



SCOTTISH HOSPITALS INQUIRY

**Hearings Commencing
25 April 2023**

Day 2
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Willie Stevenson

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14:00

THE CHAIR: Good afternoon.

Now, Mr MacGregor, is the next witness Mr Stevenson?

MR MACGREGOR: Mr Stevenson.

THE CHAIR: Good afternoon, Mr Stevenson. As you appreciate, you are about to be asked questions by Mr MacGregor, but before then, I understand you are prepared to take the oath.

Mr Willie Stevenson

Sworn

THE CHAIR: Thank you very much, Mr Stevenson. Now, I do not anticipate that your questioning will last a long time, but if at any stage you want to take a break for whatever reason, just give me an indication of take a break. The other thing is, I am very conscious of this because my hearing is poor, but maybe just speak a little louder than you would in normal conversation. You have got a microphone there that should solve any problems of audibility, but maybe just a little louder than you would in normal conversation. Thank you. Now, Mr MacGregor.

MR MACGREGOR: Thank you.

Questioned by Mr MacGregor

Q Are you William Stevenson?

A I am.

Q You have provided a witness statement to the Inquiry, and you should have a copy of that witness statement available if you want to look at it. For anyone that is following in the electronic bundles, it is in bundle 13, pages 479 to 487. The content of that statement is going to provide part of your evidence to the Inquiry, and I am also going to ask you some questions today. If at any point you do not understand the question that I am asking, please do say, and as I said at the start, if you want to refer to your statement at any point that is absolutely fine. If I could just begin with your career, Mr Stevenson, you set some of that out in paragraphs 2 and 3 of your statement. You are an engineer. When did you first qualify as an engineer, approximately?

A In terms of graduation?

Q Yes.

A In 1989.

Q Okay, so you have worked in in the industry since the 1980s, and you tell us that you joined Mott MacDonald in 2002 and you are currently a technical principal of

building services?

A That's correct.

Q What does that involve?

A Basically, my role within the company is I oversee our building services engineers within Scotland. So, I oversee the guys in Aberdeen, in Edinburgh and in the Glasgow offices, and my role there has a technical role, looking at the technical delivery of projects.

Q You explained some of the sectors that you worked in, including on healthcare projects. You gave us some examples: one is that of the Freeman Hospital in Newcastle. What did your work on that project involve?

A My role in that one was a technical advisory role. Very similar to the roles that I carried on the other hospitals, including the one in Edinburgh. So it was all advisory what we were doing: advising the board and reviewing bidders and looking at designs, etc., design submissions.

Q So providing engineering advice, but to the client going out to attend or for a large-scale project?

A That's correct.

Q Thank you, and you mentioned that you worked on the Forth Valley Royal Hospital as well. What did your work there involve?

A Again, it was similar roles. It was technical advisory roles – formulating the board's construction requirements, reviewing tender returns. Again, very much similar to what we were doing on the Edinburgh hospital.

Q So, again, acting for the procuring authority who is going out to tender for a new hospital?

A Yes, that's correct.

Q Thank you. Within your statement, at paragraph 4, you helpfully set out the difference between mechanical and electrical engineering. As I understand it, what you are telling the Inquiry is that they are effectively two separate disciplines, albeit they are often lumped together?

A That's correct, yes.

Q Again, this is a matter of fairness to you. Within your statement, there is aspects of engineering that you talk about, whereby it might be electrical but there are also aspects of mechanical ventilation. Just in fairness to you, would you really be deferring to someone who was a mechanical engineer for the ventilation side? You are giving your expertise as an electrical engineer.

A That's correct.

Q Thank you. If we could

perhaps just pick matters up in terms of your involvement in the project. The Inquiry has heard that there was the original capital funded project, that stops, and then there is a switch to a revenue funded model, sometimes called the NPD model. Is that your understanding?

A That's correct, yeah.

Q One of the issues that the Inquiry is looking to explore is there was a lot of work that had been done on the capital funded project, and the Board has told the Inquiry that it was very keen that it did not simply waste work that had been done – entirely understandable. Could you help the Inquiry though, is work that had been done on a capital project from an engineering perspective, was that automatically going to be relevant when you switch to a revenue funded model?

A I would say, technically, it's probably going to be comparable, yes.

Q You say “technically,” was there other aspects that might not be comparable?

A Yeah, contractually, etc., funding mechanisms, but at the end of the day, you're still going deliver a similar hospital project, technically, from an M&E viewpoint.

Q Because one of the documents I want to discuss in a bit more detail is the Environmental Matrix, which you discuss in your statement. As I understand it, there is a draft that is prepared of that document at the capital funding stage, and that then gets further developed at the revenue funded stage. Is that correct?

A That's correct, yeah.

Q As I understand your position from your witness statement, that document at the revenue funded stage, it was a document that was produced, but on your interpretation, it could not be relied upon by prospective tenders. Is that correct?

A It was certainly there for developing, yeah. It was like a starter for ten for the bidders to give them an indication as to what the board was looking at, etc. and an example.

Q I think just at this early stage, one thing I would be keen to have your views on is if that was a document that was just a starter for ten, it could not be relied upon, why provide it to tenders at all?

A It was still a reasonable example of what would be required. There was probably still a lot of valuable information within there in terms of the criteria for various rooms.

So it was giving the guys a good start, the bidders a good start, but at the end of the day, the design responsibility was theirs and they needed to validate, basically, any information within that matrix.

Q But if that was the intention to put the design risk on to the contractor, why not just tell them the standards that they had to comply with and then leave it to them to formulate their bid and their proposal?

A I don't know the contractual reasons why that may or may not have been done, but it's been suggested it would have been a shame to have wasted all the good work that had been done previously trying to formulate what the board was looking for.

Q I think, again, I am just interested in your views, not necessarily from a legal perspective but from an engineering perspective. Do you think that possibly providing a document like that, that was populated with information, could give rise to confusion?

A I don't know if I'd use the term "confusion," but I certainly would go along with the fact that bidders may want to come back, question or ask for justification for some of the figures that may have been used. They may want

to change them through a derogation because of how they want to design the system or how they're looking at the system, there might be some variations that they want to put forward. So if you're looking generically, it is a good start to a document, but it does need developing depending on how the solutions are going to work out.

Q Thank you. You mentioned within your statement the concept of a reference design. Can you just explain to the Inquiry what do you mean by a reference design?

A Basically, the reference design is giving the contractors an indication of what the Board is looking for. So they're getting a good indication of clinical functionality, which is key for the Board, that's one of the main drivers. So, it's giving them good guidance, but they really need to further develop that and look at the areas that they need to provide to service that facility with that requirement. So there may well be some indicative plant spaces, etc. within the information provided within the reference design, but the contractor has more or less got a free hand to identify how he wants to deal with the M&E elements, and look at all these rooms and vary all these rooms.

In terms of the reference design, like I say again, it's like a starter for ten, it's laying down some of the key principles. Some of it is mandatory that they must comply with and not vary, and other areas are open to their interpretation and their design.

Q There is a term that has cropped up in documents the Inquiry has seen called "operational functionalities." Is that a term that you're familiar with?

A Yes, a little bit, yeah. In terms of room adjacencies, how they all link up together, corridor widths, etc. It's more or less to deal with how the nurses and staff, etc. can operate within the hospital. Make sure things are working efficiently for them, so you've not got nurses running all over the place and, you know, things have joined up logically department by department.

Q Is that a term of art in the engineering world or is that something that would be very project specific in terms of how it was defined in procurement documents?

A Sorry, could you repeat that again?

Q I was just asking if "operational functionalities," is that a term of art in the engineering world, or is it something that would be highly

project specific and set out in procurement documents?

A It's mainly a term I've come across in the healthcare projects, I haven't really come across it in other areas.

Q Within your statement, again at paragraph 7, you offer some views in terms of what would and would not be mandatory in terms of a reference design. Presumably, you are expressing your own personal views there, you are not offering any form of legal opinion on those issues?

A Yes, it is my-- what I've been told, you know, via briefings during the process, etc. from the project managers.

Q If I could ask you some questions about the role of Mott MacDonald in the project for the new hospital in Edinburgh. Can you just explain your understanding? What role were Mott MacDonald undertaking?

A We were undertaking a technical advisor role. We were providing advice to the health board.

Q What form of advice are you providing?

A In my instance, it was technical advice on the electrical services.

Q Were there also some

mechanical engineers engaged by----

A And mechanical.

Q -- Mott MacDonald?

A Yeah, that's correct.

Yeah.

Q You are doing the electrical engineering. Who is doing the mechanical engineering from the Mott MacDonald----

A Colin Macrae was involved in mechanical engineering.

Q Sorry, Colin Macrae?

A Colin McCrae.

Q Any other individuals at Mott MacDonald?

A Yes, there would have been other individuals involved during the course of the project. Paul Kelly was involved for a little while when Colin was off, and there was graduate support as well that we had, but there was other engineers during the long duration of the whole project.

Q You are doing the electrical engineering, Mr Macrae is doing the mechanical engineering, what is Richard Cantlay's role within Mott MacDonald?

A Richard was looking more at the contractual implications of the project, pulling all the contracts together, etc. and overseeing that and dealing with the board.

Q Again, just so I am

understanding things, is Mr Cantlay is dealing maybe at a slightly higher level, and yourself and Mr Macrae, maybe dealing with a slightly more granular level of the detail and advice?

A That's correct. I mean, the sort of role that we had would be pulled in on an as needed basis to contribute, provide information as and when it was needed.

Q In addition to the technical advice, did Mott MacDonald provide assistance in terms of the assessment of tenders that were submitted?

A That's correct.

Q Can you just again, explain in general terms what is Mott MacDonald doing at that point? We hear that they are the technical advisors, but what are they doing whenever bids are being assessed?

A What we're doing is we're reviewing the bids against the Board's construction requirements to make sure that they have a good understanding of what the Board is after. So, we would review their designs, we'd review their written submissions; albeit their designs were very schematic at the time because that was the level of detail that we were at with the project – still early stages. So we would review on that

and be involved in scoring that.

Q Did Mott MacDonald stay involved after the preferred bidder was appointed?

A Yes.

Q So in the period from preferred bidder to financial close, what role is Mott MacDonald undertaking at that point?

A We'd, again, be looking at reviewing contractor submissions as the design was developing and moving forward.

Q In terms of some other statements that have been made by other witnesses as to Mott MacDonald's role, Ms MacKenzie, the individual who worked for NHS Lothian on the project, she described Mott MacDonald's role in following terms. She said, "They were our technical advisors who could and did advise on all the technical issues." Is that a fair summary of what Mott MacDonald were doing?

A Yes.

Q Another witness, Mr Hall of Multiplex, he describes Mott MacDonald as effectively being "a shadow design team." Would you agree or disagree with that?

A No, definitely not. I mean, we have no design responsibility whatsoever in the

project.

Q Again, maybe if we could just explore that a bit more. Mott MacDonald are providing technical advice, but they do not have a design role. Can you just explain what you see the difference being?

A What we're doing in terms of our review roles is basically reviewing the bidders' submissions, the contractors' submissions and, like I say, checking them against the board's requirements to make sure that the bidders are picking up on what the board is looking for, but we're not doing design inputs at all.

Q Turning back to the issue of the Environmental Matrix, the Inquiry has heard evidence that in relation to this project, there was the Environmental Matrix, but room data sheets produced using the Activity Database, they were not produced by or on behalf of the board when it went out to tender. Is that your understanding?

A I wasn't aware of that, but subsequent to that, I've been----

Q Right.

A -- aware of that, yeah.

Q So you were not aware of that at the time that you are working on the project?

A No, I wasn't.

Q Is that simply due to the timing of when you had come into the project, or would you have expected to have known about that decision?

A In terms of the pulling of the contracts together and all the documentation, I had very little sight of that apart from being involved in the M&E section of it.

Q So for that type of issue, perhaps input on “do we have room datasheets?”, “Do we have an Environmental Matrix?” is that the type of issue that, albeit you are not advising on it, Mott MacDonald might have been advising on it?

A They possibly could have been involved in advising.

Q In terms of those issues that the Inquiry might be interested in, who at Mott MacDonald would those questions best be directed towards?

A I would say they're probably best directed to Richard Cantlay and possibly Graeme Greer.

Q You explain within your statement that, in your views, “Environmental matrices on a project of this nature are common and useful.” Can you explain why do you say that? Why are they a useful thing to have on a project of this nature?

A Because of the way the information is presented, it's very much

focused on the M&E information in terms of environmental conditions, lighting levels, ventilation, etc., very easy to read format, easy to use format, and it just brings it all into focus. In comparison to what I have seen of ADB datasheets from a long, long time ago, is they're sort of multi-page documents, it's full of lots of information in terms of architectural finishes, you know, coat hangers, wastepaper bins, etc. and then within there, there is a section on the M&E services. So that would run to volumes and volumes of information because it's probably about four pages per room, whereas on the Environmental Matrix, it's very much up there in front of you, your full list of your schedule of accommodation and all the criteria. So from an engineering viewpoint, it's certainly a very useful document.

Q Again, a number of items that the Inquiry has seen have suggested that it is an easier reference document and perhaps more user friendly than having a full suite of Activity Database sheets.

A Yeah.

Q In relation, you say that there are environmental matrices that are quite common in your experience. Is that common generally in terms of

engineering projects or specifically to the healthcare sector?

A Mainly in the healthcare sector, yeah. We certainly had them on the Forth Valley Hospital at Larbert, and I believe they've been used on Dumfries and Galloway Hospital as well, which is almost running in parallel at the same time as the Edinburgh Hospital.

Q Again, drawing on your experience, in terms of the production of an Environmental Matrix, would that ordinarily be produced by the procuring authority or by the contractor or the tenderer?

A The initial one would tend to be with the health board and the advisors, that's what we've done previously. Then that would then go out for development by the bidders and contractors, yeah.

Q Again, just so I am understanding. In your experience, the first draft is effectively produced by the procuring authority and then developed by bidders. Is that correct?

A That's correct.

Q Again, just so I am understanding. That, in your view, is what happened on this project: draft produced by the procuring authority to be developed by bidders and contractors?

A That's correct.

THE CHAIR: Sorry to interrupt, Mr Stevenson. When you say your experience of Environmental Matrix is not unusual, maybe you already answered this question, but maybe can I just ask you to confirm, used for precisely what purpose?

A Used for briefing the bidders.

Q Sorry, for?

A For briefing the bidders.

Q For briefing-- Yes.

Anything else?

A It's basically to give them an indication on what the Health Board is after and give them a start to go off and develop their M&E designs.

Q Anything else?

A That would be the main criteria.

Q Right. So it is a document, in your experience, typically originally drafted by the procuring authority or perhaps by the procuring authority's healthcare consultant?

A Yes.

Q -- And handed over to prospective bidder to inform them -- correct me if I am wrong -- in broad terms of what the procuring authority has in mind or wants?

A That's correct.

Q I mean, is that fair way of

putting it?

A Yes.

Q Thank you. Sorry, Mr MacGregor.

MR MACGREGOR: Thank you. Another issue that you touch upon in your statement is what would happen with an Environmental Matrix if there was a divergence between statements made in the guidance notes at the front, and then the information contained within the body of the document. Can you just explain, in your view, what would take precedence if there is a divergence?

A In my view, the guidance notes on the front would take precedence. It's obviously giving you your instructions and how to deal with the matrix, and it's highlighting upfront specific requirements that it's expecting to see within the matrix.

Q The Inquiry heard evidence from Mr O'Donnell from Hulley & Kirkwood and, again, he was the individual that-- or one of the individuals that had input in producing the Environmental Matrix for the project. He took a slightly different view in terms of what would take precedence. In his view for an engineer, the most onerous standard would take precedence. So if there was divergence between the guidance

notes and the body, in his view, the most onerous standard, wherever that that cropped up, would take precedence. Do you have any observations on that? Would you agree or disagree with that?

A I wouldn't disagree with it. If there was major conflicts that you were finding then, yeah, I mean you would expect someone to raise queries or derogations or whatever on that.

Q Again, just so I am clear, when would someone raise a query or a derogation? Let us just assume that there is a disconnect between guidance notes and information in the body of a spreadsheet.

A So if they've gone through, started it, and have read through the guidance notes, they've obviously got a flavour of what's intended within the matrix. Then, once they've started going through the matrix, if they're finding any abnormalities or anything in there, then you'd expect them to raise a challenge on that one.

Q So if there was that divergence, you would expect that to be raised by someone that was interested in and reviewing the document?

A Yes.

Q In terms of the review that is being carried out by Mott MacDonald, you mentioned within your statement that it was really just spot checks or sample reviews that were being undertaken. Can you just explain maybe in a bit more detail what Mott MacDonald are doing and why they are adopting that approach?

A This is in terms of the Environmental Matrix? The reason for looking at a spot check on this one is because of the time available for carrying out the reviews. Now, if you're looking at a line-by-line check – say, on every line within the matrix – I think on the version 13 one there's probably in excess of 1,100 lines. So basically, what you're doing then is you're looking down at the room descriptions that have come from the schedule of accommodation. So, you would find the room type, you then go to the lighting guides, search through the lighting guides to find out that room description, and cross-check each of the lighting parameters. I'm speaking here about electrical and lighting at the moment. So, you'd be looking at your normal lighting, night lighting, gas lighting, the color rendering, standby provision for the lighting and switching control. So, you're looking at all of these elements. So, if you were to

take a rough average of say one minute to a check, by the time you find the room type, by the time you cross-checked the individual lighting criteria, you go through in a line by line and do about eleven hundred lines, you're talking about probably in excess of 19 hours, about two and a half days of input. That's just on the electrical side, and that's on the basis that as you go through the room descriptions, they are mapped to descriptions of rooms within the lighting guide. In several instances, that just isn't the case. Then what you're having to do is to say, "Okay, what is the function of that room, what is it doing and is there another similar room type within the lighting guide that you could say, 'yeah, that's a match for that' that would give the criteria that you were looking for?"

I do remember one room type. I mean, obviously this was a sick children's hospital, I think it was one of the upfront rooms which was a baby feeding/nappy change area, and that's just one example of a room that you won't find in the lighting guidance. So, when it comes to issues like that, the engineer may check through the lighting guidance and say, "Okay, here's another room that's similar type

of use or it could be used for that;” or he may use a bit of engineering judgment; or he may say, “Well there's another lighting guide here that does have that type of room, so this is my justification for using this criteria.” Like I say, it's a volume of information there, that just on the electrical side would probably taking about two and a half days to go through if you're uninterrupted and things went reasonably smooth. Mechanically, I would defer that to mechanical colleagues but there is a lot more information to check, and I don't know how the information is constructed and how it's sourced. But on the lighting guidance, there is tables there, but you do have to search manually through all the tables and find the information.

Q That's very helpful. So, just so I can understand things, at the point that tenders get submitted, where there would be a range of tenders, there would be a huge amount of work to do a line-by-line review of every Environmental Matrix----

A Yes.

Q -- submitted. Is that correct?

A Yes.

Q So to try to address that, you do a sampling process?

A Yes.

Q What about whenever the preferred bidder is appointed, is it still a sampling process or is there ever any line-by-line check once the preferred bidder is appointed? Perhaps in the period from preferred bidder to the signing of the contract at financial close?

A Again, it would still be looking at sample checks, etc. because ultimately the design responsibility for delivering the matrix would lie with project co there.

Q Thank you. If I can ask you to have in front of you, please, bundle 13, which contains your statement, and if we could look to paragraph 16, which is at page 484. So you should have a paper copy, but it should also come up on the screen in front of you. So bundle 13, page 484, and within paragraph 16, if we could look at approximately six lines up, there is a sentence beginning, “We understood from Hulley & Kirkwood.” It should be paragraph 16, page 484, about five or six lines up from the bottom of that paragraph, the sentence, “We understood from Hulley & Kirkwood...”

A I can't actually find it. Is it five lines up from the very bottom?

Q So, it is page 484, paragraph 16.

A Yeah.

Q Six lines up----

A Oh, yeah, yeah.

Q -- from the bottom, a sentence beginning, "We understood from..."

A Yes, yes.

Q Do you see that?

A Yes, I see that now.

Q You tell us:

"We understood from Hulley & Kirkwood however that their design complied with the SHTMs, as they had certified compliance and told us that their design complied. We would have had no reason to suspect at final tender stage, that the reference design EM contained any data which might not have complied with the SHTMs."

Do you see that?

A Yes.

Q Can you just explain, what was it that Mott MacDonald had asked Hulley & Kirkwood to do?

A At the end of the stage that they were involved in, I believe that the various design houses were asked to provide information that their designs had actually complied with the guidance. So there was correspondence and documentation that certified their designs.

Q Getting that checked from Hulley & Kirkwood, was that your responsibility within Mott MacDonald, or was it someone else's responsibility?

A Sorry, to get what checked?

Q In terms of the sign-off from Hulley & Kirkwood saying the design complies with SHTMs, was that your responsibility, or was it someone else within Mott MacDonald's responsibility?

A No, it was someone else who had to deal with that.

Q The reason I said, it might just be helpful to look at the relevant documentation, so if we could have bundle 4, please, at page 322. This is an email from Andrew Duncan to a Thomas Brady dated 28 February 2012. Do you see that?

A Yes.

Q It says:

"There is an action on the Reference Design Team to confirm that the Reference Design complies with NHS Guidance and key legislation. I attach the requirement schedule for each of the Reference Designers to respond to. We require a statement from each designer to confirm that the

Reference Design complies with the Requirements Schedule.

Should it not fully comply then each designer shall confirm that the Reference Design complies with the Requirements Schedule with a schedule of derogations.”

Do you see that?

A Yes.

Q So is that effectively the confirmation that you are telling us about within your statement that would be asked for?

A Yes.

Q If we then look on to page 324. We see a document, it has got “Nightingale Associates,” “BMJ Architects,” “Hulley & Kirkwood” and “Arup.” Do you see that?

A Yes.

Q It is called “Reference Design Proposal,” “Derogations List,” and it is dated “16 March 2012.” Do you see that?

A Yes.

Q If we then look on to page 325, look approximately six boxes down, you will see a document, “Health Technical Memoranda and Scottish Health Technical Memoranda.” Do you see that?

A Yes.

Q It is, “We have followed SHTMs and also HTMs when there is

no Scottish equivalent.” Do you see that?

A Yes.

Q Okay. So is that what you are telling us about in your statement, this confirmation or derogations list on 16 March 2012?

A Yes.

Q If I could ask you to have in front of you, still within bundle 4, page 131, this is the Environmental Matrix that was issued to prospective tenderers, and if you look at the bottom box and the descriptions it is called a “Third Issue” and it is dated 19 September 2012. Do you see that?

A Yes.

Q The Inquiry heard evidence from Mr O’Donnell from Hulley & Kirkwood that this was effectively the final Hulley & Kirkwood iteration, which was in September 2012, but the confirmation seems to be given of compliance at an earlier date in March 2012, and Mr O’Donnell’s position was that he was not asked to effectively refresh that confirmation of compliance with SHTMs or HTMs. Were you aware of that, or is that something, as you say, that is perhaps an issue for Mr Cantlay?

A Yeah, I think that would be an issue for others, yes.

Q Thank you. Within

paragraph 16 of your statement, you said that there was no reason at the final tender stage to think that the reference design did not comply with SHTMs or other published guidance. Were you aware that one of the bidders, bidder C, had put in a revised Environmental Matrix, whereby they had changed certain of the Critical Care values in red from 4 to 10, albeit it is on the mechanical side rather than the electrical. Was that something you were aware of at the time?

A I don't recall it now, but I probably would have been aware of it at the time. Yeah, because it would have been a part of the information that we would have reviewed.

Q I appreciate that you are on the electrical side, not the mechanical side, is that something you would be expecting your colleagues to raise because the Environmental Matrix has had various values marked up or is that something that is fairly standard (inaudible 01:07:17)?

A One of the scoring questions put that question out to the bidders to highlight whether they wanted to make any deviations, etc. and obviously there was an obligation on the bidders to develop the matrix as well. So that would obviously have been seen as going towards getting

the developments done, and then maybe raising any queries or issues in terms of how they saw their design proceeding. So the likes of that would have been seen as a proactive approach.

Q Again, just so I am understanding things and, again, I am talking about a generality, I appreciate the values we are talking about being changed are on the mechanical side – we can ask a mechanical engineer about – but just thinking about the matrix generally, from an engineering perspective, if you saw values changed, as I understand, you are saying that is not an automatic red flag that something is going wrong? Is that correct?

A Yeah. I mean, I would probably give the example of, like I say, when I'm checking the lighting and we're looking at the room descriptions and there's not a room description within the lighting guide for that particular room, someone may have made an assessment or looked at another lighting guide for that value, the bidders then may come back and say, "Well, I don't quite agree with that." They may have experience from somewhere else and may have an alternate value and they would want to propose an alternate value because

there is quite a number of, you know, lighting guidance documents out there, quite a number of them do actually conflict. So, again, someone may be getting information from different sources, and they may well come back and say, "Well, I think it should be this value, not what you have stated." So that's the sort of things that could happen in that circumstance.

Q So, again, you told the Inquiry that, as far as you are concerned, there was not any real concern about non-compliance of any of the tenderers that submitted up to the point that tenders are being assessed and a preferred bidder is being appointed. Is that correct?

A Yeah, because in terms of the compliance, the matrix wasn't mandatory. So, on that basis, you know, they had to have a free hand to develop it, change it, etc. It wasn't a mandatory document, so it wouldn't have impacted on the compliance of their tender.

Q The preferred bidder IHSL is then appointed. Did issues emerge of possible non-compliance with published guidance in the period from the preferred bidder being appointed to financial close, as far as you are aware?

A I think timelines for me

are probably a bit on the hazy side because of the duration that has gone past, but certainly I do remember putting comments back on matrices, Environmental Matrices, with engineering comments on them, going back, but where that sat in the timeline, like I say, it's a bit misty.

Q Again, I appreciate it is 10 years ago, but casting your mind back, was there anything major or from your perspective that leapt off the page in terms of potential non-compliance of IHSL's solution with published guidance in the period to financial close?

A Not in terms of the electrical side of the Environmental Matrix, no.

Q Okay. Were you aware from discussions with colleagues on the mechanical side whether there were any such issues that that emerged?

A Yeah, I was aware that there were discussions ongoing in terms of the ventilation. Yeah, but obviously I was more focused on the electrical side.

Q Yes, and I appreciate-- I am not asking you for specifics. We can cover that off with Mr Macrae and Mr Cantlay but, again, just trying to cast your mind back to the relevant

time period from appointment of preferred bidder to financial close, were those really serious concerns that your colleagues had, or were they simply issues that were part and parcel of a big project that could be managed?

A I certainly recall there was workshops being held, etc. to go through and discuss the various aspects of ventilation. The specifics, I don't know.

Q Again, just any assistance you can provide, were they routine issues that could be managed, or were they issues that your colleagues were really concerned about?

A I would say there was concern about it because they knew that a lot of them were ongoing discussions, try and get solutions sorted.

Q Were you at any point in this period, from preferred bidder to financial close, aware of any reports called Healthcare Associated Infection System for Controlling Risk in the Built Environment, or HAI-SCRIBE reports, in relation to the ventilation system?

A I'm aware of HAI-SCRIBE, but I wasn't aware of any reports as such.

Q Okay. If there had been

issues highlighted in an HAI-SCRIBE report in relation to the ventilation system, is that something that your colleagues Mr Macrae and Mr Cantlay would be dealing with? You would simply be dealing with the electrical issues?

A That's correct, yeah.

Q The reason I say that, in fairness – I will just turn the reference up – is if you look at bundle 10, please, page 283. So, it is bundle 10, volume 1, page 283. Bundle 10, volume 1, page 283. There should be a document there called "HAI SCRIBE." It is a report from 19 November 2014. Do you see that?

A Yes.

Q Have you ever seen this document before?

A I can't recall. No.

Q The reason I take you to it is because if we could look on to page 286, there is an entry at paragraph 2.2 beginning, "Is the ventilation system design fit for purpose"? Do you see that?

A Yes.

Q So, the question is asked here, "Is the ventilation system design fit for purpose, given the potential for infection spread via ventilation systems?" and there is a "Yes," "No," or "N/A," and "No" is ticked. Do you

see that?

A Yes.

Q Again, do you remember having any discussions with your colleagues, particularly Mr Macrae or Mr Cantlay, that there had been this HAI-SCRIBE report saying that the ventilation system design was not fit for purpose?

A I don't recall that. I'm not saying I wasn't involved in any, but I just can't recall.

Q Thank you. The next document that I would ask you to look at, please, is within bundle 8, and if we could look to page 84, please. Bundle 8, page 84. In the top right-hand corner there is the Mott MacDonald logo. It is a document called, "Design Risks to the Board to Financial Close." Do you see that?

A Yes.

Q Would you be seeing design risk documents in the period from preferred bidder to financial close or, again, is this something that the mechanical engineers would be dealing with rather than the electrical engineers?

A If there was any electrical risks or anything there, then I would have been involved in adding electrical risk, and the mechanical would be doing the same as well, we would feed

them to our project managers for inclusion in the documents.

Q Because the first entry, the category is "M&E," the item is "Ventilation," and do you see the risk impact is classified as "High"?

A Yes.

Q It says:

"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."

Then do you see the final position is "TBC"?

A Yes.

Q Do you recall having any discussions about the ventilation system being high risk as at 28 January 2015 with any of your other colleagues within Mott MacDonald?

A It may have been

discussed with Colin, most probably when he was forming his feedback to our practice managers.

Q But in terms of the specifics, is that something-- Again, in fairness to you, you would defer to Mr Macrae and to Mr Cantlay in terms of the specifics of the technical issues.

A Yeah, for the technical aspects, yeah.

Q I think we can put those documents to one side. Within your statement, you tell us that in terms of a procurement exercise you will have various weightings, that the weightings for mechanical and electrical engineering, they are often not very high. Can you just explain why is your understanding as to the criteria being set at a relatively low level for mechanical and electrical engineering?

A I think, looking at things holistically, obviously the main driver is the clinical functionality. There's no denying that the hospital has to function well for the patients and the staff, etc. So all the adjacencies, the logistics of how the building all comes together, that is certainly the prime driver but, again, for a hospital of this nature, it is very heavily serviced with the M&E service provision. I mean, don't hold me to these figures, but if you were looking at probably the

construction value of this, the M&E content might be of the order of 25 per cent, the construction cost, and, like I say, there is a lot of servicing all in there. You've got your high-voltage supplies coming in, your substations, your generators, your boilers, your UPS systems, power supplies and etc., for redundancy and reliability. So there's a lot of M&E services crammed into that building and it is very complex and, again, it's just with the weighting factor that's applied there. It's almost as if you could hardly differentiate between bidders in terms of their scoring by the time that weighting factor is applied to the whole project, and I do appreciate the whole project is a mix of, you know, FM facilities and all through the life of the project, but certainly, in terms of projects like this one, the services are very, very heavily provided for in these buildings.

Q Again, just so I am understanding, you accept that there is a lot of mechanical and electrical engineering services going into a hospital, but the weighting is fairly low, and you say the weighting is fairly low because it is quite hard for bidders differentiate themselves?

A It would be hard to differentiate the difference in the scores between the bidders. So, when

we look at the individual M&E element of the scoring, with that weighting factor compared to all the remainder of the scores, the M&E element, in terms of the total, is very, very small for something that is a very, very complex system within the building.

Q Do you think, that low weighting, is that appropriate for projects of the scale of the project we are talking about today?

A Probably if we're looking at our lessons learned or anything near it, I think it would probably be worthwhile re-evaluating that in terms of the other percentages against other items but, again, I'm not taking away from the fact that clinical functionality is key. That is the main driver but, you know, the M&E does play a very, very important part in the hospital. That's where most of the problems arise and come from, you know, people have got to live with that for a long time in the building if it's not correct.

Q I think that the final issue that I just want to ask you about for your reflections is, certainly as the Inquiry understands it, NHS Lothian accepts that there were some errors in the spreadsheet and Environmental Matrix at specification. Do you think that there were any issues at the procurement stage that contributed to

that issue and, if so, do you have any reflections on how matters might be improved on future projects of this scale and nature?

A So, could you just-- and I'm not asking you to repeat that again, it sounded like there was almost sort of two questions in there, yeah?

Q I think really what I was asking you for is if you think that there were any issues that arose at the procurement stage that were problematic, and if there were, if you have got any reflections in terms of how a project of this nature could be done better to try to avoid those issues?

A I think, given the early stages of the project and how far through it was, I think what was produced was reasonable, because bearing in mind we're at the very, very early stages of designs here, so we're still playing with building blocks and positioning things. Nothing's been finalised, so there's still several stages that need to be gone through where any anomalies or things could be captured, fine-tuned, etc. You'd expect that to happen during the development.

In terms of, essentially, what could be done to try and mitigate against things like this, I think it would

be good if we had, say, an NHS-provided Environmental Matrix for the industry to use. That would certainly get rid of a lot of conflicts and discussions over variations, whether it's different lighting levels in the room because there's a whole host of different lighting guys who say different things. If we had something produced by the NHS, give a definitive list from the schedule of accommodations and the provisions, the industry could feed back into that as things develop and change – because they always change, technologies change, procedures change, rooms change – the industry could then be bringing that back to the NHS, HFS, etc. and saying, “Look, we've got a new room type here. Can we agree on this as a criteria?” for that criteria to then be embedded into the master matrix, say. So, again, that would be the industry giving active feedback back into a centrally held NHS document. I think that would be a worthwhile exercise.

A Thank you very much, Mr Stevenson. I do not have any further questions for you at this stage. His Lordship might have some questions or, equally, there might be questions from core participants, so thank you.

THE CHAIR: I do not have any other questions at this stage, Mr

Stevenson, but what I intend to do is give the legal representatives in the room a little while just to consider their position. When I say a little while, maybe 10 minutes or so. So, we are going to adjourn, so if I could ask you to wait in the witness room for what should not be a long time. When we find out whether there are going to be any further questions, I will bring you back. Well, when I say I will bring you back, somebody will bring you back, but if, for the moment, please, you could go to the witness room.

(Short break)

THE CHAIR: Now, turning first to Mr MacGregor, are there likely to be any further questions for Mr Stevenson?

MR MACGREGOR: No further questions from me and no applications from core participants as I understand it.

THE CHAIR: Right. So, everyone is content to leave the questioning there. Thank you. Could we invite Mr Stevenson to join us again? (After a pause) Thank you for waiting, Mr Stevenson. My time estimates are seldom accurate and they were not accurate this time. However, what I have done is confirm

that there are no further questions for you and therefore your evidence is at an end. Can I say this? Thank you for your attendance this afternoon, but I do appreciate that it is not just a question of turning up for an hour or so in an afternoon. In order to prepare yourself to give evidence, you have done a lot of work, and I appreciate that, and thank you for that, but you are now free to go.

(The witness withdrew)

Well, we shall see each other, all being well, at ten o'clock tomorrow morning. Thank you.

(Session ends)

15:10