SCOTTISH HOSPITALS INQUIRY

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Hearings Commencing
19 August 2024

Day 34
Wednesday, 23 October 2024

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THE CHAIR: Good morning to those here in the hearing room in Edinburgh and to those listening to us remotely, and good morning, Ms Armstrong. Can you hear me clearly? Now, I can't hear you, and I think the reason is that you are muted.

THE WITNESS: Okay. Can you hear me now?

THE CHAIR: Very clearly. Thank you very much. Now, as you appreciate, you're about to be asked some questions by Mr Connal, who I hope will appear on your screen at an appropriate moment but, first, I understand you're prepared to affirm.

THE WITNESS: Yes.

Ms Sandie Armstrong

Affirmed

THE CHAIR: Thank you very much, Ms Armstrong. I'll now hand you over to Mr Connal.

A Thank you.

Questioned by Mr Connal

Q Good morning.

A Good morning.

Q Yes, there we are. I'm going to ask you first of all-- Because this is a joint statement to which both of you have put your names, I suppose I'm going to ask you the formal question, are you prepared to adopt this witness statement as your evidence in this Inquiry?

A Yes, I am.

Q Thank you. Now, I'm going to take you to portions of that statement which have been identified as ones that weren't covered by your sister yesterday. So, if it's slightly disjointed, that's just the nature of the exercise. Please bear in mind, when you're giving the evidence, that we have heard the kind of basic background material from your sister in the course of yesterday, and obviously you're here to tell us a number of things about the circumstances surrounding the death of your late mother. The first passage-- and we'll use the witness statement as a guide to take us through, and I'm conscious that you are only seeing things on a phone and not on a separate screen.

A Yeah.

Q In paragraph 23 of the witness statement, you talk about finding out something about an antigen-positive test.

A Yes. Yes, that's correct.

Q Is that something you'd been told about when your mother was in hospital?

A No, we weren't. We were told in December, when she'd come off the, sort of, targeted cryptococcus drugs, that – so, that was on 11 December – her bloods had cleared. So, in other words, they couldn't grow the fungus in the

cultures from her blood, and that was consistently what we were told. So, it wasn't until a few years later that we actually discovered that she was antigen-positive still on 19 December, and we didn't really know what that meant because nobody's really explained it to us but, having looked at my mum's medical records just recently – and, you know, it's thousands of-- well, it's about 1000 pages and quite difficult to follow – I was kind of trying to understand what this might mean, and I saw quite a lot of entries about a fungal disease that my mum had in her eye.

So, I think that was noted on 28 November, and from 3 December, she had daily ophthalmic reviews. On 22 December, there's a note that's written that says, "Cryptococcal fungamenia (sic) with ophthalmic involvement," and on 23 December there's an entry saying, "High dose fluconazole for eight weeks, Cryptococcus." So, that's quite significant to me because they were still noting concerns about Cryptococcus right through to the end of December, and especially in relation to an eye problem because that would indicate a high likelihood of something going on and possibly meningitis.

Now, none of this was ever discussed with any of us, and the fact that she was antigen-positive wasn't discussed. So, I'm not a doctor, and I can't say exactly what that means because nobody's talked us through it, but what I'm saying is nobody's ever talked us through these things, and it's never been noted in any of the reports or the SCI.

Q Can I ask you now-- I'm going to move to paragraph 30 of the witness statement.

A Yeah.

Q Do you have a copy of that?

A I've got it here, yeah. Thanks.

Q We have an electronic page 9, but I'll give you the paragraph numbers because it will be easier for you to follow because----

A Yeah.

Q There, what you're telling us about are-- We know there was a meeting on New Year's Day, but there were subsequent meetings on 3 and 4 January when you----

A That's correct.

Q -- were asking various questions. Is that right?

A That's correct, yes. Yeah, so, we met with Dr Ink-- we'd already met with Dr Inkster previously, and then we were also meeting with Dr McDonald now. I can't remember exactly who was in which meeting, and one of the meetings it was just me that was there, and one of the meetings it was me and

Beth.

Q Yes. You were asking about whether she should have been in the same ward. Is that right?

A Yes. So, basically, they had mentioned there was another patient who had been diagnosed, and I asked about that patient, and I asked if that patient was alive or dead. They couldn't give us any information because of patient confidentiality. I became quite alarmed, and I asked why hadn't she been moved out of the ward. They also said that the other patient wasn't in the same ward, and Dr McDonald said, "Well, it would be difficult to move her out of the ward because she wouldn't have the specialist care and equipment on another ward." But I was still confused because I thought, "Well, another patient has contracted this in a different ward, so could the whole ward be affected or other wards, you know, possibly the whole hospital?", and there was a very-- There was a silence basically, and my answer-- my question wasn't answered, and I was very confused about the fact that she hadn't been moved into a safer environment in the hospital, because that ward wasn't set up for such an extreme case.

There was also somebody taking that which I thought were minutes/notes, and I asked for minutes of those meetings afterwards, and I was told that no minutes had been taken.

Q Thank you. Can I move on, please, to the SCI which you deal with----

A Yeah.

Q -- in various paragraphs. Perhaps we might start with paragraph 57. We know a list of questions was prepared, and we heard about that from---

A Yeah.

Q -- your sister yesterday. The point I wanted to pick up in 57 was that you were told there was this thing called an SCI investigation, and that----

A Yes.

Q -- you would be engaged throughout that process, and did that happen?

A No. No, it didn't. So, we were told that the SCI was already underway. So, that was in a letter that Jonathan Best sent to us, which I think was in May 2019-- no, it was the next letter. It was the letter after that. Sorry, I'm getting confused because he wrote us a few letters. But, basically, he had said that it was already underway, and when we received it, it had been started in the March of 2019. So, he told us about it two months after it had been started. He said they would engage with us throughout, but we didn't hear anything more (inaudible) it, which was over a year

later and one year and three months after our mother had died, and they're supposed to complete it within three months.

Q Right. You go on in paragraph 61 and the following paragraphs to touch on a number of the issues that occurred to you, certainly, when you were looking at the SCI. Can I just go to paragraph 62----

A Yes.

Q -- because that's one where you raised the question as to how it was possible to conclude that the Cryptococcus had no impact or no contribution to make to the event they were investigating.

A Yes, that's right. So, their conclusion were that issues were identified but they did not contribute to the event, and the only issue that they seemed to concede, but they'd still said it didn't contribute, was the fact that when mum first came to the hospital – so, before she was diagnosed with the Cryptococcus – she'd been taken off the prophylactic fluconazole, you know, the protective antifungal that they were putting patients on, and so that might have made her at greater risk.

Sorry about that noise. I can't turn my notifications off. So, that might have made her a greater risk. However, they did that because her liver function wasn't great. So, it was a sort of a clinical decision made by doctors that, on balance, it was better to take her off the antifungal but, you know, I still don't see how that couldn't have contributed in some way to her catching the Crypotococcus.

Q Can we just move on to another point that you make about, in effect, what you were or were not told?

A Yes.

Q If we go to paragraph 67, you're quoting there, I think, from the SCI, about halfway down that paragraph, under the heading "Key Issues Identified & Lessons Learned." It says, "What was the source of the Cryptococcus infection?" and then said there was some "wider review".

A Exactly.

Q Were you told any more than that?

A No. So, what we were told at the time when we got the SCI-- that was-- that was all-- There was a cover letter from Jonathan Best who said, you know, "The SCI isn't going look into the root causes and the source of the infection, because an SCI is all about patient care," which I thought-- that the wording of that was odd because an SCI is supposed to look into root causes. But he'd also said in that letter, "But rest assured that there are investigations happening," and that's

all that he's-- that's the only context he gave us. So, when we read the actual SCI, all it said was that the terms of reference had initially included looking at the potential source, but this had been changed "because the Board has commissioned a specific review of these matters." Now, we were never told what the specific review of these matters was. It also said that there would be a wider review by the Board and the Scottish Government.

So, subsequent to receiving this, much later in the year – so, it was September 2020 – we did have a meeting with Jonathan Best and Theresa Inkster, Dr Hart, Dr Hood and some others, but they still didn't really clarify what the reviews were and what the investigations were. It was still very, very vague, and I remember my mother's brother, [redacted] , sort of saying, "Well, will we get results of these investigations and these reviews?" I can't remember them saying yes. They did say that there'd been a subgroup set up which Dr Hood was chairing to look into matters, but a report wasn't really-- it wasn't going to come out as a report, it was more minutes of a meeting.

And then we were told, obviously, about the independent review, which was commissioned by the Scottish Government but, again, when they sent us that review, they didn't point out that it was part of the SCI, and when we read it, it didn't mention the ward that my mother was in at all, even though it mentioned other wards, and it drew conclusions that there were-- there was no sound evidential basis to link these cases – so the two Cryptococcus cases and the other case – to the hospital environment. But in that review, again, there was no detail about the investigations that had been carried out. It was based on one anonymous witness who wasn't named, and the scientific evidence was not included. So, in effect, we were never given any information about the investigations really.

Q Yes. If I can just move-- We've jumped ahead a little bit, so let me just move through the witness statement so we can allow those----

A Sure. Sure.

Q -- who are following it that way to just see where we are.

A Yeah.

Q In paragraph 69, you mention the letter of 10 May in which you were told the SCI was already underway and they would engage with the family, which you said didn't happen.

A Yes.

Q And then, paragraph 71 (sic), you refer to the point you've just made that you were told that the report didn't:

"…consider the source of your mother's infection because the role of an SCI investigation is to establish if there was anything related to care and treatment that had a detrimental impact to the patient [which is a point you disagree with.]"

A Yes.

Q Then in 73, you go on to narrate another letter in which you were told that there was no link between the ventilation and infections and mentions Dr Hood's position----

A That's right.

Q -- on these matters, following which you raise various questions. In fact, we heard from Beth yesterday that a whole series of questions had been laid out with a view to discussing these with people at the hospital.

A Yes, that's right, yes. So, we did go and have a meeting about that.

Q Yes. You pick this up, I think, at – this is something I want to ask you about – paragraph 77 of your witness statement.

A Yes.

Q After a section in the witness statement in which you note your appreciation for the care given by the ward staff, which we were told about yesterday, you say in paragraph 77 that Dr Hood downplayed everything, and you felt you were being manipulated. Why did you feel you were being manipulated?

A Well, can I come to that in one second? I just wanted to slightly circle back to the fact that the drafts of the SCI report had been changed. So I'll come on to that in a second.

So, just going back to the fact that the scope had changed to not include any discussion of the ventilation system, we were never told that the scope was going to be changed or that the report had been referred to the commissioner, and then we found out just a couple of weeks ago in Dr Inkster's witness evidence that the the SCI reports had been changed so they did not include any information about the ventilation system plant room. I just wanted to put that point in.

And then when we got to the meeting where we were talking about the ventilation system, as you quite rightly said, we felt we were being manipulated. This was the first time we had met Dr Hood, the first time we'd been told about the Cryptococcus sub-group that he was chairing. So, in effect, it sort of felt like we'd been a bit ambushed by this, and his-- He really did dominate the meeting with his hypothesis. So, to start with, his main point was that the only way that the spores could have gotten into the ventilation system were when the system was shut down-- Sorry, did somebody say something?

Q No, don't worry.

A Okay. So, when it's shut down and the filters are being changed. So, he spent a long, long time describing to us how the air couldn't go in, but it would be pushed out. So, he was only talking about when the ventilation system was shut down, right? He also said-- He talked about one particular plant room where there were pigeon droppings, and he said to us that there weren't pigeon droppings in the other plant rooms.

When we got the minutes-- or the notes of that meeting, his statement had been slightly changed to, actually, that the other plant rooms had less excrement in them, not that-- He'd said there was no excrement in them, and this is also corroborated by Theresa Inkster's statement as well, that when she had a meeting with the family – it's in paragraph 734 of her statement, on page 240 – that the statements that he made were untrue: so, that there was there was no other droppings in the other rooms and also that the excrement was wet, so it couldn't be aerialised easily, but actually the photographs subsequently showed that-- that they-- they were dry as well as wet.

So, we had a sense we were being manipulated, and since then we've kind of found out that they were definitely, sort of, massaging the truth, and also, we've been-- we've found out since then that

the spores could enter the ventilation system by various means, that the filters on the ventilation system were not HEPA filters, so they could-- the spores could get in. Also, they could get in through duct work which was damaged. So, there was a lot of things they said that they hadn't explored. It was all about one plant room and when the plant room was shut down and the fact that my mum-- it didn't even serve the area that my mum was in. I asked questions about, "Well, she was walking corridors to try and get her strength up. She was being taken for scans in different parts of the hospital," and the reply I received was that, "Well, she wouldn't have been exposed for a very long time in those areas," which doesn't make any sense to me, because if she's exposed, she's exposed. You know----

Q Can I just ask you about something you say in paragraph 78, if I may--

A Yes.

Q -- the top of what we have as page 25? Recorded there:

> "He [that's presumably Dr Hood] said there was no way we could prove"--

Ah, now you've----

A Have I done something with my video? There we go.

Q You're back again.

THE CHAIR: You're back with us both in sound and vision.

MR CONNAL: Okay.

A Thank you.

Q You say at the top:

"He said there was no way we could prove that the Cryptococcus came from pigeons roosting in the hospital. "

Is that the way he put it?

A I can't remember his exact wording. We did ask for a recording of the meeting because it was being recorded, and they didn't-- they said they-- that it was no longer available. So, it's very hard to talk about exact wording, but----

Q What about this reference to your mother contracting it while sitting in the park opposite her house?

A Yes. So, he said she was just as likely-- words to that effect, that she was just as likely to have got it from from the park opposite her house, which we found to be a very insensitive thing to say and, again, the minutes didn't reflect that or mention any of that. Yeah.

Q Yes. Well, if I can just move on to one or two other things. You record in the witness statement you asked for minutes and then you weren't happy with what you got, and in paragraph 84 and onwards you're starting to look at some of the responses you received when you asked more questions. In paragraph 85, I think the point you're trying to make there, if I'm picking it up correctly, is that you ask a question and the question gets slightly changed to fit the answer.

A Yes. That's right. So, we asked about negative blood cultures. You know, even if they couldn't grow the culture, for whatever reason, could she still have had, you know, an infection in her blood? And this is before we knew about the antigen-positive. This was before we were aware of that. So, Jonathan Best in his letter, when he's replying, says that a significant part of her infection had been treated, and that was kind of, "Oh. A significant part," and actually it wasn't until some time after that I suddenly started thinking, "Before, we were led to believe that her infection had been treated. Right?"

So that's-- Anyway, he was changing the focus, and he was talking about the difference between a latent infection, which lies inactive or dormant in a patient, and an acute infection, which is like a live infection where symptoms are present. Well, first of all, a live infection, you don't necessarily have to have symptoms, which is another thing that I've just found out. But, so, he says:

"We do not know... whether

your mother's Cryptococcal infection was latent or acute, but… her blood cultures were... positive, then became negative."

They weren't really asking the question-- They weren't really answering the question about whether she still had the infection, and they had that information, I think. I mean, as far as I know, and I don't know for sure, because we've never really been able to talk to them about it.

Q In the end of the day, this thing called an SCI was carried out, and in your statement, at paragraph 90, you're asked the straightforward question, "Were you happy with this investigation?" and the answer, I assume, is no.

A Absolutely not. No, because we were given no information about the investigations that were carried out, either into the source or into the clinical care. We weren't given any detailed information about the scans and all the various things that the doctors were worried about throughout December. We weren't given any information about the various different sub-groups and reviews into the ventilation system, and we also-- we're now feeling that the narrative was slightly changing, so now it was becoming a significant part of the infection had been treated. Another thing that Jonathan Best said in the letter following the meeting in October 2020 was that:

"Her clinicians do not feel this was-- her decline or deterioration was specifically due to her infection and its treatment, although this will have been part of it."

So, the SCI was saying nothing was part of her deterioration except for lymphoma, and now, a few months later, we're getting letters that are suggesting the case is different.

Q In paragraph 91, you described the communication with the hospital as "appalling." I mean, I have to suggest to you that you may not have been happy with all the answers you got, but you do seem to have got a fair number of letters and communications and reports and so on at different times, and at least responses to your questions, whether you were entirely satisfied with them. Is it fair to describe communications as "appalling"?

A Well, I would say that we had to push very hard for that communication. So, it wasn't being-- it wasn't freely available to us. It didn't feel that they were being, that they were offering information and that they were being open and transparent. It felt they were being very reactive. We were constantly having to sort of ask questions. When we tried to initially ask questions, they put it into a complaint format that we'd never

even made.

We were never really given direct answers to our questions a lot of the time. and there was a focus on-- It felt like there was a certain line which was just to keep repeating "blood cultures are negative" and not go into any more detail or nuance and, you know, that "Investigations are being done, so don't worry about it," but we never got any information about the investigations into the ventilation system. So it was pretty appalling, yes.

Q I think I only have one final question for you for my part. You've obviously got these various communications suggesting no connection, possibly some connection, some impact, no impact, different versions that you say you've had. Do you think from what you've seen and discussed, there was any impact on your late mother's life due to the Cryptococcus?

A Absolutely there was. Absolutely. I mean, yes, she did have a rare form of cancer and it was being managed, so, you know, we were realistic about that, but when my mum came to visit me in Brighton in October of 2019 – so we're only talking a few months before she rapidly went downhill – she went to the Victoria and Albert Museum to see a Frida Kahlo exhibition with her friend. She was all ready for a lovely holiday with me. She got a cold. She developed fevers and then she was kind of stuck in Brighton without treatment for a few weeks because she got an infection there.

So, by the time she arrived at the QEUH, she was in a very weakened state, and then she was put into a ward where the air change rate isn't even-- the air change rate you're supposed to have for a normal ward, let alone a neutropenic ward-- it was at 2.5 and it should have been at 10 air changes an hour, and she should have been in a positive pressure room. So she was-- and then and she wasn't on antifungal protection.

So she was literally being put into a situation where she had no defences whatsoever, and the hospital was-- played a big part in that because she should have been in a more protected environment. Now, her rapid decline had a massive effect on her length of life, I think. Who knows how long she would have lived after that, but it definitely shortened her life, and it massively impacted the quality of her life because she became confused. She was speaking almost in a foreign language sometimes. She couldn't have conversations with people a lot of the time. She lost her mobility. She really suffered terribly, and we didn't get a

proper chance to say goodbye to her.

So, you know, a few months before that, she was at the Victoria and Albert Museum and also, you know, we'd been given three different options of cancer treatment in November, and then suddenly by the end of December they were-- there was nothing on the table. So I think it really, really did impact on her quality of life and our time with her, and I feel that she suffered too much.

And there was one other thing I wanted to say just about the bad communication, because there was another thing in the meeting that we had with everybody. I was trying to discuss the improvement notice that was on Ward 4C. Now, at that time, I hadn't seen it, but there was-- the Health and Safety Executive had put an improvement notice on Ward 4C, which said:

> "You have failed to ensure, so far as is reasonably practical, that the ventilation system within Ward 4C is suitable and sufficient to ensure that high-risk patients who are vulnerable to infection are protected from exposure to potentially harmful airborne microbiological organisms."

And they were told that they not only had to upgrade the systems to meet health and safety regulations but also that they were supposed to undertake a fundamental review of the specialised ventilation system and that they had to go through a whole verification process.

Now, yes, they put in portable HEPA filters after my mum died, but as far as I'm aware, everything else that was in that schedule on the improvement notice hasn't been done, and when I talked about it in the meeting, they didn't seem to know what I was talking about. So, yes, I just had to put that in as well, because it feels like there have been a lot of omissions and a massive lack of transparency around many, many issues.

Q Well, thank you very much for the notes. I think you touch on that in paragraph 81, but we needn't go back to that and, as I say, I've no further questions in this short session this morning, my Lord.

THE CHAIR: Thank you, Mr Connal. Miss Armstrong, what I need to do now is just check that there are no other questions in the room. I anticipate that shouldn't take too long, so could I ask you to stay potentially in touch with us? What I anticipate is that we will no longer see a picture or have audio contact, but our technical people will get back in contact with you and I'll confirm the position in what I anticipate to be not much more than five minutes. So if you would bear with us?

A Okay, thank you. Thank you very much.

THE CHAIR: Right. Mr Connal, what I intend to do is just rise for five minutes for you to check the position.

MR CONNAL: Thank you, my Lord.

(Short break)

THE CHAIR: Mr Connal?

MR CONNAL: No further questions, my Lord.

THE CHAIR: Miss Armstrong, I think you may be muted. Right.

A Can you hear me now?

THE CHAIR: I can indeed. Miss Armstrong, I understand there's no further questions, and therefore you're free to leave us, but before you do, can I thank you for your evidence this morning, but also the preparation, together with your sister, of the witness statement, which of course is part of the evidence available to the Inquiry. But thank you, as I say, for this morning, but also the preparation of the statement. Thank you.

A Thank you. Thank you for hearing me.

THE CHAIR: Now, Mr Connal, our next witness is Mr Leiper, but we might take a----

MR CONNAL: I might suggest that perhaps 10 minutes----

THE CHAIR: 10 minutes.

MR CONNAL: -- both for technical reasons and to allow organisation of peoples, etc.

THE CHAIR: Very well. Well, if we plan to sit again at about five past ten?

MR CONNAL: Right.

(Short break)

THE CHAIR: Now, our next witness is Mr Leiper.

MR CONNAL: It is indeed, my Lord.

THE CHAIR: Good morning, Mr Leiper.

THE WITNESS: Good morning, Lord Brodie.

THE CHAIR: Good morning. As you'll understand, you're about to be asked questions by Mr Connal, who's sitting opposite, but before you do that, I understand you're prepared to affirm.

THE WITNESS: That's correct.

Mr JIM LEIPER

Affirmed

THE CHAIR: Thank you, Mr Leiper. Now, we've scheduled your evidence for the morning – there may be a possibility of going into the afternoon, but the schedule is the morning – however we will take a break at about half past 11. However, if you want to take a break at any other time, just give me an indication and we can take that break. Now, Mr Connal.

Questioned by Mr CONNAL KC

Q Thank you, my Lord. Mr Leiper, good morning.

A Good morning.

Q You've produced a witness statement which will appear, as if by magic, on the screen in front of you in due course, but can I take it that, subject to one point that you'd like to correct as we go through, you're content to adopt that witness statement as your evidence?

A That's correct.

Q If-- We won't end up looking at every passage of your witness statement, so if I miss the passage you want to correct, please simply tell me and we'll go back and do that. We see from your witness statement that you have held a number of senior roles, including head of Estates at NHS Tayside, director of Estates, Facilities and Capital Services at NHS Fife and so on, and also strategic director of Facilities at Health Facilities Scotland. Is that correct?

A That's correct.

Q So far as your connection with the Queen Elizabeth Hospital is concerned, you were employed on a sort of six-month contract which kept getting extended in order to do what I'd describe as sundry different project things. Is that a fair----

A That's fair, yes.

Q -- summary? Including ones that we're going to ask you about. You also set out in your statement – perhaps we could just bring the statement up so that we have it in front of us – that you had worked previously with Mary Anne Kane. Is that right?

A That's correct, Mary Anne and a number of other colleagues.

Q What we're going to ask you about I think are primarily two reports that you did, and one of these was on the ventilation system in Ward 2A of the hospital. What I wanted to ask you is this: this request came to you from Mary Anne Kane; now, did she not know what the position was about the ventilation system in 2A at the time she was speaking to you in 2018?

A I'm not sure if she did or not. She never really discussed the matter with me at any point, but she had just asked me to contact Mr Powrie and for him and I to provide some information on the ventilation system.

THE CHAIR: Sorry, entirely my fault, Mr Leiper. "She just asked me to contact Ian Powrie," and then I missed the next bit.

A To work up and give some information on the ventilation system and----

THE CHAIR: To work up some information on the ventilation system?

A Yes, to-- there had been-- If I may, Mr Connal, is that okay to expand?

MR CONNAL: Please.

A Ms Kane had received an email from Annette Rankin asking for some information about the ventilation system. The Estates personnel were very, very busy, and I had just recently joined the organisation, so Ms Kane asked me to go and contact Mr Powrie, because he was the person with the knowledge, to try and glean information, to do a bit of reading on it, and to provide information for Annette Rankin, who was, I believe, writing a report for HPS, and Ms Kane asked me to get some information to assist Ms Rankin, and provide information to her to assist her-- write her report.

THE CHAIR: Did Ms Kane identify what sort of information she had in mind?

A It wasn't to be overly technical. This was a conversation. It wasn't to be over-technical. There was other technical reports getting done, and at the time I had only been in the organisation----

THE CHAIR: I mean, I ask it because-- I mean, as we can see from your CV, you're vastly experienced, but you'd only been with GGC for a week or so.

A Yeah, I was part-time. I was a home worker, so I was home-based.

THE CHAIR: Mm-hmm.

A So, I hadn't even been in the hospital at the time. I'd only been to the hospital-- short visits to pick up a laptop and get connected and things. So, I didn't really have any experience of the hospital. I didn't know the geography of the hospital, and she had asked me to provide information not as much in a technical perspective but in, kind of, plain English giving, kind of, a comment and perspective on things if I could, and just to provide, kind of, background information so that Ms Rankin could be assisted, and she copied me an email that Ms Rankin had sent to her, and copied it into Mr Powrie, and Mr Powrie was good enough to meet with me and provide me with some information. I did other bits of reading and things like that, and produced the report from that. So it wasn't a technical review per se; it was kind of background information, if you like.

THE CHAIR: Thank you. Sorry, Mr Connal.

MR CONNAL: One of the reasons I asked the question, Mr Leiper, is that we've had some evidence that – to put it no higher – issues with the ventilation system in the hospital had been identified in various forms and at various dates long before 2018 when you were on the plot. Now, were you told about any of that?

A I find it difficult to recall in

detail and in the timeline of when I became aware of certain situations but, in conversations with Ian Powrie, information was brought to my attention. So, I knew that there had been history with the ventilation system.

Q Yes. Well, perhaps just for ease of reference, given some of the answers you've just given, particularly to his Lordship, we could go to paragraph 22, first of all, on your witness statement, which is on page 198. We see there something along the lines of what you just told us, 22 against the letter A, a reference to Annette Rankin in asking for certain information, which is all listed there. Then there's a quote, I think, from a water review meeting where it says:

> "IP [that'd be Ian Powrie] and [you] are... to pull together... information on ventilation to assist AR with her report."

Can I just ask one other question of a general nature? 24, which is on 199, you mention there providing "readable information." So, what was really meant, meant by that?

A In plain English, basically not a full, kind of, technical review of the systems but perhaps comment on guidance, perhaps comment on air changes in particular, ventilation rates within the ward, and that's what I sought to do.

Q Yes, and did you understand there were other reviews going to be done as well as yours?

A Yeah. There was a review taking place with Innovative Design Solutions. They were already investigating, plus I know Mr Powrie had a lot of involvement with the ward as well, so he was able to give me some good background information, and I had tried to get some information from ZUTEC, from records and various other parts of guidance, and even went as far as to contact BSRIA, who had actually done the research on the air changes to find out a bit more information.

THE CHAIR: Sorry, I missed that name-- contact.

A BSRIA, the building institute for research. They undertake research-- Sorry, forgive me. I can't just get in my mind just now what the acronym means but it's BSRIA is the acronym for it.

MR CONNAL: Thank you. I think you told His Lordship just a moment or two ago you hadn't actually been to the hospital other than for introductory purposes, but you did ultimately go to Ward 2 or 2A with Mr Powrie. Is that correct?

A That's correct. I was trying to read A1 drawing-- So, that's the largest size of drawing that you can get. I was

trying to read A1 drawings on a laptop screen. So, if you zoom in, you lose perspective of the ward, and if you zoom out, you can't see what the-- so you lose perspective on the thing. So, I was getting confused and unfortunately, as you can see with the report, the confusion persisted into the writing of the report, actually.

Q Yes. I suspect that the point you're referring to there was that there was an issue in your report which, for our purposes, may not matter as to what bit was called Schiehallion and what wasn't.

A That's precise----

Q 2A and 2B. Yes, and I think in terms of who you spoke to, you record in your witness statement at 201 in answer 33 that you spoke to Teresa Inkster because she had a particular concern about negative air flow. Do you remember speaking to Christine Peters at all, another microbiologist?

A I didn't speak to Christine Peters at all.

Q Do you know why one and not the other?

A I think Dr Inkster was-- she was part of-- I don't know if she chaired one of the IMTs that I was involved in, but she had sent me an email because she was concerned about the slightly negative air flow in a room for neutropenic patients within 2A, and I

referred her to Mr Powrie because he would've been much more *au fait* with the system there, but that was really the first kind of direct contact that I had with Dr Inkster.

Q Now, was there a passage that you wanted to correct in your witness statement? Do you remember where that was?

A Yeah. I had it in my notes next door, and I'm not allowed my laptop in. So, forgive me, I can't remember which one it is but it's to do with----

THE CHAIR: Mr Leiper, if I can just intervene. If you have material which you have produced as an aide-memoire, I don't see any reason why you shouldn't have access to it if you feel it would be convenient to have that.

A Thank you, Lord Brodie. That would be helpful.

THE CHAIR: Yes. Right. Munirah, is it a question of just picking up the laptop?

A No, it's in my case. Perhaps at the break, I could get it and----

THE CHAIR: Right. Well, let's----

MR CONNAL: My Lord, I suspect the correction is not one that is particularly critical for any of the questions that I have to ask, so that might be the easiest way of doing it later on.

THE CHAIR: Okay. (To the witness) Well, all I would say is that if you

feel you can give your evidence more effectively with your notes, there's no reason why you can't go and get them. Do you want to do that?

A Yeah, if that's possible. Yeah.

THE CHAIR: Yes. Well----

A Two minutes.

THE CHAIR: Yes, two minutes.

A (After a pause) Thank you, Lord Brodie.

THE CHAIR: Maybe I should just say-- I don't see this will necessarily arise, but if you were referring to-- I mean, it's one thing to refer to your own note. If you were referring to other material, could I ask you at least to identify that to Mr Connal because we hope that we have everything relevant that we can put to you but might just, for housekeeping purposes, want to be careful that we're not, you know-- you're not using material which we don't have access to.

A Of course.

THE CHAIR: Right. Mr Connal.

MR CONNAL: Thank you, my Lord. I think I was just going to pick up the correction that you wanted to make, if you know what that is, Mr Leiper.

A Yes. Question 82, in respect to chilled beams, yeah that's the one. So, it was----

Q That's page 220 of your witness statement. What was the correction you wanted to make?

A Yeah. So, the questions have been re-numbered three times, so I might be out of step on that. Perhaps-- not to delay matters if you want to continue. It was regarding the question:

> "How did the use of chilled beams impact patient protection from infection in ward 2A?"

And I've said, where fitted, the CBUs would have a limited air change rate. So, it was just to say that-- except for in the Bone Marrow Transplant, which didn't have the chilled beam units fitted, it was really-- That's something (inaudible).

Q Yes. So, you're making the point there that-- and I think you make it elsewhere, that, because the chilled beams can only operate on a certain level of throughput of air, they limit the number of air change rates you can have, but they weren't in all of the areas.

A That's correct.

THE CHAIR: Could I just take the opportunity to ask for your help in arithmetic? In your answer to 81, you explain that the air change per hour is limited to the capacity of the chilled beam, and you give the figure of 40 litres per second.

A Yeah.

THE CHAIR: Now, I think we see

elsewhere that – or at least if I've understood things correctly – eight litres per second, which is the building standards regulation, gives an air change rate of about 2.5 or so. My question to you is: is there a straight arithmetical relationship between litres per second and air change rates per hour, or is there not?

A Yes, there is, and the 40 litres per second will throw-- So, the 40 litres per second will satisfy the requirement of the building regulations, which requires-- I think it's changed recently, but at the time it was 8 litres per second per person in the room. So, 40 litres per second would have been okay for five occupants in the room.

THE CHAIR: Right. Is that----?

A That's as far as the building regulations was concerned.

THE CHAIR: What I was-- Because I've been doing all my thinking in air change rates, does 40 litres per second-- I was wondering if that was equivalent to 12.5?

A No, it's-- No. 2.5 to 3 air changes in that size of room.

THE CHAIR: Right. So, I think the answer to my question is: there's not a straight arithmetical read across.

A There is conversion. There's a----

THE CHAIR: Right. Well, can I ask the question this way? Is it possible to express 40 litres per second as a generally applicable air change rate, or is it not?

A It is, but you require the room volume.

THE CHAIR: Right.

A So, it's so many litres. If you can imagine a litre of air in the room-- So, this room would hold so many litres, and if you change that over, that gives you your air change rate per hour.

THE CHAIR: Right. Sorry, Mr Connal. Thank you.

MR CONNAL: Thank you, my Lord. Mr Leiper, I needn't take you to the section of your witness statement that deals with it, but I did mean to just take you to another part of your expertise when we started your evidence, because you say later in your statement that one of the things you've done during your career is work on a lot of building projects, both large and small, in the Estate side of healthcare. Is that correct?

A Yeah. It's probably a lot over the time that I've been involved in the NHS, which has been over 40 years now, but in the great scheme of things, as far as people who are-- deliver projects for a living, that's a different scale. But, as far as operational Estates professionals are concerned, I've been involved in a few major capital developments.

Q In particular, you've been involved in what are usually called PFI-type projects?

A I've been involved in some PFI's, yes.

Q And in discussions at the HFS level about how these contracts and other types operated?

A Yes.

Q Thank you. Now, what I wanted to do, probably now, is to move to have a look at your report on the ventilation system, which we have in Bundle 23, at page 872, because one of the things that immediately emerges from the report is that you don't just discuss, you know, does X room have X air changes. You also discuss, in effect, how it came to be as it was, to some extent by reference to some documents which you annex to your report showing what we're calling a derogation to a lower air change level. Is that correct?

A That's correct.

Q So, if we go to that document and we look at, for instance, page 875, which is section 3-- I'm not going to ask you to look at the log again, because we've all seen the log, but you narrate, in simplified terms, what had happened over the proposed change at a time prior to the contract being signed, and then your first comment is:

> "At [the time] of the examination, no written media has been observed that would provide firm evidence about whom this was agreed by, on behalf of the board, or whom any prior consultation may have taken place with."

Did that surprise you?

A It did. Yes.

Q And then you say that during your investigation, you were told that it might have been signed off by "Francis Wrath, the Board's Technical Manager," and possible consultation with advisors. Then you comment on the accuracy of one of the comments that was made in the exchanges: "Providing 6 air changes is energy intensive and not necessary." You question whether that was correct?

A Yeah. I agree that it's more energy-intensive than what was provided, but whether it's necessary or not, I have an opinion on that, which-- which, going by the guidance, says it is necessary.

Q Yes, and then you say that you might have assumed that the project director or an equivalent would have asked technical advisors and infection control and clinical representatives to comment on that suggestion and sign off it. That's what you would have expected?

A Yes, and to be honest, I think probably the conversations were had. I don't believe for a minute that a change

of this nature would just be on a whim and without discussion, but it was certainly not evidence that I came across. I didn't find an audit trail of this. I knew that the proposals had been made, that there was reference to chilled beams early on in the project as being a possible solution, a possible technical solution. So, I think the situation with the chilled beams had been on the radar, if you like, for quite a period of time, but it came to fruition with what's recorded in the change log about the derogation, where it was agreed by the Board to install the chilled beams.

Q And because you were unable to find what you've described as an audit trail, you're having to speculate as to what may or may not have happened.

A Yeah. Part of-- You'll see in the way that I've framed the report that it's a small kind of quotation, if you like, or an excerpt from something, and then there's a whole load of comment on it. So, the purpose of that was to stimulate thoughts in others and maybe provide a bit of background because, being in the NHS as long as I have, you-- I was there when the germ of this kind of guidance was brought in. So, I know the history of the guidance, and I know where the ventilation rates have been previously, natural ventilation, etc, and so I try to provide a background to this to engender some thought about somebody else writing the report – that they would have useful background information. So, that was the purpose of the way I framed it.

Q I'm not going to ask you to read the whole of it, otherwise we'll be here for longer than we have available, Mr Leiper, so you'll excuse me if I just pick up one or two things. In the middle of that page 875, you make a comment just under the bold "Annex 2". You say:

> "There is a sense that the Board may have accepted this proposal in the belief that Ward Isolation Rooms, Critical Care Areas and Neutropenic Patient Wards did not form part of the proposal, because the Guidance indicates that these areas should have a ventilation rate of 10 ACH or greater. It is apparent now that the proposal was implemented and applied comprehensively in the hospital's single rooms irrespective of higher-risk patients being cared for."

Is that the kind of conclusion you came to?

A Yes. I was kind of dismayed by it. The history of the ventilation in general wards has been a bit circumspect, but the latest guidance actually nailed it to six air changes in

general wards, and my view of the log that described the derogation was that it was so poorly crafted that it could be easily misunderstood, and I think I make comment elsewhere that these-- particularly derogations need to be much more accurately worded in order that-- and written in a manner that provides an audit trail, that anticipates that there might be somebody coming on later on that would wish to know what the thought processes were in this, what the objective of it was and, you know-- and even to the point of testing it later on to say, "Was the objective that we anticipated by the derogation-- was that actually achieved or not?"

Q I think some of that we pick up on the next page of the report, 876, where you've got suggested recommendations, which you include throughout your report, and again I'm not going to go to all of them, but you say there:

"They have to be recorded in sufficient detail to provide a full audit trail... a clear unambiguous description of what will be delivered… what the expected outcomes and implications will be... possible unintended consequences and risks."

Is that the kind of thing you're thinking about?

A That's precisely what was being-- I must be going on. Yeah.

Q Thank you, and your report then goes on to pick up what the various guidance documents are, and we've discussed these elsewhere. You make some comments I'd like to pick up on page 878, because-- Am I right in picking up from that that there's a concern that you're expressing about the, kind of, what is truly the cheapest solution when parties are looking at a contract like this?

A Yes. So, it's the-- it's the best value interpretation of decisions that are made. So-- and that's normally what's applied is the best-- the best value, and better than just taking it at face best value is to look at it over the extended life of the project: so, the life cycle cost. So, it's not just the cost of providing this element; it's how much this element is going to cost over the life cycle of the building, and if decisions are taken on that, that might offer different options as being preferable, and if you then add to that or skew it towards what is the safest best option--

So, the safety of what's going to be provided is paramount, and thereafter it's the life cycle cost over the life of the project, and if you marry those two, I think you're as close to Utopia as you get.

Q I'm just picking up-- It's a paragraph on 878 which possibly just expresses what you've said. Near the top of the page, starting:

"The life cycle costs associated with the operation of poorly designed and installed systems will dwarf the cost of actually getting it 'right' at the beginning, even if the installation is initially slightly more expensive..."

Is that your point?

A Yes. I mean, there are graphs that you see in presentations where, you know, the cost of a capital project is represented by a small circle and the cost over the life-cycle of the building is a big circle next to it, and it's in that proportion. I can't remember the proportion, but you're probably 10 to 1. So the benefit of getting it right first time, even in the sense of an economic model, is by far the most preferable way to go.

And then when you consider that it's not just the cost of providing item A to replace it, but if you're doing that in an operational hospital, the relative cost goes through the roof, because it's fraught with difficulty, technical difficulty, access difficulties. Not to mention the additional risk that you put the patients in to start these kind of operations in a functioning hospital.

Q And you make the point later in that same paragraph there:

"The principle of decisions being taken based on life cycle costs is often lost and frequently overtaken by the 'on-time, under budget' mantra routinely used by Project Directors. That's, 'A healthy project target, but not at the detriment of costing proportionally more.'"

And then you make the point later in that paragraph that, as I understand it, that you need to do this early in the process, because by the time you're getting closer to build, people are not very amenable to any change?

A Yes. It might seem as if I'm being a bit unfriendly towards project directors, and it's no detriment to the project directors, because they are primarily focused in delivering the project on time, on budget, and that's healthy.

That's indeed the desire of every healthcare professional is you're always interested in what the economy of the thing is, because you're dealing with public money and you have a professional and ethical responsibility to do that as economically as possible, but for me, there is a line between that and compromising safety and particularly the patient environment.

So, it's the thought processes, but when you're a project director or a project team delivering a capital project, the focus is very highly on getting the project delivered and getting it over the line, whereas the operational team tends to be kind of waiting on this juggernaut that's coming down the line toward them, and they're very concerned about how they're

going to cope with all this additional work, because these guys are busy doing the day job already without something new happening.

Q Yes. I think the recommendation that you make among others, number 8, about a quarter of the way or so down that same page is, you should consider:

"...changing the prime motivator for projects and replacing the ‘on-time, under budget’ ambition with the principal target to reach a specification to deliver ‘the safest, most appropriate, best value healthcare outcome,’ and if possible, to achieve this prior to the Preferred Bidder stage"

A I'm flying a kite, basically. Do you know, I really hope that what comes from the Inquiry, Lord Brodie, is something that is tangible towards that aspiration, because I see this type of thing persisting in projects that I've looked at in the interim period. I still see this push to get over the line, the on-time, on budget thing still happening, and it pervades the whole delivery of capital, not only in Scotland but further afield in the whole of the UK probably, and further afield perhaps, but to bring that element of safety into the equation of decision-making.

And I'm not-- Please don't misunderstand it. I'm not saying that project directors and project teams just fly by the seat of their pants and deliver anything, but it's just a change of emphasis that I think would be really, really beneficial to capital delivery.

Q Thank you. Now, turn on----

THE CHAIR: Are we leaving this page, now, Mr Connal?

MR CONNAL: I was going to leave that page, yes.

THE CHAIR: Right. With your permission, Mr Connal, just something I'd like to pursue for a moment with you, Mr Leiper. We see in this report a discussion of guidance. Now, something I found when I was previously reading it, I found striking, and I think is picked up in recommendation 8, but also recommendation 4. Reading the comment, broadly speaking, about a third of the way down, you use the expression "Statements like ‘the contractor shall comply with SHTM’ are routinely used," and then you go on to explain how that expression might be used by the contractor at a later stage when there's perhaps a dispute. Now, recommendation 4, you use the memorable expression-- or at least memorable to me, "The use of guidance as a pseudo-specification should be avoided."

Could you just maybe tease-- I mean, I think it's fairly clear what you're saying, but could I just ask you to tease

out the point you're making here?

A Sure. Perhaps I could give just a reference to explain where I'm coming from on it. I recall a project that I was involved in and a contractor was proposing something about what they were to deliver, and I had said to them, "But you're required to comply with the guidance, and the guidance said that you should consider this," and he said to me, "Yeah, we considered it, and we consider that we're not going to do it."

So, learning from that, years and years and years ago, the guidance as it's given is as written, as I normally put it, "For the caring professional." So it's written for people like me to take and to apply into the circumstances that prevail where you're making an alteration or delivering a capital project. So when I receive what's required, when I receive a brief, I'll be looking at how the guidance applies into that clinical environment, what the patient group is, and I may vary the guidance from time to-- I may lessen it if I feel that the economy actually trumps the requirement that-- and there is no real necessity for a protective patient environment. Why would you then, kind of, over-egg the pudding?

But similarly there might be other cases where you think, "Well, this is a particularly vulnerable patient group, so let's provide more than what the guidance is recommending."

So the guidance is written-- very little of it is black and white: "You shall do this. You shall do the next thing." It's written as guidance, so it's not statutory, and there is quite a degree of interpretation required. So just to say you will comply with the guidance actually gifts the interpretation of the guidance to the contractor, particularly in a design-build situation. So, using the guidance as a-- as I call it here, "a pseudo-specification." It's not written in that format as a specification: "You shall do this, you shall do that," and it's very kind of black and white.

We used to have in the health service documents that were mechanical electrical specifications, and we used those in conjunction with older contracts, the JCT 80 contracts, where you had a bill of quantities and you were actually specifying the work that the contractor would do, and we had everything down to the size of bolts that you would use and the threads in the bolts and what were all defined. So, these were actual specifications, but the guidance is just written as guidance, and it's up then to the reader to interpret it and apply it as appropriate into the situation that you're presented with.

Does that clarify it for you, Lord Brodie?

THE CHAIR: I think it does, and if I was to take away from that that if a healthcare authority in its contractual documentation depended on an expression such as "The contractor shall comply with SHTM" as its only specification. What it has provided is what you describe as a "pseudo-specification," in other words that something at first blush looks to identify its requirements but, in fact, does not. I mean, is that a fair way of putting back to what I think you've just said to me?

A That's fair. I think the latest version of the ventilation guidance is getting toward being more prescriptive, certainly more wordy, and it recommends decision-making and things like that that weren't in the previous versions. So I think the guidance is beginning to catch up with that kind of mindset, that kind of perspective, but it will still require interpretation, and perhaps, you know-- It's almost an impossible task, but to wish that you could take every element of the guidance that was interpretive and give the decision on that so that you would say to the contractor, "When you are considering this, this is the way you will consider it, this is what you will apply."

And there is a tension in that, because when you're in a design-build world, particularly with the NEC III, the design responsibility is on the contractor. So if you go too far to influence that or to tell them, "I want it that size. I want it red"-- You can influence it to a certain extent, but you need to be careful that the benefits that's derived from this contract of it being risk-transfer to the contractor. If you then start to specify closely all of the elements of the project, you wrestle responsibility of that design risk back from the contractor, and it's a high wire that you're walking there basically that you don't stray too far into the area where design responsibility can be assigned back to the client. So that's what you're trying to avoid.

THE CHAIR: Thank you.

MR CONNAL: Now, you've made a lot of comments, and we have all of these available to us in any event, but I'd just like to pick up on a few more. 879, we pick up actually on things that you've already told us, basically about your view of the drafting of the derogation and the consequences of the drafting, and you comment about two-thirds of the way down the page that there needs to be a vast improvement in the way this is done, and it's so poorly crafted and open to interpretation, and somebody somewhere needs to know that you're looking for 10 air changes an hour in isolation rooms, for instance, to understand what this does or does not say. You pick up a slightly different point, I think, at the very foot of

that page and going on to the next page, which is that if you were to interpret it as meaning that 40 litres per second is all that had to be provided, it raises the question of whether the separate requirement for 125 per cent capacity in the ventilation system has or has not been impacted. Is that right?

A Yes, yes.

Q Then, there's another point made which is about, and please bear in mind-- and, in fact, you say, if you're talking about a system at its full capacity, how do you deal with the fact that its performance deteriorates when the filters are no longer clean?

A Yes. So, it was the original ambition that all-- I believe from the documentation that I've read about the project that there was an ambition to have a 25 per cent spare capacity in M&E systems. I would-- As I say there, I would wholeheartedly support the principle of giving that kind of resilience into systems, but you need to be careful that you don't-- Again, it's a matter of interpretation, something that I spoke to Lord Brodie about just a minute ago. So, in ventilation, I would say, "That's really good," but in water systems, perhaps not as good to provide an overcapacity like that. I think overcapacity is fine to a certain extent, but you don't want to inhibit flow rates and things like that in the water system to encourage stagnation. But, as far as ventilation is concerned, the normal scenario that you get is that the risers, the service routes up through the building and the ceiling spaces where the services run are normally packed to the gunwales, so they stuff the services in.

A value engineering concept that's routinely applied is that they compress the size of the-- between the slab and the ceiling tiles, so if you go beyond-- I think it's a metre, you need to have detection in for smoke and things like that. So, it's a good save in value engineering to reduce the size of the ceiling void. So, that would be, in this room, above the ceiling tiles and below the slab, and that's where the services run, but when you then put in large ducts, cables, water services, it very soon fills up, and ideally what you would have is for the maintenance teams to go in and, when they open the ceilings up, they have free access to water or to ventilation or to whatever. But because of the compromises that are made in "value engineering", these tend to be very congested spaces. So, if that is designed to 100 per cent and you think, "Well, let's open up another room, let's have another isolation room," or whatever, there is no capacity. There's nowhere to go with it, and if your plant is right on the money, if it's right on 100 per cent, your filters will

deteriorate. Your filters, as the system runs, will begin to silt up, and then the pressure drop across the filter, if I'm landing this okay, will increase, system resistance increases.

So, the effect of air delivery is inhibited then by filters that are getting dirtier, and if it's 100 per cent with clean filters, there is inevitably going to be a deterioration in what's provided. So, if you provide 125 per cent, you have a bit of legroom there, but if it's right on the money, if it's right on 100 per cent, you don't have anywhere to go with that, and particularly in this circumstance where you had less than what was recommended, if you're then trying to improve that situation, it's an impossibility because the risers are already full with the ducts that are there, and to improve the air change rate means potentially you need to increase the size of the ducts, and if you don't have that space to put an enlarged duct in, the options open to you are vastly diminishing.

Q So, this is part of your proposition of getting it right at the start----

A Absolutely.

Q -- because it's difficult to fix later.

A Yes, and particularly in an operational hospital with-- I listened to the evidence provided by the families to

the Inquiry, and their journey has-- the clinical experience that they've had has just been horrific, and to have them having to, on top of that, be involved with issues related to the building, I think it's just so sad. It really is. So, yes, to answer your question, I think get it right first time because the correction of it-- it's vastly more expensive than it would have cost you to get it-- to put in an extra bit of kit or whatever at the beginning, and the impact on the patient and the patient environment is very much reduced.

It gets back to the thing about the chilled beams as well about, "Would you actually put something in the room that you need to go and maintain and disturb the patient environment?" So, it's not just-- and, again, coming back-- It's a full circle back to the interpretation of the guidance. What's allowable is not always right, and you have to take the patient environment into consideration where you're deploying these design solutions. It might be allowed, but is it amenable to that patient care, that clinical delivery?

MR CONNAL: Yes, so, any idea that a layperson might have that in order to go from 3 air changes to 6 you simply send the guy down to the room and he turns a button and it goes up from 3 to 6 like you might do with a central heating radiator or something is not in any way accurate.

A If you design the systems appropriately, it's possible to do that----

Q But you need to have designed them with ducts that would take 6 air changes an hour----

A That's correct, yes.

Q -- which I think we've heard from other witnesses would be substantially larger than the duct that you would need if your maximum was 3.

A Yes, and it was part of the comments that I made that looking to improve the situation is very much inhibited by what you're provided with in the first instance.

Q Well, let me just pick up a number of things. I'm conscious that we need to read your whole report as a whole, but I just wanted to pick up a few things. On page 881, you've picked up the reference to BREEAM, and you say:

> "... more attention is given to the achievement of a BREEAM target rating rather than the implications of the deviation from the recommended air flows."

You say-- There's a note:

> "... the energy target and the BREEAM rating should be the focus of a 'joint review', but there's no mention of air flows in that. Both issues are important… [and you say] one might conclude that the lesser priority was taking precedence."

Is that your view?

A Yes.

Q Now, I'll just move on reasonably quickly through some of the other issues. You've already mentioned chilled beams, they crop up at page 883 of the documentation, and I think you make the point that, because of the way these chilled beams work, there's a certain amount of air drawn into them, and therefore an issue that might arise over cleaning them----

A Yes.

Q -- and if you're in a single room with an ill patient in, not very easy to do, presumably.

A Well, the room would need to be vacated. There would need to be a SCRIBE done, a risk assessment done, so already you see that the administration of the ability to maintain these installed systems becoming ever more complex because if the patient needs to move out, can the patient move out? Is the patient able to move out? Where do they go? How do you administer-- Who arranges that with the clinical staff? So, there's a whole raft of administration that goes behind that, whereas if you have a once per annum or a twice per annum clean of a grill or something like that, that's a different ball game. But, yes, so, that

kind of servicing of a patient's space, particularly if it's a single space, can be fraught with difficulty in an operational hospital, particularly at the bed occupancy that the NHS works at today.

THE CHAIR: This is my fault for not having spotted this earlier, Mr Leiper. My eye is on the reference to chilled beam units, which is on the page we're looking at, that's 881, just above "Suggested Recommendations".

What I hadn't, I think, picked up on previously was that if we are looking at, for example, Ward 2A, if you're going to install a chilled beam unit and the chilled beam unit is to have an impact on producing an air flow because of the difference of the temperature of the air, should I read what you're saying there as if you make the decision to have the chilled beam unit and you want the chilled beam unit to have any impact, you thereby limit the air change rate that an additional mechanical ventilation system can produce? Now, I don't know if I'm asking that question very clearly.

A I think I get where you're going----

THE CHAIR: It goes back to my previous question about 40 litres per second.

A Yes.

THE CHAIR: As I say, I hadn't picked that up, but are you saying that if you choose to have chilled beam units, you are limiting the air change rate that can be or should be produced by a mechanical ventilation system?

A I think if I could maybe just swing it a wee bit? So, if you have 100 rooms with 100 chilled beams, you will design your air handling unit to deliver the air that's required to the chilled beams because the chilled beams take primary air from the air handling unit and they circulate air within the room. So, the percentage-- if there were no chilled beams, all of your air would come from the air handling unit, and therefore that would be sized appropriately. So, the air handling-- there would be no use in providing a humongous air handling unit if that weren't required – it comes back to the economy again – but you would provide it purely for the duty that's required of it, and if that's chilled beams, you would size it accordingly, and if it's not chilled beams, it's likely to be a lot bigger because all of your air would then need to be delivered by the air handling unit because it's a sealed building. You don't have any calculated natural ventilation in the building.

MR CONNAL: I wonder if we could ask the witness, my Lord, just so we're getting a clear answer to my Lord's question, to go back to page 881 and to look at what is said immediately above

the words "Suggested Recommendation." The short paragraph there, starting, "The CBU's installed..." Is that the----

THE CHAIR: Mm-hmm. I mean, that's the paragraph-- and I'm just wondering if I'm understanding it properly.

A Yeah, the rating of 40 liters per second is in the manufacturers' and the suppliers' documentation. So, there's a table with a range of units all at certain airflows, and this one in particular was 40. The one above that was 55 litres per second, but there was only one above-- this was the penultimate in the table, if you like, that I've seen. So, that would be the rating of the unit.

If you started to pump in more air, you start to increase velocities, you start to increase noise levels and things, and if you're pumping in more primary air into that, the balance of your heating and/or cooling, depending what season you're in, would be affected by the increase in air. So, potential for drafts and things like that onto the patient. So, you would effectively limit the airflow to suit the appliance that was installed.

THE CHAIR: Right. So, at risk of just repeating what you just said, if the decision is, "We're going to have a chilled beam unit," you have, by making that decision, made a decision as to what the rate of air changes are delivered by your mechanical system.

A That's correct, yes.

THE CHAIR: Right. Thank you. Thank you, Mr Connal.

MR CONNAL: I just wanted to pick up again a topic which is probably a little more complex to discuss in a couple of sentences, but we have heard some other evidence on it, and that's the design of rooms with lobbies and how you structure the air circulation in these rooms for particular purposes. You pick up on that in your report at 884. The comment you make in the middle of the page is, "Well, there are different things you can do, but if you don't have any constraints because you're doing a new build" -- so, you're having to retrofit into an old building, your view is you might reasonably expect the normal standard configuration to be what was built. Is that right?

A That's correct.

Q And that wasn't what was built?

A No. The normal configuration is to have (inaudible) extract within the ensuite so that the air flows from the lobby through the patient space and out through the----

Q The ensuite.

A -- ensuite. So, that's what would normally be expected, but in the case at Queen Elizabeth, the extract was in the patient room, and there was only a

small toilet extract to, you know, designed to-- I surmise to take odours away from the toilet.

Q And at the foot of the page you say that putting the-- which I think it's a main extract on the ceiling of the patient's bedroom might not create an airflow that was ideal for what was intended.

A That's correct. I've seen this just actually in a presentation at a conference I was at just recently, where the gentleman that was having a look at the ventilation system actually put a smoke stick up to the vent, and all that happened from the supply was the smoke went right across the ceiling tile and out the extract. So, you're not ventilating the space, you're just short-circuiting, and that is the potential-- if you stick the extract within the patient room, and your supply is at high level coming through above the door from the lobby, the potential is that it will go straight across and out the extract without mixing in the room, and you don't have anything in the ensuite that would encourage that circulation. That's indeed the way the research was done. When I contacted BSRIA, that was there, the way they'd set up their research.

Q Can I ask you about something else? Single air handling unit for this ward, which is dealt with on 885 at the foot of the page. You've described a single point of failure, and then your comments quite interesting, perhaps. You suggest that there's a difference between how an in-house Estates professional and an external person might look at this. Is that right?

A Yeah.

Q And is that because the in-house person thinks, "Well, what happens when I need to maintain this?"

A Yeah, absolutely. I've been that (inaudible) on many occasions. It's always a challenge, particularly, you know-- We discussed the mantra of the project director – “on time, on budget” – and there's always a tension in the provision of resilience and contingency and to deliver something that just agrees with the guidance, and it comes back to the interpretation of the guidance and the application of the guidance. So, as an in-house Estates professional, I'd be looking at it and saying, "Well, if I have to give a protective environment to the patient, at what time does this protective environment become unnecessary?" Well, the answer is, "At no time." The protective environment is required at all times.

So, in order to maintain the operation of the plant 24/7/365, you need to anticipate that the plant is going to break down. It's going to need maintenance. It's going to need cleaned.

Do you know, there's a whole range of issues that may cause what's being provided by that plant to cease. So, ideally, you would have something that you-- even remotely these days, you go onto your computer, push the button and change over onto the standby system that's operational, and then you have time to deal with the problems that was in the kind of operational system.

Now, I understand the arguments here because it would be the greatest thing in the world to have not two but three of everything so that-- to be sure, to be sure, so that you have that kind of resilience and depth, but it's always a tension with the capital that's provided to provide the facility, and the guidance allows-- For ventilation systems, it allows, like, spare motors, so fan motors and things like that or spare fans, but these need to be-- If there's a problem, there needs to be time-- If it happens in the middle the night, there needs to be time for a call out or the shift guy to get there, prepare the site. What happens to the patient in the interim? The patient's still in the room. Do you say, “Well”-- you know, and if it affects a whole ward. Do you say, "Well, we need to move that ward because we can't protect"-- So, it becomes-- Operationally, it becomes very very difficult, and it comes back to the argument that I was making earlier

the report of it. The safest, most appropriate option, and that will lead the designer down a path where the resilience is actually appropriate.

So, it is allowed by the guidance, but is it appropriate? And if you're motivated one way, you would say, "Well the project can't afford it." If you're motivated in another way, you would say, "I don't care what the project can afford. This has to be the solution, so if we're going to do the project, we do the project properly."

Q So, in the context of a breakdown on the need for maintenance, if the air handling unit serves the whole ward, you can't provide a protective environment 24 hours, 365?

A Yeah, it's a moot point because the isolation rooms should have their own dedicated plant, but if isolation rooms have their own dedicated plant, that plant, in my view, should be backed up in some way. It might be that if there's four isolation rooms in the BMT, it might be that there's one spare plant or two spare plants that can be switched over. You don't need to replicate everything. So, there's a scale of economy there that could be applied, but it could be cleverer than just providing a one-off, and if that breaks, well, we don't know where we go. Particularly, if the four rooms are occupied, what do you do with the

patient?

Q Can I just ask you about a couple more things before I come back to some basic questions about the air change rate? You mentioned thermal wheels very briefly. Now, the Inquiry has heard a bit about thermal wheels, and you say in your report, effectively, well, they can be provided, but then you say, "Well, is it right for them to be provided?" Why do you question that?

A Yeah. Where they have been provided, you will get arguments to say, "Well, you know, there's no appreciable risk." I haven't personally studied this in any great depth. It was always a kind of rule of thumb in the olden days where you wouldn't really put a thermal wheel into a clinical environment. If you were wanting heat recovery from a clinical environment, you would have a run-around coil which separates any kind of ins and outs, but with a thermal wheel, you take energy from the exhaust, and you transfer that energy to the supply.

In my opinion – based on nothing but that sounds right – I think if you can transfer molecules of heat, you can try to transfer microorganisms. You might obviate that by putting HEPA filters downstream of that so that anything that's transferred is caught but, you know, I think I mentioned in the report somewhere that through one of the other technical reports they found that the interlock cams that locked in the the HEPA filter units in some cases had been missing. So it's not foolproof and, again, we're dealing with patients here. These are not guinea pigs to be, you know, “Let's see how that works.” So I think if we make it as safe as we know how to make it-- There will always be inherent risk, but if we make it as safe as we can for the patient, I think that's a laudable motive.

Q Can I ask you one other question? I'll just try and frame this generally for you. One of the things you touched on in your report was where the arrangements for planned preventative maintenance-- or what wasn't very good about the arrangements for planned preventative maintenance. Is this something that's important for an Estates team to have these in place properly?

A Yes. In my opinion, yes.

Q And what's the consequence if everything isn't in place to allow a PPM system?

A Well, maintenance can take numerous forms. It could be totally reactive, in that you only sort stuff when it breaks down, but in a hospital environment you have the other dimension of the requirement to operate 24/7, and you also have a patient-client group. So, it's not that you can shut

down for two weeks in the summer, you know, *à la* a factory, and then do all your intensive maintenance then. So, you have to design it such that the intensive maintenance actually happens whilst the plant systems all function, because the hospital doesn't wait for that kind of maintenance.

So-- and to have systems run effectively, ideally the planned maintenance is a dynamic system. So, once you-- You can set up programs – manufacturers recommended frequencies for operations and servicing and things like that – but if you operate the system dynamically, you can flex the frequency by the level of breakdown.

So, if you're maintaining something every month and you never ever see a breakdown, that's good in one sense, but you might be over-maintaining it. So you can move it to bi-monthly and see how it goes. If you start to get a breakdown, you can handle it, hopefully, because of the resilience in the system, but you can then flex the frequency in order to have an ideal frequency where you're maintaining it to minimise your reactive maintenance.

So, this is the stuff that breaks down unexpectedly, causes disruption, worst of all, if it affects patient care-- You know, if something happens in the theatre, you cancel a theatre list. It's not just the

expense of that, but the clinical impact of that is huge. So, to have an ideal planned maintenance system will hopefully intentionally restrict the amount of unplanned, unnecessary breakdown that you get. So, it's important from that aspect.

Q So, to use those horrible buzzwords, it's proactive rather than reactive?

A Yeah, and you also have statutory requirements to demonstrate that you are maintaining your systems appropriately, so it's good to have that as your record of maintenance, so, if ever asked, you can produce the evidence that you are maintaining things appropriately.

Q Now, just a couple more questions before we move to a different topic. If I may, can we go back to your witness statement, please, at 211? I suspect we know the answers to these questions, in a way, because we've already discussed them with other witnesses, but you've talked about chilled beams and the consequences of chilled beams. You've talked about thermal wheels. You've talked about the PPVL-type rooms. Just in terms of the general airflow rates that you would have expected to find in the wards that you were asked to look at, is your evidence on that set out at page 211?

A It's page 211? Sorry.

Q Page 211. So, it's at the top of the page. We have an electronic number. It's paragraph 56 and 57 and 58 and 59.

A Yeah, so, the air change rate is 2.5 to 3. The 2.5 to 3 air changes were in each and every room that was supplied by a chilled beam. So-- and this is where I get confused, but I have it in my mind now that the arc of 2A-- All of these rooms had chilled beams in right round to the point where the Bone Marrow Transplant PPVL rooms were. So, all of those rooms had chilled beams, and they would all have been affected by the limitation to the air change rate: 2.5 to 3 depending on what----

Q And what should the air change rate have been?

A Well, in a general ward-- It depends, again, what you're specifying the ward to be. If it's a general ward, it should be six according to the SHTM, but you have to take into account what your patient population is going to be, and if there's immunocompromised patients there or people who are susceptible or more susceptible than the general population, you might consider that even in a general ward situation that perhaps 10 air changes would be more appropriate and-- you know, and then start to think about pressure differentials.

Q And, I think, is it 10 pascals?

A 10 pascals, yes.

Q Of positive pressure?

A Yeah. So, that means that it's coming from the room out, so-- but the benefit of the PPVL is that can be protective of source isolations.

Q Yes. So, to just make sure I've got that last question right, because it cropped up recently with another witness, a PPVL room can both protect against something coming in and something coming out if it's set up properly?

A Yes.

Q Just, perhaps, one final question before, perhaps, we'll take a break. You've got a lot of comment in your report-- You discuss a lot of issues. In order to come to the point where you were able to produce this report, who had you spoken to?

A Basically, Mr Powrie and, to a lesser extent, to Miss Kane.

Q And you were talking about looking at drawings and so on earlier. Where did you get them from?

A Yeah. They came from ZUTEC. Shona Frew operated ZUTEC and knew how to get the most from it. So, a lot of my earlier reliance was on Shona to provide some information, and a difficult system to navigate, particularly from an inexperienced perspective, made it twice as difficult. But-- So, she provided information that I had, and in

other ones, you know, I took it on my own bat to call BSRIA. Spoke to one of the researchers. They copied me papers and research papers. Explained-- Because the big question was, about air change rates, is it compliant? And I would always answer that with a question, "Compliant to what?" because of so many things, but the main point of compliance is with the SHTM. So it's the six air changes for general wards and it's ten for isolation rooms.

Q Thank you. I wonder whether this might be an appropriate point to have a break, my Lord?

THE CHAIR: All right. We'll take our coffee break, and if you could be back maybe by ten to twelve?

A Yes, my Lord.

THE CHAIR: Thank you.

(Short break)

THE CHAIR: Mr Connal?

MR CONNAL: Thank you, my Lord. I'm going to come to the report that you did about what had happened to the DMA Canyon L8 risk assessment just very shortly, but if I could just pick up a couple of points, as it were, on the way to that destination?

If we could look at page 217, which is probably picking up a point that you've touched on in your wider discussion – you've asked a question there about, well, what's the primary focus? Cost, or benefit to patients, or protection of safety----

A Yes.

Q -- and you express a view about that?

A Yes, safety. Every day of the week and twice on Sunday. As I said earlier, these are people's lives that we're dealing with. First rule is do no harm, and that should be a prime objective of how we build and design environments for patient care, so I think it should be the primary focus. I think as public servants we also must have an eye to the economy because, as I said before, we're dealing with the public purse, we're dealing with money that's provided for that. So the appropriate stewardship of that finance is of prime importance, but what trumps that is the safety-- the patient safety, and not just the patients, staff, anybody that uses the-- visits-- comes in contact with the business.

Q Thank you. Now, one question I probably should have asked you when I asked you about PPM. It's about when you should have your structures to allow PPM in place in a project, and you touch on this on page 239. If we could come to 239 in the witness statement, please?

At the top of that page, so, I think you suggest the operational PPM should be in place as soon as systems and plant

are running or really start to run?

A Yes.

Q So before occupation?

A Absolutely. If the systems are designed or drawn, not being procured and things like that, we should know what's going in to a building and therefore we should-- it should be the next step, then, to prepare the maintenance schedules and things like that, and to have that populated and assured-- so bounced off the people that are going to be running the planned maintenance.

Q To actually get them involved?

A Absolutely, yes. I know there's a kind of contractual danger in it, but for-- so that the building and the facility is functionally prepared for operation, these systems should be tried and tested, end to end, and ready to go. The button is ready to push in order to generate the planned maintenance and things like that. It just was not the case here. The systems, in my opinion, were dysfunctional.

Q I'm going to come now to ask you about your report into what happened with the L8 water assessment, which was produced by DMA Canyon in 2015. Who asked you to do that piece of work?

A Jane Grant asked me to find out what had happened to the DMA Canyon risk assessment.

Q And what were you told about the circumstances to help you on that journey?

A It had come to light, I believe, through Health Facility Scotland and highlighted to the chief executive that these reports had been made-- the risk assessments had been done and the reports had been made. There was another one in 2017. There wasn't much distance between the recommendations in both, so it was obvious that something had been missed, and she wanted me to have a short investigation to find out what had happened to it, who got it and where it went.

Q Now, on page 244 of your witness statement, you set out some of that information. You cover in your report who got the report, so far as you were able to find, and who knew it was there. Were you able to find out who knew such a report was being instructed?

A Just-- The process of who knew-- There would've been several people that knew to a greater or lesser extent. There would have been an awareness and perhaps not detailed knowledge, but there would certainly have been an awareness to probably about half a dozen/eight people, something like that.

Q Is that people who were aware that one was being instructed?

A Yes.

Q Did that include people above Mr Ian Powrie?

A Yes. I know-- I think Mr Loudon had discussed it with Mr Powrie to get the risk assessment organised, and I can't remember if I say here, but I recall seeing a minute of a meeting, maybe a technical group, where it was it was intimated that this would be done, and I've seen Ian Powrie's initials next to it, and I had asked Ian about this and Ian couldn't recall it. So, I don't know if he was perhaps not at the meeting and then maybe David Loudon was at the meeting and had volunteered Mr Powrie to get that done. I don't know exactly what the background or detail was in that, but----

Q What about Mary Anne Kane? Because she was sort of in charge of a lot of this by the time you were involved.

A Yes. Perhaps to maintain confidence, I don't know, but Ms Kane was off-- away from work for a lengthy period just before that, and I don't know what, if any, kind of handover there was between Mr Loudon and Ms Kane as he departed and Ms Kane come into post, so-- But I'm aware that Ms Kane didn't have any awareness of the report, and it was a complete surprise to her when Ms Grant had challenged her about it.

Q Well, I just wanted to ask you about that because I can see that she may not have known the report had been received, but in her role, would she not need to know one had been instructed?

A I think her focus would've been elsewhere, and it would've been probably through Mr Loudon-- but I'm speculating, Lord Brodie. I don't know for sure for sure. I've not, kind of, seen it written down, but just through the investigation that I've done and what I've read/what I've seen, I know that David Loudon had been involved in initiating it, so I knew that David would have been aware of it, and in that channel of communication, I don't think it came through Mary Anne, so I----

Q The other question I wanted to ask you about this-- You're being asked to do this in 2018. As you quite rightly mentioned in your witness statement, the authorised engineer for water, Mr Kelly, had done some comment on issues in 2017. Now, were people not aware through Mr Kelly's report in 2017?

A Yes, quite possibly, and-- but I don't know who that report went to as far as Mary Anne Kane was concerned. I know it was probably bouncing about within Estates between Powrie and Gallacher and within the Estates team, but I don't know if that broke the silo through to----

Q I'll come to look at the report in a second. I think I need to ask you what, in many ways, is the big question. In the

report, you explain a number of the issues about workloads and problems with coping with things in the absence of proper maintenance systems, so on and so forth, working long hours, many of which we've already heard. The report was a report which was on a topic of, would you agree, potential significance to the wellbeing of people using the hospital facilities?

A Absolutely, yes.

Q In fact, depending on your condition, there was the potential for people becoming ill or worse if things weren't done properly----

A Yes.

Q -- and we know that, in effect, it wasn't actioned properly or fully or much for about three years or thereabouts. Now, your report basically says, "Could have done better," but otherwise doesn't really say much else. Were you not appalled and horrified and shocked or whatever? Because that doesn't come through in your report.

A All of the above, but that wasn't the purpose of the report. The purpose of the report was to find out what had happened with the DMA Canyon risk assessment, and that was focus. I could have been down all sorts of rabbit holes on that one, taking the focus away from what had happened in the report by actually dinging in a commenting about,

"This might have happened because of-- the recommendations weren't applied appropriately," or, "The solutions to the recommendations weren't applied appropriately," but the report and the investigation was delayed because of various aspects that I won't trouble you with just now, but-- So I had to focus on answering the question that had been posed to me to answer and not to really speculating what the outcome of that was. That process was already underway.

Q I can understand that in a sense, but your process was carried out almost a bit like a human resources exercise with the HR team and the staff side being consulted and so on and so forth. If somebody has failed to do something which could have had pretty appalling consequences, would we not expect that to find some place in your report?

A Yes, and I do say that it was a big miss. It was an important thing and crucial, perhaps, and it was a big miss, definitely a big miss. But, as far as what had happened to the report and the other kind of not so public statement of the report, “Was there any issues for disciplinary action?”, that was always the kind of background. Staff were very nervous because this was somebody whom they believed to be external

coming to have an inquiry about what they had done and what their actions were, so staff were very nervous, and you're right, it was more or less a HR exercise. So, what I concluded from what I had learned in the evidence that I took from the interviews was that it was a miss, an important miss, but it was, in the circumstances, I believe, inevitable that something was going to be missed, and tragically it was this that was missed.

It could have been a whole range of things because they were so busy correcting issues and responding and things that-- and I think I mention elsewhere that the team-- with the greatest of respect to the team, because I have the greatest of respect for them, the majority of the team were fairly inexperienced at that level, and Mr Powrie was really the only kind of well experienced person in the group. The rest had been brought-- newly promoted, brought from other places and things, and from what I gathered, most of Mr Powrie's time was spent in issues that were emerging from the hospital and trying to sort them. So I just felt that the whole circumstances dictated that it was inevitable that something was going to happen, and this was, unfortunately, what happened.

Q In fact, according to your witness statement, the only people-- we know of Mary Anne Kane at the moment. The only people you were able to interview were Colin Purdon, Mr Powrie, obviously, Mr Guthrie, Mr MacMillan, Tommy Romeo in that group, and then Mr Hunter, who was, what, Mr Powrie's immediate superior?

A Yes, so it was-- I can't remember how we formulated the list of people to be spoken to, but I was assisted by that and, I think, by Mr Powrie, who was saying, "Yes, that would be an appropriate person." If I floated a name, he said, "Yes, probably good to speak to that person," and speaking to Mary Anne Kane as well, she would say, "Yes." I interviewed her as well. So, there was a few of them that put their hand up and said, "I'm the person to speak to about this," because they had something to say. Others were more nervous of the process because I think behind all that was the fear that I was going to come and say, "Well, there's been a huge mistake here, so pull the revolver out and shoot somebody in the head." It was that kind of tension in the air type thing.

Q Was Mr Hunter aware that it had been instructed?

A I would need to go back through my notes. So, each of these interviews were scribed, so scribed by Alison Hirst and Jillian Cole, and then we

went back and forward between each of the participants to ensure that we had captured what they'd said correctly, so to try and remember what each person said individually is a bit of a long shot for me just now.

Q I think the only other person you interviewed according to your witness statement is Phyllis Urquhart, but she wasn't actually there in 2015.

A No, but she had----

Q She was the compliance officer.

A She had-- She came with a folder, with a plan, and-- So, it was an action plan for actions for water, and I think I learned subsequently that there had been-- a copy of the recommendations, maybe the appendix or whatever, in the DMA Canyon report was copied around to maybe Phyllis, and she had worked alongside I think it was maybe Jim Guthrie to produce an action plan. When I had a look at the action plan, I didn't go through it in any detail whatsoever, I kind of leafed through it, but a lot of the actions that I'd seen were pertinent to what had been recommended within the 2015 report, and I felt that there was maybe some kind of crossover there, some cross-fertilisation between the DMA Canyon report and what the action plan was. The action plan was basically for the whole site, so it included (inaudible) Estate as well.

Q Now, what you do in your report-- which we'll find at Bundle 8, page 150. It's divided into sections. I just wanted to go to 153 just to make sure I'm not misquoting you. You say at the top there:

> "Actions on the recommendations of the L8 risk assessment could have been better."

Some might suggest that's a little bit of an understatement.

A Possibly an understatement, just the wording that I used.

Q

> "A more robust response may have reduced the risk levels."

And then you make some other comments. What you then do in the report, rather like your 2A report, is you go on to look at issues prior to the actual mechanics of the receipt of the DMA Canyon report, some of the other issues that you suggest are contributory to the impacts on the Estates team. Is that right?

A Yeah.

Q And what you-- you do that, starting in 154, where you pick up the change in a procurement model, pointing out that in a PFI-type contract, which was originally the thought, your services

people are not the clients people but they're part of the providers system after the building has been built during the period during which the PFI contractor-- well, let me just use the word "maintains" the system, and you pick up on a point that you've already made that it's less expensive to make alterations of the designs as they're being worked up than sorting them out later, more disruptive to make alterations at a later stage, and you make a point two-thirds of the way down, page 154, the depth of involvement of in-house technical advisors you describe as "fairly shallow."

A Yes.

Q Is that right? That's something that bothered you?

Q Yeah. My earlier statements about having things in a state where it's operationally ready necessitates the input of people who are going to maintain the place. So, in terms of a PFI where it's handed off to a third party provider, normally part of the constructor's organisation-- they then have, happily, an income stream over the life cycle of the building, and they – I know this from previous experience because they are in the same tent as the constructor – can then go and, during construction, talk to them about procurement of quality stuff that minimises the potential for early replacement. So they can influence the main contractor to a certain degree because the main contractor is still under pressure to deliver it to a guaranteed price but, within that envelope, they can stretch it in order to improve quality of systems that are being put in, access, etc, etc. When it becomes a Treasury funded model, the actions after handover is not to hand the property over to a third-party provider. It then gets put onto the Estates team.

So, in my view, the Estates team should have equal access, basically. It's just that kind of input and influence perhaps. They're in a less influential position because of the period of the contract. I mentioned elsewhere that if you want to make any substantial changes, you make it very early in the project, and that's why I say that, you know, if it's going to be a Treasury-funded model handed off to the Estates team, they should be right on the ground floor, and I'm talking about Infection Control, I'm talking about Estates, the professionals that will operate and have this facility function after handover.

So I think it's very important, and the situation here was that, early on when Mr Powrie was still at Glasgow Royal and Brian Gillespie, another colleague, was in the Clyde Royal, they were kind of tapped up to give opinion or input.

But, in speaking with Ian Powrie

through interviews and things, the depth of that was fairly minimal. I know Brian privately, and he had said something similar. So, it's that-- they were asked the occasional questions. It wasn't until 2013 that Mr Powrie was actually seconded into the project, and by that time, you know, it's in tablets of stone, basically. It's not to say that things can't be changed, but it becomes more difficult. The further the project design progresses, procurements are in train. It becomes more difficult then to make any significant or substantial changes in the project.

Q On page 154, near the foot, you make that point about the input from Mr Powrie being not particularly significant. In fact, you had material suggesting that he was sort of kept out of the way on occasion.

A Yeah. I understand the position because I've been that person many times where you become the pariah because any time you open your mouth you're costing people money and you're causing delays because you're picking fault in things that you haven't been involved in earlier. So you come into that environment, and you start to say, "Well, you know, I would like that bigger. I would like more of that please," and, you know, "I would like another one of them," and every time you open your mouth you just cost money, and that's-- From a project director perspective, that's the last thing you need.

So, I did find evidence – and I'm just reporting what I heard – that Mr Powrie, when he was seconded-- and I think probably because of that-- because Mr Powrie is a very good engineer, so he knows a lot about a lot of things, and he would have been suggesting this, suggesting that. So I could see the reason why he was maybe, kind of, isolated or kept at arm's length a wee bit. I'm sure others would disagree, but that's what I heard.

Q I think you also comment later in your report on the kind of roles and responsibilities – presumably things like the appointment of people as Authorised Person, Water and all that – wasn't in place. Is that----

A No. It came to my attention very early on. I think we were going through the Health Facilities Scotland report by Ian Storrar, fielding questions, still kind of dealing with information, and I kind of seen comment that Ian Storrar had made in the report about the lack of appointments. By this time, I hadn't seen the Dennis Kelly stuff, which also comments about no appointments, and I had said to Mary Anne-- I was in the same office as Mary Anne. I said to her, "Who's your AP?", and she said, "I don't

think we have one," and I suggested to her that that happens pretty quick, and what I said to her was, “If you have an AP there, the AP then recognises that is his or her bailiwick. That's what they are responsible for, and if they are appointed, they are trained and they are aware. So they know what to look for and issues like what we've seen, what we've experienced here.”

Had there been an Authorised Person in place at the operation-- or actually when water hits the system, actually, in a water system. When water hits the system-- and I think you've had evidence it’s a year previous to handover. To have water in a system for a year is just nuts. It's just silly. I appreciate there's processes to go through, but to have that and to have to manage that then, in my opinion, the contractor, whilst they have responsibility, as soon as they put water in it, should manage it accordingly as far as the NHS process is concerned.

So, there should be appointments made, and better actually, if it's to be handed off to NHS Estates, it's better that the appointment is made through NHS Estates, and work hand-in-glove to manage that system over the prevailing period. I know, again, it's difficult contractually and things, but it's coming back to what I was saying to Lord Brodie earlier about the kind of safety first thing. It's to have that principle in mind so that if these appointments are made very early in the process, that system is managed appropriately. It's difficult to replicate operational use by flushing and things like that, but the eye is on the ball then. I think I say somewhere in there, if that had been in process, the handing off of the DMA risk assessment and the actions that took place or didn't take place thereafter would have been very very different. Had that been handed off to the appointed AP, the appointed person trained, knowing that it's within their bailiwick, knowing it's their responsibility, I suggest that the response would have been very different. So, it's the operational preparedness, I think, is really essential and an essential component of that.

Q If we go to 156 of this report, you set out a paragraph under the heading, "Operational preparedness and readiness," in which essentially you're talking about the small team, the inexperienced team, the pressures they were under, the long hours.

A Yes.

Q And that information you gathered.

A Yes, and that came from everybody. Everybody, bar none, testified that that was the case.

Q Further down the page, under the heading, "Response to the DMA risk assessment," there seems to have been a meeting. Some dubiety as to precisely who was there. But I suppose the puzzling thing from outsiders or anybody who's actually read the DMA Canyon report is it's full of bits highlighted in red and fairly easy to see that they're meant to be actioned. No indication that that was spotted.

A Yeah, I thought it was incredible myself, and I think-- I know that Mr Powrie regrets it very much. I don't know why nobody just sat and kind of flicked through the report and thought, "Oh goodness, there's a lot of red in that." I don't know why that happened, why it didn't happen, but it's apparently the case. I wouldn't accept that they leafed through a report and seen all the red and thought, "I'll just ignore that." That wouldn't happen, so I speculate that that's-- it was passed off thinking that others would take responsibility for the implementation of the action plan for the recommendations.

Q One of the issues that has been touched upon by some other witnesses was the connected question of resources: how many bodies you've got, who they are. Now, you deal with that on 159 of the report under the discussion heading "Resource Estimation", and you're quite critical of what was done about setting the budget. Is that right?

A Yeah. The process was what was explained to me from the interviews, and I have to say-- I mean, it looks very critical of the Board, and I guess, you know, guilty as charged basically, but you have to understand this is a process common in the NHS. There has never been a project that I've been involved in that has-- that both sat on a life cycle that-- the cost of the process. It's basically, "That's the money you've got; make it fit." It's, you know, "Set up your process"-- and we box clever with this, and 99 per cent of the time we're good at it, you know, nursing things along and making things happen and prioritisation. You know, risk-based prioritisation-- It's-- You know, I did it every year that I was operational.

And this is no different from any other situation that I've been experienced of, where they take an assessment, and I think the assessment was done as part of the public sector comparator-- is the-- We do this public sector comparator where we actually build up costings for the scheme for, you know, what the public sector would like, and then that's compared in a value-for-money exercise with what the bids are from the private sector.

So, the rationale that I was told that

was applied to this was that the budgets were taken from the demitting hospitals-- so, accumulated from the demitting hospitals. So, that's the money that we have available and, well, we're building a nice shiny new hospital with all this efficient kit in it, so we could take some money off that as efficiency saving. So that was-- I paraphrase, but that's----

THE CHAIR: It's my fault. Could you just take me to that again, really starting with the word "rationale".

A Yes, so the rationale that I was-- that was suggested, you know, was applied to this was that the budgets for the demitting hospitals-- So that was the – I don't know – three/four hospitals that were demitting. So, they were taking the budgets from that and saying, "Well, you know, we're replicating the services that we had in these four hospitals. We're putting in to that"---

THE CHAIR: Okay. So, this is-- You're talking about the revenue budget?

A Yeah. So, this is the revenue budget, and so we apply that into the new situation, which is delivering the same services as the four-- however many of-- number of demitting hospitals there were. So, you have a budget amount that you're used to spending, and that is then applied into the new hospital, and considering that the new hospital's brand new and should have more efficient plant and

things like that, if you take a kind of rough-- Well, we could take a-- and I don't know figures. We could take a 10 per cent off that, and that's the budget that you're left with.

So it was that kind of thing and, you know, to all intents and purposes, when you're working up a-- a public sector comparator, particularly if it's a PFI, it might not be that important in the great scheme of things, but when that's carried through then and that becomes your budget and the hospital is no longer off to a third party provider but it's actually into the Estates maintenance people, their resources are then restricted to what's been predicted, and if that prediction is off the mark or incorrect, it becomes a millstone round your neck, really.

And Mr Powrie-- I don't know if this is where you're going with it, Mr Connal, but Mr Powrie had worked up a costs model, if you like, for resources for the new hospital, and it was well in excess of what was to be provided for the operation.

MR CONNAL: Now, I think you deal with this, I think, under the heading of "Resource Estimation". If I'm getting this correctly, you say, “Well, first of all, people didn't understand that the more mechanised new hospital would cost more to maintain.”

A And to run.

Q And to run, and then, having failed to notice that, they would then deduct something for "efficiencies with new kit" which would cut the figure again, so you would end up with it with a starting point which, to your mind, would be too low.

A Yes.

Q And Mr Powrie, I think, according to the report here, suggested he needed about three to four times the budget----

A Yeah.

Q -- but he couldn't get it.

A The-- Well, again, we're talking about things that are set in stone. So, that becomes the budget, and if they were to say, "Oh. Yeah. We've made a mistake, so let's give you four times what we've estimated," that money would need to come from somewhere else, and that's operations and hip replacements. So the juggling of these figures is no mean feat, and it's to every chief executive of every board that-- There is no one department in any health board, I would suggest, that's coming to the chief executive and saying, "Listen you've given us too much money this year. Let's, you know, put something back."

By far and away every penny is a prisoner within the NHS, particularly today. You see it every time you turn the TV on. So, to-- to actually just say, "Well, okay. Fair do's. We'll just double your money or triple your money or what--" It's not within their give at that point in time, so I could see-- or I could feel the dilemma of Mr Calderwood, who would have been the chief executive at that time, and maybe Alec McIntyre who was maybe making the decisions on that. I could understand their dilemma on that: even if they recognised that there was a shortfall, how they were going to, you know, bridge a gap.

Q Well, let me take you to a slightly different point on the next page. On the next page, you deal with a topic we've already touched on, which is the role of the in-house team and when they should be involved and so on, but then you have a heading "Common Reasons for Relationship Tensions". I was just interested in your comment there, that you say, you know, basically, Estates and project teams are "uneasy bedfellows".

A Yeah. So, it's----

Q Is that based on your experience?

A Yes. It's-- The project directors have a very difficult job to do, and most of them that I've been involved with are really focused on what they're doing in delivery and trying to do it to the best of their ability and, indeed, it was in this case that everybody's focus was in delivering a first-class environment and

things, but there's always a tension between the in-house Estates and project directors, because the in-house Estates tend to feel that they get imposed upon. They get-- The delivery, if they're involved in it, they're involved in it too late.

So these things are perennial, these things happen with monotonous regularity, and there is always a tension between the operational Estates and what's being delivered. But for the very reason that I mentioned earlier about when you turn up at meetings and you say, you know, "I need two lifts, not just one." That's an additional £120,000, so it's the last thing the project director wants to hear, but it's-- Operationally, I think, "You need another lift because if you service that, then do you just shut down the upper floors if that lift doesn't work?" So it's that kind of logic that's applied, and it doesn't equate readily to the budgets that are available to the project director, so there's always a tension.

Q Yes. I think elsewhere in this report you return to some of the themes that we've already discussed. I just wanted to come back to one or two points before I leave it. Page 165, you come back to the actual DMA Canyon report. Just let me ask you, while we're there: we've heard this described as an L8 pre-occupation risk assessment. When should it have been done?

A I think the timing of the thing was actually okay, but it kind of went over-- past handover. So, ideally, I think, probably done, as the name suggests, prior to handover: pre-occupation. The occupation of the building didn't happen until later on, so, you know, I guess there's a bit of latitude there. I think-- You know, the recommendations that were made in that, maybe the shortfalls and things and thinking about the soft landings that was in place-- Arguably, I think, you know, some of these shortfalls and issues could have been taken back to Brookfield, to say, "Look, these have been highlighted as shortfalls. Could you get them sorted, please, before the building's really occupied?" But that doesn't seem to have happened like that.

Q I mean, essentially, the narrative that you set out there is that Ian Powrie thought it was somebody else dealing with it. If it was Jim Guthrie, he either didn't think he was dealing with it or didn't do much with it. If it was Mr Brattey, you don't know what he said, because you didn't interview him because he'd retired. So, that-- nobody really seemed to be on top of it.

A Yeah. I wasn't able to actually put my finger in that thread to tie it down precisely about who had done what to

whom. Taking them at their word-- Considering it later, I don't think Tommy Romeo was at the meeting. I think he was at a subsequent meeting, where it was perhaps talked about, but certainly Powrie, Brattey and Guthrie were there at the meeting, and according to them-- according to Ian, it was handed over. Jim couldn't remember receiving it, but there was evidence later on that he had a view of the risk assessment, and I wasn't sure about David Brattey because, as you rightly say, Mr Connal, I was not able to interview him, but I know the Inquiry has taken evidence from Mr Brattey.

Q Well, can I ask you about something at the top of 166? You've commented on Mr Powrie, Guthrie, MacMillan, and so on. Was there not a responsibility further up the tree from Ian Powrie on the part of somebody who was aware that, well, first of all, such a thing was needed and, secondly, should have been aware that it was instructed to find out what was happening with it.

A Yeah, and I think that would extend up the tree. That would go Powrie/Loudon as well. Having been a director of Estates and Facilities, one of the kind of prime focuses in setting up things is setting up things like your appointed people, your water safety group, that kind of structure, because it's through that structure that these things

are properly managed. So, arguably, you know, of that tree, there should have been not only knowledge of but interest in-- excuse me, not only knowledge of but interest in how that was being managed, if it was being managed appropriately.

Q Did you get to the bottom of where that responsibility higher up the tree should have been?

A That came later on. I was working with work policies and things like that, and that is replicated at DMA Canyon. You provided this in the bundles as well about the structure, that they actually named people within the structure, which to my estimation wasn't far off the mark.

So, top of the tree, if you're duty holder, chief executive, and that day-to-day responsibility can be delegated, but the overall accountability can't be delegated. That's carried by the chief executive, but it then goes down the structure and we're authorising the engineer and Infection Control to play into the structure.

So when I was in that position, I would ensure that that structure was-- and I'd seen that as being of prime importance, but engineering-- it's my profession. I'm a chartered engineer and that's my profession and that's my knowledge base. I don't know necessarily that that's particularly the skill-set of Mr

Loudon, for instance. It certainly is for Mr Powrie.

So I guess it's having people knowledgeable enough with that wide-scanning accountability at a position within the Board that they can influence proceedings. So I'm talking about director-level/Board-level input of people who are experienced with not only the big picture engineering-wise, because it's very easy to have the big picture and miss the detail, but understand the detail and understand the importance of the detail as it's applied into the modern healthcare environment.

So it's a regret, personal regret, that the engineering profession is not, kind of, placed higher in the organisation so that-- In times like this, these questions immediately jump into my mind because I know the guidance. That's my bread and butter and has been for a long time, but it might not be on where a person has maybe a catering background or basic services background or a general management background. They may realise that these things are important, but whether they can actually follow it through into the detail of it and ensure that, you know, “What about the structure here? That's important,” and ensure that that's been put in place. Whether that lands 100 per cent of the time, I don't know.

THE CHAIR: Am I right in thinking that-- What I'm picking up from what you're saying is structure is important, but also competency and sensitivity on the part of those who fall within the structure, but I'm right in thinking that a structure is provided by L8 and SHTM 04-01?

A Yes.

THE CHAIR: So that's where you go to comply with what you're supposed to do, but it also gives you a structure to work with. Now, I have to just admit at the moment – although if I go back to the evidence I might get the answer – I think I'm right in saying that that structure was not in place in 2015?

A No, not for The Queen Elizabeth, no.

THE CHAIR: And it may not have been in place until 2016/2017?

A Beyond, even, yes.

THE CHAIR: Sorry?

A 2018.

THE CHAIR: 2018?

A So, September 2018, when I finished writing the report, I said these positions, people, have been trained and are in place.

THE CHAIR: Thank you.

A Sorry, Lord Brodie, similarly people even with a basic understanding of engineering would have known that but would have been unable-- or maybe it wasn't on their radar to do things like that,

and because it's written in an SHTM, it would surprise me if there aren't-- The people who are directors within the NHS organisations, if it's not been part of their history, whether they would actually be able to read and understand and remember all of-- I mean, there's a lot-- There's 500-odd books, so it's unlikely that they're likely to read that and be aware of it.

MR CONNAL: I think the reason you're being asked a number of these questions is that in the course of other evidence, somebody said that water is always a risk that's marked as high because of the issues that can arise with its management. So to find that there really wasn't a system in place which would have allowed somebody either to progress something that had been done or, on the other hand, to supervise and say, "Where the heck has our L8 got to?" seems a little odd.

A Yes, it is.

Q Can I ask you about something else? In your witness statement, you also cover a lot of the issues that we've already discussed in oral evidence today, and I'm not going to go back over all of these.

I did want to ask you about the Dennis Kelly point, because "Who knew what when?" is a topic that has cropped up regularly, and in your witness statement at page 254 you say that at some point you discovered that Mr Kelly had produced an audit in May 2017----

A Yes.

Q -- in which he'd made what I might suggest are uncomplimentary remarks about the state of the water system.

A Factual. Well, uncomplimentary, I agree.

Q Yes, and, in fact, he said if there was an incident, you wouldn't be in a strong position.

A Yes.

Q In the course of discovering this, were you able to discover who was aware that that criticism had been made, because that might, on one view, have alerted people to the need for checks?

A Yes, I can't remember when I became aware of this e-risk assessment, whether it was after the investigation that I'd done, and I'm not sure where it landed, whether it went to Mr Powrie or whether it went to Mr Gallacher within the compliance team. Subsequently, you know, I spent some time with Dennis Kelly and Kerr (?) Anderson working in various aspects of the water system, but.

Q When you finished your----

A Staff interviewed-- He's marked it, I remember. It's actually marked on the risk assessment that there's a-- staff interviewed as being

Tommy Romeo and Phyllis Urquhart, and Phyllis Urquhart was part of the compliance team. So, I don't know who initiated it. I don't know if it would have been Tommy Romeo or whether it would have been initiated from the compliance team.

Q When you finished your water report, who did you give it to?

A I gave a brief and a briefer report. So, I gave them-- it was about six pages and another one eight pages to Ms Grant, and I think I maybe copied the full report electronically to her. I didn't know what Ms Grant was going to do with the report. I didn't know where she was taking it. I knew 150-page reports, not a thing that you bang on the table of a Board, so I was trying to kind of cover the bases for Ms Grant to make it easier.

I didn't know if it was just for her, and that would have been legitimate, but I provided a couple of reports, basically culminating in basically the executive summary of the big report. The big report was basically an argument I was having with myself-- I was debating it on paper. So that's, you know, hence the kind of issues. So I was trying to finesse it into kind of a brief report that hit the salient-- hit the high points for Ms Grant.

Q I think I just have two topics, if I can? One very short I just want to ask you about, because we know from your

witness statement that you did the 2A report, you did the water report and you did sundry other exercises in which you became involved in this, that and the next thing to help out, basically. Is that right?

A Yes.

Q Could I ask you briefly about one, because there's a little bit of a controversy about one topic. Can I ask you to have a look at Bundle 19, page 614? This will come up on your screen, hopefully. Now, have we got this right?

I'm just trying to find out if you were involved in discussions about the decant of Ward 2 into 6A?

A Yes, I was involved, and I can't remember this meeting *per se* but I certainly was involved in the process. I remember that was part of the reason I wanted to speak to Dr Inkster; it was a bit after the suggestion of the move between the----

Q Yes, there'd been some debate as to who made the decision to decant the ward. This seems to be a meeting attended by Mr Best, Mr Walsh, Ms Grant, Dr Armstrong, Mr Archibald, among others, and if we go on to the next page of that document where we see the heading "Decant" and it says "It would cease to be agreed it's appropriate to decant the patient group to another area" and then there was discussions and a lot of details.

So, you seem to have been present at a meeting at which that group of people decided to do the decant. Is that right?

A I think it was recommended by the IMT, because I recall the IMT was chaired, I think, by Dr Inkster. Because as soon as the decant was mentioned, I was on the water executive with Jonathan Best, Tom Walsh and Mary Anne. I had said to Tom I would like to speak to Dr Inkster about the move, and he organised for me to go and speak with Dr Inkster, and I went and spoke to her in her office in the Lab building, and this was prior to the move.

So I obviously had it in my mind that Dr Inkster was the main protagonist, if you want to put it that way, of seeing it necessary to move the patients from Ward 2, and what I had gone to see her about was-- it was 2 October-- 4 October, 2018, and I had gone to kind of seek her counsel, basically, because there was a lot of, kind of, micro-organisms that I'd never heard of that were being mentioned, and I was going to speak to her about that, and also to see her about the move to another location, and what I'd said to her at the time was, "Do you think it would be wise to maybe take an assessment of the area that you're moving the patients to?" because if you take a-- My colloquialism for that was "to ensure that you're not moving them from the frying pan into the fire," so make sure that you're moving them to a place that's safe, and also if you establish that that is the measure of safety, the place that you're moving them to, that is then the measure of safety that you will require when moving them back. So, I knew it wouldn't be in this case, but I've had the kind of situation myself where you move a group of patients in and they don't want to move back, and it's the devil's own job, so it's always good to have your ducks in a row before you actually make any move. I don't know if the assessment was ever made. I think-- Knowing what I know of Dr Inkster, and that's not much, I would imagine that she was really on the ball with that, so-- but that's the reason that I had spoken to her.

So, my mind, just to answer your question – a long road for a shortcut – my mind on that was that the decision was made basically by IMT with Dr Inkster in the chair, and something of that nature I imagine couldn't be going ahead without ratifying it with senior management, so I think it was appropriate that that happened, and I think, in my mind, that's the process of events that I took from it.

Q Yes, thank you. Now, I just want to pick up very briefly your sort of conclusions to your witness statement, if we could, so if we just dip back into that

very quickly at page 315. Tell me if I'm wrong, but I pick up three things from the narrative at the end of your witness statement. In paragraph 269, you're essentially putting in a plea for the involvement of more engineers in these discussions.

A Yes.

Q Is that right?

A Yes, I don't know if it's-- I'm sure that we-- general managers and people of other persuasions all over the country are rolling their eyes just now, but it's not just pushing my own profession. I think it's essential for efficiency and for safety in the future of capital projects that the engineers are involved right at the heart of this decision making and influence.

Q The next point you make is one that we've touched on----

THE CHAIR: Hang on.

MR CONNAL: Sorry.

THE CHAIR: Just before we leave that, am I right in thinking that it's not just engineering competence, it's hospital engineering competence?

A Absolutely, Lord Brodie. It's good that you point that out because, in our world – and with the greatest of respect to people that are outside our world – even if you're a good engineer outside and you come into a hospital environment, it's two to three years before you actually get into the mindset and the heartbeat of how a hospital functions and how it works and to be able to manage within that, so the-- and I don't mean to kind of blow any horns or anything like that, but that's the level of competence that's required there.

THE CHAIR: I appreciate that there's a danger in oversimplifications and overgeneralisations, but something that I have picked up in the course of listening to evidence but also reading material is that if one was to look back over, arbitrarily, I'll say 40 years in the context of hospital construction, one might notice at least two things: one, that hospitals or-- much larger hospitals are being built – I'm not suggesting all hospitals are large – than have been built in the past, and they are more likely to be built by contractors with general contracting experience who might be building hotels, office blocks, shopping centres, as opposed to what was the case in the mid into the third quarter of the last century where there was such a thing as a hospital contracting expertise. Now, as I say, I may have got that wrong, and there's a danger of overgeneralising, but I would welcome your comment.

A Yes, I think it's very astute of you to notice the-- I agree. I think there's an overgeneralisation. I don't want to turn this into a, kind of, "The old days

were the best days." There's a lot of benefit that has come from the innovation of construction and about the methodology, modern methods of construction and things, that have benefitted-- greatly benefitted the construction of hospitals, but I know at the time when the contract was let for Glasgow, there was a lot of eyebrows raised about it because nobody had heard of Brookfield. I think they'd built Wembley before, but nobody had seen them on the park building hospitals and things, so there were eyebrows raised about their appointment.

But you're right. That's the modern way if they're constructors, and they'll bring on subcontractors who may or may not have experience/technical advisors who may or may not have experience. Most of the technical advisors do-- I've seen the situation where the A team turns up to the beauty contest, and then when you appoint them, it's the B team that you get to run your project. So, there's many a slip between cut and lip, but there are contractors about – and I could name them, but not that many now – who have vast experience of building healthcare facilities, but the procurement rules don't allow you just to select this one or two. You need to include-- That's where the benefit of NHS frameworks comes in, so the appointments process through the frameworks that was established a number of years ago for appointments.

THE CHAIR: Thank you. Mr Connal.

MR CONNAL: I'm almost finished, Mr Leiper. I just wanted to pick up the things you're sort of finishing on in your witness statement, because the two others that jump out to me, one appears on page 315 near the bottom, where you say:

> "The level of operational preparedness ... needs to vastly improve with sound, safe operational arrangements and operational systems in place and tested end-to-end before ... handover. "

A Yes.

Q You think that's important?

A It's absolutely essential, and I hope that's maybe one of the learning outcomes that the Inquiry picks up, because although the capital position is kind of very much restricted these days, there are other hospitals in the pipeline, and you would hate to see the same or similar issues happening in subsequent builds.

Q The final point I picked up appears on the next and effectively the last substantive page of your statement where you say:

> "Ideally [so this is another on your wishlist], some influence should be afforded to those who will maintain the hospital [whoever that is] in relation to the quality of the assets... to enhance the longevity of efficient and effective operation..."

That's the point you've been making earlier.

A Yes, essentially.

Q I have no further questions for this witness, my Lord.

THE CHAIR: Thank you, Mr Connal. Mr Leiper, what I need to do is find out if there's more questions in the room, as it were, so if I could ask you to return to the witness room and hopefully we can reconvene in about 10 minutes. Thank you.

(Short break)

MR CONNAL: I have no further questions, my Lord.

THE CHAIR: Mr Leiper, I'm told there are no more further questions for you, and that means you're free to go, but before you do go, can I express my thanks both for your attendance this morning but also for your report-- Sorry, I've been thinking about reports all morning. What I meant to say-- your witness statement, which of course refers to your reports. You provided the Inquiry with important evidence, and I'm very grateful to you for that. You're now free to go.

THE WITNESS: Thank you, Lord Brodie.

(The witness withdrew)

THE CHAIR: Now, Mr Connal, unless you anticipate a time pressure that would be alleviated by a shorter lunch break, I was going to suggest sitting again at quarter past two, but it may be that you would advise a shorter lunch break in view in order to finish the next witness during the afternoon.

MR CONNAL: It's possible this may be a fairly full afternoon, and I know it causes difficulties for numbers of people if we spill past four-ish, so my own preference would be to start at two----

THE CHAIR: Well, I'm going to say two o'clock. Right. Let's see each other again at two o'clock.

(Adjourned for a short time)

THE CHAIR: Now, Mr Connal.

MR CONNAL: Ms Bustillo is the next witness, my Lord

THE CHAIR: Good afternoon, Ms Bustillo. As you understand, you're about to be asked questions by Mr Connal, who is sitting opposite you, but before you do that, I understand you're prepared to affirm.

THE WITNESS: Correct.

Ms SANDRA BUSTILLO

Affirmed

THE CHAIR: Thank you, Mr Bustillo. Mr Connal.

Questioned by Mr CONNAL KC

Q Thank you, my Lord. Good afternoon. You have two witness statements.

A Correct.

Q You have one prepared some time ago and one very more-- much more recently. So, I need to ask you the formal question I ask all witnesses, which is are you prepared to adopt these statements as your evidence in the Inquiry?

A I am.

Q Thank you. Now, we will use your witness statement, but it's quite likely we'll be diverted off of it at various points for reasons which will become apparent, but we'll use it as a guide to where we've got to. So, if we start by looking at the witness statement in which, of course, you set out that you're our first communications professional that we've heard from, and you set out your CV at the start of your witness statement on what, electronically, is page 318, and then you go on to set out what a communications team is supposed to do. Does that include defending the Board's reputation?

A It includes managing press enquiries that we receive and political enquiries that we receive. So, what we try to do is obviously give an accurate account of the position that we are asked about. That is not reputation management. It's about being open, transparent as a public body, that is-- We are accountable to the public and we've got a duty to do that.

THE CHAIR: So, did I hear you say "not about reputation management"?

A The reputation of an organisation is not just based on the work of a corporate communications team. It's based on the services that people provide. It's based on the culture of an organisation. It's based on the people that work within the organisation. What we do is we are the place at which we, as an organisation, respond to political and media enquiries and scrutiny about those services, those people and our culture.

MR CONNAL: I'm not sure that actually answers my question. Is it part of your role to defend the Board's reputation?

A I would, again, say what I do is I give information about our services, our people and how we perform. I wouldn't characterise it as defending the reputation of the organisation. I give an account of what we do.

Q So, if people have the impression that one of the things that the

comms team helps with is structuring communications to defend the Board's reputation, that would be incorrect?

A I think "defend the reputation" is probably the term that I'm uncomfortable with. I think we-- As I said, we will structure communications, as you've said, in order to explain what we do, our people do, our services are and our performance is.

Q So, you don't like the word "defend", but you accept that the Board's reputation is something you're dealing with?

A How the Board conducts itself is something that I deal with, yes, how I present the information about how the Board conducts its business.

Q Yes. Can I ask you perhaps a slightly technical question? If we go to 321 of your statement – I'm using the electronic page numbers which should hopefully appear at the top of each page for you – you're dealing in paragraph 12 and the subparagraphs beneath that with the guidance for dealing with incidents and communication responses, and you say you're following that guidance. Now, on page 322, you mention a communication in which it's said, among other things:

> "If a proactive media communication is planned, then this should be undertaken in consultation with HPS and Scottish Government communication team colleagues."

Now, is it not the case that with both amber and red assessments of incidents all press statements must be sent to HPS, not simply proactive ones?

A So, a holding line should also be sent to HPS, and that is a routine part of the IMT process that if there holding line prepared, that that is sent to HPS.

Q So, just so----

THE CHAIR: I probably should know what a holding line is, but I don't.

A So, a holding line is a line that is prepared to respond to any media enquiries. So it is distinctive from a proactive statement in that a proactive statement is a statement that an organisation will proactively release into the public domain either through its own channels or through a media release. A holding line is a line that an organisation will prepare as a line that it would take if it receives any enquiries about an issue or an incident.

THE CHAIR: Thank you.

MR CONNAL: I may have got your answer, but I'm just very keen that I have this accurately. I think the suggestion is that the guidance, which is usually picked up in things called HIIATs, which are – so we don't miss another acronym –

Healthcare Infection Incident Assessment Tools, which have had various iterations, they provide that both holding and other releases all have to go to HPS?

A So, that would be the case. So, if we have a situation-- Actually, we would-- We can and we will, at times, proactively release information at a green, amber or red assessment. However, in the case of an amber or red, if a holding line is prepared, it should be shared with HPS and the Scottish Government, and certainly, obviously, also when there's a proactive release, we do that too.

Q Yes. So, basically, all press statements, holding or ordinary, must go to HPS in an amber or red situation?

A Yes, they would go to HPS, and actually they would go to Scottish Government. We have a very close working relationship with the Scottish Government on these matters.

Q Yes. Now, if we can move on, can I ask you another question about this topic? On page 325 – so we're still on and around the same topic – you're discussing the criticisms that were being made that the Board wasn't following the national guidance and the suggestion of lacking in transparency and so on, which we'll, I suspect, come back to later. You say there that:

> "These criticisms I believe... stem from a degree of ambiguity in the national guidance."

Is there a contrary view that there is, in fact, no ambiguity in the guidance on HIIATs at all?

A So, the ambiguity is in what you do with the assessment that you've made with an incident. It's very much left to the individual IMT to consider whether they wish to have a proactive statement or whether they wish to simply have a holding statement. What you have there is that you have a lack of consistency across Scotland in how you apply those.

So, for instance, in the Cryptococcus incident, we had, at various times, red, amber, green assessments. We went proactive with that when it was amber. The circumstances were such that we chose to go proactive. I am aware that Dr Inkster, for instance, has mentioned another Cryptococcus case in another health board where, again, it was felt that hospital exposure could be a factor. They produced a hold-- and the person sadly died, and they produced a holding statement for that. So, there's an inconsistency in the way in which the guidance is applied, but that's because the guidance in itself allows for that inconsistency. It allows for local IMTs to make local judgements about whether they wish to have a proactive statement

or simply just to manage it reactively.

Q That doesn't mean that the guidance is ambiguous though, does it? That's just the phrase you've used?

A It can be interpreted ambiguously. I suppose there's a more accurate way to describe it. It doesn't set out a hard-and-fast rule that if you have a situation whereby you have a red assessment, that you should or must go proactively. It allows for different situations to be assessed locally and individually, and that's not wrong. I don't think that-- Certainly, in some circumstances, it's quite reasonable not to be proactive. However, it does allow for an ambiguity in how it's used and how it's referred to.

Q Well, that is an inconsistency as between one person decides to do one thing, one another-- or one group decide to do one thing, another-- That's not the same as an ambiguity, is it? You're the expert on words.

A So, I believe that it allows for-- If I can take a step back, one of the things we were criticised for was that we were slow at going out and having a proactive statement about a red incident. I can come on to discuss that in more length. It's the Cryptococcus case. We had very good reasons for taking the time to do it the way we did. However, there was a belief among some quarters, some journalists and some politicians, that a red assessment was an automatic release of information, and that then led to the criticism of a lack of transparency that we hadn't automatically-- when we made the red assessment, automatically had a proactive release. That's possibly the ambiguity that I'm referring to.

Q But the HIIAT didn't provide for an automatic proactive release.

A No.

Q Somebody thought it did.

A They did, yes.

Q But it didn't.

A Yes, they did.

Q Thank you. I've been asked to put some points to you because a lot of the incidents that the Inquiry has had to deal with have unfortunately had to deal with things that impacted on children. I'm just wondering whether, in your role, you had occasion to look at things like the child rights and well-being impact assessments?

A No.

Q There's something apparently called "Get it right for every child."

A GIRFEC, yes. I'm aware of that.

Q You're aware of that. Did you ever do a child rights impact assessment on your communications?

A No, we didn't.

Q It probably ties into an

interesting point that another witness has raised, so I'll ask you about that now, since I'm on the topic. One of the questions is, “Did you go to the recipients of your communications, such as parents of children, and, in effect, see what impact your communications were having on them?” Did you do that?

A So, that was one of the actions that we took after 2018/2019. We may come on to talk about the Oversight Board interim report and final report. One of the recommendations was for us to engage with families, parents and children about communications both to seek their views on how we should communicate with them, and also learning from the experiences of the previous two years. We commissioned an independent company to do that for us. A trauma based approach was taken so that we could have a sensitive approach to that, and a report was produced for us and, indeed, that approach that we took from-- the learning from that informed the communications that we used when we reopened Ward 2A and 2B.

Q So, this something that arose from the Oversight Board which dealt with a lot of communications issues?

A It was.

Q Well, let me just ask you a sideways question on that point because Dr Mathers, when he gave evidence, came up with a point that we hadn't heard before, and I thought I ought to ask you about it, given you're a communications expert. When he was asked about things like effectiveness of communication, he said:

> “Well, don't ask me. The correct perspective is to see what the recipient thinks of the communication, not what the drafter thinks.”

Do you agree with that?

A Yeah. I think that is important. I think it is important for us to think of our audiences and to engage with our audiences. I think there is an issue around-- we were dealing with-- and we were dealing with a series of situations that we having to respond to at pace, but I do think it is important beyond that that you do reflect on your communications and see if there are lessons to be learned in terms of how you take communications forward. I think one of the most interesting things that came out of that was that, in fact, the parents didn't really want to hear from the organisation. In doing so, they felt that if they were hearing from the organisation, there was something wrong and that, you know-- they were keen that their communications were mainly through clinical staff, the

teams that were caring for their child, and that they had-- As you will have heard, I think, before, they held them in very high regard.

So, there were other key findings, such as very keen that we spoke in an age-appropriate way, and that was something that we took on board for the reopening of 2A and 2B. So, we had age-appropriate communications. They wanted much more succinct communications from us, and so we used that in terms of the style/the format of our communications, again, for the reopening.

THE CHAIR: I wonder if you've answered the question. What was put to you was the test for effective communication is perspective of the intended recipient. I didn't hear an answer to that. What I heard was a discussion of when you might consult the intended recipient. What's your answer to the question you were asked?

A I think that time is an inhibitor to that. I think we were dealing with emerging issues that we were dealing with often at pace. We were often reacting and responding to information that was put into the public domain by others. I think-- At that pace and in that way in which we were responding, I think it might be difficult to have that opportunity that-- as you are developing your communications, to be engaging with people so that you can test out your communications ahead of sharing them more widely.

THE CHAIR: Coming back to the question----

A Sorry.

THE CHAIR: -- I think I understand what you mean about you may have to consider when you assess the perspective of the recipient, but what about the question that you're asked? Do you accept that the test is to be judged from the perspective of the recipient or do you not?

A I do, yes.

THE CHAIR: Thank you.

A Apologies.

MR CONNAL: Thank you. Let me come on to a slightly different topic. Page 329 of the witness statement should now appear. In paragraph 33, because this is a statement that you prepared rather than prepared directly on a questionnaire and answer basis, you say it's been suggested that core briefs are not a suitable source for various reasons, in particular not everybody accesses them, not everybody has time to access them. Now, you then go on to say, "Well, there are a variety of methods for communicating." Does that really answer the question, which is, "Are core briefs"-- or, "Were core briefs" we should

probably be saying because we're concerned with the timing that we've been looking at. "Were core briefs a suitable source for issues about the hospital environment?" Because I think there have been some criticisms of them. People are too busy. Not everybody has internet access and so on.

A So, if I can explain the totality of how staff were informed because core brief was one part of it but not the only means by which----

Q No, I think you've done that, but I'd just like to understand your answer to the question. I can understand there are other means of communication. We can take that as read, and you've set them out very fully, but the specific criticism of core briefs – "Is this a good place to put that kind of stuff because lots of people don't have either the time or the access to get to it?" – is there an answer to that question?

A I believe it is a good place to put it. Core briefs were not only sent out through 49,000 email addresses, they were also published on our website so they could be accessed at any time of the day. We keep them in a format that's high level, that's short and succinct, because we recognise that our colleagues are busy. The purpose of the core brief in this situation was so that wider staff would not read about these matters in the media before they heard about them from us. It was not specifically to communicate with those most directly affected.

Q Right. Helpful. Can I ask you another question? Can we go to paragraph 38 on page 330. I'm picking up little points in your statement not necessarily to criticise the words in the paragraph, but in order to allow me to ask a more general question. One of the criticisms levied from time to time was the time it takes to issue statements, and there are some very specific answers to specific examples of that, and we needn't trouble with these at the moment, but one of the points you make in paragraph 38 is that-- you say:

> "Media statements could also be agreed with other colleagues, including senior NHS GGC officials."

Now-- Well, the first question is why? If you've got the clinicians or the IMT lead or whoever involved, you've got a communications person involved, why is it necessary for someone else to have a say on what's in that communication?

A I think because of the issues that we were dealing with. So, for instance, many IMTs, we do not systematically involve senior officials, you know? Routine IMTs that we're dealing with, it would be very much contained

within the IMT process and approved by the chair. However, these issues that we were dealing with obviously were not normal IMTs. They were significantly bigger. They had significantly greater significance, and therefore it was appropriate that we would also engage with senior officials.

Q So a senior official not involved in the IMT would have some say in what was in the press release?

A We would share them with that so that they would know about it, and they would see them in advance. They wouldn't override what was said. It was an iterative, collaborative process whereby Dr Inkster, for instance, as the chair for most of these IMTs, would be one of those who would agree to them as well as some of the senior officials.

Q I'm still not quite-- I can understand telling people, or I can say, "We need to tell you, Ms. Chief Executive, we're about to issue a press statement about water or whatever." I can understand that. So, communication to them is fine. I'm just a little puzzled as to why they should be participating in the drafting.

A I would go back to my point that these were significant issues. These were very level significant matters for the organisation, and for those particular IMTs, it was felt to be appropriate that we would engage with some of the senior officials as well as the IMT.

Q You understand the reason I ask because there is obviously a suspicion in some quarters involved in the Inquiry about anything that senior officials do, because they're put in a box marked "management" as opposed to "clinicians," who get a lot of the nice things said about them. So, I'm still not quite following what content a senior official is expected to contribute to a communication about some incident on a ward.

A "Contribute", perhaps, is not the right term. I think it would be so that they would be cited on them, so that they would be aware of what we're proposing to say, and they would be content. I don't recall that there would be any, sort of, changing to the drafting of it. Most of the communications were drafted and prepared with Dr Inkster, as the chair of the IMT. It was a process by which-- obviously you would recognise that the release of information into the media is a matter that you would want to make sure was accurate and was reflective of the organisation, and so it was-- because of the significance of these issues, it was-- for some of them, we would include senior officials.

Q Okay. Well, let me go back on that answer. Accurate, yes. One can

immediately see that. "Reflective of the organisation." What does that mean? If you've got an accurate statement about an incident, why do you need something else?

A Because there was consequences because there was actions that were taken-- The IMT wasn't, in itself, able to manage all of these issues. The organisation had to respond and manage the issues and, as you know, we did. We put in a number of different actions and steps to deal with what was obviously a very difficult emerging situation, and so the organisation-- the senior officials within the organisation were those that were responsible for taking the actions. It was a senior director within Estates who was responsible for the point-of-use filters for the work on the water. It was the senior officials who worked, you know, with the IMT to look at the decant, etc, so it was absolutely within that context that you were dealing with major organisational responses to the IMTs that it was appropriate, I felt, as the director of communications, for senior officials to be involved in how you were presenting that information.

Q Yes, and one of the consequences I think you very fairly accept in your statement, in paragraph 39, is that it can mean that by the time

everybody who you say needs to approve it has approved it, it can slow the process down.

A I agree.

Q You've instanced later in your statement various individual examples where people up to the chief executive had to be involved. Is that right?

A Correct.

Q And that's presumably for the reasons you've been seeking to explain to us?

A Correct.

Q One of the challenges of reading your witness statement, Ms Bustillo, is that you're painting a very positive picture of the Board's communications, in general terms, but then throughout your statement you point out there was an error or a need for an apology and so on, which, perhaps-- is it fair to say that there were justified criticisms of the communications?

A Yes.

Q I'm picking on this for no particular reason other than it's a convenient example: on page 335, in paragraph 56-- This is one of the tricky ones, because you're trying to get your communications out before it appears somewhere else, which might have been a lot easier in a former age when electronic communications weren't as common, but in this case a number of

parents said, "Well, we first heard about this through the media," and you accept that shouldn't have happened.

A Oh, absolutely. I can explain, if you would like, that issue. I mean, I've set it out in my statement, but I'm more than happy to----

Q Well, I think we've got an explanation of the mechanics that it had to go through, but the net result of everything that was done was that some people did hear about it on the media.

A Yeah. Unfortunately, this is one of the situations whereby the media learned of the decant proposal ahead of-- actually ahead of a final decision on that being taken, and so we were approached by a journalist from STV on the 17th, on the evening of the 17th, and she, I think, as it transpires, had spoken to a parent and was interviewing the parent next day. We hadn't at that stage finally decided that that was the option that was going to be taken, and so we worked over the next day to finalise the statement.

As I've outlined before, that is a sometimes protracted process. The statement was approved late on in the afternoon of the 18th and was given to STV in order to meet their timescales. We had colleagues waiting to talk to the parents within the ward ahead of that. Unfortunately, they didn't get the go-ahead to do that, because the director-- their director was in a meeting discussing the detail of the decant. I very much regret that there were patient parents who, therefore, found out about that proposal from the evening news on STV.

Q Can I ask you about the Ward 2A decant/communications around about that, because that's one of the more controversial areas, I'll suggest to you. You deal with this on page 337, at least; I suspect you deal with it elsewhere as well, but the first place at which it crops up is page 337, paragraph 60 and onwards. I suppose the first question that I have for you is: you've reproduced the briefing for families, and then you've reproduced the briefing that went externally and, you know, the first paragraph talks about an enhanced cleaning programme. No doubt it's correct there was an enhanced cleaning programme, but that really revealed that, you know, it's all part of the search for suspected infection organisms?

A So, I think it I think these communications have to be seen as part of a series of communications that have come beforehand. You know, I don't think it's correct to look at them in isolation. We had been, since March, regularly communicating with parents, families and with the wider population about the situation as it was emerging. From 16-- from 6 March we'd obviously

been communicating with families that were in the ward. We then had a proactive statement on 16 March. We had a further six proactive statements in the very short time thereafter. We then had a period in June where we had a further three proactive statements, and then we had a period in September. So, this is part of a whole series of communications that have been given to families about what we were finding, what we were trying to respond to and how we were trying to respond to it, and I think if you look at all of those communications, I think you will see that we have been open and transparent about the situation that we found ourself in, about the impact it was having on patients and, regrettable, families, and about the efforts that we were taking to try and understand the issues and then mitigate them.

So, this was the latest in a series of those communications, which had-- obviously including the various mitigations, including both the drain cleaning and then the HPV, as well as the point of use filters, etc, that had been applied.

Q The reason I wanted to ask you about it-- I mean, you prepared this statement, and you've selected that one, and you put it beside the media release, which appears on the next page on 338, and the media release contains lots of other information that's not in the statement given to families. Now, the point I want to put to you is, I think, a point that's been raised with at least one other witness, which is that if you're suspicious, if you're doubtful about what's going on, if you're starting to mistrust what's being said to you and you have a statement to families and a statement to the media and the bit to the media says more, is there not a natural inclination to think, "Well, they're hiding things from us"?

A The process by which the media statement was issued was that the media statement was also handed out to the families so that the media-- so that the families would see what the media statement said so that there would be no surprises about what was going to appear in the media. We were very concerned about that. You can see, in the debrief from the first IMT in May, that process had been adopted in the first phase with Jen Rogers, Jamie Redfern and Dr Inkster attending the ward, and one of the actions that they took was to hand out the media release as well as to have the verbal updates for families so that there were no surprises about what would be getting told to the media.

Q I might as well just ask you about 2A at the moment, because I think this has been raised with you. When 2A

was moved, one of the communications was that the opportunity was being taken to upgrade the ventilation. Now, two questions-- two points there that I'd like to ask for your view of you on. First of all, taking the opportunity to upgrade the ventilation sounds as if you wouldn't have bothered with the ventilation was it not for the fact that you happened to be out for other reasons? That doesn't quite match the information the Inquiry has about the need, the significant need, to radically alter the ventilation in 2A, so is that not therefore misleading?

A So, I've reflected on that because I am aware that that comment has been questioned before in evidence, and I have-- have discussed it again with with colleagues around, “Was that a misleading comment?” Opportunity was what was there, you know. We had the opportunity because of the physical infrastructure. We had the opportunity because patients were not in the ward at the time. I know that you've heard evidence obviously about the situation in 4C and how there isn't that same opportunity. So, I think opportunity-- Whether it signifies something else to others, I think opportunity was what there was at the time. I also questioned whether we were right to call it an "upgrade", and those who are expert in technical matters, of which I'm not, believe that that was an appropriate term.

Q The evidence that-- I mean, “upgrade” might, to some people at least, sound as if you're switching out the Mark 5 for the new Mark 6 or something, something of detail, whereas we know that the works that were required to 2A were very extensive indeed, essentially stripping out entire systems, building works, and so on. It doesn't, perhaps to the lay person, say "upgrade". It may end up with a better system. I might suggest to you "upgrade" is misleading.

A I mean, I think we were quite honest about what we thought the time scales were going to be. I think we were honest about what we thought the cost was going to be, significant in terms of both. So, I think it was quite clear for those who, like me, aren't technical, that we were going to be investing a significant amount of time and money to change the ventilation system.

Q Well, let's move on. 340, you put down what you've described as "reflections" on communications handling, and I think the first point you quite properly acknowledge is that one of the points that you began to realise was that there were people who weren't physically in the wards, and therefore they weren't getting the same information, although they might be coming in the next day or the day after or whatever, and that was

something that you hadn't got quite right but you then took steps to fix it. Is that fair?

A That's correct. Yes. I think-- So, whilst there was significant effort made by clinical staff, by the senior management within the hospital and with the support of my team to try to ensure that parents and patients in the ward were well informed and got their information direct from us rather than from another source, clearly there was a number of leaks that were taking place and other commentaries around the situation. There was quite a lot of media speculation, and I think we were slow to recognise the impact that that had on those who we weren't directly engaging with. We did have intermittent communications that went out to 400/500 families, you know, but they were very intermittent up to the point of September 2019, and I fully accept that we were slow in recognising the impact that that had – in fact, too slow – and we obviously then took steps to remedy that in September '19 with the closed Facebook page.

Q And the next point you make is that perhaps it wasn't fully appreciated-- and I'm trying to paraphrase, so please tell me if I'm getting it wrong. Perhaps it wasn't fully appreciated that if you say the water's fine, but at the same time, on the ward, people are being told to use bottled water, it can cause confusion.

A Yes, that was a second issue. I think there was the optics. You know, we were-- we weren't looking at it from how parents were experiencing the environment. We were looking at it from-- We thought we were telling them what we understood to be the case after the point of use filters had been applied, but they were still being told to drink-- to use bottled water. Now, there was a very practical reason for that – there was a kitchen that was out of use – but we just didn't look at it in the round.

Q Another point that you've quite properly highlighted in paragraph 67 on page 341 is in relation to a mistake that was made, in effect, not to remember that there had been previous advice not to drink the water.

A Yes. No, I agree. That was a mistake. We had-- That was by October 2019, so some 16/17 months after the original instruction had been to use bottled water. We obviously at that point-- we'd had a change of Chair in the 6A IMT. We were working-- continuing to work with the Chair on our communications, but the Chair obviously didn't have that knowledge, that memory, and this was a complicated situation that had evolved and changed over that period, and we made a genuine mistake, but that was a mistake. We had obviously

given that instruction to drink bottled water, and then we said that we hadn't in our statement that we gave to a journalist.

Q The next question is the DMA Canyon reports, and I want to raise with you a sort of thesis that has been beginning to emerge among some of those in the Inquiry as we've gone along to understand your perspective on it. One of the things we've heard from Infection Control people is infection control is everybody's business, don't just assume it's the Infection Control nurse, because you, you, you and you have things to contribute to achieving the result, and I wonder, and I'll explain why, whether the same might be said in some circumstances of communications, because one of the issues that has emerged is that, let's say, Board official "X" knows of the DMA Canyon report. If that person knows about it and doesn't then communicate with, say, someone in Infection Control or the like, then that person can't then communicate with people on the ward, who then can't communicate with the patients. So, to that extent, is it fair to say that everybody who gets information that could bear on patient safety is part of the communication process?

A Yes.

Q And, of course, the issue with the DMA Canyon report was that some people knew about it in varying ways, either because they'd received it or seen it or knew it was instructed. But nobody seemed to tell anyone else about it, such as Infection Control or the other people dealing with patient safety. Can you help us at all why that wasn't picked up?

A It's not a matter I was aware of until 2019, as I've said in my statement. In 2018, I was the associate director of communications. Ally McLaws was the director of communications. He would have been part of the senior management team. It may have been discussed at one of their meetings. He certainly didn't mention it to me, so the first I learned of it was when it was brought into the public domain by a politician.

Q I suppose it's part of the same question that keeps getting raised, which is this question of, “What do we mean by transparency?” Because if-- There is an argument – and I’d like your view on it – that as soon as the Board discovered that there’d been, shall we say, a significant error in dealing with something that potentially impacted on water safety, should they not have been proactively telling people about that? "We've spotted we've made a boo-boo here"?

A I'm not sure whether the IM— So, if I can take you back? The process

by which we were communicating about the water issues was through the IMT and its deliberations, considerations and actions.

Q I'm asking you about the discovery of the DMA Canyon report.

A Yes. So, that report was then given to the Chair of the IMT when it was brought to the attention of our chief executive. I was not asked, nor were my team asked, to include the discovery of that report as a salient point in the investigation of the water incident. Had we been, we would have. So it's within the context of, “These are the issues that we are investigating. This is what we are finding. This is what steps we are taking in order to address it.”

Once the report had been shared, and if it was felt to be of significance, I would have anticipated and expected that we would have been asked by the Chair of the IMT to include that in our communications, because we were-- these were ongoing communications that we were having over that period. We were not asked to do that.

Q Now, I suppose it's an interesting perspective that you put on that is to push it at the Chair of the IMT. But, on one view, the failure was nothing to do with the IMT, nothing to do with anyone on the IMT. The failure, assuming there was a failure, was of the-- Let me just call it “the structure that should have dealt with that” to avoid getting into naming names, and is that not, particularly given its content, a failure that should have been disclosed by the Board, not by the IMT?

A Its significance, however, related to what we were looking at, and we were investigating that through that IMT process. So I think it would be entirely reasonable and right for it to have been raised and communicated through that process. We were communicating a number of other issues that we were discovering. So I don't see that necessarily it would have needed to have been a separate issue. It's an issue that we're discussing now because it was felt to be salient to the water incident IMT into what we were looking at and what we thought we had then discovered.

Q The Board's failure to deal with a pre-occupation risk assessment for about three years was nothing to do with IMTs, was it? That was a quite separate and free-standing issue?

A In my capacity as the director of communications, I was not made aware of it. I was not asked to report on it or to comment on it. Whether there was a discussion by others about whether to talk about that or to raise it specifically, I'm not party to.

Q Can I ask about-- I'm afraid

I've got to come back to 2A because I've missed a point. At page 344, you've reproduced a background note that was prepared and, second paragraph, that note talks about moving people out of 2A and so on. Then it says:

"This allowed our technical staff to carry out remedial works and to make investigations into the whole ward environment. It was during this period that our teams identified the opportunity to upgrade the ventilation system..."

Now, we've had quite a lot of evidence already at this Inquiry that the issues with 2A ventilation were known in various forms from 2015 onwards. They weren't just discovered because you happened to move people out of the ward, were they?

A I think that's two different issues that we're discussing. So the issue that I think you're referring to from 2A to B wasn't about the specification of the non-specialist ventilation rooms. What emerged – and I know you've obviously heard evidence on it before – in late 2018 was the reports that we commissioned, which did talk about the opportunity and did talk the issues and what-- and then we then proceeded to upgrade those rooms. The issues about which we had been aware of since you know 2015 were issues to do with isolation rooms, as far as I understood. So I think we're looking

at two different parts of a whole.

Q But before any of the reports were done, we've had evidence that senior people in Estates were aware that the air change rates were not what was recommended, and there were, to put it no higher, challenges with doing anything about it because of the way things had been set up. So that knowledge was already there. It didn't just get discovered during the decant of 2A, did it?

A You know I'm not sure when the knowledge was first-- when they were first aware about that. It's not something I was involved in.

Q Yes. Thank you. I just want to move a little further forward to 349. You have a heading at the top of the page there, "The challenge of balancing public interest with patient confidentiality," and a decision was taken, but you accept that although that was a good-- You say it was a good-faith decision, but it had some negative consequences. Is that fair? About halfway down, paragraph 103.

A Yes. So, this is about Cryptococcus----

Q Yes.

A -- and I think you'll see from the IMT minutes there was lengthy discussion about whether or not to go proactive on that from the early IMTs. There were a number of personal issues affecting one of the families, and I think

because we were keen to support the family, we were keen not to issue a proactive statement at that time.

We then moved forward and, as you know, there's a number of actions taken to introduce mobile HEPA filters. We communicate that with families. We then obviously discover the problem with the showers, and then the clinicians, the IMT and senior officials decide that it is appropriate to issue a proactive release on all of these matters. We do that proactive release on 18 January.

We only issue it once we have told the families of both patients that we were intending to put out a release so that there was no surprises for them in terms of it being in the media the next day. We don't include information about the fact that the patients have died. The reasons for that were that we were very concerned about deductive disclosure. We were quite anxious to protect the identity, particularly of the paediatric case because, as you will be aware, the number of deaths amongst that cohort in that period are small, and one of the things we were really keen to do was to try and protect that family. So we didn't include information about the patients.

We put out the statement late on Friday night because it took us a while to make sure that both families had been spoken to, and then early on Saturday we began to get inquiries from both STV and BBC who had heard through social media that it was two children who had died.

We spent quite a long time that day trying to say how could we answer those questions, still protecting the identity of the young patient but not lying about the information, trying to answer the question that had been asked. We thought that describing the older patient as "elderly" was a respectful way to describe it. We obviously then learned that it caused quite a bit of distress. I'm very sorry for that, clearly that was not our intention. What we were trying to do was to protect the family of the young patient and also to make sure that we were still responding to the questions that were coming in from the media. It was very----

Q Could you just have said "adult" as opposed to "elderly"?

A Well, then that would have revealed that the other patient was a child. These were matters that we spent quite a bit of time toing and froing.

Q Let me ask you a question, and I suspect from your witness statement you may not be able to help me, but I'll ask you since you're available to us today. At page 353, we're still talking about Cryptococcus, and we're talking about the setting up of an expert group, which one might have thought is going to investigate all the hypotheses

and try to work out what the answer is, correct?

Now, the report to the Board, which is instanced at 116, says you're told by the medical director an expert advisory group being set up to report to the IMT to help establish whether a definitive source of the Cryptococcus could be found.

And then there's an insert:

> "Although it was noted that an American study has reported that the organism can lie dormant in a healthy human and only become harmful when a person becomes"--

Well, that jars a little, if you're going up and away with an open mind to try and find out what the answer is, to put that in. Can you help us at all about why that was inserted?

A No, I can't. It was a reported at the Board. I think it had emerged recently that that might be a possible hypothesis. I don't think hitherto that had been considered. It was-- It was discussed at a public board. What we do is that we record what is discussed at those public board meetings, and then we issue them so that the public are aware of key decisions that are taken. So, that point was made, Ally McLaws had heard it and recorded it, and it was issued as a core brief that evening.

Q Now, I have some question to ask you about a later passage – 358, please. We're jumping around a little, and I apologise for that, and if we miss something critical, please do tell me, but we do obviously have the whole of your report now as evidence at the Inquiry. In paragraph 130, what's happened is that Dr Inkster and Dr Peters have "raised the accuracy of various media statements" with Dr Bain, and Dr Bain gives you these complaints and asks you to respond, and you say, "Well, that was done"-- Well, the first question, you say "with independent oversight by Professor Angela Wallace", but Professor Wallace was reporting to the chief executive of the Board, was she not?

A She was. She was a Government appointee. She had only just arrived, and the independence was that she wasn't involved in these matters before. Mark Wright, finance director, had not been involved in them at all, and so we felt these were appropriate people that could give a fresh pair of eyes to look at our statements, the comments that had made by Dr Peters and Dr Inkster, and then the further information that we had identified to respond to their comments.

Q Okay, I understand your answer, but the phrase "independent oversight" usually suggests an outside person, not a person reporting to the chief executive of the Board. Both people here that you mention are reporting to the

chief executive of the Board.

A They were outside of the processes that had been employed up to that point to draft answers.

Q Right, so it was just a board review then?

A It was, and that's what we were asked to provide. Marion Bain spoke to me and asked me to look at the comments that were made by the two doctors and to respond to them. I didn't want just to do that without somebody else having a fresh pair of eyes to look at that, and both Professor Wallace and Mark White were deemed suitable because they hadn't been involved at all.

Q Am I right in understanding that – I have Professor Wallace's CV with her statement, and the other is perhaps obvious – neither of these individuals were people with expertise in infection control?

A No, but the questions that were asked were not simply about infection control; they were a range of matters. So, it wasn't just about infection control, there was technical questions as well that were asked.

Q Did anyone from infection control give input into this report?

A The process by which we asked was we would have asked-- in fact, we did. We asked Professor Leonard on questions that were around processing of labs, etc, we asked the director of Estates around questions of a technical nature, and we would have asked Sandra Devine around questions to do with the John Hood report.

Q Did you meet Dr Inkster and Dr Peters to discuss it at all?

A No. So, we took-- So, the questions had come to me in January of 2020. By March, as you know, we were all dealing with COVID and we were very much focused on that. We were keen before Dr Bain left that we would give her a written response to these points. I gave her that in April. She demitted her post in May, and I heard nothing further.

Q Thank you. Just bear with me a second. Actually, answer me a-- what maybe sounds a slightly technical question. Later in your witness statement – if you need the reference, it's 363 – you're discussing not specifying the particular bacteria that's being considered, and one can quite understand lots of the points you're making about jigsaw identification and so on and so forth, but not mentioning the bacteria, what's the logic behind that?

A You'll see I've set out in the statement a number of the factors that can be taken into account in terms of identifying and breaching confidentiality, and one of those is about patient conditions and treatment. Because of the

very small number of patients that were-- that we were investigating at time, and because of the situations that we had experienced before when we had confirmed bacteria, etc., and it had caused upset to families in terms of some of the media coverage, we took the position that we should withhold that information. We discussed it with HPS and with Scottish Government, and because of the small numbers involved, they also shared our view, and they agreed that, given the very small numbers of patients involved, that that was information that we shouldn't release.

Q Let me ask you about the Oversight Board. I'm conscious that you've got some comments on relationships, if I can put it like that, over your communications later on. The Oversight Board produced an interim report, which we can look at if we need to, but that will probably depend on the answer to my next question. That interim report contained a series of criticisms – that's just the best word I can come up with – of communications on a number of matters. Do you accept those criticisms?

A I accept that families found our communications wanting, I do accept that. I think that one of the reasons that we were put in escalation was for communications and engagement with

families, so it stands to reason that our communications didn't meet the needs of those families. So, yes, I do accept that there were issues with communications with the families involved.

Q Then, just for completeness, although most of this was in the interim report, in the final report, there was also some further criticism including how you dealt with the duty of candour interpretation, and you remember that?

A I do. That's not a matter which I was involved closely, but, yes, I do recognise and recall that.

Q And Professor Craig Whyte, who was appointed and from whom we're going to hear later, he also has some not dissimilar criticisms of the Board's communication. Do you accept that?

A He was the chair of the Engagement-- Communications and Engagement Subgroup that then formed a view that was then set out in the interim report, so his views will be part of that assessment.

Q Thank you. Can I just ask-- I may have dealt with the DMA Canyon to death because you're probably not particularly involved in that. Can I just ask-- Can I have Bundle 27, volume 11, page 25, please? Yes, I think the-- The reason this is up is this is lifted from a series of Q&As, as you know, and I suppose that the question that is arising

for the reasons that we've covered to some extent earlier is that there's a statement that:

> "When the hospital first opened ... there was no indication that there was a problem with the water ..."

But, of course, we know that there was a report on problems with the water system produced by external consultants fairly early on. It wasn't dealt with, but it was produced, so you would see that some people might regard that as a slightly misleading statement, saying there was no indication there was a problem with the water.

A I'm not sure when that report is that you're referring to.

Q Well, the DMA Canyon report in 2015.

A Yes, but the water assessment processes-- I mean, I think what our understanding was is that the issues did start to emerge in 2018. Obviously, we're aware that there are some people that were dealing with a report in terms of a processing of a water assessment, but that wasn't known, as you know, to the organisation as a whole, so I think that's an accurate statement in terms of the organisation as a whole. If there are individuals dealing with something that is not known to the organisation as a whole, then the organisation doesn't know it.

THE CHAIR: Just help me with this:

> "When the hospital first opened in 2015, there was no indication that there was a problem with the water in the [children's hospital]."

Do you say that was an accurate statement?

A There was no indication to the organisation. I think what that is is a board statement, is an organisational corporate statement.

THE CHAIR: In January 2015, as was known by 2020, which is the date of this document, at least one and perhaps more Board employees had the DMA Canyon 2015 risk assessment which provides a number of indications that there were problems with the water.

A So, this statement is a statement about what-- the organisation as a whole.

THE CHAIR: No----

A That was the position that we took.

THE CHAIR: No, it's not a statement about the hospital as a whole. The sentence I'm looking at is:

> "When the hospital first opened in 2015, there was no indication that there was a problem with the water in the RHC."

Do you say that was an accurate statement?

A There was an indication to some.

THE CHAIR: Sorry?

A There would be an indication to some.

THE CHAIR: Thank you.

MR CONNAL: Part of your witness statement goes through a number of communications and, in effect, complains about the way the Board's communications were handled by others involved in the process, particularly after the Oversight Board and the Scottish Government were involved, and we've got the opportunity of reading all of these. I wanted to ask you about one specific point, because it may be the kind of point which perhaps has more of an impact on a lay listener.

If we go to 371 of your witness statement, in paragraph 176 somebody is getting in touch with you saying the:

> "…. Cab Sec wanted this sentence omitted as the phrase 'acceptable' level of infections jarred."

Now, if you were a patient or a parent of a patient, would you not find the idea that the Board was saying, "There are acceptable levels of infection," something that jars?

A I think a more accurate word would be expected, so I do accept that "acceptable" would jar.

Q Yes, because it suggests that someone is saying, "Oh, that's"----

A Tolerable.

Q Yes, that's okay. Okay, thank you. Much of your complaint about the way things were handled ties around your assertion that there is something called the "corporate NHS GGC position", which is what you were trying to get across. Is that not part of the question I started out by asking you, that there is this corporate GGC position that it's your job to make sure is presented.

A I think that's a fair description of it, yes.

Q Let me ask you something about a completely different topic that has kind of cropped up perhaps slightly unexpectedly. May or may not be peripheral to the job we're doing, but as it's been raised in evidence-- I think you're aware that-- you're probably aware that the Inquiry has had evidence from one witness about being – well, I'll use the word "distressed"; that's the best word I can find at the moment – to find that their social media accounts were being monitored, and any mention of either her or her late husband was being picked up by someone being paid by the Board to do that. First of all, let me just

ask you generally. I have some specific questions I want to put to you about that, but do you think that's an acceptable use of the Board's funds?

A So, this is the social listening software?

Q Yes.

A So, the social listening software was procured in response to the interim report of the Oversight Board. It was a recommendation that we needed to improve our responsiveness to social media comments, and that we had been slow to listen, slow to pick them up.

Q Can I just ask you to pause there because the quotation you're giving is the one I've been given to put to you. The Board-- Oversight Board actually recommending that you should learn from other health boards' good practice? Can I ask you which other health boards were engaging in the use of social listening software?

A So, there were three other boards that I-- I reached out to all boards to ask them were they using such software, and the other boards did come back to confirm that they had that capability. That was Grampian, Lanarkshire, and (inaudible).

Q Now, as you're no doubt selecting your words very carefully, there may be a distinction between having that capability and using it. Did they say they were using it?

A They weren't using it in the way that we then subsequently used it.

Q They weren't using it?

A They weren't using it to listen to individuals.

Q Right.

THE CHAIR: Just a matter of detail, is it a sort of in-house operation, or do you contract it out?

A Yes. So, it's a company-- it's an American company. They are a global company that provide this service, and they have a way in which you can automate reading and monitoring public statements. So, it's a way in which you ask them to have keywords that they will pull out from public comments that are made on public social media accounts.

MR CONNAL: Is that Cambridge Analytica?

A No.

Q No?

A Meltwater.

Q Sorry?

A Meltwater.

Q Meltwater. Thank you. I asked that because there was a rumor circulating that that's who it was, so I wanted just to check, and the other boards were not using this. They had the access to the ability, but they were not using it targeted on individuals.

A They weren't following

individual's accounts, correct.

Q So, is it then-- You've, as it were, innovated on other boards' practice by deciding to target it on individuals?

A I wouldn't describe it as that. There was a number of key terms that were included. My team also included four individuals, of which one was a family member, as you're aware, three were politicians. These were people who were regular commentators. There was actually no need to include them. You could publicly look at the comments that they make. These are public comments that are being made on their accounts. We obviously then reflected on that and, as you'll be aware, we withdrew that so that we stopped listening and monitoring their public statements as of summer last year.

Q Just so I'm clear about it, in the witness statement that Ms Slorance produced, she narrated an email exchange that she'd obtained via one of these subject access requests, which indicated that not only was her name being targeted but also any mention of her late husband have both been stopped.

A There's no patients. There's-- No individuals are being followed at all.

Q No individual. Thank you. Now, you've already dealt with the Oversight Board, so I don't need to ask you about that. Can I ask you about a reflection that you've made near the end of your statement, in which you've very fairly accepted-- you called it an error on your part. You talked about a situation in terms of a battle, and then, on reflection, you accept that was something you shouldn't have said.

A Correct.

Q Is that-- I'm going to ask you a couple of questions about this. The first question I have is was your use of the word "battle" not a reflection of the fact that you felt you were, as it were, the defender of the Board, and on the other side of all these patients and so on who were, if you like, the opposing parties. So there was a battle going on between the Board and everybody else.

A If I can describe some of the language that was being used against the organisation at the time, you know, it was being described as a crime scene, that we were murderers. It was highly emotive language that was being used unfairly, obviously, we felt. We also felt we were not having the opportunity to be able to speak freely and give across the organisation's point because all of our communications were being cleared at that stage by the cabinet secretary and, as I've explained, some of that meant that there were alterations to our statements.

So, it really did feel-- I think we all--

a number of us had been trying to do our best, but we did feel that we were being unfairly treated, having been trying to do our best over a number of years to address these very very complex and difficult issues. So, it was a comment that was made in a private meeting with a small group of my team, which I've obviously since apologised for, but I think it is reflective of just the way in which we felt the situation was developing.

Q Now, the second question I wanted to ask you about it was what you actually said, because it's been suggested to me – and I want to put this to you – that what you actually said, referring to Professor Cuddihy, was that, "He may have won the battle, but he won't win the war."

A Correct.

Q Is that correct?

A Correct.

Q Which must have, presumably, meant that you were of the view that he'd had some success, because here he was associated with the Oversight Board, but he wasn't going to win at the end of the day. Otherwise, why say it?

A It was a comment made about, if I recall-- that there were-- there were comments that were being made about a situation that we didn't agree with. There was many comments being made. There were leaked documents getting put about that we couldn't respond to. A lot of it was related to individuals. A lot of the leaked information was about patients, and we can't and won't comment about patients in the public domain, so we were struggling because we couldn't comment on that, and there were then a number of accusations against me and my colleagues who-- I think we had all been working very hard to try and address these issues collectively.

So, it was not personal against Professor Cuddihy. It was symptomatic of the time that we were in, of the difficulties that we were feeling and of the very very limited opportunity that we had to try and get across what we felt were very reasonable points to make.

Q Let me ask you an individual question. Can I have Bundle 8, page 113, please? This has been drawn to my attention, and this is an example where a statement had been made, presumably with involvement from your team, that said that anyone who was concerned about quality of care should contact the chief executive, and promptly all the consultants in that area said, "Why are you mentioning quality of care? There's no issue about quality of care. It's the environment." Is that fair?

A Yes. I recall that letter.

Q Thank you. Let me go on, then, to another topic, and this is the one

that's covered in your supplementary witness statement. In fairness, the witness statement makes it clear that you weren't involved in the communications that you're covering in that witness statement. You've simply been given that material by someone else. Is that right?

A Correct, yeah.

Q And the focus of the witness statement is on the suggestion that there were no ventilation problems elsewhere in the hospital at the time when the 4B move back to the Beatson took place. Now, I wonder if we could look at Bundle 27, volume 9, at 411, please.

Now, we can scroll down and read the whole of this if we want, but the point is that there were specific issues spotted with the ventilation arrangements in 2A: holes in the walls, other things. These issues were indicative, I would suggest, that the necessary validation had not taken place at all because it couldn't have done, for instance there were no HEPA filters. Then there was a broader question as to whether the standard of the Board was up to scratch at all, and that's what Professor Williams sent to Dr Armstrong. I take it Dr Armstrong was one of the senior people who would have been aware of the press statement.

A Yes.

Q So, what was the basis of the press statement saying there were no problems elsewhere?

A So, the press statement said that the-- I can't remember the exact words. The last sentence in the press statement was a straightforward indicator that the only service that was moving was the adult 4B service. It was no more than that. However, I think there are quite different issues that we were facing in terms of 2A and 2B, which obviously had been designed with specialist ventilation, and 4B, which was obviously a retrofit that had not been designed for the needs of the patients in the unit. So, I think those were the factors that were obviously being considered but, as you say, I obviously wasn't present at that time.

I think you'd also questioned the introduction to the statement in previous evidence. There was obviously a disagreement to that point as to whether the issue was that the specification was wrong or that the building had not been built to the specification, and the specification was right. The one thing that was agreed by both parties-- by both ourselves and Multiplex at that stage was that the air particle counts were too high, and therefore that was an agreed position by both parties, and that was why we obviously then explained that that was the trigger for the move back.

You'll have seen as well – I believe

it's in the information that we supplied – that Ally McLaws and his counterpart at Scottish Government do discuss the difficulty with going into the issues as to where the responsibility lay for whether the 4B unit had been built correctly or not because of potential future litigation. That's why that wasn't stated in that press release.

Q Yes. I understand the need for caution with litigation very well, Ms Bustillo, but I think the question that I'm more interested in is whether the statement that was issued at that time gave a false impression of the fact that there were no other significant issues because, with the benefit of hindsight, 2A and 2B were not built in the way that they should have been. We've heard endless evidence about what had to be done to fix them, and this was one of the early reports on that.

A However, they were built with specialist ventilation, which was different from 4B, and so I think what those points are is that they were two different sets of issues that we were dealing with.

Q I don't think I have any further questions for this witness, my Lord.

THE CHAIR: Ms Bustillo, what I need to do is find out if there's any other questions that legal representatives wish to put forward. So, if I may, can I ask you to return to the witness room, and I would hope to ask you back within about 10 minutes.

A Thank you.

(Short break)

THE CHAIR: Mr Connal?

MR CONNAL: My Lord, I think I have probably three questions.

THE CHAIR: I understand there perhaps might be something of the order of three more questions, Ms Bustillo. Now, Mr Connal?

MR CONNAL: Thank you, my Lord. Probably all clarification points, if I may. We discussed the comment you made about Professor Cuddihy and the circumstances, and you explained your position on that. Now, in the course of giving an explanation of what was going on at the time, you mentioned the leaking of documents. Are you suggesting that Professor Cuddihy had been leaking documents?

A No.

Q When we were dealing with the social listening software topic, am I right in understanding from what you told us that there were four people on the list: three were politicians and then there was Mrs Slorance?

A Correct.

Q Do I understand you've now apologised to Mrs Slorance for including her?

A I have.

Q And why was she added?

A She was a frequent commentator about NHS Greater Glasgow and Clyde.

Q The final question is going back to the exchange that we had about the comments by Drs Peters and Inkster leading to an investigation, leading to a report. Was that report shared with Drs Peters and Inkster for comment?

A I don't know. I gave it to Dr Bain as I was asked to do, and I don't know if Dr Bain shared it with them.

Q Thank you very much, I have nothing further, my Lord.

THE CHAIR: Thank you very much, Ms Bustillo. That's the end of your evidence and you're free to go, but before you do, can I say thank you for your attendance this afternoon and your work in preparing the statements. Thank you.

THE WITNESS: Thank you very much.

THE CHAIR: You're now free to go.

THE WITNESS: Thank you.

THE CHAIR: Now, I think we plan to hear from-- is it Professor White----

MR CONNAL: Professor White tomorrow.

THE CHAIR: So, we'll see each other at-- all being well, at ten o'clock tomorrow, and have a good afternoon.

(Session ends)