SCOTTISH HOSPITALS INQUIRY

Hearings Commencing
13 May 2025

Day 7
Thursday, 22 May 2025
Mr David Hall

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10.02

THE CHAIR: Good morning, everyone. I think we're able to resume with Mr Hall Mr Hall. Good morning, Mr Hall. As you're aware, you're about to be asked questions by Mr Connal, who's sitting opposite you. But first, I understand you're prepared to affirm.

THE WITNESS: Yes.

Mr DAVID HALL
Affirmed

THE CHAIR: Thank you, Mr Hall. Now, your evidence is scheduled for the day. We will sit between now and one o'clock in the morning, but-- Not one o'clock in the morning. Let me start that again.

MR CONNAL: Somebody should have told me.

THE CHAIR: We will sit this morning between now and one o'clock. We'll take a coffee break about half past eleven. We'll sit again between two and four if we require that time, but if you want to take a break at any time, just give me an indication and we can take a break.

THE WITNESS: Thank you, my Lord.

THE CHAIR: Now, you seem to me to have a good, strong voice. Can I encourage you to use it? It's important that we all hear what you have say.

Now, Mr Connal.

Questioned by Mr CONNAL

MR CONNAL: Thank you, my Lord. Now, you are David Hall, the man who is synonymous with Currie & Brown for a lot of the evidence that we've heard in this Inquiry. I start by asking you the formal question we always ask witnesses at this stage, which is, you have produced a witness statement; are you content to adopt that as part of your evidence to this Inquiry?

A Yes, I am.

Q Thank you. Now, I'm going to return to the witness statement, and we'll put it up on screen and so on, and when I refer to page numbers, you'll find that the page number at the top of the page is where the electronics will take us. So I mention that to you now.

I want to ask you, before I turn to the witness statement and acknowledging, as I start this somewhat long point, that we will end up going back to a number of issues, because they crop up at various points in your witness statement. I want to ask you about one or two things first.

Can I just ask you first of all a very

general question about the form of contract that was in use here, the NEC3 with Design & Build provisions? At the time – obviously, this is some time ago now – was that a contract that you were familiar with?

A Yes, I had received-- done training in the NEC before we started the-- the project, and I had-- had-- I hadn't used it, personally, but I had strong awareness of it.

Q Thank you. Now, the next question I want to ask you is focused on the role of Currie & Brown, and when I say you are synonymous with it, it's simply because you're the most common name who appears when people talk about Currie & Brown in this Inquiry. So if I say "you" and it's not something you did but somebody else did, no doubt you will tell me.

An issue appears to have arisen about what role Currie & Brown played – particularly after contract signature – and what people thought was happening, and I'd need to put these things to you, as they have arisen. Now, we have the benefit of a witness statement from your colleague Mr Ross, who describes himself as "the commercial man". Is that a fair description? He was dealing with contracts and things.

A Yeah. He was the senior director and was dealing with the contracts. Douglas's background is in costs management, rather than project management.

Q We also have a witness statement from Mr Baird, who's going to speak to us later in the Inquiry, who was one of your colleagues. So I just want to put some things to you fairly generally. We can go back and look at documents later if need be, but if you can just follow this through with me and tell me if I'm getting it correct.

Looking at Mr Ross – and also, to some extent, your statement, Mr Baird's statement and perhaps even Mr McKechnie's statement – I'll start with a preliminary question. There's a lot of reference, both in witness evidence and elsewhere, to something called "the technical team" or "the technical advisers". Now, did these phrases have any particular formal existence in the contract documents?

A In the initial stages, the "technical team", which existed up until the end of 2009, was under Currie & Brown, and Currie & Brown had a technical team up to that point.

Q Yes. Well, I'm going to come to the detail of that. I just wondered whether, you know, like "project manager" is a word which you can find----

A Yeah.

Q -- by looking up the NEC3

contract and saying there's a project manager, but I just wondered whether technical team was in that kind of category.

A I think you will find – and this is from memory; it is a long time ago – that the appointment of Currie & Brown in the original phase would have included the "technical team" definition to include HLM, BMJ, Wallace Whittle, Buchan Associates, and others who were, you know-- that formed part of that team that were preparing the employers' requirements.

THE CHAIR: I wonder if we're speaking about the same contract? Are you asking about the NEC3?

MR CONNAL: Well, yes.

A Right, so that's a different contract.

Q The contract which formed the arrangement between Multiplex and the Board has phrases in it such as "project manager", such as "NEC3 supervisor", and so on. I just wondered whether you were aware whether "technical team" had some special definition there.

A Yeah. I do not believe that existed within the NEC3 contract.

Q Okay. Now, my understanding from the material that I've seen, particularly Mr Ross's statement, is that the original intention, or hope, on the part of Currie & Brown was that you would retain the team of sub-consultants, which we'll see in due course, after contract signature, and then carry out a role – whether you describe it as employers' agent or whatever you want to do – which would involve you having these consultants still working for you, and using them and your own expertise to check things like design, compliance with employers' requirements, and so on. Now, is that the original intention?

A That, I believe, was the intention prior to the procurement and contract strategy. The Board went through a process of understanding how they would procure the-- the hospital and under-- what contract they would use.

So at the point when we were talking in those terms, that preceded the decision for the NEC, it preceded the decision about how-- you know, the competitive dialogue process, and was assuming, you know, a more-- perhaps the more normal SBCC- or JCT-type route, which wasn't taken.

Q Now, as you said, you had a series of sub-consultants, and we'll come to these – they're laid out in your witness statement in detail, and elsewhere.

THE CHAIR: I mean, just, essentially, for the purpose of our notes, when you use the abbreviations SBCC and JCT, these are separate standard form or probably suites of

standard form contracts----

A Of contracts.

THE CHAIR: -- in contrast to NEC3?

A The SBCC is the Scottish equivalent of the JCT, effectively. I think there are other forms of contract, yes.

THE CHAIR: Sorry, Mr Connal.

MR CONNAL: What I was just looking to take from you generally at this stage –because we can go back and look at any of the details later – is that things then changed around the time – and, in a sense, whether it's December 2009 or January 2010 doesn't really matter for our present purposes – when the contract was signed with Multiplex, because at that time the Board decided to take on the role of project manager, and they decided they would appoint an NEC3 supervisor, which in due course was given to Capita. Is that correct?

A Yes.

Q The result of all of that was two things: one, your sub-consultants Wallace stood down in January of 2010----

A That's correct.

Q -- and what was left of Currie & Brown's role involved yourself and Mr Baird on limited areas of work. Is that right?

A It was providing project management support, primarily, and Douglas providing the costs management support. There was, just to be clear, a drawdown arrangement put in place for, I think, two of the sub-consultants during the period of the Appendix K, which is the period from 2009-- December 2009 to December 2010-- for what I would describe as ad hoc support in terms of perhaps coming in on instances to cover off issues that arose, and those were with Buchan Associates and Wallace Whittle.

Q I'm going to ask you about Wallace Whittle, because they were one of the sub-consultants dealing with M&E matters. So, I'll ask you about that in due course, but if we take the generality for the moment, up until the end of 2009, Currie & Brown – and we'll go through the jobs that you did – were leading a group of consultants covering a range of topics, and then, broadly speaking, and subject to the point you've just made, they were all stood down in 2010 in January. Is that----

A Yes. The design responsibility was passed to multiplex.

Q Now, what I want to ask you about next, then, is this. Leave aside for the moment any debate that there might be as to whose job it was to do what at this stage. Can you help us at all as to how the arguably quite significant change in your capacity – you, Currie & Brown's, capacity – was communicated to both the Multiplex side and the GGC side?

A In terms of formal, no. In terms of informal, there was a quite clear awareness across both the project team and Multiplex that the people that they had been talking to through competitive dialogue through the employers' requirements preparation were no longer evident.

We-- we all worked out of-- Well, the team worked out of the one office, and all of these consultants would regularly visit, and they were regularly in the facility. They were there during the employer-- employers' requirements delivery-- preparation; they were there during the competitive dialogue process, and supporting the team; they were there at the point of the evaluation; and they were part of that evaluation.

From the point of January 2010, those people were no longer there, so it was very quickly evident-- would have been very quickly evident to anyone that was engaged in the project that there was, indeed, a change in the way that the project was being designed. The design responsibility had moved over to Multiplex entirely.

Q Can you remember any communications in which-- You know, the description you've just given us is of-- people were aware because other people were not there anymore.

A (Inaudible).

Q Can you help us at all with any communications that may have taken place, or that you made, about-- saying, "Well, you remember it was Currie & Brown and the technical team? Not anymore."

A That was made clear to my mind at internal project team meetings. Alan Seabourne led the internal project team meetings that were on a regular basis, and I would suggest that-- that, you know, that was part of the discussions around that time about how we moved forward. Because we were changing from having user group meetings with HLM, BMJ, etc., which had happened up to that point, and we were now engaging with Nightingales, we were engaging with ZBP – Zisman Bowyer Partnership.

Q Yes.

A So that was all communicated to the team, that those were the people who would be taking forward the design.

Q In terms of any communications to people on the Multiplex side, including the names you've just mentioned, are you aware of them being told that things had changed?

A Yes, because they were quite clear, in terms of the way the contract was set up, that the-- the responsibility for design lay with them, and the Board's responsibilities were, under the Reviewable Design Data guidance,

limited to clinical functionality. And, therefore, they were aware that there was no design-- there was no technical design team generally behind that, and that the way they had to deal with that was by raising specific issues as-- as non-compliances or-- We-- we used to use the term “alternative design solutions”; I think in the Inquiry we’ve referred to “derogation”. It was the responsibility of Multiplex to highlight those so as the Board could take appropriate action in terms of seeking advice on those type of changes.

Q The label “the technical team” or “David Hall and the technical team” or “Currie & Brown and the technical team” seems to have stuck after January 2010. Who would be in that? If anybody said, “Well, who are the technical team, David?” what would you tell them?

A The technical team for the hospital was Multi-- was Multiplex’s team. If we needed to have advice from a consultant, then that would have to be specifically sought, and that would typically be done when Multiplex raised a non-compliance or derogation or alternative design solution, and there are examples of that prior-- you know, in the early phase – that’s what I’m talking about – when Wallace Whittle came in for those short stints. And then, thereafter, the Board appointed, when situations arose, Capita as an additional compensation event to their role to review certain design issues.

Q So, during the design process, any perception that you – by which I mean Currie & Brown and yourself, possibly Mr Baird – were the technical team would be incorrect, would it?

A If you were referring to contract administration, project management, no, it would be correct. We were technical in terms of those activities, but not in terms of design.

Q BY this stage, by the time you’ve moved into the design phase, who physically from Currie & Brown was around and about on the project?

A There was myself and there were some of my colleagues, Graeme(?)Thompson, who, one of our activities and one of the responsibilities I had within the project team was to look at programme management and to look at an NEC contract, you have to undertake a review of the programme every month and the project manager named in the contract, Peter Moir, would have to accept it.

Graeme Thompson and I reviewed the contract programme on a monthly basis and provided technical advice in terms of that, you know, my background as a chartered construction project manager leaves me technically qualified

to do that particular activity and that would be something that we would do. So we were technical in that sense, that was project management and so there was Graeme.

We also had some people that were assisting in terms of some of the clinical moves and the like, so Paul Ferry was involved in that as well. Again, that was a project management support function, it was not a design function.

Q I need to continue this theme with you, I'm afraid, because I need to seek your comments on things that others have told us about this, if I can. Perhaps one view, the most striking one, is that you know who Emma White was?

A Yes.

Q So she was the lead architect, the lead consultant on the Multiplex side, whatever phrase you want to apply to her. She seemed to think that Currie & Brown were still the technical team and indeed that you were reviewing M&E design.

A Right.

Q Why would she think that?

A I would put the responsibility for that on Multiplex. Emma White was part of their design team. She was working to their design managers. There would be Darren Smith, Gavin Burnett, and Jim Murray were three design managers and they were responsible for communicating everything to their design team.

I lost count probably of the number of times I reminded those three individuals that the Board's responsibilities were to sign off on clinical functionality and that the Board were not reviewing the technical design.

Q I'm going to ask you about clinical functionality a little later so that we get a definition of that, but rather than stop there-- So that's fine. So she's on the Multiplex side of the equation. Did you work with Frances Wrath?

A Yes, I did.

Q Now, occasionally or regularly?

A Regularly. We sat in the same office for five years.

Q Now, in the course of giving evidence here, she was asked, well, where did the Board go for technical advice on M&E matters? And her first reaction was to say, "Well, I would go to David Hall." Now, why would she think you were dealing with M&E matters?

A I was the conduit for M&E matters. So, for example, if there was a question mark over M&E, quite often I would be asked the question and I would then communicate with the appropriate people. Post-2010, of course, that was Multiplex.

So there will be emails from me, for

example, where people have raised questions. I have actually taken their question, put that into the design management process, and asked Multiplex to come back with their responses, because they were responsible for the design. So I was, I was acting in that role of coordination, but I was not, you know, I'm not qualified, you know, to do M&E.

Q I mean, you, I think it's clear from your witness statement that you don't have any qualifications as an M&E designer or indeed as an engineer.

A No, I don't.

Q Frances Wrath is asked, "Well, who's looking after these issues during the design process?" She says, "Well, David Hall, Peter Moir, Alan Seabourne, David Loudon." Now, none of these individuals have technical qualifications in M&E matters, is that right?

A Correct.

Q So she's then asked, "Well, where would they get the technical expertise from?" Her answer is, "Well, I assume there was a technical team." Now, again, it's just a bit puzzling that the position you're setting out is very clear and focused, but somebody you're working with all the time is assuming that behind these individuals there's a technical team. Can you help us at all on that?

A The assumption, to my mind-- I don't understand that assumption. You know, as I say, there was clear evidence of who was involved on the Currie & Brown side, and that did not include any technical support beyond 2010 when the final piece of work by Wallace Whittle was done.

Q Well, maybe you've given us the answer in response to an earlier question, but I'll just continue with this meantime. Mhari McLeod, is that somebody you worked with?

A Yes, it is.

Q Again, in physical location terms, were you close to where she was based?

A Yes, she was in an individual office, but I was in the open-plan office immediately outside it.

Q Now, when she gave evidence, listeners may have got the impression that any technical issue that cropped up, she popped along, and you gave her the answer. Would that be an accurate description of how things happened?

A She may have come out and asked me a question. I didn't-- unlikely I would have given an immediate answer. I would have gone and sought the answer. Part of my role was to support the team. Bit of an analogy, but when you're putting together a team for these

things, it's a bit like putting together a football team; you need people with lots of different skills. You've got your striker and you've got your defenders, so people-- in this sense, we've got people who have--

I mean, Mhari was a business manager for the NHS. Mhari was not a construction person and she wasn't necessarily familiar with all the processes and everything else in a construction project. I had 25, at that point, 25 years of working in the construction sector, so my experience about knowing who to go, where to go and who to ask questions of was probably lent upon by that team. As I see it, to say they "popped out and got an answer from me" is inaccurate because I wouldn't have the answers, but I would know where to get the answer.

Q I see. Now, I'll come back to the-- make sure I'm getting that correctly. Mhari McLeod was in charge of one part and Heather Griffin another, right?

A Yes.

Q Were they both in the position of being essentially healthcare administrators, because they were given the title of deputy project manager in charge of parts of the site.

A Yes. They were project managing. Mhari was project managing the children's hospital. Heather was project managing the adult hospital.

Much of their responsibility was about interaction with the stakeholders, with the clinical users, and about organising the user group meetings and doing all that activity.

I always treat it a bit like an hourglass. I'm trying to give you an analogy or a description of how I would explain this, but if we have the construction contract at the bottom of the hourglass and we have the users at the top of the hourglass, you have a pinch point in the middle, and that's where your project managers sit. So, in there, you need to have people who have the skills both to work upwards into the users, understand the clinical aspects of that and gather all of that information, and you also need people who know how to interact with contractors and construction professionals.

So, basically, when you put the team together that sits in project management, it's never one person, it's a group of people, and you use the different skills that those people have to create a strength that is greater than any of the individuals. And that's really how it worked, in the sense that a lot of my experience would be about how the client would interact with the contractor.

That's where Peter Moir effectively sat as well. Peter was the project manager managing the NEC contract.

My main interface, therefore, was with Peter and into Multiplex, but, like anything, I always work on a principle of awareness versus real knowledge. The majority of my job was about having awareness. I don't undertake many-- a lot of the tasks, but I'm aware and I'm managing and I'm coordinating. So, you know, I try and keep my mind open to everything.

In every meeting, I listen to everything that everybody's saying in order that I've got a greater-- the greatest awareness of what's going on, but I'm not necessarily into the detail of absolutely everything. In the hospital of this scale, that would not be possible for one individual. You rely on a team approach.

Q So Heather Griffin and Mhari McLeod weren't project managers in the sense that you might find on any building project dotted around the country? They were more focused on communications, as you put it, towards the top end of the hourglass that you described?

A Yes. If I can put it another way – and I'll help you out here, I think – in my current role where I am, I have a team where I've described development managers and project managers, and I would say that the role of development manager – which is all about developing the brief and taking the project through its initial stages and understanding the

requirements in the business case – was where Mhari and Heather's strength sat, and then the project management piece sits after that.

And then-- but you keep the two together so as you don't lose the train throughout the thing, so I would say that they were closer to what I would describe as a development manager.

Q Well, I need to ask you about one or two particular documents. Can we have bundle 46, volume 1, page 98, please? If that's the right one. Now, if we just scroll down onto 99, I think, to see the start of this, you'll find here that there's an email chain involving Mhari McLeod when she's passing on information about HEPA-filtered rooms. You see that at the bottom of 99? Now, it would appear she thinks she got that information from you, is that possible?

A I don't-- I can't comment. I don't believe so. I'm not familiar with that email chain whatsoever.

Q Good. I'm just wondering-- I won't ask you after this passage of time to remember every email that we show to you. Please do just tell us if you don't.

A Yes.

Q But trying to square the circle, if people had a question about M&E and ventilation, am I right in thinking, from your earlier evidence, they may have come to you because you were the

person that was known to be the point of contact, and you may then have got information from somebody else, depending on what the topic was?

A That's possible.

Q Is that the kind of thing that you did?

A Yes, yes. What I would say in this instance is – and it's a general comment – that, in terms of the amount of interaction I had, it was greater in the adult hospital, and I think I said that in my statement because Frances Wrath is a building surveyor, has a construction background and was closely involved in the children's hospital.

So Frances and Mhari worked very closely together in much of the children's and, as a result, a disproportionate percentage of my time was more to support Heather because Heather didn't have a, you know, a similar backup on that side. So the majority, you know, I would have probably more interaction with Heather than I had with Mhari.

Q Another name that crops up is Miss McCluskey. Do you remember her, Miss McCluskey?

A Yes, she was the nurse advisor on the project.

Q Could she have thought that you were the person to go to ask about ventilation issues?

A As I say, in a similar way, if there was requirement to gain information, I often was the conduit into Multiplex. And similarly, you know, you'll find that Multiplex will say the same thing. If they needed something, they would come to me as well. And Peter Moir, unfortunately, as you know, he can't speak to Peter.

Q No, no. He's not available to the Inquiry; I'll just leave it at that. Jackie Barmanroy, is that another name you recall?

A Yes, infection control nurse, Jackie Stewart.

Q Yes. I just want you to have a look at a couple of documents just to see if you can help us. If you can, fine. If you can't, equally so. Can we have bundle 14, volume 1, document 2, at page 21? Now, here we have-- as you quite correctly point out, her name was Jackie Stewart, in 2011 saying in an email to various people, "I'm meeting with the M&E chaps next week to go into some more detail." Do you have any idea who "the M&E chaps" would be? Because you don't have any on your team by that time.

A No. In 2011, that would presumably be ZBP.

Q You would take that to be a reference to Multiplex's advisors on M&E?

A Yes. It could either-- Well, it

could either be that, or it could be Multiplex's M&E managers, so there was the likes of Darren Pike and Colin Grindley and others that were in that role.

Q Okay. Can we just go on to 25? We may find a similar answer. Let me just see. If you go near the foot of that page 25, you see Jackie Stewart again saying, "The technical guys were wondering if you were available to meet them" – she's saying this to Craig Williams – "and they're going to outline systems and ventilation systems generically." So this is 2012, so it's even further on. Can you help us at all as to who that might have been, the technical guys?

A I've obviously not seen the email before, but I would suggest from that-- Again, I would expect that that would have been Multiplex, and it would have been Darren Pike, Colin Grindley, etc.

Q Thank you. So if we do come across – and we may touch on a few as we go through your witness statement – documents in which you appear to be involved in a variety of technical issues, you're simply helping out in your project management role. Is that what we should take away?

A Yeah, I'm coordinating, getting the right people in the right room at the right time to talk. I mean, when it says "the technical guys", it could have included me as the facilitator of that.

Q Just before we leave these sort of introductory discussions, I just want to ask you about Wallace Whittle. They were the M&E consultants – I call them that – M&E engineers who were part of your consultant team prior to the change in early 2010, and they were one of the consultants who were then stood down, subject to the point that I'll come to that you've made already, in 2010, so that they weren't then routinely participating and advising. We have Mr McKechnie coming to speak to us later in the Inquiry.

Well, let me just ask you the general question: as far as you're aware, did Wallace Whittle, as a consultant for Currie & Brown, for GGC, design any of the ventilation systems?

A No, not until they bought-- to just confuse it further, bought over ZBP.

Q Right. That's why I prefaced my question by saying "in their capacity when acting for Currie & Brown, who were acting for GGC".

A No. They did not design.

Q Now, the initial perception that one might get, then, is that when you get to around January 2010, Wallace Whittle, as an advisor to GGC, would disappear off the scene and not be expected to be around because, like all the other

consultants, they were there, but you told us there was a provision whereby they could be asked to do specific tasks if a specific request was made. Is that right?

A That's correct.

Q Now, we've had some evidence from Multiplex witnesses who were asked about a number of these structural arrangements and how Wallace Whittle fitted into them, and they seem to recollect involvement of Wallace Whittle at some point later in 2010 than January. Is that possible?

A Yes.

Q Mr Pike thought that they were involved in some kind of M&E reviews in August 2010. Do you know anything about that?

A Yes, I do.

Q What was what was happening there?

A Okay, so the purpose of the reviews was for Multiplex to present any issues that they believed did not strictly comply with the employers' requirements and that they needed to consider an alternative design to deliver the solution.

So there might have been competing requirements within the employer's requirements, for example, and those competing requirements might require them to go up, you know, not to comply with something entirely. So therefore, they would become effectively an alternative design solution or are known as a derogation.

So the purpose of it was that throughout the period of 2010, ZBP were developing their design. Effectively, what we then did was-- I'll call it a gateway review of the M&E design. So there was a short burst of presentations in the August on a variety of topics ranging from, you know, fire detection to smoke removal to water systems, ventilation, heating, all the rest of it.

So Wallace Whittle came in to be presented to and to comment upon issues that Multiplex considered did not necessarily fully meet the employer's requirements, and that was the purpose of that, and I believe there was actually a further set of that.

Q Okay. Well, let's just pause on one for the moment, and I'll give you the opportunity to add to your answer, because we're obviously keen to know your evidence. I was just going to ask you to look to another document which you may not have seen recently, but it shouldn't cause any issue for you. Can we have bundle 31, page 111? Now, I've put up this page of the document. Have you got it?

A Yes.

Q Yes, thank you. Primarily because this page, although it doesn't mention you, sets out who is at this

meeting of something called the Project Management Group. Do you remember participating in these?

A Yes, I do.

Q We see there that you're among those present, with Mr Moir, Mr Ross, in fact, Mr Ballingall, Mr Pike and various others, and then there were some apologies. I just wanted to ask you about one area where DH, which I think is you, appears, which is on the next page, 112, third paragraph in.

Now, can you just help us with what's happening here? "The workshops to review the architectural drawings had worked differently from the M&E reviews. Most of the drawings hadn't been issued; they'd been presented on the day of the workshop." Now, this is September 2010, so you're well into the design year, if I can put it that way. Can you just help us understand what's happening here? Is that anything that Wallace Whittle might have been involved in?

A Well, the architectural drawings would not have involved Wallace Whittle. So, I was noting that the workshops to review the architectural drawings had been different from the M&E reviews. So, the M&E reviews are the ones that we've just referred to in August, where there was a presentation by ZBP to Wallace Whittle. Wallace Whittle would have provided comments back on that, so that's the M&E part of that. The second part is a different issue and would not have involved Wallace Whittle.

Q I think you were about to tell me – we can take that document down, thank you – about a possible other involvement of Wallace Whittle after the January of 2010 when they otherwise stood down. Now, just tell us an outline about that, and we'll ask you----

A I was obviously alerted to this question ahead of it, so I have had time to consider this. In my memory, and obviously we are talking some time ago, I think there was three interactions in total by Wallace Whittle. Interaction number one was probably in the spring of 2010 and involved a discussion around high-voltage connection to the hospital with Scottish Power, etc. So that was something that-- You know, that was the first interaction.

The second interaction was a review of the design progress on Appendix K in terms of the MEP, and that's the one to which I think Mr Pike referred to, a series of workshops on a number of topics. They would have been attended by a number of people on the Board, including Peter Moir, Alan Seabourne, myself, potentially Hugh McDermott for some issues, Ian Powrie for other issues, as well as Wallace Whittle, who attended

that and commented on those.

Then I believe there was a final, shorter session in late 2010, probably around about October, when Wallace Whittle had a further presentation on what was effectively going in to the final Appendix K.

Q When they were doing these things, they were doing them, what, as a sub-consultant to you?

A Yes, because that was the appointment. I think there was an allowance within the letter, from memory, so----

Q So what was their function in the events that they attended?

A So, as I said, they were only looking at issues that were raised by Multiplex as potential areas where we were looking to move away from the Employer's Requirements. So if it was something that was fully in accordance with the Employer's Requirements, it would not be presented and discussed. It was only where Multiplex highlighted this was out of line or, you know, we needed some discussion on this to make sure that everybody was content, and what they were doing is that Wallace Whittle were then providing the board with advice on whether these sort of issues were acceptable or not.

THE CHAIR: My fault entirely. You mentioned, as you recollected, three interventions by Wallace Whittle in the course of 2010: the high voltage connection, the design progress on Appendix K, and I----

A The last one was almost like a final sort of review of Appendix K. You know, so they came in the August, made comments and then obviously ZBP went off again and did some further work, and then there was another-- almost like a wrap-up review.

THE CHAIR: Thank you.

MR CONNAL: Now, another document has only recently come to my attention which I need to put to you. Again, if you're not familiar with or you can't help us with it, you're very free just to say so. Could we have bundle 43, volume 3, page 1280? Now, this is headed-- Well, it's a Multiplex document for a start. I'm just calling them multiplex to avoid getting into the different names, Mr Hall, so forgive me for that. You see it says, "New South Glasgow Hospitals: Response to Comments on Appendix K M&E Drawing," and then there's an introduction saying:

"A number of drawings were presented ... reviews ... high level ... of strategic nature with detailed discussion on specific [issues] ... drawings would be developed to a more detailed level for further review."

Then there's some comments on

different issues, most of which we needn't trouble about because they're on topics that the Inquiry isn't focusing on, like maintenance or-- Well, we have been asking about maintenance, but medium voltage systems, for instance. We don't need the technical detail on that. First of all, is this something you've seen before?

A I honestly can't remember.

Q Can we just look at a couple of the items? Can we scroll through, please, until we get to item 27? I'm afraid I don't have the precise page reference. Thank you. We're now on 1284. You see an item headed "Isolation Suite – Ventilation", and there's a comment that they're "gathered together within a common plenum, within a plantroom [etc., etc.] ... mixed with fresh air then extracted via another set of fans." The comment is, "This is non-standard," so is that the kind of thing that Wallace Whittle apparently were commenting on? Because the heading, of course, is "Wallace Whittle Comment".

A Yes. That is the type of thing, because these are obviously issues that have been raised by Multiplex as potentially having some question mark around compliance with the Employer's Requirements.

Q Yes, and then the next column is the Brookfield or Multiplex response. Can you remember whether there's any discussion about the actual design of isolation rooms? Because this is actually commenting on a supply issue, how the air is going to get, basically, from the plantroom. If you don't remember, that's not an issue. Just tell us, please.

A Do I remember there being discussions around isolation rooms?

Q Well, at this point.

A At this point, probably not.

Q Then there's another paragraph headed "Renal Dialysis – Ventilation." It says:

"Renal dialysis is taken as 10 ac/hr which is the category of a treatment room, discussion as to whether this can be reduced. Further investigation required by ZBP via the SHTM; risk assessment and other precedents to be utilised."

Then, there's a field comment saying:

"We have discussed this with the Board. It may be relaxed."

A Yeah. That's one I am more familiar with----

Q Right.

A -- to be honest. So this is one-- we're working with Heather. One of the issues that we had from the user groups on the renal dialysis suite was their experiences from the Stobhill and Victoria Ambulatory Care hospitals, where we had reference from those users that the 10 air

changes per hour for a patient sitting for three to four hours getting renal dialysis was drafty and was creating an issue in terms of patient comfort, and they asked us – as lessons learned, effectively, from those hospitals – to look at the implications of reducing that air change rate.

Q Do you know what the outcome was?

A From memory, this is one that was referred to Peter Hoffman for his advice, and the ultimate result was, I think-- if I remember rightly, the air change rate in the renal dialysis suite was reduced to six air changes per hour.

Q Thank you. Can I just go, just while we're here, onto the next page to point 30. It says:

"Plant has currently been provided with 25% margin…"

Now, we've had some evidence earlier in the Inquiry about how you should design ventilation plant with a margin because it degrades, even if maintained, because things clog up and it doesn't produce precisely 100 per cent of what it was doing. Do you remember any discussion about this?

A Absolutely. You know, obviously, it was there. It was in the employer's requirement for the 25 per cent margin, and what was-- you know, the discussion there was about the final distribution. I mean, obviously, the biggest problem in adding to ventilation at a later date is either the plant or the vertical movement, because it's very difficult to increase the size of a riser.

If you're refurbishing or refitting a floor, it is much easier to then expand the ventilation horizontally, so the bit that refers to the-- "final distribution does not have this margin applied" is on the floor, not through the core of the building, because you can-- obviously, if you take a ceiling down, you can put a wider duct in.

That's not generally a problem. So there's a common sense approach in what's being done there in terms of that efficiency because that makes it more efficient as well.

Q It probably raises the general question that we've raised with a number of witnesses, which you've picked up on, that changing ventilation, particularly in a riser and in plant rooms and so on after you're well into the process of getting the hospital up and running, is difficult.

A Yeah, it's future-proofing, and what was allowed for was either-- not always 25 per cent was given in the plant because that would be extremely inefficient and, you know, would cost a fortune to run potentially, and actually might not run properly. That's my understanding of it.

I'm basic mechanical engineering here from learning and listening. I'm not a mechanical engineer, but-- and, similarly, I mean, obviously in the risers-- so, in some cases in the plant rooms, there was additional space left rather than the plant actually having the additional capacity.

Q Well, we can take that document down. Thank you very much. Apologies for showing you things that you've not necessarily seen for some time, but it's the nature of this Inquiry that the number of documents that (a) exist and (b) emerge is significant. I want now to take you back to your witness statement----

A Okay.

Q -- and pick up on any issues that arise using the format and order of the witness statement as a guide. We find that starting on an electronic page number, which is 196.

THE CHAIR: Mr Connal, you said you would come back to clinical functionality.

MR CONNAL: I will.

THE CHAIR: There may be an appropriate moment for you to do that.

MR CONNAL: There will indeed, my Lord. The first time it appears that I've spotted, we shall ask the question.

THE CHAIR: Right, very well.

MR CONNAL: It might be easier to do it in the context where my Lord sees----

THE CHAIR: Absolutely.

MR CONNAL: -- the sentence or whatever where it appears, rather than take it simply as an abstract question.

(To the witness) What you've done here, obviously, is you've set out your understanding in the way that has suited you to do. Inevitably, that means we will trip up over points we've already discussed as we go through, but that can't be helped because, even on the first page, we see in paragraph 4, you're talking about, "Currie & Brown's reduced remit following the award of the contract" because that reflects the fact that you didn't then have a whole troop of sub-consultants regularly.

Of course, we're not talking necessarily about one individual per consultant; it may be a number of individuals. You don't have these anymore; you only have a much reduced operation, as you've described to us. You go on, on the next page, to explain your experience. Although you've done various things in the past, you describe yourself now as a project manager. Is that where you see your skills lying?

A Yes, I'm a chartered construction project manager.

Q You say you've worked on various complex projects, and you

instance a couple of these. Anything as complex as the new hospital prior to that?

A To be honest, no.

Q There's no harm in saying no. It's asking the question.

A I think, if you look around Scotland, you'll find it hard to find a more complex building.

Q So we can have context to your subsequent answers, we should probably look at 198 because there you set out the dates during which you worked on the project from September 2008 until April 2015. So that, as you point out, between handover and live occupation----

A Yeah. I had some ad hoc recalls from probably April to September.

Q I think you were focused on various things after that----

A Yeah.

Q Was Peter Moir your principal contact?

A Peter and Alan, yeah. I mean-- in terms of-- obviously, my role was very much project management. Peter was the project manager. He delegated activities for me to undertake.

Q You'll understand that, when the Inquiry formulated questions from which you then created this statement with assistance from those you needed, the Inquiry didn't necessarily know who did what when, why, and hence you may have been asked questions that weren't in your remit, but I note in paragraph 10 you're keen to make the point that your role was centred around coordination of project activities, and you did not undertake any design responsibilities at all.

A No.

Q So that's your, basically, the theme which then runs through what you us later on.

A Yes.

Q In paragraph 12-- and, at this point, you're giving us a general outline, and some of the points we return to later in your statement. You say that, in the first year after the contract – so that's the first year of the reduced role, if I can call it that – your "time was split between supporting and coordinating the process of design development… and…contract administration of the… laboratory building", which we don't need to concern ourselves today.

When you say "supporting and coordinating", just His Lordship understands, what are you actually doing? Because the word "design" appears there and you're supporting and coordinating it. Can you make sure we're absolutely clear as to what you were doing?

A Okay, so the Multiplex design team had come together at this point,

obviously. They had prepared their bids and everything else. They had done it through the competitive dialogue process. They were now engaging----

THE CHAIR: Sorry, Mr Hall, you do speak quite quickly.

A Sorry, I come from Glasgow.

THE CHAIR: Could you just start again? The question is, what do you mean by supporting and coordinating? I think we're still at paragraph 12.

A Okay.

THE CHAIR: So, could I ask you to start your answer again?

A Okay. No problem. So, in terms of supporting and coordinating, Multiplex had now been awarded the contract. Their design team had made some of the user groups previously but obviously we're now coming into a much wider thing because they were having to go into every single user group.

So we have to pull together the Multiplex design team, the Multiplex design managers, with the end users and all the stakeholders in the user groups in order to develop the design of the hospital from what was a big stage into something that could actually be contracted at the end of 2010. So it was sitting in-- and as I say, I talked about that hourglass. It was sitting in that-- middle of that hourglass, making sure that we were getting the right people from the Health Board, talking to the right people from the design team.

MR CONNAL: Were you, in that role, contributing to the design process, or were you just organising it.

A Contributing in the sense of trying to ensure that the designers and the stakeholders understood each other. Often, when you are working with groups of clinicians, nurses, physiotherapists, all those type of people, they are not familiar with how to inform a design team.

They need assistance to make sure that the right questions are being asked and the right answers are being sought, so you are facilitating and sort of trying to create the environment in which the correct outcome, you know, is arrived at. You're using your experience of having worked with stakeholders, worked with designers, and understanding where the gaps are.

Many laypeople find it hard to read a technical drawing, and you need graphics, you need images. So you're talking to the designers about how they are presenting, how they are getting their message across. You're trying to encourage them to use more visuals, all of those type of things, to make sure that the people understand what it is that they are commenting upon, because if you actually sometimes give people a blank plan, they'll actually see nothing. So you

need to give them more than that. So it's all of that encouragement to make sure that the design process is working correctly.

Q We'll touch on the user group meetings. As I understand it, these were primarily focused on, basically, layout and equipment and the other requirements that you had to have in terms of gases and machines, where they're going to go and stuff like that. Is that what was being discussed?

A That is primarily what was being discussed. I mean, there are obviously reference to some of the guidance and all the rest of it. Again, often a difficult subject to discuss with end users. There's guidance there that they have to work with. They want what they want, and then you say, "Well, you can't have that because the guidance says that's not possible." I don't want to make everybody laugh, but I actually sat in a meeting on one occasion where one of the clinicians said, "Well, the SHTMs are just balderdash" because the SHTMs wasn't giving him what he wanted.

So you have to balance that whole piece that says that the end users want what they want, but they also have to have the advice, you know, and that's what the designers should be doing. The designers are responsible for designing in accordance with the guidance. So they should be pushing back but there's always that middle ground, and that's what-- again, what the Board's representatives or the Board's team would have to sit in the middle of and try and manage that.

THE CHAIR: What we're just discussing here are the user group meetings?

A Yes.

THE CHAIR: Yes.

MR CONNAL: I think you say, in paragraph 14, that the person you primarily were supporting was Heather Griffin, for the reason you indicated earlier, that Mary McLeod had more assistance from Francis Wrath, and Heather didn't.

A Yes.

Q Then you go on to deal-- to set out there what you deal with during the construction phase, which is later on, and then your tail piece is about group five equipment installation, which I gather is certain specialist equipment that the Board had to get in place. It's not a topic we're concerned about.

A It's MRI scanners, CT scanners, all of those type of things.

Q Right. I think, for the reasons that you're probably beginning to spot by now, the questioner who has led you to produce this statement then asks again, "Well, just let's get this quite clear," so

you give us another answer in paragraph 15, “Contract management in support of Peter Moir” is what you’re doing. Programme reviews, you mentioned to us earlier to support the Board, and “facilitating and managing the design reviews for clinical functionality.”

Now, here we have clinical functionality. Can we just be clear what you understand clinical functionality is when you refer to it as something that was done at that time?

A Yeah, so clinical functionality is about having the facilities in the room that allow the end users to use it in the way that they have described and desired. So do they have a sink? Do they have a bed? Do they have, you know, other-- the medical bed head with the correct gases in it?

So that is the review. Does the room have a light fitting? You know, the technical design of all of those elements and the systems that lie behind the wall are the responsibilities of the Design Team to comply with all of the requirements that are set out.

So the Board are signing off-- The Board could only sign off that because that was the skill set that sat in the Board Team and that was set out in the contract. So, you know, the contract did state clinical functionality. So, if you want water, you need a tap, so is there a tap? But the system to deliver safe water to that room was down to Multiplex.

Q We’re going to come back to this because it crops up repeatedly, but let me just ask you generally, at the moment, you say, on the next page at the top, that:

“Multiplex was responsible for the entire design of the hospitals, however the Board had a responsibility to review the clinical functionality... [and you] had a delegated authority from Peter Moir to [do that].”

Then you say you weren’t involved in technical commissioning, witnessing or validation, which are things that probably come a little later in in the process.

A That’s true.

THE CHAIR: Just before we leave clinical functionality, there will be a contractual definition of clinical functionality; is that right?

A Yes.

THE CHAIR: The contract, as it were, presumably gives a power to the employer to insist on clinical functionality as construed by the employer?

A I think it’s almost the other way round, in the sense that it’s limiting the responsibility of the employer in terms of what they are signing off.

MR CONNAL: This may or may not become important and hence we’re kind

of pausing on it now, Mr Hall, that-- I mean, I was about to ask, well, how does anybody know any of the participants in these meetings on both sides of the table? How do they know that this definition is being applied to the power to sign off?

A I think, as I said before, I lost count of the number of times I repeated that to Multiplex on behalf of the Project Team.

Q So you think it's----

A It's in the contract.

Q It's in the contract. Well, I'll just ask the follow-up question then. From your recollection, was it clear to Multiplex what the limits were to the signing off?

A Yes.

Q Was it clear to the other participants from the GGC side what it was that was being signed off?

A Yes.

Q Now, you say you told Multiplex repeatedly. Can you remember discussing it with those likely to be interested from the GGC side?

A Yes. I think some of them, in their witness-- or in their evidence, have tried to describe without using the term, "clinical functionality". They've tried to describe what it is they thought they were doing, but it is actually set out.

Q I'm not sure whether my Lord has anything else on that point at the moment, but we can move to another topic.

THE CHAIR: All right. I obviously will have to look again at the contract documentation. I just have a little concern that those involved from the GGC side in the user group meetings may or may not have understood entirely what they were being asked to do.

MR CONNAL: Well, my Lord may be right. My note on the matter, in effect, says that the user group meetings were known to deal with-- and my attempt to deal with it was, you know, what kit you need, where it goes, can you fit it into the room, what machines you need and----

A That is clinical functionality.

Q -- so on, and it was a matter of general consensus that these user group meetings did not deal with what I might describe as M&E design.

THE CHAIR: That is true, we have heard evidence along that line.

MR CONNAL: But this is a different take on it that we have the benefit of Mr Hall helping us with. We'll probably return, in a way, to this topic a little later again. I'd like just to follow the sequence of your witness statement----

A Okay.

Q -- because it'd be easier for us to understand why we get to different points at different stages. What you set

out on page 200 is turning the clock back a little bit now. We're talking about appointment of lead consultant, the documentation led by Mr Ross and the job that you describe in paragraph 17 is a task before the contract was let because you were developing or working up – whatever phrase you want to use – the employer's requirements. Now, I may be crediting you, I'm not sure, correctly, when-- I have a note that someone described the employer's requirements as "what, not how". Is that your phrase or is that one that I've incorrectly picked up?

A I'm not sure if it's my phrase but it probably is quite true because it's setting out what you require, but, you know, it is not how.

Q So the employer's requirements say, "Well, this is what we want but how you get there is then a matter for you as the design and build contractor." Is that right?

A Yes.

Q Just----

A In general terms.

Q -- in general terms.

A Yes.

Q I'm keen, as we move through this, that we make sure we're understanding the different stages because, in 18, you talk about the change, and 19, on page 201, you continue to talk about the change. The way you put it halfway through paragraph 19 is:

"The design services provided by Currie & Brown in the initial pre-design stage were not extended, with the responsibility for technical design instead forming part of the Multiplex contract."

Is that the way you see what happened?

A Yes.

Q You didn't have the team, in effect, because you no longer had the design responsibility?

A That's correct.

Q Yes. So, in effect, you're describing a situation there that, as at-- let me just say January 2010, the Board didn't have – unless they specifically called them in – M&E design people daily involved in the processes that were then going on?

A Well, they did in the sense that they hadn't bought that from Multiplex.

Q Right, but-- Okay, let me just split this then into two. There's Multiplex and there's the Board. So far as the Board are concerned, they are not then employing anybody as M&E design specialists, for instance, for routine involvement in the processes that are going on. Is that right?

A They did employ Capita as the

supervisor role, which included, you know, review and certification of the construction progress of M&E.

Q Okay.

Well, let's just stick to the design phase----

A Yeah.

Q -- between January 2010 and essentially the end of 2010. During that phase, am I right in understanding that the Board did not have, routinely on its team, M&E design engineers or anything like that?

A No.

Q Thank you. Now, in fact, at this stage of your witness statement, you actually refer to the letter that is called the "Revised Fee Agreement," because that's a letter which actually starts talking about how many hours you need and from whom and how they're going to be paid. I suppose we should just look at that for reference. It's bundle 17, page 2870 where this is addressed, obviously, to Mr Ross because he's handling the contracts----

A Yeah.

Q -- side of things and refers to dialogue and then says, "Well, here we are, split into two new lab project management support, so much, cost management, so much." The figures don't matter for our purposes. New adult and children's hospital, "57 weeks commencing Tuesday 5th January 2010," period for conclusion of contract, that's done. Then:

"Project management support – Based on input of 3 days (22hrs) per week by David Hall.

Cost management... 2 days (15hrs)... 2 cost managers [rather]."

Then, various other provisions giving a budget total, and if we just go on to the next page, there's a note:

"The inputs by David Hall and Mark Baird will be developed over the next 2-3 weeks based on the attached schedules for both Design Development (Schedule A) and construction works on the Laboratory Project (Schedule B)."

Because this was going on sort of in parallel, wasn't it----

A Yeah.

Q -- the laboratory construction?

A Correct.

Q "Inputs by the Cost Managers will generally follow requirements," and so on, and Mr Moir says the kind of thing that you often see, which is, "We'll need to manage this within an agreed financial envelope," and they'll consider the ceiling and so on. The suggestion is that you and Alan Seabourne and Mark Baird meet with Mr Moir to talk about what is envisaged will actually be done. Is that right?

A Yes.

Q Thank you. I think we can leave that because obviously we have the document and, essentially, what you say in your witness statement is, subsequent to that, you were aware that you had discussions with them, but you can't ever remember taking those discussions and creating some kind of (inaudible) when within the (inaudible).

A It was much more flexible than that, to be honest. I mean, you know, it was constantly a moving feast in terms of what required to be done.

Q Yes. Then, in page 203, you turn to a slightly different topic, which is the project: timeframe, pre-design, April competitive dialogue to September, bid evaluation until October 2009, and then design and construction phase from 2010 to 2015, including the initial design process, and you go on to say you're going to explain what you did here.

Now, we've touched on Heather Griffin and Mairi Macleod and their designation as project managers already in your evidence. What did you understand Francis Wrath's role to be?

A Francis had a significant experience in health care projects. She carried a lot of knowledge of the Southern General site and she was definitely acting in, effectively, a project management support function, supporting on the development, particularly of the children's hospital.

Q So another organiser rather than somebody with technical input, is that fair?

A Yes, she-- but with more experience than Mhari, again, in terms of dealing with contractors and those type of things, so, in effect, you know, doing a similar role to myself on the Children's Hospital.

Q Thank you. Now, I am just walking you through some of this, Mr Hall, so that his Lordship gets an understanding of the way the different stages worked and we understand some of the phraseology that has cropped up from time to time, which we need to make sure we understand because we're sitting outside the box and a long time after it was created.

What you then do is you take the different stages that you've outlined on page 203 and you then touch on these in the subsequent paragraphs, and you list on page 204 the different subconsultants that you had and then you turn to "Employers' Requirements and Exemplar Design", and what we're going to see is you explaining what these mean to the Inquiry by means of your witness statement.

Now, in paragraph 30, you explain about the employer's requirements and

you say your role was providing project management support, and then you touch on exemplar design. Now, that's a phrase that has popped into various pieces of evidence that we've had. In terms of this project, can you just try and summarise for his Lordship what exemplar design was meant to do? What was the idea of having something called an exemplar design?

A The idea was to-- effectively, you could write it all out in words. That famous phrase, "A picture paints a thousand words," so the exemplar design was meant to paint a picture to help people visualise what it was the Board wanted.

So you have a kind of massing element which says, you know, "Here's the entire"-- you know, "what it is we need," but then you focus in on certain elements of that in order to give examples of how it might work. I can't remember the exact number. I think-- I don't know if I wrote it down, but there was a number of departments, maybe 11 or something like that, that----

Q 11. I suspect you're right about 11, Mr Hall.

A Yes.

Q Let's just take 11 for now.

A I think there was 11 departments that were looked at and you started to look at how those would-- how you would lay out those departments, what type of facilities you'd want in them, what adjacencies you would want in those departments, but it was purely about trying to express the employer's requirements in a visual form, trying to give people a feel for what it was that the Board were wanting to achieve, so-- but it wasn't creating an entire design for a hospital. It was painting pictures about certain elements, if-- That's the best way to describe it. I don't know if that's helpful.

THE CHAIR: Let me just tease this out a little bit. The exemplar design, if I understand it correctly, is just a possible proposal which a bidder may or may not choose to follow, but it's a hint. Well, it's more than that.

A A starting point.

THE CHAIR: You say it's what the employer at the pre-competitive dialogue stage thinks it wants.

A Yes.

THE CHAIR: Now, I think we know, in the case of the Queen Elizabeth, in the level of massing, there was, in fact, a change from what the GGC thought it wanted and what it decided it did want. Am I wrong about that?

A I think where that's coming from is that the 11 departments were produced in isolation, right? So, if you imagine you weren't building anything

other than one department, this is what you might want, right? But once you try and mass 90-odd departments together into one building, you then end up having potential compromises, changes, tweaks and all those sort of things.

So the exemplar design laid out for those 11 departments what perfection – if that's the right word – as it was understood at that point, might have been for that alone, but when you put all the pieces together, it's not possible to create perfection in every place, and there is always the piece of compromise that says, "Well, because of the shape, because of the interaction, because of the adjacency, we need to move that and do this," and so you never actually end up with that in the end.

So those 11 departments were produced in isolation. They weren't into the mass of a building because the mass of the building hadn't been designed, so that's probably the difference between, you know, what you might have as a discussion.

The other thing is, of course, that people's minds develop because you do the exemplar design with one set of designers who put their ideas into that, but once they come back to the same users in a second series of meetings with a different designer, you might get better ideas rather than what was in the exemplar design because people have thought about it since. You know, their minds have moved on and it's a year and a half later.

So it really was just painting a picture of what the Board wanted and, you're right, the learnings of that were used by both, you know, the user groups and the eventual designers, Nightingales, to advance their design.

THE CHAIR: It's probably not critical to any of the questions we have to turn our attention to, but I would like just to understand, what is the information that the potential bidder is getting from the exemplar design? I mean, you've said----

A They're getting----

THE CHAIR: -- there's an indication of massing and 11 example----

A I think it's more-- It's probably-- it's more about flow and operation within-- how does the patient flow through the department?

THE CHAIR: Right.

A You know, how is treatment done within the department? What facilities are required? So, you know, if you have, you know, critical care, you know, where do you have your nurse station? Visibility. You know, how does the patient come into the critical care department? What-- You know, do you have high dependency? Do you have,

you know, intensive care and how does it flow through?

So I think that's the type of information that the bidder is trying to get from the thing. It's about understanding how the departments will work because there's been work done with the user group to say, you know, "If you laid it out like this, would this work for you?"

So that's the example of how that department might work. Now, that would be developed and changed in the next stage, but that was what it was setting out and that's what the bidders were using it for.

THE CHAIR: Thank you.

MR CONNAL: I think you said about 11, including an adult ward and a children's ward, as far you can remember----

A Yes.

Q -- and obviously there were many adult wards.

A Yes.

Q I think I'm right in saying that your witness statement indicates that while something like a sample of 11 was taken, the final total areas, if you can put it that way, was somewhere in the order of 96----

A Yes.

Q -- and that's the point you were making.

A Yes, I mean-- and some of those departments are quite small, three/four rooms – audiology, things like that, you know – and other ones are very big, wards being the obvious mass.

Q So, you deal with that on page 205 and you explain that these were just samples, and you explained in paragraph 34 that to get to the exemplar design involved lots of meetings between the Project team and proposed end users, presumably in the kinds of areas that were being used as the samples.

A Yes.

Q You describe your role during all of this as a "facilitator".

A Yes.

Q You're asked in paragraph 36 what your knowledge was of the employer's requirements and, indeed, the guidance documentation, some of which was said to be compulsory and some of which was said to be considered rather than necessarily followed, and you say you were familiar with that, but, in the middle of paragraph 36, "the technical content and application was beyond your remit and understanding".

So does that mean – we'll take the one that we're always talking about, which is SHTM 03-01, hospital ventilation – you were aware it was in the list and aware perhaps generally of the kind of things it dealt with, but the detailed

content wasn't something you were on top of?

A No, because that's a mechanical engineering document about ventilation which, you know, to be fully understood, you would need to be an engineer.

Q What about another document that we've heard about, Clinical Output Specifications? Did you have any involvement in these?

A Very limited.

Q Very limited.

A Yes. They were primarily done by Heather and Mhari along with the user groups.

Q Right.

THE CHAIR: Sorry, Mr Hall.

A Sorry, they were done by Heather Griffin and Mhari McLeod along with the user groups, typically.

MR CONNAL: Then, in paragraph 39 on page 207, I come to it because it's obviously a point you were very keen to ensure we noted, that while the exemplar design was important, it was never built as such.

A No.

Q So, it's not another question of somebody saying, "Well, here it is, just go on and build it."

A No.

Q That's not the way it worked.

A No, you could-- I mean, as I say, it was only a sample of departments. It didn't consider how those departments, you know, married up with the rest of the hospital or anything, so you would never have been able to build what was in the exemplar element.

Q Yes, and I think probably Emma White told us about this. What was done, as you illustrate in the same paragraph, is the 11 that had been dealt with were redone----

A Oh, yes.

Q -- as part of the overall design. It wasn't a question of saying, "Fine, we've got 11 filed away. Let's do the others."

A Yes.

Q Is that right?

A Yes, that's correct, and that in itself presented some challenges because, as I say, in some instances, there had to be compromises, so, you know, there were some debates about, you know, "Well, actually"-- Some of these consultants would have said that they preferred the exemplar, but it didn't work into the overall building.

Q Thank you. Well, my Lord, I am, in terms of the witness statement, going to move on to a slightly different topic now, if this is an appropriate time to take our break.

THE CHAIR: As I said, Mr Hall, we usually take a coffee break at about half

past 11, so could I ask you to be back for ten to twelve?

A No problem. That's fine.

THE CHAIR: Thank you.

(Short break)

THE CHAIR: Mr Connal.

MR CONNAL: Obliged, my Lord. (To the witness) Just before we move on to the next section of your witness statement, I've got one or two slightly random- appearing questions, because that's the nature of this beast – as soon as we stop talking, we suddenly think of something else, or somebody else thinks of something else.

The first question, and you may not know the answer to this: do you recall when Currie & Brown last billed GGC for Wallace Whittle's assistance?

A No, I wouldn't have been involved in that. Sorry.

Q Another one that perhaps I should have asked you at the time: you described, in the course of trying to explain how some of the discussions with clinicians about what they wanted proceeded – that one had said to you, "Well, the SHTMs are balderdash". With depressing inevitability, somebody has said, "Well, you better find out who that was." Do you remember?

A I would prefer not to say, I'll be honest. I think that was something that was probably said in, you know, a light-hearted mode. I think that would be unfair on the-- an individual, to name them.

THE CHAIR: Sorry, could you just repeat the question, Mr Connal?

MR CONNAL: The witness, my Lord, explained earlier – in an endeavour to illustrate some of the issues that arose where clinicians wanted X and they were being told they can't get it because of the regulations or the guidance, which pointed in a different direction – that the witness recalled one clinician referring to SHTMs as "balderdash". At least one of the CPs is interested in knowing the answer to that question.

THE CHAIR: I have to say, I don't regard that remark as so discreditable-- or, indeed, as discreditable at all.

MR CONNAL: Well, in that case, perhaps I would ask the witness, given what his Lordship has just said about the remark and what you've already said about the circumstances in which it was made, if you would tell us who it was.

A It was Carol Davis.

Q Carl or Carol?

A Carol.

Q Carol. Thank you very much.

THE CHAIR: I suspect harsher things have been said about SHTM 03-01.

MR CONNAL: Just, probably, a question which impacts on our understanding of processes-- When we were going through what Wallace Whittle had or hadn't done and where they might or might not have appeared post-January 2010, you were explaining that there were these sort of review meetings while things were being put together to go into a final version before the full business case had to be done, and you said there was a bigger one and then a sort of final version.

You also mentioned there were discussions about possible conflicts or inconsistencies between different pieces of the guidance or employers' requirements. Do you remember telling us about that?

A Yes.

Q Am I right in understanding that the, if you like, agenda for these discussions was purely driven by what Multiplex had identified as such issues rather than, say, the Board had done?

A Yes, cos that was their responsibility.

Q So it's not that the Board is going around checking things and saying, "We have a problem"; it's Multiplex who are saying, "When you look at this, there's this issue"?

A Yeah, it was Multiplex's responsibility to deliver the hospital in

accordance with the employers' requirements. Where they identified there was a-- like a-- a conflict, then it was their responsibility to raise that and seek agreement to the alternative design solution that would overcome the conflict.

THE CHAIR: Was there a particular forum for that or process for that or was it ad hoc?

A Well, I think, in that period of design, the process for mechanical electrical and plumbing installations-- the process was those review meetings that Wallace Whittle attended, because there was no other forum where there was a specialist on the Board side to do that.

THE CHAIR: Right. I probably should know where this fits in. There were specific design review meetings?

A Yes. That was the August and the October of----

THE CHAIR: Right, are these the occasions of the presentations that you did?

A Yes.

THE CHAIR: Right, okay, so, it wasn't a regular course of meetings?

A No.

THE CHAIR: Right. I've got it. Thank you.

MR CONNAL: Well, I'm now going to move back to your witness statement. We'd reached page 207 of the bundle, and I'm now coming back to things that

might be laid at the door of a project manager.

Now, whether that's Mr Moir or you, or both, we'll see as we go forward, because we're going to go to the issue of the removal – what's been described-- I'm afraid sometimes the Inquiry has put labels on things that you may not think are accurate, in which case you can tell us, but it's been described as "the removal of the maximum temperature variant". You say, well, you had no technical involvement in this because it's not your area of specialism, but you were aware of it through your project management role.

A Yeah.

Q Now, I suppose that the question I wanted to ask about it was this: if you change a particular parameter to which everything else then has to fit, would it not be obvious to a project manager that that could have knock-on effects on other issues? So if you change the temperature, could it affect – whether ventilation, IPC, I don't know?

A That would be reasonable, yeah.

Q In your project management involvement, would it not have been part of the role of those project managers who were aware of this to point out to Mr Macintyre – whoever was driving it – that this could have other consequences and, therefore, these needed to be explored first?

A I think this is the point at which, potentially, I need to just clarify the-- the point as to when the decision was made and also enacted. So there was a request came in from Alex Macintyre, based upon the experiences, again, from the ACAD hospitals, about overheating. So I would have referred to this as "an alteration of the maximum temperatures" really (inaudible). But, yeah, and I take your point,

Q Yes, yes.

A Yeah. So, he requested that the project look at this. So the project looked at this, both prior to entering into the initial contract with Multiplex to design the hospital-- So we looked at it in December 2009.

What we agreed to do at that point was effectively to make the-- to agree, once we got the kind of-- the two parties – ZBP, Wallace Whittle – into a place where they thought that it was reasonably likely that we could achieve, you know, an acceptable outcome, that that was inserted into the contract for the design.

So the decision wasn't made at that point. All you were doing was putting a line in the sand that said Multiplex's liability was to design the building to those parameters. That parameter could be changed at any point from 2009

through to 2010, whilst the consultations were done with infection control, done with people external to the Board – Peter Hoffman and the likes-- through.

So the decision in 2009 was to agree that this was a reasonably likely option and that it could be built into the design contract so as to be fully developed when the design of the hospital was developed. Only in 2010 was it then effectively enacted.

So, as I say, the decision in 2009 was to consider whether it was likely to be achievable in an acceptable manner and, to my mind, Wallace Whittle and ZBP agreed that, based upon precedents in other hospitals and things that had gone before, there was a reasonable likelihood that an acceptable outcome could be achieved, and therefore that was the baseline that was set for what was in the contract.

The piece about how it was then designed and developed and approved happened in the following year. The decision wasn't effectively made in 2009, it was made in 2010, because that's when the design was completed.

Q But am I not right in thinking – I'm jumping ahead a little bit – that the reduced maximum temperature – just for simplicity, let's not worry about the hours for the moment, 28 to 26 – actually played a significant role in driving what we've come to hear about as "the ventilation derogation", which was agreed in the contract?

A Well, that is-- that's correct, but all I'm saying is that there was an opportunity-- So the decision in 2009 was to accept that into the terms of the contract. If during the following 12 months, there had been an issue with that, and it hadn't been taken forward, there could have been a variation to the contract to do something else.

Q I'll come back to this, I think, when we come to the ventilation derogation, because at the moment, I'm struggling a little to understand how you can have a conversation about the ventilation derogation, the gist of which is, "Well, now that we've got this lower temperature to work with, we have to cut the air change rates. Here's a way of doing it." And then say, "Well, don't worry about it. We can do something different later."

A No, no, I'm not saying that. What I'm saying is that the finality of the decision was not until 2010 because that's when the design was concluded for all the systems. What happened in 2009 was that it was agreed at that point that there was a reasonable prospect that a solution could be found based on that, and therefore the terms and cost of the contract – there's a target price and also

what was in the contract – for the design, because Multiplex wouldn't accept going forward without some line in the sand, right?

So we had to put a line in the sand which said, "That's what you've based your price upon," and there was a reasonable assumption between ZBP and Wallace Whittle that the solution that was put forward at that time could be made to work. If, as the design developed, that was proven not to be able to work, then it could have been varied at that point.

THE CHAIR: I was sharing Mr Connal's, I think, failure to follow, but can I explore this a little? When you talk about "a line in the sand," you mean, if I understand you, that Brookfield were being asked to price on the assumption that they had to achieve 26 degrees?

MR CONNAL: Correct.

THE CHAIR: Right.

A And that the way they would do that was with the reduced air changes. So that was the pricing assumption, so it gave them a line in the sand. If it was then proven not to work or to be something else, that would instigate a compensation event under the contract, which would then be assessed, that could either be positive or negative in value.

THE CHAIR: Right, I think I have it, but I think what Mr Connal was concerned to explore or confirm was that the decision on the maximum temperature was a reason, or perhaps the reason, for the what we're describing as the agreed ventilation derogation. I think I understand if Brookfield are being required to price on the assumption that it's 26 degrees, I think I follow why the temperature leads into the decision on the ventilation derogation.

A It's certainly a reason, yes.

THE CHAIR: Right. Do you feel I've got the point, Mr Connal?

MR CONNAL: Well, I wouldn't speculate on whether my Lord has the point or not, but my Lord can be assured it will emerge again in the not too distant future, so that hopefully we can all be clear what the point is, because at the moment I'm struggling a little with the contractual sequencing here----

THE CHAIR: Mm.

MR CONNAL: -- although as Mr Hall has pointed out, it may be that what we're being told is that the contract was then locked in, and that meant that any change from that required a compensation event, and as Mr Hall technically points out, a compensation event doesn't necessarily mean the paying of more money but might.

I suppose that the reason I'm asking about it, Mr Hall, is that one of the things we've had drummed into us by other

witnesses is that you need to sort the ventilation early, because it impacts on so many of the construction elements?

A Oh, yes, and the point I'm making is that there was 12 months to do that sort, because actually the instruction to proceed did not-- was not until December 2010, so there was further consultation through the period of 2009 into 2010 on this subject.

Q Consultation with who?

A I've referenced Peter Hoffman, for example, in my witness statement.

Q Yes, but that was in 2009 when the discussion was taking place.

A I think there was further discussion as well. It's my understanding.

Q Again, one of the reasons we're asking all these questions, Mr Hall, is that the existence of the ventilation derogation appeared from the evidence the Inquiry's heard to be largely unknown outwith possibly one or two people in the project team, many who were not by then present in 2015 when the hospital opened.

So we have a slight issue here to understand how everything actually happened. So if I'm asking you questions that don't make sense from your understanding of what happened, please just tell us. The next topic it touched on in your witness statement is chilled beams, and, basically, you said you have no technical knowledge about these at all?

A Yes.

Q Chilled beams, as we'll see shortly, played a part in the proposed solution that you mentioned that led to the changed air rate derogation. Were you aware that one of the other bidders had pointed this out to the Board during feedback on the bidding process and said, "You won't get your air changes if you use these chilled beams?"

A I've seen that document subsequently, but at the time I wasn't aware of that.

Q Do you know who would have been aware of the bidder feedback?

A The bidder feedback, I presume, would have gone to Peter Moir.

Q Right. So somebody would have known that it was being pointed out at that stage, you know, it's going to give you an issue with air changes if you go down that road?

A Mm-hmm.

Q I'm asking that because I think what you go on to say on page 209 is that the people responsible for making sure that the requisite SHTMs air pressure differentials, all that stuff goes into the employer's requirements were actually ironically Wallace Whittle, working for you. That was part of their role.

A What? To insert those into the (inaudible).

Q Yes, yes, to make sure they were there.

A Yes.

Q Yes. Now, on page 209, and I'm not going to ask you about the particular question, I'm going to ask you about a definitional point. You asked who was responsible for HAI-SCRIBE, and you say, "The Board was responsible."

Now, you use the phrase "the Board" quite a lot in your witness statement: "It was the Board to do this. The Board should do that. The Board were told this." Am I right in understanding that when you use these phrases in relation to the work you were involved in, you actually mean Peter Moir or Alan Seabourne?

A Not always. I mean, many of these things, as I understand it, were taken to sort of board-- project board meetings, which included the likes of Helen Byrne and Robert Calderwood and others, so when I refer to the Board that could include up to that level as well. I didn't necessarily see sight of what was all escalated, but I was aware that certain issues were escalated beyond the direct project team into the structure of the Board.

Q Well, we'll come to that particularly in the context of the ventilation derogation, because as mentioned, the Board repeatedly at that stage, and we'll need to understand at that point exactly who you mean when you make the statements in your witness statement.

The next point that you were taking us to was what we call technical review group meetings and in fact I won't bother putting up these minutes, because you've explained your position; your role was simply to make sure that all the documents were there and these got organised, is that right?

A Yes, correct.

Q And then you say on page 210, "Compliance with SHTMs and ATMs was extremely important." And you describe it as a fundamental requirement of the employer's requirements. Now, that's an interesting statement, of course, because when we come to the ventilation derogation, we know that there was a departure from what was said to be a fundamental part of the employer's requirements which had been put together by, among others, Wallace Whittle. Is that right?

A That's correct.

Q Yes. And you say you believe it was a term of the contract that they should be complied with. Now, I'd like to take advantage of your experience here. What we've been looking at is a situation

in which an enormous amount of effort has gone into creating the employer's requirements and everything that goes with that list of guidance, visual indications, meetings with user groups, a big, big pile of effort has gone into creating something called the "employer's requirements."

Do you think, from your experience, it was understood by the key players in GGC, presumably the project team, and those who were talking to the project team, that any of these requirements could be dumped as a result of the discussions which led prior to the contract being signed by simply being removed?

A I think "dumped" is a, you know, not the right word.

Q Well, "removed."

A Well, as I say, to have a derogation or an alternative design solution is not an abnormal circumstance. I think, you know, any development of the scale that this is, you know, will come up against conflicts in terms of what is within the whole suite of documentation. And only when you design the building through can you understand what all of those issues might be.

Q Well, I can understand that point. What I'm trying to get at is whether you have any view on how well it was understood by the key board people that potentially, you know, they could have spent a very long time working on a particular requirement, but in a discussion involving only the project team that could be dis-applied.

A I don't believe the discussion was only within the project team. My understanding is that and then, you know, others will be able to confirm this because they were literally, you know, would have had those conversations. But my understanding is that the conversations extended beyond the project team into Infection Control and into management.

Q As a matter of-- you've set this out somewhere – I'll find it when we get there. As a matter of contract arrangement, a departure from employer's requirements could be authorised by Peter Moir as the NEC project manager, is that right?

A Contractually, yes.

Q Yes. Do you think that was understood widely by those who are working on producing the employer's requirements?

A On producing the employer's requirements?

Q Yes. Well, we've talked about what I might describe as a big team effort to create these employer's requirements, lots of input from different people from GGC, did they understand that the way the contract was set up, the project

manager could divagate from these?

A I would have thought that would be the case. I mean anybody with a basic understanding of NEC contract knows that the communication to alter the contract comes from the project manager.

Q How widely do you think, from your knowledge of the people you worked with, was there an understanding of the NEC3 contract?

A If Douglas Ross was here, we could have checked with him, so apologies, but I'm going from memory here. I believe that an NEC briefing was given to the project team by Douglas.

Q Now, you can see where we're going with these discussions, because the next question you're asked on page 210 is, well, whose job was it to make sure that these fundamental requirements got not only put in in the employers' requirements, but got kept in place? Your answer to that is, "Well, everybody in the project team." Does that include Currie & Brown?

A Well, in the sense that I was providing project management support to Peter, yes.

Q The next topic you're asked about is BREEAM. Now, I'm not going to delay us on BREEAM because your answer on BREEAM is that you don't think it was given more importance than SHTM compliance and that's not something you would expect to happen. That's on page 211 of your witness statement, at the foot of paragraph 53.

It so happens that general approach coincides with a number of witnesses who've been asked the same question, so I don't need to ask you anything further about that, and you're not really able to help us with the 80 kg of carbon target, because that's outwith your expertise but maybe within the expertise of others we'll hear from.

A Yes.

Q So that then brings us to the competitive dialogue process, and essentially, what you say there is your job was to make sure all the sessions happened and were administered properly and you didn't show one bidder what the other one was saying and practicalities of that kind. That was the role that you understood you had.

A That's correct.

Q Yes. Now, the next topic that you cover is the selection of a sealed building design. Now, we've seen lots of communications about whether you can have sealed buildings, partially sealed buildings, buildings with some of the rooms naturally ventilated or not, and the design, in that sense, is not a matter that you're here to tell us about, but you were clearly aware that there were discussions about this.

A Yes.

Q You say something I wanted to ask you about in paragraph 58. You say you were aware of these discussions, but it was Alan Seabourne's responsibility to obtain approval for that decision. Now, where would he go to get that approval, from your understanding?

A I would have thought he would have gone to, you know, the senior management level of the Board, and directly in that line at that time was Helen Byrne.

Q So you think, at least, that that would be something he would need to go to her and seek approval for?

A Well, I think it would be something he would make them aware of.

Q Right. Well, I'm just using "approval" because "approval" is the word that you used in your witness statement. Is it, then, more a question of it's something he should tell her about?

A Yeah, I would have suggested so, yes.

Q And he would just make the decision himself?

A The decision is based upon the advice of the experts, so he would be communicating the advice of the experts.

Q Yes. And at the top of 213, you're asked, so far as you can recollect, what the rationale for a completely sealable building was, and that was to minimise risk of infection as well as reducing odour nuisance. We'll come back to odour when we touch on carbon filters.

Then you take us further through the chronology by dealing with the bid evaluation, and you explain who was participating in it. Now, you say representatives from the technical team; that's your group of sub-consultants that we've already discussed.

A Yes, that's correct.

Q And then Alan Seabourne, Peter Moir, Frances Wrath and Mhari McLeod, did they have expertise that was relevant to assessing bids?

A In terms of the clinical functionality element, I would suggest yes.

Q Thank you. Then you're asked again at the foot of that page probably the same question you've been asked earlier and answered, "Was SHTM compliance important during this process?", and you say yes it was, but other things might crop up that cut across it, but patient safety and comfort were of paramount importance.

A Yes.

Q That's your recollection of that process.

A Yes, correct.

Q Then there were presentations. Now, we now come to the

topic of what the Inquiry has called the ventilation derogation, so if you just allow me to use that label for the moment.

The two initial questions I wanted to ask you, and one of them harks back to the point that we had a little bit of understanding difficulty earlier-- The impression that a reader of the exchanges may get is that the only choices available to the Board at that time were either to say, “Yes, we’re prepared to agree this,” or, “No, we’re just not prepared to agree that at all.” There weren’t other options on the table. Can you remember?

A This is the point I was trying to be clear about. This was an option about what should be included in the target price. The design was still to be developed. In 2009, there was no full hospital design. There was a period of 12 months to fully develop all of the systems going through, so in order to get to the point where we have agreement on what is contained within the target price in 2009, we have to put something in against this.

What is reasonable to put in against that was the discussion between ZBP and Wallace Whittle, who then advised the Board on the preferred option to have as the line in the sand. The following period then develops the design of the solution, and there are further discussions around the subject in the following year before it gets to instruction to proceed, at which point it is committed to.

Q You can take various views about the significance of the decision that was made. We’ve had a view expressed that it was a matter of sensible detail. Another view might be that building hundreds and hundreds of rooms in a flagship hospital at less than half the air change rate recommended by guidance was at least potentially quite a significant step. Where in the process, 2010, do you recollect any discussion of whether that should or should not happen?

A That would have been in some of those workshops, for example, reiterating that issue, because that obviously continued to fall outwith the exact requirements of the Employer’s Requirements. I also believe that there were other discussions with other members within the Board in terms of going to Infection Control and going elsewhere to discuss this matter.

Q Do you know who in Infection Control?

A I believe it was Craig Williams.

Q Now, by that time the contract was structured that if someone had persuaded the Board to say, “Whoa, whoa, we can’t do this; we cannot go to Scottish government,” for instance, “and

say, ‘We’re about to build a hospital that doesn’t comply with your guidance in this respect,’ or we might not convince them,” or whatever the point was, that would have then led to a compensation event if a different option was----

A Yes. Correct.

Q And would have presumably led to a complete revisiting of the consequences of that in terms of the entire ventilation structure.

A Correct.

Q Because we’ve heard from other witnesses that the number of air change rates influences ceiling voids, size of air handling units, size of ducts and everything else that would then have to feed into the construction process.

Now, the other thing I wanted to ask you about this process before we look at some of the details is that-- We know it’s in the log, and I’m gonna have a discussion with you about the use of the log for that purpose later, but there are obviously meetings, and other discussions have taken place in a relatively short space of time about this topic, and we don’t seem to have any-- apart from the emails introducing the existence of the meeting, we don’t seem to have any records of any of these meetings from anyone.

Now, would that not have been a project management responsibility for

Currie & Brown, either in the shape of yourself or Mr Baird, was also involved?

A What period are we talking about here, sorry?

Q The exchanges in December 2009, which led to the ultimate agreement of the ventilation derogation just before contract signature.

A The type of meetings we’re talking about, the log was the record of the meetings. The actions would be about the log, and the log would then follow that.

Q Well, the log doesn’t-- I mean, it tells you something, but it doesn’t tell you who said what at the meeting in the project room or anything of that kind. Should we not have notes of these of some kind, minutes?

A These meetings were, you know, rapid, and the log was the agreed tracker of those meetings.

THE CHAIR: Are you envisaging, as it were, internal meetings as opposed to Brookfield GGC meetings?

MR CONNAL: Yes. I’ll take this witness to each of the communications, but one of the challenges that the Inquiry has had is that we know there were meetings; there are notes saying there were meetings; many of the witnesses can’t remember what was or was not said exactly at these meetings, or don’t even remember in some cases whether they

were there. So we don't have any record of the exchanges on this matter which then led to the final agreed position. Is that not a fair project management point to make to you?

A Formal meetings would be minuted, but these were, you know, ad hoc meetings which were held to resolve issues which were covered by the log, and not necessarily all with Currie & Brown present.

Q Well, would that not be a project management issue for you to know what was said by whom about what?

A As I say, the project management was a team, you know, with activities going on. It wasn't just one person.

Q Right. Currie & Brown were assisting on the project management. Would it not have been part of Currie & Brown's role to make sure that records were kept on this important matter of all the discussions?

A As I say, the actions were caught on the log. That was the tool that was used.

Q Well, let me just ask you about the log. This is described as an M&E clarification log. Now, in the course of other evidence, it's been suggested if you're going to make a delegation of this scale affecting hundreds and hundreds of rooms, the correct place to record it is not in something called an M&E clarifications log, which contains any number of detailed points on a whole range of issues; it ought to be brought out in something rather more formal and separate, perhaps a derogations log or a major derogations log. Now, do you have any view on that?

A The logs were part of the contract, so as far as I'm concerned, in a normal construction contract the logs are the normal place you go to find the variances. The body of the contract effectively, in most cases, is normally a standard contract with X7 and X12 and all those sort of things appended to it. If you're looking for the exceptions, you look in the logs. That's normal.

Q Well, if you were-- You know that because you've been in the construction industry all your life, but in order to find the derogation, you would need to know that something of that type first of all would be in something called an M&E clarification log, and then you would need to go to the M&E clarification log and work your way through it until you eventually found it. Is that not asking too much from anyone who's not had a lifetime in construction?

A I'm not sure who you're meaning in terms of who's looking for it, though.

Q Well, somebody needs to be able to find it, and part of the issue that the Inquiry has had is it's being told nobody knew about this. The hospital was opened and people weren't aware of it because it wasn't overtly present in any readily found document.

You could find it, no doubt, if you went to the contract and you worked your way through the contract priority list and you discovered the M&E clarification log had priority and then you went, "Well, that's where I'll find a derogation, won't I?" and go and look at it and work your way through all the paragraphs in it. I think a question has been raised and I'm just asking for your view as to whether M&E clarifications is even a correct description of what was done here.

A In terms of that communication, I think you would have to refer that to Alan Seabourne. I mean, Alan Seabourne was fully aware of this and, obviously, you know, he was the main conduit into the Board.

Q Yes. Well, do you accept there's at least a question as to whether a change of this scale for this project should have been in something called an M&E clarification log?

A It's in the correct place in terms of the contract but whether it should have been somewhere else in terms of visibility within the wider Board is a different question.

Q So I can put a context to that question, part of my reason for asking that is that the employer's requirements, which refer to compliance with SHTM 0301, among other things, remain in the contract bundles, as it were, unaltered, unamended, without any indication that there has been a departure from them. So, if you went to the employer's requirements, you would see compliance with SHTM 0301. You wouldn't see-- except when air changes are meant for general rooms.

A Because the clarification log is the place where the changes to the contractor or where the exceptions occur and are recorded.

Q So, in the context of the ventilation derogation-- I've asked you about your project management role, so I won't ask you that again, but you're using Wallace Whittle as technical advisors on the job, and you're asked, page 215, was it part of your role to ensure the importance of SHTM was stressed and to ensure there as a process to inform the Board of any significant departure from SHTM. Now, by that, I do not mean Alan Seaborne. Was it part of your role to make sure that the wider Board structure were aware that something of this kind was going on?

A No.

Q Why not?

A Because I reported into Peter Moir and Alan Seaborne, you know. I wouldn't have seen it as my responsibility to go to senior members of the NHS management and inform them.

Q Part of the reason I'm asking that is that it may be, from what I've seen so far, that Mr Seaborne will say that it was your project management job to make sure that that went wherever it needed to go within the Board structure. Do you agree with that?

A No, my duties were delegated by Peter Moir, so I reported into Peter Moir.

Q Now, on the same paragraph, you're asked about the importance of SHTM, and we've covered the admitted importance of SHTM. You say that was stressed by you "and by members of… Technical Team, including in the Employer's Requirements [okay, so we're past that now] and during discussions about any proposed departures from SHTM."

Now, when you say that, do you mean during these discussions over this ventilation derogation, or is that just a general comment?

A It's a general comment.

Q Do you remember you or Mr Baird, for instance – because I know he also participated in this process – stressing, during these discussions, the importance of compliance with SHTM?

A That's why those discussions were happening, because there was, like, competing requirements that required a review and coming up with an alternative design solution.

Q Well, that's not quite the question I asked you. We know there were various exchanges around this before a final decision was taken. Do you remember whether Currie & Brown stressed in these discussions the importance of compliance with SHTM?

A If this is the December 2009 meeting, I don't believe I was personally in that meeting, so I don't think I can comment. My memory does not have me in that meeting.

Q Are you aware whether anyone from Currie & Brown stressed that?

A I would suggest you to ask Mark Baird.

Q We'll see Mr Baird next week, so I'm obliged for that. Then you say:

"The logs were understood by the Board, and by all on the Project, to be the correct channel for communications on such issues."

Now, I can understand Mr Moir might understand what was going on, and Mr Seaborne, because, for the reasons you've explained, they were directly

involved in how things were done and how things were recorded. Is that what you mean by the Board at that time, the project team?

A I would take it wider than that. That is the project team at that point, but I would take it wider than just those two individuals. These things were discussed at regular review meetings-- progress meetings with the wider team with others in the room.

Q One of the issues we have – and this bit is nothing to do with you directly, Mr Hall, but I need to ask you about it – is that the Board has – by that, I mean the Board of the corporate body – has searched for records or communications of this decision being recorded as discussed at any of the many committees, bodies and other such exercises, and has not, according to Mr Steele, who gave evidence here in the last sessions, found any such record of any such discussion at any such body. Can you help us at all as to why that has happened?

A I would simply say that I think you have to ask Mr Seaborne.

Q Thank you. I just want to ask you about the tailpiece of paragraph 68, "Post award of Building Contract…" So this is after this is agreed, and then-- I was about to use the word "locked in", but you'll tell me it wasn't put into the contract. You say:

"… responsibility for informing the Board of any significant departure [and I assume that's from SHTM] lay with Multiplex."

A Correct.

Q Now, where would we find that responsibility laid because there's no indication that-- well, there is no record, I don't think, anywhere of Multiplex going to anyone outwith the project team and saying, "We are obliged to tell you that this is a delegation."

A It's to advise the project team that it's a delegation. So, they have to highlight it to Peter Moir as the project manager that they are unable-- or, you know, proposing not to comply with something that is in the employer's requirements.

Q But that's what they've just done in the discussions which have led to the derogation being agreed, is it not?

A For this instance, yes, but also that then occurred later on as well in other areas and issues when there was other issues that had to be discussed.

Q Well, just let's stick to this one or we'll get confused.

A Okay.

Q Multiplex advisors have said, for this reason or that, we just can't make it work, therefore here's a solution and there's a discussion about it and then

there's an agreement on it. That's putting it without asking you to look at any of the documents. After that's then put into the contract, which is then signed a matter of days after some of these exchanges took place, does this comment from you anticipate Multiplex doing something to take that further?

A They did.

Q Because Mr Moir already knows.

A They didn't have a design at that point, right? So, in terms of the systems-- and they then had to develop that design through the following year.

Q Can I ask you about some of the details of the exchanges insofar as you can assist us, right, bearing in mind your general statement that you were not the designer and you're not an M&E expert?

THE CHAIR: Sorry, I just want to make sure that I've understood Mr Hall's answer. You said, Mr Hall, that as at the date of the contract, and therefore as at the date when the ventilation derogation had been agreed, you said they didn't have a design then and had to develop it during the following year.

A They had a design strategy.

THE CHAIR: As a statement, I understand that to be correct, but I'm not quite sure that I've understood the significance of your answer.

A Well, what they had at that point would be a design strategy, and the strategy would include, at that point, this method of servicing those rooms, i.e. with the chilled beams, with the-- but it's not a fully detailed design. They haven't sized anything. They haven't looked at your handling size, they haven't looked at pipe size, anything like that. So, they have a complete design to undertake in the following 12 months to develop what was effectively a strategy point into a full detailed design.

THE CHAIR: Therefore? I mean, I understand the point. I just wondered if there was a significance in your answer that I was missing.

A No, and that then results in those workshops throughout that period in August and October to review how the design has developed. So, you know, they had a strategy in December. They then worked up their design through to August.

They presented that design back to Wallace Whittle, who came in in that almost like a gateway review type review on that. They went away, tweaked that again, and then came back in October, and then it was only in the December of 2010 that the instruction to proceed went ahead to go on the basis of that design.

THE CHAIR: Right. Just to make sure that I'm following, what I'm taking

from that so far is there-- in the workshops are presentations-- in August into October 2010, there would have been an opportunity to revisit the level of air change----

A Certainly to discuss it, yes.

THE CHAIR: That's the point you're making?

A Yes.

THE CHAIR: Leaving aside the consequences of doing that?

A Yes.

THE CHAIR: Right. Thank you.

MR CONNAL: We're now going to move into the documents such as they are that that we have about the ventilation derogation. One of the features that emerges from a lot of these is many of them were taking place within a matter of days of concept signature.

Is that a slightly odd point to be doing something as big as changing the air change rates of most of the hospital? You've only got a couple of days till it then has to go on paper.

A It's about a strategy. I mean, it's not abnormal that certain things go to the wire in a contract negotiation. That's not unusual. So, is it abnormal? No, and as I said before, it wasn't as if, at that point, it was an absolutely final decision because there was the opportunity to revisit thereafter. So, it was about putting the line in the sand rather than in fixing the design because we didn't have a design at that point.

Q I probably won't bother putting it up on the screen, but I will if you need it. In the course of these exchanges – and you're asked about it in your witness statement at paragraph 70 on page 216 – one of the comments that emerges-- and it actually emerges in a slightly odd place. It emerges under "Brookfield comments", but it's attributed to John Bushfield, who is not Brookfield but works with Wallace Whittle. In fact, we have a statement from Mr Bushfield, who says, "Well, I don't know who it was, but it wasn't me."

Anyway, at the time, there's a statement attributed to Mr Bushfield which says, "A deviation not accepted", and then, "Any variation would require a board clinical infection control review." Now, this is-- we're in December, so we're heading towards contract close. As the project management people who are assisting in this process, did you do anything to make sure that, first of all, there was such a review, and secondly, there was time for such a review?

A I think the point I was trying to make earlier is that there was subsequently time for review. I wasn't personally involved in this, as I said. Mark Baird was more involved in it, but my understanding is that the agreement was reached between Wallace Whittle

and ZBP. I am not aware of what other conversations went on around that, but there was time thereafter to review that with infection control.

Q The Bushfield comments, you know-- somebody's saying, "We want to do something different, which involves a delegation", and Mr Bushfield apparently, or at least attributed to him, says, "Not accepted. This needs IPC review." I'm just trying to find out if you're aware of anything being done at that time before it was accepted.

A Not that I'm aware of.

Q Because, when you're asked about it, again, in effect, in paragraph 72, you say, "My recollection is that following the comments by John Bushfield, a report was produced by Wallace Whittle discussing compliance with CIBSE standards design standards," which doesn't really meet the point, does it? That's a report on a different topic. It's nothing to do with IPC review. I just wondered why you'd explained it in that way.

A Well, I understood that there was a further discussion with Wallace Whittle and that there was reference to the CIBSE report-- you know, CIBSE standards and that was part of, you know, the agreement as to why it was a reasonable way to move forward.

Q Well, that bit I understand. I'm just wondering why you were linking Mr Bushfield's point, "We need IPC sign-off on this," with a report on whether it complies with CIBSE standards.

A Because Mr Bushfield worked for Wallace Whittle. The report that came from Wallace Whittle, I-- you know, my understanding was that that responded to, you know, the points, and the point about-- in terms of infection control, appreciating all the time scales, time of year and everything else, is-- the point I'm trying to make is that there was an ability to amend that if there was a major issue at a later date.

Q I think you suggest there was some discussion with IPC at the time or, at least, you have a recollection of hearing that there was. First of all, are you aware of any record of any such IPC review?

A As I've said before, I haven't had access to records----

Q No, no.

A -- for 10 years, so apologies. You know, I can't comment on that in terms of what might sit there. What I am-- It's very difficult to remember exact dates, timings, sequences on all of these things.

What I do know is that there was conversations at a point in time with Infection Control, with the infection control nurse, with the wider Project

Team, including people like Fiona McCluskey and, you know, Heather Griffin was, I think, involved in that as well, and probably Francis, in terms of, you know, the fact that the single bedrooms, you know, had a different ventilation arrangement. This is not something that wasn't discussed.

Now, what I can't categorically say was whether that was around this time or was later in 2010 in the period when we weren't actually developing the design.

THE CHAIR: Sorry, could I just have that again? As I say, quietly and quite quickly----

A Sorry, apologies.

THE CHAIR: Could I just have that answer again?

A Right, so it's difficult in terms of memory to remember exactly what discussions occurred at what point in the sequence. However, in the period from December 2009 through to the point where we were instructing, I am aware that there were conversations with Infection Control, both in terms of going to Craig Williams and also in in terms of, you know, the infection control nurse on the team, which did change around that time because there was a net ranking initially and that then changed to Jackie Stewart, and there was a gap in that period as well in terms of one to the other.

I can't remember the exact timing of that, but there was involvement there and with Fiona McCluskey and given that the predominant discussion about these single rooms was about the ward stack with Heather Griffin as well.

MR CONNAL: Yes. Just so his Lordship understands your last point, that is that the discussion at that time had focused around the adult general wards.

A Yes.

Q That's just where it had come from.

A Yes.

Q Yes, and in fact, you go on to say-- Well, let me just put this to you: would it be fair to say that it's unlikely that any of the IPC nurses would regard themselves as either qualified or willing to sign off on building hundreds of rooms without compliance with standards? That wouldn't be up to them, would it?

A I wouldn't have thought so, no, but they should be aware.

Q Can you help us at all as to where we are likely to find if we look-- because we haven't found, so far, any confirmation from any IPC individual confirming agreement to this strategy?

A Well, the communication with IPC at Craig Williams' level was from Peter Moir and Alan Seabourne.

Q You also say, and I need to make sure I take this from you, that your

understanding from Mr Seabourne was that, in addition, at that time, he'd spoken to Peter Hoffman about it.

A Yes.

Q Is that correct? We asked Mr Hoffman about that when he was here and he had no recollection of anything in 2009.

A No, no, sorry. No, sorry. That's the point, my recollection is that that was in 2010.

Q Oh, 2010?

A Yes, and that's why I was emphasising this piece about when the decision was made, there was still time to amend that, were there any issues?

Q I mean, we understand that, from time to time, Mr Hoffman-- I'm not sure what's happening behind us. We'll blame some construction company probably.

A I'm used to it.

Q We heard from Mr Hoffman to the general effect that one of his functions-- it's probably putting it too highly, but his role was that people rang him up from time to time and said, "What do you think of this?" or, "What do you think of that?"

We haven't found anything in writing from Mr Hoffman on the ventilation derogation as such, nor have we found anything in writing asking him for advice on whether that should be agreed or not. Do you know what the content was of any discussion between Mr Seabourne and Mr Hoffman? If you don't, just tell me.

A I don't. I don't have the specifics.

Q No, the part of the material that was circulating at the time was something called a "ZBP Ventilation Strategy Paper". Now, you're asked about that on page 218 and you think you must have become aware of it sometime around the date it was produced, so 15 December.

Now, is your answer going to be the same to the question I had then that, here is a document coming from a specialist a matter of three days before the contract was signed on the 18th; it doesn't, on the face of it, give much opportunity for debate, discussion, analysis or anything else. Is that a fair point?

A Yes but, again, I reiterate the point that there is still the flexibility in the following year to address that. So the question to, you know, Wallace Whittle at that point is, is this a reasonable way to go forward, i.e. does it give us a line in the sand for the target price?

Q In fact, your evidence is that you, thinking back, you probably knew about it at the time but you don't recollect doing anything with it or being involved in any discussions about it?

A No. As I say, I think probably better-- you know, in terms of that

conversation, Mark is probably better placed to answer that.

Q Just so we can put the context around that, if we go to paragraph 81, you refer to an email exchange between Mark Baird and Stewart McKechnie of Wallace Whittle, so I think we should put that up, bundle 17, page 2861, and there were various things said on this. Am I understanding your evidence to be that you were copied in but you weren't primarily involved in these exchanges?

A Correct.

Q Can you help us at all when it says, "WW to take Board through this," who "Board" would mean?

A That would be Alan Seabourne, Peter Moir and others within the Board Team.

Q Right, and I think there's another one at 2869 we probably better just put up in fairness to you. I think your answer is probably the same, that you're copied in but you think that was about the extent of your involvement. You were aware of it happening, but not directly concerned?

A Yeah. I mean, as I say, a lot of these things, you know, it's about covering for each other. It's about team-- You know, I mean, you're copied in so as if something occurs. I actually suspect on 15 December I was possibly on holiday, it is my birthday, so it may actually have been a day I wasn't even in the office but it would only have been the day.

Q Because that's another email which appears to infer there was then a meeting and one of the challenges the Inquiry has is that we don't have any record of that meeting. We think it probably happened because there was a meeting room booked or something, but that's all we know.

A Right.

Q Can you help us at all?

A No, sorry.

Q One of the topics that's then raised about this whole issue is whether, given what was being suggested, someone should have been doing a risk assessment to look at all the possible consequences and issues in a sense of something formal rather than just phone somebody up and ask them what they think, or have a half-hour meeting that there's no record of.

Your answer, when you were asked about that, is that Currie & Brown had no responsibility for risk assessments and you were never asked to produce one. If there had been one at the time, either requested or produced, would you know?

A Possibly.

Q Who would have been responsible for risk assessing this proposal or suggested way forward or (inaudible)?

A I think, in my answer, I said I thought it would be something that, you know, Infection Control would have led on.

Q So, if somebody wanted to assess the risks that might arise or might not - who knows until you do the assessment - arising from this proposed solution, you would expect that to be done by IPC. Were you aware of any such assessment being done by IPC?

A No.

Q Were you aware of anyone, to your knowledge, suggesting that that was something that needed done?

A No.

Q (After a pause) Let me just finish this-- get a little step towards finishing this particular part of the exercise. The picture you're suggesting to us is that there were some exchanges, a decision was reached, and it was then incorporated into the contract, as we know, in the way that we've discussed, for good or for ill, but that there would have been an opportunity to change direction in the next year had that been desired.

A Yes.

Q Are you aware of any change of direction ever having been suggested or discussed?

A No.

Q Because the alternative view might be, and I'd like your comment on this, that, once you've had your discussions, you've been to Wallace Whittle, you've bounced it back and forwards, done your thermal modelling and all that stuff, the assumption is that that's been agreed and that's the end of it, and you can go and order your ducting for two and a half air changes instead of six. Is that not correct?

A Well, the design was developed and then further reviewed so that further review, along with other discussions, would inform that.

Q Are you aware of any discussions directly on whether the ventilation derogation should be proceeded with or not?

A I am aware, as I said before, that there were further discussions in 2010 with Infection Control and with Peter Hoffman, for example.

Q About this derogation?

A As I understand it, yes.

Q Just bear with me a moment, my Lord. (After a pause) I think this is perhaps-- I'm not quite finished this sequence, my Lord, but it might be as good a point as any to pause.

THE CHAIR: We'll take our lunch break now. Could you be back for two o'clock?

(Adjourned for a short time)

THE CHAIR: Good afternoon. Now, Mr Connal.

MR CONNAL: Obliged. Right, Mr Hall, arising from one of your answers, we've been doing some digging, and that was over the definition of clinical functionality in the contract. So I'm going to ask that bundle 17, page 735 is brought up, which, with a bit of luck, will--

Now, that, I'm told, is an extract from something marked "Appendix 1" within Appendix 5 within the Multiplex Design & Build main contract, which appears to set out a definition of clinical functionality, points of access, relationship between buildings – we'll leave these aside because these are bigger picture issues for the moment – size of rooms, location and relationship of equipment, furniture fittings, etc., interrelationships between rooms, fire strategy and infection control only insofar as these relate to clinical use. Now, do you think that's what you were suggesting?

A Yes.

Q Thank you very much. You'll appreciate that part of my reason for doing that is that also allows everybody else in the room to know exactly where they can find this if they want to go and look at it over the weekend. Can I ask you another question? It's not on this document. Thank you very much.

It's largely to make sure that I'm understanding as clearly as I can one of the points you make because one of the pieces of evidence you give us today is that you say, "Well, yes, this was all agreed ultimately in the last few days before contract signature over the ventilation derogation, but there was scope for that to be reviewed, notwithstanding it was in the contract and that could be done in the next year."

Am I right in understanding – you may have told me some or all of this, but please bear with me – that one of the possible consequences of a change of approach, were it to be done in the next year, is a compensation event which might involve payment by the Board to the contractor for the consequences of the change? Is that correct?

A Yes.

Q As at December 2009, it might have been difficult to estimate what that consequence might be in money terms?

A Agreed.

Q Thank you very much. Now, I think I've probably got a reasonably clear picture of your involvement or otherwise in the ventilation derogation discussion, but I'd just like to come back to, "Who knew what and when?" because, as you

probably gather, this has troubled both the Board and the Inquiry because we haven't found convenient records.

At paragraph 96 on page 224 of your witness statement, the phrase there is, "How was it signed off by the Board?" and you refer to some comments in response to a PPP, which is arguably not a very fair question, but what you say there is that you were aware at that time – so presumably way back in December 2009 – that Alan Seabourne and Peter Moir had advised Helen Byrne, Alex McIntyre and Peter Gallagher of the agreed ventilation derogation. Can you help us at all as to why you know that?

A It would have been via conversation.

Q Did you have any understanding at that time about any of the governance structures that the Board had put in place to look after the project, different committees and so on?

A My understanding was that, you know, there was a board that sat in relation to this project.

Q Have you any knowledge as to whether this matter was reported to that board that you're----

A Personally, no.

Q Thank you. Moving on to another topic, because your witness statement then, on 225, moves on to another chapter in perfectly logically ordered chronology, can I ask you one question? Because it came up another witness and I'd like to make sure I understand your position.

As you can probably gather, there has been a discussion about how the ventilation derogation was recorded, what you can gain from that, what you can understand what you can't. We've done that – I won't ask you about it again.

Would you agree that, in general terms, that were there to be any derogation from a guidance document, such as SHTM 03-01, just for convenience, during either design or construction, then there should be a record of what it was, why it was, who agreed it, what it applies to and so forth?

A Do you mean within the contract or do you mean within----

Q As a matter of general principle, would that be a desirable thing to have?

A Well, in terms of the way, that sort of thing, it would have been addressed via the early warning process and recorded through the actions of the contract.

Q Yes. Part of the reason I ask that is that one possibility is that somewhere in the preparation of M&E design – not the user group stuff, M&E design – someone may have designed something which does not provide SHTM

03-01 compliance, and perhaps somebody has signed that off in some way, and therefore you can ultimately track back-- if you go through all the documents, you can eventually work it out where it came from, but there's no clear record at the time, so I was just wondering whether you would agree as a project manager that, in principle, there should be a clear record somewhere.

A Well, I think there is a record within the contract documentation because there are different levels of sign-off and there are instructions going to other parties.

So, for example – I'll take an example – some of the drawings relating to ventilation were reviewed by Capita because Capita received an additional instruction from the Board to undertake some design reviews, and that's-- that was the typical process that occurred within the recording of-- you know, in any derogation, if we-- if you use that word. That would-- that was the process that was followed: Multiplex notified, Peter Moir instructed Capita in those instances to undertake that review, and that review was-- then resulted in a sign-off by Capita of the drawings.

THE CHAIR: Again, Mr Hall, you do speak quite quickly.

A Sorry, apologies.

THE CHAIR: I'm not asking you to speak at dictation speed, but I am trying to take a note of what you're saying.

A Okay.

MR CONNAL: Yes, I think what Mr Hall has just said is that one example of a recording of a departure from an SHTM might be, if a proposal was made for such a departure, that Mr Moir then instructed Capita on a specific instruction to review this proposed departure, and there was then a signature on a drawing, perhaps, recording what had been reviewed. I think that's the process the witness just explained.

A That's correct.

Q I suppose my question to you is if you were looking at the contract documentation, trying to find out how it came to be that room X was built with the wrong air changes, just say for the sake-- or what appeared to be the wrong air changes, it might be quite difficult to actually find that if there is no record kept. That's what I'm getting at. Do you agree?

A In retrospect, a fair point, yes.

Q You mentioned early warnings, and I'd just like to make sure we understand what these are. In your witness statement at 225, you set out various responsibilities that became the Board's after the contract was let. Have you got 225?

A Yes.

Q There's a list there, and I

needn't go into that. The last thing we want to talk about is time and cost management. So, 98.6, "Early warning." First of all, so his Lordship understands, what does that mean?

A I always think it's wrongly named. The NEC contract is a collaborative framework. I think it should actually say "early notification", but formally in the contract it's called an early warning. When the contractor is aware of something that is arising that could potentially impact upon the cost or time or specification of a project, they have to raise an early warning. An early warning can be raised by either party, so the client or the project manager can also raise an early warning where he has observed something or he requires a change.

So there might be a scope change required by, you know, one department to bring in a new piece of equipment or something, an early warning would be raised, there would then be a meeting arranged with all interested parties to discuss and-- you know, discuss what the implications are of that. If it's agreed to go forward, you would then request a quotation from the contractor for the alteration works and then it would be accepted with the impacts of time, cost, etc., noted.

Q Yes, so this is not dissimilar to the kind of notifications that you're

required to make in other standard forms of building contract when you think something else needs done and you think you might want paid for it.

A Yeah, I mean, it's-- I think the important word under NEC is the "early" because it's meant to be a-- you are forced by the contract to notify within a maximum of eight weeks of becoming aware of an issue, and this avoids the perennial problem with other forms of contracts of a big, you know, burn fight at the end of the project.

Q Yes. Did you get involved in early warning meetings?

A Yes.

Q Did you get involved in providing technical advice in the course of these meetings?

A Only contractual or programme related.

Q I wonder if we could look at bundle 32, page 59, please. This is just trying to continue to understand your role, Mr Hall. Now, let me just see. In paragraph 7010, which you'll see on the left-hand side, there's a discussion there: "DS reviewing comments received back from C&B." Do you know what that's about at August 2010?

A Yeah, that would almost inevitably be the comments from Wallace Whittle----

Q All right.

A -- because that would have related-- It's said, "M&E process underway. Board to start signing off drawings. M&E workshops very beneficial," so that appears to be tied to the above comment, and I would suggest that whilst it came from C&B, it was obviously under the auspices that Wallace Whittle had prepared that.

Q Right. Can we look at page 163? Now, do you get involved in discussing drawings about changes here? I see there's an item involving you on 12 April 2012 and then also 29 November 2012 and in other places. (After a pause) You seem to have a pretty major role in these discussions.

A Quite a lot of them. I mean, I noticed the first item refers to "programme" – "Will update on programme for return", so a lot of my work was around programme. Yes, I was coordinating the return of these-- I wasn't necessarily, you know, reviewing all of these documents personally. There's one down there in 13 December referring that I would "liaise with Frances Wrath re returning the documents", so, in much the way as we spoke before, I was almost like the coordinating point in many of these cases.

Q Okay, thank you. 173, please, same bundle. Now, let's see if I can find the right (inaudible). I had a note that you had been preparing a sketch of something to do with the MTHW system, a proposal which ultimately didn't proceed, and I was wondering why somebody in your position was preparing a sketch on that.

A I don't recollect that and I-- Is that in there somewhere?

Q Yes, I'm not finding it in there, so we'll move on.

A It sounds odd. Doesn't sound like something I would have been involved in, but okay.

Q Okay. We can leave that document, thank you. The next part of your statement narrates various groups that you were a member of, and then we go on to the RDD process, which to some extent we've already touched on at various points of our earlier discussion.

A lot of the evidence that we've had about this, Mr Hall, splits the process into two, the first bit being user group sessions, and, for instance, I think Mr Pike told us – was that only yesterday? I can't remember now – that there were no air change rates visible on anything that the user groups were shown, which is perhaps understandable if they were looking only at clinical functionality. You participated in a lot of these, is that right?

A Yeah, obviously a significant number. Predominantly, again, in the adult hospital, critical care,

theatres and the likes.

Q Now, the other part of the RDD process that is said to exist are what were thought to be M&E design meetings, so user group meetings to discuss clinical functionality, and then M&E meetings to discuss M&E design. Now, is that how you recollect it?

A I think what I would say is that if you look at the response about the activities in the user group from where we're looking at clinical functionality, there is almost a two-way conversation for the designers to understand the needs and everything else.

If we're looking at the M&E, the M&E is predominantly set out by the SHTMs and the guidance and everything else, so, in effect, what is happening is that Multiplex are designing in accordance with all of the standards, where they raise a question, they then have a meeting, and then there was presentations on various things, predominantly about operational functionality.

So, for example, if we take fire alarms, there would be a presentation on fire alarms, including the cause and effect, and what that would have in terms of implications on how the hospital operated, in terms of, you know, how you got people out of the building, etc. So, there was less interaction in terms of a

two-way about the M&E because the M&E was set by the standards, the designers were designing to those standards and were then presenting it back.

Q Right. Thirdly, some witnesses – and, of course, recollections differ and recollections will fade over time – seem to think there were essentially two sets of meetings: user group meetings which dealt with where the beds are going and the other practicalities we've discussed, and then M&E design meetings.

Then, when GGC witnesses were asked, "Well, who would be in the M&E design meetings then, given that you didn't have an M&E designer?" that's where their knowledge ran out, other than those who suggested, "Well, possibly David Hall was there." So the idea of two sets of meetings, one discussing M&E design and one discussing UGMs is not quite correct, according to you?

A Well, what I would suggest is that they had different structures and different styles, so one was a collaborative two-way approach. The stuff on M&E, where the meetings were-- There was multiple meetings on different systems.

So you would have, you know, a meeting on water, at which the designers would present what they were doing, and

in that meeting you might have had Peter Moir, myself, you would probably have had Ian Powrie in that meeting, and you would have had others that had specialist-- you know, more knowledge on water systems from the FM part of the Board.

You would then have-- you know, you would have other meetings on fire, and in the fire case, I think we brought in representatives from Health-- not Health Protection Scotland, from-- Sorry, it was the-- the chap from HFS, Health Facilities Scotland, was brought into that, who-- who then gave us-- gave advice on what we were doing in terms of that.

So, there was not-- And there was also zonal meetings about how that, you know-- When I talk about meetings, they were more presentations than meetings, because the Board were-- the Board had already given their requirements in the-- in the form of all of the employers' requirements.

MR CONNAL: Now, leaving aside any possibility that some particular proposition came up on which a special instruction was given to Capita – and you've explained you weren't supervising Capita and you don't know exactly what they did or didn't do – was there anyone with M&E engineering and design knowledge participating in these meetings, presentations, whatever you're

talking about, for the Board?

A Beyond 2010, no.

Q Well, let me just understand it. I thought these meetings, the RDD process, was primarily early 2010 for about a year.

A No, no. Reviewable design data carried on as the design carried on. They went beyond 2010.

Q Okay. Well, maybe I'm misunderstanding the position. While the user group meetings were going on, were there other discussions about ventilation design going on?

A There were presentations on the ventilation design.

Q And was anybody participating in these presentations, from the Board's perspective, with specialist knowledge in M&E design?

A M&E operation, yes. M&E design, no.

THE CHAIR: Right. These meetings or presentations, are we talking about the period that comes to an end with the instruction to proceed?

A No.

THE CHAIR: Right.

A It goes beyond that.

THE CHAIR: Right. It's going beyond that.

A Yes.

THE CHAIR: So how long----

A In theory, design goes on for a

very long time through-- You know, you're probably talking into 2013 at least.

THE CHAIR: Right. So the design, at least in certain respects, is a process which is continuing into 2013----

A Yes.

THE CHAIR: -- and no doubt is running in parallel to the beginning of construction?

A Or beyond the beginning of construction, to be honest.

THE CHAIR: Yes.

A You know, your construction started in 2010/11----

THE CHAIR: Right.

A -- and, you know-- and then-- It must be '11, sorry, 2011, and you're still designing at that point.

THE CHAIR: Now, as Mr Connal has said, some of the evidence would sort of suggest a parallel process of user groups, probably discussing clinical functionality, and what have been described as "technical meetings". Now, you appear to have confirmed to Mr Connal that there were meetings. Or were they simply presentations – in other words, the Multiplex designer informing GDC representatives on progress?

A That's correct.

THE CHAIR: But it wasn't a matter of-- Or maybe it was, but was it or was it not an occasion for the GGC representatives feeding into the design or criticising the design or questioning the design?

A Only in terms of operation. So, for example, if we were talking about, you know, a water system and flushing, there would be somebody from the facilities department – Ian Powrie, typically – who would comment on the ability to flush out a system or alternatively-- you know, that type of thing.

So there was an operational element to the feedback, but there was nobody present in the room who could act-- challenge the design. The designer was saying, "This is in compliance with the guidance, and this is what we're-- you're getting."

THE CHAIR: But essentially the purpose is just to report on progress?

A Yes, because they were managing the design.

MR CONNAL: So, if participants or some participants in the user group sessions thought that, somewhere else, someone was checking, you know, compliance with SHTM and all the other issues that might go into the design of a ventilation system, that wouldn't really be an accurate description of what representatives of the Board were doing at that stage?

A The compliance was Multiplex's responsibility.

Q Because issues have

inevitably been raised as to what "signing off" means. You know, what did it mean when Francis Wrath or David Hall sticks their signature on one of these drawings? You're asked specifically about this, I think, at page 228, just so in fairness to you, you can see what you've said.

You say at the foot of there:

"I have been asked whether it was part of the reviewing design process to ensure that the design complied with guidance and whether this is what I was signing off on. Compliance with guidance was fully the responsibility of Multiplex and its design team and this is not what [you were] signing off on."

That's your position, is it?

A That is clinical functionality.

Q That goes back to the discussion we had earlier about everybody knowing that that's what you were doing, and you understood

A Yes.

THE CHAIR: Again, I'm sorry if I'm being slow on this. When you're talking in paragraph 105 about signing off, that is signing off by which I mean – I'm imagining – actually during or at the end of a user group meeting, or is it something else?

A I mean, no. This-- We're signing-- Following user group meetings, other workshops, then revised drawings, or drawings, would be issued, and then there's a review of the drawing for clinical functionality – and that's what's being signed off, to confirm that the things that have been requested in that meeting have been addressed.

THE CHAIR: Right, do we want----

MR CONNAL: I'm going to try and take this by example, if I can, so we can understand it.

THE CHAIR: Mm-hmm.

MR CONNAL: Because an issue has arisen, Mr Hall – let's be quite open about it – as to whether people thought there was somebody out there who was checking these things for the Board, you know, checking compliance with all the different requirements for the different rooms, for the different wards, and so on, and what you're telling me is, "No there wasn't. That was Multiplex's responsibility."

A Yes.

Q Is that correct?

A That's what the contract says.

THE CHAIR: And that is what was happening?

A Yes.

THE CHAIR: Could you explain to me what a workshop is and what its purpose is?

A Well, typically in the-- the-- What I was talking about is a presentation by the Multiplex design team of how they have addressed, you know, the delivery

of air throughout the hospital or delivery of water throughout the hospital. They will be showing where the water tanks are; they will, you know, be showing how that is, then, you know, convey-- taken through the system. That was probably more important in those scenarios in terms of maintenance, so Ian Powrie would have sat in that meeting, for example, and looked at how would-- if that was what the Board were getting, how would he maintain that?

It was, you know-- it was Multiplex's responsibility to deliver a compliant system, but there's also the question of how do you maintain that afterwards, and Ian had to satisfy himself, on that situation, that he could maintain that system.

THE CHAIR: Is a workshop the same thing as a presentation or is it additional to a presentation?

A It's probably more of a presentation, to be honest, those ones, because there was no-- Excluding that operational piece, there was no two-way in it. That was what I was trying to, you know, describe at the beginning. The user groups are very much about "This is what we want. This is how we...", you know, and it's an interact-- an interactive process with the M&E systems. The standards were already set by the employers' requirements.

Multiplex had to go away and design to those standards, and they presented what they had come up with, but they presented that to a team that, other than in terms of maintenance, wasn't going to comment back on how they had designed the system.

THE CHAIR: I may be looking for a sort of neatness which is not realistic, but should I hold on to the notion of the distinction between user groups and technical meetings – whether, perhaps, better described as presentations or workshops – at which GGC representatives were present? I mean----

A Yes.

THE CHAIR: Right. The purpose of their attendance was essentially to be informed about what was going on----

A Yes.

THE CHAIR: -- not to review or check or sign off anything?

A Well, in terms of the drawing sign-off, all that was being signed off for-- As an example, if we take-- we take a reflected ceiling plan, all that was being signed off was, "Is there a light fitting to turn, you know, to turn on?"

THE CHAIR: Sorry, is there a----?

A A light fitting.

THE CHAIR: Right.

A Are there lights in the room? Are there any other pieces? Are there, you know, any other pieces? You know,

IT. Do we need IT in the room? It was those type of things that might be on the ceiling. Fire alarm sounder location, you know-- Is that in the room?

THE CHAIR: Mm-hmm.

A But not how it's delivered, what, you know-- and how it complies. It's purely the visible functional elements – to make sure that they're there. That's all. In accordance with, you know, the-- the process that was set out in the contract.

THE CHAIR: And mechanically, sign-off would be adding a signature or initials to a drawing?

A Yes. That's correct.

THE CHAIR: Mr Connal?

MR CONNAL: Well, let me just divert round a small corner, and we'll come back to where we are now----

A Okay.

Q -- just because you deal with it on the same page of your statement. One of the slightly odd comments that has floated into the exchanges was that Multiplex wouldn't recognise a Capita signature., and people have tried to find out, "What? What's that about? Why did it happen?" Now, you have offered an explanation, I think, at the foot of 103 and then onto 104. You say:

"As far as Multiplex were concerned, they wanted to see one of 3 or 4 names on the drawing e.g. Peter Moir, Frances Wrath or [you]."

Then you say, well, why didn't they recognise Capita, if Capita had been involved in the process, duly instructed, and your understanding was it was just because Capita weren't around when the deal was struck. Is that correct?

A When the RDD process was set out, Capita were not appointed by the Board.

Q Right.

A So, at the outset, they were not part of that RDD process. They were added into the RDD process to address-- And part of it was because-- that at a point in time – and I think we're all aware of this – Wallace Whittle bought ZBP. So, if the Board had returned to Wallace Whittle, they would have created a conflict of interest, potentially, and therefore, Capita was a more acceptable route to go, with those-- with those technical clarifications.

Q Yes, and you add a nuance then to the sign-off options. You've talked about signing off following a user group meeting for clinical functionality, and then you mention in 103 the possibility that Capita have been instructed to do some form of review of some kind, that's been completed, Capita are okay with it, but Multiplex won't accept a Capita signature – so, you sign off that drawing. Is that correct?

A In addition to the Capita signature. So the Capita signature remains on the drawing; mine is added to note that it has been through the RDD process.

Q So the function of your signature is simply to say, "I'm a project manager; I'm telling you this has been through a process"?

A Correct. Yes.

Q Perhaps we can just try looking at one or two of these, just so we understand what we're all talking about.

A Correct.

Q Perhaps we could have bundle 47, volume 3, page 5, please. This has a signature, which is the usual alert on these situations. Now, this, I'm told, is the 2A Schiehallion reflected ceiling plan. Have you annotated this? Maybe you can't tell?

A That is not my writing, so the annotations on that drawing appear to be annotated by the Brookfield reviewer or Brookfield Multiplex.

Q Now, if we remember that 2A was known to be a ward with specialist requirements, the Schiehallion ward, I think the point being put by some is that, well, if you're given something like that – which demonstrates, for instance, the presence of chilled beams, the absence of an airlock, a grid ceiling rather than a plasterboard ceiling or whatever the point happens to be – if somebody puts their signature to that to say "tick," then does that not indicate approval of what is being shown on the plan?

A Only for clinical functionality.

Q Even though you know the purpose of the ward-- you know the general----

A I'm not a designer and I don't know I wouldn't-- you wouldn't review the design. To have somebody reviewing that design you would have to engage an equivalent designer.

Q So nobody that you're aware of looking at something like that would be expected on the Board's part to say, "What on earth are you doing with Ward 2A? That's not what we were expecting for a ward of that kind"?

A There was nobody in the team to do that. The responsibility might lie with the contractor as it's a design and build contract.

Q Well, you know, I have your point about the design and build contract and where contractual responsibility lies, but if we're looking at avoiding problems and avoiding them usually earlier rather than later, if we can, then to take an example, we've put a drawing like this to others and we were able to work out that the original intention to have an airlock near the top left of the drawing at the entrance toward 2A, which apparently

had been mentioned early on, wasn't there.

Now, if the circulation of drawings like this kind had to have maximum effect, should somebody not have been available to review that?

A The airlock would not have been picked up on a reflected ceiling plan. That would be picked up on the plan.

Q Right, okay. Well, take it from me, it wasn't.

A Well, if it was to be, that's where it would be.

Q Yes. You see, what I'm trying to understand what may have worked and may not have worked, but that we can look at anything that might work better, and what--

For instance, what you see in the reflected ceiling plan are the grids and the stuff that's in the ceiling in ventilation units and stuff like that. Now, we know that one of the issues here has been where you should have chilled beams and where you shouldn't.

Therefore, if somebody who was familiar with that issue had reviewed a reflected ceiling plan, they'd be able to see that there were chilled beams provided in quite a lot of areas in Ward 2A and, if appropriate, could have said, "What are you doing with that in a specialist ventilation area?" or, "Why is there no airlock?" or other questions. But there was nobody available to GGC to perform that function at that time, is that right?

A Correct. Well, there would have been people available, but they weren't appointed to do that.

Q Right, yes, sorry. So I'll just look at one more-- just so we can complete this point.

A Yes.

Q Bundle 47, volume 2, at page 15, please. Now, this I described to another, and this has a signature on it as well, this I described to another witness as looking like a build-yourself doll's house, because you can technically you can sort of fold up the sides to make the room if you were, you know, a child trying to make a model.

Again, presumably, this is a renal-- but if you were looking at that as a specialist or knowledgeable designer, you might be able to say," Oh, why isn't there X or Y?" or "Why am I not seeing what I'm expecting?" depending on the particular drawing. But this is the process that really wasn't happening wearing a ventilation hat, is that right?

A Well, no, the M&E system-- again, this drawing doesn't show any ventilation. This is really about equipment and what was in the room. So this is, you know-- the user group will

have reviewed this drawing. It's been through the process, it's met the requirements that they have and therefore it's been signed off.

Q Yes, by you, in this case.

A Yes.

Q I take it that's your signature near the top right hand of this particular page?

A Yes.

Q Thank you. We can take that away, thanks very much. And you weren't party to what instructions were given by Peter Moir to Capita to do any particular ventilation reviews, although you may occasionally have been asked to sign something off because you needed an additional signature?

A Yes, correct.

Q When you were doing that sign-off, you didn't yourself make any investigation into what had or hadn't been done?

A I may well have spoken to the Capita—again, Capita were sat in the same room, they were sitting behind me-- you know I would probably have a conversation with the person at the time to-- can-- you know, they've signed it off, you know, everything okay, but it would be entirely reliant on their review.

Q Okay, let's move on. Carbon filters, now, you're probably aware from your knowledge of the contract that a possible issue of odour, unpleasant odours had been raised during the initial processes, and a solution, which was to insert carbon filters so that all air entering was filtered, had been proposed, is that correct?

A That's correct.

Q You say on page 230 that you were party to two discussions about removing them, although it wasn't your decision as such, it was simply that you were a party to these discussions?

A Yes.

Q Is this a cost-driven decision?

A I don't think it was primarily a cost-driven decision. Obviously, there is a cost impact and an operational impact to the inclusion of carbon filters. They have a high level of resistance to air. They increased the energy consumption of the hospital, but another primary part of that was that Scottish Water had a duty to carry out improvement works, as I understood it at this time, to their plant to reduce the emissions in terms of odour, so it was----

Q And what, your evidence is that you understood at the time of the decision something had been said about what they were going to do, is that right?

A Yes.

Q Do you remember what? Because it's a long time ago.

A Well, it was to----

Q To reduce the odour?

A It was to reduce the odour, yes.

Q Okay. Were you involved in the specification of what was originally intended to be 4B as a haemato-oncology ward? Were you aware of, for instance, the clinical output specification for that ward?

A No, I wasn't involved in the clinical output specification for that, no.

Q Were you aware that it was, at that point, intended to be-- one might describe as a specialist ward, as opposed to simply a general ward?

A I think it was a-- I can't remember if it was a full wing. I think it was something less than the full wing in that instance when it was originally haemo-- but yes, I was aware that there was a zone, yes.

Q We know subsequently the decision was taken to move the bone marrow transplant unit into 4B and move the haemato-oncology to 4C, were you party to any discussions about what had to be done to the environment of 4C to fit that cohort?

A Sorry, 4C?

Q What most of the material the Inquiry has suggests that 4B was haemato-oncology and 4C was renal.

A Yes.

Q Renal was set up as a general ward, no doubt there are some plumbing issues in a renal ward, but leaving that aside, a general ward.

A Understand.

Q Therefore, the environment that was provided to the intended patients of the renal beds was not the protected environment that was intended for the patients in the haemato-oncology ward. Following me?

A Yes.

Q So we're just trying to find out if anyone knows the answer to this. When a decision was taken, haemato-oncology are coming out of 4B, that's going to be bone marrow transplant unit. Haemato-oncology are going to 4C, formally renal. We know there's been a discussion about what to do about the environment in 4B to meet the new requirement. I've been trying-- we've been trying to find out if anybody knows whether the discussion about what was to be done in 4C?

A I'm not aware of that. That particular alteration was laid almost entirely by Peter Moir.

Q Can you help us at all on why, if you looked at the materials for 4B as originally planned, you would find reference, in at least part of that ward, to 40 litres a second as the air provision?

A In haemato- that sounds incorrect.

Q Well, the only reason I ask it is that the discussion that there is on the ventilation derogation, just to use that phrase again, talks about it applying to general wards or possibly general wards in the adult hospital, but leave that debate aside for the moment. So you would agree that provision of that air change rate in what was proposed for haemato-oncology would be incorrect?

A That would be my assumption, yes.

Q And would that be the same if one was to find that reference in Ward 2A, the Schiehallion unit?

A Yes.

Q And was that, maybe you can help us or maybe you can't. Do you think that would have been clear at the time of the ventilation derogation that these specialist wards were not to be affected by the derogation?

A I would have thought that was fundamentally clear because, in my view, the derogation only applied to rooms that had six air changes per hour. And I don't think either of the locations you're referring to would ever have had six air changes per hour. They should have been higher than that.

Q Thank you. Now, one of the issues we have in trying to work out who did what when and what they knew when they did things is that once you've done your design process, there are then possibly shop drawings and various other things, but you end up with construction drawings.

We had, for instance, for Mr Fernie yesterday, that as a construction manager, he worked to the construction drawings. He did not go behind that and think, "Am I building a Schiehallion ward correctly?" He just takes the drawings, and he just assumes that that is something that's been agreed by someone else. Was that an issue that would also arise for anybody checking?

Mr Fernie seemed to think if someone was checking what that ward was providing in terms of, for instance, of air changes they would simply work off the drawing, the construction drawing. They would not go back to any earlier material such as design material.

A It would depend upon the appointment and at what point people were appointed and were reviewing in terms of-- I think you're referring to the supervisor role?

Q Yes.

A And you would need to look at the appointment and see what the appointment said in terms of that. Because the supervisor role under an NEC contract can be slightly different depending on one when the supervisor is appointed, and secondly, what their

overall duties are.

Q Can you help us with this and tell us if you can't? When Capita were instructed to do something other than their standard supervisor role, but to do review of some ventilation issue, do you know who was doing it from Capita?

A It would depend on what they were reviewing, because obviously Capita had a number – they were a multidisciplinary practice. So it depended on whether it was an architectural issue, which would be John Redmond. I think in the case of the ventilation ones, it was a chap with the name of Alan Follet, and I think you'll find that it's probably Alan Follet's signature; I think I saw it in one of the documents that was referred.

So Alan was from Capita, and he was reviewing the mechanical; they also had somebody doing electrical and other things as well, so it would depend on what, you know, the focus of the question was as to which of their team would review.

Q One of the questions which kind of follows through from that is that if you then go on and build whatever you're going to build, there comes a point where you need to commission the ventilation system. The indications we had from Mr Fernie were that not only what his team would do to commission, you know, to arrange for commissioning, but also any check on that commissioning that was done, for instance by Capita, would be based on the construction drawings rather than on guidance or anything else. Can you comment on that at all?

A I think that's probably the difference between commissioning and validation. Commissioning would check that what was built was what was designed.

Q Sorry, say that again. Commissioning would check----

A That what was built was as per the design.

Q But you wouldn't know that unless you went back from the construction drawings. You'd simply----

A No, no. The construction drawings are the design.

Q Oh, right.

A So the design is what they would check against.

Q So if somebody was trying to check-- You know, let's say this room was supposed to be designed, according to guidance, with 10 air changes, just for the sake of argument. That wouldn't be done at the commissioning stage, because somebody would simply look at the construction drawing and see what it says, and if it said something different, they would simply accept that.

A Correct.

Q So they wouldn't actually know

whether it was compliant with the Employer's Requirements or not, is that right?

A That's my understanding, yes. I wasn't-- As I said in my statement, I wasn't directly involved with this.

Q No, and that, as you point out, is why there's the provision for validation in the guidance, because then somebody else comes along and says, "Well, you may have commissioned it and worked out that the air handling unit is working, but is it doing what I, as the client, want it to do?", and that's validation. Should that have been built into the construction program, do you think, validation?

A Interesting point, because it's been discussed at great length on numerous projects. A big part of the problem is obviously that there is a lot of activity that occurs post-completion in terms of installation of equipment, installation of beds, you know, all sorts of things that come in that impact upon the ventilation.

So, in terms of that validation, the validation, as my understanding of the contract, was the responsibility of NHS Greater Glasgow and Clyde, the Board; and the decision was taken, as I understand it, not to include it in the contract pre-completion but to do it post, related to the level of disruption and everything else that was going on in the

hospital in the period from January through to April.

Q But do you understand there was a specific discussion about doing it, but doing it at a particular time?

A Well, I think it was it was excluded from the programme, and that's going a way back. So if you'd had to put validation into the programme, you would have had to have extended the programme. So validation was not included within the construction programme. There's a couple of good reasons for that. One is, obviously, as I've said, there's a lot of equipment to go in. The other part of the problem is if you pay a contractor to stand around for three months whilst that's occurring, there is a cost in that.

THE CHAIR: So, in answer to Mr Connal's question, and it's just-- I may have not heard what you said, there was a discussion at some stage----

A I can't confirm that.

THE CHAIR: -- to not include provision for validation in the programme, understanding the programme to be the period during which Brookfield was on site. Have I got that?

A Well, I don't think it's as specific as a discussion. The validation period was not included within the works for Multiplex.

THE CHAIR: Right. I mean, I

understand the reasons why it might not have been, but you do see there's a distinction between there being reasons and reasons being discussed?

A I know the reasons. I could not recall a discussion on it.

THE CHAIR: Right. Okay.

MR CONNAL: I'm simply asking because one of the issues here is that validation wasn't carried out, and in the guidance, even at that time, the indication was that the purpose of validation was to see whether the room or the ward or the area was acceptable, and logically the time to do that is when you're asked to accept it, which is at practical completion or thereabouts. Would you agree?

A Well, as I said, there's the issue about equipment and how accurate then the validation is, and I think you're saying from a perspective-- I don't know if you're doing that from a perspective of commerciality, but there is a significant defects liability period on the hospital anyway, you know, for rectification of defects. So had it been discovered, the liability would have sat with Multiplex to rectify.

Q Yes. The question may come to be what is meant by acceptance or acceptability, because on one view, if you do validation for a room and it doesn't meet what you need, you don't accept it. You say, "No, I'm not taking that room from you, Mr Contractor, until you've fixed it." Would that be a logical way of approaching it?

A That's one way of approaching it. The other is to address it under the defects liability.

Q In fact, we have one piece of evidence – I don't know whether you can comment on it or not – which suggests that you actually never get, in practice, a failed validation because what actually happens is the validator doesn't produce a 50-page report saying, "Here are all the things I've found." What he says is he tells the contractor, you know, "Your air conditioning unit on rooms such-and-such is not working," or, "Your duct is the wrong size," or whatever it is, and they fix it, and then he checks it again until you eventually produce an approval. But it clearly seems to be an important process, so we're trying to work out how best to fit it in to the system. Do you have any advice that you offer as to how best you would place validation in the contract process in a project like this?

A Certainly. Well, quite obviously prior to patient occupation, and giving a period at a point early enough that you can address issues. But I would still caution doing it too early in terms of all the equipment installation and the impact that that might have on all that-- you know, on the results.

Q Can I ask you about an entirely different topic, which the Inquiry has heard large tranches of evidence about, which is something called Horne taps, Horne taps with an E Thermostatic mixer valve-whatever taps. You have some knowledge about that, is that correct?

A That's correct.

Q Just so you have it in front of you, if you need it, page 237 of your witness statement. You say, "At the time of selection", so that was-- I think I may be right in saying 2012 or thereabouts.

A Thereabouts, yes.

Q You were part of what's described as a focus group on tap selection because some issues had arisen around infection control and ease of access to filters, and you're aware of advice being sought. It's been suggested that you may have, at that point, added your tuppence worth, which is, "Why don't we bring in HFS to look at this?" or HPS.

A The reference was to HPS. I don't recollect it, and I think it unlikely. If I had been asked at that point to bring anyone in, it would have been HFS.

Q HFS. Well, it may----

A No, but the reference was to HPS, so I don't think the reference was correct. I don't recollect that discussion, because prior to working at the hospital, I had worked with David Browning at NHS Lanarkshire. I was well aware that David had had issues with taps and all the rest in the past, as was Alan Seabourne.

So there is reference in there to, you know, discussions with David Browning on this, and David reaffirmed to Alan that he was supportive of the Horne tap at that point in time, having done other reviews. From my perspective, I attended the presentation, and, in terms of a logic around ease of maintenance, the Horne taps seemed to be much more easily maintained because all of the components that needed to be maintained were actually in the body of the tap rather than hidden behind panelling, which was the case with many of the other taps. So there was a logic to it, but again, not technically qualified; but certainly from a pure logical perspective, that it seemed to stack up.

Q Now, there were two stages of the Horne tap discussion. There was the one in 2012, and then there was another one in 2014 which involved a variety of people, including HPS. Did I understand your evidence to be that no one from Currie & Brown was there, but you knew it was going on?

A I was aware that people were talking about the issue. I was aware that there was a meeting, but I was not at the meeting. Nor was anybody else from Currie & Brown.

Q I suppose the-- You've

narrated your understanding of the result, which was, “As we’ve already got them, we’re keeping them.” I think it may be suggested – it certainly has been to other witnesses – that in reality, the decision was not a simple one to say, “Well, okay, we hear all this stuff, but we’ve just got to carry on and use the taps.” It was to put in place a particular maintenance regime which would allow them to be thermally disinfected. Were you aware of that?

A No. I wouldn’t have been, in the sense that my interest would have been in terms of, “Was there an action that had to be taken against the contract in terms of replacement of those taps or anything like that?”, which ultimately probably we would have had to be instructed if that was the case. The news that came back to me was that they didn’t require to be replaced, and as far as I was concerned, from that perspective, that closed my involvement in that.

Q Right. One of the issues that was picked up after the hospital opened was that the water system had been filled, it would appear, some time before opening, and not the day before, a considerable period of time before opening. Have you anything you can offer to assist the Inquiry on when that was done?

A I wasn’t involved, as you know, in terms of the commissioning of the system, so in terms of precise dates, no, I wouldn’t know. I know it was over a period of time because it had to be done in a staged manner, and I was aware from that-- from, you know, discussions around programme and things like that.

As I say, again, I was involved in the programme, so the commissioning of systems was marked on a programme. So other than that, I had no real awareness of it. The only other thing that came to my attention at a point in time was the water tank support system, which had to be amended.

THE CHAIR: Sorry, I didn’t follow that. Support system?

A Sorry, the tanks for storing water in the hospital, not surprisingly, are extremely large. So they’re sectional tanks, and there was supports within the tank to hold the lid up, and those were originally hollow.

There was then raised a question mark over the potential for contamination as a result of stagnant water, and those supports were replaced. So that came out of, I think, a notification centrally from Health Facilities Scotland in terms of, you know, a national observation. It became aware that we had this type of tank, and then there was an instruction to Multiplex to replace the supports within that.

THE CHAIR: Now, you’re being asked about timing. On the replacement

of the hollow supports, can you give any indication of when that happened?

A From memory it was prior to opening, around about December 2014.

THE CHAIR: 2014?

A Yes.

THE CHAIR: Going back to when the filling may have occurred, you said you were not involved, you knew it was a stage process and therefore would take a period of time. Can you help us at all with the timing of that?

A Quite a substantial-- I'm thinking in the region of months, rather than weeks.

THE CHAIR: Right, so months before January 2015.

A Yes.

THE CHAIR: Thank you.

MR CONNAL: Do you have any recollection of discussing the filling and raising the issue of concern over the infection prevention and control issues that might arise from putting water into a system of that kind?

A I remember Ian Powrie talking to Multiplex about it in terms of flushing and the likes.

Q Now, we know that your firm wasn't involved in the formal inspections of systems for handover because that was done by others. One of the topics that has arisen relates to the intended planned maintenance system for the hospital, and the different components that need to be available for that to be done, which would be asset tagging, then there's an information system called Zutec, and then you need something else. You need a computer-assisted facilities management system.

Now, we've had some evidence suggesting that you were involved in discussions about what should be provided and when. Do you have any recollection of that?

A Well, yes, I have recollection of it. I have recollection of it being raised at team meetings. I remember Ian Powrie talking to me about it but, unfortunately-- well, not unfortunately. The fact of the matter was I had no access to any of those systems. Zutec required a license to view. I wasn't given a license, wasn't deemed part of my role.

So I had no means of directly checking anything in terms of that system. However, I am aware that it was a point of discussion in team meetings with Ian Powrie, Peter Moir and the likes.

Q The inference, certainly from Mary Anne Kane's evidence, was that Currie and Brown were involved in discussions on these topics and inevitably sided with whatever Multiplex said, rather than whatever, you know, Estates or someone said. Can you help us at all on that?

A Can you give me a date on that?

Q This would be after it was discovered that occupation, of course-- that there was no asset tagging on----

A Right. So, this was probably after I left Currie and Brown. So, in answer, I'm probably not able to help you on that one.

Q So, your involvement ceased in, what, May 2015?

A Well, I moved away from the project in May 2015. As I said, I was called back on a number of occasions up until August, September 2015, and I left Currie and Brown in February 2016. So anything that occurred, effectively, after September 2015, I probably can't give any input to.

Q I think the only other thing you deal with in your witness statement is that there seems to have been a meeting in June 2015 where, for some reason, you were noted as being from the Board's commission team, or words to that effect.

A I think that's a misnomer----

Q You say you weren't from that team?

A No.

Q By that time, as I understand it from 245, you say you were actually away from the project but may have come back to help out at a meeting.

A Yeah. I suspect, in that case, it was something like-- Peter Moir was probably unavailable, I was asked to attend, and whilst I cannot recollect that specific meeting, I do remember that there was a follow-up meeting mid-July with David Louden, Robert Calderwood, Jonathan Baste and others to discuss issues around that particular issue.

Q My Lord, I have currently no further questions for this witness, but perhaps this might be appropriate point to have a short pause.

THE CHAIR: Mr Hall, we need to find out if there's any more questions in the room, as it were. So, can I ask you to go back to the witness room for maybe 10 minutes for us?

A Yeah.

(Short break)

THE CHAIR: Mr Connal.

MR CONNAL: I simply have one short clarification question, my Lord.

THE CHAIR: Perhaps just one more. Mr Connal.

MR CONNAL: (To the witness) It's a question that you may have answered, but we're just wanting to check that we understand it correctly.

Ward 2A, Schiehallion Ward, I asked you about air change rates and whether the delegation would apply to it, and you said no because that was a

specialist area. I'm just wondering, in terms of process-- because you're obviously reasonably familiar with the processes that were gone through during the design and construction. If you looked at the room data sheet for 2A, which I can bring up on screen if you want----

A Yeah, because it wasn't something, as I say, I was involved in, but if you bring it up, yeah.

Q Okay. Well, let's bring it up. Bundle 47, volume 3, page 393. I'm told you can find there a reference to 40 litres a second. There we are.

A Yes, I can see that.

Q Yes, so you've got, "Extract ac/hr", "Supply ac/hr" both left blank, and then, "… notes - Supply air rate at 40 litres per second." Can you assist the Inquiry at all into how it would come to be that that was in the room data sheet for a non-isolation room on Ward 2A?

A In my view, that's an error.

Q Who would be responsible for the error? Who would make that error, do you know?

A I would suggest it's ZBP.

Q I have nothing further, my Lord.

THE CHAIR: Mr Hall, that is now the end of your evidence. That means you're free to go, but before you do go, can I say thank you for the work that went into preparing your statement and thank you for your attendance today. It's been very helpful, and I appreciate that. So, thank you very much, but you're free to go.

A Thank you, my Lord.

(<u>The witness withdrew</u>)

THE CHAIR: Now, we're not sitting tomorrow and we're not sitting on Monday, as I understand that.

MR CONNAL: That's correct, my Lord. We resume on Tuesday with Mr Pardy followed by Mr McKechnie----

THE CHAIR: Right.

MR CONNAL: -- and CPs have also been advised that we now have made arrangements for Mr O'Donovan of Mercury to give remote evidence first thing in the morning on the Friday of next week, slotting in at 9 a.m.

THE CHAIR: Maybe you've gone into the details with legal representatives, but when you say "first thing", do you understand that to be nine o'clock?

MR CONNAL: Yes, nine o'clock. The primary witness on Friday is Helen Byrne, who will be taken by Mr Mackintosh. However, in order to make the best accommodation arrangements we could, we've arranged for Mr O'Donovan to give evidence at nine, perhaps for an hour and a bit, something

in that order.

THE CHAIR: Well, in that case, I look forward to see you on Tuesday, and can I wish everyone a good extended weekend.

(Session ends)

15.25