SCOTTISH HOSPITALS INQUIRY

# Hearings Commencing
# 25 April 2023

Day 8
Friday, 5 May 2023
Graeme Greer

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**11:52**

**THE CHAIR**: Now, Mr MacGregor, are you comfortably established in your position, or are you about to swap seats?

**MR MACGREGOR:** If I could just have a moment to set up my laptop, that would be appreciated it.

**THE CHAIR:** Yes.

**MR MACGREGOR:** Lord Brodie, the next witness is Mr Graeme Greer.

**THE CHAIR:** Thank you. I think it is still morning so good morning, Mr Greer. As you are aware, you are about to be asked questions by Mr MacGregor, who is counsel to the Inquiry, but first I think you are prepared to take the oath.

**Mr Graeme Greer**

**Sworn**

**THE CHAIR:** Thank you, Mr Greer. Mr MacGregor.

**Questioned by Mr MacGregor**

**Q** You are Mr Graham Greer. Is that correct?

**A** That's correct, yes.

**Q** And you have provided a witness statement to the Inquiry, Mr Greer?

**A** Yes.



**Q** You should have a copy available to you, but any documents that I want to take you to they should come up in the screen in front of you, so if for any reason there is a technical issue and you cannot see them, please do let me know. For anyone following in terms of the electronic bundle, Mr Greer's statement should be available in bundle 13 from pages 130 to 166. Mr Greer your statement is going to provide part of your evidence to the Inquiry, and you are also going to be asked some questions by me today. If I could begin by asking you some questions about your qualifications and career, you tell us at paragraph 2 of your statement that you graduated in 2002 with a degree in civil engineering and that you are a Chartered Civil Engineer and a member of the Institute of Civil Engineers. Is that correct?

**A** That’s correct, yes.

**Q** Could you just give us a broad overview of your career before you moved to work with Mott MacDonald, which I think was in 2011, so the period from, effectively, graduation to 2011, what type of work were you doing?

**A** Sure, so in 2002 I graduated from the University of Strathclyde, Civil Engineering. I joined

Babtie Group at that point into their reservoir and dams team, spent some time onsite as the engineers representative on a hydropower scheme project, returned to the office, did some sewer design work, worked as a senior design engineer and then, as I did that sewer design work, it moved into project management. So moved into project management in NEC-type contracts, and at that point it was working in a joint venture. It was actually being bought over by Jacobs, and it was a joint venture between Jacobs and Mott MacDonald. So I got to know a few of the Mott MacDonald staff at that point.

**Q** Okay, so whenever you are joining Mott MacDonald, are you joining them more in a management role as opposed to doing a technical civil engineering role?

**A** Yes, by the time I joined Mott MacDonald's, it was very much a project management role, yes.

**Q** And we have heard from one of your former colleagues, Mr Stevenson. He was an electrical engineer, and he helpfully explained the difference between a mechanical engineer and an electrical engineer. For those of us that do not work in your area, can you explain the difference between a civil engineer



and someone that would do mechanical and/or electrical engineering?

**A** Yes, civil engineering, they cover a very broad range of topics, but it is very much-- It can range from a sewer design that I was involved in, dams design, concrete design. It's very different to mechanical/electrical engineering.

**Q** Thank you. We will come back to talk about your career with Mott MacDonald and your involvement in the Royal Hospital for Children and Young People and the Department of Clinical Neurosciences, but am I right in thinking that you left Mott MacDonald in May 2022 and you currently work for NHS Lothian?

**A** That's correct.

**Q** Can you explain to the Inquiry what is your current role with NHS Lothian?

**A** So, I'm currently the programme director working on the capital planning team. Current project I'm working on is the new National Treatment Centre at St. John's Hospital in Livingston.

**Q** And what would that role involve?

**A** So, we're currently working with our principal supply chain partner and our lead adviser team.

We're progressing the design to go to an OBC-type submission.

**Q** So, again, just so I am understanding you, having worked at Mott MacDonald working on the contracting side, have you now moved, and you are almost on the other side of the table acting for a procuring authority?

**A** Yeah, when I worked at Mott MacDonald, we worked very closely with the NHS Lothian team, so the change in role-- it's a relatively similar role that I'm doing just now.

**Q** Thank you. If we could come back to your time with Mott MacDonald, you explained within your statement that you had worked on a number of healthcare projects during that time in your career, and we will come on to look at the Royal Hospital for Children and Young People, but you mentioned some other projects you had worked on, including North Ayrshire Community Hospital in Dumfries. Broadly speaking, what role did you have on that project?

**A** So, generally, when I was working on that project, and more generally, I worked on the technical schedules, so it's the technical schedules for the project agreement, effectively. So, the technical schedules-- starts off with the likes of



schedule part 3, the key works personnel. So, we develop that. Schedule part 6, the construction matters. There's a series of sections to schedule part 6. Schedule part 7, the program. Schedule part 8, the review procedure. Part 10 is the outline commissioning program and developing the leasing criteria. Schedule part 11 is the equipment schedule, so develop those. Schedule part 12, service level specification, so that's more the FM side of things. Schedule part 14 is the PayMech, developing that, and then last kind of technical schedules, schedule part 16 is the change protocol. So, generally coordinating the development of all those technical schedules.

**Q** And, in terms of those health care projects that you were working on, were they capital-funded projects, revenue-funded projects, or a mixture of the two?

**A** The majority-- all the healthcare projects were revenue-funded. There was one design-build development agreement under the hub project, but it was a custodial centre for Grampian Police.

**Q** And, in terms of the healthcare revenue-funded projects that you were working on, what was your understanding of the risk

allocation in those projects and, specifically, the design risk allocation on them?

**A** So, the design risk allocations are heavily governed by clause 12 of the project agreement, and in terms of the 12.5 is a key clause relative to operational functionality-- So, operational functionality-- and, in old PFI contracts, it was called clinical functionality, but I think, when SFT did the standard form, it was generic for health care and education, so they changed it to operational functionality. The principle is that-- The reason I mention clinical functionality is it's, "Who's best placed to take the risk?" and clause 12.5 says that the health board is best placed to take the clinical risk or the operational risk. So that's limited to the 1:500 layouts, the points of access to that, the 1:200 department adjacencies, and the 1:50 room layouts, and clause 12.5 says that NHS Lothian take that risk, and then the earlier clauses, 12.1 to 12.3, set out the risks that the bidders or Project Co takes relative to the technical side of things.

**Q** So your understanding, working on a range of health care projects is that-- You mentioned operational functionality or clinical functionality. That would sit with the procuring authority, and other design risks would sit with the successful tenderer, the contractor. Is that correct? And, again, you have mentioned these terms, operational functionality, clinical functionality. Were those technical terms that would be used within the industry that you were working in?

**A** Yeah, operational functionality was a defined term in the project agreement, and it was a well-known clause relative to that risk allocation.

**Q** Again, thinking of revenue-funded projects that you had worked on in the healthcare sector, how would a client provide their requirements or their brief? The Inquiry has heard a lot of evidence so far about room data sheets, about Environmental Matrices, but can you just explain your understanding in terms of these projects? Was there a specific way that a procuring authority would set out their requirements, or was it highly project specific?

**A** No, there was definitely a general theme whether it was a hub, DBFM project, Design Build Finance Maintain project or an NPD project. The NPD went through a different procurement route. The hub projects, you're directly working with a supply

chain partner from straight away, so slightly different but, in terms of how the briefing worked, it was generally done through authority construction requirements or Board Construction Requirements in the case of the Edinburgh project.

**Q** In terms of those Board Construction Requirements, what would they be? Is that a document that sets out technical requirements? Is it a full suite of room data sheets for the hospital? Is it an Environmental Matrix, or does it just depend on the project?

**A** It varies per project, but the principal sections-- you've got subsections A to C, which are your general construction requirements. You then have subsection D, which is your specific clinical requirements, and then subsection E is your non-specific requirements-- non-clinical requirements. In terms of room data sheets and Environmental Matrix, it varied depending on the project.

**Q** So, again, the Inquiry has heard different views from different people. Some people have said room data sheets; they were the standard briefing tool. Other people have said, no, it was not really room data sheets, it was Environmental Matrices. Your experience was it would just depend project-to-project how matters were set out. The key document would be the Board's Construction Requirements.

**A** Yeah, the key document would be the Board's Construction Requirements.

**Q** Thank you. I think moving away from just those general topics, I now want to ask you some specific questions about the Royal Hospital for Children and Young People and the Department of Clinical Neurosciences. I will just refer to that as “the Project.” So if I am referring to “the Project,” that is what I'm talking about. So, you tell us that you joined the project in May 2013, and that was at competitive dialogue meeting 3 approximately. Is that correct?

**A** Yeah.

**Q** So, the project has already been through the competitive dialogue session dealing with mechanical and electrical engineering at the point you come into the project. Is that right?

**A** Yes, I understand the main mechanical/electrical submissions were in dialogue 2, and I joined in dialogue 3.

**Q** Because I think, in fairness, you say you might have attended a meeting right at the very start of the project in 2010/2011, but

you exited at that point and then came back in at this point in 2013. Can you just explain? You are not in the project up to that point. Why were you coming in around about May 2013?

**A** The Mott MacDonald project manager who was on site at the time was Kenny Faulkner. He was leaving Mott MacDonald and, therefore, I was asked to come in and take Kenny's place.

**Q** So you were taking his place. Who else within Mott MacDonald were you working with at the point that you came in?

**A** So, Richard Cantlay was really leading the project at that point. The project director, Richard Peace, who I reported to directly, and then the project management team. So, that would be Mo Brown, Camille, and then there's the broader technical team as well and also the facilities management team, including that as well.

**Q** So, in terms of the Mott MacDonald side, you mentioned Richard Cantlay. Was he really in overall charge of the project? Was he leading on it from the Mott MacDonald side?

**A** Yeah, from a client-facing perspective at that point he was, yeah, leading that project.



**Q** In terms of your role, did you work with Mr Cantlay? Did you take over from Mr Cantlay? How did things progress from the point you came in?

**A** I worked closely with Richard, and it was probably closer to the financial close period when I started to have more of the lead client-facing role. Once we got into the preferred bidder stage, I started to have more of that role. Richard was always there to support.

**Q** There is other individuals from Mott MacDonald that the Inquiry has heard from, so William Stevenson, who was an electrical engineer. Were you working with him?

**A** Yes.

**Q** And Colin Macrae, who was a mechanical engineer. Were you working with him?

**A** Yes.

**Q** If we are thinking about mechanical engineering, you say, very fairly, you are a civil engineer; you're doing a management role. On the Mott MacDonald side, if we are thinking about people that had the technical skills in terms of mechanical engineering, is it really Colin Macrae that would be dealing with that?

**A** Yeah, Colin was the lead client-facing person, yes.

**Q** Okay, thank you. Before we go into the detail of the project itself, whenever you come in, obviously, the invitation to participate in dialogue has already been issued and the project is within the competitive dialogue stage. So you are not involved in the drafting of the invitation to participate in dialogue itself or any of the schedules included within that, and by that I mean Board Construction Requirements or the draft contract provided by Scottish Futures Trust. Is that correct?

**A** That's correct, not directly involved. I think the first hub project I did probably served us to-- It was Aberdeen Health and Care Village. The template for a hub project and the DBFM contract was very similar to the NPD contract, so the likes of the schedule part 6 section 7, the thermal and energy efficiency testing procedure, that was a schedule I developed for the hub project, but it was equally-- I don't think it changed too much by the time I got to the NPD projects.

**Q** Yes. The reason I raise that is really just, in fairness to you, that at various points within your statement you tell us your subjective understanding of what terms within the invitation to participate in dialogue



meant, what terms within the contract meant. Should we understand that you are, effectively, trying to be helpful saying, “This is my understanding,” but presumably you had recognised that there are other people who might take a different view and you are not trying to give an expert opinion on what it definitively means. You are just trying to be helpful and say that is your understanding as someone who was working on the Project at the time?

**A** Yes.

**Q** Thank you. If we think about the competitive dialogue stage whenever you come in, for those of us that are not familiar with procurement exercises, practically, what is happening at competitive dialogue? What are you trying to achieve in a project of this nature in the competitive dialogue stage?

**A** Trying to support the bidders to develop their proposals through dialogue sessions. So, a typical dialogue week, or the week before a dialogue session, submissions would come in. From the way we worked on the project, on the Monday we would have a core evaluation team meeting, it was called. It was the lead advisers, lead legal, financial and technical advisers, plus the NHS Lothian teams. We had a

group session on Monday, then met bidder A on Tuesday, bidder B on the Wednesday, bidder C on the Thursday, and then we had a wrap-up session on Friday. It was all about trying to develop the proposals so that they could submit compliant tender.

**Q** And, again, just so I'm understanding things, on a complex project of this nature, is it an opportunity for bidders to ask questions and for the procuring authority to try to provide clarification so that the bid that ultimately goes in is matching the procuring authority's expectations?

**A** Yeah, that's right, yeah.

**Q** Thank you. Within your statement, you explain that Mott MacDonald's role at this stage was really the provision of management and technical advisory services. Can you just explain, practically, what is Mott MacDonald doing? What do you mean by project management and technical advisory services?

**A** So, in terms of the project management function, perhaps more of a document control. So, it's not like an NEC contract where you had a named project manager and your partner. It was more of facilitating the flow of information. So Camille and Mo were largely facilitating that



flow of information. So, a bidder would put a query in, and project management team would collate that query and send it out to the relevant technical people or clinical people to review that. So, there's kind of two main functions. One was the project management, management of the flow of information, and the other function of the project management team-- part of that was issuing the technical documents to the relevant technical groups for each discipline and, again, managing the flow of that information.

**Q** Okay. So, that is competitive dialogue. When you get to the point that it is looking like competitive dialogue would be closed, what is Mott MacDonald doing at that stage?

**A** Before it closed there was the draft final tender submission. Again, the draft final tenders were submitted. They were sent out. It was almost like a dry run of the final tender, albeit we didn't do any scoring at the draft final tender stage. It was providing comments back to the bidders to get them to a compliant bid status. When we got to the final tender stage, there was the development, and we had to update the ITPD into the ISF, so invitation to participate in dialogue into the

invitation to submit final tender. So, there's a bit of redrafting, but the redrafting of that was fairly minimal. It was mainly just updating the dates and the timeframes for submissions. Then, once the ISFT was issued, it was then, obviously, bidders were away collating the final tenders. Final tenders came in, and then we started the evaluation process beyond that.

**Q** Okay, and, again, we will come on and look at all these stages in a bit more detail, but just at this stage you have helpfully set out what happens at competitive dialogue, ISFT, bids come in, tenders are being assessed. What is Mott MacDonald's role at that stage when tenders come in?

**A** It's very similar to the-- so we've still got the project management function. There was a significant exercise using a system called Conject at the time. So, the bidders would submit it onto Conject, and then there was a significant exercise, from a project management perspective, collating that information and disseminating it to the relevant technical and clinical teams that were going to review that. Then, once that was reviewed, there was then the coordination of the-- So the evaluators would be-- Each question had a group



of evaluators. So, the evaluators were given a time frame for them to review the submissions and then would come back with a consensus meeting to agree a consensus score for each of the questions.

**Q** Okay, and then at that point, once that assessment has been done, is that how the preferred bidder then gets selected?

**A** Yes, yes.

**Q** What would Mott MacDonald's role be in assisting NHS Lothian to identify the preferred bidder?

**A** As I say, for each question there was generally a Mott MacDonald representative on the evaluation panel. So there would normally be a team of four or five actually doing the reviews, Mott MacDonald would be one or two of those on the panel. They would be reviewing the submissions, generating comments and then, as I say, go into the consensus meeting to agree a score.

**Q** So, you get to a point that consensus scores are in, preferred bidders identified, preferred bidder letter goes out, what was Mott MacDonald's role in the period from preferred bidder to financial close?

**A** From preferred bidder to

financial close, it was supporting NHS Lothian and IHSL develop their bid submissions into contract documents.

**Q** If we just pick out a couple of stages within the project. The Inquiry has heard evidence that Hulley & Kirkwood had assisted with drafting the Environmental Matrix that was used in the project, but they were not available. They effectively exited before the invitation to participate in dialogue was issued. Just thinking through the, sort of, technical assessment stages, when bids come in and they are being assessed, if Hulley & Kirkwood are not there, how is Mott MacDonald assisting NHS Lothian to do the technical assessment?

**A** So, this is in the evaluation of the tenders?

**Q** Yes.

**A** Yeah. So, as I say, there would be one or two-- So, I think it was probably Willie and Colin were doing the-- from an M&E perspective, they'd have been providing their comments on the submissions. So, there was three or four M&E related submissions that they looked at. Yeah, the submission would come in, and there was an evaluation performer that we provided to each of the reviewers. So, that was both for Mott



MacDonald and NHS Lothian. It was a standard performer they used. So, the reviewers would complete the performer. The performer had all the evaluation questions, so they had to then generate-- So, they would review the submission, they would generate a comment against each element of the submission, and then ultimately try and agree a consensus score based on the comment.

**Q** The reason I raised that is one of the risks at the very outset of the project that was identified was a potential risk in parts of the reference design team not being involved at the assessment stage, and the mitigation that was put in place was to say, "Well, it will have to be made sure that the lead technical advisor is up to speed and has the relevant skills." I appreciate you were in a management role, but were you satisfied that Mott MacDonald had the technical skills to make the assessments that NHS Lothian needed to make at that assessment stage?

**A** Yeah, for procurement purposes, yes. They've got the relevant technical skills, but I think that they obviously couldn't do a design check at that point, just that there was, I would estimate for each question-- So, for each question, obviously, I

have to review three bid submissions. They probably maybe have two or three hours, maybe, on each question. They wouldn't have a massive amount of time, so it was very much, “What's the evaluation criteria, and what is a, based on their review”-- My understanding is there was a covering document for each question, and then there would be a series of appendices to each evaluation question, and generally the majority of the information would be stored in the covering document. I think that's really where the focus of the review would be, and then they would then have to refer to the appendices if they felt they had to dip into them in order to generate the comments on the evaluation criteria.

**Q** Okay, and, in terms of your role, the more management role, were you satisfied that there was enough capacity within the mechanical and electrical engineering sub-teams to undertake those tasks?

**A** Yes, for procurement purposes, yes.

**Q** Yes.

**A** Yeah.

**Q** The reason I raised that is that the Inquiry heard evidence from your former colleague, Mr Macrae, who was on the mechanical



engineering side, and he said that he was working on the project one day a week approximately, and he thought the time that he devoted to mechanical engineering issues and ventilation, in particular really the ventilation, was about 5 to 10 per cent of his time. Do you think that that was a sufficient amount of resourcing that was available at that stage of the project?

**A** Yes, I think, I say again, it was commensurate with the risk allocation in the contract. So we weren't doing a design check or a design audit at that point, we were just reviewing the submissions. I appreciate Colin said that. There was probably a focus period where he was probably spending a bit more time on it than that. I think when the final tenders came in, there was a completeness check was needed, and then we probably would be two or three weeks beyond that to then come up with the ultimate final scores. So there probably was a bit more of an intensive period and, I don't know, maybe Colin’s thinking of the average over the period as opposed to the focused evaluation period.

**Q** Okay, thank you, because you tell us within your statement you are not obviously involved in reviewing any particular

submissions, particularly on mechanical and electrical engineering issues, because you would not have the relevant skill set. So, in terms of the assessment that is taking place, mechanical and electrical engineering-- it is really Mr McCrae and Mr Stevenson that would be carrying out that task on the Mott MacDonald side. Is that correct?

**A** Yes.

**Q** I think just picking up at this stage one comment that you had made, you talked about the approach that Mott MacDonald were taking and the fact that it would not be an intensive audit that was being taken at this stage. Am I right in thinking that that is your evidence? That it was not an audit that was been undertaken. It was really, I think you refer to it as, spot checks that were being undertaken. Is that right?

**A** It's, I think, probably sample reviews, maybe. Yeah, sample spot checks.

**Q** Sample. The only reason I raise that, and it is in fairness-- other witnesses that have given evidence to the Inquiry-- So, for example, Mr Hall, who worked for Multiplex, he described MacDonald's role as more being akin to a shadow design team. Do you have any



observations on that comment?

**A** We definitely didn't have a design team working on the project. No, there was a limited number. We had the team for the procurement phase. We started into the preferred bidder to financial close phase. I think we probably did start to increase the resource more because there was more comments were getting up as we start to do the reviews of the documents towards financial close. So I think it's fair to say that it did increase a bit beyond that, but it still wasn't, yeah, a design team.

**Q** Again, if I could just ask you a couple more questions about that. For those of us that do not work in that area, why would Mott MacDonald not be undertaking the role of a shadow design team at the procurement stage of a major project like this?

**A** It's back to the risk allocation on an NPD contract. It's the private sector, specialist healthcare designers are our best place to take the technical risk. NHS Lothian or the Board and these contracts are better to take the clinical risk. It sends us back to that, “Who's best place to take the risk?” and that's how the contract was set up. So, yeah, we weren't-- There wasn't seen to be a need to do

an audit of the design.

**Q** I think, again, one other question that I would ask is if that design risk sits with the bidder-- the contractor, why even carry out sample reviews?

**A** It was beneficial to the client that we would do some level of review to support their team and develop the proposals. It was still helpful, I think. It was helpful to NHS Lothian, and it was helpful to IHSL to provide some comments.

**Q** How would you determine what level of sampling to do? I appreciate it is a long time ago but, again, people talk about "I am not doing a full audit. I am just doing a sampling approach," but it is difficult in the abstract to understand how intensive or a light touch approach was being adopted. Can you remember what was happening?

**A** Yeah, I didn't do the reviews myself, so it's difficult to say how they judged what to review and what not to review. I guess we were discussing it with-- Mott MacDonald were appointed on the four other NPD projects at that point. So the reviews at the beginning were consistent with the level of reviews we were doing on the other projects as a comparison, but on this project they did start to



increase a bit as more issues were encountered as the project developed.

**Q** In terms of doing the sampling approach-- and I appreciate it might be fair to say that it would more be for a mechanical or electrical engineer to say how much sampling to do but, in terms of doing the sampling approach as opposed to doing a full audit, was that because of the risk allocation approach? Was that really the main driver to the approach that was taken here?

**A** Yes, yeah, and that was the discussions we had with NHS Lothian. I remember conversations saying, "Why would we employ you to do a design if we've already employed somebody else to do the design?"

**Q** Well, because that was the next question I was going to ask. In terms of your understanding, was NHS Lothian aware that what Mott MacDonald was doing was a sampling approach as opposed to a forensic audit of tenders that were coming in?

**A** Yes.

**Q** Again, I appreciate it is 10 years ago, but can you remember who those conversations were taking place with in terms of who is involved in those discussions on the Mott MacDonald side and who is involved in the NHS Lothian side?

**A** I think I remember having chats with Brian Currie about it. That was the bit I remember when we said, "Why would we employ Mott MacDonald to do a design when we've already got a design team doing that?" So Brian would have been my main point of contact. I think. I'm sure Richard would have done presentations to NHS Lothian explaining the risk allocation of the contract, and then that was then reflected in the scope.

**Q** In terms of the comment that you are making in terms of the rhetorical question from NHS Lothian, "Why would we do that?" are we really talking about risk allocation, the time to do an exercise like that and the cost for Mott MacDonald to do an exercise like that?

**A** Yeah, yeah, it's primarily risk allocation, and it's also-- if you start to do your own design, then you end up coming up with two designs, and you don't get any further forward. So it was very much a supportive role trying to help NHS Lothian and IHSL develop the proposals as opposed to doing a separate design in its entirety.

**Q** I want to move on and just ask you a related but a slightly different set of questions. It is really relating to statements that would have



been made by individuals from Mott MacDonald to potential bidders, and also in the period from preferred bidder to financial close, because there does seem to be a difference in the witness statements that have been received from the Inquiry as to exactly what was being said at that time. As I understand it from your witness statement, your recollection is that what tenderers – and particularly the preferred bidder – was being told in the period from preferred bidder to financial close was that, really, issues like the Environmental Matrix-- it was for them to take the draft on and develop that as their own design. Is that correct? Is that your recollection?

**A** Yes, absolutely, yeah.

**Q** Again, there is other individuals that their recollection is that that was not what they were being told. They were being told that the Environmental Matrix, in particular, was a client brief. It was fixed, and it should not be changed. What is your recollection of what was being said at the time?

**A** There was very detailed discussions over quite a time about the general principle of the risk allocation. There's a number of fronts to this. If we look at the Environmental Matrix itself, IHSL had asked for an Excel

copy of that. So an Excel copy of the Hulley & Kirkwood matrix, that was passed to IHSL for them to develop. So IHSL then started to develop that and make their own changes to the matrix, and they made a number of changes to the matrix to suit the requirements. So things like, first of all, they removed the Hulley & Kirkwood logo, which was a sign it was their own; they changed the format of the sheets-- the main bulk of the matrix-- the format changed; the guidance notes were changed as well, so the likes of there was an RFI 5 came in which related to humidification.

The matrix was discussed in itself, but there was also discussions about the contract documents, so the likes of the Board construction, the procurement documents. The Environmental Matrix sat in Appendix C of the of the BCRs. That was for a procurement purpose. That then was moved to the schedule part 6, section 6, the room data sheet section for the financial close document. It was discussed, more generally, Environmental Matrix and compliance with the Board's construction requirements. That was discussed. There was also a derogation----

**THE CHAIR:** Sorry, just the way you put that. We are talking about discussions, and what I picked up – and I may have picked it up wrongly – was the Environmental Matrix was an expression of the Board's construction requirements. Is that what you said, or maybe you said the exact opposite?

**A** Sorry, the Environmental Matrix in the procurement documents was included as an Appendix C. When we moved to financial close, the Board's construction requirements were updated, and the Environmental Matrix was taken out of the Board's construction requirements and, in the contract, it was put into schedule part 6, section 6, which is the room data sheet section. It was taken out as a Board construction requirement and put in as part of the room data sheet section.

**Q** Thank you.

**A** So yeah, there was there was quite a few things. There was there was the derogation MEP 15 was another one. There was a clause in the BCR's, “Project Co shall comply with the Environmental Matrix,” and we agreed with IHSL that, just for clarity, we would provide extra comments. So there was a there was a derogation agreed which directed-- it would have been Project Co to-- it would have been schedule part 6, section 5, which

is their reviewable design data section. Then there's a part 4 to the reviewable design data section, which has the comments on the Environmental Matrix for Project Co to address. So it was discussed a lot and on a number of fronts.

**MR MACGREGOR:** Again, there is a lot of helpful detail that you have provided there that we will just come on and look at in a bit more of a granular level. Just thinking about conversations at the minute, and I am not asking you to say that a specific conversation took place on a specific day but, from what you are saying, are you involved in direct discussions with IHSL in particular about the status of the Environmental Matrix?

**A** I think it would likely have been either the project management group-- It wouldn't have been a one-to-one type conversation, more likely in the project management group or the Design Steering Group where the conversations took place.

**Q** Okay, but that would be information that you would be conveying, or information that a colleague is conveying whenever you are present?

**A** It would vary. We would generally escalate issues. If there were issues to be escalated, we would



escalate it. There was a project management executive meeting, which was NHS Lothian and advisors, and that took place before the project management group-- or the project delivery group meeting. So, we would feed into the project management group and then, as necessary, NHS Lothian would generally then lead that escalation.

**Q** So, if I could just, as an example, ask you to have your statement in front of you, please. So, that is Bundle 13, if we pick matters up on page 157 at page (sic) 79, please. Do you see paragraph 79 beginning, "The development of the environmental matrix?"

**A** Yes, thanks.

**Q** So, you tell the Inquiry:

> "The development of the environmental matrix in the PB to FC phase started with a discussion on transferring the ownership of the environmental matrix to IHSL. I recall being involved in a conversation to the effect that it was now IHSL's EM and was for IHSL to develop, following which on 3 July 2014, IHSL asked for an excel version of the environmental matrix in

order that they could develop it in accordance with their own design."

Do you see that?

**A** Yes.

**Q** Can you just tell us what do you mean about this discussion terms of transferring ownership? What were you saying at that point in time?

**A** So, I think-- my recollection is that would have been in one of the MEP workshops that we had, where that conversation took place. Then, as I say, following which there was a request to get the matrix for IHSL to develop.

**Q** In terms of that meeting, are there representatives from IHSL that are present?

**A** Yes.

**Q** Again, I know it is a long time ago, but can you remember who those individuals were?

**A** It would likely have been Ken Hall. I don't think it was anyone actually from IHSL. It was probably the Multiplex and the designers that were probably in the meeting.

**Q** Thank you. If I could ask----

**A** I've used IHSL generally, apologies.

**Q** No, no, it is not a criticism. It is just, I think in fairness, if there is a difference in opinion between people, it is helpful to clarify with you specific individuals. So, thank you for that, Mr Greer. If I could ask you to have in front of you bundle 10, volume 1, please. Sorry, bundle 10, volume 2, please, and if we could go to page 1300. So, bundle 10, volume 2, page 1300, if we could perhaps just look at the second email there, that is an email from Ken Hall to Maureen Brown and you, Graeme Greer. Do you see that?

**A** Yes.

**Q** On 3 July 2014:

"Good morning Mo / Graeme

Stewart has asked if he could have the environmental matrix in excel rather than pdf version to allow to populate the schedule with any changes.

Is this something you could help us with?

Ken"

Do you see that?

**A** Yes.

**Q** Now, is that the email that you are referring to in terms of a request for an Excel spreadsheet version of the Environmental Matrix?

**A** Yes.

**Q** Again, just thinking of this idea in terms of whether the

Environmental Matrix is a draft to be developed or it is a fixed client brief, do you have any observations in terms of why you were being asked for an Excel spreadsheet copy of the Environmental Matrix?

**A** It was to allow IHSL to develop the matrix to suit their design.

**Q** So, again, just so I am understanding things, is your understanding that the Environmental Matrix produced by Hulley & Kirkwood provided with the Invitation to Participate in Dialogue was effectively the starting point for the development of a design?

**A** Yes, that's correct. Yeah. Yeah, starter for tender, I would probably say.

**Q** I appreciate that you would not have been involved in the minutiae of the detail, but in your management role, were you aware of comments being provided by NHS Lothian and Mott MacDonald to IHSL during the course, particularly of the period from preferred bidder to financial close?

**A** Yeah, I would likely have been involved in most of the Environmental Matrix exchanges.

**Q** Again, just thinking at this stage in terms of the differing views and in terms of whether the Environmental Matrix was a draft to be developed or it was a fixed client brief, why was NHS Lothian and Mott MacDonald feeding comments back?

**A** It was part of the development of the matrix. IHSL would update the matrix. It would be submitted. Yeah, it would be submitted, I think we had started the review procedure informally at that point, so it would have been submitted through, effectively, the review procedure, albeit the contract wasn't in place at that point, and then through the review procedure we would, in conjunction with NHS Lothian, generate comments and feedback, any observations we had on Project Co-- sorry, IHSL's submission.

**Q** Okay. So, we are still really just looking at the status of the document. We will come on and look at some of the other aspects of the procurement exercise, but if I could ask you to have bundle 4, please, page 218. Bundle 4, page 218. It should have in the top left-hand corner, "Environmental Matrix comments [from the] 13 October 2014." Do you see that?

**A** Yes.

**Q** There are two columns there. One is, "The Board has the following initial technical comments on

the draft 1 of the Environmental Matrix," and then you see in the right-hand side, "IHSL Update 27 October 2014." Do you see that?

**A** Yes.

**Q** So, can you just explain what is this document? What is it doing? What is its purpose?

**A** I think the column on the left would have been the Mott MacDonald and NHS Lothian-generated comments, submitted, as I say, informally through the review procedure, and then the column on the right would be IHSL's response to the queries and how they were proposing to update their matrix.

**Q** Thank you. We could put that document to one side. I want to now sort of return to the slightly earlier stages of the project. You had mentioned competitive dialogue – as you were getting towards the end of competitive dialogue, there would be a draft final tender that is submitted. Is that right?

**A** Yes.

**Q** If you just explain to the Inquiry, what was the purpose of a draft final tender being submitted?

**A** I think the main aim of the draft final tender was to make sure that there was two compliant tenders, at least two compliant tenders, to go to the final tender stage.

**Q** You mention in your statement, and I think I picked you up on your evidence earlier, that they were not scored. So how was an assessment being made that broadly there were going to be two compliant tenders if there were not scores being allocated?

**A** I think we discussed this with MacRoberts, who were NHS Lothian's legal advisors, and the comments that we could generate was where we felt the draft final tenders were not achieving a pass rate. So we were not allowed to provide comments beyond that because that would come across as coaching one or the other of the bidders. So it was comments to the bidders in order that they could try and get over a-- In the technical scoring, I think you had to get over a score of five for some of the questions to achieve a pass and that was-- so that was part of the-- or in other cases there was pass/fail criteria. It was to provide comments to help the bidders get to that pass status.

**Q** So, again, just so I am understanding, perhaps a very broad-brush assessment to make sure that the tenders were going to move through the pass/fail questions and get to the point of being scored as

opposed to being excluded so that there were less tenders to be assessed and actually scored. Is that right?

**A** Yes.

**Q** Thank you. After the competitive dialogue closes, you mentioned that there is the Invitation to Submit Final Tenders that gets issued. Were you involved in the drafting of that document?

**A** Yes.

**Q** How significant were the changes that were made to the Invitation to Submit Final Tenders as opposed to the Invitation to Participate in Dialogue?

**A** It was largely a copy of the ITPD. So it was updated to reflect the revised submission dates for when the final tenders were due. There were some technical changes. There was an issue arose, it was to do with the schedule part 16 change protocol catalogue, where the bidders had submitted catalogue values above the market rate, which would have been used for the 25-year contract. So we introduced a quantifiable bidder amendment to the ISFT, so that was the one technical change I remember making to responding to an issue that was identified through the dialogue process, but generally speaking it was



administrative changes, updating it to suit the actual submission dates.

**Q** So if we think, for example, of the Board's Construction Requirements, were there any significant changes that were taking place to the Board's Construction Requirements from ITPD to ISFT stage?

**A** I don't think there were any changes.

**Q** Thank you. I would now like to ask you some questions about the assessment of tenderers themselves. So the competitive dialogue closes, tenders are submitted and then there is going to have to be the assessment that takes place, including the involvement from Mott MacDonald's technical individuals, as you have outlined. Can you just explain your understanding of how were the pass/fail criteria going to be assessed in terms of final tenders?

**A** I think that they would just be passed against the evaluation criteria. It would just be a straight, "Have they met the evaluation criteria, or have they not?"

**Q** Yes, and you mention within your statement a document called the evaluation manual.

**A** Yes.

**Q** What was the evaluation

manual?

**A** It was a manual that was developed, I think it was with MacRoberts and EY. So EY were the financial advisors, MacRoberts the legal advisors to NHS Lothian, and it was a document that we issued to the evaluators to help them. Some of the evaluators might not have done this before, so it was to give them a steer about how they would go about the evaluation process.

**Q** Thank you. So if I could ask you to have in front of you, please, bundle 8, page 101. You see a document here, "Competitive Dialogue Project Plan and Final Tender Evaluation." Do you see that?

**A** Yes.

**Q** Is that what you are referring to as the evaluation manual?

**A** I'm not sure. Can you just scroll down a page, would that be possible? Sorry.

**Q** Yes, certainly.

**A** I thought it was called something different, but----

**Q** You will have seen on that page, it says:

> "A bright new future: A project to re-provide services from the Royal Hospital for Sick Children, Child and Adolescent Mental Health Services and the Department of Clinical Neurosciences in a single building adjoining the Royal Infirmary of Edinburgh at Little France
>
> 'Re-provision of RHSC and DCN at Little France'"

**A** Yeah, sorry, it's just the name. It's the competitive dialogue project plan and final tender evaluation. I'm just-- I'm happy to go through it, sorry. Just not sure if it's the one----

**Q** As we go through it, if it is not a document you recognise or you think is a different draft that you had seen, please just do say so, Mr Greer. If we could look on to page 104, please, do you the introduction section?

**A** Sorry, could we scroll back to the two pages just for the table of----

**Q** Yes. So it is on page 103 is the issue and revision record.

**A** Yeah, that's what I was just thinking. Yeah, yeah. Yeah, I was involved in the earlier iterations, so yeah, it's fine.

**Q** So you----

**A** I just wasn't sure if it was the one that was done at the final tender stage of this, so it was earlier

when we looked at the competitive dialogue.

**Q** Okay. So, again, you have seen a document like this, whether it was this specific version you have seen or an earlier draft, you are perhaps not sure, and 10 years on that is perhaps not surprising, Mr Greer. If I could ask you to look to page 104, please, which is the introduction. First paragraph:

> "This manual is intended to provide for all members of the Re-provision of the Royal Hospital Sick Children (RHSC) and Department of Clinical Neuroscience (DCN) at Little France project team a guide on the competitive dialogue process, a guide on undertaking the Draft Final Tender reviews and a step by step guide on the Final Tender evaluation process, their role and what is expected from them during the evaluation as well as the tools necessary I order to undertake their role."

Do you see that?

**A** Yes.

**Q** Again, does that tie in with what you are saying about why this document would be produced, because some of the people undertaking the exercise might not have had a lot of experience on these types of projects?



**A** Yes, yes.

**Q** If I could ask you to look on, please, to page 114. So, section 5 is the "Draft Final Tender Review" and there is the overview, 5.1:

> "The Draft Final Tender shall not be scored by the Board. The Draft Final Tenders shall be used as a tool for the Board to ensure that bidders have solutions capable of meeting its requirements, thus enabling the Board to proceed to conclude the Dialogue Period. It follows that review of Draft Final Tenders shall focus on whether each bidder's submission meet the Board's requirements set in the ITPD (as supplemented and clarified by the Board during the Dialogue Period)."

Do you see that?

**A** Yes.

**Q** Again, does that tie in with what you have told the Inquiry already that the whole purpose of having a draft final tender was not to do a detailed scoring exercise or a dry run, it was really to make sure, in a broad sense, that there was going to be compliant tenders to be assessed at the final tender stage?

**A** Yes.

**Q** Can I ask you then to look on to page 123, please, and it is about two-thirds of the way down, there is the bold heading, “Guidance and Quality Scoring (Technical)” and then there is subsection “6.6.1 Pass/Fail tests.” Do you see that?

**A** Yes.

**Q** Which states:

> “In the first instance **all** of the responses to each question will be evaluated on a pass/fail basis. This also includes those responses that are subsequently scored. Provision is made in the Appendix E proforma to record the outcome of this pass fail evaluation. As noted in paragraph 6.1 above should a Final Tender fail this test then the Final Tender will be deemed to be non-compliant and no further evaluation will be carried out.
>
> 6.6.2 Scored Questions.”

We will come on in a moment and look at the ITPD itself, but it would be helpful to have your observations, in terms of the scoring, what is going to be a pass and what is going to be a fail?

**A** I think the ITPD and the ISFT required that the score had to be over a 5 to pass, and then there was a matrix which determined what, well, a score of 5-10 and what the criteria were to get that score, a score of 5 or a score of 10.

**Q** So, if we are thinking about the Board Construction Requirements, there would be questions, there is the pass/fail, you have got to get above a 5 to get a pass, and if you get through that, then you would be into the actual weighted scoring.

**A** Yes, I think the Board Construction Requirement we had, I think that was a pass/fail question. I think that was just a straight, “Are you complying with the Board’s Construction Requirements?” I think.

**Q** Again, before we come on and look at the detail, how intense a review are the scoring team going to be taking? So, the Board Construction Requirement is a very detailed document. How were they assessing, in terms of the scoring, who is going to be passing that they are complying with the Board’s Construction Requirements and who is going to be failing?

**A** I think it was almost the flip side to that. I think the onus was on the bidders to say they were confirming they were complying with the Board’s Construction

Requirements as opposed to a review, so yeah. I can't remember the specific question, but there was a question asking the bidders to confirm they would comply with the Board's Construction Requirements. So the onus was on the bidders as opposed to the NHS team.

**Q** We will come on and maybe look at that in a bit more detail, but at this stage what I would like to understand is just that specific issue. So, bidders are asked, "Do you comply with the Board's Construction Requirements?" and if someone says, "Yes, I do," is there any further interrogation that is taking place or is such a statement being taken, effectively, at face value?

**A** It was taken to face value was my recollection, yeah.

**Q** If I can ask you to have in front of you, please, within bundle 2, page 1001. This is part of the Invitation to Participate in Dialogue and it is section 5, "TENDER EVALUATION AND CONTRACT AWARD CRITERIA," and if we look to 5.2, "Overview of Evaluation Process," you will see 5.2.1, "The final tender evaluation will comprise the following steps." So, 5.2.1, if we look to (d), "Evaluation of all the Quality Evaluation Criteria on a pass/fail basis – as more fully set out in paragraph 5.6.2 (Quality Evaluation Criteria)." We will come on to look at that, but it is just whenever it mentions here that there is going to be an "evaluation" of matters on a pass/fail basis, should we understand that the evaluation was simply checking that someone had said that they were going to comply with whatever the requirement was?

**A** I think it would depend on the question. So, the one that jumps out, I remember, is the Board Construction Requirements one, where it was, I think, as I say, taken at face value. I can't remember any of the other pass/fail questions offhand, but yeah. So I think it would depend on what the context of the question is.

**Q** We will come on to look at those because, again, as you recognise, within the Board Construction Requirements there are a lot of things that have to be done, but the question that is posed, that we will come to see, is, "Is there compliance with the Board's Construction Requirements? Pass/fail" and, again, I have got you noted as saying what happens is there is a check that someone says they are going to comply, but in terms of the long list within the Board Construction Requirement, there is not a forensic

analysis of whether each of those sub-criteria are going to be met at the tender evaluation stage?

**A** Yeah, definitely not, no.

**Q** Again, to a lay person not working in that space that might seem surprising, but it might not be surprising to someone that is working in the space. So why was there that what appears at face value to be quite a light touch approach being taken?

**A** It goes back to the overall risk allocation in the contract and who takes the risk of compliance and to say the risk of compliance sat with the bidders and the preferred bidder and then ultimately Project Co. There was not a-- and even also just from a-- in order to check each design against all the clauses, that would be a huge task. It wouldn't be possible at all in the time available.

**Q** Just in terms of the scale of that task, again, if we were thinking about the Board's Construction Requirements and a pass/fail against each of those, if they were being interrogated, for each tenderer are we talking about days, weeks, months? What would we be talking about in terms of resourcing?

**A** Months, yeah.

**Q** Thank you. Still within the ITPD, if I could ask you to have in front of you, please, page 1003 and to look at sub-paragraph 5.6.2. It states:

"The Board are keen to ensure that the Bidder appointed Preferred Bidder is able to deliver the highest quality in respect of all its requirements. Therefore in the first instance, all QEC will be evaluated on a pass/fail basis. Primarily the QEC will be evaluated in accordance with the pass/fail criteria set out in Table B of this paragraph 5.6. However, in some instances the Board's requirements for a QEC are not set out in Volume 2 and Volume 3 of the ITPD and as such Table B shall not apply. In those cases the QEC shall be evaluated by the Board based on the pass/fail criteria set out in the column headed 'Pass / Fail Guidance' (where relevant) in Appendix A(ii) of the ITPD. It is the Board's intention that, during Dialogue and Draft Final Tender stages, Bidders will be made aware of elements of the proposed solution they are developing which are unlikely to achieve a pass in accordance with the relevant criteria, as set out in Table B or Appendix A (ii)."

Do you see that?

**A** Yes.

**Q** So, again, is that what you have told us previously that there is this broad-brush approach that takes place at the draft final tender, with the hope then that what you are going to be evaluating at the final tender stages is already a compliant tender?

**A** Yes, that's correct.

**Q** Thank you. We then see towards the bottom of page 1003 the various tables, so we have got, "Table A – Evaluation Basis and Weightings for Quality Evaluation Criteria," and if we move down, on page 1005 you will see the heading, "C – Approach to Design & Construction." Do you see that?

**A** Yes.

**Q** Then if we look further down on page 1005, we will see, for example, C8, which was "Clarity, robustness, and quality of M&E engineering design proposals." That is a scored criteria with a weighted criterion of 1.06. Do you see that?

**A** Yes.

**Q** If we look further down onto page 1006. If we look to C21, you see, "C21 Compliance with Board's Construction Requirements," that was a pass or a fail assessment.

**A** Yes.

**Q** Thank you. If we look



just finally within this document to page 1008, you will see a bold heading at the top, "Table B – Pass / Fail Criteria for Quality Evaluation Criteria." Do you see that?

**A** Yes.

**Q** With a pass being described as follows:

"The Bidder's approach:

- demonstrates a satisfactory understanding of the Board's requirements; and
- delivers a satisfactory level of compliance with the Board's requirements."

Do you see that?

**A** Yes.

**Q** Now, if we think of the Board's Construction Requirements that we have just seen in terms of the pass/fail, should the Inquiry understand that someone would demonstrate a satisfactory understanding of the Board's Construction Requirements and be awarded a pass if they simply said that they were going to be complying with the Board's Construction Requirements?

**A** Yes. Yeah, I didn't do the evaluation myself, but that's my recollection of what happened during it.

**Q** Yes. Thank you. Lord Brodie, I am conscious that that is one o'clock. I will definitely finish Mr Greer's evidence this afternoon, but I think I do have some time to go, so now may be an appropriate time to break for lunch.

**THE CHAIR:** We will take our break now, in that case. Mr Greer, we usually take an hour for lunch, so if you could be back for two o'clock? Perhaps Mr Greer could be taken out. We will sit again at two.

(Short break)

**THE CHAIR:** Good afternoon, Mr Greer. I think we are ready to resume. Mr MacGregor.

**MR MACGREGOR:** Thank you, my Lord. Mr Greer, before lunch we were looking at the approach to the assessment of tenders, and I just want to ask you a couple more questions about that before we move on. What I am really interested in is the approach that would be taken to the assessment of tenders. I appreciate, from what you have said, you were not involved in the minutiae of the actual assessment itself. That would have been for others. If we could look within the Board's Construction Requirements please, so bundle 2, page 839? So, this is within the Board's Construction Requirements which were going to be assessed on a pass or a fail basis. If we could look to subsection 5.2 at the bottom, "Infection Prevention & Control" and look to the second paragraph there, which says:

"Project Co shall ensure all aspects of the Facilities allow for the control and management of any outbreak and or spread of infectious diseases in accordance with the following:"

And then there is various guidance, and if we look over the page onto page 840, at letter F there's mentioned, "Ventilation and Healthcare premises (SHTM 03-01)". It's really just, in terms of the approach, if a bidder is being told that they have to show that they are going to manage an outbreak of infection in accordance with SHTM 03-01, how would the assessment team work out if a bidder was doing that in a satisfactory manner, or is that level of assessment simply not taking place when the bids come in?

**A** Yeah, I don't think that level of assessment would take place during the procurement phase of the project.

**Q** And is that essentially for the reasons that you have given

previously about your views in terms of where risks sat and the volume of work that would be required to analyse that level of detail?

**A** Yes, yes.

**Q** Thank you. The next issue – and it is still really still in the same area – there was a requirement within the Board Construction Requirements to comply with Chief Executive Letter 19 of 2010, and you touch upon that in your statement. At that point in time, whenever you were working on the project, did you have an appreciation of Chief Executive Letter 19 (2010)?

**A** I think I was generally aware of it, but I wouldn't have known the details of it at the time.

**Q** Because, again, I asked Mr Macrae about that issue whether CEL 19 (2010) was on his radar, and he said that "That's not something that would have been on my radar." So what I would be interested in is, in terms of the Mott MacDonald team, who, if anyone, would have had the requirements of CEL 19 (2010) on their radar?

**A** In terms of the evaluation side of things, I don't think it would have been at that level of detail. I would imagine-- So, I wasn't involved in the drafting, but generally when the- - as I mentioned, I was working on Aberdeen Healthcare Village, and we drafted some-- it was authority construction requirements there, so that was that was probably one of the templates they used to start the drafting of the Boards Construction Requirements for here. So, in terms of how that would develop, the technical adviser team would start draft of the Boards Construction Requirements. It would be sent out generally to the NHS Lothian Estates team to comment on and get broader consultation. So whether that clause was in the healthcare village version of it and it's been carried on, I'm not sure, or whether it was specifically included for this project. I'm not sure exactly how that developed.

**Q** Yes, and at some point subsequently, perhaps in preparing for the Inquiry, have you had an opportunity to look at CEL 19 (2010) and its requirements?

**A** Yes.

**Q** I can turn up the references if you want, but certainly my understanding – and the Inquiry has looked at a couple of times – is that CEL 19 (2010) made a mandatory requirement for the Activity Database or an equivalent to be used as a design and briefing tool. I think the

reason that I flag it to you at this stage is whether there was any assessment being made when the tenders are being assessed as to whether bidders had used the Activity Database as a design tool?

**A** I don't think so. Part of the submission was to have some of the room data sheets in the draft final tenders and the final tender and, generally, if you're producing room data sheets, you would use the template ADBs as your starting point to produce that. So, in a roundabout way, it could have been, but it would have been up to the bidders to decide how they were going to generate those room data sheets.

**Q** Because I think within your statement you say you had assumed that that is how a bidder would have produced the room data sheets that they submitted. Is that correct?

**A** Yeah, I think just-- it was based on the format of the draft final tender that had the ADB codes on it, and it looked a similar format as to if you'd started with a template ADB.

**Q** But that would not have been your job to review the technical information in there because you're not a mechanical engineer?

**A** No.



**Q** Mr Macrae gave evidence, and he said that he was not actually aware that room data sheets had been produced in the period to financial close. Does that surprise you?

**A** No. I suspect Colin probably wasn't aware of them. The room data sheets-- So when we got into the preferred bidder phase, it was one of the first items we identified as a priority item to develop. It was early April ‘14 where that was identified. I think when the first draft of the room data sheets came out, it was very-- I think it was about 8 weeks out from the projected financial close date. So I think there was a series of meetings took place. First of all, there was a question raised by NHS Lothian as to whether NHS Lothian was willing to accept a reduced amount of room data sheets and then, beyond that point, all the discussions were around mitigation measures to make sure that we got fully populated room data sheets in the construction phase. So I think in terms of Colin not being aware of that, it's probably because they weren't reviewed in the build-up. There was a decision taken go for mitigation measures as opposed to a review.

**Q** But am I right in thinking, in terms of both the ITPD and the

ISFT, there were two stages to the production of room data sheets? So with the bid there had to be key and generic rooms that were produced and then 100 per cent room data sheets for the hospital had to be produced by financial close?

**A** Yes, that's right.

**Q** So, in terms of the key and generic rooms-- the room data sheets for those spaces, are you aware of anyone from Mott MacDonald reviewing those at the tender assessment stage?

**A** I'm sorry, I'm not aware.

**Q** Okay, the only reason I raise it is-- I appreciate you are not a mechanical engineer; it is more in terms of the process of how a pass or a fail would have worked, but the key and generic rooms included Critical Care rooms, and it might seem surprising that Mr Macrae had not reviewed those key and generic rooms at the tender assessment stage. Do you have any observations on that?

**A** I think it was probably back down to the quantity of information they had to get through and the time available to do it. I'm not sure exactly where the room data sheets were submitted in. I would imagine it would have probably been in one of the appendices to the



architectural submission as opposed to a mechanical electrical submission. So I think it probably would have been led by the textual team reviews and, again, that would be sufficient to develop the comments, consensus, comments and then a score. I'd imagine that the architecture teams-- it was one of many drawings they would have been looking at and probably wasn't a huge focus on it an architectural perspective.

**Q** What's the point of asking tenderers to produce room data sheets for key and genetic rooms if they are not going to be reviewed when their tenders are being assessed?

**A** Ultimately, so you've got fully populated room data sheets for the contract at financial close.

**Q** Mr Macrae in his evidence said that he thought if he had been provided with the room data sheets that there is a possibility for the Critical Care rooms that he might have spotted what I think NHS Lothian now accepts were errors in the Environmental Matrix. Would you share that view?

**A** It's a possibility, yeah.

**Q** Do you think it would be fair to say that that is possibly a missed opportunity if those room of

data sheets were not reviewed by a mechanical engineer at the tender assessment stage?

**A** I think it goes back to the contract risk allocation, it could have been picked up in the reviews, but it wasn't the NHS Lothian or Mott MacDonald's responsibility to make sure they were really complying but, yes, it could have been picked up in the reviews.

**Q** Because I think in your statement you say, “It could have been picked up,” but that is not to mean it should have been picked up. Again, other people may look at it and say well Mott MacDonald are there as the lead technical adviser, should they not be spotting such issues at the tender assessment stage?

**A** I think if our role was to do a detailed design audit, then I think that's the type of thing we should be picking up but, as I say, it was a sample review. They had a few hours per question with significant information to get through, and I don't think that-- It's not the type of thing I expect to be picked up.

**Q** So for a £150 million hospital project for sick children, you would not be expecting room data sheets for Critical Care rooms to be reviewed at the tender assessment



stage?

**A** No.

**Q** If I can ask you some questions about bidder C – and, again, I will keep these at the level of I am interested in your views as the person whose project managing as opposed to the individual that is doing the detailed technical assessment – one of the issues that you address in your statement is whether the tender that comes in from bidder C should have had alarm bells ringing within Mott MacDonald. So, my understanding is that there is a tender that comes in from IHSL which says, “We will comply with published guidance including SHTM 03-01, and we will comply with the Environmental Matrix. We do not need to make any changes to it whatsoever.” Bidder C tender says, “We will comply with published guidance, including SHTM 03-01, but we need to change the values in the Environmental Matrix,” and they mark them up in red. Why is that not an alarm bell that should be ringing at Mott MacDonald at that point?

**A** Yes, it's back to the level of detail that was reviewed at that point in time. As I say, I didn't do the reviews myself, but I can just I can imagine the guys having a limited time to review the submissions and,

therefore, that type of thing I wouldn't expect to be picked up. The purpose of the evaluation is to generate comments in order to ultimately agree a consensus score. The purpose is not to do a detailed check on the bidder's design and back to the risk allocation of contract. It's up to the bidders to make sure it's a fairly compliant solution.

**Q** But even just at that very high level one bidder saying, “I can comply with the guidance, and I don't need to change the matrix,” and another saying, “I can comply with the guidance, but I do need to change the matrix.” Does it not follow that one of those bids must be a variant bid?

**A** I don't think-- As I say, I'm not mechanical engineer, but my understanding is that, depending on the architectural layout and the particular design, then the Environmental Matrix would have to be updated to reflect that particular design. So it could have been-- or it's likely that bidder C would have a different architectural solution to bidder B and, therefore, the matrix would have been different.

**Q** Thank you.

**THE CHAIR:** Sorry, my fault entirely Mr MacGregor, your question was surely one of these bids must



have been non-compliant or did I mishear?

**MR MACGREGOR:** Indeed. I asked, I think simply as a matter of logic, whether one of the bids must have been a variant bid that should have been rejected and, as I understand it, Mr Greer's response was to say he didn't accept that that was a binary choice because there could be different architectural and technical solutions put forward by various bidders.

**THE CHAIR:** Thank you.

**MR MACGREGOR:** If I could move on and look at the tender assessment itself. If we could look to Bundle 8, please, page 92. Bundle 8, page 92, which should be IHSL's ITPD Evaluation Proforma for the C8 section. So, we see the reviewers comments, and if we look in the first box-- so this is for “C8. Clarity, robustness and quality of M&E engineering design proposals.” The reviewers comment is, “Lacking detail on design philosophy and BCR compliance,” but is the brief achieved? Yes. Again, can you assist with how a tender could be lacking detail and design philosophy and BCR compliance, but be assessed as being satisfactory and a pass?

**A** I think it was back to

what's sufficient from a procurement perspective. I take it the reviewers felt that there was sufficient detail. Although it did lack detail, there was sufficient information to still achieve the pass marks.

**Q** And if we look over the page to page 93, please, you'll see "x" approximately four boxes up from the bottom, so:

> " x. An environmental conditions / room provisions matrix for both mechanical and electrical services for each room in the Facilities."
>
> Do you see that?

**A** Yes.

**Q** And then we see that the reviewers comments: "No matrix provide, but environmental layout drawings provided." Then if we look at on to the next box:

> "Major plant life cycle statements and design life, including an explanation of the Bidders lifecycle philosophy to support the lifecycle costing analysis completed in the technical costs pro forma.
>
> Basic statement referring to CIBSE guidance for life cycles. No costs provided."
>
> Then after that we see C8.3:
>
> "Whilst Bidders are required to undertake their own design, the Board has provided a draft Environmental Matrix as part of the ITPD documentation. Bidders **must** confirm acceptance of the Board's Environmental Matrix, highlighting any proposed changes on an exception basis."
>
> Do you see that?

**A** Yes.

**Q** And the response given is "Good response." Do you know why that response was given?

**A** I don't remember the detail of it. I didn't do the evaluation myself, but I would imagine they'd be thinking that the bidder has agreed to develop their own design in the preferred bidder to financial close. I think bidder A did a similar response. They said they accepted the draft but they'll develop it further, and then bidder C they went a step further and started to develop it. I think, overall, my recollection is it was just a satisfactory response to the overall scores. I think they got a score of five, which I think was the lowest of the of the tenders, which kind of reflected the-- as you said earlier, it was the limited detail, so I think, ultimately, the overall comments were then reflected in the lowest score.

**Q** The reason I raise this with you is it is certainly in NHS Lothian's position before the Inquiry that the Environmental Matrix had issues in terms of compliance with published guidance including SHTM 03-01 for Critical Care rooms. Against that background, do you find it surprising that the technical team that assessed it thought that this was a good response or, again, does this come back to the issues that you have told us about before about the level and intensity of review that's being undertaken at this stage?

**A** It's back to that point about the level of review.

**Q** If we could move onto a new issue, and it's an issue about stamp drawings, which you touched on in your statement. If we could look to your statement, please? So, it is bundle 13, and if we could start on page 147 at paragraph 53, please. In paragraph 53, at the bottom, you state:

> "The lengthy conversation about the document stamp related to design risk allocation. I worked with MacRoberts on this as it was critical to the operational functionality risk in the contract, to ensure that any signing of the submitted design was limited to the operational functionality aspects of the project. This reflected the risk allocation in the project agreement. NHS Lothian was only accepting design risk for aspects of the project relevant to operational functionality. By stamping drawings as approved, there was a risk NHS Lothian could be deemed to be taking responsibility for the design, and it was only appropriate for them to be doing that for matters relevant to operational functionality. This matter was discussed by all parties, and I believe understood by all of them at the time."

If we begin by thinking about-- what do you mean by the stamping of the drawings? What stage is that taking place at?

**A** So, I think this occurred in the-- I think we started to do an informal review procedure before financial close. I'm not sure. I can't recall if the stamp was for pre or post financial close, but the principle of it was that, as I say, I was recommending that the board didn't just say a drawing was approved just on the basis that that didn't fit with the contract risk allocation. We wanted to make it sure that if anyone was

stamping a drawing as level A or level B, which is allowing the project to proceed, then that was only insofar as it related to operational functionality, which is back to that limited definition of 1:500 layers, 1:200, and 1:50 layers.

**Q** So as the drawings are being developed you have got a reticence about stamping them in case it could be seen that the Board was effectively taking responsibility for them, and you tell us within your statement that, as far as you can recollect, everyone was clear on that because you were telling IHSL that is why you were not stamping the document.

**A** There was a very lengthy email trail on it. It was discussed a lot.

**Q** Thank you. Before I move onto the period between preferred bidder and financial close, there is one other issue that I want to pick up perhaps on the technical side, and it relates to room data sheets and the Activity Database. So, if you have looked at CEL 19 (2010), you will see that it is mandatory for NHS bodies to use the Activity Database as a design and briefing tool or to use an equivalent. The Inquiry has heard evidence from a number of people that said they have some concerns about the Activity Database and how robust the information is within it, whether it is always up to date, whether it's accurate and whether it would always reflect the Scottish Health Technical Memoranda. You touched on those issues in your statement, but can you just explain to the Inquiry any concerns you would have about the activity database and how robust the information within it is?

**A** I think that knowledge has come laterally as opposed to probably what I knew at the time. I think it's widely known that the environmental characteristics in the templates/ADB sheets need reviewed.

**Q** And why would that be? Why would they need to be reviewed? Why could you not just produce your room data sheet and take it as read that that would have all the right environmental parameters?

**A** Yeah, it's interesting because there's a clause 2.60 in the SHTM. So, it's in SHTM 03-01, which directs you to the ADB sheets for the specific characteristics for the rooms. There's a slight contradiction in that the SHTM is telling you to go to the ADB sheets for your ventilation requirements but, as I say, there's now a known-- I'm not sure if that was known at the time that there was anomalies with the data in the ADB

sheets. It's something, certainly, we're well aware of now.

**Q** So, again, probably not known about at the time, but say you were working on a project of this nature now for a different hospital facility and someone simply said, “We are going to use room data sheets produced with the ADB system.” Would you have concerns about that if there wasn't going to be a detailed review of those room data sheets?

**A** Yes, yeah.

**Q** And it may be obvious, but why?

**A** Yeah, I think there's known issues with the environmental characteristics in the ADB sheets, so there needs to be a robust methodology now for developing. You use your template ADBs as a starting point, and then you develop it in consultation with various stakeholders.

**Q** I think one expert that gave evidence in the Inquiry described room data sheets produced using the ADB system as a starter for 10. Is that how they are viewed within the industry?

**A** I think they are now, yeah.

**Q** Thank you. I now want to move on and think about the period from preferred bidder to financial close. How much work, in terms of volume of work, needed to be done in the period from IHSL being appointed as preferred bidder until financial close was achieved?

**A** Sorry, could you just say that question again?

**Q** What volume of work had to be done in the period from preferred bidder to reach financial close?

**A** Yeah, there was significant work. One of the primary objectives was developing the bidders’ proposals and turning them into Project Co proposals. There was a substantial amount of work on that. There was also just developing the service-level documentation again. So the FM documents had bidders’ proposals, and then they had to be turned into contract documents. There was a lot, and then there was commercial development as well.

**Q** And, in terms of the development of the Project Co proposals, how did that go? Was there a clear understanding between the parties as to what had to be achieved, or were there difficulties in the Project Co proposals being produced?

**A** Yeah, there was difficulties. I think IHSL's view at the start was just to use the Board's

Construction Requirement clauses rather than use the bidders' proposals. So there was a bit of confusion there at the start to say we need to develop the bidders' proposals into Project Co proposals and not just rely on the Board's Construction Requirements. So it took a while to develop that, and then we also then had to try and develop a structure to what the Project Co proposals were going to look like and, again, that took a bit of time. We then agreed a programme for development of the Project Co proposals, and I think the first the first iteration, I think, we were due was about 32 Project Co proposals, I think, that were due, and we only got 15, but they were largely just a copy of the bid proposals. So it took a lot longer than we would have liked.

**Q** Some witnesses that have given evidence to the Inquiry have said that there was a mismatch in expectations between NHSL and Mott MacDonald as opposed to IHSL in terms of what had to be provided and the level of detail that had to be provided. Would you agree with that?

**A** Our primary objective was trying to get them to a base-- the first objective was to get them to a base level. The bidder's submissions quite often have options in them, and



there's a lot of photos and things like that which are good from a bid perspective, but it's not what you want in the contract, so it took longer. In terms of whether there was a mismatch, I think, latterly, I do recall discussions or second-hand discussions probably about October or so when they were saying we were asking for too much information. From our perspective, we were really trying to push to get what we thought was the base level to get to suitable for inclusion in the contract.

**Q** The reason I raise it is, again, a layman looking in might find it surprising if there has been an open and fair competition with Board Construction Requirements being issued to all bidders during an open procurement exercise that there was a mismatch in expectations. Was it not obvious from the published documentation what the bidder had to do?

**A** Yeah, typically the preferred bidder or the company leading the technical design-- they would typically drive the Project Co proposals and get to refine proposals so they knew that when they hit financial close they could then hit the ground running in the construction phase.

**Q** If we just take one example, it was stated within both the ITPD and the ISFT that the successful party would have to produce 100 per cent room data sheets for every space in the hospital by financial close. Was that achieved by IHSL?

**A** No.

**Q** Why not?

**A** We identified it early as a priority item. I think it was, as I say, early April when we did that. I think it took to about August until we'd had a template, and then, as I say, it was October or so until we got our first draft, by which point it was too late. So, in terms of why it took so long, IHSL are probably better placed to comment on-- There is a lot going on in the preferred bidder to financial close period, so I can understand if there was a lot of development in the 1:500s, the 1:200s, the 1:50s, the whole architect-- so there's an awful lot going on. So I can understand why it might not have been a priority for IHSL but, yeah, it was a requirement.

**Q** In terms of it being a requirement, again, the Inquiry has heard evidence that it was not a requirement that was insisted upon by NHS Lothian. Do you know why NHS Lothian did not insist upon that requirement that had been set out in



the published procurement documents?

**A** I think there was a compromise made to try and reach financial close.

**Q** In terms of that compromise, how was it compromised? Was it simply waived, or was it put into reviewable design data? What happened?

**A** We enhanced the-- There were some extra clauses added to the Board's Construction Requirements, and there was extra clauses added to the completion criteria to make sure that there was compliant room data sheets produced in the construction phase.

**Q** Just thinking about that requirement that there should have been 100 per cent room data sheets by financial close. If that had happened, would the Environmental Matrix effectively have been redundant by that point if you had used a full suite of room data sheets?

**A** I'm not sure it would have been redundant; I think it would still have been a useful exercise, I think, from a mechanical and electrical design perspective. I think the shift would have moved to using the room data sheets as the primary source, but I'd imagine there might still have been

benefits from a design perspective.

**Q** Okay and, again, the Inquiry understands that the Environmental Matrix or at least certain parts of the Environmental Matrix became reviewable design data within the ultimate contract. Do you know why that happened?

**A** Again, it just took longer. I think either the Environmental Matrix or the room data sheets would still have been reviewable design data. So, there was a template list of RDD that was shared in the procurement documents, and I'm sure that would have contained room data sheets. I think there would always have been the expectation that that would have happened in the construction phase.

**Q** The reason I raise it is the Inquiry heard evidence from an individual from Wallace Whittle TÜV SÜD, and he commented on the fact that the Environmental Matrix was included as reviewable design data, and he said from a designer's point of view he had never seen that done before, and he thought it would be commercially dangerous because the individual that had to design it and price it would not know what they were designing or how they would price the system. Do you have any observations on that?



**A** It was the concept of having-- as reviewable design data was discussed in the MEP workstream, and I think Wallace Whittle were included in that, so the idea of it being reviewable design data was well discussed prior to financial close.

**Q** Thank you, and, just to pick up one other issue, I think this morning you referred to the ITPD having the Environmental Matrix as an appendix to the Board's Construction Requirements, but by financial close it had been moved into a separate part of the contract into the schedule part 6 of the project agreement. From your perspective, was there any significance to that change?

**A** It was putting it where, from a contract perspective, it was appropriate to put it because, as I say, the room data sheets is where the environmental characteristics sit, and so it made sense. I think it was discussed with MacRoberts when we were deciding where best to put it.

**Q** If I could ask you to have your statement in front of you again, please, bundle 13, page 155, paragraph 75. If we could just perhaps pick matters up at the very end of what is on page 155, over the page onto page 156. It is the final line, you state,

"IHSL did adopt the environmental matrix, and developed it…" Do you see that?

**A** Yes.

**Q** And you say, "… making some significant changes to it." Again, I appreciate it is a long time ago, but you said that when they took it on and developed it, they made some significant changes. Can you just give us an example or a couple of examples of the significant changes that were made?

**A** It was the changes to Guidance Note 15. I felt it was a significant change, so that was-- I'm not sure if we discussed this earlier. It was the RFI 005 was issued by IHSL requesting that-- So, Guidance Note 15 relates to Critical Care areas, and IHSL were asking if humidification was a requirement for the air handling units in the Critical Care areas. So, the RFI came in, the project management team issued it to the technical and clinical teams. There was a paper produced on whether it was required or not, and then the response went back to IHSL, and the response went back saying, "NHS Lothian don't require humidification in the air handling units. They require the space for future provision." So that change was then made to the Guidance Note 15 of the Environmental Matrix on Project Co's Environmental Matrix. So we thought that was a significant change for the ventilation requirements in the Critical Care area.

I mean, the whole format of the sheet was changed. As I mentioned earlier, the logo was taken off. I think there was additional guidance notes added. I'm not sure the detail of them. I just remember some extra notes being added to the guidance notes, and there was generally changes. I don't know the detail of the changes that were made, but I'm aware from the technical team there was changes to the content of the matrix as well with the bulk of the main content.

**Q** Thank you. I would now like to move on. We are still within the period up to financial close, and if we could go back and look at some of the comments that were made on NHS Lothian's behalf at that time. If we could look to bundle 4, please, page 218. This is the document we have looked at before, the comments that were being made on 13 October 2014. If we look over the page, please, onto page 219, you see at the top of the page there is a comment:

> "Further review and development of the Environmental Matrix is required

to clarify the following."

Then it says:

"a. There are some rooms at 28°C which are provided with comfort cooling.

b. There are areas / rooms in the Environmental Matrix that contradict the above BCR clause, hence once IHSL produce an updated Environmental Matrix, further discussion is required with the Board to confirm which rooms or areas are not going to meet the Clause."

And then you see that the next section is comment 7, it says:

"Bedrooms 4ac/hr, SHTM says 6ac/hr

Bedrooms of no extract

[etc.]"

In terms of that comment 7, can you remember why that was being highlighted, that the bedrooms at 4 air changes an hour, SHTM saying 6.

**A** I think I think it was Colin Macrae, in his reviews of the designs, had noted that the bedrooms didn't seem to comply with SHTM 03-01. So that was that was a comment that was flagged to IHSL.

**Q** Do you know if that issue was resolved?

**A** No, it wasn't. There was a lot-- there was further discussions beyond that relating to this.

**Q** Did there emerge issues in terms of single bed rooms, in terms of both air change rates and pressure regimes?

**A** Yes. So, I mean, the conversation went-- Do you have a date on this when this was----

**Q** So these are the comments from October 2014.

**A** Yeah, so there was a subsequent meeting, I think it was 11 November, where there was a refined set of comments produced. It took out the detail on the air handling units, but just asked for detailed proposals weighted on the ventilation requirements to meet the negative or balance pressure. So, the day after that, Colin then sent me another email saying, "Still concerned about this," so it was sent it to Willie and myself, and it was then raised again at the HAI-SCRIBE meeting, which was a week or so after that. Then the conversation then continued into January where Wallace Whittle produced an airflow diagram – January. That was then, I think it was an RFI 77 then followed that, and the RFI was then discussed. Again, it went to the project management team, project management team put it out to the clinical and the technical, and then a

response went back asking that the design complied with the SHTM 03-01 and shouldn't in any way rely on opening windows.

**Q** Thank you. So, again, maybe just to pick up some of that chronology that you have mentioned, if we look within bundle 4 to page 245, you see an email of 11 November from Graeme Greer to the various people, and you are saying:

"Dear all,

Notes attached from todays meeting."

Is that what you are referring to, the meeting of 11 November?

**A** Yes.

**Q** Then if we look a couple of pages on to page 247, you see a note beginning, "Project Co shall update the Environmental Matrix to reflect the following Board comments." Do you see that?

**A** Yes.

**Q** Is this what you are talking about in terms of the note that you made that perhaps stripped back what we saw in the more detailed comment from October 2014?

**A** Yeah, that's correct, yeah.

**Q** If we look four bullet points up from the bottom, do you see an entry, "Detailed proposal…"?



**A** Yeah.

**Q**

"Detailed proposal awaited on bedroom ventilation to achieve balanced/negative pressure relative to corridor."

I think you told us that the discussion has continued, that there was a proposal that came back from Wallace Whittle TÜV SÜD, and is my recollection right that Mr Macrae did not agree that the proposal that came back addressed the concerns that he had?

**A** Yeah, the one that came in January-- It wasn't just Colin, that was discussed more broadly with the Infection Control team and the NHS Lothian team, and I'd say there was a-- the response went back that it wasn't acceptable and it had to comply with SHTM 03-01.

**Q** Just in relation to this chronology, if I could ask you to have bundle 8, please, page 69. So that should be an email from you to Brian Currie dated 13 November 2014. Do you see that?

**A** Yeah.

**Q** In which you say:

"Brian,

Further to the Environmental Matrix meeting on Monday, please refer to the email

below and attached that summarises the issue with the single bedroom ventilation.

As discussed at the Environmental Matrix meeting we added the following comment to the Environmental Matrix,

- Detailed proposal awaited in bedroom ventilation to achieve balance/negative pressure relative to corridor."

Do you see that?

**A** Yes.

**Q** If we look on to page 70 within that chain, you will see an email from Colin Macrae to William Stevenson which you are copied into. Do you see that?

**A** Yes.

**Q** Where he says:

"Attached is a summary of Project Co current ventilation strategy for a single bedroom, could I get your comments please."

Do you see that?

**A** Yes, yeah.

**Q** Then if we look over, we see the comments that had been made, on page 71. This is Mr Macrae's view on the single bed ventilation. Just below the table, do you see wording beginning, "Mott MacDonald…"?



**A** Yes.

**Q** It says:

"Mott MacDonald concern is that the room will be at a slight positive pressure relative to the corridor which would allow infections such as MRSA or Norovirus to spread."

Do you see that?

**A** Yes.

**Q** So, again, just to make sure that I am understanding this, we are in a period now of November 2014, financial close takes place a couple months later in February of 2015. Is that correct?

**A** Yes.

**Q** In terms of the proposals that are being put forward by IHSL, there is a concern on Mr Macrae's part, shared by others at Mott MacDonald, that the ventilation system that is being proposed by IHSL would allow the spread of infections including MRSA and Norovirus. Is that right?

**A** Yes.

**Q** At this point, given that we are talking about a children's hospital, how concerned were yourself and Mr Macrae about what was being proposed by IHSL?

**A** It was one of many issues I think we were working through at that point. So it wasn't something

which jumped out as being a higher priority than anything else that we were working on to get to financial close, but it was something we wanted to address before financial close and in the subsequent meetings from that.

**Q** The reason I raise this is if we think back to the Board Construction Requirements of what the Board said to the market it wanted to achieve, one of the critical requirements within the Board Construction Requirements was that infection prevention and control-- spread of any infection would be controlled in line with Scottish Health Technical Memorandum 03-01. Given that the Board had said that they wanted a bidder to do that right from the outset, were you concerned by November 2014 that IHSL's solution would give rise to a risk of a spread of MRSA or Norovirus?

**A** Yes, genuinely concerned. I think, as I say, there was a lot going on at that point, so it was one of many issues we were working through at the point. There wasn't any-- I guess the reason-- the caveat in response is there wasn't any indication at that point that IHSL weren't, when we got to financial close into the construction phase, going to make it compliant with SHTM 03-01. I



think if we'd got to the point before financial close, if IHSL had said, "No, we're not going to comply with SHTM 03-01," I think that would have been alarm bells ringing and, yeah, we'd have to have escalated further. But at the time we were all working collaboratively together to get to financial close, and the expectation was that they were going to make it compliant.

**Q** So, again, so I am understanding, your position was this was an issue to be managed but it was not something that was ringing alarm bells on the part of Mott MacDonald?

**A** It was a concern, but it was something we working through, yeah.

**Q** What about the Board's perspective, because obviously you are copying in people from NHS Lothian such as Brian Currie, what was their reaction to the idea that the design development at this point – late 2014 – had a risk of a spread of MRSA or Norovirus within a children's hospital?

**A** I'd say that generally what I would do is if there was an issue I felt was needing escalated, then Brian would generally be the port of call, so I passed this email on. I think Brian-- not sure exactly, but there

was a point in time where we flagged the ventilation issues as an escalation issue to Brian. Then Brian then escalated it into the Design Steering Group meeting as a point for discussion there. So, I think that they did address it, and again it was back to that point that if there had been an indication that IHSL weren't going to comply, then obviously there would have been more significant concerns.

**Q** Just in terms of that issue whether IHSL were going to comply, certainly from Mr Macrae's evidence, my understanding is that there was almost a bit of a standoff at this point whereby Mr Macrae had said, "I don't think your technical solution complies with published guidance. I think it gives rise to these risks of a spread of MRSA or Norovirus." Wallace Whittle TÜV SÜD came back and said, "We don't agree with you," and gave an explanation as to why they disagreed. Mr Macrae considered that and said that he did not accept that. So the issue does not seem to be resolved at this point. Why is the contract signed without that issue being resolved?

**A** I think that, for me, the closure to this point was when the RFI 77 was responded to, when we made it clear what the Board was expecting.



I think, on top of that, Project Co's own proposal said they were going to comply with SHTM 03-01. Yeah, there wasn't any-- When we responded to the RFI, then there wasn't any complaints about what we sent back. So, at the time I think we deemed that it was accepted and we were moving forward with Project Co going to comply with 03-01.

**Q** Again, correct me if I am wrong, is the solution not simply to take this problem and make it reviewable design data, so it is not agreed when the contract signed?

**A** No, it was agreed insofar it should comply with 03-01.

**Q** So your understanding is that it complies with 03-01, but it is still included as reviewable design data?

**A** Yeah, there was a requirement for Project Co to make it compliant with 03-01 in the construction phase.

**Q** Thank you, and were NHS Lothian content with that solution to the problem?

**A** Yeah, I believe so, yeah.

**Q** The reason I raise that is if we could look to bundle 10, please, volume 1, page 283. So, bundle 10, volume 1, page 283. See, this is a "Healthcare Associated Infection System for Controlling Risk in the Built

Environment," HAI-SCRIBE report from 19 November 2014. Do you see that?

**A** Yes.

**Q** Now, I do not think you were involved in the HAI-SCRIBE process but if you look to page 285, you will see in terms of the "Section 2 – consultation," halfway down, David Stillie and Colin Macrae were involved in the HAI-SCRIBE report. Do you see that?

**A** Yes.

**Q** Do you remember either of those individuals discussing the HAI-SCRIBE report from November 2014 with you?

**A** I don't remember any detail-- I was aware the meeting was going ahead, and I was aware that this was one of the issues we had to work through. Yeah, so I don't remember any specific discussion at the meeting other than, yeah, it was still an issue and Wallace Whittle were saying, "In January, we're going to present a revised paper on it."

**Q** Thank you, because, again, just for completeness and in fairness to you if you have not been involved, if we look over the page onto page 286, you will see that the first full entry, 2.2, you see that, "Is the ventilation system design…" Do you



see that?

**A** Yeah, yeah.

**Q**

"Is the ventilation system design fit for purpose, given the potential for infection spread via ventilation systems?"

The box ticked is "No." Do you see that?

**A** Yes.

**Q** And it says:

"Some concern has been raised in relation to a potential issue with ventilation with regard to negative/balance pressure in single bed rooms. Awaiting drawings and further information to fully understand if there is a risk/issue."

Do you see that?

**A** Yes.

**Q** Again, is the way that that is dealt with that there is the proposal that comes back from Wallace Whittle TÜV SÜD and, as you have said, that your understanding is that what the Board said is that there has to be compliance with SHTM 03-01, but the issue is not fully resolved; it is included as reviewable design data at the point of the contract?

**A** Yes, yeah.

**Q** Thank you. Again, just to make sure that I am understanding

you correctly, this was an issue that you said that cropped up amongst many other issues. This was not having alarm bells ringing on the part of Mott MacDonald that perhaps there had to be a more detailed review or audit of the Environmental Matrix at this point?

**A** Not at this point, no. As I say, we were working collaboratively with NHS Lothian and IHSL at this point, with the understanding that IHSL were going to update the matrix in the construction phase. So, yeah, there wasn't any particular alarm bells on that.

**Q** I now wish to move on and just ask you some questions about technical risk registers that were produced in the period before the contract was concluded. If we could begin looking within bundle 10, volume 1, at page 75, please. So that should be a document, "Technical Risks to Close." This one is 25 August 2014. Do you see that?

**A** Yes.

**Q** Have you seen this type of document before?

**A** Yes, I think it was myself that suggested we do it – something we do regularly as we go to financial close to try and manage the risks and on any project, so yeah.



**Q** So, again, "Technical Risk to Close," it is a risk register capturing what you saw at that point in time as the risks to the project?

**A** Yes, yes, but I think this-- Is it this version here? Yeah, so that's August 14. So it's something that I think there was an earlier spreadsheet version of this that we had and, yeah, it was something we shared with NHS Lothian, and we also shared with IHSL so that everyone was aware of what we thought were some of the key risks that needed to be developed as we all headed towards financial close.

**Q** So, at this point – summer 2014 – if we look at the second entry, so it is: Category – Technical; Item – Project Co Proposals; the Issue was, "Project Co proposals insufficiently developed to required level for FC"; the risk impact is "High": the mitigation measures are:

> "1. Comments fed back on the PCP structure.
> 2. Comments fed back on the draft 1 of the PCP's.
> 3. PCP workshop held setting out the Board's expectations.
> 4. Individual workstreams setting out the Board's expectations."

Then we see the final box,

"Potential Further Mitigation Required post FC":

"Increase the length of the RDD list.

Focus on specific design risks.

Fast track the legal review."

Do you see that?

**A** Yes.

**Q** So did that risk dissipate by the time you got to financial close in February 2015?

**A** I'm not sure if the risk impact changed. I'd need to check for further on. In terms of the general principle of it, I know that the PCPs-- By the time we got to a point where IHSL at the time couldn't-- There wasn't sufficient time to do another iteration of the PCPs and, therefore, that's when we started to explore mitigation measures with NHS Lothian in terms of if they still want to proceed to financial close rather have open-ended Project Co Proposals, then we're looking at mitigation measures to try and manage that risk.

**Q** Is one of those to increase the volume of reviewable design data that would be in the contract?

**A** Yeah, it was more than just increase the volume, it was provide comments-- In addition to the



overarching Clause 12 obligations, there was additional comments that we wanted Project Co to address.

**Q** By the time financial close was reached, were you concerned about the volume of reviewable design data? Was it more or less than you would have expected on a project of this nature?

**A** It was a lot more than we would normally expect.

**Q** Okay, and would that have been a concern to you, just simply the volume of reviewable design data?

**A** Yes, and it was openly discussed with NHS Lothian and IHSL, the concern about this. At the time, it was felt that this was something we could manage in the construction phase.

**Q** Again, for those of us that do not work in the space, if you have got a lot more reviewable design data than you had anticipated, what are the potential problems and risks arising from that?

**A** Ultimately, it's lack of clarity for the Project Co to progress to construction. So there's programme and cost risks.

**Q** What was your understanding? Why was NHS Lothian content to undertake that

increased risk of the greater volume of reviewable design data?

**A** I think it's probably better for NHS Lothian to comment, but I can imagine they were at a-- There was a lot of pressure to push to get to financial close, delays in the project, so I can imagine there was pressure and, therefore, they were open to compromise about how we could get there.

**Q** Thank you. Just still within the "Technical Risk to Close," page 75, below the entry we had looked at, we will see again there is a "Technical" category, item – "Project Co proposals," and we see, "Lack of review time for the PCP strategy documents," and again that is a high risk. Does that effectively flow on from the risks we looked at above?

**A** Yes, yeah.

**Q** Just for completeness, if we look on to page 76, please. If we look five entries up from the bottom, do you see a "Technical," "Design," and then next to the issue being highlighted is "Agreement on RDS format / content"?

**A** Yes.

**Q** That is noted as being a high risk. What had prompted the lack of agreement on RDS format and content? Why is that still a high risk by



summer of 2014?

**A** I don't think we'd-- I think we'd maybe only just received a first draft of the content by that point, and therefore obviously we were, I think at that point, probably looking at a November-ish financial close. We were aware we were fast approaching financial close and we hadn't agreed the format, never mind the actual content of it.

**Q** Then if we look two entries down from that, we see "Technical," "Reviewable Design Data," and the comment is, "Due to the current status of the PCP's, the RDD list could be extensive." That is listed as a medium risk. Why is that a medium risk rather than a high risk?

**A** There wasn't really a set of criteria for what was high and medium. It must have just been the decision made at the time in terms of the feel of the risk at the time.

**Q** Then if we look to the final box on the right-hand side:

> "Long list of RDD due to further iterations of drawings etc. to be made etc. Board required to both resource the requirements for review and understand the rights of comment they have within the Review Procedure (which is where RDD

is reviewed). This should then mitigate risk of Project Co claiming changes."

Do you see that?

**A** Yes.

**Q** So, again, is this within the risk register highlighting the problem, and then what you talked about is the mitigation to try to address those risks?

**A** Yes.

**Q** If we then look on to page 79, still within bundle 10, volume 1. This is a document called, "Design Risks to the Board to Financial Close," and the risk is assessed as at 28 January 2015. Do you see that?

**A** Yes.

**Q** So, again, could you just explain in general terms what is this document?

**A** Again, it's the same document, just a further iteration of it in terms of what the current risks were as we approached financial close.

**Q** Okay, so we see the first entry: the "Category" is "M&E"; the "Item" is "Ventilation"; the "Risk Impact" is "High"; and the "Current Mitigation Measures" is described as:

"The single room with en-suite ventilation design shall comply with the parameters set out in SHTM 03-01.

The design solution should not rely in any way with the opening windows as these will be opened or closed by patient choice.

The critical factor from SHTM 03-01 for infection control will be the resultant pressure within the room being balanced with or negative to the corridor.

Isolation room ventilation shall comply with SHPN 04 Supplement 1."

Do you see that?

**A** Yes.

**Q** Then the final position is "TBC" – to be confirmed. Was that issue resolved or did it simply get placed as reviewable design data?

**A** Well, it was reviewable design data. I think 28th of the 1st, that's-- I mean, the text there is very similar to the text that was in the response to the RFI. So it feels like these two documents coincided. So, yeah, the final position was the RFI was responded to and position confirmed.

**Q** If we could look over the page onto page 80, please. Approximately in the middle of the page you see a box on the far left-hand corner, "PCP / RDS," and then there is a reference to "Environmental

Matrix" beside that. Do you see that?

**A** Yes.

**Q** Approximately halfway down the page that the left-hand entry is "PCP / RDS," and there is an entry for Environmental Matrix: "Content of Environmental Matrix" which is described as "Closed." It said:

"Board reviewing internally on 1st October 2014. Comments to be feedback to IHSL."

Given the first risk that we have looked at about the single bed rooms, why was the Environmental Matrix closed off as a risk?

**A** I think it was to do with the getting the first submission of it. Probably saying, "Right, we need the first submission of the Environmental Matrix," and then we've got that, and comments have been fed back. So I suspect that's why it was closed. It was closing off an action as opposed to maybe a risk.

**Q** Then if we look on to page 84, please. This is a document called "Technical Risks to Financial Close 30/01/15." What is this document and how does it differ to the one we have just looked at?

**A** I think these are probably more the slightly contractual elements as opposed to the pure design risks.

**A** So if we look, I think it is



five entries down, we will see the item being "RDD." Do you see that?

**A** Yes.

**Q** So the "Issue" is:

"Despite best efforts of the Board

More RDD than was expected by the Board."

"Risk to Project":

"Less well defined proposals, therefore less certainty by the Board.

Lack of design."

The mitigation is:

"IHSL pushed very hard to achieve maximum information during PB stage.

Further developed RDD schedule for the Board."

Do you see that?

**A** Yes.

**Q** Is that effectively recording that, despite the best efforts, there is still a large volume of reviewable design data and that is a risk that has to be flagged to the Board before it signs the contract?

**A** Yes.

**Q** If we look to the entry below that, again it is RDD:

"IHSL have indicated there is going to be a significant quantity of RDD release in the early stages of the construction

phase."

Then if we look to the far box on the right-hand side:

"The Board and Motts to resource RDD appropriately.

Manage Project Co's rolling programme in accordance with Part 3 of Section 5 of Schedule Part 6."

Do you see that?

**A** Yes.

**Q** So, again, is that simply the flip side of what we have been looking at? That that is the problem and that is the best way to try and mitigate it and manage it?

**A** Yeah, there was those extra clauses added to the RDD beyond the (inaudible 01:35:05). Typically, you just have a list of items to be submitted, but there was four parts added to it, and one of the extra obligations we put on was that we were looking for a 15-day rolling programme so that we were aware of what information was coming in and therefore aware of-- Yeah, so the team could be set up to try and review that data in the construction phase.

**Q** Thank you. I am finished with that document and we can put that to one side. There is really just one further issue that I want to pick up with you at this stage, Mr Greer, and it is really to ask for your observations. You have obviously worked for Mott MacDonald; you are currently working for NHS Lothian. NHS Lothian's position before the Inquiry is that there is effectively an error in a spreadsheet – the Environmental Matrix – which does not get spotted, does not get picked up throughout the procurement phase and into the point where the contract is signed. Given your experience of the project, do you think there were issues or missed opportunities during the procurement phase that could have resulted in that issue being spotted at an earlier stage?

**A** I think that in terms of-- In my statement, I'd used the word "anomaly" rather than "error." I guess the reason I did that is I'm not a mechanical engineer and I didn't want to be saying there was an error when I'm not qualified to do so. So there's definitely anomalies between the Guidance Note 15, between the SHTM 03 requirements and the rooms, the Critical Care department, so whether that's an error or not-- But, yeah, so I think it's probably better for mechanical engineers to say whether there was a missed opportunity or not.

**Q** In terms of your

experience as someone who manages projects of this nature, is there anything in terms of reflections you have had about how things just generally could be done in projects of this nature in a better way to try to mitigate against those types of issues cropping up in the future?

**A** Yeah, I mean, I think there's a lot of good work already been done since then. The set up of NHS Scotland this year has been a good initiative and the guidance has been developed as well. The guidance is continuing to be developed. I think particularly in terms of SHTM 03-01, the patients that classify for a Critical Care area for the enhanced ventilation, that's been clarified in the latest guidance, which wasn't in the previous guidance. So I think there is, yeah, there's good work being done already in that guidance. I think there's also got to be more digital solutions that can support that. We mentioned the ADB database, and having that more up to date and having platforms to look at that, I think. Digitally, there's got to be ways ahead which can mitigate the risk going forward.

**Q** Thank you. Mr Greer, I do not have any further questions for you at this stage so thank you for answering my questions, but there may be questions from Lord Brodie or there might be applications from core participants, but thank you.

**A** Thank you.

**THE CHAIR:** I do not have questions for you at this stage, Mr Greer, but what we have been doing is to allow the legal representatives in the room 10 or so minutes just to consider whether there is anything that arises. So what we will do is I will ask you to be taken back to the witness room for 10 or so minutes, and then I will ask you to come back. Either there may be additional questions or a clarification for Mr MacGregor, or there may not, but we will be able to tell you then.

**THE WITNESS:** Okay, thank you.

**USHER:** Please stand.

(Short break)

**THE CHAIR**: Mr MacGregor?

**MR MACGREGOR:** Lord Brodie, there is just one point of clarification one of the core participants has asked me to raise, which I am content to do, but I am not anticipating any applications. It is just one point of detail.

**THE CHAIR:** Just one point of clarification. Mr Greer, I understand

maybe there is one question or one point to clarify.

**MR GREER:** Okay, thank you.

**MR MACGREGOR:** Mr Greer, there is just one point of detail, and it is really just the point about the derogation, I think, that you had mentioned in your evidence. Just to make sure that we are talking about the same document, could I ask you to have it in front of you, please? It is within bundle 5, the paper apart, page 3861.

**A** Yes.

**Q** So, this is from the contract itself, schedule part 6. If you just take a minute to refresh your memory in terms of this document. Was this what you were referring to as "the derogation"?

**A** Yes.

**Q** Again, views might differ on this, but what was your understanding of what this document, this derogation, was doing?

**A** My understanding was it was related to the-- Sorry, the headline clause is "Project Co shall provide the Works to comply with the Environmental Matrix," and this was just clarifying that Project Co had to address the anomalies that have been identified, including their comments. So, this is in addition to the



overarching Board Construction Requirements, but these were some specific helpful comments to IHSL to address-- that were included in part four of the RDD schedule.

**Q** Thank you, Mr Greer. That is the only point I wanted to pick up with you, so thank you again for answering our questions today.

**A** Thank you.

**LORD BRODIE:** Thank you very much, Mr Greer. That is your evidence, and very shortly you will be free to go, but before leaving can I just express my thanks for your attendance today but also your work in preparing what is quite a substantial witness statement, and I appreciate that that will have involved time and effort. Thank you for that, and you are now free to go.

**MR GREER:** Thank you.

(Session ends)