'O' was not in the DBFO and that decision had been taken very early on and the programme to deliver a DBFO would have taken longer than the strategy that was being deployed with inflated costs and may have been totally unaffordable because of that reason given the Scottish Executive funding limitation – that's the answer.

GM The OBC refers to a market consultation process carried out by TIE on the procurement strategy, especially in relation to Infracore (from 6.2.2). The PIN published by TIE in the OJEU is relevant here (**CEC00208681**), as is the Project Information Memorandum sent to respondents (**CEC01866826**), and the Tram Project Director Executive Summary for the Tram Project Board on 22 November 2005 (**TIE00090571_3**).

1. Please explain that process and the feedback received, especially on the overall strategy of early design, utility diversions and novation of design?

2. What assumptions were made during these discussions about the extent to which design and utility diversions works would be completed by the time the infrastructure contract was awarded/commenced and the design contract novated?

3. Was there any discussion at that point about the potential impact on infrastructure procurement if design and utility diversions works were delayed/incomplete?

2. 1. Please explain that process and the feedback received, especially on the overall strategy of early design, utility diversions and novation of design?

- IK The market responded positively in particular to tram supply novation that was not seen as being a problem and to the tram supply aspects of it. They responded positively to the early design process and that TIE would undertake utility diversion risk. However, having said all of those things, there was still really a quite small degree of interest in the Infraco market place for this project because there was a high degree of scepticism as to whether it would ever happen and whether it would ever actually be funded.
- GM 2. What assumptions were made during these discussions about the extent to which design and utility diversions works would be completed by the time the infrastructure contract was awarded/commenced and the design contract novated?
- IK The design and the utility diversions had to be advanced far enough to reduce the interface risk between TIE and the Infraco. In other words if there was an interface that we were responsible for we knew that there would be consequences of late delivery so that was a primary concern. This made it critical and complete knowledge and the earliest possible deployment of MUDFA or it could have been another strategy but it had been decided to use multi-utility diversion under one contract.
- GM 3. Was there any discussion at that point about the potential impact on infrastructure procurement if design and utility diversions works were delayed/incomplete?
- IK Yes. A complete or understanding that it would either cause a huge financial problem if Infraco was awarded too soon or the decision would have to be to further delay or to delay the award of the Infraco. It was clearly understood that this was a critical planning aspect.
- GM Were you content with the timeline for that ie should there be more time left for design?
- IK In fact before I left towards the end of the tenure that I had, it was clearly under focus and under discussion and at the highest levels involving David Mackay, Michael Howell, Renilson, my team I was discussing it with TSS about what we could do to accelerate the process because the pre-commitments had been made to the market place and, albeit that there was little interest on the Infraco side, the tram supply was hot to go and could have gone sooner. In fact the delay of the tender process was almost complete by the time I had finished because of the delay in the SDS and because of this particular risk, in particular.

- GM The OBC contains a section on the SDS contract (especially 6.7). In relation to that:
1. What progress had to be achieved with the design, and by what stages in the process, for the objectives of the procurement strategy to be obtained?
 - a. In relation to Infraco?
 - b. In relation to utility diversions?
 2. What progress had to be achieved with consents, and by what stages in the process, to obtain those benefits?
 3. What was meant by the statement that the risk transfer to SDS was “*substantial in relation to approvals*”?
 4. To the extent that the design remained unfinished, or consents had not been obtained, by the stage of awarding the Infraco contract, what was anticipated would be the effect on any risk premiums in the Infraco price?
 5. What issues, if any, were expected to arise in relation to novation of the design contract if design was incomplete?
 6. In relation to 6.7.1:
 - a. What was the basis for the estimate that the design process would take between 2 and 2.5 years?
 - b. What is meant by the design being “60-70% complete”?
 - c. On what basis was that statement made?
 - d. What were the “key risk areas” in relation to which design was to be completed prior to Infraco award: had they been identified; if so, how; had they been defined; if so, how?
 - e. If they had not been defined, was any process in place to define them and, if so, what was it?
 - f. If 30-40% of the design was left incomplete, how would there be enough certainty for the infrastructure bidders to accept the design risk without including risk premiums in their prices?
 7. In relation to 6.7.1.1:
 - a. Can you expand on the description of the design work which had been done, and was yet to be done, and the extent to which it would be sufficient to remove risk premiums from infrastructure bidder pricing?
 - b. On what basis was it expected that the detailed design would be “significantly advanced”, and the “majority” of consents completed, by July 2007?
 - c. What (if any) discussions had taken place with PB and/or the consenting authorities (especially CEC), to inform that statement?
 - d. What due diligence (if any) had TIE done, prior to the award of the design contract to PB, on PB’s ability to deliver the design and consents in sufficient time to support the procurement of the infrastructure contract?
 - e. What was meant by the “non-critical areas” in respect of which design might remain outstanding, and how (if at all) were they defined?
 - f. On what basis was the assessment made that they were “non-critical”?

8. At 6.7.3 it is stated that, *“This strategy requires the Infraco to take over responsibility for the SDS contract. This is clearly a potential risk, but one which TIE believes it can manage.”*

- a. Please comment on this.
- b. What was the risk?
- c. How was it envisaged that TIE would manage this risk successfully?

1. What progress had to be achieved with the design, and by what stages in the process, for the objectives of the procurement strategy to be obtained?

- a. In relation to Infraco?

IK Sufficient design to minimise the design-related risks including utility diversions. The scope of the street works and street scene works consistent with planning permissions. Traffic signal prioritisation and traffic management – result. A temporary traffic works scheme and Orders which would enable a defined construction process particularly in the critical area between Haymarket and the top of Leith Walk and therefore resolve planning permissions. Those were the things that would need to be done.

GM What about in relation to other key stakeholder interfaces? You mentioned the Haymarket one, Network Rail would that be key as well?

IK It would be important because, in any planning permission associated with a stop adjacent to a station, Network Rail would be a person who would respond to the normal planning permission process and it could have been dealt with in that way but we should have taken a proactive approach and we had in conversations and meetings with Network Rail ongoing. Therefore, for that example, that would have been important but less critical or it would have been a part because if I say “Haymarket” then the planning permission on the station in Haymarket would have been there. However, was it necessary for that to be completed, absolutely, before the Infraco I would have said not but I would have said it should have been completed before the Infraco needed it. That is something that could have been novated.

GM b. And the progress that had to be achieved with design in relation to utility diversions?

IK The primary thing about the utility diversion strategy is that the design of the tram system that is where the track is running, so as to ensure that utility diversions could be done and therefore did not have to be re-worked by a reorientation or realignment of the track, is the first problem.

GM So that is to try and sort that through design to try and avoid ...

- IK That's right. In other words you are going to clear the utilities from a particular design or area of a depth of say 600/800 millimetres before existing road surface over a width of 3.5 metres, or thereabouts, on the track side and you are going to do that along the alignment, that is the primary thing that you are trying to focus on. The secondary order thing that you would have worked on was one of the advantages of the SDS, was whether or not when you came to something that was a very expensive and almost immovable object at any place along the line of that track, you ask yourself the question "can you redesign the track slab to bridge over it". In other words instead of a standard track slab do you do something special to avoid that diversion, it could be because of cost, it could be because of time, a big power cable, national grid power cable, you might have a problem in getting that cable turned off to change its location with a year's advance notice.
- GM What progress then had to be achieved with the design in relation to utility diversions? Did you have confidence that the design would there be a challenge to get that design done in time for the procurement strategy in moving to Infracore?
- IK Absolutely. That was the absolute challenge.
- GM 2. What progress had to be achieved with consents, and by what stages in the process, to obtain those benefits?
- IK Substantial progress. Not complete progress but substantial progress so as to derisk the critical path of the construction programme which would have been, not only a top down approach, which is an approach where we tell the contractor what we think it would have been in the negotiation process through (15.21) before completion and award of the Infracore it would have been a bottom up from the Infracore telling us what they felt was critical that we had not identified, or even less critical, and we could release it for a later date but either active process should have occurred.
- GM 3. What was meant by the statement that the risk transfer to SDS was "substantial in relation to approvals"?
- IK The design cost risk had been transferred to SDS to achieve the planning consents. What happens in a planning process is that you do your level best and you submit a planning approval to a planning officer, the planning officer will then take it as necessary up to a planning committee or, if he has delegated authority will approve it. Therefore, in this process there is an expectation of an iteration and a reiteration and perhaps a further iteration, before planning permission is achieved by multiple meetings with planning officers in the first instance until a recommendation could be made on the

scale of the Edinburgh tram project with multiple multiple planning consent requirements. The transfer of risk to the SDS was the cost of the design of doing that, redoing it, and doing it as many times as necessary until such time as the planning consent was achieved, that was what had been passed.

GM 4. To the extent that the design remained unfinished, or consents had not been obtained, by the stage of awarding the Infraco contract, what was anticipated would be the effect on any risk premiums in the Infraco price?

IK Whatever approvals were outstanding and whatever part of the design was outstanding would attract a risk premium that is a design-related risk premium and perhaps a time-related risk premium and even a cost recovery-related risk premium. In any event there was the transfer and novation of an existing design service and there were residual liabilities or liabilities from that process which will be at the time needed to resolve its outstanding claims and issues. There was still a primary insurance and other aspects of that design which was now being taken by the Infraco so it was always going to be the case that in that pricing the Infraco would have taken a view as to what premium should have been applied to an SDS, even total solution, for these types of issues.

GM 5. What issues, if any, were expected to arise in relation to novation of the design contract if design was incomplete?

IK Firstly, if there were outstanding unresolved SDS claims for additional costs and time, that would have been a primary concern of the Infraco. That meant that they had to be resolved by TIE by negotiation or by DRP, it had to be finished so that the SDS would know what they were taking over. In other words if we knew that the design programme was going to have to be extended by virtue of some under-performance, or other issue, then we would have had to resolve that and make the Infraco aware of it and actually re-modify before we awarded it a programme that fitted with the Infraco and/or get the Infraco to modify his programme so that he could work with the SDS.

GM Would that be TIE that would carry that risk or would that be SDS?

IK I would carry that risk until the point of award and novation.

GM Just looking at that that SDS are kind of getting away of things a wee bit in that if they don't do that design to a factor where on novation to the Infraco contractor that they aren't satisfied with it that TIE's going to take that risk on?

IK They wouldn't take the risk back. SDS might have felt that that was a way to commercially negotiate a premium for their own services knowing that they still had to do stuff maybe they felt they could negotiate something down-

stream. Such conversations were so far in advance and it would be illogical to make that a primary strategy, in other words to delay your whole design so much intentionally so you could maximise a premium two years down. Risks, the contract being terminated by TIE for underperformance and that, obviously, was even reviewed beyond by myself.

6. In relation to 6.7.1:

a. What was the basis for the estimate that the design process would take between 2 and 2.5 years?

IK What good the experience in other projects – the experience of myself, of Andy Wood from Transdev, the experience of Mott MacDonald, David Hand and others. Doug Blankey from Faber Maunsell and our general industry experience and knowledge associated with the delivery of this type of project that's where it came from.

FI b. What is meant by the design being "60-70% complete"?

IK 60-70% of the design man hours and/or deliverables. Many hours expended with substantial drawings and specifications completed. Outstanding related design associated with the detailed engineering rather than issues which related to the scope of the project. Therefore by 60-70% of the design having been done, you are moving from knowing, not just what the depth and breadth of the track slab is, now you are moving into what is the detailed reinforcing design within that track slab so you are going through a process of further design calculations to produce a set of drawings which are capable for construction at the end of the detailed design process it is capable for construction in the field, through the creation of shop drawings by the contractor. At 60-70% you are into that process in part of the way but you are not completing that process.

GM c. On what basis was that statement made? So on what basis was that the design would take 2-2½ years that the 60-70% would be complete? What was the reassurance that that would be the case?

IK Firstly experienced based, that's the experience of myself, the TSS, the SDS itself saying it could be done in that time in terms of their bid process and programmes. Before that Doug Blankey, Faber Maunsell, David Hand, Mott MacDonald, others in the team, my own personal experience with industry practice from around previous tram projects and the performance in previous tram projects and that is why I was capable of and able to make this statement.

- GM d. What were the “key risk areas” in relation to which design was to be completed prior to Infracore award: had they been identified; if so, how; had they been defined; if so, how?
- IK The key risk areas had been defined. For example, if we take the utilities diversions as being a key risk area – yes we had interactive with each of the utilities. We had identified those utilities in the areas associated with the key critical path activities on the delivery of the tram project. These key risk areas were being constantly reviewed as to performance.
- GM One of the key risk areas is utility diversions what would be the other key risk areas?
- IK As we have outlined before – the planning permissions and the Traffic Regulation Orders, the temporary Traffic Regulation Orders. The locations of tram spots and their planning permissions in Princes Street. The extent of the street works that were going to be associated and side streets off, and adjacent, to the tram line.
- GM You are probably referring back to your previous answer in relation to experience and all other outside consultancy that fed into that?
- IK We had been working on this and trying to identify this from 2004 onwards. We had got Mott MacDonald to draft me a plan which was a plan of the line and route with all of the key risk areas, high risk areas and that’s before SDS even came along, therefore we had been focussing on exactly what there was. For example, down in Princes Street the basements of the buildings underneath the street, how many of those were we going to load? How many of those might we have been at risk in running the tram? We might have been at risk of causing a problem that means we needed to do something about it so we knew those things and those risk areas had been identified, I think, quite well. That identification was then going to be taken the next step by the SDS through its investigation programme to determine precisely, or more precisely, what it is that was associated with these key risk areas. However, the question is: were they identified? The answer is ‘yes’.
- GM You have explained the process that was in place to identify and define them.
- f. If 30-40% of the design was left incomplete, how would there be enough certainty for the infrastructure bidders to accept the design risk without including risk premiums in their prices?
- IK The answer is it is perhaps more accurate if you start by considering that the risk premium would be a reduced risk premium. Think about it like this – if we, at the end of the Parliamentary process, pass the entire design and

construction risk as a D and B to the Infracore, we attract the maximum risk premia. That risk premia will be in various categories. It will be commercial, it will be time-related, it will be design cost-related and then, given that a tender design will have been done by the contractor himself so as to, for example, determine not only the width and depth of the track slab as an example, but also the predicted reinforcement ratio – how many tonnes per cubic metre of steel goes into that track slab along the 9 kilometres of on-street running, that will have been assessed and judged and then a premium, based on the contractor's experience, will be applied to it. Example – detailed example – if the contractor is told by his designer that it will be 150 kilograms per cubic metre, he will say "I am going to put a 10% or 20% premium on that because I don't believe it" or "I think last time I did it it was actually 200" and he will therefore conduct a risk analysis inclusive of that particular element. Therefore as the design process goes forward, he will then take and, he will receive, receive the information as predicted here at 60% and 70% of the design which has been focussed, as we have already said, on the critical areas of the project so that he will then take a review of that, he may engage external designers to review that, he may do that through his own internal design capabilities but most likely it will be an external review and then that reviewer will say to him "I think that there might be a problem in this area, maybe we can do better in this area" or "I think the design is correct, we should just run with it". Having said all of those things, the contractor will then take a view on that and put it back into his risk assessment again now, not only on this design-related risk but as a package of holistic construction delivery risks. However, specifically to design he will still take a view and apply a risk premium so at the end of the day, even if the design is complete 100%, what the contractor will do is he will take a view as to where he can improve that design, he will do his own design in that area and he will try and do it in a better way, more efficient way, with some technology he might have himself or basically to give him a competitive cost and time advantage against his competitor in a tender process. That is what happens and that is what is being done by contractors over each and every day but at the end of that process he will still apply a risk premium. However, the point of it is is that risk premium is a variable, it is an output, it is based on an individual contractor's view of life and view of this project and design risk fits together with commercial and time-related risks and then he takes a view which is added to his price.

- GM You mentioned that the risk premium would be reduced. Does that mean there is always going to be a risk premium in this?
- IK In any contractor's price there is always a risk, a risk assessment which is put in there.

GM How could you be so sure then because you would not know what that risk premium would be? Although you said it would be reduced you would not know.

IK Based on judgement. Based on having done it myself.

7. In relation to 6.7.1.1:

a. Can you expand on the description of the design work which had been done, and was yet to be done, and the extent to which it would be sufficient to remove risk premiums from infrastructure bidder pricing?

IK The aim was to reduce the risk premiums and that would come from achieving planning consents which would make the risk dual part of the overall design duration. More certain and knowing that utilities diversions had proved to be problematic on other LRT schemes and that they were the major problem to have addressed that part of the scheme and the design in a detailed fashion. The example being where I talked about the major utility which was able to be avoided as a diversion by virtue of a design that was undertaken to modify the track slab, the bridge, the bridge over option, that would already have been agreed with the utility company, that would have been agreed by the designer, that would have been completed as a detailed design and the contractor wouldn't have had to worry about doing that other than to construct it. Therefore, that part of it, the intention was that that part of it would have gone through to detailed design and be included within the 60% to 70% so we needed to make sure that we focussed our attention and the use of the 60% to 70% if that was where we got to and not 100%. We needed to focus our attention on what was critical to the performance of the contractor and to have completed it so that the contractor really then would not have done other than to price that as being effectively a piece of work that he didn't, and wouldn't have taken a process, an alternative process, under consideration because it wasn't worth the time, wasn't worth the effort and he it would have caused him to assume a risk which had been covered off. That is a detailed example of what we were trying to go for.

GM b. On what basis was it expected that the detailed design would be "significantly advanced", and the "majority" of consents completed, by July 2007?

IK When did we start the design process? We awarded it in 2005. In 2007, where I think we are 18 months into the design process, there is an expectation, if it is true, and our expectation was and was in the SDS programme later that the design process was 2 to 2½ years and we are 18 months into a process here with a closest completion of two years, we are substantially through that design by that time.

- GM What was the basis of that? Is it back to your experience at Croydon?
- IK The basis of it was the experience and the preliminary programmes that we had done ourselves. In Croydon, for example, I can tell you that the utilities diversion process which started in earnest at the same time as the contract award to us, the concession agreement, then in 18 months to 2 years it was finished on 3½ kilometres of on-street track section.
- GM c. What (if any) discussions had taken place with PB and/or the consenting authorities (especially CEC), to inform that statement? Looking at consents had there been discussions with Parsons and with CEC to make sure that the majority would be through and it would be significantly advanced?
- IK Yes. That's correct. PB were contracted, in fact, to deliver this resolve, that was what we believed and CEC was fully aware and briefed on a regular basis.
- GM d. What due diligence (if any) had TIE done, prior to the award of the design contract to PB, on PB's ability to deliver the design and consents in sufficient time to support the procurement of the infrastructure contract?
- IK PB was awarded the SDS contract after significant reviews of going through a procurement and TIE tender process that those tender submissions against a field of other bidders was assessed and, on the basis of the assessment, it was believed that Parsons Brinkerhoff understood the magnitude of the problem and had the ability in their documentation and tender programme to deliver in accordance with the expectations that we had outlined in that tender. In terms of the design and consents and delivery one of the bidders, which was effectively a joint venture between Mott MacDonald and Faber Maunsell, refused to accept part and some of the risks associated with the SDS contract, whereas Parsons Brinkerhoff did accept them, albeit that they had qualifications, as did all bidders, in their tender submission.
- GM So there is confidence when that contract was issued to Parsons that they had sufficient time to support that procurement?
- IK Yes. They did and I specifically remember they had addressed the issue of the quick start and high intensity nature of the early part of the programme better than others and had committed to engaging a high number of additional staff in the start-up period which caused us to believe that they could actually

achieve what we had wanted and did that in a convincing way better than others.

GM e. What was meant by the “non-critical areas” in respect of which design might remain outstanding, and how (if at all) were they defined? It makes reference to outstanding design work at this stage may include non-critical areas any amendments required by consent authorities and any remaining value engineering required by the Infracore. What was meant by non-critical areas?

IK Non-critical areas would be non-critical in particular to the interface risk and the risk that TIE was managing, for example, the utility diversions risk that would be one area which was non-critical, it could be non-critical in terms of the programme of delivery that is in the definition and the planning undertaken for the project, there are areas which are described to be on the critical path; the critical path being that is the shortest duration that the overall project can be delivered. Those areas which are non-critical have float associated with them and it was a matter of identifying and having a complete understanding and view as to what of those we are talking about.

GM How were they defined?

IK They are defined by planning.

GM Planning by whom?

IK Planning by TIE, planning in terms of SDS detailed planning and reviews by TIE and the TSS.

GM Who would be in charge of that? It is quite a critical area even though they are non-critical areas and eventually it was. Who would be in charge of planning to find out the non-critical areas?

IK Planning and programming in our team was being managed by David Ramsay.

GM Would you know how he was going about planning for these areas, ie the non-critical areas that were outstanding?

IK We developed, ourselves, a programme working with, David was working with our own planners and non-critical was consistent also with the high risk areas. Critical areas is also coming from the risk matrix in terms of those areas which are of high risk to TIE so we are using that, we are using the planning aspect to determine what will be non-critical.

- GM However, it could be argued that the non-critical areas were actually critical areas also because they were the ones that were going to look at this risk premium isn't it because they would fall into the risk premium if the non-critical areas ...
- IK No. I think whether non-critical is a correct turn of phrase or whether less critical. At some stage anything can become critical in a programme. If you look at it and rank it those things which were of highest cause of risk to us and to the contractor were those things that we took on to do ourselves to establish the programme and the basis for the Infraco to come forward so that his risk premium could be reduced. As we worked through the programme, as we did the job, we started with a perspective that the highest risk area, the critical area, was the area between Haymarket and the bottom of Leith Walk. As a plus the bridge adjacent to Network Rail Depot, the back area associated with Murrayfield, and the depot location and the depot itself, so that we could establish a commissioning at the earliest possible time and running which would be those areas were defined.
- GM I guess where he is coming from, and I see that as the due diligence in respect of identifying these non-critical areas and how was that monitored? Was it monitored by risk registers because obviously these non-critical areas were the ones that at that stage they are suggesting the design might remain outstanding and that could have a significant effect on this premium that we spoke about reducing the risk premium?
- IK If we couldn't complete the design and we had assessed that the design was complete so as to allow the contractor to go forward into tender and be awarded and, as I have outlined just before, there would always be a level of risk premium which was applied by the contractor under any circumstances. The order of maintenance would be very different based on what was done. If we focussed our attention on the areas that we believed, and we had adjudged, and our team had adjudged, including SDS, they need to be more critical and focussed on them then the outcome would be that the risk premium would be reduced against a situation where we didn't focus on anything.
- GM 8. At 6.7.3 it is stated that, "*This strategy requires the Infraco to take over responsibility for the SDS contract. This is clearly a potential risk, but one which TIE believes it can manage.*"
- a. Can you comment on that?
- IK When it says manage it is manage the process to take the transference or novation of the SDS contract to Infraco.

GM b. What was the risk?

IK The risk is that the Infraco would not accept it.

GM That's quite a substantial risk isn't it?

IK Yes. In theory it is. What it would mean is quite clearly if the Infraco refused to take on the SDS then what that would mean is that the SDS contract would be redundant, number one, and would need to be reduced, completed, terminated, fore-shortened, that would be part of the risk. The risk would be that the Infraco would then take on another design consultant entirely because he didn't want PB for example to do his design and that would have an impact on his price and on his timing but he may argue that that is a better solution and he may price it lower than if he took the PB team over. Therefore, we can't sit here and pre-judge that it would have been a wholly negative outcome because it might have been an entirely positive outcome. For example if all of the detailed design was being done not by high price consultants in the UK but was being done by an international contractor using consultants out of either India or China, for example, where a very large percentage of the world's engineering is being done on a daily basis now, cost-effectively and at 50% of the cost of the local design companies and if that was brought in as a competitive advantage by an Infraco, there would have been a very very good reason for the Infraco to have convinced TIE, and myself, that that was a better solution and would have offset any negativity of the truncation and cessation of the SDS.

GM c. How was it envisaged that TIE would manage this risk successfully?

IK With competent people.

GM You said it might have been cheaper if Infraco might have taken over the design and it might have been cheaper looking at it from a positive point of view. I would look at that as still a risk

IK It is a risk.

GM How did you manage that risk?

IK We hadn't got to that risk.

GM Was that looked at that time?

IK It was a risk that was recognised that it needed to be managed at the appropriate time. For example, if we put out a tender design produced by Parsons Brinkerhoff which was not well conceived and the contractor believed that he wanted to modify 90% of it then he might well have wanted not to take the SDS contract over. However, in the UK market place Parsons Brinkerhoff was one of the highest ranked railway consultant companies and had worked on other major projects successfully here in the UK and internationally so that was an inconceivable risk but a very unlikely risk

GM The OBC contains comments on the MUDFA contract.

1. In relation to 6.8:
 - a. What progress had to be made with utilities diversions by the time work began under the Infraco contract, if the risk, price and programme benefits of early utility diversion were to be achieved?
 - b. What was meant by “significant” utility diversions being completed prior to the start of Infraco works? Was that quantified or defined, and if so, where and how?
 - c. To what extent, at this stage, was there clarity about the amount of utility diversion work which was required, or how long it would take?
 - d. What stage had been reached by this point in time with survey, investigation and design work to inform the scope of diversion work on utilities?
 - e. The following is said at _10: “*On award, the MUDFA Contractor will undertake a series of pre-construction activities including working with the SDS Provider to optimise the design of the utilities ...*”. Can you explain what this was to involve?
 - f. Who supplied the estimate that the utilities work would end in summer 2008 and on what information/assumptions was that based?
 - g. If that survey and design work was still to be started or completed, how ‘solid’ were these estimates?
 - h. What due diligence (if any) had TIE carried out, prior to the award of the SDS contract, on PB’s ability to carry out the necessary survey and design work for utility diversions to be carried out on time?
2. In relation to 6.8.1 to 6.8.3:
 - a. What agreements had to be reached with the third party utility companies for the necessary works to be done under MUDFA, and when were they needed?
 - b. How important was it to secure these agreements?
 - c. What progress had TIE made by this stage, and by the time you left TIE, in securing the necessary agreements with utility companies?
 - d. Were the powers under the tram acts adequate for this purpose?
 - e. What were the obstacles to progress (if any)?
 - f. Please explain TIE’s retention of the scope and time risks, and their potential impact on the Infraco programme.

- g. What arrangements did TIE have in place to manage them?
- 3. In relation to 6.7.3
 - a. How was it envisaged that any overlap in utility diversion work and work under the main infrastructure contract would be managed so as to avoid conflict on the ground?
- 1. In relation to 6.8:
 - a. What progress had to be made with utilities diversions by the time work began under the Infraco contract, if the risk, price and programme benefits of early utility diversion were to be achieved?

IK The short answer is that what had to be achieved was we had to have achieved that part of the works and have that part of the works outstanding but with a programme which allowed us to believe that we would achieve the schedule of handover dates which would have been contained in the Infraco tendering documentation and, upon which, the Infraco had based his programme and construction price. Therefore, we had to achieve that which was consistent with the handover dates on each section of the track for completion of the utilities diversions as we have contracted to do.

- b. What was meant by “significant” utility diversions being completed prior to the start of Infraco works? Was that quantified or defined, and if so, where and how?

IK What was meant was we have an overlapping programme of works where the Infraco is promised that he will have certain areas available for his work by a certain date. The utilities diversion programme fits within that, or before that, and our programme with MUDFA has to be such that we complete those utility diversion works within those areas so as to enable those handover dates to be achieved with adequate contingency and flow built into it on our side before we commit to the Infraco handover date and that is what we are talking about. Significant works having to be done before that means that because the design was coming into the hands of the Infraco in an advanced state, the Infraco would theoretically have been able to advance works in what they considered to be the critical areas, perhaps at the earliest possible handover date, so that the works which needed to be done in MUDFA had to be substantially on because the time between when Infraco would have enough information to start work and the time that we had left from the award of the Infraco to complete the MUDFA works, was known to be, not necessarily, that long. However, what we had the ability to do ourselves is knowing the progress of the MUDFA works, we have the ability to manage the commitments to handover dates within the tender process so that the contractor can rearrange his tender consistent with our latest information on

how MUDFA utilities diversions are actually progressing to enable that risk to be managed.

GM Was that quantified or defined?

IK It was quantified in that we had worked through a programme for the utilities diversions that was contained within the MUDFA tender programme. MUDFA at this time obviously hadn't been awarded and we were working through it on the basis of the information and the utilities diversion programme which had been worked up by ourselves and with information gleaned from Mott MacDonald and Fabers, in the first instance, and from our direct interactions through our utility diversions team in TIE, with all of the utilities companies so that we could come to a view as to what that programme was so we had a programme for utilities diversion at this time which had been being worked on for 18 months based on that information.

GM How was it getting quantified and designed? You said we were working on it but how was that?

IK That was in that programme and all the information was in the hands of SDS. SDS had everything that we had.

GM So that responsibility was, at that time, sitting with SDS?

IK The responsibility for doing the design aspects of it, the investigation and the design and the re-design of the utilities was sitting with SDS at that time. The responsibility for the project management of that process was sitting with TIE supported by TSS and we had a utilities diversion team from TSS, I can't remember how many people, but a number of people working on this particular issue only.

GM c. To what extent, at this stage, was there clarity about the amount of utility diversion work which was required, or how long it would take?

IK Consultation with utilities companies was ongoing, individual agreements were either on the verge of being reached or they were insubstantial, substantially made. In fact we had agreed with all of the utilities companies regarding MUDFA and they had all agreed that we would use the one contractor to undertake these works. Utility companies had responded with details of their assets and necessary diversions so they had been given information about what we knew of the design, where the track was going, and undertook and then supplied their information as to what utility information they had and what they knew about the diversion requirements.

- GM Did you think at that stage that there was clarity in relation to the amount of utility work that was expected to be done?
- IK SDS was to undertake investigation works so as to improve and define the scope of work as best it could be.
- GM Were you happy that there was clarity about the amount of diversion work?
- IK No. I knew that there was a risk associated with it, I knew that there was a high degree of uncertainty about it. We talk about utilities in two manners, we talk about identified utilities and we talk about unidentified utilities diversions. Unidentified utilities diversions when you say it it is a prima facie declaration of risk.
- GM I understand that but you are aware of the risk associated with a high degree of uncertainty in relation to the amount of utility diversion work which is required so it is clearly a risk and it is clearly a risk as they move towards that the end result would be the novation of the Infracore contract. Were you satisfied that TIE was managing that risk to a satisfactory ...
- IK I was not satisfied with certain aspects of the speed of delivery of it. The speed of delivery of the SDS investigation works which was the primary clarification of it. I was not happy that TSS was mobilising enough people to help and I spoke directly to Bill Woolgar and he wrote to TIE later after I left and he said some things which were fairly disingenuous because I had been on his back to mobilise his better team and his crack team and the best people in Turner and Townsend were not available he said "I am sorry Ian", that is what he said to me. Therefore I was completely aware that this was it and I knew exactly that if you put it together with how long had we been being told that the industry "why is there a big utilities diversions risk?" It is because of the risk associated with the absolute clarification of the scope of work. It is associated with the fact that unidentified utilities exist. You don't know when you find a cable in the ground whether it has got power in it or not. If it is not on the power network drawing what is it? Those things I am absolutely aware of it.
- GM d. What stage had been reached by this point in time with survey, investigation and design work to inform the scope of diversion work on utilities?
- IK SDS was behind in their programme. That it was well programmed and well understood and they were on the job but they were behind programmes and not meeting our programme expectations with respect to that.

- GM e. The following is said at _10: "*On award, the MUDFA Contractor will undertake a series of pre-construction activities including working with the SDS Provider to optimise the design of the utilities ...*". Can you explain what this was to involve?
- IK This relates to selecting whether to shift the utility or modify the track design for example to span over utilities. Generally working together to solve engineering problems and reduce the total cost to TIE that is what I wanted.
- GM f. Who supplied the estimate that the utilities work would end in summer 2008 and on what information/assumptions was that based?
- IK That was based on the programme that we had been working on which was using the identified utilities which had come from the individual utility company itself working with a team in TIE and TSS to review that information and to develop a programme of works which was believed to be reasonable based on assessments and assumptions with respect to accessibility and traffic management practice being consistent with that programme, meaning the temporary Traffic Works Orders.
- GM g. If that survey and design work was still to be started or completed, how 'solid' were these estimates?
- IK The frame of reference that I have that I keep coming back to is certain knowledge overall that the utilities diversion on other LRTs including my central Croydon tram link, utilities diversion process took two years, in a city centre situation which is not dissimilar at all to Edinburgh other than, perhaps, the age of certain of the buildings but in utilities terms and street design and the rest of it, the similarities are such that it is not unreasonable to establish that it should be done in a period of time of the order of magnitude of two years. That was the expectation and there was no piece of information that came out that said by anybody that it could not be done in that time.
- GM h. What due diligence (if any) had TIE carried out, prior to the award of the SDS contract, on PB's ability to carry out the necessary survey and design work for utility diversions to be carried out on time?
- IK TIE knew that PB was going to subcontract certain aspects of this work. For example the ground penetrating radar, any cat scanning for the power cables, the geotechnical investigation, perhaps any excavation and location works by intrusive exploration, we knew that they were going to do that. However, it was contained within the overall scope of the design construction contract and it was a risk that was passed to Parsons Brinkerhoff and it was assessed that the outcome of that process would be satisfactory.

- GM Just to get back to the question: What would be the due diligence that was carried out to ensure that Parsons had the ability to carry out the necessary survey and design work? I am talking before the contract was awarded?
- IK We went through a review process on the available bidders and each of them had to respond in the same manner and the evaluation process included, and the utilities diversion, and this part of it was obviously an important part of the SDS review and we had people specifically reviewing that on a competitive and comparative basis, or comparative basis between those bidders that came through and I cannot remember whether Parsons came top in that score or not but it was certainly part of the evaluation process.
- GM Who were the people involved in that evaluation?
- IK There was a team of four or five within TIE, all our TIE people. Gerry Henderson did the commercial, David Ramsay worked on the construction and delivery processes and it is a factual document and a matter of record, it would be available I am sure.
- GM Did you have confidence in the team that were assessing with due diligence Parsons ability to carry out the necessary work?
- IK Yes. I had a utilities diversions manager in our team.
- GM 2. In relation to 6.8.1 to 6.8.3:
6.8.1: "TIE and CEC will use their powers under the tram acts and as the roads authority to negotiate with the utilities, with the objective of securing their participation in MUDFA."
a. What agreements had to be reached with the third party utility companies for the necessary works to be done under MUDFA, and when were they needed?
- IK We had to have an agreement with each of the utilities companies, I believe that we already had that.
- GM Who dealt with the agreements between the utility companies? Was that SDS or was that TIE?
- IK TIE
- GM Who would have led on that in the organisation?
- IK Our utilities diversion manager?
- GM Who was that?

IK Can't remember.

GM So it would be the utilities diversion manager?

IK Yes. We can come back to it and I will find a name.

GM And they would report direct to?

IK That was reporting jointly into David Ramsay who was handling the overall construction but it was so important that it was coming directly into me.

GM b. And it was important to secure these agreements?

IK Yes.

GM c. What progress had TIE made by this stage, and by the time you left TIE, in securing the necessary agreements with utility companies?

IK Substantial progress.

GM Any issues there? Any particular challenge?

IK There were no alarm bells or warning signs. In fact we wouldn't have been able to go into a process on MUDFA unless we had made substantial progress early on.

GM d. Were the powers under the Tram Acts adequate then for that purpose?

IK I don't think the powers under were.

GM Why were they not adequate in relation to securing necessary agreements with utility companies?

IK They were sufficient for the utility companies to know that there was a tram coming and that they would need to work with us. The utility companies were all objectors therefore the objector removal agreements had to be met. That is the Parliamentary process and so ultimately the powers were satisfactory.

GM e. What were the obstacles to progress (if any)?

IK Until the Parliamentary approval, progress was generally tedious because of what I have just explained. The process that they knew this was coming but it wasn't entirely the highest priority at all in the team, in the utilities companies, but they didn't just give it lip service, they had genuine interaction so the process was improved obviously when the Parliamentary process was finished.

- GM f. Please explain TIE's retention of the scope and time risks, and their potential impact on the Infraco programme.
- IK It is the same story. TIE had to assume utilities diversions risk otherwise there was no contractor going to price Infraco, that is my straight statement. TIE had to deliver the diversions on time in accordance with the schedule of access dates consistent with the temporary traffic diversions and the traffic management plan finally approved by the City of Edinburgh Council. The potential impacts on the Infraco programme is just if we don't hit them and we have committed to a schedule in a contract, there is a delay in the Infraco.
- GM We have discussed that but obviously that section they say "the risks remain with TIE under this approach" and I think you clarified it and obviously these risks would be critical and again just asking you again just to reemphasise what arrangements did TIE have in place to manage these risks?
- IK I think TIE had its own internal staff and we had TSS and Technical Support Services was a team that was chosen, in part, because Turner and Townsend had diverted utilities in Sheffield and Croydon and they diverted them in Croydon for London Transport as a project manager in a duration of two years.
- GM Who was the lead in TSS that was managing that?
- IK The lead from TSS came out of Scott Wilson and I can't for the life of me remember his name.
- GM Did you have confidence then that TSS were managing these critical risks?
- IK I had confidence that they could manage the risks and I explained to you that about May time, it would have been about May time, I had been calling TSS to improve the level of support for this because I could see that it needed more help, it needed more input and that was exactly what TSS was designed to do. TSS was designed to be a call off contract that if I needed another ten people then I probably did say "give me ten people" and they said "I can only give you two or three". However the point was we knew that it was there and I had the ability and through that call off contract, had the ability to call down additional resources from the TSS contract, Scott Wilson and Turner and Townsend combined resources, I suspect at that time of the order of 10,000 people, it may have been more, that that's the inherent capability that I had set up and contracted in so that that additional support could be called into the project management process of anything in TIE that TIE was doing in this delivery, but specific to the utilities diversion because of the Turner and Townsend expertise.

- GM 3. In relation to 6.7.3:
6.7.3 says “early completion of utilities diversion will mean a reduced likelihood that utilities works will interfere with the main infrastructure works
- a. How was it envisaged that any overlap in utility diversion work and work under the main infrastructure contract would be managed so as to avoid conflict on the ground?

IK By adequately planning the works consistent with the temporary traffic management plan and MUDFA delivering the work that utilities diversion work within the required durations.

GM On the section on Infraco

1. In relation to 6.12.2 and 6.12.3:
 - a. Please explain in more detail how the design and infrastructure procurement processes were intended to function in parallel.
 - b. Had this approach been used on projects previously? Has it been used since?
 - c. How was competitive pressure to be maintained through this process, eg, if design continued to evolve after a preferred bidder had been selected?
 - d. Was there a risk that a preferred bidder would use ongoing development of the design as an opportunity to increase its price?
 - e. Was it anticipated that, if the design was not wholly complete by the time the infrastructure contract was awarded, the infrastructure contractor would either (a) include risk premia in his price, or (b) seek to pass design risk back to TIE?
 - f. What other risks were present in developing design, diverting utilities and procuring the infrastructure contract in parallel?
 - g. Did TIE identify those?
 - h. Did it have plans to mitigate these risks? If so, what were they, and what steps were taken to implement them?
 - i. What due diligence, if any, did TIE do, prior to awarding the SDS contract, on PB’s ability to deliver the design on the timescales necessary to support the procurement of the infrastructure contract?

At _7, the OBC says:

“The delivery of the Final Business Case which demonstrates affordability, economic viability and financial viability is in turn dependent upon the prior completion of the following procurement activities: ... Analysis of 1st stage tender returns for the Vehicles and Infrastructure contracts to the extent that the Final Business Case can conclude, with a high degree of confidence, that the capital cost estimates for the assumed phase 1 of the tram are robust and affordable from the agreed CEC/SE funding package.”

2. Can you comment on this, and in particular on why the process was expected to yield cost estimates on which a high degree of confidence could be placed?

At 5.2.1, the OBC says:

“TIE has carried out a great deal of work to ensure that the current capital cost estimates are the most accurate available and are benchmarked against outturn costs on completed tram projects. However on a project of the scale and complexity of the tram project there is still a significant degree of uncertainty (including that relating to construction market prices generally) which will exist up to and beyond the point where tender prices are known. It is therefore important to achieve as much certainty as possible on the likely price for the different elements of the network before awarding the major contracts for the tram infrastructure and vehicles.”

3. Can you comment on the cost uncertainty, and the extent to which certainty could be achieved prior to award of the infrastructure contract?

4. To what extent, even after tender prices were received, would provision have to be made for risk and Optimism Bias?

5. To what extent was there consensus, or dissent, about any of these key features of the procurement strategy as it evolved during your time at TIE?

1. In relation to 6.12.2 and 6.12.3:

a. Please explain in more detail how the design and infrastructure procurement processes were intended to function in parallel.

IK A simple statement by adopting if you recognise that the SDS is going along and you want to do an Infraco procurement process, which you do, and is you adopted a design for it and you prepare a set of documentation upon the state of the design at that particular date of that design freeze, you put that into the tender document for the Infraco and he responds on that basis of the available information. If you are going to then do a second ‘best and final offer’ which was consistent with what we were expecting to be able to do, that will occur at a later date, that later date may be of the order of three months after the tender has been received and a total of up to perhaps six months after the initial tender has been issued – three months to do a tender, three months to review it, six months of advancing the design process – you are in a different place. If you want to initiate a (1.17.03) at this point you then have frozen a month before that design process and you have again prepared a document which is based on that design which has been advanced by, in my example today, five months. That then goes to the tenderer “bang this is where we are now – respond”.

GM So is it about sharing progress with the tenderer and giving them a final update on the design?

IK Absolutely.

GM b. Had this approach been used on projects previously? Has it been used since?

IK Had it been used on projects previously – yes.

GM What other projects would that be?

IK That doesn't say tram projects so I would suggest because it has been ...

GM What would be the other projects?

IK Where have I seen it? I saw it a lot in Australia. I used it a lot in Australia and a lot of them were related to development-type projects, property development projects.

GM So you used that sort of process in Australia on property development?

IK Yes.

GM What about similar projects?

IK It wasn't used in Croydon. I think in Manchester phase 3 there were stages of design information released.

GM Is that experience you have had before?

IK It's experience because we were bidding, when I was with Amey, Amey and (1.1903) did Manchester phase 3. I am pretty certain that it came out in different stages. It is generally speaking not that uncommon. However, if you are going through a best and final process and if you have a designer which is working then that is what you would obviously and what you do. The piece of experience that I haven't relayed is that once we were selected as likely preferred bidder in Croydon, we had to reduce something like 10%, 15% in fact off the total cost of the equivalent Infraco/Tramco combined and operator combined consortium price so as to have a sufficiently low budget to make the project go forward.

GM Do you know if that sort of process has been used since the Edinburgh tram?

IK I don't whether it has been used in the UK.

- GM Do you know if it has been used elsewhere?
- IK Internationally – yes.
- GM Where about internationally?
- IK Doha, Abu Dhabi.
- GM Are these all on tram projects or is this property projects?
- IK Transport.
- GM Are these projects that you have had involvement in at all?
- IK Yes – but later.
- GM c. How was competitive pressure to be maintained through this process, eg, if design continued to evolve after a preferred bidder had been selected?
- IK There was always the risk there was no project and if you have actually done a bid and you have spent £100m on it and your bosses in the company and the Board if it's a plc, have already announced it, there is pressure to complete so the competitive actually always is there. The risk if you have got a preferred bidder you always carry, the public sector always carries a bidder in reserve, it is common practice across the UK, and the world, and that means that the preferred bidder knows that whilst it might not be so easy and the public sector doesn't really want to do it, they can bring the other one back and so those are the mechanisms.
- GM d. Was there a risk that a preferred bidder would use ongoing development of the design as an opportunity to increase its price?
- IK Yes.
- GM e. Was it anticipated that, if the design was not wholly complete by the time the infrastructure contract was awarded, the infrastructure contractor would either (a) include risk premia in his price, or (b) seek to pass design risk back to TIE?
- IK Clearly there is more of a risk if you come down to a preferred bidder and a sole bidder or a sole bidder scenario but the sole bidder hopefully was not going to happen. Of course it can happen that there is going to be changes or developments in the design that could have had an impact on that but those

changes really needed to, if they happened to be flagged. If you are talking about the way in which TIE manages the process, it isn't until the date of award that the Infraco is aware of anything that has happened post the information transfer which is consistent with the best and final offer and you are negotiating on the basis. In the background if SDS is still working away and something comes out of that, it would be beholding on TIE to make a decision as to whether or not there was something that should affect or if they thought might affect this, so as to avoid any disingenuous nature in there, but there would be no way for the Infraco to actually understand that was happened and that has happened in the background and Infraco would be at risk of such not being declared by TIE. On the other hand you can see the counter-availing argument that if something had happened which caused a potential reduction in cost, well guess what, I am certain that if that came to the knowledge of the TIE Project Director, he would make sure that that was then provided to the Infraco as advanced knowledge. Those two things are going on and the potential is there for them to happen and under any circumstances, based on the completion of the design, as I have already explained, the Infraco has, hopefully, as he has moved through this BAFO process been able to reduce some part of his risk premium because of better understanding of detailed design and, in fact, may have influenced it in his initial qualifications process in terms of his tender response. Therefore he has had, in time, may have managed that process in a positive manner so as to affect the reduction, just as I explained to you that in Croydon I reduced 15%, in my team, between the date of tender submission and being named sole preferred bidder. I had that experience.

GM f. What other risks were present in developing design, diverting utilities and procuring the infrastructure contract in parallel?

IK The integration of the tram supply. We talked, ad nauseam almost, with respect to utilities diversion we failed to talk at all about the integration of the tram supply contract and the integration of the tram supply within the systems integration and systems design which was within and contained within the Infraco contract.

GM So the other risks present in relation to design diverting utilities and procuring the infrastructure contract in parallel we have spoken about utilities design but the other risk could be integration of the tram supply contract?

IK Into the Infraco and systems integration contract – yes.

GM Any other risks and we will look at this individually, but in addition to the utilities diversion any other risks was identified from that that we haven't spoken about?

- IK g. The other type of risk would have been land access. In other words has the Council acquired all of the property rights that are necessary to enable us to build the system.
- GM These are the risks and we have spoken about land access and integration of tram supply contract, did TIE identify those?
- IK Yes.
- GM h. Did it have plans to mitigate these risks? If so, what were they, and what steps were taken to implement them?
- IK The integration of the three contracts – the Infraco, the tram supply and the SDS. This was to be achieved through a close and detailed understanding and working through the same set of lawyers. Effectively the clauses that were contained in those three would work together and enable a smooth novation process to occur from TIE to Infraco. In other words you don't have things which don't talk to each other, they must talk to each other so when you envisage the Infraco tender process you envisage that the Infraco understands because he has got a copy of the complete SDS contract in a statement as to where we are and an updated programme, you can understand that piece, because he then is looking and reviewing at this novation and PB being the designer. Similarly the same has to apply to the tram supply contract not because of the design process but there is a design aspect to it, but also because of the integration of the tram into the Infraco contract. In other words, for example, will the tram fit into the depot, that type of thing requires coordination.
- GM Was that managed by TIE in-house?
- IK In-house this whole process was managed by TIE supported by TSS and everything that we know should be being made aware at the earliest time to the SDS and the SDS is doing vice versa back up and interacting outside with the utilities diversion process and with the Council.
- GM Another one was land access?
- IK A good example we had to buy the pub next to Haymarket Station because the line of route went through it.
- GM i. What due diligence, if any, did TIE do, prior to awarding the SDS contract, on PB's ability to deliver the design on the timescales necessary to support the procurement of the infrastructure contract?

IK I will refer you to the last answer.

GM At _7, the OBC says:

“The delivery of the Final Business Case which demonstrates affordability, economic viability and financial viability is in turn dependent upon the prior completion of the following procurement activities: ... Analysis of 1st stage tender returns for the Vehicles and Infrastructure contracts to the extent that the Final Business Case can conclude, with a high degree of confidence, that the capital cost estimates for the assumed phase 1 of the tram are robust and affordable from the agreed CEC/SE funding package”.

2. Can you comment on this, and in particular on why the process was expected to yield cost estimates on which a high degree of confidence could be placed?

IK Why? If we understood that we were planning to issue a tender document with a design that was 60-70% complete with all of the qualifications and with all of the direction towards those areas that we knew were of critical concern to any contractor that what we would receive from the bidder was an offer capable of acceptance, albeit that he may have qualified it. That offer would be a price, that price would be capable, if we wanted to of accepting it, and consistent with the conditions of contract, the risks would then be transferred by that contract. That is different to a budget, that provides you with a high degree of confidence that you have got something that, if you understand what you have contracted with him, or can contract with him to do, you also understand what you have not contracted with him to do and your quantitative risk assessment can therefore be done consistent with what he is not contracting to do given that his price is now available and can be accepted. I think genuinely speaking, that is the basis for somebody to say “it gives you a high degree of confidence”.

GM At 5.2.1, the OBC says:

“TIE has carried out a great deal of work to ensure that the current capital cost estimates are the most accurate available and are benchmarked against outturn costs on completed tram projects. However on a project of the scale and complexity of the tram project there is still a significant degree of uncertainty (including that relating to construction market prices generally) which will exist up to and beyond the point where tender prices are known. It is therefore important to achieve as much certainty as possible on the likely price for the different elements of the network before awarding the major contracts for the tram infrastructure and vehicles.”

3. Can you comment on the cost uncertainty, and the extent to which certainty could be achieved prior to award of the infrastructure contract?

- IK It is the tendering processes yield offers. The degree of certainty increases because it is not a budget but an offer possibly with qualifications. The major unknown components in the budget being cost escalation from previous projects which have been made as an assumption within the construction industry since the last project and now replaced with a current price as set out in that document.
- GM I understand that about costs and certainty but what is the extent to which certainty could be achieved prior to award of that contract?
- IK I would say to you – yes I will comment on that cost uncertainty because the Business Case says that what we are doing at this stage is that we are replacing an Optimism Bias of a factor of plus 14% on the top of our contingency with a known tender price plus a contingency of probably 10%. If the budget equals the tender price then that is where we are. If the budget does not equal the tender price if it is say 5% higher the net impact is that 5% of the 14% now goes into the contingency and the budget has been escalated and changed to a tender price 5% higher.
- GM I understand that but are you saying that cost certainty could be achieved by having a contingency then?
- IK That would mean that 90% of the cost was now capable of being described as relatively, or certain, under the contract and the remaining would be a contingency so the degree of certainty in the overall has increased from zero on the budget at one level to 90% on the tender and 10% on the contingency.
- GM The contingency then is that the way that you achieve that cost certainty?
- IK Yes.
- GM Who would work out that contingency? Take away from Optimism Bias just look at contingency.
- IK The contingency should be assessed on a quantitative risk assessment based on what is not contained in the contract to the Infracore and the risks associated to TIE of that delivery process.
- GM Were you satisfied that a sufficient quantitative risk assessment had been made in relation to that?
- IK Not at this time. It was an Optimism Bias. What we had done, there was contingency which had been established rather than a quantitative risk assessment.

GM I still don't understand how you got the contingency?

IK Contingency came from the advice originally of our friends in Mott MacDonald and in Faber Maunsell as we were talking about yesterday.

GM Would that be normal for these external consultants to decide on the contingency?

IK Not decide, it was advised and then we accepted.

4. To what extent, even after tender prices were received, would provision have to be made for risk and Optimism Bias?

IK I think at this stage you can begin to remove the concept of Optimism Bias and you can replace it with the concept of risk.

GM 5. To what extent was there consensus, or dissent, about any of these key features of the procurement strategy as it evolved during your time at TIE? Was there any dissent from any parties?

IK Not that I recall.

Prior evolution of strategy

GM An early suggestion of advanced design was made by James Papps of Partnerships UK in October 2003, but his concern was that it would break down the risk transfer one would see under a DBFM contract (**CEC01881206**) email.

1. How did the idea of early design evolve?
2. Can you comment generally on Mr Papps' concern?
3. Was there other dissent about its impact on risk transfer?

1. How did the idea of early design evolve?

IK The designers working on Parliamentary process were not contracted to undertake the design fit for a tender arriving at the lowest possible cost to TIE from the Infraco. In other words I will be specific. If we tendered on the basis of the design as it was undertaken for Parliament, the Infraco would have had to do its own design development, its own planning consents, its own design for optimisation of utilities diversion and they would have priced at an absolute premium or not priced at all and from the market consultation I don't think they would have been interested in that contract at all. Then they go on: the matter was discussed in the Procurement Working Group, including James Papps

and then and thereafter the concept of TSS and SDS was the outcome agreed where SDS would do the design but be novated to the contractor, that would be the best solution but there was a requirement for TIE to maintain its capability to review the design undertaken by the Infraco, at that stage, and that was support provided by TSS.

GM That is you commenting on his concern and how that was mitigated?

IK Such concern was noted and the handover process, and in particular, the transparency of the design, at the time of handover was known to be necessary. The key matter would be the cost to date incurred under the SDS contract being clear, the outstanding claims by the SDS being resolved and the cost to complete being accurately forecast. Infraco will take all of that into account and form a view and price based within its tender.

GM 3. Was there other dissent about its impact on risk transfer?

IK The risk discussed was whether it could be achieved, that is whether the novation could be achieved and a consensus including legal advice from DLA Piper arrived that with good management, proper management, by TIE it could be achieved.

GM In a note dated 8 April 2004, DLA offered advice on the allocation of design risk and the novation of the design contract (**CEC01865184, CEC01865183**).

1. What was the context to this advice?
2. What did TIE do in response to it?

IK It was written in order to be part of the argument to resolve the procurement strategy.

GM 2. What did TIE do in response to it?

IK It determined that the design services would be split into TSS and SDS and procured that SDS would be novated.

GM Progress Paper for Scottish Executive on the Tram Procurement Strategy (revision 10)(10 June 2004, **CEC00380901**).

1. Please comment on the following observations in this paper:
 - a. *“The theme of the strategy is to ensure that risks are aggressively managed and in particular that TIE’s stakeholders are not asked to commit to either contractual or financial obligations until each stage has been thoroughly analysed and approved.”* (_3)
 - i. Who was to carry out the “aggressive” management of risk?
 - ii. What were their credentials for doing so?

- b. TIE's recommendation that the conclusions of the National Audit Office report "Improving public transport in England through light rail" be adopted in full, including: *"Seek ways of managing risk and reducing the costs of utility diversion including questioning the need for specific diversion; and Identify the most cost-effective procurement methods and contract structures as a means of controlling cost."*(_8)
- c. By what bodies was the procurement strategy approved? When?
- o A paper on procurement was prepared for the TIE Board meeting on 21 May 2004, with a view to approval in principal and a firm recommendation at the June Board meeting (**CEC01879839** – Tram Procurement and Funding Strategy Discussion Paper, Executive Summary, 21 May 2004). The minutes, however, make no reference to it (**TRS00001896**), nor do the minutes for the June meeting (**TRS00001897**).

- 1. Please comment on the following observations in this paper:
 - a. *"The theme of the strategy is to ensure that risks are aggressively managed and in particular that TIE's stakeholders are not asked to commit to either contractual or financial obligations until each stage has been thoroughly analysed and approved."* (_3)
 - i. Who was to carry out the "aggressive" management of risk?

IK TIE and its advisors, particularly, TSS.

GM ii. What were their credentials for doing so?

IK Experience in terms of other tram projects and leadership capability.

- GM b. TIE's recommendation that the conclusions of the National Audit Office report "Improving public transport in England through light rail" be adopted in full, including: *"Seek ways of managing risk and reducing the costs of utility diversion including questioning the need for specific diversion; and Identify the most cost-effective procurement methods and contract structures as a means of controlling cost."*(_8)
- c. By what bodies was the procurement strategy approved? When?

IK Ultimately the procurement strategy was approved by the TIE Board. It was reviewed and discussed with the Scottish Executive, with the City of Edinburgh Council officers, I am sorry the date of its approval I couldn't specifically locate.

GM There are so many documents and I think that is the one they are struggling to find.

IK The definitive approval date. I myself haven't been able to see that, although, to be honest, I haven't gone through every single document that you have sent, including every single TIE Board minutes.

GM But your belief is that that was what would have to go up to the Board?

IK To be able to have initiated the procurement processes of the TSS and SDS, you will find that it had to have been approved prior to that date but that part of the procedure was going to be approved. Prior to that the original approval of the early operator involvement pre-dates all of this and goes back to 2003. Therefore, you have got something approved at, or before, 2003 for early operator involvement, you have got something that is approved for the procurement of the next three pieces, those three pieces being the SDS, the TSS which were about at the same time, and later the Joint Revenue Committee, the JRC, that was also approved as a key part of the Business Plan.

GM In May 2005, KPMG (on behalf of the Scottish Executive) raised queries about the procurement strategy in relation to the design contract, to be discussed at a meeting (**CEC01882678, CEC01882679**).

1. What was discussed?
2. Did TIE address their concerns, and if so, how?

IK Yes. I did go into this one and I saw the email that was talked about. All they can say is that I believed that the items on the agenda were discussed, which is sounding a bit flippant and did we address their concerns, and if so, how? I am going to say by discussing the matters, at the time, and with the personnel involved at a relatively detailed level.

GM (**CEC01866826**) is TIE's Project Information Memorandum on its procurement strategy.

There are various references in this document to the stage to which TIE expected the design to have been developed by particular stages in the procurement process. The way in which that is expressed is different (and perhaps more detailed) than the way it was put in the OBC.

1. Was TIE's intention for progression of design vis-à-vis procurement the same here as in the OBC?

2. If there were changes, what were they?

The PIN also notes (at 2.5.5.1) that "TIE has categorised the system into sections by criticality of the obtaining of planning consents eg the section from Haymarket to St Andrew's Square is in the most critical category."

1. How, and by whom, was that categorisation carried out?

2. Was it recorded anywhere? Is it the schedule which appears at Appendix 2 to schedule 1 of the SDS contract?

3. Was it discussed with CEC's planning department? If so, when, and by whom? What was the nature and outcome of any such discussions?

1. Was TIE's intention for progression of design vis-à-vis procurement the same here as in the OBC?

IK The overall strategy is the same. The overall strategy has not moved. Additional detail as you have moved on, and as you are putting it down to a contractor, is added, it doesn't mean that the strategy is any different, it is not. The answer, therefore, is I believe so, it was TIE's intention to be the same as in the Outline Business Case.

GM 2. If there were changes, what were they?
The PIN also notes (at 2.5.5.1) that "TIE has categorised the system into sections by criticality of the obtaining of planning consents eg the section from Haymarket to St Andrew's Square is in the most critical category."

1. How, and by whom, was that categorisation carried out?

IK That goes back to 2004/05 when myself, our peer Review Group and Mott MacDonald were working together to do that so that is the "who" and by how and whom? How – by virtue of Mott MacDonald having the most detailed knowledge, at the time, of the line 1 route, including this section, and being directed by me, alongside of Faber Maunsell, to identify the high risk areas, high risk being cost, time or difficulty for any combination of reasons and that they have worked through that process and achieved that.

GM 2. Was it recorded anywhere? Is it the schedule which appears at Appendix 2 to schedule 1 of the SDS contract?

IK It was a table, a list and a map which was produced by Mott MacDonald as I recall.

GM 3. Was it discussed with CEC's planning department? If so, when, and by whom? What was the nature and outcome of any such discussions?

IK We held meetings, our tram team held meetings, directly with Keith Rimmer and his team and they were held regularly and I believe that this was one of those items that was discussed.

Risk

GM Who was responsible for risk management in TIE?

IK With Mark Bourke working together with the Project Directors and teams.

GM The Outline Business Case March 2006 (**CEC01856896**) contains a detailed section on TIE's approach to risk and management of it (section 8, _76 onwards).

It identifies that the procurement strategy left significant risks with TIE, including the following:

- Delay and cost increases due to planning requirements during development of the design
- Utility diversion delays, impacting on work under the infrastructure contract

It also acknowledged that "*the major responsibility for identifying and managing potential risks during this period will remain with the project team and their advisers*" (8.5.1) and that these risks would "*therefore require to be vigorously managed*" by TIE (8.5.4). It also said that TIE each risk had been discussed and mitigated, and that TIE would "*continue to apply significant efforts to identify, analyse, categorise and implement the planned mitigation for each identified and emerging risk*" (8.6.2).

1. Please describe how TIE managed the risks arising from the procurement strategy during your time there

2 What steps did it take to mitigate the risks arising from design delay, utility diversion delay, and the need to obtain consents/approvals?

IK I have written the words almost continuous, discussions and review with meetings with external parties and internal parties, as the case may be, and as anything new which we felt had become a risk item of higher priority or a major concern, brought to the attention of the relevant parties, that is how we did it.

GM 2 What steps did it take to mitigate the risks arising from design delay, utility diversion delay, and the need to obtain consents/approvals?

IK The timing for the award of MUDFA, and the later award of Infracore, meant that TIE had the situation in its control. The early design and utility diversion progress could be measured against contracted programmes and the decision to award, and initiate, Infracore was in TIE's gift to determine. Consistent with all of the things that we have said before.

Guidance

GM TIE had available to it guidance on procuring major projects (such as the National Audit Office Report on "Improving public transport in England through light rail" (April 2004)(**CEC01708649**) and the Audit Scotland Report on the management of the Holyrood Building Project, June 2004)(**ADS00054**).

1. To what extent did TIE take account of these reports in setting up its own strategy?

2. How familiar were you with their recommendations?
3. To what extent were the recommendations applicable to the tram project?
4. What were the major lessons from these reports which TIE adopted in its own strategy?

It may be relevant to consider (**CEC00455307**) being a report to the Executive of CEC on the National Audit Office report. Paragraphs 15b, 18, 19 and 24 are most relevant.

A response to the Edinburgh Tram (Line Two) Committee of the Scottish Parliament, 12 November 2004 (at Appendix A) lists lessons learned by TIE from the Audit Scotland report on the Holyrood Building Project (**CEC01686226_19 to _28**).

5. Does this accurately summarise TIE's treatment of that report?
6. Were any of these lessons particularly significant or influential for TIE?

1. To what extent did TIE take account of these reports in setting up its own strategy?

IK I believe that we were more than aware of it and made due consideration of it.

GM 2. How familiar were you with their recommendations?

IK We went through those recommendations so the answer is – I was.

GM So you went through the recommendations?

IK Yes. Those recommendations were reviewed and I believe we have recorded them in parts of the earlier Business Case documentation.

GM 3. To what extent were the recommendations applicable to the tram project?

IK They were each considered on their merits. Considered against the ultimate, and formed a part of the consideration before the procurement strategy was resolved. Considered on a case by case basis.

GM 4. What were the major lessons from these reports which TIE adopted in its own strategy?

IK We believed that we had taken into consideration that which was relevant to the procurement strategy and that we had, in fact, determined a strategy that was consistent with the best combined practice on all of the LRT schemes that had been undertaken in the past ten years, in the UK.

GM A response to the Edinburgh Tram (Line Two) Committee of the Scottish Parliament, 12 November 2004 (at Appendix A) lists lessons learned by TIE from the Audit Scotland report on the Holyrood Building Project (CEC01686226_19 to _28).

5. Does this accurately summarise TIE's treatment of that report?

IK I believe so.

GM 6. Were any of these lessons particularly significant or influential for TIE?

IK I want to make the same answer as what I just did for answer 4. There is a major difference between the Scottish Parliament experience and the tram experience. The Scottish Parliament experience was driven largely because the master architect was engaged, who hadn't done one of these buildings before, on the basis of a concept design, he then died, and then other people were then, architecturally, trying to interpret his design, probably in the face of a changing set of requirements, which was continuous, and a contract which had been awarded and from which material change occurred throughout the process of the Parliamentary process building development. Considering what the major lesson is "get your design right before you actually try and award an Infraco". We had done the complete opposite, we had a strategy which was to engage a designer, to obtain planning permissions, to make sure that we understood the design in all of the critical aspects of the programme, delivery for the Infraco, prior to that Infraco being contracted such that he would give a price consistent with what we expected the design to be without change. That is the key point, without change going forward.

GM The Audit Scotland report on the Holyrood project noted (para 5.8, p65) that in 2003 the Office of Government Commerce recommended that clients should "*follow procurement methods which provide an integrated supply team not separate agreements with individual consultants, contractors and specialist suppliers*".

1. To what extent, if at all, was that guidance taken into account when devising the procurement strategy for the tram project?

IK I think that that Audit Scotland report, and its recommendation, can be seen to be mirrored 100% in what we have as our approved and being delivered procurement strategy in that the agreement, ultimately, that we are working towards, through the Infraco, is a design and build contract and tram integration contract, therefore building a consortium model where a complete design and build risk is achieved, as opposed to a set of separate agreements, which would have left TIE with a separate tram supply contract, a separate design contract, a separate infrastructure contract and a separate utilities diversion contract. That would have been to not do what Audit

Scotland recommended, what in fact we proposed, and were doing, was precisely in accordance with this so you can say that by our actions 100% supported it.

Time

- GM 1. How did TIE decide on the programme for procurement, award and commencement of the infrastructure contract?
2. What factors dictated or influenced it?
3. Was the general inflation of costs a factor?
4. Was the political climate a factor?

1. How did TIE decide on the programme for procurement, award and commencement of the infrastructure contract?

- IK We believed, and had looked at, alternative procurement and programming approaches and we believed, and had assessed, that following the strategy that we had outlined, that we would deliver the system into operations more quickly and, therefore, at less total project outturn cost than alternative methods and that is why we did it. In other words we were, it is an often used term, fast tracking the project, which means that by working in more than one contract at the same time we can deliver the overall project faster.

- GM 2. What factors dictated or influenced it? You mentioned the project outturn course and the fast tracking side of things.

- IK The primary concern on the programme for the procurement, the early initiation of design to achieve planning permissions which were affecting the scope of the works overall, some of the details associated with the design in critical areas and, particularly, the utility diversions programme.

- GM 3. Was the general inflation of costs a factor?

- IK Absolutely 100% – yes. Because at this stage, and really throughout, the Scottish Executive grant had not been formally agreed to be escalated. Therefore the general inflation of costs from 2002 £375m to a deliver which should have been completed in 2009, which was our programme when I was around, we couldn't square that circle until such time. Therefore by doing it more slowly, and taking longer, the only outturn of that would have been to have an Infracore delivery cost at a greater number.

- GM 4. Was the political climate a factor?

- IK Not during my time, not really – no.

GM There appears to have been time pressure to procure and award the infrastructure contract.

1. Is that correct and, if so, what were the main reasons for the time pressure?

2. What was more important to the success of the procurement strategy: completion of design and utility diversions to the appropriate degree prior to the award of the infrastructure contract; or award of the infrastructure contract on time?

3. Was consideration given, during the development of the infrastructure strategy, to what should be done if these two objectives came into conflict (ie, delays in design and utilities meant risk premiums remained in the infrastructure bidders' prices)?

4. If so, when and by whom?

5. What ought to have been done if the two came into conflict?

1. Is that correct and, if so, what were the main reasons for the time pressure?

IK Cost and affordability.

GM 2. What was more important to the success of the procurement strategy: completion of design and utility diversions to the appropriate degree prior to the award of the infrastructure contract; or award of the infrastructure contract on time?

IK Absolutely – no brainer. The completion of the design and utility diversion so as to allow the Infraco access as per the contract and the schedule of access dates was critical to avoiding cost to TIE, however, also inflationary effects of delay would affect the cost to TIE from the Infraco if it was put later. Given that the SDS and MUDFA were under the TIE management, the position should have been understood and manageable, at the time, before the Infraco was awarded. The control of that was within the gift of TIE and TIE's alone to make a decision. Therefore, whilst those two things were notionally in conflict, ie the escalation of the Infraco as opposed to the delay events arising within the Infraco, I would say if I was managing that risk 100% I would go, as I first said, and I would not award that Infraco, no matter what it meant, until such time as I was confident that I could deliver the utilities diversion programme, or have modified the Infraco to reflect the fact that I couldn't divert those and come to a different answer. That required an active management, but you ask a specific question and I think I gave the specific answer.

GM 3. Was consideration given, during the development of the infrastructure strategy, to what should be done if these two objectives came into conflict (ie, delays in design and utilities meant risk premiums remained in the infrastructure bidders' prices)?

IK The first thing that you knew that you had to do to manage that risk was to award the MUDFA as fast as possible and to get it underway and I don't believe that was done. MUDFA was good to go in mid-2006, when was it awarded? You will have to tell me because I don't know. I wasn't there at the time it was awarded but what I am saying to you is that you can see that the way that it had to be managed, and the tack that I was on, was to try and award that MUDFA and get that work done as fast as possible because it is only by having those works progressing that you can force the issues associated with anyone else involved in this project to make the progress happen commensurate with the needs of the programme to bring it forward and complete it as soon as is possible.

GM It was about mid-2007 that MUDFA actually started going.

IK There was a whole set of things that went on but the real question coming right here and right now that I can comment on, only as a third party, is I have said to you very clearly that I would not have awarded the Infraco until I was dead certain, based on everything I knew at the time, not what I knew in theory, but what I knew at the time, to award that Infraco, until it was clear that I had got headroom, space, time, to be able to finish it. Therefore the key question for the Inquiry it seems to me what was done at the time when, not when MUDFA was awarded, but what was done prior to the time, and at the time that Infraco was awarded, consistent with what I am saying my strategy and view would have been, I think. It is something that you might find interesting.

GM 5. What ought to have been done if the two came into conflict?

IK Accelerate MUDFA. Put everything you have at MUDFA. Force them, take works off them, put works in the hands of a new contractor, force MUDFA to bring in additional resources, within the contract, or pay them extra, do it faster, get approval from the Council, work overnight, just absolutely blitz the MUDFA scope of works so as to complete to avoid the issue. Take whatever political flack you have got in the project, take whatever happens in the press, get the job done, that's me, that's what happens, you should see what happens in Dubai and in Abu Dhabi and in Doha under the same circumstances, in comparison to what happens in the UK. That is why we can do in the Middle East projects ten times the size in three years.

GM In the Tram Project Director Executive Summary for the Tram Project Board on 22 November 2005 (TIE00090571) you said:

“TPD advises that the delivery of the utilities agreement is on the critical path for the project and that delays in reaching agreement beyond the anticipated tender release date of 9th January, 2005 will add cost to the total project value at a rate of circa £3.5m per month.” (Emphasis added)

1. Was this a reference to inflation?
2. Can you explain the remark, and how the estimate of £3.5m per month was calculated?
3. Would this pressure have been alleviated if the grant funding had been index-linked?

1. Was this a reference to inflation?

IK Yes.

GM 2. Can you explain the remark, and how the estimate of £3.5m per month was calculated?

IK An assumed inflation rate multiplied by a budget cost divided by 12 months.

GM 3. Would this pressure have been alleviated if the grant funding had been index-linked?

IK Yes. Clearly.

Implementation

GM 1. To what extent had the procurement strategy been implemented by the time you left TIE?

2. To what extent was that done as had been intended, ie, in accordance with the strategy?
3. Insofar as you are able to comment, do you consider the procurement strategy overall to have been properly implemented and successful in its objectives?
4. Could anything have been done differently which would have assisted the better achievement of the objectives?

1. To what extent had the procurement strategy been implemented by the time you left TIE?

IK Parliamentary Acts had been passed, operations contract over 30 years, had been awarded, SDS and TSS was awarded, JRC contract was awarded, MUDFA was in the process of tendering, tram procurement, big documents

I would have estimated at around 80-90% complete and the Infraco bid document was under preparation, it was going slowly and it was probably, I would say, 40-50% complete, I might have said something different at the time, but I feel that it was probably there or thereabouts, that is what had been done. What else was there? There was the procurement strategy for the utilities diversion and the planning permissions, we had established a working group with the Council and SDS under Barry Cross trying to facilitate the processes in the Council for the closure and development of planning permissions and with Keith Rimmer with respect to the traffic management modelling and approvals of permanent and temporary Traffic Regulation Orders. That is pretty much where we were.

GM 2. To what extent was that done as had been intended, ie, in accordance with the strategy?

IK The recorded strategy was 100%.

GM 3. Insofar as you are able to comment, do you consider the procurement strategy overall to have been properly implemented and successful in its objectives?

IK Overall clearly not given the outcome. Something went embarrassingly wrong after I left you may quote me.

GM 4. Could anything have been done differently which would have assisted the better achievement of the objectives?

IK I have not been supplied with information allowing a proper and full professional and complete assessment to be made and I don't, therefore, think I should comment further.

GM You reported to a meeting of TIE/TEL senior management on 11 April 2006 about PQ submissions for the Infraco Contract (**CEC01882566** – draft minutes – **CEC01882565**). Michael Howell commented that the response “*had not been five star*”. You noted that TIE would use the pre-qualification process “*to maximise chances of an outcome which strengthened competition*”

1. Can you comment generally about the discussion at this meeting concerning: the market response; the proposals to strengthen competition; the revised procurement programme and its objectives?

2. The note states that “*the overlap of MUDFA and Infraco was manageable*”. Can you explain this issue? What discussion was there about it?

3. James Papps asked “*how reliable the pricing in October 2006 would be and if waiting for improved quality of design and technical information improved would secure a superior outcome from Phase 1 ITN submissions*”. Please explain his comment and your response.

1. Can you comment generally about the discussion at this meeting concerning: the market response; the proposals to strengthen competition; the revised procurement programme and its objectives?

IK As I recall the market response from Infracos was that only one potential bidder responded and that was on the basis of civil works only and that was Bilfinger Berger. Not stellar means almost zero. It was a very unexpectedly bad response given that we had had prior consultations with the bidder groups, and we had hosted in DLA offices briefings, which I personally gave to the assembled bidders, and potential bidders, who were going to respond. Siemens made a response, I can't remember for the life of me who else made a response, but virtually it was radio silence. I determined that we had to do something more about that and the primary reason that we found was that, in spite of everything that we had said, no one believed that the funding of the Edinburgh tram project was actually going to happen and no one believed that it was there so why waste our time doing something. Nobody believed that the Scottish Executive was going to fund this project. Still, even though there was a design process going on that we had funded, that is small beer in comparison to the total cost of the tram project as everyone found out. The contractor market was waiting for the signal from the Scottish Parliament and from the Scottish Government and through the Scottish Executive that in fact this was going to be funded before they really and truly put their heads down. As the process went on, what I tried to do was to discuss again with people who didn't turn up, by phone calls and by interactions when I could, together with Andrew Fitchie that we were serious and achieved a fairly good response with respect to that or, at least, an understanding of “we haven't really said no, we just haven't done anything”. Given, also, that, for example, early market consultations by Carillion “we won't come at all, ever, if you put utilities diversion in there and if you expect me to take planning permissions risk, we won't come at all”. That's the type of thing that we knew already but we had taken those into account as I have talked of. Therefore, I undertook additional meetings with Andrew Fitchie to attempt to strengthen interest.

GM 2. The note states that “*the overlap of MUDFA and Infracos was manageable*”. Can you explain this issue? What discussion was there about it?

IK This is, again, going back to the point, and I make again the statement, that the interface risk knowing that MUDFA and SDS must perform, under TIE

prior to the award of the Infraco contract, to achieve those dates consistent within the schedule of handover for the Infraco contract, was a matter that was in the hands of TIE to manage, that we had brought together, under TIE, TSS and TSS included Turner and Townsend, who supplied a team and that team was going to be, obviously, increased once MUDFA came along, consistent with managing that utilities programme as aggressively as possible. Ultimately the gift on that management of that risk was the award date on the Infraco and complete knowledge of where you were. These things had to be done and you had to understand what was left to do before Infraco could come in and be able to deliver.

GM 3. James Papps asked “*how reliable the pricing in October 2006 would be and if waiting for improved quality of design and technical information improved would secure a superior outcome from Phase 1 ITN submissions*”. Please explain his comment and your response.

IK I am sure that we come to it in another place where I said “please give me a mildly ...” what was my turn of phrase? I can explain without going through that so I will. James’ concern was whether or not the budget being translated into the first response from the ITN would be complete. As we have gone through this what we have said is that the design process was frozen at a time which would enable the phase ITN to be priced that there was a proposal for the best and final offer, involving two bidders, to happen probably five to six months later, following five to six months of advance design and that if we had adopted a mildly conservative design approach from the outcome in the ITN, then the expectation would be that the price would move in a positive, or reduced, manner as we went through the best and final offers. As we have said, there might be some risks of things going the other way in that time, and we have talked about that haven’t we? Those things were true but James’ concern here is what we get at the ITN phase 1 good enough to support all of the funding submissions and the rest of it enabling the award to be achieved and my answer to that is that I expected it to be – yes.

GM The minutes refer to a Readiness Review

1. What was that?
2. Did you participate in it?
3. What was its outcome?

1. What was that?

IK The Readiness Review was a review to determine the satisfactory nature of the documentation at the time with respect to the tram supply contract in the Infraco supply tender documentation. In other words did we have enough information to go into the tender process? It was a readiness to move into the

tram supply and Infraco tenders and given that I have said where we were probably in terms of the state of the development of those documents, it was a bit of a formal process which I supported at the time. It came out of a meeting that was held in Melville Street, I think, involving David Mackay, involving Michael Howell, my project team and direct reports and Neil Renilson and we were talking about whether or not we were ready to go to tender and we could get those tenders in in 2006 or whether there was an argument for delaying those and allowing the SDS to move further on in its design and I myself had taken the view that it was, on balance, a probability going to be the outcome that we would delay the tenders, notwithstanding the fact that the tram supply contract was almost there, but that the Infraco clearly was not up to the mark where it could go within the timeframe that we expected it to go into the market place and that was understood. It was reflecting a bit of a design slippage. At the same time, within the tram supply contract, because the JRC had not finalised its transportation modelling and revenue forecast, I had commanded that the tram supply bid document was produced to contain optionality within it. What does that mean? What that means is there was a vigorous debate going on between myself and Renilson regarding Princes Street, regarding what was happening in the tram project, what Renilson considered to be the primary objective which was “no delays, no stoppages to any buses” that’s any bus, not just his buses, any buses, and what I believed the obligation of the tram project was which was to provide a tram system which performed consistent to the run time forecast that we had put before Parliament, which had been assessed, which required in certain locations, the prioritisation of the tram system and the segregation of the tram system to the detriment, potentially, of bus operations in certain locations. Put simply, that debate had not closed and when that comes into the tram supply contract, we come to a conclusion that I put into the document, at this stage, the option to have a shorter vehicle, a 32 metre vehicle, which is the same as what I had in Croydon, as opposed to a 45 metre vehicle which we have on the streets at the moment. The reasons that we would want that variability in the pricing from the tram supply contract is to allow for the bigger debate on the revenue forecast and Business Case to close, about a higher frequency service which is smaller capacity, running at a higher frequency, generating more revenue, than longer trams, lower frequency, not as desirable service, people not transferring on to the tram system, revenue of tram lower than the first case. I know what the answer is? Andy Wood from Transdev knew what the answer was, he had done Nottingham, I had done Croydon, we brought our best experience here, he left Edinburgh at the first opportunity because he couldn’t work with Renilson and he would never accept, and neither would Transdev accept, the requirements that Renilson was putting on so he left. Here, however, the Readiness Review was then “shall we go into the market place seeking prices for two trams or shall we go into the market place having

made a decision to only ask for one?" I was going with two to keep the optionality open that was where it was.

GM 3. What was its outcome?

IK It wasn't finished. In fact it wasn't started. Really and truly it hadn't progressed very far. What I had done was I assembled a team to do the Readiness Review, one of whom, and you will make a note of this name, one of whom was Mike Heath, who I mentioned yesterday, my counterpart from London Transport, re buses all his life, did the privatisation of the bus companies in London, the whole contract procurement and negotiation for the Croydon tram line. There was a man who I would put into a Readiness Review to see whether or not everything was there and who I knew would have an influential voice, or should have, an influential voice, to educate the people in positions who had never done a tram system, who had never undertaken integration of tram and bus and who would be able to listen to somebody, not like me, who was supposed to be a tram injected zealot, or Renilson who was a bus injected zealot because we needed to calm ourselves, and the group, to enable the best decision to be taken for the project and for the city and that is what I wanted. Therefore that review was set up to handle those issues.

Delay

GM Throughout 2005, various delays in the procurement programme were reported to the TIE Board. This appears to have been linked to funding uncertainty.

At the meeting on 24 October 2005, the chief executive reported that if funding was not resolved, there might be difficulties in persuading Parliament that the scheme was viable. There had been a six month delay in the programme for completion of the preliminary design, a seven month delay in the programme for completion of the detailed design (crucial sections) and a three month delay in the award of MUDFA.

At the meeting of 27 February 2006, it was reported that a meeting with the Transport Minister, Tavish Scott, had signalled that the project would proceed, and that a funding plan emerged which would pay for phase 1 from Leith to the Airport.

1. What were the main causes of delay in the procurement programme over this period?
2. To what extent did they have an impact on the project overall?
3. What were the funding decisions which were delayed? What lay behind the delays?
4. What was their impact on the procurement strategy? And on the project more generally?

5. To the extent that these delays had an impact on the project overall, which were of most significance?

The minutes and papers for the TIE Board meeting, which may assist in answering these questions fully, are set out in the appendix.

1. What were the main causes of delay in the procurement programme over this period?

IK SDS and the document preparation and the disruptive activities of TEL.

GM 2. To what extent did they have an impact on the project overall?

IK It caused potential delay and delay to the bidding but at the same time significant political delay was learning.

GM 3. What were the funding decisions which were delayed? What lay behind the delays?

IK Our completion of the revenue forecasting for the Business Case and approval of the project at completion of the Business Case following the revenue forecasting and the approval of the project therefore by the Scottish Executive and its funding including the critical indexation of the grant.

GM 4. What was their impact on the procurement strategy? And on the project more generally?

IK Uncertainty regarding whether the project would proceed at all.

GM 5. To the extent that these delays had an impact on the project overall, which were of most significance?

IK The most significant was the funding uncertainty that delayed the ability to prosecute any bids in the market place.

Late design and modification of procurement strategy

GM An email from Rod Cameron of PWC to Stewart McGarrity of TIE commenting on a draft of the section of the Outline Business Case dealing with the procurement strategy noted:

“Given the level of de-risking is not going to be as great as anticipated due to SDS position we probably need to be careful what we say here” (CEC01855109, 2 March 2006).

1. Are you able to explain that remark and its context?

2. In particular, what was meant by “*the level of de-risking ... not going to be as great as anticipated due to SDS position*”?

IK The position of the SDS performance was becoming critical to the timing of the bidding. I think that you can't explain what people understand when they hear verbal and/or read a written delivery of a procurement strategy and unless you have, perhaps, a more detailed engineering background than generally would be available to somebody, such as Rod or Stewart, then you are inclined, I think, to assume, as we have been going through, that it becomes an all or nothing that in fact the world and the engineering in a project, is not actually a whole series of shades of grey between knowing everything and everything being rock solid and perfect and there being, for example, zero risk allowances and knowing only what you knew at the Parliamentary process and having a significant risk allowance. The point of it being that Rod here is concerned that we would be too far towards the higher risk contingency side of it by virtue of the SDS not having concluded enough information to move it forward. Put it at its most simple: if we go to bid at 40% of the design rather than the 60-70%, that we had talked about, before then this would have an increase in the risk contingency that a contractor would put on it and, therefore, that the price might be higher. That was the sort of thing that would have come as a thought process.

GM You discussed a revised procurement programme with Andrew Fitchie of DLA in April 2006 (**CEC01858127**, **CEC01858128**, **CEC01858129** and **CEC01858130**).

1. Can you please explain what these documents are?
2. What was their context?
3. What was the thrust of the recommendations?
4. What degree of confidence did you have that they would work?
5. What use was made of these documents?
6. What was done in response?
7. (**CEC01858130**) appears to show that the procurement timetable (as at 6 April 2006) envisaged that all of the following would be completed prior to the award of Infraco: SDS Preliminary and Detailed design, and final approvals of TROs.
 - a. Is that correct?
 - b. Was that the strategy at that point in time?
 - c. That appears to be a change from the Outline Business Case from March 2006, which stated (6.7.1): “*The overall design process will take between 2 and 2.5 years. It is expected that the overall design work will be around 60-70% complete when the Infraco contract is signed.*” What was the reason for the change?
 - d. What degree of confidence did you have that that timetable could be met?

- e. On what was that based?
- IK I can open Andrew's email but it was the attachments to it that I couldn't see because the question is on the detail.
- GM (**CEC01858127**) would be the email. I take it that was the one got into okay?
- IK Yes. I got the mail.
- GM The next one is (**CEC01858128**) and it's the discussion notes regarding revised procurement programme working paper 6 April 2006. I could maybe point you to specific lines if that would be helpful?
- IK This is the date at which, it is sitting here, TEL's concerns about whether we are ready to go to the market place with the tender occasioned the preparation of these documents recording the Readiness Review as being a decision to take as a result of it.
- GM What the interpretation on this document especially in relation to 16, 14 and 20 is that Andrew Fitchie, and possibly yourself, are thinking about procurement of Infracore and particularly how to modify the procurement process so its objectives could be met, notwithstanding, the delay in the design. Would that be a fair context?
- IK Yes.
- GM 3. What was the thrust of the recommendations?
- IK That was when the decision to take the Readiness Review as being the logical consequence to get other people, besides ourselves to determine what the best strategy was. Whether to cut and go into the market place or to delay and go into the market place later, that was the decision that was at hand.
- GM (**CEC01858129**) seems to suggest that procurement programme needs modification to enable TIE to recover project momentum and it was just to explore broad themes with you. Was this a response in relation to delayed design?
- IK No.
- GM What issues did that delay cause for the procurement of Infracore?

IK Ultimately, a decision, which I am sure taken after I left, to get the design to be in a more advanced state before going into the market place. However, you can see a process that is going on now, which I am involved with fully, to make that decision in a full and proper basis. Not to me, personally, push the document into the market place because I have told the market place that this is coming, but to take steps to manage the process professionally with a group of peers, transport project peers, help us to make sure that we make and take the right decision professionally. That is what is going on now.

4. What degree of confidence did you have that they would work?

GM And the concerns, as you say, is the response to delayed design?

IK Yes. The concern would be that if you go into the market place undercooked, you are not going to achieve what we wanted in the procurement strategy which is to get the lowest possible price, you will get an inflated price, because the risk and the uncertainty on the things that you can't present, a more complete design, means that they can only be assumed to be at the state that they are. Therefore, the contractor has to do more in his tender process and therefore more cost, and he will then put a higher risk premium on which means that, ultimately, you might find that the numbers coming in will be greater than what you really want them to be and greater than what you should have wanted them to be.

GM In particular, was there a concern that the success of the procurement strategy was under threat?

IK There was a threat, not that the procurement strategy was under threat, because the procurement strategy was continued with. What there was was there was a threat that the result of going into the market place would be a cost that became unaffordable in the Business Case and would not be acceptable to the funding constraints governing the project and that it would be a mistake to work with numbers that were too high when you had promised that you would be tighter and, by playing it longer, you would achieve a better outcome against a delay which would cause an inflationary impact anyway. Therefore the two things were going to happen but the question was then which of those two options would be prevailing.

GM What modifications were being proposed?

IK Modifications to the procurement strategy? None. Just do what you said you were going to do which is get the design done.

GM The sweep up of that was should the problems of a late design have been anticipated?

IK Of course. If that's a foreseeable risk, that's a foreseeable risk, but it is only when the foreseeable risk eventuates that you get to deal with it. Yes of course it was foreseeable.

5. What use was made of these documents?

IK I think this was to support a decision, ultimately, to undertake a Readiness Review and then from there to get a consensus and make a decision as to what revised procurement programme timing for Infraco and Tramco would be used. What was the best way to do it?

7. (CEC01858130) appears to show that the procurement timetable (as at 6 April 2006) envisaged that all of the following would be completed prior to the award of Infraco: SDS Preliminary and Detailed design, and final approvals of TROs.

a. Is that correct?

IK When we started we believed that would be the case – yes.

GM b. Was that the strategy at that point in time?

IK Yes.

GM c. That appears to be a change from the Outline Business Case from March 2006, which stated (6.7.1): "The overall design process will take between 2 and 2.5 years. It is expected that the overall design work will be around 60-70% complete when the Infraco contract is signed." What was the reason for the change?

IK The design and quantum. If 60-70% that would be on the Infraco contract going into the market place sooner. That reflects that the SDS design progress was slower.

GM d. What degree of confidence did you have that that timetable could be met?

IK It was an assessment and a judgement but I guess the truth is that there were was still a degree of uncertainty about that given that the SDS performance hadn't really turned around.

GM So there was still a degree of uncertainty and that was based on the SDS performance?

IK Yes. It wasn't absolutely clear. And I come back to it. The point about the Infraco tender is the same point that we were making about the award of the contract and, clearly, we have, by virtue of the slow performance of the SDS design, we are fast approaching a position where not only the ITN for the Infraco is needing to be delayed, to make sure the documentation is improved, but if we go too soon we have two problems. Firstly, is we are going to get a price which is higher than what we should be able to get if the design is further advanced and secondly, because we haven't initiated MUDFA, we are running ourselves into a higher risk scenario regarding the utility diversion process and the planning approvals and the Transport Orders process as well. Therefore, we were getting to the point where a delay in tendering of Infraco was fast becoming, if you like, an inevitability arising out of the SDS performance.

GM Document (**CEC01858129**) says "It is envisaged that all these candidates will be retained in the negotiation phase based upon the best design, interface and risk definition that TIE can achieve by January 2007". Was this a recognition that the design might not reach the optimum level of development within TIE's proposed timescale?

IK Yes.

GM Graeme Bissett asked you about the revised programme (**CEC01876978**) email 9 April 2006.

1. What did he mean by: "*Does this also offer an antidote to the risk arising from progressive delivery of tram design information into the tender process?*"

2. What was the answer?

IK I believe – yes.

GM What did he mean by that?

IK Discussions were aimed at overcoming the SDS delay in design and therefore a delay to the tender process. My first reaction was "what can we do about SDS delay" and that included getting rid of them as being "you are just so crap I can't work with you and you can't deliver this". (1.07.14) discussions I held directly with Scott Wilson and Turner and Townsend as to what it is that they could do. Could we take the utilities diversion process away from SDS freeing them up to go forward on the detailed design aspects, excluding utility diversions, and come together where we have to bridge the immovable object

that we talked about in terms of the utilities, but do that. I was actively looking and exploring ideas and avenues whereby we could correct this SDS process because the delay was going to go to the point where, not only was it in one level, the least important level, it was embarrassing to myself who had spoken to tenderers, almost daily or whatever the phone rings about that, to being unable to demonstrate that we were running this job and we knew exactly what we were doing and this was all arising out of what SDS wasn't doing. Therefore, I was effectively trying to find options at the same time as attempting to manage the SDS to do what it was contracted to do and the programme it was required to do it to.

GM What was the answer then you gave to Graeme Bissett in relation to him or his statement there.

IK I believe the answer was yes.

BREAK FOR LUNCH

After your departure

GM In a letter dated 15 June 2006 (**CEC01827972**), W K Woolgar, the Managing Director of Turner & Townsend Project Management Limited, made comments about the progress of the project, including about the utilities diversions and procurement of Infraco. You may not previously have been aware of this (since you had left TIE by then), but it would be helpful to have your comments on it generally and in particular on the following remarks:

1. SDS not having yet completed utilities surveys or a diversion strategy, and the urgent requirement for Halcrow to complete the utilities design (page 1).
2. The poor response to the OJEU notice for the Infraco contract (page 1).
3. The risk transfer not being attractive to civil engineering contractors, for example, responsibility for all statutory consents, design and system integration (page 1, 2)
4. The observations about "organisational accountability" (section 4), including:
 - a. *"TIE itself needs to consider whether or not it will perform the traditional role of project sponsor or undertake project management delivery roles. If the latter, can TIE procure the necessary resource at the correct quality and at the right time?"*
 - b. *"The current project structure does not provide a clear project management focus with accountability for deliverables and nor does it provide a framework to deliver the specific packages of work – MUDFA, Infraco, Tramco."*

5. Mr Woolgar's proposal of a sub-project structure for utilities which he said he had discussed with you several times, "*with a view to delivering on time and budget and to the quality required*" (page 4).
6. "*The issue of SDS input must also be addressed. SDS is scheduled to provide design clarification/change advice to the MUDFA contract. It is also proposed that they will be novated to the successful INFRACO contractor. These overarching fundamental obligations create an inherent conflict in relation to design liabilities, risk of consent, risk mitigation, programme and in value engineering between both MUDFA and Infraco. For this reason, we believe that SDS' MUDFA role should be curtailed at completion of detail design with TSS taking over the contract administration role for MUDFA. This would allow SDS to work fully in accordance with the requirements of the Infraco tender and appointment.*" (page 4).
7. "*So far, there has been limited practical commercial input to the Infraco procurement, methodology and tender documentation – the emphasis being PFI risk transfer/legal perspective without considering the commercial impacts and opportunities. The market place would appear to have generally rejected this approach. This is not a position we should find ourselves in; given the World Heritage status of part of the route, the project should be the 'jewel in the crown' of any major contractors' portfolio.*" (page 5)
1. Does the letter accurately report the important factual matters?
 2. Do you accept the criticisms made?
 3. Do you agree with the recommendations?
1. SDS not having yet completed utilities surveys or a diversion strategy, and the urgent requirement for Halcrow to complete the utilities design (page 1).
- IK This was a fact I was well aware of with corrective actions and meetings having taken place certainly since January and had called a review in fact to assess who is Bill Woolgar in April.
- GM So SDS not having completed utilities surveys or a diversion strategy, and the urgent requirement for Halcrow to complete and you were aware of that and the meeting had taken place?
- IK Yes. And we were looking at alternatives including at alternatives for additional support through TSS which is Bill Woolgar so we knew that 100%.
- GM 2. The poor response to the OJEU notice for the Infraco contract (page 1).
- IK Agreed this was a fact I was well aware of.

GM 3. The risk transfer not being attractive to civil engineering contractors, for example, responsibility for all statutory consents, design and system integration (page 1, 2).

IK No. I disagree.

GM Can you explain that?

IK The risk transfer not being attracted to civil engineering contracts, for example, it's the example so aren't correct. For all statutory consents – that was going to be an outcome of the SDS process that we had substantially moved through that planning process and consents process before the Infraco came along. The design and system integration – no I disagree with that too simply because we are well aware that design and construction of light rail schemes has been undertaken by many contractors before and the system integration that is the tram and civil engineering has also been undertaken by others before so that is why on those basis I disagree but he is making the point that the risk transfer is not attractive to civil engineering contractors and I think we have addressed the primary needs of that risk transfer and that the response was not negative as a result of that and more to do with the fact that there was doubts about whether the project would actually go forward.

GM 4. The observations about “*organisational accountability*” (section 4), including:

a. “*TIE itself needs to consider whether or not it will perform the traditional role of project sponsor or undertake project management delivery roles. If the latter, can TIE procure the necessary resource at the correct quality and at the right time?*”

b. “*The current project structure does not provide a clear project management focus with accountability for deliverables and nor does it provide a framework to deliver the specific packages of work – MUDFA, Infraco, Tramco.*”

IK I found this a little surprising to be honest that it would be written in such a way. The position was that TSS should support and be supporting TIE who needed to be the project manager of this process in the areas that it was responsible for, ie the utility diversions which were not being transferred outside. Turner and Townsend were selected partly because of their experience precisely in this area as we talked about before. It was not ever that we would be simply a project sponsor but that we needed to work with TSS to actively project manage this process and that is what we thought. Therefore on that basis I disagree however, it could be other conversations outside of those between myself and Bill and/or have taken place by this stage.

GM You would disagree with that? Do you accept the criticisms that he is making – well you wouldn't because you disagree with it?

IK The question was do I agree or disagree really was it not with the statements.

GM Would you say they were criticisms?

IK After I left I have no doubt that the place was in turmoil. We will come to it later, but there is a report on restructuring which I commanded TSS to produce in April which they delivered in April which is only a month before I had left and now we are in June and it could be that nothing has happened in terms of a proactive response really to that. I can't confirm what I did because I don't have access to my emails or to anything that I was doing at that time and haven't had for ten years and the point here is "was there ever other than in Bill's mind this consideration" and the answer is "not". I tried to get Bill to marshal more resources and he had admitted to me that he had difficulty. The TSS was structured precisely for us to be able to flex our project management capability.

GM He discussed a proposal of a sub-project for utilities which he said he discussed with you several times with a view to delivering on time and budget.

IK That was the proposal in April and I recognised that conversations had been done because I was looking for him to come up with an affective answer so we were debating it. I didn't have the structure and the things in place or approved, I don't believe, or I had not approved them to go ahead but discussions were ongoing. He will be telling other people that that was the case because they won't have known.

6. *"The issue of SDS input must also be addressed. SDS is scheduled to provide design clarification/change advice to the MUDFA contract. It is also proposed that they will be novated to the successful Infracore contractor. These overarching fundamental obligations create an inherent conflict in relation to design liabilities, risk of consent, risk mitigation, programme and in value engineering between both MUDFA and Infracore. For this reason, we believe that SDS' MUDFA role should be curtailed at completion of detail design with TSS taking over the contract administration role for MUDFA. This would allow SDS to work fully in accordance with the requirements of the Infracore tender and appointment."* (page 4).

Do you accept this or what would be your comments on that recommendation?

- IK That can be a recommendation that either does or does not have to happen. We could have done such a thing but I disagree that it was absolutely necessary but at the time of novation the cessation of a direct role between ourselves and SDS and MUDFA, and the risk transfer in the Infraco, effectively means that that design service is curtailed.
- GM Would you accept that recommendation that he is making which would allow SDS to work in accordance with requirements?
- IK Of the Infraco?
- GM Yes.
- IK Yes – absolutely. And if there was something else that they were going to do then those requirements of the Infraco would be flexed to incorporate what SDS was yet to do. That there would be a clean handover and, thereafter, management by TIE and TSS was always envisaged and SDS goes off and works for Infraco.
- GM I guess you would accept that the SDS input must also be addressed? Would you accept this?
- IK Yes.
- GM I want to take a break from this. You had conversations around all this anyway and it could be looked at that that he has just done a full assessment of the project and come up with these recommendations?
- IK No. He didn't. I had opened the door. The report on 9 April, which we will come to a bit later on, was at my specific request because of the concerns that I had and I tried hard, very hard, in January etc in December to get SDS to self-correct but by March, and then coming into April when that report came through, I was seriously looking at alternative options because SDS had not walked through the door and this had been set up to be so time-critical for the whole tendering process that it was only right and proper that I took immediate action to look for alternatives. All of them were not what we wanted, they were not in accordance with the original plan but when you plan the plan and then work the plan but then you have got to re-plan the work because you don't know what is going to happen until it happens and then you have got to do something and, I think, there is more than significant evidence of me trying to do something.
- GM 7. *“So far, there has been limited practical commercial input to the Infraco procurement, methodology and tender documentation – the emphasis being*

PFI risk transfer/legal perspective without considering the commercial impacts and opportunities. The market place would appear to have generally rejected this approach. This is not a position we should find ourselves in; given the World Heritage status of part of the route, the project should be the 'jewel in the crown' of any major contractors' portfolio." (page 5)

Are you accepting what he is saying there? I don't know if there are any recommendations there it is just like a statement?

IK No. There is not. Everyone could say that but the risk of working in the world heritage site you can't access to your construction site, then nobody is going to turn up.

GM At a TEL Board meeting on 24 July 2006 (**CEC01794942_2** (06.87), the new interim project director, Andie Harper, is noted as making the following point: *"It was stressed that timing of tender prices for inclusion within the final business case would be an issue, and the Tramco prices quoted in the business case would not be fixed, and Infraco would be estimates as FBC was to be submitted before Infraco tenders would be returned."*

1. Whilst you were not at that meeting, does that reflect the position as you understood it when you departed from the project?

2. What do you understand by the point that *"timing of tender prices ... would be an issue"*?

3. To what extent was this a departure from the procurement strategy put in place during your time at TIE?

4. What did you consider the prospects to be, when you left TIE, of obtaining truly fixed price Infraco bids?

1. Whilst you were not at that meeting, does that reflect the position as you understood it when you departed from the project?

IK Very likely to be correct.

GM 2. What do you understand by the point that *"timing of tender prices ... would be an issue"*?

IK That the timing and of the receipt of the tender prices did not predate the Final Business Case.

GM 3. To what extent was this a departure from the procurement strategy put in place during your time at TIE?

IK Originally it was not to be this way but it was a departure which was reflective of his assessment and, in fact, my own assessment and that which we talked about with Graeme Bissett in an email, for example, of delays in the tender

process but maintaining but maintaining the timing for the Final Business Case to be submitted.

GM 4. What did you consider the prospects to be, when you left TIE, of obtaining truly fixed price Infraco bids?

IK By the completion of the negotiation process I still believed that it was very possible with continuing the risks that may have been ultimately negotiated into a shared position which would have meant that it wasn't 100% fixed but with material interfaced risks probably still remaining with TIE, ie our ultimate completion of the utility diversion process for example.

Overlaps in procurement

GM As we understand the procurement strategy, it was always intended that its different elements would overlap: ie, design, utilities diversions and the procurement of the infrastructure contract were all to progress simultaneously.

1. To what extent did that present a risk that, if one or other element was delayed, the objectives of the procurement strategy would not be achieved?
2. Was that risk understood and managed, and if so, how?

IK A real risk. Was the risk understood and managed? Yes that risk was understood. How was it managed? It was managed by constant review including consideration, as an option, of SDS, also a removal from the utilities diversion process to be replaced by a bigger TSS team to manage that with minor inputs from SDS and that is the type of the thing that is on the face of 9 April report from TSS to me.

GM The elimination of risk price and from infrastructure bids would be more likely if the design and utility diversions had been totally completed first? I suppose if both underway at the same time at least some risks would remain?

IK Yes.

GM And presumably that would be reflected in the infrastructure bids later on?

IK Yes.

GM Do you think then if both or either/or were delayed then risk pricing would increase?

IK Yes. The big problem was the initiation of the utilities diversions in the streets of Edinburgh before either the Final Business Case had been approved which

wouldn't have happened really but it could have been initiated before the Infraco was in place for sure.

Bespoke contracts

GM The infrastructure contracts (and others) were bespoke, rather than based on standard forms.

1. Who decided what form of contracts should be used?
2. What advice was taken?
3. What consideration was given to risks that might arise from not using standard form contracts (appropriately modified), eg, that lack of familiarity with the contract terms could give rise to mistakes or disputes?

1. Who decided what form of contracts should be used?

IK We go back to the Procurement Working Group back in 2004 when we were reviewing the risk transfer and the consensus view at that point was that we would attempt to get to a position where maximum risk transfer had been achieved at the point of the final Infraco award which, in their consideration, we thought about the NEC formal contract and we had walked away from that and that was the outcome recommended that was there so predated.

GM 2. What advice was taken in relation to the contracts?

IK We had DLA Piper and we had Partnerships UK and we had Grant Thornton.

GM And you have already mentioned the personalities involving those people involved at that time.

3. What consideration was given to risks that might arise from not using standard form contracts (appropriately modified), eg, that lack of familiarity with the contract terms could give rise to mistakes or disputes?

IK It was a consideration certainly we are that that is an argument that it has been raised through this and that was the genesis, I suppose, of the NEC contracts and working groups there. However, the contracts and the documents that we were going to prepare were, again, to be prepared as a suite using similar clauses within the tram supplier, the SDS and the Infraco such that they could be done. I said already that I had personally facilitated and provided the suite of equivalent documents for Croydon tram link in their entirety and I have said before, and I now repeat, that the dispute processes for a contractor into the concession company failed 100% in terms of the contractor's recovery of claims, on the concession company, was zero in the face of a £40m or 22% overall construction costs escalation which they wore. What I am saying is they attempted through the dispute and resolution

processes in that suite to recover and they did not. That showed me that the clauses that were written in the contractual framework that was put in place that I myself negotiated over 12 months with each of those parties, worked.

Miscellaneous

GM In hindsight, do you consider the procurement strategy was appropriate for the project?

IK I considered the key part of the strategy was that TIE was building its own consortium, attempting to make it as cost-effective as possible and undertake utilities diversions, which would not have been undertaken by any Infraco, therefore it was appropriate and key parts could not be done in any different manner. We maximised the competition in the tram price and thereafter the competition in the Infracos to the extent we knew however that Infraco competition was less and, therefore, we were able to provide and build our own consortium and choose, for example, our own trams. To deliver it required intimate knowledge and expertise. You couldn't be a mug punter and never done this before, come along and expect this to be done optimally, you couldn't and I don't know that expertise was there after I left.

Design

Work prior to the appointment of the SDS provider

GM There is reference to design work being carried out prior to the appointment of PB.

Eg, papers for the TIE Board meeting on 22 November 2004 (TRS00018648):

- _15: *“work is now underway on detail design and procurement under Ian Kendall’s leadership”.*
- _95 onwards, IK’s report on tram procurement:
 - *“The critical section of the project between Haymarket Yards and Ocean Terminal is being addressed as a priority”.*
 - *“The critical aspects of the project relating to improvements in the design concept will need to be decided by the end of March 2005 to allow the detailed design process to be undertaken.”*

Report for the TIE Board meeting on 21 January 2005 (TRS00008502_39):

“Certain critical design issues will need to be discussed and resolved prior to the appointment of SDS and TSS consultants to avoid re-working of the design.”

Chief Executive’s report for the TIE Board meeting on 28 February 2005 (TRS00008507_15; Minutes TRS00018615):

“The tram design team is well under way on a wide range of technical activity focussed on the detailed design of the tram. Particular progress has been made in the utilities context.”

Questions

1. What was the nature of the design work carried out prior to the appointment of Parsons Brinckerhoff as SDS provider in September 2005?
2. Who carried it out?
3. Who managed it?
4. How far had it progressed by the time PB were appointed?
5. To what extent did it provide a sound foundation for the work to be done under the SDS contract?
6. What was meant by "detailed design" in this context? The same term is used to describe the final phase of the SDS contract, which was yet to be even awarded.

1. What was the nature of the design work carried out prior to the appointment of Parsons Brinckerhoff as SDS provider in September 2005?

IK I mentioned yesterday the creation of a peer review group that in people who I knew and trusted from previous projects who came to TIE work under my direction to review the state of the overall design, in particular, in what we termed ultimately the critical areas. To determine whether or not improvements to, in particular therefore, the Mott MacDonald line 1 design between Haymarket side broadly, Murrayfield broadly, all the way through to Leith could be made. Certain changes were then implemented as a result, one of them being, for example, the realignment of the track from the alignment that was going through line 1 Parliamentary process to a different alignment adjacent to Verity House, I can't remember the street name, but it was to maintain the tram alignment adjacent to the railway alignment until it came to the road which runs between the Institution of Scottish Accountants and Verity House and to then come up to Haymarket through and on that road. That then went into an amendment into the line 1 Parliamentary process, a belated amendment so that is the type of thing, that was the most notable one. However, for example, could we actually fit a tram stop in Haymarket because there were physical constraints there. I brought people who had built things with me before to review whether what Motts had done could be built and we improved it.

GM So you have got the initial thing from Motts, as you say peer reviewed ...

IK And some changes were adopted.

GM 3. Who managed that?

IK Me.

GM 4. How far had it progressed by the time PB were appointed?

IK We had finished.

GM 5. To what extent did it provide a sound foundation for the work to be done under the SDS contract?

IK A sound foundation. It improved the foundation that had been produced by line 1 Mott MacDonald as evidenced by a supplementary amendment to the Act.

GM 6. What was meant by “detailed design” in this context? The same term is used to describe the final phase of the SDS contract, which was yet to be even awarded.

IK That was Michael’s comment. Probably not correct in that detail design by SDS is very much more detailed than the work that was undertaken at the time so it is a misstatement of what I refer to, when I refer to concept preliminary and detailed design. What it means is more detailed than the design that had been done by Motts in the Parliamentary process but it does not mean fully detailed design so that you can give it to a contractor to construct it.

GM David Ramsay of TIE made the following comments to Sharon Fitzgerald of DLA about SDS reporting requirements (before the SDS contract was drafted) (CEC01876951, 16 February 2005). In accepting that such requirements might not be normal for a designer, he said:

“that may be why front end design activities generally go over time and budget as these controls and early warning systems are not in place. The future novation of this package also means that we need absolute visibility of where the SDS is at any time”.

Unless TIE contracted for reporting which was

“totally intrusive then we will at some point during the contract live to regret it”.

Questions

1. Can you comment on Mr Ramsay’s concerns?
2. Were they taken into account in the SDS contract?
3. Was PB’s reporting to TIE adequate and, if not, why not?
4. What was the intention concerning control, and management, of the delivery of the design?

1. Can you comment on Mr Ramsay’s concerns?

IK I think his general observations are correct and his general concern regarding the point of novation and the ability of us to know precisely what it was that the SDS was where they were at so that we could affect the handover and

that the contractor would accept that novation, those points that were made and completely understood. Were they taken into in the SDS contract? I believe so in terms of the reporting requirements. What this shows really is that Dave, independently of me, adding value into the development of the SDS contract which was being written by Sharon.

GM 3. Was PB's reporting to TIE adequate and, if not, why not?

IK Just making a statement here that it should have been if it was done as in accordance with the contract, for example, Sharon picked up David's comments and applied them but the actual PB performance was less than satisfactory here but it was not at a critical point in terms of this novation issue and that was David's point so we still had quite some time to manage PB into a successful space.

GM 4. What was the intention concerning control, and management, of the delivery of the design?

IK That TIE would know where Parsons Brinkerhoff was, at what cost and what time they required to complete any part of their overall assignment in particular the critical milestones as they bore against our risk issues.

GM Consideration was given to the procurement of investigatory work and services prior to the appointment of the SDS provider, to assist an expeditious start to detailed design (eg, **CEC01877125** and its attachments, **CEC01877126**, **CEC01877127**, January 2005).

1. Why was this being considered?
2. What decisions were made about it?
3. Were such advanced investigation works carried out?
4. If not, why not?

1. Why was this being considered?

IK Consideration, again, with respect to potential time savings for SDS this time.

GM 2. What decisions were made about it?

IK Not to do it and to avoid the liability for it and the probability that SDS would have to later redo it anyway. Were such advanced investigation works carried? No. Why not? To avoid I suppose TIE's liability risk we would have given that information across to SDS but they wouldn't have been able to avoid redoing, either in part, or in total, for their own professional indemnity policies and for particularly noting that downstream they were going to be novated to a contractor and if something has been missed or done incorrectly,

then they would wear it therefore they would have to do it themselves and in the real world.

Appointment of Parsons Brinckerhoff as SDS provider

Parsons Brinckerhoff was appointed in September 2005.

GM One of the bidders for the SDS design contract – Mott MacDonald/Faber Maunsell – expressed reservations about the feasibility of achieving the design programme on the timescales then proposed, and suggested a reduction in scope with work being carried out later in the procurement process (**CEC01876037_1**, attached to **CEC01876036**). They also refused to accept the novation agreement “as it contains irreconcilable conflicts of interest” (**CEC01876037_4**).

1. Can you explain their concerns about timescales and conflicts?
2. What, if anything, did TIE do in response to them?
3. Both Mott MacDonald and Faber Maunsell had had previous involvement in the tram project – having done work underlying the capital expenditure estimates. To what extent was that taken into account by TIE, in assessing what weight to give to their concerns?

1. Can you explain their concerns about timescales and conflicts?

IK What I can say is that it was an aggressive programme and I think that their point about the conflict of interest is more to do with they don't want to, and didn't want to, work for an Infraco and I can tell you that subsequent to this process and me leaving, I have sat in front of the Managing Director of Mott MacDonald and he said to me “oh you're the guy that didn't give a stuff, the job in Edinburgh, aren't you” and I said “yes”, and Motts have subsequently worked for me in the companies I have been employed by many years since. However, their point is that they didn't want to accept the risks, they thought they couldn't price them and they didn't want to be novated to an Infraco.

GM 2. What, if anything, did TIE do in response to them?

IK Our approach and the tender pricing was received, albeit with qualifications offers to, or various offers to, we would change some aspects of the tender as qualifications with cognisant savings being offered. What we did was we did an evaluation matrix, we did an evaluation across those bidders and we attempted, and we did, what we call a normalisation process in terms of we did evaluate a price adjustment up or down based on the qualification and including a change that we would have had to make to Mott MacDonald's price to get them to accept all of these risks and we looked at that process before arriving at a conclusion that, on balance, the better of the alternatives and the better value for money for TIE and CEC, in Scotland, was in fact to go

with the PB. The orders of magnitude of this discussion can be found in the documents and they should be in existence. However, off the top of my head, if Mott was £17m and Fabers £17m without risk and without novation, PB was about £23/24m and Scott Wilson was about £30m; with Scott Wilson and PB both taking the majority of the risks and Faber Maunsell not taking the risks.

GM 3. Both Mott MacDonald and Faber Maunsell had had previous involvement in the tram project – having done work underlying the capital expenditure estimates. To what extent was that taken into account by TIE, in assessing what weight to give to their concerns?

IK It was in the evaluation because it meant that we had people who we had worked with, it wasn't that we didn't want to work with them it wasn't that I didn't want to continue to work with Faber Maunsell, who I had worked with well, or Mott MacDonald who, I have just told you, I worked with before and after, it isn't that. It is on the face of this I had no choice but to evaluate them on a straight back basis using the team to do the evaluation and present it and not to influence it, not to work with it, and I was very careful with that and then with all of the evaluations to finally do the commercial evaluation after the technical side was all covered.

GM You approved a paper for the TIE Board meeting on 22 August 2005 recommending the award of the SDS contract to Parsons Brinckerhoff (DLA00000775, recommendation approved by the Board: minutes TRS00008535_9). The paper noted

- That the information developed by the JRC provider would be critical to the success of the SDS contract
- that the contract contained c. £2m of surveys which would be outside a conventional design scope contract.
- that *“the risk transfer to the SDS is substantial, particularly in relation to approvals, and this has been verified by in-house and external consultants and affords TIE control over liability and responsibilities that would not normally be achieved.”* (_2)

1. Can you explain these statements, in particular:

- a. The role of the JRC provider, and their interface with the SDS provider?
- b. The survey work that was to be carried out under the SDS contract?
- c. Why survey work was included in that contract, if it would normally be outside the scope of a conventional design contract?
- d. What was meant by the risk transfer being “substantial”, especially in relation to approvals?

I guess he is asking for these three bullet points to be explained but when you are explaining it the role of the JRC provider?

- IK Joint Revenue Committee was to undertake the latest greatest most definitive revenue forecasting model which would have been with the target being to maximise the tram revenue given the truncations and modifications to the bus service pattern consistent with work we had already sent to Parliament and/or defined whether there could be some improvement in it. The interaction between the SDS then and this revenue consultant is that the revenue consultant is doing an Edinburgh-wide transportation model and the SDS is doing a model which is associated with more local traffic and local network for the purposes of achieving temporary Traffic Orders and for permanent Traffic Regulation Orders so I wanted those two things to not be discorded and be saying different things and specifically in terms of the design, if the revenue model said that it was absolutely hypersensitive to run times, which it is, and from it you would get a different pattern of trams and size of trams, you get lighter or heavier trams, and those things have to go into the design by the SDS so there had to be an overlap in those areas and it working together so I wanted the guys doing the transportation models for traffic regulations and permanent traffic diversions to work together with the guys who were doing the network model for the revenue, that is what made sense.
- GM And the contract contained the surveys which would be outside the conventional design scope so the survey work was to be carried out under the SDS contract then?
- IK Yes. That is what we have just talked about.
- GM And the risk transfer to SDS was substantial, what survey work was included in that contract and if it would be normal?
- IK It would be the things such as geotechnical investigation, ground penetrating radar, cat scans, condition surveys and physical survey works.
- GM d. What was meant by the risk transfer being “substantial”, especially in relation to approvals?
- IK It was substantial in comparison to what is normally achieved by all clients and what was reflected in the response that we have just gone over about from Fabers and Mott MacDonald, they didn’t want to do things that and they weren’t used to doing things that we were asking them to do. Therefore to achieve that risk transfer was to get a consultant to do something he doesn’t normally do and to price it in and effectively so it is a substantial risk transfer.

GM Recital E of the SDS contract states that “*TIE intends to appoint an infrastructure provider (the “Infraco”) to complete the design ... of the Edinburgh Tram Network*”.

1. What did you understand by these words?
2. If it is a reference to the completion of the design by the SDS provider after novation of the design contract to Infraco, what elements of the design was it envisaged would remain to be completed at that time?

1. What did you understand by these words?

IK TIE’s procurement strategy required us to procure an Infraco and novate the design work to the Infraco and they were to accept what had been done before and to complete the design and to assume responsibility for the completion of the design.

GM 2. If it is a reference to the completion of the design by the SDS provider after novation of the design contract to Infraco, what elements of the design was it envisaged would remain to be completed at that time?

IK Whatever was remaining which would have been, in particular, elements that we had considered to be non-critical to the critical path of the Infraco delivery.

Third party involvement in designs

GM 1. At the time the SDS contract was entered into, to what extent was progress with the design dependent on input from third parties, eg:

- a. survey information
- b. utilities (input from the utility companies)
- c. consents (such as planning permissions)
- d. decision-making by CEC (as project sponsor) and TIE about design options?

2. What work had TIE done, if any, to assess the scope of the inputs needed from third parties, and the timescales realistically needed to obtain them?

3. TIE had timescales for the procurement of the infrastructure contract. In setting those timescales, to what extent was consideration given to the scope of inputs needed from third parties into the design, and the timescales needed to obtain them?

If you could just give a quick overview.

IK The survey information was to be done by the SDS. Utilities – initial scope with SDS from TIE/SDS to make complete and through surveys then complete the work. Consents – totally outstanding at this point and as required by the Acts and the CEC planners, and this was a major major risk,

as we have talked about, being transferred to the SDS. Decision-making by CEC – CEC were not 100% ready to undertake this role and it was a major issue going forward. They were not ready to take this role going forward at the time of the SDS commissioning and even at the point when I had left the project.

GM What do you mean by not reading?

IK Not ready means processes not in place and approved for officers to make streamline decisions and so the volume of work that comes out of the tram project to them for all of these things would have required an effective increase in their resources to be able to handle it internally and those resources were not yet visible. In fact the Planning Department only came really visible at all come January/February time of 2006.

GM 2. What work had TIE done, if any, to assess the scope of the inputs needed from third parties, and the timescales realistically needed to obtain them?

IK From the outset going all the way back review of these risks with, and by, Mott MacDonald and Faber Maunsell relating to the scope and the risks and the definition of the critical areas and those translating into a project plan.

GM 3. TIE had timescales for the procurement of the infrastructure contract. In setting those timescales, to what extent was consideration given to the scope of inputs needed from third parties into the design, and the timescales needed to obtain them?

IK Due consideration and understanding that CEC readiness would be forthcoming, in other words we have explained the situation to them. As a side bar I have to say to you that in any project that I have been involved in, particularly in the last ten years in the Middle East, the whole design and approvals process coming back to the clients from a design and build contract, which is in the main what is done now, is the Achilles heel of every contractor.

GM Why is that?

IK The clients generally speaking and authorities generally speaking aren't good at making quick decisions. And for the reasons that the people of (44.01) are not used to, not paid to, and not willing to accept the risks that carries with making decisions.

GM The Tram Design Manual (eg, **CEC00069887**) was approved by the Planning Committee of CEC on 1 December 2005 as supplementary planning guidance.

1. To what extent were you aware of this, and involved in its production?
2. What was its broad purpose?
3. One of its stated aims was for an efficient delivery process (paragraph 1.9). Can you comment on that, and on whether that aim was achieved?

The Manual refers to the Tram Design Working Group, and its remit in advising on applications before they were lodged with CEC (section 2).

1. To what extent were you involved with, or aware of the work of, the TDWG?
2. What was its broad purpose?
3. To what extent was it successful in progressing consents on a suitable timescale?

The Manual refers to the flexibility allowed by the Limits of Deviation established in the tram acts, for the alignment of the track (eg, 5.78, 5.79).

1. Was that flexibility helpful?
2. Did it leave a good deal of design work and decision-making still to be done?

The Manual refers to CEC's strategy for developing the public realm alongside the tram project (eg, 1.8).

1. What impact, if any, did that have on decision-making in relation to the tram project, and on progress of design in particular?

Your Tram Project Director Executive Summary for the Tram Project Board on 22 November 2005 (**TIE00090571_9**) noted:

"CEC Design Manual approval is required within the Requirements Definition Phase of SDS to avoid delays and additional costs. This establishes a deadline of 19th December, 2005. TPD/DTPD meeting with Director of Planning and Director of City Development has facilitated progress towards achieving CEC approval of a modified Design Manual by this deadline."

2. Was progress adequate?

1. To what extent were you aware of this, and involved in its production?

IK Not involved and aware. Every iteration I read.

2. What was its broad purpose?

IK My words – to attempt to control the scope of the tram project and avoid betterment scope creep by the CEC Planning Department as had occurred in other tram projects in the UK post-completion an award to Infracos.

GM Better scope to avoid creep?

IK Yes. Betterment and scope creep. Betterment is “I’ll be okay with asphalt payment, no I won’t I want marble lights underneath it” that’s betterment. Scope creep is “I don’t need asphalt against my track, I want pavements going all the way up Castle Street please”. Those things.

3. One of its stated aims was for an efficient delivery process (paragraph 1.9). Can you comment on that, and on whether that aim was achieved?

IK Yes. It was for an efficient delivery process or a more efficient delivery process so the answer is ‘yes’ and to establish an agreed basis for planning consents at some rudimentary outline form or level. Was it successful? Was it achieved? I am sorry I don’t know.

GM The Manual refers to the Tram Design Working Group, and its remit in advising on applications before they were lodged with CEC (section 2).

1. To what extent were you involved with, or aware of the work of, the TDWG?

IK That came to fruition in 2006. It was led by Barry Cross for me and I was aware of it and of the scope of the work that it was attempting to manage.

GM 2. What was its broad purpose?

IK To manage the (46.55) and input into it.

GM 3. To what extent was it successful in progressing consents on a suitable timescale?

IK It caused me apoplexy on a couple of occasions and it caused me to have my worst ever row with Mike Jenkins and Parsons Brinkerhoff in the presence of Barry Cross one afternoon because it wasn’t achieving the restriction of the betterment process and the scope, it was causing massive acceleration and expansion of it and I said “what the heck are you doing”. Was it effective at the end of the day? I wasn’t there long enough to be able to answer it really was it but it was a start but it was slow and it wasn’t directed.

GM The Manual refers to the flexibility allowed by the Limits of Deviation established in the tram acts, for the alignment of the track (eg, 5.78, 5.79).

1. Was that flexibility helpful?

IK Yes.

GM 2. Did it leave a good deal of design work and decision-making still to be done?

IK No. I don't think so, that's normal.

GM The Manual refers to CEC's strategy for developing the public realm alongside the tram project (eg, 1.8).

IK We are talking about this now. This is the betterment v the tram project argument coming to some degree of definition and at least you have got CEC recognition of public realm alongside and not within. That was a primary win.

GM 1. What impact, if any, did that have on decision-making in relation to the tram project, and on progress of design in particular in relation to their strategy for developing the public realm?

IK It was a cause for potential delay because if the public realm wasn't working in sync, in lock step and in front of, or alongside of, the tram project then it was going to cause delay and they had a couple of international architects bounce in to Edinburgh and going to do things their way which was going to be not the tram way because we couldn't have time, we didn't have time to play around with this stuff. However, nonetheless, that is why I say it was a cause of potential delay.

GM Did it result in that?

IK I don't know how it worked out. I imagine it did cause some delay but whether or not it was major I don't know. Not really, I wouldn't have thought given the time that was available before the Infraco went out.

GM Your Tram Project Director Executive Summary for the Tram Project Board on 22 November 2005 (**TIE00090571_9**) noted:
"CEC Design Manual approval is required within the Requirements Definition Phase of SDS to avoid delays and additional costs. This establishes a deadline of 19th December, 2005. TPD/DTPD meeting with Director of Planning and Director of City Development has facilitated progress towards achieving CEC approval of a modified Design Manual by this deadline."

2. Was progress adequate?

IK Just above we said when it was approved and it was before 19 December so I believe it was.

Design and procurement

GM At a meeting with PB in January 2006 (**PBH00012276**), you asked SDS to produce designs sufficient for tenderers to submit “a marginally upper bound price”, to be refined at the preferred bidder stage (para 5). Whilst development was to be phased due to funding constraints, to future proof the design for future phases, site investigations and preliminary design were to be for the whole project (paras 8 and 9).

1. What did you mean by a “marginally upper bound price”?
2. What refinement was envisaged at the preferred bidder stage?
3. What was expected from the designs if they were to be sufficient for those purposes?
4. Can you expand on what PB were being asked to do, in relation to prioritising work?

1. What did you mean by a “marginally upper bound price”?

IK The design would be able to be generally improved in detail design as being a principle and not increased. For example, if we talk about reinforcement ratio in track slab it would, most likely, be assumption on a drawing submitted in the first place to the tenderer would assume be 150 kilogrammes per cubic metre when the designers really think that by the time they have finished their analysis and the rest of it, it will be 125.

GM 2. What refinement was envisaged at the preferred bidder stage?

IK That the five months or thereabouts that we had talked about as being the time difference and that design would have increased the elements of detailed design and confirmed the critical parameters that we decided should be. For example, it would have confirmed that 125 kilogrammes per cubic metre.

GM 3. What was expected from the designs if they were to be sufficient for those purposes?

IK If they were to be sufficient for those purposes that detailed design would be available and that the design risk would be reduced.

GM 4. Can you expand on what PB were being asked to do, in relation to prioritising work?

IK They were being asked to prioritise work that work which was understood to be on a critical path for the Infracore trying to take the construction to meet the project interaction.

Management of the design

- GM 1. How was it proposed that TIE would monitor and manage the production by PB of deliverables under the design contract?
2. What was the role of TSS in that regard?
3. What resources did TIE have, in terms of numbers of staff and expertise, for its role in that task?
1. How was it proposed that TIE would monitor and manage the production by PB of deliverables under the design contract?
- IK By TIE having a project management team supported by a flexible and number of resources coming from the TSS.
- GM 2. What was the role of TSS in that regard?
- IK To provide TIE with the capability to undertake a full project management task until completion of the project.
- GM 3. What resources did TIE have, in terms of numbers of staff and expertise, for its role in that task?
- IK I had a small team on the tram which I gestimated at around about 30 at this time and that small team would be supported by a variable team of TSS which could have gone anywhere up towards a 100 if necessary but probably should have consolidated around another 30 focussed on the utility diversions process.
- GM And expertise in that team?
- IK Expertise in the team was everybody was qualified and had experience in the delivery of railway or tramway projects or utilities diversions relevant to the position that they were assigned.

SDS performance/progress with design

- GM The SDS contract was executed on 19 September 2005.
1. In general terms, how did it progress during your time at TIE?
2. What went well, and what went badly?
3. To the extent that there were problems, what were they and why did they arise?
4. To what extent did any such problems have a lasting impact on the cost and timescale of the project?
1. In general terms, how did it progress during your time at TIE?

IK Slowly. It started problems on their side and we will come to some memos, I think we had start-up problems our side.

GM 2. What went well, and what went badly?

IK The thing that went particularly badly for SDS was that the designated Project Director for PB came and went in about six weeks. Staff left during the start-up period including the SDS Project Director and PB could not resource numbers consistent with the programme. Not just the programme they had convinced us that they understood the demands of the start-up phase by effectively doubling the resources through what they called the 'tiger team' and what happened was that they only got about a half of what the combined 'tiger team' and normal requirements would be on either of them. So instead of two times they only had probably a half of what they should have had in the first team. Whether they were caught on the hop or whether people didn't really want to come and what I have seen since then and perhaps before and this is not uncommon but this really bit us because we really did have a very, not overly aggressive but we had an aggressive start-up and that was reflected by the comment that Motts and Fabers had. Therefore, you should have expected, and I could have expected, and indeed did expect, slippage, I always expect slippage in the first six months of a programme, always. But these fellows just didn't come up with the goods.

GM So you think it was down to management change, resource change, unable to get resources, the not so good things at the slow start-up due this resource issue?

IK Yes.

GM Good things?

IK We were underway. Good things through my time I am maintained, albeit, and we have evidence and issues associated with having a stormy, not a stormy, but a difficult relationship. I had a direct line to Mike Jenkins who was in the top of the PB train in the UK and Middle East, UK and Europe and he was taking my calls and we were talking normally all the time about the problems that we had. That was good and that isn't always there so that was alright.

GM Why did they arise then? Was it solely due to the resource and issues that they had or was there anything else that was a factor in that?

IK I think you can probably look at some other consequential issues. I think probably the initiation of the document control systems is always a problem.

The mobilisation of resources and the consolidation of resources into a team. Getting everybody to start to work as a group. This PB team, whilst it is PB, that doesn't mean that they worked together. That doesn't mean that they know each other and that certainly doesn't mean that they understand the project and especially if the people who have been working on the bid then disappear or don't turn up, but anybody who comes comes new and they should be well and truly further advanced than if they had worked through three months tender in the negotiation and the rest of it and they knew what was going on.

GM 4. To what extent did any such problems have a lasting impact on the cost and timescale of the project?

IK I think that it is evident that there was a lasting impact on the timescale.

GM There appear to have been last-minute delays by PB in signing the contract.

1. What were these, and why did they arise?
2. How were they addressed?
3. What impact if any did they have on the project?

See (CEC01857896), emails 8 and 9 September 2005.

1. What were these, and why did they arise?

IK The most telling one was the issue that we required a parent company guarantee, an ultimate parent company of Parsons Brinkerhoff is in New York and they point blank refused to do it and we eventually had to make a concession to them with respect to the parent company guarantee and accepted the highest company in the UK.

GM Why do you think there was a reluctance then on behalf of the parent company to give that guarantee?

IK Because it was very hard in what I had and I did speak directly to New York on several occasions and they said to me point blank that they had never done it, never ever submitted and given a parent company guarantee and we tried our level best to get them to do it and we tried our level best to check whether or not what they were telling us was true and then, eventually, that concession was given and I really don't think it actually made a blind bit of difference to anything.

GM So that was addressed by giving that concession and did it have any impact on the project?

IK No. Not during my time.

- GM The SDS contract (**CEC00839054**) contained a programme for completion of the design (see the Programme Phasing Structure – appendix 2 to schedule 1, and the Outline Design Programme – schedule 4). This required completion of parts of the Preliminary Design of critical areas by 30 November 2005 (just over two months after execution of the contract), and the completion of Detailed Design of those parts by 30 March and 30 May 2006.
1. On what basis had those target dates been fixed?
 2. Did you expect them to be met?
- IK They had been fixed as target dates to match the Infraco tender timeframe.
- GM 2. Did you expect them to be met?
- IK At the time I expected them to be met but they were not.
- GM And expected to be met?
- IK They were not met.
- GM Why did you expect them to be met?
- IK Because PB had made a big play on the project initiation and so-called ‘tiger team’ requiring to doubling or increasing, effectively doubling, resources at the start-up so that they could do so but it did not occur as planned.
- GM There are various references to “design freezes” in the design programme. Eg, Tram Project Progress Report No. 5, 1 – 31 October 2005 (**TIE00090572_20**): two design freezes, one at 7 April 2006 and another at 30 October 2006.
1. What were these, and what was their purpose?
- IK The purpose was to enable the tender documentation packages to be closed for Infraco and Tramco consistent with the overall state of the design at the time of those.
- GM PB was responsible, under the SDS contract, for survey work (eg, schedule 1, paragraphs 2.1.5), at least some of which was necessary to inform the preliminary design (eg, paragraph 2.3.1, 2.3.2.7, 2.3.3).
1. What survey work had to be done to inform the preliminary design?
 2. What arrangements were in place for that survey work to be done to allow production of the design in accordance with the programme?

- IK The survey being physical survey, GI conditioned surveys without penetrating radar and cat scans what we have said before.
- GM 2. What arrangements were in place for that survey work to be done to allow production of the design in accordance with the programme?
- IK They were to contract for it or subcontract for it however self-perform if they could.
- GM For the preliminary design to be complete, the relevant approvals bodies (which included, for example, CEC as planning and roads authority) had to be satisfied with the design (paragraph 2.4 of schedule 1).
For the detailed design to be complete, the full approval of the approval bodies had to have been obtained (paragraphs 2.6.1.2 and 2.6.2.4 of schedule 1).
1. What arrangements were in place for the relevant approvals and consents to be obtained, as needed for production of the design in accordance with the programme?
- IK Barry Cross was assigned to the role of managing this process and he could have had underneath him as many people as he wanted out of the TSS to do it.
- GM There appear to have been issues for PB in “mobilising” to perform under the SDS contract.
1. What was the problem?
2. Why did arise?
3. How was it addressed?
- IK The failure to secure and mobilise adequate staff numbers.
- GM 2. Why did arise?
- IK I have written the further question to PB, they never answered to me to my satisfaction. I suspect the requirements of the project were actually underestimated by PB but nonetheless they did not supply the personnel that they had promised and personnel who they did supply, some of whom, including the Project Director, my counterparty left.
- GM Who was that?
- IK I have forgotten his name, he was there such a short time but he is the person who is on the face of the PB, SDS tender and proposal, the guy from the States. He came to Edinburgh and liked it but then left quite soon after he

arrived so he didn't really like Edinburgh, whether that is the reason or not I do not know.

GM We got this from a tram project progress report in 2005 and it said that work commenced on the contract there must have been some mobilisation issues it was document (**TIE00090572**) which had manifested itself on the ineffective development of the design programme and TIE has taken remedial actions. What would be the remedial actions that TIE took?

IK Remedial actions is to call Mike Jenkins into the office and David Hutcheson who was the Scotland Manager for Parsons Brinkerhoff and to go through all of the outstanding issues and attempt for them to understand, listen to whatever they have got to say about it and then come to "right this is what we are going to try and do from now on and this is what you are going to try and do".

GM What were they saying then? What was their mitigation measures to that what were they suggesting?

IK What they were saying what the mitigating factors for them were causing them to be late was the late handover of information or impartial or incomplete handover of information and new information and other things going forward. For example, the design manual was only approved in December when they started in September and it originally had to be put through as "here it is" right from the start. There were some things like that but if you don't have the people to read it and to understand it and then to work with how you are going to do it then put it out into your teams, it doesn't matter.

GM Did they address the issues in relation to these mobilisation issues at the start?

IK I would say they were well and truly aware of them. Did they address them to my satisfaction? No they didn't. They obviously were trying and obviously were struggling.

GM You raised concerns about SDS's production of a programme.

1. What was the issue here?

2. How was it addressed?

(**CEC01711241**) letter from PB dated 11 November 2005.

The matter is also discussed in the Tram Monthly Progress Report for the period to 28 February 2006 (**TRS00000085_3**).

IK It was failure to produce and it was addressed by demanding it was and they had to mobilise planners and they did. They didn't bring the planners of the

right seniority and experience to be on the project in the first instance and after shouting at them a lot and reading the riot act, they did, and suddenly 'hay ho' it moved in the right direction.

- GM And that was highlighted in documents (**CEC01711241** and **TRS00000085**).
- GM PB denied they had a contractual liability to supply legal support for TROs and TTROs.
1. What was the issue here?
 2. How was it addressed?
- (**CEC01711243**) letter from PB, 11 November 2005
(**CEC01875205**) email from DLA, 14 November 2005
- IK They weren't responsible for legal costs associating with it and we obviously had to take advice from DLA on that and Sharon wrote an email, a paper on it with various extracts from it. I believe it remained a disagreement. Where would that have ended up? Most likely it seems to me I would have augmented earlier your resources to get the job done and then had a dispute later if I needed to.
- GM Did you say that they had a contractual liability for a legal support on which you didn't think they did?
- IK It wasn't definitive because in re-reading Sharon's note you can read into it that it is and you can read into it that it isn't as clear as crystal in that it doesn't state it. I would say this, I would say that it is one thing for the SDS as a design service to be on the hook for late designs and poor designs and it is another thing for them to be on the hook to external third party costs which are not normally contained or manageable by a design company to undertake a permanent Traffic Regulation Order to a Council who is asking for all sorts of things upside down and back to front. In other words to take on the services of Dundas and Wilson with a blank cheque, which is what had happened, was that in the SDS? No and that is where it should have gone to.
- GM PB complained about unsatisfactory engagement by CEC's roads department, and resultant delay in their deliverables.
1. What was the issue here?
 2. How was it addressed?
- (**TIE00241940**) letter from PB, 25 November 2005.
- IK That is something that we referred to earlier. Were they really ready for it? No they weren't. Did they have a specific and additional team resource to be able to do it? No.

GM Was it addressed eventually? Did they put resources into it?

IK It was hard for us. The answer had to be 'yes' and Barry who had been seconded to TIE and then was the Depute Project Director for me then was the best man to be able to get into the inner workings of the Council to actually define what it was that they needed in terms of additional contracted-in resources to support the officers to create a team to be able to process things internally so of course he was the right person to do it, there was no better person in Edinburgh to do that actually, or anywhere else for that matter. Given that he had through me, and who else came after me, the ability to call off, as necessary, and to get project management resources which is what it is all about, project management through TSS. That would have been what to do. Did we want to take that into the tram budget? Absolutely we didn't want to take that into the tram budget because it wasn't part of our remit and really the Council was responsible for processing it. However, if the overall position in the project was such that that was causing massive mega-millions of expenditure and loss on the tram site, because you couldn't find another 20 people to put into the Council, well I know what I would have done and that is to put another 20 people in the Council. This was a time when we were starting and learning what the constraints were and trying then to fix it.

GM The papers for the Tram Project Board on 23 January 2006 include reports on progress of the design.

1. What was meant by SDS having started the preliminary design "at risk", and why had that happened (**TRS00002103_2**)?

2. There is reference to delay in site investigation works, and you recommended that complete site investigation works be undertaken (**TRS00002103_2**). Can you elaborate?

3. There is reference to a "critical" need for completion of processes for dialogue and agreement between CEC and TIE (**TRS00002104_4** (at 1.4)). Can you explain that issue?

TPD Executive Summary (**TRS00002103**)

TPD Progress Report (**TRS00002104**)

Minutes (**TIE00090588**)

1. What was meant by SDS having started the preliminary design "at risk", and why had that happened (**TRS00002103_2**)?

IK Because they hadn't completed the requirements definition phase to everyone's satisfaction.

GM The requirements definition phase?

IK That was the first phase and then it went into the preliminary design phase. The requirements definition effectively was to pick up all of the information from all sources to refine it into a suite of documents which would tell them what to do and once that was complete to be able to desegregate that into their teams to be able to undertake separate silo design in the expectation that then it would come back and be co-ordinated. In that the requirements definition phase was not complete, they then started the aspects of the preliminary design at risk to the further information trickling in and causing them to modify it.

GM 2. There is reference to delay in site investigation works, and you recommended that complete site investigation works be undertaken (**TRS00002103_2**). Can you elaborate?

IK That means the complete scope of the project, that means including the areas that were going to be taken out. Line 1 and line 2 SDS was to do all of it.

GM So the delay in site investigation works you recommend the complete investigation works what would that be?

IK That is truncated to all of us, do a complete line, do all of the lines because it is not such a big cost and it will be there for the future.

GM 3. There is reference to a “critical” need for completion of processes for dialogue and agreement between CEC and TIE (**TRS00002104_4** (at 1.4)). Can you explain that issue?

IK That’s it, that’s just what we have been talking about.

GM At the TEL Board meeting on 20 February 2006, it is noted that the design work to date had proceeded on certain assumptions which had yet to be approved by the TEL Board. You sought approval of the strategic design principles, which were approved subject to ratification at the March Board (they in fact seem to have been approved at the May 2006 Board) (**CEC01701915**).

The principles which had not previously been approved included things like the alignment of the track within the Parliamentary limits of deviation, compatibility with CEC’s public realm aspirations, compliance with the design manual, tram stop locations and integration with other major developments.

1. What was the role of these principles in the design?
2. Had their absence hindered progress in any way?
3. Why had they not been approved sooner?

Minutes (**TRS00000319**)

Principles for that meeting (**TIE00090592**)

Principles as approved (**CEC01701915**)

1. What was the role of these principles in the design?
2. Had their absence hindered progress in any way?

IK Yes.

GM 3. Why had they not been approved sooner?

IK TEL really didn't exist and it didn't exist in the personas of Mackay and Renilson and Gallagher coming in at a detailed level.

GM So although the role of these principles were critical in design ...

IK They were critical to the SDS performance but what had not been there was the oversight by these particular individuals and the Renilson individual in particular.

GM Had that hindered things?

IK It hadn't hindered me but their approval process was about to, not only hinder me, but cause me more than hindrance.

GM So all that sort of thing had to go to the TEL Board then?

IK Yes.

GM The Tram Project Progress Report No 6, for the period 1 to 31 January 2006 (**TIE00090591**) noted that, whilst SDS had delivered the Requirements Definition Phase Deliverables on time, they were not up to the required standard. The documents were to be revised and an eight week delay in the programme was anticipated. Problems with the programme were also noted.

1. Can you explain both of these issues?

The report also noted that a team had been set up to ensure SDS deliverables would support work in relation to the Infracore tender.

2. Who was in this team, and what was its remit?

The report noted a delay in commencement of the site investigation works due to issues with SDS's subcontractor.

3. Is this the same issue discussed at the January TPB? To the extent it is different or had developed, please explain the issue raised in this report.

1. Can you explain both of these issues?

IK Partially complete.

- GM So they were not up to required standards?
- IK The required standard – missing pieces, poor drafting, all sorts of things.
- GM It has mentioned in one of the Executive Summary that “SDS’s attitude was generally encouraging – they seem willing to listen and to want to produce a good tramway – but the quality of the documentation, and in some cases of the underlying knowledge, is variable”. That goes back to what you said.
- IK It is back to what I said. They are trying to do things and they are writing things but they are writing things like “here’s a piece of paper” instead of actually understanding that they need to read this bible before they can write this piece of paper and, therefore, results in omissions and things that just simply aren’t what we want.
- GM The report also noted that a team had been set up to ensure SDS deliverables would support work in relation to the Infraco tender.
2. Who was in this team, and what was its remit?
- IK I can’t remember who was in that team. At this stage the Parliamentary process is still going through but the earliest time I would have put Willie Fraser on this.
- GM Was that remit then to ...
- IK The most important thing is that action was taken within the team and if, I can’t go back to my emails or anything, to find it was. The remit is to fix and then make it complete, that I can be sure of.
- GM The report noted a delay in commencement of the site investigation works due to issues with SDS’s subcontractor.
3. Is this the same issue discussed at the January TPB? To the extent it is different or had developed, please explain the issue raised in this report.
- IK Yes.
- GM The Tram Project Director Executive Summary, February 2006 (TIE00090593) noted (item 3, _1) that a change order had been issued removing phases 2 and 3 from the design, and “back-ending” phase 1b.
1. What had prompted that?
2. Did that re-prioritisation speed up production of the design?

The same report notes that the Design Working Group was actively involved in the design with SDS (item 3) and that protocols between the project and CEC were being developed as a priority (item 8).

1. Were these intended to, and did they in fact, streamline the design process?

2. Can you explain the need for the protocols?

3. The paper on protocols (_25) noted the urgency of the matter. Why was it so urgent? Why had it not been resolved previously?

1. What had prompted that?

IK You can see that we are talking here on the screen about truncation of parts of the line 1 and line 2 and what had prompted that was final agreement which either TIE/TEL Board that such were going to be unaffordable and that all of the current information consistent with and even indexed, Scottish Executive £375m grant and therefore the right decision was to cease even although they had only just been contracted.

GM 2. Did that re-prioritisation speed up production of the design?

IK Yes. Well it would have done.

GM The same report notes that the Design Working Group was actively involved in the design with SDS (item 3) and that protocols between the project and CEC were being developed as a priority (item 8).

1. Were these intended to, and did they in fact, streamline the design process?

IK They were intended to define and then streamline the process to the standard that could be streamlined that was what Barry was going to do, that was what he was doing. Did they in fact streamline the design process? It certainly wasn't close to the most streamline design process I have ever seen. We could streamline against a backdrop of it being a complete random process but not comparable with the most efficient form of design process that you would perhaps have wanted.

GM 2. Can you explain the need for the protocols?

IK Yes – absolutely. To avoid individual officers and/or individual members of my team going off on frolics of their own with the net effect being either a delay or increase in the cost of the tram project for things which were nice to have – gold plating and all the sorts of things that others in our previous projects had identified as being likely.

GM 3. The paper on protocols (_25) noted the urgency of the matter. Why was it so urgent? Why had it not been resolved previously?

IK Because it was impacting and we were being told by SDS that it was impacting on their performance and it was being said to be a reason why they were under-performing and it was in our gift to do it to speed it up.

GM By early 2006, TIE had taken advice from DLA on serving formal “persistent breach” notices on Parsons Brinckerhoff under the SDS contract, although were advised against doing so.

The grounds for termination included:

- Failure to produce an adequate programme
- Failure to meet the standards for the Requirements Definition Phase
- Failure to undertake surveys
- Failure to obtain TROs [Traffic Regulation Orders]
- Inadequate resourcing and progress

Questions:

1. To what extent were you involved in dealing with these matters? Who else was dealing with them for, or on behalf of, TIE?

2. So far as not already done in response to earlier questions

a) Can you explain the nature of the problems?

b) Why did they arise?

c) Who was responsible for them having arisen?

3. It appears that the notices were not served. Can you confirm? If they were not served, why was that?

4. Jim Cahill’s note (**CEC01878386**) suggests a woeful performance by SDS relative to the contract programme. Why was the performance so bad, and was there any warning of it? Was the programme realistic?

5. There is reference to TIE building evidence of PB’s breach for possible support to a claim for damages. What was the nature of that claim, and was it taken forward?

There was also a suspicion that PB were lining up a defence against a claim that they had caused the delay, or failure, of the procurement process. The anticipated defence was that PB were not contractually responsible for the production of technical specifications.

1. Can you explain this?

2. What was done about these disputes?

3. To what extent did they have a significant impact on the cost and timescales of the project generally?

See generally:

(**CEC01857074**) Advice email from DLA (Fenella Mason), 10 and 14 March 2006

(**CEC01878385, CEC01878386**) TIE note of main areas of concern/failures by SDS, 10 March 2006

(**CEC01867255, CEC01882243**) Emails with DLA, March 2006

(**CEC01787163**) DLA advice on breach notices, 24 March 2006

(**CEC01883585**) DLA email 29 March 2006

(**CEC01787162**) DLA advice on not serving notice, 11 May 2006

1. To what extent were you involved in dealing with these matters? Who else was dealing with them for, or on behalf of, TIE?

IK I was dealing with these matters. I wouldn't trust anybody else to deal with these types of matters.

GM In relation to all this the advice is in document (**CEC01878386**) we were referring to.

2. So far as not already done in response to earlier questions.

a) Can you explain the nature of the problems specifically to this ie the grounds for termination issues?

IK The grounds for termination issues was a result of things not being done in accordance with the contract as required under the contract and the sum total of them coming to a, or getting close to coming to a critical point where we would have to suggest that the PB team should be removed and replaced so it was proper for me to assess whether or not their performance had and to assess where the grounds would be under the contract for that termination knowing that really what I wanted to do was use it as a stick to batter PB over the head with to use it in negotiations, to use it in demands for recovery actions, changes of plan, additional staff, effective change, those things, rather than at any particular stage having made any terminal decision about what that would be but also recognising that, frankly speaking, this job could just have been too big for them and that is what was being discussed.

GM And that knocks off 2.a) and b) and you have explained the nature of prolongs or they are written down in front of us there and why they have arisen is this because it is just maybe too big for them. Who was responsible for these problems arising that's the ones at the bulleted points above?

IK If it is a termination under or failure to perform on their side, it is something that they haven't done.

GM 3. It appears that the notices were not served. Can you confirm? If they were not served, why was that?

IK They weren't served.

- GM Why was that?
- IK Because it was too soon in the overall scheme of things and because, whilst I wanted to have a firm basis of understanding for it, I wanted to use it more in negotiation with Mike Jenkins and David Hutcheson then I wanted actually to terminate them. The second part of that could well have been to use in the negotiation to terminate them from a part of the contract, ie to remove the utilities diversion processes out from them and to give it over to TSS given an effective change could be made and to use the grounds for termination as a means to minimise the penalty legal cost in the transfer.
- GM 4. Jim Cahill's note (**CEC01878386**) suggests a woeful performance by SDS relative to the contract programme. Why was the performance so bad, and was there any warning of it? Was the programme realistic?
- IK As we have talked about before. Jim's comment is as a commercial manager, not the most senior, but as a commercial manager reviewing the programme and in writing part of the report for me which I obviously then read and passed on as being our report but really it talks to the non-performance, specifically, of Parsons Brinkerhoff.
- GM Was the programme realistic?
- IK One would always question whether the programme was realistic and by passage of events you would suggest that the programme was optimistic and difficult to achieve but, frankly speaking, in terms of getting this aspect of it up and running, it was always going to be difficult and it is on every project.
- GM 5. There is reference to TIE building evidence of PB's breach for possible support to a claim for damages. What was the nature of that claim, and was it taken forward?
- IK I don't know. It wasn't taken forward, certainly not. Damages really weren't going to actually be relevant other than to minimise any termination cost to PB.
- GM There was also a suspicion that PB were lining up a defence against a claim that they had caused the delay, or failure, of the procurement process. The anticipated defence was that PB were not contractually responsible for the production of technical specifications.
1. Can you explain this?
- IK Is that on the face of a document referenced in this question?

- GM There are a number of documents there.
- IK I would like to try and cut it a bit short and simply just say that the suspicion of what PB's defence would be doesn't translate into what an actual defence would be however, such a suspicion would have arisen from conversations and/or but not certain knowledge. If we had email correspondence into denying the (1.34.24) under the contract for the production of technical specifications, as there was, as we talked about earlier, which talked to the issue of the legal costs for TROs then ... The disputes were not crystallised as disputes, they were recognised as being issues for disagreement and/or discussion. They didn't have a significant impact on cost and timescales of the project.
- GM In an exchange of emails within PB in 2007 about the dispute between PB and TIE, there is reference to discussions between you and Mike Jenkins and Dave Hutchison of PB (**PBH00012275** and **PBH00012276**).
1. Is the account accurate?
- IK Is the account accurate? I can't sit here and say that it is 100% accurate but it feels mostly accurate. There is a high probability that it is materially accurate – yes.
- GM 2. What were the issues which were "preventing PB from performing"?
- IK They said that what was preventing them was finalisation of all of the requirements by virtue of all of the documents having got to them. What Jenkins says as noted, different people giving them different priorities associated with it. I don't know who else was giving them different priorities because I was only giving them one priority and if they had made the mistakes of listening to anyone else, even if they were in my team, that's what a Project Director does, he takes the opportunity to actually correct any aspect of what his team is doing or to confirm a direction from the Project Director not any part of his staff.
- GM 3. What was the issue about data transfer from TIE to PB?
- IK It was slow in getting across to them and incomplete, for example, in terms of a final design manual, as we talked about, at the time when tender was awarded. It was supposed to get over to them faster than it did.
- GM 4. What were the other issues which were preventing progress?

IK I think you could say that all of the processes and staff and processed into and through the CEC approvals processes were undefined including 'how do you get a temporary Traffic Regulation Order' those things.

1. What, if any, other issues materially affected the delivery by PB under the SDS contract during your time at TIE?

GM I can't think of anything.

Utilities

Introduction

GM TIE's strategy was to enter into a single 'framework' contract, with a single contractor, for the diversion of utilities ("MUDFA"). The utility diversion works were to be carried out in advance of the award of the infrastructure contract.

1. What was your role in devising and implementing TIE's strategy for dealing with utilities?

IK I was working on the development of that specific strategy so my role was intimate to it.

GM What were the reasons for:

1. dealing with the utility diversions separately from the main infrastructure contract?
2. carrying out the utility diversion work in advance of the main infrastructure work?
3. Appointing a single contractor to do the utility diversions?

See, eg,

- Draft Interim Outline Business Case, 30 May 2005, CEC01875336 at 5.8 (_59 onwards)

1. dealing with the utility diversions separately from the main infrastructure contract?

IK As explained previously it is to separate a risk associated with that which would not have been possible to put into the infrastructure contract.

GM 2. carrying out the utility diversion work in advance of the main infrastructure work?

IK So as not to delay the infrastructure work.

GM 3. Appointing a single contractor to do the utility diversions?

- IK So as to minimise the cost to take over the responsibility for project management of it and to have a single point of accountability for doing all of it.
- GM In broad overview, what had to be done in what sequence, and who had to be involved, for the utilities to be successfully diverted? For example:
1. Surveys and other information gathering, about the location and condition of the utilities.
 2. Design of the track (including its alignment) and associated infrastructure
 3. Consents from utility companies
 4. Consents from public authorities, such as CEC as the planning and roads authority
 5. Appointment of a utilities diversion contractor
 6. Design of the utility diversions themselves
 7. The physical diversion works
1. Surveys and other information gathering, about the location and condition of the utilities.
- IK Firstly and foremost we got information from the utility company themselves. They are statutorily required to have, and maintain, current drawings and to provide them to you when you ask, especially if you have a power as we have coming under the Bill. Therefore the primary collection mechanism is to ask them to tell us and to give us details of where their assets are and we did all of that and that was the primary collection.
- GM 2. Design of the track (including its alignment) and associated infrastructure.
- IK It was coming through Mott MacDonald and Faber in a concept and then going to be developed through preliminary and into detailed design by SDS.
- GM 3. Consents from utility companies.
- IK Consent primarily was indeed with each and every one of them necessary to be able to use a MUDFA strategy rather than an individual contracting strategy. The reason here is that we believed on the basis of previous experience which was my own, which was what happened in London, which happened to Carillion and Doug Blankey from Fabers being associated with that, what had happened and talking to Turner and Townsend as well, who, obviously, we had in TSS that there are two ways to do it – you either contract with the utility company themselves to divert themselves and use their own contractor where you don't have anything other than a budget, they will never give you a fixed price and you don't know where you stand or you try and

internalise it and manage it as best you can yourself and we took the second of those choices.

- GM
5. Appointment of a utilities diversion contractor.
 6. Design of the utility diversions themselves.
 7. The physical diversion works.

IK We wanted to use the SDS to be able to design the utilities diversion and/or to redesign our track slab to avoid such diversions and we thought that that added value to what we had. The diversion of the utilities themselves has to be done by a regulated approved contractor of that individual utility company and what we looked at was the numbers of utility contractors and we looked at the numbers of regulated approved authorisations that they held across the basket of utility companies. There was no one who swept the floor entirely, that meant that they needed to, themselves, be able to engage a subcontractor across there and we were then looking at the evaluation process of working that through.

GM The sequence of all that and who had to be involved?

IK The sequence of it was a collection of the information of TIE, Mott MacDonald and Faber Maunsell were involved in that. Once they came in the information was passed across to TSS and to SDS. The surveys were to be undertaken by SDS, they could have been undertaken by ourselves, we had been through that issue. We hadn't got to the appointment of a utilities diversion contractor but the design work, so as to minimise those utilities diversions, was already being undertaken through PB.

GM You reported to the TIE Board on 21 January 2005 that TIE had "commenced a critical review of the utilities diversion cost and programme implications" (TRS00008502_39).

1. What was this?
2. What were its outcomes?

IK At this time what we had was the SDS team being mobilised and the TSS crew was on board as well so we now had the management and critical resources to be able to review what it is, and what we are looking for when we are doing this, is big things that we can possibly avoid as being areas which might be fruitful in minimising the outturn cost.

GM 2. What was the outcome of that?

- IK A work in progress and I can't remember that there was anything specific, I don't have it to mind other than to make sure that my team was absolutely focussed on what we were looking for.
- GM The prospect of having two MUDFA contractors was mooted in December 2005 (**CEC01859054**, 7 December 2005). Sharon Fitzgerald was broadly negative.
1. Why was this under consideration?
 2. What decisions were made about it?
- IK It was under consideration because of the scale and scope of the utilities diversion programme, the capacity of it, an individual contractor to handle all of it even with subcontracting capability because this is the biggest job that any utility contractor has probably ever seen, and likely to see, because most of it is 'do something in a local area rather than do something en masse'. Those are the types of reasons why it was under consideration. The decision was made to continue to go in a direction of having a single contractor so as to minimise the project management costs of doing it and it was believed that, in particular, Alfred McAlpine had the capacity to do it.

Information on scope

- GM
1. What information did TIE have about the nature, scope and location of the existing utilities?
 2. How complete was that information?
 3. Where did it come from?
 4. Did TIE take steps to obtain complete information?
 5. If so, what steps were taken?
 6. To what extent did they provide the information needed for the utility diversions to be designed and programmed?
 7. To what extent did they do so on timescales that allowed TIE to meet its wider procurement programme?
1. What information did TIE have about the nature, scope and location of the existing utilities?
- IK We had everything that was supplied to us by the individual utility companies.
- GM That would be the information would come from the utility companies? Would it come from CEC?
- IK No. This stuff comes directly from the utility company themselves.
- GM
2. How complete was that information?

- IK We knew, and we always knew, that what it would do would be as complete as what the current information and services have. We knew that there were going to be unidentified utilities out there and we knew that that would be a utility that could be left in place, like a pipe, or cable, or something that was redundant, or it could be that the information passed and in the hands of the utility company, was for some reason incomplete. We were well aware of those risks.
- GM 4. Did TIE take steps to obtain complete information?
- IK That was what the investigation process was designed to do to achieve.
- GM 6. To what extent did they provide the information needed for the utility diversions to be designed and programmed?
- IK They provided high level information as to what they had. That had to be supplemented if there was going to be a design for it to be diverted, or changed, there had to be a new design done based on the existing and based on the changeover and based on necessarily what you do to achieve that changeover.
- GM 7. To what extent did they do so on timescales that allowed TIE to meet its wider procurement programme?
- IK We had this substantial information at the time this was being done which was in December/January. We had this to hand because we had been working on it throughout 2005 and previous to that in 2004 and Mott MacDonald and Faber since 2002.
- GM Tram Project Board, 22 November 2005, Minutes (**TRS00002067**) at 3.4, you advised that there were around 1000-1500 items of utilities diversions within the tram programme.
1. Where did that information come from?
 2. How accurate was it, as a statement of the total number of utility diversions that would be needed?
- IK That came from various reports and interactions with the team and with all parts of the group working on the project. To be able for me to express such a range it shows you that there was a degree of uncertainty and plus 50% is a high degree of uncertainty about exactly what it would be at the end of the day. Where did it come from? It came from the information supplied to us by the utility companies and an assessment by our engineering team and TSS

initial overview of what would be necessary to be diverted against what would not be necessary to be diverted up to 500 questionmarks.

Co-operation from third parties

- GM What co-operation and agreement did TIE need from the utility companies?
1. From how many utility companies did TIE require that co-operation and agreement?
 2. What steps did TIE take to obtain it?
 3. Did TIE get the degree of agreement and co-operation that they needed?
 4. What impact did this have on progress with the utility diversion works?
Progress in signing up the utilities seems to have been very slow.
 5. Why was more rapid progress made with some utilities, but not others?
 6. What difficulties were encountered?
 7. Was progress slower than expected? Why?

What co-operation and agreement did TIE need from the utility companies?

- IK It needed fundamentally that the utility company understood that there was a tram system coming that we were going to be able to use our MUDFA methodology that we were going to be allowed to do the diversion rather than using a recognised contractor or subcontractor, that they would allow that to happen, that we would be responsible for the cost associated with it and for all safety-related issues associated with it, we would indemnify them against there being damage to their assets arising from either that process of diversion or, generally, because of the tram scheme coming in on top of them. There is something called stray current which comes off of the tram system that causes erosion on metallic pipes and assets and it is something that I needed to indemnify each one of the utility companies individually to remove their objection to the Bill.

- GM 1. From how many utility companies did TIE require that co-operation and agreement?

- IK All of them. Specifically I can't quote an accurate number but, from memory, in the range of 12 to 15.

- GM 2. What steps did TIE take to obtain it?

- IK Meetings on an individual basis with a specific utility company, each one separately.

- GM 3. Did TIE get the degree of agreement and co-operation that they needed?

IK Generally.

GM 4. What impact did this have on progress with the utility diversion works?

IK As yet none.

GM Progress in signing up the utilities seems to have been very slow.

IK Yes it was.

GM 5. Why was more rapid progress made with some utilities, but not others?

IK Some were just more amenable than others and all, generally, were objectors to the Bill so until the Parliamentary process got to a point of having an objection/removal/agreement, they were less than forthcoming, generally they were playing it long until such time as that got into place, they understood where they stood but they were protected, then the signal internally came to their individual project staff “okay we have got to do it, get on with it”.

GM 6. What difficulties were encountered?

IK Difficulties were encountered and I can only refer to the process leading up to the award of the tendering process for MUDFA, just slowness in a response for the reasons I have outlined, completely understandable. I was happy and comfortable that at the end of the day, the big issues I had won, I had got effective agreement. Stray current is a big issue. If you knew that some systems in the world have got what we call ‘grandfathering rights’ they came first, and after that utilities companies internationally have been privatised, that is one thing and the railways generally have a ‘grandfathering right’. It doesn’t mean they don’t have impacts on the utilities companies with erosion of various metallic things – pipes bursting and the rest of it – as a result of stray current, light columns being corroded, it happens. However, because they had been there for so long, side by side, they fix their own problems. In Melbourne the tram scheme, which has been there forever, still causes massive corrosion problems across the city of Melbourne and gets away with it. You try and put in a new system and all of these utility companies know this problem there is a “wooo hang on a second we are not going to do that”. In the principles of good governance and the world we live in, democratically, they are allowed to object and their objections need to be removed before Parliament is willing to accept and pass the Bill into law so that is what happens. That was the only difficulty that I encountered, apart from that, we were working fast towards closing them out and as soon as that got out of the way then the fellows moved quickly.

- GM 7. Was progress slower than expected? Why?
- IK No. It was slower than what might have been expected because the Parliamentary process went on for longer than what was expected but apart from that the answer is 'no'.
- GM DLA supplied a draft memorandum of understanding as a means for engaging utility companies. (**CEC01880572**, **CEC01880573**, 22 September 2005.
1. Can you explain the purpose of these documents, and the extent to which they were used?
 2. The covering email suggests TIE had a lack of leverage over the utility companies.
 - a) Is that correct?
 - b) If so, why was that?
 - c) Were the statutory powers in the Tram Acts concerning utilities adequate?
- See, eg, emails from Sharon Fitzgerald of DLA in December 2005 (**CEC01859200**).
1. Can you explain the purpose of these documents, and the extent to which they were used?
- IK The purpose of these documents is to make the utility company aware of our strategy, make aware formally that we exist and on the face of the document to make them formally aware that we will, effectively, not harm them, to give them and to get them to engage with us in terms of the delivery of a programme and a project which is going to run very fast and hard so that are the type of things that it was covering.
- GM 2. The covering email suggests TIE had a lack of leverage over the utility companies.
- a) Is that correct?
 - b) If so, why was that?
- IK There is a general lack of leverage at this time, this is September, because the Bills are not Acts is one issue, and a prima facie issue. Until we have an Act, and the power, and the law says we will do it and we can do it, of course we don't have leverage and that is what it refers to. If so, why was that? That is just what I have just said.
- GM c) Were the statutory powers in the Tram Acts concerning utilities adequate?

IK You can always say “no” but the point of it is is that Sharon isn’t working on those powers, she is working on the delivery and the contracts and the MUDFA agreement under our strategy for us, I would say at the end of the day to be able to answer that you really are going to have to look hard at the actual implementation ‘did they act at the time in accordance with what the expectation was for that’ and I would have said at this stage that we believed that the answer was “yes” and it can be worked effectively.

Extent of diversions prior to Infraco works

GM TIE’s project strategy depended upon substantial progress being made with utility diversions before work began under the main infrastructure contract.

1. How much of the utility diversion work did TIE need to carry out in advance of the main infrastructure works?

2. What estimates did TIE make about the likely timescales for the utility diversions?

3. What information formed the basis for those estimates?

4. How complete was it?

1. How much of the utility diversion work did TIE need to carry out in advance of the main infrastructure works?

IK As we have said before how much is substantial amount of it before the contract award and that that, which remained, could be completed before the date of access contained within the Infraco contract agreement. Theoretically we were setting out a process and a stage management of the construction process so that the answer would be, in simplistic terms, all that we had agreed to divert and all that needed to be diverted within the main line of the tram scheme. However, probably not every single fibre optic cable underneath an overhead line equipment pole base, because they might have yet been optimised by the Infraco and that would have been the only nuance in there. Apart from that the answer should be that all of them would have been diverted by the date of handover of the individual section of the track.

GM 2. What estimates did TIE make about the likely timescales for the utility diversions?

IK Based on our understanding of the diversion, understanding of the design of that diversion, theoretically, will be that we won’t have done it and the development of a programme which reflected our initial view and expectation as to how long each of those would have taken. Therefore we had a utility diversions programme which was being developed, had been developed, through 2004 and certainly through 2005. The information that formed the

basis of the estimates was that which had been provided to us by the utility company.

GM So they weren't estimates?

IK They were based to the extent that we could base them, at the time, before the actual final design of the diversion had been done on our preliminary view as to how it should be done subject to detailed further investigation and a better solution being found and developed by SDS.

GM 4. How complete was it?

IK It was complete in terms of a programme for that work which we had visibility of.

GM 1. What consideration did TIE give to the possibility that the utility diversion works might be delayed?

2. What consideration was given to the likely implications of any such delay on:

- a. The cost of the project.
- b. The timescales for the project.
- c. The success of the overall procurement strategy

3. What steps, if any, were taken to address those risks?

1. What consideration did TIE give to the possibility that the utility diversion works might be delayed?

IK A lot. That is a flippant answer. We recognised this as being, if not the, one of the material risks that we had to manage so we gave absolute consideration to this "yes" and we produced a programme which had float until contingency at the back end of our preliminary estimates as to how long things would take to do in each of these sections so as to provide us with a cushion, a buffer, before the initial programmed handover dates, or access dates, to the contractor. Therefore this is our estimate of the programme duration, this is the float that we have got, or spare time that we have got, this is the handover date.

GM The draft Interim Outline Business Case that was (**CEC01875336**) there is a narrative from that: noted that if the utilities contractor failed to complete on time to allow the infrastructure contractor on site, the public sector would be responsible for the delay; but that that risk was minimised by early scheduling of utilities diversions which would be "significantly advanced by the time that the Infraco Contract is signed".

What is meant by "significantly advanced"?

IK Against if you start them at the same time as the Infraco. The idea would be to get MUDFA going. If you get them going 18 months before the Infraco was even awarded that would annual programme duration for the utilities, that would be the most conservative position. If you then reduce the start date on the Infraco to six months then, potentially, you have got six months of utilities works still happening within the Infraco programme and so long as the Infraco programme can live with that work being completed and still have a contingency, a float in there, then it will still be reasonable, that would be a second view, reducing the overall inflation on the construction contract but to take it all the way through to a starting parallel, given that you were dealing with an advanced design process in the Infraco, was actually going to cause there being delayed. In Croydon, for example, they did start on time but the design process in the hands of the concession, and the Infraco, was coming from a concept design phase, whereas what we were going to do was handover something to them through SDS novation that would have made it possible for them to start earlier. Nonetheless, it was in the hands of TIE to be able to manage that process and to establish in the Infraco contract those schedule of handover dates and that is exactly what we were looking at doing.

GM 2. What consideration was given to the likely implications of any such delay on:

- a. The cost of the project.
- b. The timescales for the project.
- c. The success of the overall procurement strategy

3. What steps, if any, were taken to address those risks?

IK We had them in our risk matrix. They were reviewed constantly. What steps were taken? To work as best we could to avoid them by advancing the design process.

Utilities and design

GM What was the intended interface between the MUDFA contractor and the SDS contractor (both before and after novation of design) in relation to:

- a. design of the tram system;
- b. design of the utility diversions;
- c. programming of utility diversion work.

IK The SDS undertakes the design of the tram system. The MUDFA contractor delivers the construction works associated with the utility diversion scheme. The SDS contractor can, and does, design the modification to the utility diversions. The programme for the utility diversions is actually created by the MUDFA contractor given the information coming out of the SDS in terms of

that utility diversion. Modifications to the tram system design, to avoid utilities, are taken as opportunities where the SDS can get an alternative effective change in their design to do just that.

Progress and cost

GM 1. To what extent was adequate progress made with the utility works during your time at TIE?

We understand that funding uncertainty might have delayed matters, and that the Scottish Executive and CEC refused to authorise physical utilities works until a draft of the final business case gave sufficient comfort on the robustness of the estimates of capital costs.

2. Is our understanding correct?

3. Why was their approval needed, and what form was it to take?

4. What was the impact of that decision on timely progress of utility diversions?

5. To what extent did that affect the prospect of firm and final pricing by the Infracore bidders?

1. To what extent was adequate progress made with the utility works during your time at TIE?

IK Adequate progress was made in terms of the identification and information coming from the utility companies to us. Progress in terms of the SDS investigation progress was unsatisfactory and recognised to be so. The progress associated with the tendering of the utility works was able to be undertaken by virtue of recognising that the MUDFA agreement needed to be done on a schedule of rates and re-measurable basis meaning we couldn't define each and every one of 1,500 diversions and design it. We didn't have that information so we had to create using Turner and Townsend's expertise a contract document which would have allowed, given that we understood the dimensions of each of the utilities in the areas as given by the utility companies to us, a schedule or rates basis contract which would enable us to effect virtually any change to any diameter of any pipe that we had across the whole of the piest and the whole of the tramway in Edinburgh and to apply that known cost per unit lineal metre of replaced pipe to be then put into a price which was the MUDFA price and then calculate it. We were managing that risk in that way and the risk of not knowing exactly what needed to be done was managed, and set up, in a way that MUDFA could go even though we didn't have all of the detailed design of every single change made and that they could be progressed actively and proactively as we went through.

GM We understand that funding uncertainty might have delayed matters, and that the Scottish Executive and CEC refused to authorise physical utilities works

until a draft of the final business case gave sufficient comfort on the robustness of the estimates of capital costs.

2. Is that a correct understanding of that?

IK That is a correct understanding but it goes further than that because the Business Case, I think, ultimately was presented long before the authorisation to proceed. I think the reality of the situation is that nobody wanted to see the streets of Edinburgh dug up before the final approval had been given and neither the Scottish Executive nor the CEC was prepared to allocate advance funding to MUDFA to protect, if you like, the overall delivery of the Infraco. Had they done so, had they done that, it would have been probably the first time anybody had had taken that decision so it is not an uncommon decision I wouldn't have said, had they taken that decision and done it I think noting the time and the later process of the Scottish Parliament review and whether the tram was on or off, it would have done two things – you would have had a live contract for utilities diversion based on a design which was continuing that would have actually derisked that project almost entirely by the time the Infraco was awarded by default. By delaying that MUDFA contract and putting it back into the mix associated with the Infraco contract being late in 2007, what has happened is that people have forced a decision, the Parliamentary and approval of the funding process has forced a delay in the MUDFA which has been found, in practice, to be less than what was necessary. I believe that that is it. However, would anybody have the ability? Surely if we had authorised £25m of design cost, if we had authorised another £10m running cost and that that was going to continue, then surely it would have been not impossible to see that the powers that be could have authorised Princes Street, not Leith Walk, not Gogar Depot, not out there, but in terms of future proofing the delivery of the tram, you didn't need to do it all. You could have taken the view that we are going to do this piece, could have. The other thing that I think needs to be well and truly considered is that once you have, and it should be a review of the powers under the Acts and in future Acts, associated with any part of a tram scheme, is that you should take the power to command the utility company not to put anything else into this space within the limits of deviation and at a certain depth in the future so don't make anything worse. And when you have something that is redundant take it out and do not put it back in this space and that really is something that can be done in the future but I don't think was done here.

GM 3. Why was their approval needed, and what form was it to take?

IK Because no one had the money.

GM 4. What was the impact of that decision on timely progress of utility diversions?

- IK It was effectively to delay the overall delivery of the tram system at that time.
- GM 5. To what extent did that affect the prospect of firm and final pricing by the Infraco bidders?
- IK It wouldn't have affected the firm and final pricing other than that you would have been pricing two dates which were imaginary, theoretical rather than what you would actually believe that you could do and knew you could do, because that is the point; the point is you needed to know what you could do.
- GM You reported that one implication of delay was an increase in costs of £3.5m per month (eg, Tram Project Director Executive Summary for the Tram Project Board on 19 December 2005 (**TRS00002065**)).
1. Can you please explain that?
I think we have spoken about this earlier?
- IK We have. That was a specific question that was the inflation assumption.

Problems with utility works

- GM TIE obtained a report from Scott Wilson dated 10 April 2006, entitled "Utility Diversions – Strategic Review" (**CEC01827973**).
1. To what extent were you aware of this report, and the issues described in it, during your time at TIE?
To the extent you can, **please comment on the important parts of the report, including those listed below**. Please also identify any other points you consider were relevant to the timely and cost-effective progress of the project:
- At _4: "*Since appointment SDS has, in the opinion of TIE, been slow to recognise and implement an appropriate methodology for the utilities diversionary works or to produce and provide the necessary resources to enable design to be completed and agreed by all parties to meet the current project programme...*".
 - TIE's request for TSS to review and audit SDS's progress, to make recommendations to recover time, and to identify a solution for effective design of diversionary works.
 - That it had been unclear to Scott Wilson what specific and unambiguous instructions had been given to SDS on their role on utility design;
 - That SDS had failed to produce the only two items that were due for completion on the day they issued their programme;
 - That SDS had failed to establish and agree design parameters or criteria with all parties;

- That SDS may not have appreciated the risk inherent in utility companies not having full, complete and accurate information on the location of services;
- The late appointment of a GPR subcontractor to prove utility locations;
- The lack of any SDS team structure for utilities;
- The need for refinement of the MUDFA contract to incorporate essential tramway infrastructure below ground services (to minimise repeated excavations of the streetscape);
- SDS not being organised to deliver to the required timeframe;
- SDS not having demonstrated a clear understanding of the requirements and implications of utilities diversions.

2. SW's recommendation of a core project management team for utilities diversionary works.

1. To what extent were you aware of this report, and the issues described in it, during your time at TIE?

IK I was aware of it because I asked for it.

GM The issues described in it during your time at TIE and to extent can you please comment on the important parts of the report including those listed below.

At _4: "Since appointment SDS has, in the opinion of TIE, been slow to recognise and implement an appropriate methodology for the utilities diversionary works or to produce and provide the necessary resources to enable design to be completed and agreed by all parties to meet the current project programme...". Your comment on that?

IK Correct. No argument.

GM TIE's request for TSS to review and audit SDS's progress, to make recommendations to recover time, and to identify a solution for effective design of diversionary works.

IK Correct. What I asked for.

GM That it had been unclear to Scott Wilson what specific and unambiguous instructions had been given to SDS on their role on utility design.

IK That's their statement. I am not going to confirm that there was, that that was the case, I don't believe it was.

GM That SDS had failed to produce the only two items that were due for completion on the day they issued their programme.

- IK A factor probably.
- GM That SDS had failed to establish and agree design parameters or criteria with all parties. Would you agree with that?
- IK Yes.
- GM That SDS may not have appreciated the risk inherent in utility companies not having full, complete and accurate information on the location of services.
- IK I think that is unlikely that they would not have appreciated that utility companies don't have full and complete accurate information because we know that we are looking for unidentified utilities out there.
- GM The late appointment of a GPR subcontractor to prove utility locations.
- IK That is true.
- GM The lack of any SDS team structure for utilities.
- IK Yes. That is true.
- GM The need for refinement of the MUDFA contract to incorporate essential tramway infrastructure below ground services (to minimise repeated excavations of the streetscape).
- IK This is something that we wanted to attempt to achieve. Repeated excavations of the street scene is very clear. You have 12 utilities in one patch, they dig the street up, they re-cover it, they dig the street up again, they re-cover it and they do it over six months 10 times. The idea of the MUDFA was to be able to co-ordinate and do two, three, four, five in the same patch under safety management so there was no health and safety issues, but to do it so that that could be done quicker rather than one starts and finishes, then a month passes, then they start and finish again etc etc.
- GM SDS not being organised to deliver to the required timeframe.
- IK No argument.
- GM SDS not having demonstrated a clear understanding of the requirements and implications of utilities diversions.
- IK No argument.

GM 2. SW's recommendation of a core project management team for utilities diversionary works.

IK That was coming and I agree with that. That was precisely why TSS was around.

GM And you commissioned that report?

IK I did.

Governance Introduction

GM 1. Please describe the project governance structure (including its evolution) over the time that you were involved in the project, covering:

- The TIE Board;
 - The Tram Project Steering Group;
 - The TEL Board;
 - The Tram Project Board;
 - Any other bodies, or lines of reporting, you consider to be relevant.
2. Please also explain your roles in relation to each of those.

The TIE Board.

IK The TIE Board came into fruition before I came along and was in place in 2003 being chaired by Ewan Brown, representatives of the Council and TIE. TIE was established as a separate entity to Lothian Buses and as a subsidiary of the City of Edinburgh Council to deliver certain projects inclusive of the tram project. It was therefore designed to manage the project management of multiple projects under Ewan Brown's stewardship. Michael Howell was appointed as Chief Executive, confirmed some time mid-2003, was not a Board member but, at the same time, clearly was the Chief Executive of TIE and all of the rest of the people came along as attendees to that particular Board. The Board itself, up until the time when Ewan Brown left which was in 2005, from memory, the TIE itself would effectively, it was effective, it was chaired well and it was professionally run and the progress that had been made by TIE in the tram project to get up the Acts of Parliament and the initiation of the aspects of the tram procurement strategy and other projects, was evident that there was clear functional direction, approvals at the right times and things were happening in accordance with the stated objective to "please establish a tram system".

GM The Tram Project Steering Group.

IK The Tram Project Steering Group came along afterwards. From memory, I am going to say it came along in the year 2005, and towards the backend of 2005, and really started to mark the introduction of, and allowance for, the introduction of, I suppose, I am going to call it the Lothian Buses influence, into the tram project and, at about the same time, the integration and establishment of what here is called TEL, was being mooted and you can see in the records of the Board meetings that TEL has been established and has been established to integrate the transport across Edinburgh between the tram project and the buses. The TEL Board was then established in, and around, and personnel assigned to it, around the backend of 2005 and really became functional in actions in 2006 and David Mackay was the Chairman of the TEL Board. What was never clear from the Council was a written directive to the TIE Board as to what to do and how it should be functioning and how it should be managed and what powers TIE was to (43.27) to TEL with respect to the specific management and delivery of a £500m project called the tram scheme – never written. What happened was that personnel were appointed that remained at all times a mystery to me. Who appointed David Mackay as the Chairman of TEL, who appointed Willie Gallagher as a Director of TEL, who appointed Neil Renilson as the Chief Executive of TEL? The only answer that I can give is that it appeared to me that it was more to do with the then leader of the Council than anyone else because it certainly wasn't coming out of the Councillors, or Councillor Andrew Burns, in specific terms, into TIE Board as to who and how these personalities have been selected and what duties and roles they had been commanded to do other than a general specific statement of "TEL is going to integrate buses and trams", "what does that mean". And what does that specifically mean with respect to the processing and completion of the Parliamentary process? What does that mean going forward? Does that mean about the procurement strategy? What does that mean about the specific approvals necessary for the SDS and the planning permission in the Council to enable the tram scheme to be built when you have got a seriously big major project to do? In other words it was not just hugely disruptive, it was almost debilitating to my ability to be clear and to direct solutions and outcomes and it changed materially the ability that I had to move this project forward at pace and in 2006. It set up a lot of conflict and the major conflict, as I have already alluded to, the major conflict came between myself and Renilson and also Andy Wood who was the only other person who had built and operated a tram scheme before. That is a point of conflict, it is not relevant to the governance structure point other than to say, and you will see in the minutes where people, and Bissett in particular, is attempting, Bissett is trying to play middleman and trying to negotiate something which is definable and working with me, and others, to try and define something like "how are we going to have this governance". Therefore,

the whole question becomes one, ultimately, of what does TIE do and what does TEL do and how on earth do we continue to advance a project at the rate that we need to advance a project and this procurement strategy which requires, in the hands of the TIE Project Director of the tram, almost perfect knowledge about instantaneous decision-making capabilities to be able to minimise and to do all of the good things that this procurement strategy is supposed to do at a detailed level on a day-to-day basis. And then you would read, in the minutes, and you asked already, a question pertaining to that some aspects of the design strategy have not been approved by TEL. That is where the fun starts really.

GM The Tram Project Board. How did that fit in to all that?

IK The Tram Project Board is a smudge, it is an evolution of the Project Steering Group, and a smudge between the TEL Board and the TIE Board to try and find some accommodation. It is an unclear concept because, basically, the Tram Project Board became the Board who was supposed to then manage the tram project as a subset of the TIE and/or TEL Boards and to report, independently, to the TEL Board on what the tram project was doing, any other bodies or lines of reporting you consider to be relevant. I have just described something which is a transitional structure in from something that was working to something that became unclear and uncertain and wasn't working and at the time I left it was not resolved.

GM What were your roles in relation to the TIE Board?

IK I reported to the TIE Board through Michael Howell on the tram project.

GM The Tram Project Steering Group?

IK I was a participant in the Tram Project Steering Group.

GM The TEL Board?

IK I don't think I was even present at the TEL Board.

GM What about the Tram Project Board?

IK Yes. I was there.

GM What were the good points and bad points about the governance structure?
For example:

1. Was it efficient?

2. Were all stakeholder interests adequately represented and taken into account?
3. Was there a clear route for decisions to be taken?
4. Was there adequate and transparent reporting of information to the appropriate decision makers?
5. How did it compare to the governance structure in other public projects you have been involved in? What about private projects?
6. What, if any, changes do you think might have improved the governance structure?

1. Was it efficient?

IK No. I would say that, really and truly, up until September 2005, it was and thereafter it wasn't.

GM Why was that?

IK Because of what I have said, the governance structure was not agreed. What I had as roles, responsibilities, duties, authorisation limits, for changes and expenditure and all of those good things that a normal Project Director has documented and a normal Chief Executive of TIE has documented above him and then, and thereafter, a Board limits of authorisation and duties and responsibilities, became non-existent.

GM Was there one particular person at fault with that?

IK No. You can't say there was one particular person at fault in that. What you can say is that by allowing water to find its own level rather than by sitting and organising a management structure that was effective, it set up a chain of events which materially affected personnel, teams, the ability to progress and that change was badly managed in terms of the transition from "okay TIE get on with it and build us a tram scheme" to "okay TEL and TIE deliver a tram scheme".

GM 2. Were all stakeholder interests adequately represented and taken into account?

IK I would say that the actual interests of the Scottish Executive and the interests of the CEC were not adequately represented in TEL.

GM 3. Was there a clear route for decisions to be taken?

IK No. Other than to say that TEL thought it had all of the rights to take all of the decisions and that TIE should not take decisions unless they were TEL

decisions and TIE had not been told that that was by, anybody, in the Scottish Executive, or in the Council, that that was what they wanted as the funders of the scheme.

GM How did TEL get into that powerful position then?

IK The Councillors all stepped away, changes to the personnel from the Council changed and it seemed that the new leader of the Council was involved in the discussions which didn't include me, I don't think they included Michael, but they had definitely included Messrs Mackay, Gallagher and certainly Renilson, who came armed with "this is what we have been authorised and told to do" and that came to us. Bissett was trying to check that and Howell was, pretty much, being positioned for termination at the earliest possible opportunity by Messrs Mackay and Gallagher and Renilson for no reason other than that they would use the ability that TEL had now been given the rights of command over TIE to take people out to put others in.

GM 5. How did it compare to the governance structure in other public projects you have been involved in? What about private projects?

IK Rubbish. The Croydon tram link project, which is the equivalent of this project out here, was managed by myself and a Board which was a Concession Company Board. Myself and my Chairman reported to the Managing Director of Surface Transport in London Transport and his one Project Director, on a monthly basis. We had devolved responsibility under the Concession Agreement through the Acts of Parliament to undertake the tram project. We undertook the tram project through four different London Boroughs. We undertook it and worked on a project adjacent to three different train operating companies on nine mainline stations, we affected change to either the station and in Wimbledon, which is one of the biggest stations in London, we came into the station and we did all that without a governance board. In terms of the reorganisation of the bus services in London, which London Transport runs, it went directly to the man who sat across the table who had a Managing Director of Surface Transport reporting to him. We didn't see a bus company person when we were delivering the whole tram until six months before we went into operations and six months before we went into operations London Transport undertook a small consultation process, to the public, to tell them what was going to be changed and to inform them what the new bus services were going to look like. It was virtually seamless, it was effortless and it was very straightforward. They had committed to make modifications to the bus services and certain truncations to it and they had promised that if they didn't do it they would compensate us over 20 years. They actually didn't do all of the things that they said they were going to do and they did pay us compensation for ten years until TFL purchased the whole tram scheme back

from us. If you can compare what I have just described to the technical term “buggers muddle” that was in play, in particular, in Edinburgh from that transition point from TIE to TEL and from TEL to effective change in management of TIE, in TIE change in management, and repeated change in management, the truncation and the termination of a 30 year agreement of Transdev, as the operator, and the replacement of them with somebody who would never have had the capability to even pass the evaluation criteria at first base when we were establishing it, you should ask yourself the question “how did these things happen?”.

GM 6. What, if any, changes do you think might have improved the governance structure compared to your experience there?

IK If the governance structure had been left with TIE to resolve the changes necessary and to put in a tram scheme and to work together with Lothian Buses to modify their bus services, in accordance with that which had been put before Parliament, then that should have been straightforward. If the City of Edinburgh Council did not want Lothian Buses to be treated in that manner, they should have done something different other than to establish TIE as an independent entity from the start. They could have said Lothian Buses second some people into this and work together with them and live happily ever after. They didn't do that and say that. What happened here was the enterprise value of Lothian Buses, which is a sister subsidiary to the City of Edinburgh Council, worth £60m, to be sold on the open market as a bus company enterprise, is put into a position, and the Managing Director, is put into the position of running a tram project which he has said in the Parliamentary and basically said “I don't think it should be here, I don't think it should be done and I don't think anything should happen with this because you are wasting your money and you are causing my bus company a problem”. Instead of re-routing half a dozen different bus routes and truncating a couple of services and living happily ever after, he is put in charge of this, destroys the capability of TIE to manage themselves and its consultants going forward, and causes, effectively, a total replacement of virtually everybody who was in the tram team, and the Chief Executive of TIE, within six months of this change being effected, that is what has happened. Therefore we are sitting here saying “this Scottish Government is spending £500m and we are trying our level best not to destroy a bus system, we are trying our level best to get a tram system to fit into the fabric here and to be worthy of the expenditure of £500m and I shall not compromise my tram system because of one bus route which makes a change on the enterprise value of something worth £60m and I will not misuse £500m worth of money to save something worth £500k in a bus company, I will not do that”. Because of what I just said is the way I was, and the way Andy Wood was, it set up an immediate major conflict between myself and Mr Renilson which was only

resolved by Mr Renilson, Mr Mackay and Mr Gallagher engineering my dismissal and that is what happened. Thereafter, as had been played to me across a table by David Mackay in January “we will get rid of Michael Howell” Michael Howell left in July – bang and you can ask Michael the circumstances under which he left and I will tell you the circumstances under which Michael Howell, effectively, initially, fired me and then realised that we needed to do something different and we ended with a compromise agreement.

GM Barry Cross sent a note to Michael Howell on 4 December 2005 about difficulties in the relationship between CEC and TIE (**TIE00707565**, **TIE00707566**).

Please comment upon this, in particular:

1. Why was this note prepared?
2. Do you agree with the difficulties it identifies?
3. Can you expand upon them, to the extent they affected the timeous and cost-effective progress of the tram project?
4. Were the issues addressed and, if so, how?

1. Why was this note prepared?

IK Because there were difficulties in the relationship between CEC and TIE and there were difficulties in the CEC understanding what TIE needed to do to be able to effect the delivery of the tram project, Barry Cross was in charge of this interface, that is the interface in terms of the approval of the design manual, the approval of the Design Working Party and process, and was the best person to interact with Keith Rimmer, although we both interacted with Keith, and Keith’s team, going forward. It was an understanding that the tsunami that was about to hit the Council in terms of approvals processes and information flow for planning permissions and the rest that was specified in the SDS, they weren’t there and there was not a recognition that the tsunami was coming and it wasn’t far away so it was absolutely right and proper that Barry was doing that.

GM 2. Do you agree with the difficulties it identifies? So you would obviously agree with the difficulties?

IK Yes.

GM 3. Can you expand upon them, to the extent they affected the timeous and cost-effective progress of the tram project?

IK I think we just stick with them, I don’t feel it is helpful.

GM 4. Were the issues addressed and, if so, how?

IK Partially and a work in progress. But were they effectively addressed in the face of a tsunami? – no. Were they effectively addressed in the face of a leap tide? Probably getting close enough but there was not a genuine real understanding of just precisely how big this process will be and, to be honest, I suspect that there was not a complete understanding, or there was perhaps, not a total understanding of the scale of the problem even in TIE, and in Barry. However, we certainly knew to be more worried than what CEC had prepared themselves for.

GM During the period from mid-2005 until you left TIE (and, indeed, beyond), establishing a governance structure for the project appears to have occupied a lot of time.

1. Why was that?
2. To what extent was there disagreement or controversy or difficulty in establishing the governance structure?

IK It has. I have just told you why. I think I have to explain the answer to 2. It was for TEL a positive development, was it a positive development for the tram project the answer is – no it was definitely not a positive development for the tram project. It destabilised me and my whole team really from January right the way through to when Michael, as I have said, asked me to come to his office, leave the tram office and told me I shall not go back.

GM As part of those developments, TEL (Transport Edinburgh Limited) took on a role in governance of the project.

1. Why did that happen?
2. Was it a positive development?
3. We understand that a major part of TEL's role was to handle the integration of the tram and bus services. Is that correct?
4. What other reasons, if any, for TEL's increasing role?

The main part, supposedly, of TEL's role was to handle the integration of tram and bus is that correct?

IK If I told you that the integration of the tram and bus had already been pre-planned by the consults subject to some local issues associated with individuals, the public consultation process, and that the whole reorganisation of the tram and bus routes is about less than a half of one per cent of all of the concerns of the delivery of a tram project, then it would give you an indication as to what I think the truth in terms of the need for that was against the political view which was created by Renilson on behalf of himself, firstly, and of so-called Lothian Buses best interests, with respect to what was needed. This is not the way things happen, for example, in London, I can assure you.

GM 4. What other reasons, if any, for TEL's increasing role?

IK The second reason, besides the route planning, besides the stop locations, besides the proximity of tram stops and bus stops, which is first principle of engineering to start off with. The secondary outstanding issue, and the issue which needs to be integrated, is ticketing. Ticket products sold on tram, off-tram, sold on-bus/off-bus, period tickets sold from a ticket machine, vending machine, to be valid on both, for a day pass, period passes, contactless ticketing, those types of things. There is a ticketing issue there which obviously requires there to be some form of interaction and agreement for the benefit of the public and it should be done in a way which makes sense and consistent with what else is going on in Edinburgh and I know exactly that coming from London, and with my tram system, my tram scheme was a participant in the London travel card agreement, which is not only London Underground, but it is all of the train operators, all of the bus operators, and the tram scheme. Therefore, I was a flea in the scheme of things but I was a participant in the travel card agreement. When contactless cards were coming in, they came in about into the third year of my delivery process, we are going to have contactless oyster cards and therefore we are going to have an oyster card "oh Christ what are we going to do". We had re-engineer it so the oyster cards could be fitted on to the tram stops and the protocol agreed for how the oyster card would be used vis a vis the Bylaws, and the Penalty Fares, Regulations which were going as secondary Acts, or secondary legislation, to be then enforceable by the BTP or the lack of police in penalty fares, and recovery at court. Therefore I have been through all of that, all of that process, 100% in a very very difficult and big environment. If you say that a Tram Project Director has absolutely no knowledge of that, well frankly speaking if he has run a bus company, he will have; if he has run an airline or an airport's operation, he will have no idea; if he has never been in a transport environment he will have no idea and here we are told that "excuse me TEL needs to sort out all of this stuff". That's fine that TEL needs to sort out all of this stuff but frankly speaking I was in the middle of sorting it all out anyway and all they needed to do was have a couple of more agreements with Renilson as to what was going to happen and I was trying to do it me to him and then take what we agreed into the SDS and say "will you specify please that we are going to have a contactless system and we are going to buy it from somebody" or else say "no it is not there, it is going to be supplied because Neil's going to buy it and we are going to put it on the tram scheme because he has already going to have it before us". That was what I was trying to do. Actually is there/was there a particular need? Yes there has and is a need for obvious reasons for ticketing to be integrated.

Tram Project Board

GM The Tram Project Board was established in 2005, as the main decision-making forum for the tram project.

1. What was the thinking behind setting up the Tram Project Board?
2. What was its remit?
3. What was the extent and source of its decision-making authority?
4. Please explain the respective roles of the TPB and the Tram Project Director in terms of decision making on the project.

We understand that project decisions were to be taken by the TPB (or, within the scope of his delegated powers, the TPD), but legal responsibility for delivery of the project remained with the Board of TIE.

5. How was this to work in practice?
6. Were there any difficulties in separating decision-making from responsibility in this way?

1. What was the thinking behind setting up the Tram Project Board?

IK It was to clear significant issues associated with the design and the early approvals of them.

GM 2. What was its remit?

IK Was to do that obviously.

GM 3. What was the extent and source of its decision-making authority?

IK Was delegated authority from the TIE Board.

GM 4. Please explain the respective roles of the TPB and the Tram Project Director in terms of decision making on the project.

IK The Tram Project Board, in the main, was given decisions which were to be confirmed to be made and to the Tram Project Director to understand any concerns associated with those decisions.

GM We understand that project decisions were to be taken by the TPB (or, within the scope of his delegated powers, the TPD), but legal responsibility for delivery of the project remained with the Board of TIE.

5. How was this to work in practice?

IK It was an attempt to make it work. It was that the Tram Project Director was to work with the Tram Project Board and then ultimately that the decisions would be ratified by TIE but it was an attempt really, an early attempt, to try and handle the things that turned out to be the new remit of TEL to handle.

GM 6. Were there any difficulties in separating decision-making from responsibility in this way?

IK I think that there is. In 2005 I would say that we had a working model that you could live with, and that I can live with, I could live with at that time was TPB.

TEL

GM The TEL Board was described as the forum for debate and resolution of integration issues, and the TPB the forum for resolution of project matters (**TIE00090573**).

1. How was that to work in practice?

2. Were there any difficulties in separating decision-making in that way?

At the TPB on 22 November 2005 minutes (**TRS00002067**), you noted that a two company governance structure was not included in the tram budget.

3. Please explain this point.

4. What other concerns, if any, did you have about the governance structure that was being proposed?

At the TPB on 19 December 2005, you invited views on project governance (**TRS00002065**). An attached paper proposed TEL take a more significant role in the governance of the project, either taking on overall responsibility for the project or overseeing TIE.

5. What were your views?

6. What views did others express? The minutes are opaque (**TRS00002102**).

You have explained this in quite detail so just if there is anything else you want to add and how that was to work in practice?

IK The TEL Board was described for the debate and resolution in integration issues. How was it to work in practice? Quickly and succinctly – it didn't. Yes, there were difficulties in separating decision-making in that way.

GM Probably for some of the reasons you have explained previously?

IK As I have outlined. It didn't need to be established in that way.

GM At the TPB on 22 November 2005 minutes (**TRS00002067**), you noted that a two company governance structure was not included in the tram budget.

IK In other words I don't have a budget in the tram project for TEL.

GM 4. What other concerns, if any, did you have about the governance structure that was being proposed?

IK Every single concern under the sun as I have outlined. In everything from “we are going to get the wrong length of tram, we are not going to have tram priorities, we are going to have our tram stops in the wrong place, we are not going to integrate properly with the airport because there is an airport bus” and actually when I came through the airport, the several times I have done so since it has been opened, I can say that that’s absolutely what we are looking at. When we are looking out there at the way the signalisation on the tram scheme and the bus scheme is working, that is not a true segregated tram line, the whole tram scheme is running like slow as opposed to what it should be running like, and we have got far too many buses still running on Princes Street without any consideration of alternative methods and solutions, including wild card things like, basically all the buses in Edinburgh, like all of the simple systems in buses, in bus world, in bus land, go end to end, from one side of the city to the other side of the city and, of course, that is what they all do but there is no necessity actually other than new depots to be able to change that. The optimisation, if you like, of the £500m, and you can tell me what the outturn cost of the tram scheme is, let us just guess £900m, or something like that. Therefore £900m has been done and sub-optimised because of certain views about how it is better to run bus company worth £60m – is that good business? I don’t think that is good business for Scotland, I don’t think that is sensible engineering or transport policy practice but that is what happened in Edinburgh.

GM At the TPB on 19 December 2005, you invited views on project governance (**TRS00002065**). An attached paper proposed TEL take a more significant role in the governance of the project, either taking on overall responsibility for the project or overseeing TIE.
5. What were your views?

IK My view hasn’t changed. I was attempting to continue to work to deliver something I was, not only emotionally but I was completely wedded to deliver the best that could be done for Edinburgh and we were running into all of this. I was running personally into all of these problems and I tried to play it calm for as long as I possibly could.

GM 6. What views did others express? The minutes are opaque (**TRS00002102**).

IK Minutes are opaquely written because nobody wants to explain that there is a raging a battle going on between group 1 and group 2 from which there is going to emerge a dominant group and nobody wants to be, other than to

remain professional, in terms of any minutes knowing also that they are subject to Freedom of Information Act.

GM The minutes for the TPB on 23 January 2006 (**TIE00090588**) record that the TPB and TEL Boards had been merged, and that you would be working with Graeme Bissett and David Mackay to establish clear governance.

Your executive summary (**TRS00002103_1**) noted that resolution of governance issues required resolution in the short term for clarity on critical decision-making.

1. Why had the Boards been merged?
2. Please explain your concerns about the need for resolution of the governance issues.
3. What was the outcome of your work with Messrs Bissett and Mackay? Is it (**TRS00002175** (circulated by email by Graeme Bissett, 16 February 2006, **TRS00002174**)?)
4. That paper made a proposal to fully integrate TEL in the tram decision-making process. Can you explain this proposal?
5. The paper noted that responsibility for various issues remained unclear (_4), including interchange design. To what extent were there difficulties in allocating responsibility for decision-making as a consequence of the governance arrangements?
6. Graeme Bissett's cover email of 16 February 2006 (**TRS00002174**) notes that views differed. What were the areas of disagreement?

1. Why had the Boards been merged?

IK Because it was clear at that time that TEL was going to overtake or have an overarching role in terms of the delivery of the tram project and it was not wanted that there would be, not only two, but three Boards that is a TIE Board, a TPB and a TEL. I mean for heaven's sake, one is enough, let us not have any more than two and we get it back to one, well we know where we are headed. However, the critical point that I have raised there is that the actual resolution and definition of the governance issues which is how does it work? As I have said before, the delegated authorities and the responsibilities for decision-making, what is delegated, what is not, how is it going to happen, what can I do to vary the contract in a normal day-to-day basis can I get an extra stop design, those types of things. Those things were not defined which meant that it not only put me, or anybody, in a Tram Project Director position, on line, remember we have got £40m of the contracts in place and these things are happening on a daily basis and we are in meetings on a daily/weekly and monthly basis with people who expect to be told that it should be done like this and, if not, and if I then change my position from what I have said last month to what I am now told to do this next month, I have to write a variation because I give you an instruction which has now been

changed and my ability to handle things at the speed, and at the volume, that we are talking about with SDS so as to hit these Infracos and how to do MUDFAs, we need to either have delegated authority to do that or have pre-decided exactly everything that was going to be likely to cause this type of problem. For example, if we are going to put in a tram stop, is it certain that it is going to be in the location on the Parliamentary plan, or is it going to be in another place which TEL wants it to be for another reason. SDS wants to go away and get planning permission for it in that location, SDS wants to do a utility diversion for the track underneath it, and in that location, and “hang on a second I have got to wait how long for somebody to decide?” Those are the types of things that cause paralysis, you can see that coming. It wasn’t just that we couldn’t make the decision because, of course, we could have got some plans and sat down and done it. The point was what was the decision? The secondary point was on what basis would such a decision have been made? On what basis? In an uncontrolled fashion that becomes just an absolute nightmare and so instead of focussing more on the details, what we have is Graeme Bissett phoning me and emailing me left, right and centre all the time about what this is and us trying to effectively placate someone “a bull in a china shop” above us running around and me saying to the Board “the governance needs to be actually agreed so that I know where I stand because I don’t want to actually overstep my mark and find that I have caused myself to be fired, because I could quite easily do that. If I don’t know where I am I will do something in good faith and somebody else will then later tell me “you shouldn’t have done that” on what basis? That is what we are looking at here. What was the outcome of the work? The outcome of the work was that it was a work in progress that continued and continued and continued until the day I didn’t go back any more, it was not complete and that is documented, and well documented. Bissett was trying to play middleman but at some stage in this process. Bissett started out as more closely associated with Michael, myself and (1.24.03) and what we had done before saw that the transition was coming and was moving in a general direction of more supporting what Mackay was wanting.

GM The broad thrust appears to have been that sort of interposed TEL between CEC and TIE with TIE delivering the project for TEL and all the formal decisions were then ...

IK Effectively for TEL to replace TIE to take it over.

GM And for the decisions only to be taken by the Directors of TEL then?

IK Yes. That is correct.

GM 4. That paper made a proposal to fully integrate TEL in the tram decision-making process. Can you explain this proposal?

IK It is just as we have said. To fully integrate into actually is not the right term, it is more of a takeover than an integration. An integration suggests they are working together, it is not, it is a seeding of control.

GM 5. The paper noted that responsibility for various issues remained unclear (_4), including interchange design. To what extent were there difficulties in allocating responsibility for decision-making as a consequence of the governance arrangements?
I think you said it was a challenge.

IK Yes.

GM 6. Graeme Bissett's cover email of 16 February 2006 (**TRS00002174**) notes that views differed. What were the areas of disagreement? Document on screen.

IK This is an email sent by Graeme to a cast of several cast of many where clearly the governance structure for the tram project and the role of TEL has been prepared, for the benefit of informal discussions with some, although not all and that means Graeme Bissett has had discussions with some and not all of the key parties. Although the overall direction has consensus, there are key areas where those views differ and that will be in the key areas of aspects of the decision-making on, it could be for example, ticketing, it could be for example, a tram priority, it will have been on tram priority and it will have been potentially on tram stop locations and it will be with respect to maybe any relocation of bus stops so those are the areas where you know that they will be.

GM The corporate governance structure is said to have been approved at the March Boards of TEL and TIE see (**CEC01685419_1**) papers for the TEL Board of 15 May 2006). Although further development of the governance proposal had taken place, the underlying proposal was said not to have changed from that proposed in February. Some challenges appear to have remained eg (**TRS00000329**) Summary).

1. What were your views at the time about this structure for project governance?

2. Did you have any concerns about the structure, or those involved in it? If so, please explain them.

3. Was it clear, and clearly understood, by those involved in it?

4. Do you have any views in hindsight about the governance structure?

The following papers for the March TEL Board may assist:

(**TRS00000329**) Summary;
(**TRS00000331**) Proposed Governance Structure, tracking changes from paper considered at February Board;
(**TRS00000332**) Delegated Authority Rules table;
(**TRS00000333**) Delegated Authority Rules table.

1. What were your views at the time about this structure for project governance?

IK I made it clear but I was trying to make it work so long as somebody could quickly give us clarity about how we would be making decisions in the face of a large project.

GM 2. Did you have any concerns about the structure, or those involved in it? If so, please explain them.

IK I think you have heard them. I had concerns and I had concerns of the motivations of those people involved and I had concerns about the skillsets of those people involved and I had concerns about the cost impacts of those decisions made by unskilled personnel in senior positions over the top of a £500m + tram project and the consequential impacts of those decisions, coming at a time which was not the appropriate time for those decisions. In other words they were coming late, they were coming randomly, they were coming without notice.

GM 3. Was it clear, and clearly understood, by those involved in it?

IK Only anybody who would listen to me.

GM 4. Do you have any views in hindsight about the governance structure? The following papers for the March TEL Board may assist:

IK It was one of the major causes of the disastrous performance of this project. It has taken me, and I have waited ten years to say that.

GM You have given a really good overview.

IK Of the concerns at that time and I have now made a statement that by extrapolation, albeit without a single shred of evidence, that there has been set up a governance structure and a management which would not have been capable of delivering my strategy.

GM And for these reasons about the skill base experience, motivation. Would you like to specifically name:

IK I told you already in the passing that I had a major conflict, and that Andy Wood from Transdev had a major conflict, with respect to the motivations and the direction from which Lothian Buses in the persona of Neil Renilson was coming.

GM Was that understandable at the end of the day?

IK It is one thing to say it is understandable from my respect, it could be said to be understandable from the perspective of two bulls in a china shop or from a bus company who didn't want any part of their services disrupted. It could be said to come from somebody who truly believed that a tram project shouldn't take a place in the City of Edinburgh. As a Managing Director of a City of Edinburgh Council subsidiary, that Council and the Scottish Parliament having decided that a tram project would be done was more than 100% inappropriate, every personal issue should be set aside.

GM You may have a private opinion about something ...

IK You may have had the chance to give that personally to Parliament and Parliament has then said "thank you for that, we are still going" then you can't possibly maintain that.

GM The Outline Business Case, March 2006 (**CEC01856896_11**) stated:
"The overall project governance structure has been revised in recent months to reflect the pivotal role of TEL and to streamline reporting lines."
To what extent do you agree, or disagree, with that statement?

IK It was written because it had to be written because we were effectively working to instruction. I am sure that sentence would have been written by Bissett.

Conclusions

GM What views, if any, do you have on why the project was delayed, delivered reduced scope and ran over budget?

IK The views as to why the project was delayed? Clearly there was a delay looming with respect to the Parliamentary review as to whether the tram project would go ahead after the Scottish Nationalists gained power in 2007 but that should not have borne against anything that was done in 2006. However, leading up to it, it could have been used as being a reason why people would not have been at that election process, because no one knew the Scottish Nationalists were going to take over, but there could have been

those who thought that that was going to be a potential outcome and could have used it in terms of engineering slowing things down until such time as things were clear and there might have been some people who believed that that review process, taken on in 2007, would stop the project full stop. There might have been. I am just raising it as a view and our view is not based upon anything other than ... I don't even know whether the SDS was continued to operate and to prosecute its design process and the utility diversion at 100% from the day I walked out that door or whether any services were slowed down. However, if they were slowed down to any extent, then that meant that the propensity for the work not to be completed by the time MUDFA got on board and Infraco got on board, was going to increase that risk. If we sit here and presume that SDS continued, then what has happened here is that the MUDFA process, it seems to me and the identification of utilities diversions generally, has probably been incomplete and somebody has been at fault in not finding things and finding all of the things until such time as people hit the streets to do work. Thereafter, obviously, the access dates that I talked about ad nauseam, as being the commitments into the Infraco as to when we would be able to get there, have been breached on multiple occasions I suspect because the utilities have not been completed. Have you had the ability in the governance structure to change and negotiate a change on line with the contractor to assume the risk and if you found a big pit out there can you get him to fix it and not slow himself down or slow himself down less, that would be the type of thing that you could do. And you would ask yourself the question "was the governance structure and the decision-making capability of those people who were in command was it adequate to the task of this particular project?" I am going to say that in view the Tram Project Directors following and the personnel who were above them, were incompetent to run the tram project because they had no experience, they were not qualified to be there.

GM To the extent that it had a bearing on the timescales, cost and delivered scope of the project, what were the strengths and weaknesses of the people and organisations involved in the project?

IK I would like to ask the question: Who made the decision? Who authorised the decision to truncate and terminate Transdev and on what basis was that done?

GM Do you think that had a bearing on the timescales, costs and delivery of the scope of the project?

IK I believe that that had a bearing on the decision-making that would have sub-optimised the tram scheme. Therefore, we have got a tram scheme out there that is not working as well as it should be and we have got a tram scheme

which, therefore, cannot afford to be augmented as well as it should be. We are talking about a wholesale cessation of the whole of the Leith Walk leg when we should have a tram scheme that goes down to Leith right now. That is what we set out and should have expected to be the outcome. The project was delayed and the scope was reduced because instead of the project running efficiently, the delays which occurred through the utility diversion process, probably magnified and equally to blame was the traffic management and approvals process of TROs, and temporary Traffic Regulation Orders, to enable the construction. That process grew like topsy and ran completely out of control I say because, and that is my view formed by coming to see Edinburgh and speaking to ACOM, who was TIE's consultant, for traffic regulations in 2009. I asked them how much time and effort did you put into it and they said "we have had a huge team working on this" so the whole traffic management and Regulation Orders took them mid-construction and everything else, it was a mess.

GM You appear to have left TIE by mutual agreement in May 2006. You were retained to assist TIE for 12 months after that, but your services do not appear to have been drawn upon.

1. Why did you leave TIE?
2. Why were your services not drawn upon thereafter?
3. How were your relations with others involved in the project?
4. What, if any, difficulties were there?
5. Why did they arise?
6. What, if any, impact did they have on the project?

TIE Board minutes 8 May 2006 (**CEC01758155**).

1. Why did you leave TIE?

IK Because Michael Howell asked me to leave. I was running a meeting with the Chairman of the Readiness Committee in the office, a Board meeting room of TIE in Verity House. Michael Howell was in the meeting, was in the other offices of TIE, I had a call on my mobile phone "Ian I need to see you now please come". As I got there I was walking into the front door of the office as Mackay and Gallagher walked out of the office, they had clearly been meeting with Howell. I went up to the meeting room with Howell and he said "we have decided to terminate you with immediate effect, you are not allowed to go back to your office, you are not allowed to collect anything, don't talk to anybody" – please fuck off is what it actually amounted to. That is what I did, I did leave the office, I didn't go back but, of course, I was still staying in Edinburgh and, again, other people spoke to me since that time, not immediately on that day. Thereafter I met with Michael on a couple of occasions in Andrew Fitchie's office at which time I pointed out to Michael that really and truly if he had actually done, summarily dismissed me for no

reason, number one there was a problem and if you really want to stay on that tack, I can walk out of this room now and I will tell the world, not only that you fucked me, but I will tell the world that this tram project is a disaster, don't come anywhere near it – do you want me to do that or do you want actually to compromise and you want me to help you however I can, you can ask me to help you, I am going to calm down now and we will work forward. We had an outbreak of common sense and a mutual agreement, because I was never going to do what I have just said I was going to do, because that is not me but the point was I still had more knowledge and intimate knowledge than any single person around and more ability still, even demoted, off the field, as an advisor I am still in the top five people in the whole country to assist whoever comes in, not only in the immediate short-term, but in terms of the specific structuring of the contracts and the development and completion of the MUDFA contract and the award process, the completion of the Infracore project where I have done it and I have been in a construction company and I have come here and no one else on the field has anything like my experience at all, including the interim Project Director, Andie Harper, he has never done a tram project before he came here, he didn't know what he was doing. What he knew was what he had done and he knew what he was told and in what basis would he be able to argue with Renilson or with someone else about a tram priority in the city centre in terms of optimising the spend of £500m for the benefit of the tram system and the whole of Scotland, couldn't possibly. Therefore, did it not make sense for us to maintain a relationship and maintain a consulting agreement and to establish a consulting agreement such that I could be consulted or I could actually still maintain and play an active role working out of the offices of DLA off the field as far as TIE is concerned but materially able to streamline and improve the contractual documentation and flow and that is what we had talked about and what is written on the agreement. Those are the reasons why they are written on the agreement because I still felt that even under this scenario where I feel I have been really badly done to, I still feel my heart is wedded to this project and I still have a value added contribution especially when you can't find anybody else like me who is going to be prepared to come and do it.

GM Did he ask you to assist in the next 12 months?

IK No. Not one single phone call. In fact what happened was that I remember on one occasion Mike Heath, who I have mentioned a couple of times, who was in this Readiness Review, he continued and that Readiness Review was undertaken and he told me the outcomes of it and he passed us several messages through from myself and questions to Andie and back and forth for about ten days that he was here and then after he went back to London, that dried up and there was no further communication, in direct communication between myself and Andie Harper. Some number of months later he called

me up one day and said “hey who is Andrew Cross” and I said “Andrew Cross who is Andrew Cross, “I don’t know Andrew Cross”, “hang on a second he has just written and he has just been appointed by TIE and on his CV he has got Croydon tram link sitting on his CV as having worked on it” I said “I don’t remember Andrew Cross”, he said to me “if I don’t know Andrew Cross and you don’t know Andrew Cross what did he do?” and I actually went into fits of apoplexy and probably broke the Communications Act with an SMS that I sent to Bissett. You know what Bissett said “thanks Ian but it is not your problem” and that was it and there was no communication. What could I have done? Practically anything. What did I do? Zero.

GM You exchanged emails with Michael Howell in May 2006 about terms for your retainer (**CEC01860831**).

In your email of 9 May 2006, you refer to foregoing a win bonus by Infraco of in excess of £500,000.

1. Please explain this.

IK There had been a verbal conversation and what was that about? That was in the event Michael said “that you release then please be aware that I will be able to go and get a job with the Infraco in terms of the preparation of the bid for the Edinburgh tram project and if we win I can expect something of the order of this sum of money”. This sum of money was never discussed as a sum of money face to face with Michael, it was never ever even close to being discussed as something that TIE would ever be paying me and it was almost marketing speak from my side in terms of why it should be that some sort of proposal, of a reasonable nature, should be agreed between us because by compromising myself I am foregoing something potentially. It was not any more than something in that nature, there was nothing else said before or after.

GM Michael Howell (the TIE chief executive at the time) stood in as interim tram project director following your departure. He himself left TIE shortly thereafter (TIE Board minutes, 26 June 2006, **USB00000025**).

1. Were you aware of this?

2. Do you know why he left?

3. Was TIE’s approach generally to prioritise the timetable over cost certainty? If so, why?

Michael Howell’s report to the TIE Board meeting of 26 June 2006 noted that:

- “The Readiness Review confirmed that the full implications of the procurement approach, especially novation of tram supply and system design, had not been thought through”, and accordingly a procurement sub group had been set up.

- That Andie Harper had been appointed [as Tram Project Director] on an interim basis and had “brought a welcome inclusive style to the job” (CEC01827975_1).

1. Do you have any comment?

1. Were you aware of this?

IK Yes.

GM 2. Do you know why he left?

IK In January David Mackay said we are going to get rid of Michael Howell and Michael Howell left in June of 2006, six weeks after me. You can ask Michael, I just told you what I know. Was I aware of it? Of course I was aware of it but do I know why he left? No I don't, you would have to ask him. He may or may not speak to you the way I have spoken to you.

GM Michael Howell's report to the TIE Board meeting of 26 June 2006 noted that:

- *“The Readiness Review confirmed that the full implications of the procurement approach, especially novation of tram supply and system design, had not been thought through”*, and accordingly a procurement sub group had been set up.
- That Andie Harper had been appointed [as Tram Project Director] on an interim basis and had “*brought a welcome inclusive style to the job*” (CEC01827975_1).

1. Do you have any comments?

IK What I can say is to repeat what I have said, there were certain aspects of the governance structure which caused and set out conflict in the tram project with me and Renilson, and there being a daily subject of conversation as to what that conflict was and what the current conflict was within my tram team to extent that after I left that meeting and went up to that meeting with Michael Howell, it was reported that one of my direct reports had said to the others “I don't think we are going to see Ian again” and in fact that was quite true. In Michael's terms Michael was prone to make positive statements because he would like them to be true. Andie Harper had no basis and, at this stage, had no absolute detail knowledge, of, I am sure, detail knowledge of the history and the situation and Andie had never done a tram project before so Andie was finding out and Andie was trying to fill a breach and Andie was trying to get things to continue to work not knowing, and not being able yet to make hard decisions so my comment is simply that Michael would have said that because he himself knew, I believe he knew he was next at risk

and I can say that I knew he was at risk for the previous six months, and I hadn't seen my own demise coming in the manner that it did come.

GM In the papers for the TIE Board meeting on 26 June 2006 (**CEC01827975_2**) Michael Howell expressed the view that if at all possible, the timetable should be adhered to "even if the level of cost certainty is less than originally hoped for"

1. Can you comment on that?
2. Why was cost certainty less achievable than had been hoped?

IK That is consistent with the retained view that he would have had that the better way to go was to get the job out in the market, the approval of the money going and moving it forward in the face of the design, delay and lack of design detail coming out of SDS and his view at that point on what was best.

GM

1. During your time at TIE, was staff retention good or bad?
2. Can you explain why?
3. What, if any impact, did that have on the project (in terms of timescale, budget and delivered scope)?

1. During your time at TIE, was staff retention good or bad?

IK It was good we never lost anybody.

GM And that would be why.

3. What, if any impact, did that have on the project (in terms of timescale, budget and delivered scope)?

IK What I can tell you is that within six months of me going not only had I gone, Michael was gone, only Willie Fraser was gone very quickly, David Ramsay was gone very quickly so the key guys, in terms of the construction and design management process had gone. What did they do afterwards? They went off and have had successful careers. Ramsay is a Project Director for Carillion in the Rail Division and Fraser is a Divisional Director of Jacobs Engineering in a consulting engineering firm, a major consulting engineering firm. I don't know what happened to them but the churn certainly didn't happen on my part to churn in the face of whatever was happening, the churn happened afterwards. Barry Cross obviously went and retired at some point of this process and got sick of it.

GM To what extent was TIE set up and resourced sufficiently to perform its role in the tram project, having regard, for example, to:

1. staffing
2. procedures

3. internal management structures?

IK In terms of staffing it was set up in the resource sufficiently given the capability to augment the resource through the TSS.

GM Andie Harper ultimately succeeded you as tram project director, on an interim basis.

1. What steps, if any, were taken to pass on your knowledge and experience of the project to him?

2. Was there anything of particular importance to the success of the project that you consider should have been passed on?

3. For example, TIE's procurement strategy was relatively novel. What arrangements (if any) were made to ensure that it was properly understood and implemented after you left?

Was there any handover?

IK No. Yes there was, I don't care to give you War and Peace. I would have suggested that there should have been some form of handover and the compromise agreement that we had reached for the continuous consulting should have allowed it. Somebody had decided not to and written on the face of an email from Gallagher to my friend McGarrity you can see who that might have been.

GM TIE staff were often engaged as contractors (as you were) rather than employees.

1. Do you have any observations on whether this was model was successful?

IK Depends on who it was.

GM Are there any other matters which you think may be of assistance to the inquiry?

IK At one level I think I have said rather too much and I have tried to be and I have tried to keep it as calm as I can be. You will be able to, I am sure, find people who I have named, and my team in particular, who will be able 100% to confirm where I was coming from and what I was trying to do independent of me and actually that is fine. At the end of the day though, Ian Kendall didn't matter, Ian Kendall didn't matter, what mattered was that the project and the system was 1) value for money and 2) delivered as best it could possibly be and that is the problem. I don't think that in all honesty it is an okay system.