SCOTTISH HOSPITALS INQUIRY

Hearings Commencing
27 August 2024

Day 2
28 August 2024
Darryl Conner
Thomas Romeo

CONTENTS

9:55

THE CHAIR: Good morning. The witness that we will hear, first of all, is Mr Darryl Conner. Can you hear me, Mr Conner?

THE WITNESS: Yes, I can.

THE CHAIR: Right. Now, I understand, Mr Conner, you're in your office and you're alone in the office. Is that correct?

THE WITNESS: Yes, that's correct.

THE CHAIR: Right. Now you're about to be asked questions by Mr Connal, who-- Can you see on your screen Mr Connal who-- You may not know who Mr Connal is, but do you have a view of the team sitting on my right, maybe two or three people?

THE WITNESS: Yes, I can. I can see Mr Connal, yes.

THE CHAIR: Right. Now, before we begin, I understand you're prepared to take the oath.

THE WITNESS: Yes, that's correct.

Mr Darryl Conner

Sworn

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

Questioned by Mr Connal

Q Good morning, Mr Conner.

A Good morning.

Q If you encounter any difficulty in either seeing me or following what I'm saying to you, please just let us know. We can certainly see you, so that's a positive. Likewise, if I ask you about, for instance, documents or whatever, and for some reason there's a difficulty having a look at them, could you just please indicate? I'll check that with you again, but I just wanted to flag that at the outset.

A Certainly.

Q Sorry. That's one of the problems with the remote: I can't talk over you, so I think you gave an answer there that I didn't pick up.

A Yeah, I just said, "Certainly."

Q Fine. You've given a statement following the issue of a questionnaire, and I think you've had access to that statement. Is that correct?

A Yes, that's correct.

Q And are you content to adopt that statement as your evidence at the Inquiry?

A Yes, I am.

Q Thank you. Let me just start with a little background information, if I may. You're currently employed and have been employed since 2021 with NSS(sic) Assure. Is that correct?

A Yes, that's correct.

Q Just give us a brief indication of what it is you do there.

A Sure, no problem. So, at NHS Scotland Assure I'm a senior engineer and also an authorising engineer for healthcare ventilation systems.

Q What does being a senior engineer at NSS Assure mean you actually do with your time?

A I do various tasks working for NHS Scotland Assure. One of them is contributing towards healthcare guidance, the Scottish Technical Memorandums. I contribute towards the revision and output of them. I also work on KSAR, which is Key Stage Assurance Reviews for new healthcare projects at various stages through the design, from initial assessment all the way through to commission and handover.

Working as an authorising engineer, I provide services to various health boards where I carry out ventilation audits, and I provide external business-as-usual ad hoc support for guidance interpretation and general support to the health boards.

Q I'm not sure we've necessarily heard of the review process that you participate in as yet. I wonder if you could just walk us through what that actually involves NSS Assure doing in relation to a project.

A Yes, so there's various stages of a design project or a building project which are outlined within the RIBA guidance and the SCIM guidance, which is the Scottish Capital Investment Manual, and it essentially takes a project at concept, initial assessment, and then it goes to outline business case. It then proceeds on to a full business case and then it goes to construction and then it goes to commissioning, validation and then eventual handover to the client.

What NHS Assure does under the Key Stage Assurance Review is we are brought in to conduct a review of the information supplied by the project at whatever stage that we're brought into it. Ideally, we're there to kind of benchmark the design against the outgoing guidance that's available, whether it be British Standards, technical memoranda, CIBSE guidance or the building standards and

obviously the Health and Safety at Work Act. We provide detailed review of the design proposals, and we feed that back to the project team in order to provide an external, impartial supported or non-supported status to allow them to progress to the following stage of the design concept. So that's what's-- a kind of high-level overview, if you like, of what we provide and what we're involved in within the Key Stage Assurance Review.

Q Sure. That's very helpful, Mr Conner. What you provide is that advice or instruction? How does it work in practical terms?

A So, in practical terms, generally what happens is, for example, if it was a full business case review, the expectation is that the design is almost fully-fledged and it's ready in concept to be put in to build. What we do as a team, collectively, is review the various disciplines within that project proposal and we look for any non-compliances, we look for any areas of conflict, if you like, within the design. Pretty much everything that we do has the kind of core principle that infection control is right up the middle of it. So we have a view that it's very specific to the health built environment. I believe that the service itself was formed as a result of aspects

of what has happened with the Queen Elizabeth and also the Royal Hospital for Children in Edinburgh. So it's more of a proactive measure to get ahead of design prior to going to build and to ensure that all necessary diligence is taking place so that any shortfalls in design or problems can be avoided ultimately for the patient, the end user. That's essentially what it is.

Q That's very helpful, Mr Conner. You used the word in your last answer, "ensure." Can I just come back to the question that I asked you? Your answer was very helpful, but I just want to check what the position is. Let's say you find something that you're not happy with. I'm just using that in the layman's terms, it doesn't matter what the detail is, something that you don't think is correct or doesn't conform to guidance or whatever it happens to be. What are you doing? Are you advising about it, or are you telling somebody that they have to fix it, or how does that work?

A So, essentially, the output from NHS Scotland Assure under KSAR is, eventually, there's a fully written QA'd report that's issued to the client.

Q Just let me interrupt you there, there's a fully written-- Can you just tell me what that report was

called?

A It's a KSAR review report.

Q KSAR review. Thank you.

A Yes. So, if you were to, say, come across a significant design concern, it's structured in a fashion where it looks at the governance aspects of the project, it also breaks down into the various disciplines whether it be electrical, mechanical or plumbing, and everything that we-- any observations that are made are directly benchmarked in reference to the current outgoing guidance to kind of give that basis a cross-comparison, if you like, and to demonstrate-- to raise the question of whether it's going to be fit for purpose or not. That information is provided to the Health Board themselves at the end of the KSAR process and the onus is on them, if you like, to take that on board and develop an action plan, if you like, in order to address these highlighted issues prior to getting recommendation to moving on to the next design stage.

Q So, you tender advice. What then would happen if, for instance, a board looked at your advice and said, "Well, that's all very interesting, but we've got different ideas for whatever the topic is, we're going to do something that's not in accordance with the advice"? How do you ensure that something's done about it?

A I've asked that question myself before, to be honest, and I've had it advised from our director, and our prerogative is essentially based on the output of NHS Assure's report, if there is an unsupported status, the project does not progress.

Q Well, that's helpful. Presumably, that-- whether the project progresses, is that a decision for the Board or for somebody else? Do you know? It may not be a question that you can answer, Mr Conner.

A I would say perhaps I can't answer that as well. I think maybe my head of engineering or assistant director would probably be better placed to answer that question.

Q Thank you very much for your help on that topic in any event, because it's not a topic that was directly covered in your original questionnaire. So, if I can perhaps move from NSS Assure back to your days at the Queen Elizabeth, I think I'm right in saying from your statement that you first joined the team there in 2014. Is that correct?

A Yes, that's correct.

Q And you held a number

of roles there, a duty manager, then an Estates manager, then an interim site manager, and then site manager. Is that right?

A Yes, that's correct.

Q Thank you. And you eventually left there in 2021. Can you remember when?

A I believe it was July 2021.

Q Thank you. Just so we have a picture of what you were doing, what's the difference between duty manager and manager? Because I think you were an Estates duty manager first.

A Yes, so an Estates duty manager essentially is to provide out of hours 24-hour response to Estates-related issues, essentially breakdowns or emergencies. It was and I believe still is a shift team, five shift teams providing 24/7 response out of hours, outwith working hours. So it provides that-- from Monday to Friday, say, it gives you that night shift cover, and it gives you cover over the weekend to address any out of hours or any emergency responses.

Q I think at the time you were the Estates duty manager, you had a particular interest in electrical systems. That was your area of responsibility. Is that correct?

A Yes, that's correct. Fundamentally, I was electrically-biased, so when I started as Estates duty manager, one of the roles that we had to adopt was to start to train as authorised persons for relevant disciplines. So I undertook high voltage and low voltage systems, AP training and appointments, and that allowed me to obviously provide out of hours support under the Estates duty manager banner but also to engage and manage and control planned authorised persons work for specific shutdowns within the hospital, at different stages, that could maybe only be carried out, out of hours.

Q Thank you. I think, again, this is covered in your statement. I won't bother to bring it up just now. You became Estates manager, day shift, in 2018 and, at that point, you started to manage the ventilation systems. Is that correct?

A Yes, I believe I came off the shifts on-- it was around about April 2018 and moved on to a day shift Estates manager role where my remit was to take over the management of the ventilation maintenance for the hospital.

Q In your statement, you explain what that involved in some detail and I don't need to get you to

deal with that. I think you were working beside Kerr Clarkson. Is that correct?

A Yes, that's correct, I worked alongside Kerr.

Q And you say in your statement you were using SHTM 03-01, the various parts of it, as your guidance as to what you were supposed to be finding. Is that right?

A Yes, that's correct.

Q Thank you very much. And then, later, you became interim site manager and then site manager and ultimately when you were site manager-- and, again, you were back to looking at electrical systems primarily. Is that right?

A Yes, yes, I was. That's correct.

Q Thank you very much. Just bear with me. Looking at page 85 of your witness statement, can I just check since this is the first document, can you see that?

A Yes, I can.

Q Thank you very much. I won't ask you every time, but if you have a problem, please just indicate to us. You are asked in the run-up to these questions about training, and I see in addition to the authorised person work you told us about earlier, you're talking about being AP for ventilation systems, about at the bottom third of that page in September 2019. You see that's the date that's given there. Is that correct?

A That would be September 2018, I believe.

Q That would be 2018?

A Yes, (inaudible) persons training for ventilation in September 2018.

Q Were you then appointed as AP ventilation?

A Not straight away. Generally, after you carry out your relevant training, the authorising engineer will conduct an interview of your skillsets, your knowledge, your previous experience, your site experience and your site familiarity prior to providing a recommendation for appointment to the designated person, at which point the designated person will issue you with an offer of appointment for you to accept in writing. So that happened after I conducted my training. I can't remember the exact date that my appointment was signed.

Q Thank you. And just to finish that section, can we just look at the top of the next page, 86? I see you say here:

"Training assisted me in

applying its principles to the hospital's sizeable ventilation asset to drive compliance with SHTM 03-01, and also under the correct governance, the implementation and control of a safe system to work."

Just tell us what you were learning about there.

A Yes, so the authorised person training for ventilation essentially is fundamental. It casts a light and gives you knowledge, and it presses on the onus for the importance of validation of a ventilation asset and subsequent annual verification of a ventilation asset. The safe system of work-- In electrical for example, there's a designated safe system of work where you're working under a permit to work system. Within SHTM 03-01, the current outgoing guidance recommends a request for isolation of the ventilation plant but it gives you the overview that you have to have some type of control measure in place to, one, record that the verification itself is going to take place, and that the relevant parties that are involved know about it, agree to it. They agree the time scales and any output from the verification can be communicated back to that individual.

Q Thank you. Now, I'm going to come back to some of the words that you used in the course of that answer, Mr Conner, just to make sure that we're all understanding exactly what's involved. Could we go to page 91 of your statement? And, at the foot of that page, you asked a question about commissioning and validation. Now, don't answer the question before I ask it, if you don't mind. I'll come back to these words just in a moment. You were trying to navigate the Zutec portal. Was that easy to do? We've had some evidence about Zutec.

A Personally, I never found it that easy to interrogate Zutec. Essentially, it was a structured folder drop-down menu with various routes in to trying to access design information, handover information, commissioning documentation. It took some time to familiarise yourself with it and, in some instances, you would rely on the users of others to maybe advise how to access a particular document if it was on there.

Q Thank you. Now, if we just go to the top of page 92, I just want to ask you about the terms that we're using on that and the next section of your statement. I'd like you just to make sure that we're understanding this correctly. Are there

three different processes for a new ventilation system? Am I right in thinking there is commissioning, validation and verification? Is that correct?

A So, for a new ventilation system, there is commissioning and validation. Verification happens after, a year later.

Q Okay, just so we're clear about what these are, commissioning, that's done by the-- Let me just call it the contractor for the moment. It doesn't matter whether it's a specialist or whoever. Is that correct?

A Yes, that's correct.

Q And that's them basically making sure that what they put in is up and working?

A Yes, if the design says "X", the commissioning engineer measures "X" and reports on that finding.

Q Now, validation is the next stage for the new system. Now, am I right in thinking that's done by the client, although often through an external expert or consultant?

A Yes, that's correct.

Q What's the point of validation?

A The point of validation is for the Health Board to ensure that the design that's been installed and commissioned fits the clinical environment and aligns with the guidance outlined within 03-01. It's to ensure that the ventilation strategy is in keeping with the parameters set out within the guidance document with respect to air change rates, pressure profiles, hierarchy of cleanliness.

Q Thank you. Just so you can see where you are in the sequence of your statement, that's essentially a slightly longer version of an answer you gave in answer to question 36 in the middle of the page that we're looking at, at the moment. That's page 92.

A Yes.

Q Is that correct?

A That's correct.

Q So, that's why it's important, and then does validation have any connection to verification?

A Yes, it does. In order to conduct a verification-- The whole point of a verification is that you're verifying against the installation's original validation to see that that hasn't moved in regime, that the performance of the system hasn't drifted. So it's in its word, in itself; you're verifying against that original validation.

Q Now, in this case, am I right in understanding that, when you

moved into your role in 2018, you either had a task set for yourself-- you set yourself a task of finding out what, you know, documentation on things like validation was available. Is that correct?

A Yes. When I took over in April 2018, essentially, it was just to continue the pre-existing maintenance regime that had already been initiated with regard to maintenance and annual verification planning, and then during that process – I believe I've tried to highlight it within my statement – that I conducted an overview of the entire ventilation asset for the Queen Elizabeth and cross-referenced that against the SHTM 03-01, part B, appendix 2, in order to highlight what systems were critical and were recorded as critical and what ones were general, so that the maintenance that was going to be carried out from a compliance standpoint, the frequencies would be correct, and also any verifications or planned verifications that were currently done-- any ones that were not being done could be added to the list.

Q Well, let me ask you two questions. You have touched on this in your statement, but did you find records of validation for the ventilation systems at the Queen Elizabeth Hospital?

A No.

Q Did that cause you concern when you didn't find the validation?

A It didn't actually cause me concern because, when I took over the ventilation in April, we had-- the Estates team already had quite a robust, well-rehearsed verification plan in place for the theatres and, in light of not having appropriate validation documentation, any subsequent verification is directly then benchmarked against the guidance in 03-01. So to look at previous verification reports and that they were benchmarked against those guidance standards, demonstrated to me that they were still performing as intended for the ones that were being carried out, but, yes, there's always a concern that you don't have validation documentation, I suppose, for all assets.

Q The----

THE CHAIR: Can I just interrupt? It is just to check that my note is correct. You did not find validation records for any aspect of the ventilation system. Is that what you said, Mr Conner?

A Yes, that's correct.

Q However, when it came

to verification, there was a programme in place and recorded for verification of theatres. Have I picked you up correctly?

A Yes, you have, you have.

Q Right. Now, by referring to theatres, is that in contrast with other spaces within the hospital?

A Yes. Within the guidance, there is an outlay of what it constitutes as a critical asset, a critical ventilation asset, within the healthcare built environment. So, obviously, theatres are one, critical care, high dependency, MRIs, NLEV system – they also encompass the critical asset if you like – isolation rooms.

Validation information-- Validation, you should do once and you should do at handover, and that's when you have a performance document, if you like, for general ventilation plant and critical ventilation plant. So when I took it over and didn't see any validation information, you would have a concern that there was no validation information for the general plant but, because we had an ongoing program for the verification of the critical plant – albeit it didn't encompass all critical assets at that point in time – you had some assurance that the main-- the higher priority items were being taken care of.

There was a programme in its early iteration of servicing the-- sorry, conducting a verification of the isolation rooms, but there was-- I can't-- I think there was about 36 isolation rooms and, at that point in time, only a couple had been verified for other challenges. So I kind of made it a priority to start verifying them in accordance with SHTM 03-01 and also SHPN note 4, supplement 1.

Q How often would you expect a critical asset-- And you've given the example of critical care, high dependency unit, MRI, isolation rooms. How often would you expect a verification of the ventilation outputs in these assets to be carried out?

A The guidance recommends it's done within 12 months. Every 12 months, annually.

Q Right, every 12 months?

A Yes.

Q So, when you took over responsibility in April 2018, as far as you were aware, there had been no verification of the critical assets other than the theaters?

A Yes, that's correct.

Q Right. Thank you very much. Sorry for interrupting, Mr Connal.

MR CONNAL: When you did this exercise of essentially carrying out a

check of the whole ventilation systems in the hospital, once you'd done it, what did you do with it? Who did you give it to, if anybody?

A Well, the process itself was quite time consuming and I wouldn't say laborious – it was interesting – but it took a little bit of resource in order to get that relevant information. So, essentially, I would be having plant rooms surveyed to give me a list of air handling units for each plant room, the areas that they served, and then trying to assess any associated documentation for that particular unit, collating that information onto the one place, if you like, and this is where Kerr Clarkson, my colleague at the time, was fundamental in helping me collate this information to give a complete asset overview of the ventilation from what was already there to what was actually visibly surveyed by myself and the team.

Once that information was ready and available, it was-- and obviously my line managers, Colin Purdon at the time and Andrew Wilson at that time, had visibility that this was an ongoing process that I was involved in, and then it was put on the Estates shared drive for all to see. So it was fully visible and it actually acted as a tool

because the PPMs on the CAFM system weren't up and running at that time so, in order to get compliance, I was aware from reading SHTM 03-01 that critical assets must be serviced in a quarterly basis and the minimum requirement for compliance for a general asset is that it incurs one 40-point check per calendar year. So to look at the information and the PPMs that were being returned from the pre-existing process, I was able to mark off, from a compliance perspective, what ones had been serviced for that year to allow me to pinpoint what areas still required PPM in order to comply with the guidance.

Q So, you've told us that there was no validation records to be found. You told his Lordship that, apart from the theaters, no verification. What did you find about maintenance? Did you find they'd all been maintained quarterly as required or was there gaps?

A The theatres were maintained quarterly and the documentation that was currently being issued for them was aligned with the frequencies you would expect. For general plant, I found that there was no PPMs necessarily being issued for them and there was duplication and repeat PPMs being issued.

Essentially, the document set for issue to the competent persons was a folder structure on the Estates drive with calendar months and the pre-populated PPMs that were to be issued for that month. I found an overview and then it didn't cover the full estate, and that's what gave me the ability to prioritise what was missing and what had to be done.

Q Apart from putting your documentation, once you'd got it finished, on the shared drive so it was there for people to see, did you do anything to escalate the fact that there was a lack of validation, a lack of verification, and not as much maintenance as required to anyone else?

A Yeah, I had conversations with Colin and Andy Wilson, and they supported me in the exercise that I was carrying out to conduct that overview of the asset.

Q Thank you. Let's just move on for a moment, Mr Conner. At a later stage of your statement, you were asked about the hospital opening and any issues that you were bothered about at that time, and I don't think I need delay you to take you through all of that. You highlighted in particular the pneumatic tube system which you were a bit surprised to see was causing problems. Is that right?

A I don't dispute that. I don't remember actually recording that within my statement but I wouldn't deny that the PTS system – the pneumatic tube system – certainly opening was a challenging system to keep up and running. It suffered from continuous breakdowns. There was a significant lack of service contract support in place at that time and very limited training and expertise with regards to it. Yeah.

Q Perhaps I can just take you to page 98 of your statement. At the foot of that page, a bit about the pneumatic tube systems is a little earlier, but you've covered that in your answer. I think you say at the foot of that page you were concerned basically about the sheer scale of the building and the time that people had available to get on top of things. Is that right?

A Yes, that's correct.

Q And when you talk about the specialist service contracts, what are you talking about there?

A Various systems for specialist service contracts, where do I start? Control contracts for the building management system, boiler maintenance contracts, CHP contracts. These things were put in

place as a matter of urgency, I believe, by Ian Powrie very early on, but initially when they were handed over, some of them were still in the process of being put in place. Specialist verification contractors, nurse-call contractors, every contractor that you'd imagine that you would require to manage that size of estate and could not be carried out in-house with the existing staff. It took time to get all these these contacts and agreed contracts up and running, I believe.

Q Thank you. You mentioned CAMF or C-A-M-F. Just so we're sure, that's the system that's supposed to help you do PPM. Is that correct?

A Yes, that's correct. Computer Aided Facilities Management System.

Q Yes. And I just want to ask you about one thing you said about that, just so we're sure we understand the point you're making. At page 104 of your statement, near the bottom half, you talk about CAMF there, time of handover, and just explain to us what you're telling us in that answer there about CAMF.

A Sure, no problem. So, the CAFM system was a system that was adopted Board-wide, I believe, maybe three to four years prior to the Queen Elizabeth coming online. So I'd had experience using it as a planning supervisor at the Western Infirmary and how it was initially used at the Queen Elizabeth was that the users – the staff, if you like – for all the departments would have access to the client part of the system where they could record any job requests, issues, and that would feed back to the system. On the other side of the fence, the users of the system, the supervisors and Estates managers, had the ability to issue those jobs to the technicians and also to create additional tasks manually that could also be issued to carry out maintenance. The pre-population of PPM was not on the CAFM system at that time. So, essentially, any maintenance that would be being carried out was manually created and issued.

Q Thank you. I mean, we know from your statement that in the course of your time at the hospital, you were involved in attending to a variety of issues that arose and I don't want to take up time asking you about all of them, but I would just like to touch on a topic that this Inquiry has already heard a little bit about, which is chilled beams. Now, you know what we're talking about in relation to chilled

beams. Is that correct?

A Yes, that's correct.

Q The section of your statement which deals with this starts at 106, at the foot. You got that?

A I have that, yes.

Q And then you say there, you remember incidents when there was condensation dripping that had a global effect on the hospital. What do you mean by that? Do you mean everywhere in the hospital?

A Yeah, fundamentally, more than one chilled beam. It's not an isolated incident. The issues that I found with chilled beams were one of two things during my time at the hospital. The physical connections for the cooling and heating circuits that were connected to the chilled beams were the----

Q Okay, just let me ask you to take this slowly so we follow what you're talking about. You're talking about the connections. Are these connections that carry water to the beams?

A Yes, that's correct. Yes. There were----

Q What was the issue there?

A So, they were the types of fittings that-- The chilled beams, in essence, come in two styles. The ones that the Queen Elizabeth are active chilled beams and that they're connected to a mechanical ventilation system. The batteries on the beams themselves have essentially spigots that come off of them and that's the point of connection for the medium, whether it be chilled water or low-temperature hot water----

Q Just so I'm clear, Mr Conner, I'm sorry to cut across you, this is one of the problems with a remote hearing. When you talk about batteries, you're not talking about electric batteries that you put in something that----

A No, no. I suppose that the correct term would be coils, cooling coil or heating coil.

Q Thank you. Anyway, you were saying that they had spigots coming off them. Is that right?

A Yes, the point of connection onto the battery to connect the medium was done by push-fit connections and they're not ideal. They are-- They can basically succumb to fluctuations in temperature through medium failure. So, for example, if we have a boiler failure and the temperature of the medium temperature hot water being generated drops, the system itself will cool and the pipework will contract. That

contraction can breach the seal, if you like, within the push-fit connector and can lead to leaks and they're not always resealed when the temperatures are reinstated.

So that was one issue with the chilled beams, the physical connection to them-- the physical mechanical connection to them. The other issues we experienced were condensation and that is quite a rare event. It didn't happen all that often. It's something that would occur at the hospital under extreme atmospheric conditions where the temperatures are extremely high and the levels of humidity are high, and, essentially, the external components of the chilled beam would have water condense onto them and drip through. There was various measures put in place to address that.

Q I was just about to ask you, is that something that you would have expected to have happened or would you have expected that to have been designed out of the system?

A I would have expected it to be designed out of the system, but the reality is that when you're sizing and building systems of this type, it has to be-- they have to be done in such a fashion where they can support the majority of conditions over the use of a year. My predecessor, Paul

McAllister, had worked with Ian Powrie and Schneider Controls to implement local dehumidification strategies software, so that this type of air could be cooled locally at the air handling units in order to remove the moisture within the air under these conditions. So that was applied to all zones of the air handling plant, and I think that made a step change, but when I got involved with it, there was still an occasion, a rare occasion, where condensation could still occur and essentially it was when the dew point of the air itself was high enough and was able to condense within the space itself.

The reason for that was, and my investigations showed that, under these circumstances-- Essentially, dew point is a property of vapour pressure and essentially it is the temperature of air when it is 100 per cent saturated and is-- will start to condense and start to return to water. The dehumidification strategy at the air handling units tries to cool that air down to bring it down to its dew point in order to drop the moisture out of the air prior to it being sensibly reheated and discharged to the space. But, under extreme conditions, we found that the amount of cooling-- that was the cooling capacity for the site, was

not necessarily adequate to remove that moisture. So you still had, in extreme circumstances, the risk of condensation appearing on the external elements of the chilled beams within the space.

So I implemented with colleagues from Schneider a simple strategy to ensure that the flow temperatures-- the chilled water flow temperatures associated with the chilled beam circuits, were always above the dew point of the air measured by the building management system by 2 degrees. So, essentially, the chilled beam-- the chilling capacity of the chilled beam would always be higher than that of the dew point of the air delivered to the space, hypothetically eradicating the risk of condensation. The drawback to that is that you would have difficulty continuing to cool the space but, I think at that time, it was deemed that it's quite a rare event that happens, and it's the greater of two problems that's been addressed.

Q Thank you, Mr Conner. Just while we're still on chilled beams, if I may just ask you to look at a couple of documents to see if you can help us with them. Can we have, please, bundle 12, page 974? Can we just check that's the right one? Can we just scroll down past that page, please? I think there should be another chilled beams. Ah, yes. I was looking to find your name, Mr Conner, and I find it in the middle of page 975, where it said, "a rapid HAI-SCRIBE was put in place, signed by Darryl." That'll be you. Is that right?

A Yes, that's correct.

Q And if we go then from that document to page 108 of your statement, you're being asked about this document, and you explain this is to do with the issues and your job was to get something sorted out fairly quickly. Is that right?

A Yes, that's correct.

Q And the-- this business of the connections not being ideal or failing under certain conditions, was that a one-off or was that found elsewhere in the hospital estate?

A No, that was found elsewhere in the hospital estate pretty much from day one. All radiant panels, all chilled beams, anything that would be a wet service, if you like, a closed loop service within the rooms was pretty much connected by flexis. Pretty much from handover, the builder was in carrying out a retrospective changing of all these flexi-hoses for compression type. That was quite a long and lengthy process, but when I had conducted investigations and

improvement works through various wards within the hospital, our surveys showed that they hadn't all been changed and that the flexi-connections still existed. In this instance, 6A, we changed out all of the flexible connections within Ward 6A to compression type in order to minimise that leakage risk.

Q Yes, I was about to ask you that, because the document we looked at a moment ago dates from September 2019. So the hospital's been open for some considerable time, by the time you're finding this problem. Is that correct?

A Yes. That's correct.

Q Can I ask you just one other thing about that? If we go to the next page of your statement 109, in the first paragraph, you say there, you don't think there was an awareness that chilled beams are closed circuit sealed systems.

> "This means that the quality of water in pipework is not the same standard as consumable domestic standard at a sink tap or showerhead."

What's the point you're trying to make there?

A So there was a concern-- I remember at the time there was a concern of the water that was leaking from the chilled beam, and that it could present some microbiological risk, and essentially domestic water that's fit for consumption – (inaudible) or potable, if you like – goes through a far different process with regards to filtration and dosing and all the other associated water management that's conducted by others, but the closed-lip systems itself are essentially radiator circuits, and when I say radiator circuits, that could be heating or chilling circuits. They're sealed systems to provide the transfer of energy, either heating or cooling, from one space to another. They are those with inhibitors or glycols in order to keep the systems pressurised, but they are not-- under optimum operating conditions, they should-- they would never be within the space because they're not leaking, they're sealed. I think that was the point I was trying to make, sorry.

Q And what then leaks is not filtered potable water designed for any particular patient group. It's simply water that's had the inhibitors and other things put in it, so you don't really know what conditions it's in. Is that right?

A Yes. It's not something that would be generally tested and if it did leak, you wouldn't expect it to be of

the same standard of the water that came out of a tap or a showerhead. You wouldn't expect it to be clean because it's a sealed system.

Q Thank you. Can I ask you-- and it's just to see whether you can help us at all with this. Can I ask you to look at bundle 10, page 197? Now, I'll tell you, this is a meeting of-- a minute of a meeting of a Water Technical Group in July 2020, and if you can't help us with this, please say so. If you see in the second paragraph, there's a note, “There's an emerging issue with a high rate of failure on the chilled water system [which is the one we've just been talking about] about 80 failures.” It's a note that Ian Powrie had previously discovered stainless steel might be different, and so on. Do you know anything about the emerging issue of failures on the chilled water system?

A I don't know anything directly about it. I was aware there was an investigation going on with regards to different types of materials used within the systems, dissimilar metals, areas of corrosion within the system that were being inspected, photographed and collated.

Q So, you were aware of it happening, but you weren't directly involved?

A Sorry, that would be the best way to put it, yes.

Q Is that a fair summary?

A Yes.

Q If I put questions to you like that, Mr Conner, and you don't agree, please don't hesitate just to say that's not correct, just so we keep ourselves clear, but thank you for that, and, in fact, I think it becomes clear from your statement that water wasn't your main concern, certainly to the extent the ventilation was. Is that fair?

A That's correct.

THE CHAIR: Yes. Now, are we moving away from chilled beams?

MR CONNAL: We are.

THE CHAIR: Could I just ask for your help, really just to make sure I'm following things and understanding it. You described the chilled beams in the Queen Elizabeth as "active chilled beams", right?

A Yes.

Q I think I had got it into my mind that they were passive chilled beams, so I'm wrong about that. If I-- We're talking about an active chilled beam system.

A Yes, that's correct.

Q Right, and the other thing is, from previous evidence, I think I've understood, but tell me if I'm wrong about this, that at least at one time, the

problem of condensation on the chilled beam had its origin in a disabling or turning off of the dew point control. Now, maybe I should-- I have understood – and I may be entirely wrong about this, Mr Conner – that the dew point-- the point of the dew point control is that it's an automatic system which once the ambient temperature in the hospital reaches a certain level, the chilled beams are automatically switched off. Now, is that right or wrong?

A That wasn't what I found, that wasn't what my investigations showed.

Q I appreciate you've told us something else. So would I be wrong in what I've just said?

A No, that would be one way of controlling it. You're not wrong.

Q But was it a way of controlling it at the time you took over responsibility?

A No, not that I could see.

Q Right.

A When I got involved in that, the flow to the chilled beams wasn't something that was switched off. If it had been switched off under that type of control strategy, then you wouldn't have condensation appearing. That would be my understanding of that. The control strategy that's

implemented through the building management system should broadly deal with that type of condition. However, under these circumstances, it was important to maintain the temperature of the external elements of the chilled beam to be that above of the dew point.

Q Right, and what I understood from your evidence was that when you realised in what you described as "extreme, very warm weather", there was a problem of condensation and you solved it by what I'm understanding is an adjustment which ensured that the temperature of the water within the closed chilled beam system was always at 2 degrees above the dew point?

A Yes. When I was working with one of the colleagues for Schneider, we came up-- It was a very simple solution. Essentially, it was to install a dew point sensor, an external dew point sensor, outside one of the main plant rooms at plant room 31, just to give a constant definitive measure of the dew point that could be fed in to govern the flow rate, if you like, of the secondary side of the plate heat exchangers for the chilled beam circuit. Because the dew point control or the dehumidification strategies were

being controlled at source on their handling units and would be independently controlled as per the software, this was something that would be over and above that, and it was essentially just to take all risk out of the ability for those beams to condense under any condition. That was my goal.

Q Thank you.

MR CONNAL: Thank you, my Lord. I'm going to be able to move on through your statement now, Mr Conner, because we've dealt with a number of issues. You touched briefly on thermal wheels, but you've given some brief evidence on that in your statement. I don't think I need to get you to read it out, and then the discussion we had earlier about the task that you set yourself in 2018, just for the record, we find that dealt with on page 126 of your statement when you talk about consolidating an "accurate documentation inventory". That's the phrase you use at that point, and, again, because we've already dealt with that, I won't go back over it, and you mention the importance of SHTM at page 128.

So, if I can just move on to one or two specifics about ventilation in the hope that I can finish with that topic shortly. You were asked a number of

questions about particular areas of ventilations-- ventilation within the hospital estate. If we could go to 135----

A Sorry, my visibility of the documentation has dropped off. I'm just trying to reconnect it just now.

Q Thank you. Well, let me see if I can help you while that is being attended to. You were asked about particular ventilation areas and you say in an answer that Ward 6A was-- you understood was being used as a general ward and then it was later intended as a decant ward for 2A. You'll remember that event, at least.

A I do, yes.

Q And you then lay out what you would have expected to find, both for a general ward and also a ward cohort labelled as "neutropenic". Probably don't need to wait for the technology for us at that point. If the technology works, it can come with us to page 137. How is it doing now?

A I can see that.

Q Thank you very much. What we've got there is a paragraph that starts actually on a previous page. We didn't go there because you were talking about the desire to understand what systems there were and how they were operating, and then you say, about half a dozen lines into 137, that

you were involved in option appraisals for 6A and 4C. Now, 6A we've just heard about. It was a general ward that was to be used as a decant for 2A. What were you involved in for 6A?

A So, initially, for 6A, I was originally involved when the decant was taking place, or in preparation for the decant taking place, there was a large hive of activity, Estates activity, within the Ward 6A. My role at that time was to ensure that the air handling units that served 6A were serviced with clean filters and correctly working. The option appraisals that I carried out were during the occupancy of 6A after the decant had taken place and I think there was an awareness that it wasn't necessarily designed specifically for that type of patient application and that there was significant restrictions and challenges within the in-built parameters of the hospital for that ward to meet that of the requirement for a neutropenic patient cohort. So I was tasked to come up with an option appraisal to discuss ventilation improvements, risk-reducing measures, and an option study to see what can be carried out to essentially make the environment safer, to make it as good as it could be without complete rebuild, without complete plant replacement; although

that was one of the options on the option appraisal.

Q What did you do with that option appraisal? Who did it go to?

A So, I sent that option appraisal to Alan Gallacher, Colin Purdon and Tom Steele.

Q What about 4C? Do you know what the patient cohort was in 4C?

A I believe it was adult's haemato-oncology. I could be wrong there. It was a very similar option appraisal.

Q A similar option appraisal. I think in fairness to you, about half way down, that very long paragraph, you'll see 4C appears where you say, "My actions would be, save for 4C," and then you set out what these were. And a similar option appraisal there. Is that right?

A Yes, that's correct.

Q And the conclusion that you put at the end of this section is you say you provided option appraisals. So, can we just get clear, you provided the appraisals but somebody else decided what happened. Is that right?

A Yes, it was a group decided what happened. This option appraisal was essentially an engineering option appraisal and that was taken to a table where these

options were discussed and then I was informed by-- I think Alan told me, what one was to be carried out and, obviously, I can remember what was carried out and what we did over a duration of time.

Q What was done in 4C? Can you remember?

A Yes. So, 4C, prior to that taking place, there had been some rebalancing works of the ventilation systems carried out within the hospital. 4C was essentially to get the specialist contractor to provide us with a survey of the rooms within the ward to demonstrate the measured air change rates that were seen and the pressure profiles from the patient room to corridor and whether they were positive or whether they were negative.

Once we had that, the goal was to try and make them positive because it was a haemato-oncology patient cohort. So moderate rebalancing to that system was carried out in order to achieve that. The pressure cascades that were recorded, and I can't remember the reports, but they were notionally positive, 1 to 2 pascals positive eventually from room to corridor. Other improvements were carried out within those patient rooms over the course of time, individually carried out under HAI-SCRIBE agreed by infection control to install en suite ceiling-mounted HEPA filters. We also carried out inspection of the IPS panels within the en suites to inspect the wet services and to see if there was any ingress or dampness within those areas----

Q IPS means----

A Oh, Inspection Services Panel. It's essentially a cabinet within the en suite where the sink's attached to it and you can lift off the top panel and inspect the chamber behind it where the wet services and pipe connections exist. So it was all about looking at them, making sure they were clean, clear, damp-free, any fabric within the space would be repaired. There was an installation of door drop-downs to help encourage being able to achieve a pressure profile within the space. The ward corridors themselves had ceiling vent grilles, which are essentially just blank grilles, louvered grilles that sit within the corridor spaces. They were removed and replaced by standard ceiling tiles.

Then there was a subsequent kind of re-verification report that demonstrated the levels of secondary air change rate that the en suite HEPA filters were providing, because what

they did was essentially scrub the air that was already delivered to the space within the en suite.

THE CHAIR: Sorry, I missed that last detail. It was just a lack of attention on my part. Could you just repeat your last answer, please, Mr Conner?

A Sure. We installed ceiling-mounted HEPA filters within the en suites. Those units were significantly oversized for the volume of the en suite itself. They incorporated charcoal and H14 HEPA filters, and it's important to note that they weren't filtering the air for these spaces from source, but they were scrubbing and cleaning the secondary air that had already been delivered to the space. So the concept was to lower the level of particulate within the room itself and this was also aided by the deployment and use of a portable mobile HEPA filter.

The information-- When the project was completed, we had a verification report that would demonstrate what the pressure profiles looked like post-works and what the recorded air change rates were, and I suppose that there was two additional improvements that were made also to the air handling units that serve these areas. So, in the instance of 4C, there was three air handling units that were located up in the level 12 plant room that were-- essentially, served levels four to seven within that core of the building. So, at source, the secondary filtration within the air handling unit was upgraded to a higher level efficiency filter. So we went from, what they would call at the time, F7 to F9. Also, there was some rebalancing of the plant to lift the load currents of the motors to maximum load current to provide as much additional air volume as possible in order to optimise pre-existing substandard air change rates.

MR CONNAL: Am I right in thinking, Mr Conner, that among the options for 4C – and tell me if I'm wrong – was not the kind of change you're talking about, but complete rebuild of the ventilation systems?

A That was one of my options, yes.

Q And you end the section of your statement that we're looking at, at the moment, by saying this, you:

> "…provided options appraisals for my line manager's consideration and review to try and optimise the ventilation strategy to suit the clinical environment [then you say] with the understanding that it did not

meet the outgoing guidance standards for that of a general or immune-compromised setting."

Can you just explain what you mean by "it didn't meet standards"?

A Yes, so within the Technical Memorandum Appendix 2, it states that the required air change rate for a general ward is six air changes per hour, and for a neutropenic patient cohort it should be, at that time under 2014 guidance, ten air changes per hour. The recorded air changes that we've seen under that survey were in keeping with what we'd seen for the rest of the areas that were surveyed of between two and a half and three air changes per hour.

The limitation of those air change rates for those rooms has obviously been widely discussed by others but, fundamentally, from what I could see, it was about plant capacity and also with chilled beams being the delivery of air within the patient room itself, they are limited to the amount of air volume that you can put through them. I believe the ones at the Queen Elizabeth were rated for 40 litres per second and that's about 14 and a half metres cubed per hour and, based on that room volume, would give you an air change rate of between two and three air changes per hour. So, what I was basically saying is it wouldn't align with the guide-- recommended air change rates for both general and neutropenic as per SHTM 03-01.

THE CHAIR: Could you remind me, Mr Conner, of the date of your option appraisals for 6A and 4C?

A I can't remember the dates of when I carried them out. I know that the documents should still exist and perhaps sit with the Estates team, they're there for visibility, but I believe it was between-- I think it was 2019 to 2020. I can't remember the exact date, I'm sorry.

Q Thank you.

MR CONNAL: Thank you, my Lord. I'm going to move on to what I hope is my final question or questions about ventilation, Mr Conner, and that's about the work done on Ward 2A, where we know that a more-- let me call it a more radical solution was adopted involving much more work to the ventilation systems for that ward, and I think you'll remember that. Is that so?

A Yes, that's correct.

Q And, I think, just so we pick this up in your witness statement, if we go to 144, I didn't get you to read through this, but I see near the foot of that page you talk about a complete plant replacement of all systems was

to be carried out, and then you say what that was to try to achieve. You see that? Near the foot of that page.

A I did, and-- Yes I do, yes.

Q And then am I right in understanding from your subsequent answers that you were involved in helping to develop the specification for what should be provided in 2A, once it was up and running with its new kit?

A Yes, at one point, I did get involved in providing what I thought the client specification should look like for that ward. Initially, when the original concept of refurnishment was being discussed, I sat alongside Ian Powrie, the capital team, and Matt Lambert as a----

Q Mr Lambert of IDS, the external advisor. Is that right?

A Yes, that's correct.

Q Thank you. So, you were with Mr Powrie and Mr Lambert and you said the capital team?

A Yes, representatives of the capital team. I sat there as an authorised person for ventilation, that was my role. As the design progressed and obviously Enid retired, I was involved-- I had sight of what the development of the design looked like and the capital team would provide regular sharing of what the design intent was to the operational Estates team – being both myself and Alan Gallacher – and I think the whole thing was kind of governed by Gerry Cox, who was assistant director at the time. So, yes, that's----

Q So, you were involved-- I think you say on page 145, halfway through the answer in the second half of the page, that you voiced your opinion about compliance standards. Is that what your input to the discussions was focused on?

A Yes. So, the original design refurnishment proposal was to only carry out the works to the TCT, the Teenage Cancer Trust aspect of the ward, and the haemato-oncology part. The bone marrow transplant aspect of the ward at that time was not-- it didn't form part of these refurnishment works and my concerns were around the fact that you could argue that that was a higher clinical datum than perhaps the other two areas, but that would be for the clinical and infection control teams to kind of confirm that. And there was obviously some shortfalls in the existing design of those isolation rooms and the corridors themselves that were served from shared air handling plant, and there was stuff around the level of filtration and the ability to actually

service that filtration.

So these were some of the things that-- concerns that I had raised at meetings and, obviously, you can see by my evidence that Gerry had asked me to provide a specification for what I thought that ventilation strategy should look like for that ward. So I prepared that. Not by myself, it was myself that led it. I had additional support from the AP at the time, Jim Guthrie, Hugh Brown, and I think I had the authorising engineer's input also, Jamie Minhinnick, and I also had our specialist contractor, Ian Mackenzie, helping me look at relevant industry standards, current guidance and up-and-coming guidance to provide that recommendation of what would be an optimum patient environment for that patient cohort.

Q I think you were asked a question in your questionnaire, having explained some of this material, you said-- "Well, were your suggestions taken on board?" and am I right in saying that you say you think they were, but, ultimately, you had left before the vision that you'd been discussing had actually been built?

A So, yes, that's correct. There was a-- the revision that I, if the first version of the client specification was Ian's, the second one would have been mine, and then I believe there was other iterations of the design prior to me submitting that one and after I left, but I think there was an openness and a mindset within everybody that was involved to provide an extremely modern and usable facility, and I do believe a lot of those things were taken on board. I wasn't involved with the validation or handover of the project, so I don't know what was finally delivered, but I think it would be a significant facility over what was pre-existing.

Q Thank you very much. I'm about to leave ventilation, my Lord, in case my Lord has any further questions?

THE CHAIR: No, thank you.

MR CONNAL: Thank you. I just have one more topic to raise with you, Mr Conner. I might just ask a couple of preliminary questions about it before we come into some of the detail. I want to ask you about Cryptococcus and pigeons.

A Okay.

Q Now, based on what you say in your statement, am I right in understanding that if there was an issue with pigeon or pigeon infestation or pigeon droppings or whatever it happened to be, fixing that could be instructed by a variety of people, not

simply by one designated person? Is that correct?

A Yes, that's correct.

Q Can you tell us, and please say if you can't, whether anyone was, as it were, in control of checking what pigeon issues were cropping up and what was being done?

A I don't know. I don't know. I would say that the fact that various people can report ingress or vermin from all facets of the soft and hard FM facilities, whether it be through help desks, individuals reporting it, fmfirst or personally witnessing it, the fact that the third-party contractor, if you like, comes out and carries out those works, I don't know who would actually sit to monitor all that. I do believe it is soft FM, it's the Facilities Team, that generally deal with it but I think, at that time, the requests for these types of jobs and cleans were not necessarily centrally managed. That's what I'm trying to say.

Q The reason-- I'm just conscious of time, my Lord, before I go any further. We're just about at 11.30, if this would be an appropriate juncture?

THE CHAIR: Well, I'm in your hands, Mr Connal.

MR CONNAL: I'm content that this is as good a point as any.

THE CHAIR: Take a break. Mr Conner, we usually take about 20 minutes for a coffee break in the morning, and we'll do that now. Could I ask you to be back at your screen for ten to twelve?

THE WITNESS: Yes, no problem.

THE CHAIR: Thank you very much.

THE WITNESS: Thank you.

THE CHAIR: Right, we'll take a break.

(Short break)

MR CONNAL: My Lord, as we wait for Mr Conner, as he has now joined us, but I've been asked to make it clear that there seems to be an error in communications to core participants about the decision to slot Mr Conner's evidence in today, and apparently they hadn't been advised of that, which has led to a number of discussions about questions during the break that would otherwise have been done much earlier. So I thought I better advise the Inquiry openly that an error had been made on that front.

THE CHAIR: Right. I mean, have you managed to deal with that or

do you want a longer break?

MR CONNAL: No, I have most of the questions I need. We'll perhaps do a final check at the end but hopefully we can still deal with it as scheduled.

THE CHAIR: Right. Okay, so we'll continue with Mr Conner.

MR CONNAL: Yes. I have a preliminary question----

THE CHAIR: Then give you a break.

MR CONNAL: Yes, I have a preliminary question, Mr Conner. Perhaps you can help us. One of the challenges of doing this remotely is that we're here and you're there, and we can see you but, other than the Venetian blinds in the room, we can't see anything else. Have you been receiving emails during the course of your evidence? Because we were hearing----

THE WITNESS: No.

MR CONNAL: -- pinging from time to time.

THE WITNESS: No, I haven't received any emails. If I have, I haven't checked them.

MR CONNAL: Thank you. Let me just see if I can-- I'm going have to come back on a number of issues that I've been asked to touch on afresh, Mr Conner, but let me see if I can just

deal with the Cryptococcus issue. Am I right in understanding from your witness statement at page 150 that you didn't really know anything about Cryptococcus and pigeons at the time that you were an estate manager in 2018?

A Yes, that's correct. I'd never heard of Cryptococcus in my life.

Q I think you're asked at 151, had you ever heard of it before, and your answer is simply no, you'd not come across it.

A That's correct.

Q I asked you some questions just before the break about how work to deal with pigeons or pigeon excrement or whatever were instructed and you confirmed that it could be instructed by a number of people. I-- The information I have, Mr Conner, is that there were instructions about and reports of difficulties with pigeons going back to 2015 and onwards from there. Do you know anything about that?

A I'm aware that there's been an ongoing issue with pigeons since the hospital opened. I do remember one of my site managers, David Brattey, requesting GP Environmental to carry out remedial works with regards to pigeons and ingress within the hospital plant rooms

in the past.

Q When you say “in the past”, can you remember when that was?

A I think it was certainly between-- it could be as early as 2016, but I can't be certain. I do know that it was with respect to the children's hospital plant room.

Q Right. The reason I ask the questions, and maybe you can't help beyond your secondhand knowledge of this, is that a lot of the material the Inquiry has about pigeon and Cryptococcus focuses on the period in 2018 come-- into 2019, but your understanding was that these problems with pigeon ingress, for instance, into plant rooms date back well before that.

A Yes, I don't know whether within plant rooms, but certainly around the courtyards of plant rooms. I don't have good detail or overview to comment on what was previously dealt with. I didn't have much involvement with it during that time period.

Q Thank you. And, in fact, I think on page 151 of your statement that you say you could "count on one hand the occasions when I would call out GP Environmental”. That's the pest control company.

A That's correct.

Q And on the odd occasions you were involved, what were you calling them out for?

A In the occasions that I was calling them out for would have been for pigeon-- pigeon droppings or-- I think that's the only time I've ever called them.

Q And why was that something that concerned you sufficiently to call in a contractor?

A So, in December-- November and December 2018, Andrew Wilson had asked me to carry out an exercise to re-commission-- or not to re-commission but to re-balance some of the air handling plants within the hospital, to provide dedicated pressure profiles for the rooms. That included Wards 4C, 5D, 7D and another one, perhaps 4C as well – maybe I've mentioned that – but the specialist contractor who was carrying out these re-balancing works was accessing and working on the plant in Level 12 plant room and he sent me an email bringing to my attention there was dead birds and pigeon droppings within the plant room. So that's what called me to-- Well, actually, when I got sight of that, I delegated that to an Estates supervisor to request that GP Environmental should be called out to

carry out a cleanup, and that was generally standard practice. If you have a report or if it's reported through fmfirst or it's mentioned or that's visibly seen, then you would contact them.

Q Okay, we'll just stick at 151, near the foot of the page. You've already told us you really didn't know anything about Cryptococcus, and then you say here you were told by Ian Powrie that someone has passed away, and Cryptococcus was one hypothesis. You knew nothing about it but you were asked to go and survey all the plant rooms which you then did. Is that correct?

A Yes. That evening, I was asked to go and survey the plant room on Level 12 of the adult hospital, so I printed off a drawing-- an A1 drawing and took it up to the plant room and systematically walked through all the plant rooms marking up on the drawing where I could see any pigeon droppings or ingress and, essentially, just marked it on the drawing, highlighted it for ease of third-party visibility, and I signed and dated it to record when that was carried out. Then came back to the office and I believe I maybe scanned it and then emailed it to certainly Colin and Ian the following day.

Q At that time when you were checking to see what could be found, was there much to be found, or not very much or what was the general picture?

A It's hard to quantify what would be much, as in nothing at all would be zero, but certainly one of the plant rooms had more droppings in it than others. I found through my walkthrough, there was sporadic dottings of droppings through all the plant rooms in Level 12, but it was more of a kind of peppering, if you like, but the plant room 1, 2, 3, which served Ward D of the hospital, that had the largest concentration of pigeon droppings at the end of the plant room, next to the plant room door, and in the middle space, if you like, between two of the air handling units. I think I highlighted it on my drawing as a kind of big box.

Q Yes, and I think you you point out at 153 of your statement that to clean that wasn't just a question of sending somebody out with a bucket of water, it actually involved protective equipment on a specialist contractor and so on. Is correct?

A Yes, the representative from GP Environmental, I believe his name is Allan Bryden, he explained to Colin and myself and perhaps Ian, the measures that they would need to take

about how they would deal with the clean, by neutralising the pigeon droppings by treating them with biocide, and then obviously they would have to submit a risk assessment and method statement outlining their protective measures and personal protective equipment in order to carry out that task. That pretty much, from that day forward, started a full clean of all plant rooms for an ongoing, quite a long duration of time, top to bottom.

Q I think you've been asked in the course of your statement to look at a report that GP Environmental did in January 2019 and I think you said when you read it, nothing surprised you, but you hadn't actually seen it until more recently. Is that fair?

A That's fair, yeah.

Q And I think we'll find that at volume-- sorry, bundle 24, volume one, page 115, and this is a report which talks about a significant health and safety issue.

A Yes.

Q Just so I'm clear, you hadn't seen that until when? When you were being asked questions for the purpose of your statement?

A Yeah. I'd seen this document, I believe it was on Monday. I think it was either requested on Friday that there was an additional

document to review. It was either Friday or Monday of-- Friday of last week or Monday of this week, I was asked to look at this document. I think it outlines the helipad and the adjacent walkways from the helipad, doesn't it?

Q Well, just for the record, it's dealt with on page 153 of your statement when you pointed out it was addressed to Karen Connolly and you didn't recall reading it, but what you saw tended to support what you knew of the response from GP Environmental.

A Yes, that's correct.

Q And do you know what they were doing, GP Environmental, apart from sending in reports pointing out that the risk-- What were they asked to do? Did they do any physical work as opposed to cleaning?

A I believe they were doing-- trying to implement control of the problem of pigeons and I remember hearing verbally that they would be setting traps, capturing them, removing them kind of environmentally, safely and humanely, treating areas that were soiled, cleaning them. I don't know the exact detail. GP Environmental were on site for a long time dealing with this issue and I didn't have sight of what their daily routine was and the specific

aspects of what they were doing-- what they were carrying out. I just know that their remit was to deal with the survey and the control of the pigeon problem within the campus, essentially.

Q Thank you. Can I ask you about one specific thing that you do seem to have been involved with? You were asked to show Dr Christine Peters the Level 12 plant rooms. I think you were asked that by Mr Powrie according to your statement at page 155.

A Yes.

Q Do you remember that?

A Yes, I do remember that.

Q Do you remember when this was done? There seemed to be some debate as to why it was in the evening or whether it was in the evening.

A I can't remember when it was done and I don't necessarily recall it being in the evening. I don't dispute that it was, but I think the reasoning behind was it was-- just when it was possible for Ian, Christine, and myself to all be in attendance to carry out that visit.

Q One issue of some controversy seems to be that it is said that you didn't tell Dr Peters that you had a lot of photographs taken at different times of different places showing pigeon droppings. Can you remember, did you have access to these photographs at the time of that visit?

A I don't remember that I had access to them. I had been involved in the collation of all sorts of evidence with regards to the investigation, whether it be pictures taken, layout drawings, service records. I was instructed by Colin Purdon that any information was to be collated and put onto a designated folder on the Estates shared drive that would be shared on its completion with all relevant people. So the sharing of that information, I was not tasked with, it wasn't for me to do.

Q I suppose the question is, Dr Peters is there presumably wearing an infection control hat, and you know that there's this material, it's not necessarily yours or yours alone. The question might come to be, well, in order to give the infection control team the best picture of what was in place, would it not have been appropriate to mention that to her?

A Perhaps, but I was in attendance with Ian Powrie at the time as well. Ian was my line manager in that setting and any requests of that nature from a governance perspective

would have went from Christine-- or should have went from Christine from her to him. My role for that was to facilitate that meeting because I had access to the plant rooms through keys. I knew where the equipment was, and I knew I'd already surveyed the areas of fouling that I could see.

Q I suppose we better just check we're all talking about the same thing. Can I ask you to look at bundle 12 at 1238? And then at 1239, the first picture, I'm told, shows a dead pigeon, and the second one shows-- with some droppings, and the second one shows quite a lot of pigeon fouling, whatever phrase you want to use. Are you familiar with these photographs?

A I am. I am.

Q And where did they come from?

A I don't know where the dead pigeon was. The one with the main fouling at the end of the plant room, that certainly looks like plant room 123, core D.

Q Do you know who took these two? Just tell me if you don't.

A I don't. It may have been myself, it may have been GP Environmental, it may have been Colin Purdon or anybody who had access to the plant room that was involved in the control of it at the time. I know I certainly did take pictures that were put onto the shared drive within that folder, but I don't know exactly what ones. I do remember photographing that myself personally, but I don't know if that particular picture is mine.

Q Thank you.

THE CHAIR: Just for my note, you said the second photograph you were shown looked like plant room 123, and then did you give a further definition?

A Core D.

Q 4D?

A Sorry, core D. Core D. Tower D, if you like.

Q Tower D. Thank you.

MR CONNAL: Now, I just want to look very briefly at some other pictures, Mr Conner, just so we make sure we know what we're talking about. Can we have bundle 27, volume 2, page 20, please? Now, that-- I'm just taking that as the first picture. In fact, on that expansion of the photographic becomes a little bit blurred, but it appears to show pigeon droppings on top of some piece of plant. First of all, have you seen that before?

A I haven't seen that picture before. I've seen it on the review of the evidence for the purpose of this Inquiry, but I haven't seen that

picture before or in real life.

Q I'm just trying to understand what the collation of photographs was that you remember. Do you remember now what was in that collation of photographs, or do you not?

A The collation of photographs was-- in areas where pigeon droppings were within the plant rooms.

Q Yes.

A So, it was essentially to get the biggest picture possible for where this ingress existed within the plant rooms and if it was on any of the equipment.

Q So, you don't recognise document 20. What about 21? That's maybe not very clear. Let's move on to 22. I suppose there's some evidence of pigeon droppings on something, but do you recognise these other than having been asked to look at them very recently?

A No, I don't.

Q 23?

A That looks like-- I don't-- I can't-- wouldn't be able to know what plant room that is because the plant rooms are all physically laid out in a similar fashion, each fork of the plant room, but it does look to be one of the supporting cross-beams between the

H beam on the external elevation of one of the plant rooms.

Q Yes. So, you know what it is. Is it something you recollect being part of the collected photographs at the time or is it simply something you've seen because you've been asked to look at it for the purposes of your evidence today?

A It's seen for the purpose of the evidence today. I'm not surprised to see it, though, because there was a vast collation of pictures of this collected, but that's-- this is the first time I've seen that.

Q I'm not going to ask you about the others. I'm about to leave pigeons for the moment. Can I turn the clock back a little bit to earlier in your evidence, please? A number of issues have cropped up. Can I ask you, first of all, you remember in relation to Ward 2A, where a completely new system – let me just use that phrase – was put in, or was being put in, you were involved in various discussions about it, and then you left before that project was completed. You remember that evidence earlier?

A Yes, I do.

Q Are you able to help us or are you able to tell us who might be able to help us about any question of

whether NSS Assure proposed to visit the rebuilt and re-functioned two-way ventilation system once it was all done and what response there was to that suggestion from the Board, if any?

A I can't-- I can't, but I could say that if you wanted to know the answer to that question, yeah, you could speak to Thomas Rodger, who's head of engineering for NHS Scotland Assure. He would be able to advise on that request better than I, and also the pre-existing Estates Team at the Queen Elizabeth. I believe Hugh Brown is in charge of the ventilation at the hospital there. He would be able to advise whether that request is being carried out.

Q Okay. At various points of your statement, you mentioned the importance of SHTM 03-01.

A Yes.

Q When you started to look into what the condition was of the ventilation system at the Queen Elizabeth Hospital, having SHTM 03-01 in mind, when you were discussing these issues, did you hit any resistance to using SHTM 03-01 as the yardstick for looking at ventilation systems in healthcare?

A No, I did not. It was expected and is expected from the Estates operatives within the Queen

Elizabeth that anybody working in any prospective discipline that that-- the technical memorandum is guidance, but for operational estates personnel it's pretty much the Bible for what the requirements are and how you should shape and conduct your maintenance. So I never had-- There's an expectation, I would say, that you would refer to it and use it. I wouldn't say that I was met with any resistance in using it or trying to access it and, in some instances, if you had queries about certain issues – and bearing in mind that as you're working, you're gaining experience and you're encountering different things and your training is being increased as time goes on – you would consult your line managers, who would point you to certain aspects of guidance as well.

Q Thank you. Can I ask you to look at page 98 of your statement, and I apologise in advance, I'm jumping about a bit, but that's the nature of the exercise. Page 98, actually you can see that near the foot of the section we're looking at, at moment, at large A. "This is difficult to say without knowing." You see that?

A Yes, I can see that.

Q Now, this is where you were having a look round, you know, the hospital early on, and you're

saying, "Well, was there anything missing?" and you say, well, "That's difficult to say without knowing what was contractually agreed." You say:

> "At a glance, areas that were deemed as complete and ready for occupancy looked visually complete and tidy, but this was not an indication of the correct functionality of the system within these areas."

What's the point you're trying to make there?

A So, the point I'm trying to make there is that you can walk through a department and it looks clean, tidy. It's had its builder's clean, it's had its pre-clean for occupancy, it has a veneer of looking complete and to the naked eye and the person walking through it, it would appear that it looks ready, but from a project perspective and a commissioning perspective, nobody would have any visibility. You wouldn't as a-- As somebody who's occupying that space and have not been involved in the process, you can't-- you won't know. You have no way of knowing at that time whether it's been commissioned. You know, you could walk into a room with no lights on and not know whether-- the lights might well be in situ, but you don't know whether they work properly. You know, you can see a nurse call indicator sitting above a door, but unless you go up and actually physically press the remote indicator at the patient's bedside, you're not going to know whether it works or whether it alarms back at the nurses' station. So, essentially, you don't know if all the commission and due diligence is taking place just through walking and familiarising yourself with a particular department.

Q Thank you. Can I ask you a general question, Mr Conner? We discussed validation and we discussed the idea that it was done once, and am I right in thinking the idea is that the client, if you like, has to know whether it's okay to take on that system because it's meeting what they want? Is that a fair summary?

A I would say that's a fair summary, yes.

Q Now, should-- that being the case, should patients be put into a hospital which hasn't been validated?

A I think that would be-- Without not trying to answer the question, I think that would be a decision for the clinical and infection control team to be satisfied that that information is available to them to demonstrate and provide that

assurance that they can occupy these areas with confidence. Are you asking my personal opinion?

Q Well, I'm just trying to understand, you know, what the consequence might be if somebody is coming along to a new hospital with the intention of putting patients into it.

A Yes.

Q Should that be done without satisfying yourself that validation is in place, in your view?

A In my view, validation has to take place. Without appropriate validation from a ventilation perspective, you have no way to know evidentially that the system performs as intended by design. You have no evidence for it to demonstrate that it meets the requirements outlined within the guidance.

Q Can I ask you another general question, and as with all of these, if you're unable to answer, please just tell me and we'll explain why. When you started to review the overall ventilation systems as part of your exercise, you were basically trying to find out what was there, and-- can you remember whether the-- there were HEPA filters where you anticipated there should be HEPA filters, or can you not?

A I would say it was a learning experience for me to understand what constituted an isolation room, the different types of isolation rooms that were available at the Queen Elizabeth Hospital, and then the clinical requirement or selection to have these fitted with HEPA filters. So, in the instance-- the guidance talks about HEPA filtration being a requirement for a neutropenic patient cohort. So, in the instance of the likes of the BMT within 2A, they would have terminal HEPA filtration installed on them, so that would be in keeping with what you'd expect, but there is other positive pressure ventilated lobby isolation rooms within the campus which didn't necessarily have HEPA filters fitted to them at the time. I believe the selection of what rooms were to have terminal HEPAs installed and what ones weren't were agreed prior to my arrival on site.

Q Can I ask you one or two questions, and I want to be careful about separating these out. They're all about the involvement of infection control in issues relating to ventilation. When you discovered there was no validation, do you know if that was shared by you or anyone else with the infection control team?

A I don't know if it was shared by anybody else with the

infection control team.

Q Did you share it with the infection control team?

A No.

Q When we talked about Ward 4C and your options, different types of options ranging from complete replacement of the ventilation system onwards, that wasn't done. Something less than that was done, that's what you were telling us.

A Yes.

Q Do you know who in infection control signed off on the ultimately selected option for 4C?

A I don't know who signed off on that. The option appraisal that I generated, I submitted to Alan and Tom, and then I was told by Alan after it had been reviewed what option was to be carried out. Sorry, Alan Gallacher.

Q Alan Gallacher and Tom Steele?

A Yes.

Q And on 4C, which you described as "less than completely compliant", as you-- I think you put it, I can find the exact words if we need be with the requirements, but what was available with working within the existing systems broadly. If it's less than compliant with SHTM 03-01, do you know whether any formal derogation process was gone through to record and check that?

A Not to my knowledge. That's not to say that derogations weren't retrospectively drawn up. I do remember derogations were a thing from an Estates perspective that were relatively new, in my experience. I remember the first one that was created was around the new ICE building. With regards to 4C and what we're speaking about, I don't know the answer to that.

THE CHAIR: Mr Connal, just for my benefit, when you're asking the witness in relation to whether there was any derogation in place in respect of 4C, are you referring back to a period before handover of the hospital, or are you thinking about the work which Mr Conner has described----

MR CONNAL: No, the----

THE CHAIR: -- he doing, I think in 2018.

MR CONNAL: The fault is mine, my Lord, and perhaps I should re-ask the question of Mr Conner, so we're absolutely clear. What I was referring to there, Mr Conner, was the evidence you gave us about having prepared option appraisals and for an option ultimately having been selected, which I think you described in your witness statement as not fully compliant with

guidance but, if you like, working within what was available at the time. And I think my question was if the resultant system was not fully compliant with SHTM 03-01, whether you knew anything about any formal process for derogation. Is your answer that you don't know what was done about that?

A Yes, that's my answer. For me, and how it's explained and defined within the current outgoing version of the guidance, essentially derogation would indicate that it's of betterment or equivalence if the-- as if the guidance had been followed itself. So, for me, the derogation probably necessarily wouldn't fit that. What it should be is a risk assessment and that's how it should be captured as a risk assessment. The option appraisal that was submitted would have been taken to a table where I believe that risk assessment would have taken place, taking into account these factors prior to me being authorised by my line management to commence and carry out these risk-reducing measures.

Q Were you involved in the carrying out of any risk assessment as to the options selected for 4C?

A I don't believe I was.

Q Another technical question about 4C. You told us about the insertion of additional HEPA filters.

A Yes.

Q Was there to be any form of validation of these HEPA filters as part of the process of installing them in 4C?

A So, to my knowledge, there wasn't a great deal of knowledge of the use of mobile HEPA filters around the time prior to the Queen Elizabeth Estates Team procuring lots of them in support of these patient environments and to reduce the risks that were known within these areas. So a lot of it was relied on the manufacturer's recommendations and data sheets provided by the manufacturer who was Camfil.

Within that, the reason these units themselves were selected over other market ones at the time was their ability to indicate when the filters had soiled and would require a service. So, from an Estates perspective, it was a relatively easy thing to manage in the sense that you would have an asset register of all the mobile HEPA filters and where they were deployed and have somebody check them on a weekly basis to see what the condition was of the service light and if they would require a filter change or not.

I think additional challenges came and it was worked out between Estates and the infection control team

about what the protocol should be should one potential mobile HEPA filter be utilised in one space and moved to another area or be taken out of service for servicing. So I believe that standard operating procedure was developed as they started to be put into use, which essentially would be a service swap for one that was already clean, one that already had new filters in it that could be deployed into the space, taken away, cleaned, serviced and put back into clean storage, ready for redeployment.

Q If when we use the word "validation", we mean checking that the thing does what it is that you as the end user want it to do----

A Yes.

Q -- am I taking it from your last answer that you don't remember any formal process, you just relied on what the manufacturers were able to tell you about the performance of these mobile filters?

A I do remember looking at-- being asked how many should be-- I can't remember who it was by but I was asked how many should be deployed or how many should be allocated to each ward. For 6A, for example, I remember one of them being deployed in each of the patient bedrooms and also within the corridor space. I think there was about seven of them deployed.

The only problem with the manufacturing information that I could see on the data sheets at the time was that the scrub rates of the HEPA filters was a two-dimensional scrub rate where it recommended it at 75 metres squared. But drilling down into the data sheet, it would give you associated metres cubed flow rate, scrub capacity of the mobile HEPA filters depending on what the speed setting was and their speed settings went from one to six. Given that the Estates Team had, at this point in time, through the surveys of the wards to indicate what the air change rates were and what the pressure profiles were, we knew what the flow rates were for those rooms and that these filters – at a certain speed – would be more than what the volume of air being delivered to that space would be. So it would support a worthy and hopefully notable scrub rate.

I think the thing about the validation part of it, and I see your comparison, under validation, we absolutely know from an engineering standpoint what the standard needs to be. It's quite clear within the SHTM. We know the pressure cascades we should see, we know the air change

rates that we should see. When it comes to the scrubbing of particulate, I'm not aware of any kind of benchmark datum of what the level of particulate should be within a clinical space. So all we were able to demonstrate through case study and our infection control colleagues' support was that when these mobile HEPA filters were deployed into the space, there was a datum to record the levels of particulate through a light scattering particulate counter or a photometer, for example, of what their level of particulate was in that space, based on the secondary filtration that's provided by the air handling unit and then what it was after the mobile filters were employed. There was a reduction, but to quantify whether that level of reduction is suitable or good for that patient group, I wouldn't be qualified to say.

Q Thank you. Just, finally, for the moment at least, you were involved, at least to some extent, in the discussions over the specification for the new two-way ventilation system and you explained how you were sitting in on meetings and so on. Do you know who, if anyone, from infection control was involved in these discussions?

A I don't know who was

involved from infection control. The best person I think that would be able to answer that question was James Huddleston. He was a project manager who was in charge of the project from a capital perspective and had wider visibility of all the stakeholders that were feeding into the refurnishment project. I don't know. I couldn't name a dedicated infection control individual that I know of.

Q Thank you. My Lord, these are all the questions that I have following discussions at the break. I'm conscious that if the CPs have not been aware, as we understand is correct, of the change of order of the witness, it's possible there may be additional questions. I wonder whether I might just take a couple of minutes now to check.

THE CHAIR: We'll do that. Mr Conner, we're just checking in the room, as it were, whether there's any further questions that Mr Connal would wish to ask you. So we'll take ten minutes, and we would hope to be back with you, either to ask you further questions or to confirm that that's the end of your oral evidence at quarter to one.

THE WITNESS: Sure, no problem at all.

THE CHAIR: Right. We'll take 10

minutes.

(Short break)

THE CHAIR: I understand you have some----

MR CONNAL: I have a small number of questions, yes.

THE CHAIR: All right. Mr Conner, some further questions from Mr Connal.

MR CONNAL: Can you help me with this, Mr Connor, and as always, tell me if you can't. You mentioned earlier in your evidence when we were talking about pigeons, and you said that one of the triggers there was that there was work being carried out to do rebalancing on some of the air handling units.

A Yes.

Q Now, do you know who was doing that?

A It was H&V, H&V Commissioning.

Q H&V Commissioning, that's a name we've heard before, and what did you say they were doing?

A So, they were rebalancing some of their handling plant to support pressure profiles within associated wards served by those ventilation systems.

Q When you were giving that evidence just off your own bat, as it were, you said you thought that was for 4C, 5D, 7D and possibly one other. Do you know whether the other one was 6A or do you not?

A I don't. I believe it was-- because it was the cores that are served from the towers, so it was all-- it was 4C, 5C, 5D and 7D.

Q 4C, 5C, 5D and 7D?

A Yes, that's correct.

Q Thank you. In your witness statement, and I'm not going to bother digging it out again, you tell us about being told by Ian Powrie that there was a death and possible connection to Cryptococcus in December 2018. Do you remember whether there was any mention of microbiological sampling being scheduled to take place as a consequence?

A I don't remember that being mentioned during that conversation, however, I do know, through first-hand witnessing and assisting John Hood and his team in support of the investigation, that a substantial amount of microbiological testing was carried out at different locations within the Queen Elizabeth campus.

Q Thank you. Again, harking back a little bit to evidence that

you gave earlier, you remember we had an exchange about Dr Peters and what she did or did not know about photographs and you say, well, you didn't mention the photographs and it would have been for her to ask, I think, your line manager for them, if she wanted them?

A Yes.

Q I suppose the question is, if you don't tell her they exist, how does she know they're there to ask about?

A So, my understanding at that time was that everybody that was involved in the process knew that there was an ongoing investigation and that information was being collated and gathered, and opinions-- and specialist opinions were being gathered in order to deal with the incident. I thought there was an awareness that that was an ongoing process. That was certainly my understanding of it because, at that point in time, there was weekly requests of actions to be carried out and requests for additional information in order to support both the IMT and the Cryptococcus subgroup carrying that out.

The only formal request I recall getting was an email from John Hood requesting pictures in early 2019. I remember speaking to Colin Purdon about that, saying that I had received a request from John Hood asking for these pictures and would it be okay to send them on, and Colin said, "Yeah, that would be okay," and I subsequently went on to the shared drive, pulled the pictures off and emailed them over to John for his distribution and use.

Q Yes. So, at the time that you were with Dr Peters, would I be right in thinking that you assumed she would know there would be things like photographs somewhere that she should go and ask about?

A I was under the-- I had the understanding that there was conversations. Bearing in mind my understanding in Christine Peters that she was quite a senior representative within the infection control team, if not the infection control doctor, and she would have been having conversations with my line managers who are leading, if you like, with the investigation. So, from my perspective, that would be Ian because he was my line manager.

Q Thank you, and just one final question, if I may, and this one is entirely my fault because I'm an old school person and assume that most messages are sent by email. Remember, I asked you whether you'd

been receiving and reading emails during your earlier evidence and you said no, you hadn't, and you certainly hadn't read any.

A Yes.

Q I'm reminded that there are other methods of electronic communications, Teams messages, WhatsApps and all kinds of other things. Have you been receiving any other electronic communications during the course of your evidence today?

A I received a message from my partner just to ask me how I was and how I'm doing. I did see a Teams message pop up from my work but I haven't answered it, and I think the last thing I want to do during this occasion is to check my emails, to be honest.

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

THE CHAIR: Mr Conner, that is now the end of your evidence, and I would normally say to a witness, "You're free to go," but I suppose you're free to switch off the appropriate connection with the computer, but before you leave us, can I say thank you for your evidence this morning and thank you for the work that will have gone into preparing your witness statement which, together with your oral evidence, makes up your contribution to the Inquiry, for which I'm grateful, but that is the end of this session of oral evidence. Thank you very much, Mr Conner.

THE WITNESS: Thank you, my Lord.

THE CHAIR: Now, we are just before the one o'clock. We will sit again at two when I understand that Mr Maciver will be taking the evidence----

MR CONNAL: That is correct, my Lord.

THE CHAIR: -- so we'll see each other at two o'clock.

(Adjourned for a short time)

THE CHAIR: Good afternoon, Mr Maciver. Your witness is Mr Romeo. Is that right?

MR MACIVER: Correct.

THE CHAIR: Good afternoon, Mr Romeo. As you understand, you're about to be asked questions by Mr Maciver, who's sitting opposite you, but, first of all, I understand you're willing to take the oath.

THE WITNESS: Yes.

Mr Thomas Romeo

Sworn

THE CHAIR: Thank you very

much, Mr Romeo. Now, I don't know how long your evidence will take. We've scheduled for about two hours until four o'clock, but, if at any stage, you want to take a break, just give an indication to me and we can take a break. For whatever reason, just give me an indication. Now, Mr Maciver.

Questioned by Mr Maciver

Q Could you tell the Inquiry your name, please?

A It's Thomas Romeo.

Q And what's your present occupation?

A A taxi owner-operator.

Q And who do you work for?

A Myself.

Q And where do you do that?

A Glasgow.

Q Now, you've signed a witness statement for the Inquiry. Is that correct?

A That's correct.

Q And are you content to adopt that witness statement as your evidence today?

A Yes, I am.

Q Now, we're particularly interested in your history at the Queen Elizabeth Hospital in Glasgow. I think your history with the NHS extends either side of the time that you were involved with the Queen Elizabeth Hospital. Is that correct?

A That's correct.

Q When did you start working for the NHS?

A I think it was 2011 in the Glasgow Royal Infirmary.

Q And when did you stop working for the NHS?

A November 2019.

Q Right. As regards the Queen Elizabeth Hospital, when did you join that hospital?

A I joined that-- It was probably November 2014.

Q What was the job at that time?

A It was Estates duty manager.

Q I gather that you were there until around March or April of 2018. Is that right?

A That's correct.

Q And did your job change during that period?

A Yes, it did.

Q What did it change to?

A Well, it changed from duty manager, which entails shift work, to just Estates manager, which was just normal day shift.

Q Was the substance of the

two jobs similar? Did they change at all or was it just the timing?

A No, no. They changed, because the duty manager was more reactive to breakdowns, etc., whereas the day-shift Estates manager was doing reactive kind of calls as well as doing PPMs, that's planned, preventative maintenance on equipment.

Q Right. It was the Estates manager job that you did at the end of your time at the QEUH that involved both of those?

A Correct.

Q Were you working across the whole hospital in your time there?

A Just when I was the duty manager. After a certain time at night – I think it was about four o'clock at night, I think, or something – you covered the whole site.

Q What parts of the hospital did you cover when you were the Estates manager?

A Queen Elizabeth itself. On the odd occasion, it was the Children's as well. It depends if it was, like, the ventilation that crossed over or the water that crossed over. You had to react to them.

Q Can you recall when you made the move across from being duty manager to being Estates manager?

A I thought it was June 2017. However, when I've seen Dennis Kelly's oral hearing yesterday, it is now May 2017.

Q Thank you. How did your roles at QEUH compare to previous jobs you'd done at the NHS?

A Well, it differed from the Glasgow Royal Infirmary because I was a supervisor when I left there. Then, when I moved on to the RAH in Paisley, it was the same job as the Queen Elizabeth at the later stage.

Q But does it follow from that there wasn't a supervisor for you when you reached the Queen Elizabeth?

A I wasn't. I was Estates manager when I went to----

Q Sorry, you were the supervisor at----

A Sorry. I was the supervisor at-- Yes. I just got a promotion.

Q My mistake. Thank you. How did your job at the Queen Elizabeth compare with that previous job in terms of what you did?

A Multiply it by three.

Q Okay. You mentioned in your statement that when you got there you were part of an entirely new team. I don't think you knew anybody that you were working with.

A That's correct.

Q Who did you report to?

A At that time it was Ian Powrie.

Q I'm going to ask you some general questions about your roles at the Queen Elizabeth, but I do appreciate from what you've told me that you had two distinct jobs during your time there. So if the answer is different for those two jobs, just explain that.

A Yes.

Q The first question is, when you were carrying out work, how did tasks come to you?

A At the very early stages, because it wasn't totally occupied – the hospital – it came straight from, potentially, Ian Powrie.

Q And that was before occupation?

A Yes.

Q And when you say "occupation," when do you mean?

A Probably from 2014 to 2015, I think. I think it was early 2015, I think, it opened. Then responsibilities changed to-- I'm trying to think. It was David Brattey. I think it was David Brattey then.

Q Just to try and get the dates clear, you say you started around the end of 2014?

A That's correct.

Q The site was taken possession of in January 2015.

A That's correct.

Q And the first patients went in around, perhaps, April of that year. Would that be correct?

A Yes, that would be correct. Yes.

Q Right, so you mentioned having worked to Ian Powrie, first of all. What period would that have been?

A That would have been just before, probably, April. Up until April, until the migration.

Q Okay. Then after April, would have been----

A With David Brattey then.

Q And when would you be reporting to him? Until when?

A He retired. I can't remember the date he retired. I think it was probably 2017 sometime.

Q Who did you work to after that?

A Well, it was probably Colin Purdon but, however, he had his own responsibilities, so he was just filling in until he got someone in David's place.

Q Okay, thank you. What sort of tasks were allocated to you?

A At the early stages, I was

doing purging of the pendants and the theatres in ICU.

Q Did you say "purging"?

A Purging, yes. That's----

Q Explain that.

A -- putting air through something, just to-- Well, in that case, it was to remove water droplets from the hoses so that it doesn't-- Because you put-- It's actually medical gas – it could be nitrous as well, it could be anything. So we had to make sure there was no water droplets in it. So we had to purge them out. It was over a two-week period. Five days, and it would get tested by the QC, another five days, it would get tested again. That was like a-- I suppose, a validation.

THE CHAIR: Just so that I'm keeping up, Mr Romeo, what system are you purging?

A Sorry, medical gases.

Q Medical gases?

A Yes. I apologise.

Q Sorry. Mr Maciver.

MR MACIVER: And that would have been the first task that you were engaged on at the Queen Elizabeth?

A That would be the first task, I think. Yeah.

Q And from your memory that would have been around two weeks' worth of work?

A Yes, that one, yes.

Q And then you would have gone on after that to do----

A Something else.

Q -- something else. What might that something else have been?

A Well, it was to fit televisions to every room in the adults. So was that 30 --100 rooms or something? I can't remember.

Q Okay.

A But, no, I mean, I wasn't doing it. I was just managing the process.

Q Right, okay. Well, explain to me what you were actually doing in terms of managing the process.

A Well, I was locking off the supply to the-- It's like a partition above the bed where all the services go, like medical gasses, etc., sockets. So I was isolating the supply to this (inaudible). So the contractor would come in and fit-- it was like an angle poised light, but it had a television on it, basically.

Q Okay, but you weren't actually screwing in the back end (inaudible).

A No, no, no.

Q What were you doing?

A I was managing the process.

Q Bringing people in to do that work?

A Correct.

Q Okay. Well, I say bringing people in but were you bringing people----

A Yes. We were bringing people in, yes.

Q Okay.

A That was all-- I didn't arrange that. That was all being arranged by senior managers. I don't know who did it or what but I was just-- there to just to facilitate the job being carried out.

Q Okay. So, after fitting TVs, what might your next task have been?

A At that time, it took me on to the migration, but, at that time, you'd be getting your own jobs, becoming duty managers then, which means you'd be doing shift work and that was solely reactive: things breaking, things not working properly. I wouldn't say breaking down but things not working properly, and it wasn't always equipment's fault, you know.

Q Yes, no, I understand. What sort of things?

A Well, like the-- into the kind of-- you call it a pneumatic system that took blood from a ward to the lab.

I mean, if the taps, if the lid of it wasn't screwed-- I don't know if anyone has ever seen them. Have you seen these pods? Have you ever seen them?

Q I haven't, no.

A They're about that size, like that. You know, that's the cylinders and they go through-- It's all done by vacuum. It goes through from one area to another area. It can be blood samples. Then it goes to the lab and it comes back with the test results. So they would break down.

Q Fixing those?

A Yeah. Well, not fixing them, we could do what we could do, but sometimes we had to phone down to somewhere like, I don't know if it was Belgium or something. If we couldn't fix it, to a technician in there, it couldn't really help us.

Q Okay, so you've told us about three different tasks, they're not similar tasks at all, these three: televisions, pneumatic----

A Yeah, that's correct.

Q And did it go on like this?

A Well, the pneumatic system did, yes----

Q No, what I mean is, did it go on like this? There was no rhyme nor reason to the tasks that you might be allocated.

A No, it was just what

needed fixed or needed reset or something. We just had to just multitask on different pieces of equipment.

Q And how did these tasks actually come to you? Who would allocate them to you?

A It'd be the help desk and also through fmfirst as well.

Q And your actual role might be to get your hands dirty and try fixing these things or it might be arranging for other people to do that?

A Well, with pressing buttons, yes, the computer. Sometimes we did the pneumatic system to try and open gates, etc., to stop blockages. Sometimes it was successful, sometimes it wasn't.

THE CHAIR: Again, just so that I'm keeping up, you mentioned that you would get a prompt to do something either from the help desk or fmfirst. Now, I think we've heard about fmfirst. That's a facilities management software.

A That's correct, my Lord, yes.

Q Right, and are you still talking about reacting to something that's not working?

A Correct.

Q Right. Thank you.

MR MACIVER: Okay, well, the other side of that coin is how were these tasks and their completion recorded?

A On fmfirst.

Q All on fmfirst. One of the things you mentioned at the start was that the job was partly, I think, attending to breakages, things going wrong, and partly planned preventative maintenance. Is that correct?

A That's gone on to day shift, yes. It's just Estates manager, yes.

Q Right, so PPM didn't enter your workstream until 2017.

A That's correct.

Q I'll perhaps come on to that later, but just at this point, from your perspective, were those two different types of tasks, or was it all part of one workstream?

A Probably two different tasks.

Q Were there differences in the way that matters were allocated to you in terms of PPM and allocated to you in terms of firefighting?

A Yeah, the firefighting was done through the help desk and fmfirst and the PPMs. When I got-- When I went on to the day shift, they were all set up. I just continued what was there. There was a lot of work gone into that, you know, for the

spreadsheets, etc., and all that, especially for the air handling units and also the flushing and sampling and testing of critical care areas, water.

Q Okay, so perhaps explain a little bit more about that. When there was PPM that required to be done, how would you know that it had to be done?

A When we looked at the SHTM, for ventilation it was 03-01, and when you looked at SHTM-- I don't know, I didn't set this up, it was all set up when I came on to day shift.

Q I'm interested in your perspective. When you went in in the morning and there was a PPM task that might require to be done, how would you know that?

A You'd go on fmfirst and look.

Q And does it follow from what you've told me that the matter would be on fmfirst because it had been allocated to that by a spreadsheet that someone else had set up?

Yeah. Well, you-- some-- on fmfirst, I think you could put them in and it would automatically generate. I think it was whenever it was set up-- whoever set it up could generate it-- generate it automatically, maybe a month, three months and six months, it would automatically generate the jobs. You'd have to go in as the Estates manager and allocate the jobs to a technician, they would get it through their PDA. I think you've heard of that terminology, haven't you, PDA?

Q Explain to me.

A That's a handheld device, like a phone.

Q Okay.

A And it's got a software in it, fmfirst software, and when you put the PPM, it just transfers from your station, your computer, down to the phone and that's him, gets the job. He opens the job up, signs on, does the job, then signs it back off again. With a wee note-- a wee caveat note, if anything goes wrong or anything that was peculiar, not normal, he would write that in the wee notes. Then you'd have to go in and check all these as well to see if there were any issues.

Q Okay, so, in principle, you're describing a fairly straightforward or what ought to be a fairly straightforward system. Matters would make their way onto fmfirst because either the help desk or the spreadsheet, the automatic generator, had allocated them to fmfirst. You would log in to fmfirst and see that there were tasks and then you'd distribute them to technicians or

whoever. Is that right?

A That's correct, but also the wards could do it as well. If the ward or department had an issue with any piece of equipment, they could just raise the job themselves and then we would have to-- there's probably-- the supervisor would do it initially and I'd probably give them a hand during the day if they were too busy and just allocate the jobs to whatever technician that was most qualified to do the job.

Q Okay, but in that kind of three-layer system of tasks being generated, management in the middle to do the allocating and technicians actually doing the work, your tasks are all in the middle tier. Is that correct?

A Yes, that's correct, yes.

Q Okay, you're not generating the tasks yourself, is what I mean.

A I could. I could----

Q Tell me in what circumstances you might do that.

A If a ward phones me up, or a department, for some kind of incident that's happened and they say that, "I've not been trained in fmfirst," I would raise a job for them on their behalf, or maybe their system might be down, I would raise a job for them as well.

Q Okay, would you be actively looking around the hospital for things that needed to be done so that you could enter them onto fmfirst yourself?

A Well, if I was doing my walk around like I normally did during my shift, if I seen something, yeah. I've certainly walked by something that needed done.

Q Okay, thank you. You mentioned, I think, your background-- or you may not have mentioned your background. I may have picked up from the questionnaire, but can you just tell us what your background was before coming into the NHS?

A It was electrical.

Q Electrical engineering, I think, (inaudible).

A Well, it was qualified apprenticeship and also HNC in electrical engineering. They gave me a technician's position when I wasn't on the tools at the Glasgow Royal Infirmary.

Q And you've said in your statement that you consider that to be very relevant to the job that you ended up doing at QEH. Is that correct?

A Electricity is involved in everything.

Q Now, clearly there are other systems other than the electrical

ones involved at hospital. I'd to ask you a bit about that. Specifically interested in your training. So, water system, ventilation system and dealing with infection control, they are the three areas I'm interested in. So, my question is really how extensive was your training firstly on water matters?

A The only thing I had was Legionella familiarisation. Every member of staff in the NHS has got to attend that course. I think it's-- I can't remember how often you've got to sit it but you've got to go. It's a mandatory training you've got to do.

Q Can you remember when you did that or where?

A 2012.

Q So, that wouldn't have been at Queen Elizabeth----

A No.

Q -- that would have been at the Royal.

A Yes.

Q Okay. Probably the same question in relation to ventilation matters, how much training on that?

A I did a CP course for ventilation because I was a supervisor for the Glasgow Royal Infirmary, just so that I could interpret the reasons that the chaps were getting back when they're doing their PPMs.

Q What does the CP course involve?

A That's a competent persons course. It gave you a familiarisation of the air handling unit itself and how you would safely isolate it. Change filters, adjust set points and all that, and pre- and post-filters, you know, differential pressures. Just a familiarisation for myself. Because I never ever did the task but when I gave that task to someone to do, I had an understanding of what the job had to-- what the job entailed.

Q Is that more detailed type of training than the one you described for the water training?

A Oh, yeah. It's a City & Guilds qualification.

THE CHAIR: Right. What does CP stand for?

A Competent person.

Q Thank you.

A Sorry, my Lord.

Q No, it's my job to keep up.

MR MACIVER: And, lastly, I mentioned infection control. What training did you have on that?

A I'm sure that was just a class-based training as well, I think. I'm not too sure on that, to be honest with you, but I'm sure-- if I got it, I'd have got it at the Glasgow Royal Infirmary. So I remember one

occasion we did about maybe seven or eight in the one day. They weren't particularly long.

Q Would that have been intensive, or is that not the right word?

A Oh, it was intensive doing eight of them, yeah.

Q Well, in terms of the detail of the amount of training that you had, would that have been more than the water, less than the water, more than the ventilation, less than the ventilation?

A It was less than the ventilation, that's for sure, probably the same as water.

Q And did you get any further training on those during your time at the Queen Elizabeth Hospital?

A Well, the training I got was probably from the infection control. If I was doing a particular job and I wasn't quite sure how infection control would see the job-- well, say a risk assessment was to be carried out for it and a method statement, that's what the infection control SCRIBE is anyway, you know, basically. You would ask their advice, "How does that sit? Are you happy with that?" They maybe give you-- it's kind of ongoing training, you know, because things change all the time. You've got to change with it, risk assessment wise.

Q Okay. When you're talking about training, are we talking about actual courses that you've attended or----

A No, no, no, no, just verbally, you know.

Q Okay, when you combine all of that, would you have considered, looking back, that to have been adequate training for the types of roles that you were asked to perform when you were at the hospital?

A No, but it probably was for some members of staff but certainly not managerial. I wouldn't imagine it would be.

Q Do you know whether that was a common opinion that was had about people-- from people at your level?

A I don't really know, if I'm honest with you. It's probably something I didn't discuss, if I'm being honest with you, but I think we all had the same level of knowledge and understanding. So we didn't very often-- I mean, we were that busy, you didn't have much time to talk to anyone.

Q Well, that was going to be my question, did you have much time to think about that at the time or the fact of, when I'm asking the question now, is this you

retrospectively?

A Yes.

Q Okay. Can you think of any occasions when you were conscious of the fact that, "I don't have enough training here," or, "My Estates knowledge is not up to scratch"?

A Absolutely, yes.

Q Give me an example that. Perhaps an example relating to water would be what I'd be most interested in.

A That's the one, yeah. When I moved on to day shift, I became more involved in some water PPMs. I think I was only involved in the flushing, sampling and testing of the critical care areas within the adult and the children's hospital.

Q Explain to me the scenario and your thoughts about it.

A Well, I didn't have any background in water at all, and when I went on to the day shift, I think, my memory serves me right, there was-- it was the NHS Estates staff that were doing it. When I seen what was getting back, I wasn't particularly happy with it, the format that was coming back. Even the people who were doing it, I think they were only apprentices at the time, and you might think, "It's only-- They're only flushing. They're only testing it. They're

sending it away for"-- but it's not as simple as that, you know. Every job's got its complexity, you know. Whether it's large or small, there's ways of doing things, and I got-- in fact, I got DMA Canyon in to do the sampling for me. I had an ulterior motive there, I'm going to be honest with you, because I was-- any other works I was getting in, they were doing it.

Q Okay.

A They were the experts.

Q Right. I----

THE CHAIR: I think this is my fault. You were asked if there was any examples of where you felt that your training was not sufficient for what you were being asked to do. Now, if I heard you correctly, you first gave the example of flushing, and then I think you moved to sampling. Is that----

A Correct, that's right.

Q Could I just-- Could you maybe just tease out, first of all, in relation to flushing, what are we talking about and how you felt perhaps you needed more training?

A I actually wasn't doing the flushing. It's actually turn the tap on for the length of my time, but my-- I've got to be able to understand what the results are coming back as, so we can take the appropriate action, to see results that are out of specification.

Then I've got to take action on that to make sure they do comply. So you've got to run the tap for a length of time. Well, that's for the flushing, but if you're doing the sampling and testing, it's called a pre- and post-flush-- a pre- and post-sample.

Q Right, this is where-- partly where I was having difficulty.

A Oh, right.

Q Are we talking about one task or two separate tasks?

A It was two separate tasks.

Q Okay.

A Flushing is one task on its own.

Q Right.

A And then the next two tasks are linked.

Q Right.

A One's a pre-flush. One's a sort of pre-test. You take a sample straight from the tap as you arrive in the area you're going to be testing. Then you run it for two minutes. Then you take another sample. Then you label them up, pre and post, and all the details of the ward, because at every sink, if my memory serves me right, there was a wee kind of number on it, and that gave you the room, but it also gave you the room plus the number, and that signified where the samples came from.

Q Right. The actual sampling, was that done by GGC staff, or was it done by contractors?

A Initially, before-- even when I was on day shift for a couple of months, it was NHS staff that did that.

Q Right, and your concern, I take it, was that you would not actually be personally taking the samples, but you felt you did not have the training to supervise or manage that task. I mean, have I got that? Just tell me if I'm wrong.

A Slightly wrong, in a sense, because I could read the SHTM 04-01 to find out what the reading should be----

Q Right.

A -- but my main concern was, was the test being carried out properly by the people who were doing it.

Q Right.

A And I could probably read and interpret the results I was getting back and take appropriate action, but I had to make sure from the SHTM that I was doing that for the water.

Q Right. So, sticking with sampling, your concern was that you had to take the initiative to find out what was to be done as opposed to

having had training in it. Is that the point?

A Yeah, but that system was always in place before I came, the actual where to test and who was testing, but I changed who was testing to DMA.

Q Right. I think I've possibly got enough.

MR MACIVER: Yes, well, I might try to tie that down just a little bit more. The type of sampling that you're talking about, would that have been Legionella sampling?

A Correct.

Q And you mentioned that the, from your perspective, suboptimal method of having GGC staff carry out the tests and you not being sure whether it had been done-- not carrying out tests, but carrying out the sampling, the drawing of the water, and you not being satisfied that it had been done correctly, continued for a couple of months, and then you got DMA Canyon in to do it.

A That's correct, yes, sir.

Q And I think you said that that first couple of months was the first couple of months at your time as being duty manager.

A No, no, as just the Estates-- day shift Estates manager. That would be after May 2017.

Q Yes. I got the names the wrong way round, but that puts us right in the middle of 2017.

A That's correct.

Q May, June, July----

A Yes. That's correct.

Q -- 2017 probably, and then there would've been a shift to get in DMA Canyon to do it.

A Yes. That's correct.

Q How could you be sure that DMA Canyon would do it properly?

A Well, they've got the specialist staff to carry it out. Before the-- Even before they got-- I got them to do it, they had to send me across a risk assessment and method statement, along with everybody's qualifications who was carrying out the task, and that information was placed in the operation procedures manual for water systems. So when the AE came to do the annual audit, that was all there for them to see.

Q Okay. So, at that point, it's the-- seeing the qualifications leaves you satisfied that this is going to be done properly?

A Yes, along with the risk assessment and method statement, yes.

Q Okay, thank you. I think you've said that during your whole time

as Estates manager you were involved in arranging for the sampling and flushing to be carried out?

A Just after May 2017?

Q Yes.

A Yes, until I left in, is it April, I think, 2018?

Q Correct me if I'm wrong, I seem to be garbling when you're duty manager-- duty Estates manager and Estates manager, but Estates manager is May 2017 onwards for around eight months.

A That's correct.

Q And that's the period at which you are instructing the sampling and flushing to be done initially by GGC staff and laterally by DMA Canyon.

A That's correct.

Q Thank you. Can I ask you now about the role of authorised person? Were you ever an authorised person at the hospital?

A Yes.

Q What for?

A For high voltage and low voltage electrical and medical gas.

Q Were you an authorised person for either water or ventilation?

A Not at that time, no.

Q You say, "not at that time"?

A That's correct.

Q Does that mean that at some time----

A Yes.

Q -- you were?

A For ventilation, yes.

Q When was that?

A That was in 2019. I can't remember exactly what time it was, but it was before-- I retired in November 2019.

Q Right, so it follows from that, it wasn't at the Queen Elizabeth.

A No, no. Oh, no. No, no. No.

Q Where were you at the time?

A RAH in Paisley.

Q Okay. So, that was kind of a-- part of the closing out of your career was taking on that role?

A Yes, well, I didn't actually finish. I'd done the actual AP course and passed all that, but I didn't get signed off on anything because the time it takes to do that, I'd retired.

Q And you may have answered already but what's involved-- what's required of you in order to become an authorised person?

A You've got to go through an authorised AP course and successfully pass that. Then you'd be nominated to become the AP. That was probably from a senior Estates

manager. Then the AE would come through and assess you. You'd have to have six months to know the system you're going to be an AP for.

Q Explain that to me.

A Well, you've got to know-- If it's ventilation, you've got to know the whole system, how it works. Water would be exactly the same. Electrical would be exactly the same, where all the points are for certain points, be it whatever it is. You know, and then you had to-- After six months, the authorised engineer for that discipline would come in and you would walk round the site, show him various things, just to make it sure-- clear in his mind that you were competent enough to carry out these duties.

Q I mean, you talked about six months. Is that six months on the job, six months of training courses? Six months of what?

A No, no, no, six months on the job. Once you'd done your AP course, you'd have to learn the system you're an AP for. That's generally a six-month period, roughly.

Q So, it's a mixture of a qualification, experience and actually being assessed as fit to do the role by an authorising engineer?

A That's correct.

Q And you did that for ventilation but you never did that, you say, for water?

A Correct. You've also got to be authorised by the-- or you've got to be appointed by the Board by letter.

Q Yes.

A And it's really up to the person who's been appointed if they want to take that post up.

Q On to this point, I can ask you to take a look at your statement, which will come up on screen. It's question 51 of the statement which will be-- should be at page 186 of the statement bundle. It should come up on the screen in front of you. Now, here, the question is, what concerns did you have, if any, about specific roles not being filled? Have you had concerns? Did you escalate these? If so, to whom? And you've said:

> "When I moved from the duty Estates manager to the day shift Estates manager, I found out only after I got the job what my duties were going to be. I informed David Brattey I would not be the person responsible for the water system due to my lack of knowledge in this area. However, I would liaise with contractors (DMA) to carry out flushing and sampling in critical

areas within the hospital."

And then you describe having got a job elsewhere, but, obviously, there'd been a period of transition between the two roles. There's a suggestion there that you might have been given responsibility for the water system, is the way you've put it.

A Well, they tried to give me it.

Q Well, is-- first question is, is that the same as being authorised person?

A It can't be the same because you've got to do the training first and go through the process I just explained. You can't just say-- You can't be delegated that position. In fact, that statement is actually in SHTM for any of the disciplines.

Q Okay, well, let me ask the question in a different way, then. Firstly, who did-- that suggestion of you getting responsibility for the water system, who did that come from?

A I was never told by anyone. I was just-- It was just assumed by people come in like DMA Canyon and the AE for water, just assumed I was AP. You just can't assume that.

Q Well, you've said there that you informed David Brattey that you would not be the person

responsible for the water system due to what you considered to be a lack of knowledge in the area. Presumably, someone had suggested to you that you might be the responsible-- the person responsible.

A Yes.

Q Who was that?

A It was the compliance manager, Phyllis Urquhart, says-- I remember the first day that went on to the day shift, that was 1 May, actually it was, on the Monday morning. It was put to me that, "You'll be having an audit for water on Thursday of the same week," after I'd been in the position for four days. I just didn't know.

Q Right, so, from everything you've just told us, that would have been an absolute no-go possibility.

A How could it be a possibility?

THE CHAIR: And this was the compliance manager who put that to you?

A Correct.

Q Who was the compliance manager?

A Phyllis Urquhart.

Q Sorry?

A Phyllis Urquhart.

Q Thank you.

MR MACIVER: And your reaction that you record there of having from David Brattey, that you won't do it, did you tell-- did you say the same thing to Phyllis Urquhart? Or, in fact, how did it come about? I mean, I had the impression it was a one-to-one conversation between you and her and that might not be correct. How did the suggestion come about?

A Well, it was one-to-one. (Inaudible) the area. I was-- I used to occupy as the Estates manager with other Estates managers from the retained site and the door was opened and it was-- In fact, it might have not been a raised voice, but it might have just been between me and Phyllis, and that was suggested to me that, "You're getting a-- an audit from the AE for water."

Q And that was specifically in order that you could be appointed authorised person?

A No, no, no. An audit's-- No, you're-- an audit's-- you are the AP, you were getting audited.

Q Oh, as if----

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

Q -- as if you already were.

A No, no, no. You were getting audited.

Q Okay, so you had to

inform her that, "I am not that person."

A If the person is the compliance manager, would she not know?

Q Well, that, perhaps, can be asked of her in due course, but I'm interested in your response to her.

A I just said I wasn't the AP for water and it wasn't-- it wasn't my audit, because I was only in the position at that time for one day, about three or four hours.

Q So, in any event, there was the distinct impression somewhere across the hospital that you were the authorised person, but that wasn't correct?

A That's correct.

Q Now, Ian Powrie has already given evidence, and he said at one point that:

> "Tommy Romeo, due to staff changes, was brought in to be AP nominate and Tommy raised with me the fact that he hadn't been trained and that he would do what he could but hadn't the training behind him."

Is that an entirely different exchange?

A I don't remember having that conversation with Ian.

Q It's at least consistent

with what you've just told us about what you'd-- about the position you took with Phyllis Urquhart. Is that correct?

A Sorry, say that again? Sorry.

Q It's at least consistent with what----

A Yes, yes.

Q -- you say the position actually was.

A Yes.

Q So, that exchange might have happened, but you just can't remember it.

A With Ian Powrie?

Q Yes.

A No.

THE CHAIR: Are you able to give me a reference for Mr Powrie? You may not.

MR MACIVER: I am not, I'm afraid, my Lord. It was during his oral evidence. (To the witness) And when you said that you wouldn't be doing these things, how was that received?

A Not very well.

Q Explain.

A Well, I think at the time it was said that, "Who's your line manager?" and I says, "David Brattey." So Phyllis went to see David Brattey, and obviously he says what I'd says, and he just came in and said, "Well, we'll help wherever we can," and that's fine, that's fine, help whenever you can, but you're not-- you can't accept that role and responsibility if you haven't had the appropriate training. You just can't accept it.

Q Okay, so what you are describing at your answer to 51, is that the exchange that you had with David Brattey after Phyllis Urquhart had gone to him?

A Correct. Correct.

Q Okay, and as you put it, you do what you can, but you weren't taking on that role.

A Absolutely. I would do tasks for the senior Estates managers, infection control, microbiology, but I would do it through DMA Canyon. They're the specialists. I'd just be the (inaudible) person.

Q In practical terms, did it mean that you were carrying out the same functions as you would be, had you been an authorised person?

A No, because you wouldn't have the responsibility.

Q Setting that to one side, in terms of the things that you were actually doing?

A No, no. It wasn't the same. I don't think it was the same anyway.

Q Okay, explain to me what

you have in mind there.

A Well, you'd have to know the whole system and how it operates. You'd have to be-- You'd have to have been assessed by AE for that particular discipline. You can't just be an AP without going through the correct channels.

Q I appreciate that but in terms of what you were doing day-to-day, which as you say, is on the middle tier of the----

A Well, I was only doing the flushing, sampling, and testing for the critical care areas. That's all I was doing. Well, later on, that changed when I got some tasks from the three persons I just mentioned earlier on there. That'd be the infection control, senior Estates managers and microbiology. If they asked me to carry out or to get samples or testing for a particular organism or whatever, then I would get DMA Canyon in to carry out that appropriate test. The results would come back to me and I would send them on to whoever asked for the results.

Q Okay, and that continued during your remaining eight months at the hospital?

A That's correct.

Q And during that eight months, was your tasks entirely to do with flushing and sampling or were other things as well?

A There was other things depending-- I think there was-- If I remember correctly, there was-- I think it was-- was it February or January 2018, where they had an incident with the Cupriavidus, came up, which is something we don't generally test for in water. I had to learn as I was going along about the water. It was like a crash course, you know.

Q Can you tell us any details about that Cupriavidus testing? When was it? Where was it in the hospital?

A I think that was the beginning of February/March. I think it was late February, early March, I think. It was actually Dr Inkster asked me to ask DMA Canyon to get a sample. I don't know how they-- They're obviously doing sampling in the labs that we don't know about. They're doing a lot of stuff we don't know. They don't come back with something to tell me to test for the Pseudomonas or something, whatever it is, without having a reason. We don't have to know that reason, we just have to test for it. So I don't know. Dr Inkster would be the best person to ask about that one, if I'm being honest with you. I wouldn't know.

Q Okay, was there any particular location that you had to carry out that testing?

A It was 2A.

Q Okay.

A If I remember right as well, as a wee kind of add-on, there was something found in 2016 in the aseptic suite. There was an outbreak of Cupriavadis there in 2016.

Q That was when you were doing the other job of the duty manager?

A No, that was something that just came up in 2018. I don't know, we just got told about that. There was an incident in 2016, so that came back.

Q Right, it wasn't anything you'd had anything to do with?

A No, no, nothing, no.

Q Okay, that's fine. I suppose just to go back to the position about being or not being an authorised person, and you're quite clear that that was never a possibility that you could have filled that role. Can I ask you, in that case, who did have responsibility for the water system?

A In the absence of an authorised person, it would be the responsible person.

Q Do you know who that was----

THE CHAIR: Sorry, carry on, Mr Maciver.

MR MACIVER: (To the witness) Who was that at the time?

A At the time before he retired, it was David Brattey. Now, I'm not too sure if he'd AP training either, but I think he go down to (inaudible) and that's how it goes, isn't it? I've seen a written plan, and that's kind of how it goes. I think Ian Powrie was in that chain as well somewhere, isn't he?

Q We may simply not know, in which case I'll move on.

THE CHAIR: As you say, there's a hierarchy of responsibility----

A Correct.

Q -- and if I'm remembering correctly, the responsible person is above the authorised person.

A Correct.

Q Yes. Now, you were not the authorised person.

A No.

Q I think you were asked the question, "Who was the authorised person?"

A I didn't know there was one. Sorry, did you ask me a question? I do apologise. I didn't----

Q Maybe that's what you said and I didn't-- And as far as David Brattey is concerned, you assume he

was the responsible person or you knew he was the responsible person?

A At that point I just assumed.

Q You just assumed?

A Yes.

Q Thank you.

MR MACIVER: I'm obliged, my Lord. Just at this point, the exchange I was referring to from Ian Powrie should be found at page 64 of his transcript.

THE CHAIR: 64 in his witness statement?

MR MACIVER: Of his transcript. It was part of his oral evidence.

THE CHAIR: Transcript. Thank you.

MR MACIVER: Just to finish the thoughts about authorised person, or no authorised person as the case may be, was that a matter that provoked some concern with you?

A Yes, because I think you've got to-- you've got to have one in place.

Q Did you ever raise that or talk about it with your colleagues?

A At that time, I was only there myself because the duty managers were not day shifts, you hardly ever see the-- they were firefighting all the time as well. So it was difficult to make-- And another thing as well, we were all going through degrees as well at that point. The whole five of us were going through degrees. So we had that added pressure as well.

Q And do you feel, looking back, that that's a matter you ought to have raised with somebody?

A Well, I definitely raised it with David Brattey, yes.

Q Specifically that there should be an authorised person for water and there isn't? Is that what you're talking about?

A No, I didn't say that. I just says I'm not properly trained to be an AP, indicating that somebody had to be properly trained to be an AP.

Q But you didn't do any more than that?

Q I didn't do any more than that, no.

A And looking back, do you feel that you might have or perhaps should have done more than that?

A It's difficult for someone who's not a senior Estates manager to tell a senior Estates manager how to do his job. You either-- thought they would possibly know.

Q And does it follow from what you're saying that if he did know about the requirements to have an authorised person, then he would have

gone about appointing somebody?

A Well, you've got to know your staff, haven't you? You've got to know their capabilities.

Q But, in any event, you didn't feel in your position that this was a matter that you should be pushing upwards?

A No.

Q Were you worried that there might be any consequences or unpleasantness if you had done that or was that not something that was on your mind?

A It wasn't on my mind. I'd generally just say what I thought anyway.

Q Thank you. At this point, I'd like to bring up a document from bundle 6, page 122, and that should be the 2015 DMA Canyon Legionella Risk Assessment Report. Now, as I understand it from your statement, you are saying, I think, that you would have seen this document around the time it was issued, which would be April or May of 2015. Is that correct?

A No. Did I say that? Sorry.

Q Well, perhaps you can tell me, you can make it clear exactly what your position is then. It's page-- question 81 of the statement which will be page 198 of the statement bundle.

Now, as I read this, question 81, "When did you first become aware of this report?" you're saying you remember when Colin Purdon received the water risk assessment draft.

A Well, that was a kind of mix-up there, that was-- because it doesn't say-- it doesn't say what year it was, so I'm just surmising because I got the 2017 risk assessment done. That's (inaudible)-- 2015, I was not involved in water, so I've never seen-- I've never seen that until I seen it through this.

Q Okay, that's----

A Yes.

Q That's entirely my fault, that's-- I was aware that I might be reading that particular question the wrong way, so thank you for clarifying that.

A Yes.

Q But just to put it beyond doubt, the 2015 report that was up on the screen a moment ago, if we could have that again, this report you didn't see until when?

A I've never seen that report until I got it in the bundles. I've never seen it.

Q So, until about a week ago perhaps?

A Yes, because I had no

cause to look at it.

Q And the reason for that is?

A It's not within my remit. I'm not the AP for water.

Q Do you know anything about that report? Do you know what happened to it or what was being done with it after it-- received it, or is that just something you're not sighted on at all?

A I'm not sighted on at all, to be honest with you.

Q If we can perhaps move on then to page 416, it's a different report and if we see the dates at the bottom here, we see this is also a Legionella risk assessment but it's from 2017. And is this the one that you were referring to, or that----

A Yes.

Q -- from your perspective question 81 was about?

A Yes.

Q Okay, so at your answer to 81, you say you remember when Colin Purdon received the water risk assessment draft. Can you remember the date or when that was or is that not something that's in your mind?

A Well, it carried out-- it says it was completed on 8 September. That would be about right, I think. I got DMA Canyon in to talk

about the flushing, the sampling and testing of the critical care areas. I think it was Allan McRobbie, I made an appointment to speak to him about this, and he told me that the 2015 risk assessment is now two years old, so you'll have to get a new one to make you're complying.

Q Could we perhaps bring the statement bundle back on screen just now? And just to bring us back on track, this is your answer to question number 82. Is that correct?

A Yes.

Q Okay, so the question there, just beyond doubt, was, “Were you aware of the 2015 report being discussed prior to 2017?” You say no, until the meeting you had with Allan McRobbie.

A Correct. He mentioned it to me.

Q Okay, if we can flip back to the 2017 report, please.

THE CHAIR: Sorry, again, just to make sure I'm keeping up, am I right in thinking that, around about September 2017, you became aware of the fact that there had been a previous DMA Canyon risk assessment? Have I understood that or am I wrong about that?

A It was a bit earlier than that, my Lord. It was when I got them

in to enquire about getting them to do sampling and flushing and testing.

Q All right, so that was before September?

A That was-- I've got a letter that was dated July 2017. That's when I got them in-- well, that's when I got the quote to carry out the work for the flushing, sampling and testing.

Q Right, so, in July 2017, you became aware of the fact that DMA Canyon had carried out a risk assessment two years earlier?

A Correct.

Q Right. Did you do anything with that piece of information?

A No.

Q Right. Okay, thank you.

MR MACIVER: Again, it may be the way I've read the statement, so you can perhaps put me right with this question, but I had taken the understanding to be that you considered yourself to have brought about the 2017 risk report because you had acquired that knowledge----

A That's correct.

Q -- relating to the 2015 report being out of date. Is that your position?

A That's correct. As soon as I heard it was out of date, I took a note of it and, once the meeting was over with Allan McRobbie, I spoke to Colin Purdon because getting a risk assessment was beyond my pay scale. I couldn't authorise that. You call it "raising a PO number," that's an authorisation number, it's an order code you get, you know, and that allows the contractor to carry out the work, knowing they're going to get paid for it.

THE CHAIR: Right. So, in fact, you did something. You'd spoke to Colin Purdon about updating the DMA Canyon report.

A Yes, yes, yes.

Q I mean, tell me if I'm wrong.

A Oh, you're right, because it was out of date, but yeah. Yes, yes.

Q So, July 2017, aware of a previous DMA-- you became aware, because you were asking DMA, “Can you something different?" You became aware that they had carried out a risk assessment in 2017. That-- Sorry, in 2015. That had not been updated, you drew the fact that it had not been updated to the attention of Colin Purdon. Have I got that right?

A That's correct, only because David Brattey at that time had retired, I think----

Q Okay.

A -- and Colin was taking

over a lot of duties as well as his own, so----

Q Sorry, Mr Maciver.

MR MACIVER: Okay, so it follows from that that, as far as you're concerned, the idea to do the 2017 risk assessment was effectively your idea, just from your perspective.

A Yeah, that's a-- well, anybody else would've done the same thing as I did, you know?

Q That kind of comes on to my next question, which was that we heard some evidence yesterday about there being an audit carried out in May 2017 and, at that audit, the out-of-date-ness of the risk assessment was drawn up as being a matter requiring immediate attention. Might it be that that brought about the 2017-- the instruction to do a 2017 risk assessment?

A No.

Q So----

A Because I've never seen the audit. I've never ever seen a copy of that audit. I know Dennis Kelly says he sent emails to me. They never sent me an email at all.

Q Might it be that somebody else was also putting into place the arrangements to (inaudible)----

A I mean, it did state they sent me an email, but-- It did state they sent me an email and they didn't.

Q Okay. Well, I'll leave that there, I think.

A And the way it came across with his assessment of the audit, as if I was the person doing the work to that standard, and how could it have been? I was only in the position for four days.

Q Well, perhaps I'll look at something similar in this 2017 report itself because I think you're aware that there are references to you in it. There is-- Just give me a moment, please, I've rather backed into this set of questions. If we look at page 597, we see here there's a recording of a meeting in January 2018 that you were at along with representatives from DMA and from GGC, and we see, midway down there, the paragraph beginning, "The Estates manager":

> "The Estates manager placed in the role of "AP water" has not undergone any training in Legionella control or other bacteria and has limited knowledge of the water systems on site and the requirements of LH, HSG274 and SHTM 04-01."

Do you understand that to be a reference to yourself?

A Yeah, but it shouldn't have been there but-- Who made the assumption it was AP?

A Well, that was my next question. Is that fair comment?

A No.

Q Why would DMA have been under the impression that you were carrying out the role of “AP water”?

A Because I was probably calling them out to do the job, the work. Again, getting a contractor to do a job for you, didn't mean you're totally responsible for the job you're getting carried out.

Q On the next page, 598, there's a list of summaries of management tasks required for compliance, and then I make it the eighth box down, but the one certainly that reads, "Regular review of staff training requirements and update training matrix," you see, you're mentioned in the narrative on the right-hand side of this.

A Sorry, how far down is it, sorry?

Q It should be the eighth row down and it's the box-- they all begin “regular”, unfortunately. This one is, "Regular review of staff training requirements and update training matrix," and then four lines to the right:

> “Staff training is the responsibility of Joe McKelvey, training manager. Estates then allocate jobs based on core competencies.”

Presumably, you don't have-- there's no problem with that part of the narrative so far. Is that right?

A Yeah.

Q Then:

> “However, Tommy Romeo has been allocating water PPMs for approximately 18 months without authorised person training.”

Now, the implication from that seems to be that the work you were doing was work that required AP training.

A Unless the people doing the work were trained competently enough. That's why I got them in to do the work.

Q There might be a distinction to be made between actually doing the work – going out and taking the samples, screwing things in, fixing whatever it might happen to be – and the other task which is allocating the work, making sure that the work goes to the right people, is allocated appropriately. Might it be that that narrative that I've

just read is focused on the second part of that, and that DMA Canyon are drawing attention to the fact that you are carrying out these tasks of allocation but that those are tasks which ought properly to be done by someone with authorised person training? Would that be a fair reading of that?

A If I'm asked to do a task and I get the appropriate people in to do the task, I don't think it makes me an AP. If people are doing a task, they're appropriately trained.

Q I'm not trying to make any criticism of you in having read that out.

A Yeah.

Q My simple point is that the implication of what they may have said there is that you were undertaking tasks at a level that were beyond your training because you were not authorised person trained.

A Yeah, but it wasn't 18 months because I wasn't there for 18 months. I was only there for 8 months, so they've not got that right.

Q But, otherwise, would that be perhaps a fair comment?

A Yep, absolutely. Yeah.

Q When we get to that point, does it follow that that's a matter that's concerning?

A It would be concerning if you think-- the right people in to do the job, but you should still have an AP in, absolutely. Yes, of course, you should.

Q So, again, the feeling is there should be an authorised person.

A Absolutely.

Q The work might still be getting done, but the actual administrative arrangement is not right----

A Correct.

Q -- and you'd accept that?

A Yes.

Q If we zoom out a little more, might it be that-- is this painting a picture? No, sorry, I didn't literally mean-- A little bit far. Thank you, somebody's listening to me. If we look a little bit more at the big picture, the implication might be that, in actual fact, as DMA are assessing things, they have identified that perhaps nobody at the hospital is clear as to what the responsibility for the water system demands.

A Yes, that was one of the reasons for getting DMA to do all the work because they're totally qualified, you know, and that's one of my reasons for getting them in. The absence of an AP, at that moment in time, I thought it was the best way to

go.

Q I appreciate that in terms of doing the actual tasks, but in terms of administering, managing, allocating and so on, DMA-- that's the gap that DMA are identifying here. Is that fair?

A Yeah. Even though they're doing the work-- If they thought it was a problem, they shouldn't have done the work then.

Q Just as a last question then about that report, you instructed it, it came back to you in the first instance. Is that correct?

A The draft? I think it came back to me and I gave it to Colin Purdon or I asked Allan McRobbie to give it to Colin Purdon because, at that time, he was a responsible person and he was also paying for it because it was beyond-- I couldn't sanction that.

Q I think, in fairness, you've said in your-- you've been quite open in your response that, in actual fact, when you got it, you passed it on but you didn't read it yourself.

A Correct. It was only the draft form. I didn't know if that was the final document. Well, it wasn't if it's a draft. I didn't know when it was going to be changed. There's not much point of reading something, if something changed and you act on something that's been changed, you know?

Q Okay, well, be that as it may, looking back, was that the right thing to do? Was that acceptable to pass it on but not look at it yourself?

A I should have read it if I had the time. I probably didn't have the time.

Q Were you still aware of what was in it?

A No. No, I wasn't, because I was expecting-- with something like that, I was expecting the senior managers to look at it and then, from that, draw up an action plan. I could have been involved in that, I could have been involved in that, but I still wasn't an AP. I was still going to get the same problems you were asking-- speaking about earlier on, but I could have been involved at a later stage, but I don't think at that stage. I think that would go higher up. It would be looked at then. I could be involved later on.

Q You did pass it on to Colin Purdon.

A Yes, yeah.

Q Are you aware of what happened to it after that?

A No.

Q Are you aware of anything that came about as a result of it?

A As I was saying, that could be going in the background of senior managers that I'm not privy to. I don't know how high up the ladder it's going. I'll only know when it comes back down again.

Q Well, tell me about it coming back down again. Did you see it coming back down?

A No, it was just a metaphor. Generally speaking, you only hear things when they want you to do something. Sometimes you don't know the background for it, but I was just saying that----

Q Okay, so you would continue to get tasks but whether those tasks came about as a result of the 2017 report, you don't know.

A I don't know, correct.

Q Okay.

A I think-- To be fair, I think when the final document came out of that, it was April 2018. I know my name's on that, but I think I was away at that time. I think I was away to RAH in Paisley by that time. I know it says I got it on the 4th, then I got the final one on the 24th, but if I was in the RAH in Paisley----

Q Okay, I'm perhaps less concerned about the actual document itself and about the tasks that might have come about as a result of that document. So if, for example, it recommended that certain things be done----

A Yeah.

Q -- then, as you put it, it would have gone up the ladder or up the chain, somebody would have made a decision that these were things that should be done, they'd have come back down the chain, and you might have got some of those tasks. Is that how it might have worked?

A I would have expected an action plan coming down for that. Once it's been-- everybody's had their say at a higher level, it would come back down as an action plan. Somebody would probably get a task to draw up an action plan from it, once it had all agreed and finalised. You wouldn't do that-- You wouldn't put an action plan up for a draft, you'd do that for a final document. I'd expect an action plan to come from that.

Q So, that was the specific thing you'd expect to have seen, a formal document, an action plan but you never saw that?

A I never saw that, no, and the scheme as well probably would come out of that as well, because it would have to be updated for the previous one if there was any change

in the 2015 one.

Q And you never saw that outcome either? But, in fairness, you did-- you did leave QEUH.

A That's correct, yes.

Q Okay, just to close off the documents, bundle 8 now at page 169-- it should be 169, sorry. Now, this is a document titled "NHSGGC QEUH, RHC review of issues relating to hospital water systems risk assessment." Have you seen this document before other than over the past week or so?

A Over the past week or so. Can I make a wee point on this one if you don't mind? Is this Jim Leiper's----

Q Yes, that was my----

A I remember he came in in 2017. I can't remember the date it was, and I didn't know what this was all about. It was the HFS, wasn't it, that came in to do-- I don't know what they were-- I didn't even realise what it was for.

Q When you say "came in", does that mean for interviews?

A Yes, yes.

Q Right, okay. Tell me more about that. Did you have an involvement in that process?

A I was interviewed.

Q Okay.

A I didn't know what it was for. It wasn't explained to me what it was for.

Q Can you describe that interview? What did you discuss?

A I think it-- I think I was asked for documentation. So, the problem is with any external person in the NHS, they can't access-- I don't know about now, but they couldn't get access to the computers then because there's a lock system. They're quite protective about their system in case there's any bugs and that get into it. So they're quite protective about it and I could understand that. So, I think Jim got information off of me. We gave him information so he could build up his report and that, but I didn't realise it was about the risk assessment. I thought it was something to do with bullying or something, management-- senior management bullying or whatever, you know. I didn't think it was for risk assessment until I met Jim. It's something else----

THE CHAIR: I didn't just hear that. You hadn't appreciated that Mr Leiper's investigation related to the risk assessment, but you had thought that it was-- and I just missed what you said.

A I thought it was bullying. Bullying, aye. Bullying.

Q Sorry, bullying.

A Bullying, yes.

Q Oh, right. Oh, I see. I've now got you. Thank you.

A But I could be wrong. That was just something that was going about, but I was interviewed, and-- I don't think a question ever came up, to be honest with you. Maybe it did, I don't know, but-- I don't know.

MR MACIVER: Okay. In any event, a series of conclusions, quite a long list of those came out of this investigation. The ones you'll be interested in are in the middle of the next page, page 170. Now, the paragraph beginning, I think it's the ninth one-- eighth one, "There was no recommended specific management structure." You see that?

A Yep. Mm-hmm.

Q

> "Structure of responsible persons, authorised persons and competent persons in place and required levels of training to allow the formal appointments to be made had not taken place. This may have contributed to confusion in roles and responsibilities."

I take it you'd agree with that, given what we've discussed?

A Yeah, absolutely, yes.

Q Then I'll just read the next two paragraphs for you.

> "There's evidence that a review of water systems was taken for the whole QEUH campus, which included the retained estate and actions arising from the 2015 (inaudible) assessment recommendations, form part of the resulting action plan after review concluded around mid to late 2016. Work relating to the action plan was led by Jim Guthrie and subsequently supported by the compliance team until he left his position at QEUH for a new position in the RAH in February 2017."

And then the paragraph you'll be interested in:

> "The responsibility for the action plan was transferred to Tommy Romeo when Jim Guthrie went to the RAH. There was a handover between Jim and Tommy, but Tommy's area of expertise was in the electrical systems and was relatively inexperienced in water systems at that time, and he had not received any formal training in

water systems."

Can you comment on that paragraph, please?

A Is this an action plan from 2015? Risk assessment, I take it that's the action plan from that?

Q It appears to be on my reading of the bullet point above, putting together the dates of February 2017 when Jim Guthrie left and the pass on to you.

A Yeah, so it's took two years to make an action plan.

Q I'm not-- I'm not asking for your comments on the action plan, I'm asking for the comments in that last bullet that I read out about responsibility for the action plan being transferred to you from Jim Guthrie.

A Never seen it.

Q You don't agree with that?

A Well I didn't-- I don't recall seeing the action plan.

Q You didn't see the plan at all?

A I take it this is the handover when I came on to day shift?

Q I can't answer that, but you can comment on what you did here.

A If he's leaving in February 2017 to go to the RAH in Paisley, I took over his job. By the time I took over his job, I didn't realise I'd be the AP for water when I took his job over. Maybe it's-- it's two years after the early risk assessment.

Q Excuse me, just for a moment there, do you know that he was AP for water, or is this an assumption you're making now or at the time, or is it-- you still don't know but you're assuming on the basis of what you're reading here? Sorry, it's too long a question. You mentioned that you didn't know at the time that Jim Guthrie was an authorised person for water.

A Uh-huh.

Q Do you know that he was an authorised person for water?

A I've seen it through the written scheme on one of these, it was 2016, the authorised person. You got it in writing. I'm saying this is-- I didn't know at the time there. This says-- But I'd never seen this document anyway until about two weeks ago or something.

Q Okay, well, putting aside the fact that you haven't seen it, the fact that it says responsibility for the action plan was transferred to you from Jim Guthrie, is that something you just disagree with?

A I don't recall seeing the action plan, so I disagree with it. What

I would say with that is, has he handed anything else over or just the action plan?

Q It does mention a handover between Jim and Tommy, and I think you said there was a handover when you took over his old job. I'd be interested to know what your memory of the handover was.

A I think it was over a five-day period the handover was, and it wasn't just water, he was doing some ventilation as well and medical gasses, in between reactive jobs within that five days. So it probably was only three days, if you add all the time you had to go and do reactive work.

Q And some of that was about water. Is that right?

A And some of it ventilation, some of it medical gasses, yeah.

Q But if it was about an action plan to do with water, that wasn't something that you were aware of.

A That's correct, I don't recall seeing it.

Q Okay, thank you. The last section of my questions will be about some specific events that you might recall from your time at the hospital. The first of those relates to Ward 2A. I wonder if I can prompt you, if you can have your statement up before you again, and it will be question 73 at page 193 of the bundle. 193, yes. So, if you see question 73 there, it's a general question with many heads about sterilisation of water systems. Do you see that?

A Yes.

Q And then your answer, at the foot, is that-- about how you remember and, in particular, instruction from Ian Powrie and infection control for water system sterilisation at Ward 2A. Now, this particular instruction, can you remember when it was?

A This is for disinfecting the lines, or the actual sterilisation?

Q Well, perhaps if I just read out the full answer then, rather than having you try to read and answer at the same time:

> "I remember being instructed by Ian Powrie and infection control to get RHC W2A-- Ward 2A water system sterilisation. As a result, I got DMA Canyon to carry out sterilisation. They were already carrying out flushing and sampling within the hospital. At the time I was day shift manager [June 2017 onwards,

presumably, for eight months] the method they would have used would have been in the form of a risk assessment and method statement which would have been given to Mr Powrie and infection control to look over and make sure it met all compliance requirements. Only once the process was accepted by Mr Powrie and infection control and ward area manager, would the work be carried out. I'm not sure of the outcome as the results and documentation were sent to Mr Powrie and infection control and the ward area manager."

Okay, first question is, when did that instruction come?

A I think it was early March 2018.

Q That-- Is my memory correct, that would be right before you left the hospital?

A Yes, yes.

Q And the answer may be the same as you gave me earlier, but what was the route by which a task like this would come about?

A From Ian Powrie and infection control, but mainly from Ian Powrie would ask me to get DMA in to do the job. That would've come from infection control or microbiology to Ian Powrie.

Q We're talking about a direct specific instruction given to you, not something that would go on to the computer system that you (inaudible).

A That's correct. Yes, that's correct because we go to an external contractor. So we put on fmfirst. Really, that's only for internal work to be carried out, fmfirst.

Q Do you know what prompted that instruction?

A As I said earlier on, I think that infection control and microbiology are doing things behind the scenes and they maybe test for something because something came up, but some things they don't tell us. They just go and tell us to do sampling for a certain microorganism and then they just go and do the task. Sometimes you're not told the reason why, or what's come up until you maybe hear about it maybe four or five weeks later if you're in one of the meetings. I think that was possibly the case in this.

I think it was a meeting. Was it on 1 March? I remember being at three meetings regarding this. I think it was the 1st, the 6th-- Was it the 9 March? I only attended three. Maybe I got the dates wrong but there's only three anyway, you know, I attended,

but it was quite early on in March. I think this could potentially be a result of that.

Q Okay, but that anchors it quite firmly in your mind as being in March 2018. Is that right?

A Yes, because I was-- Yes. So, there's risk assessments and all that that had to be produced by, as I mentioned, DMA Canyon and that had to be logged in the operations procedure manual for water, you know, or even-- it may have been under sterilisation or flushing or something. It might have been under that particular envelope of that-- the binder that was in, because we had them on binders, but because DMA were doing the job, they'd be electronic as well, so that would've been a shared drive. It's in the hospital shared drive. So it'd be electronic as well as hard copy.

Q Okay, what I have in mind is that that part of the hospital had a concern about Stenotrophomonas infections earlier than that, in July-- the middle of the previous year, July 2017, and I was going to suggest to you it might have been around that time. Might that be correct?

A I'm not too sure, to be honest with you. I'm not too sure. So, it's nothing to do with Cupriavidus

then?

Q I don't know the answer to that.

A Okay. I don't know. Sterilisation----

Q So, my follow-up questions would have been-- This is an instruction on sterilisation. I was going to ask you if, given my suggestion that it might have been to do with the Stenotrophomonas matter in July 2017, can you remember whether the sterilisation took place before or after those concerns?

A I'm not sure. I can't answer that, to be honest with you. I don't know.

THE CHAIR: Sorry, the question is before-- before-- before-- Okay, I've got a problem at the moment. Carry on, Mr Maciver.

MR MACIVER: Well, to anticipate what the question might have been, my-- you were quite firm initially that the instruction to sterilise the system at Ward 2A was March 2018. My suggestion to you thereafter was it might have been around July 2017 when there was a concern about Stenotrophomonas, and I think you backtracked slightly (inaudible) can't be sure. It was one or the other.

A The reason for backtracking this-- a bit is because I

don't know if DMA were in doing the sampling and testing in July, because I just had a meeting with them in July. I wasn't too sure if it was quickly activated for them to carry out the sampling and testing in July. If it was, it was very-- I'd give myself a pat on the back if it was as quick as that, to be honest with you. So I'm not too sure.

Q Well, that may also bear upon my next question, which was if we go on a few pages in the statement to page 199, there was some other work at the foot of this page, question 86, detailed around Ward 2A. So, here, if you look at that, we are-- you start off by, again, referring to their assumption that you would be the AP for water, but you say, as a result:

> "I got DMA to carry out flushing/sampling within critical areas and later to thermally disinfect the taps in Ward 2A, straighteners-- and replace straighteners as instructed."

Is that "as instructed" as a result of what was in the 2017 DMA report?

A No, I think it was to do with-- Again, I think it came down from Ian Powrie, but I think it came down from microbiology because they found something else and I think they

discovered-- I think we took a tap-- I think it was asked by Dr Inkster to take a tap apart and send up parts of that tap, that would be the straightener and the strainer and the whole unit itself when they was tested, and I think they found-- I wasn't aware of really what they found, but they found things in it to give them cause for concern. They wanted them all thermally disinfected.

Q Okay. I'll perhaps come back to the tap issue in a moment. The part I was interested in was the next sentence there, or the last sentence here:

> "They also changed the end of line filter and replaced the shower hoses and nozzles monthly in Ward 2A."

Can I ask you what prompted that to be done, the changing monthly of the shower hoses and nozzles? Do you know?

A I'm not too sure because I remember I was asked to get two different types of end of line filters and showers-- end of line for the showers as well, and I think all the documentation I got, PAL filters. I could be wrong, but I thought it was something like 90 days you got with them, or if you used the other ones – I can't remember the name of the other

ones – you would get 30 days. I think the NHS opted for the PAL filters but changed them every month anyway.

Q Okay, I perhaps put the cart before the horse there. The first question should have been, can you remember when that was done, when you started replacing the shower hoses and nozzles?

A That was done after all the taps were thermally disinfected.

Q Can you give a month estimate for that?

A No. It was that long ago, I can't remember, but before April.

Q Before April 2017, clearly?

A Well, I'd left then. I'd left then.

Q The concern I mentioned about Stenotrophomonas cases in July 2017, might it have been around that time?

A July '17? No, no.

Q Later than that?

A It was definitely in 2018, because the end of line filters got put on after the taps were thermally disinfected. I think the end of line filters-- I'm not saying the last resort was-- well, it wasn't-- because they decanted the 2A patients and put them into 6A, wasn't it, but I wasn't there at that time. I was-- I'd left by that time, but that's what happened. That was spoke about.

Q Okay, I'll perhaps leave that then for the moment. The next specific question I was going to ask you about was an issue with the bypass at the very start of occupation at the hospital in April 2015. Can we go back a few pages in the statement to page 194, and the full page is about-- you may remember this, it's about an account by Ian Powrie of water supply being lost and to resolve the issue, water to bypass the filtration plant and feed on tanks with mains water. He further tells us that you supervised the manual fill, and you've said-- your first answer, very candidly, that, "Mr Powrie said it happened, then I have no doubt it did." But you can't remember the incident?

A No, I can't.

Q You still can't remember the incident?

A Still can't. I've even seen Ian's statement as well, and everything he mentioned in his statement-- I know Ian for a number of years now, and that's exactly what I thought he would do, which he says in his statement, but I can't remember. At that time, we were dealing with people getting trapped in lifts, we were dealing with the pneumatic system, dealing

with sewage coming up into certain areas of the hospital, fire alarms going off, because people were using deodorants in the toilets. So it was constant-- it was just firefighting all the time.

Q That was-- You're anticipating my question to you, which is that his account is-- seems fairly memorable to me in that the water supply going down, a threat to the water supply to the hospital, everyone at the end of long shifts and so on, and just the two of you to install the bypass. My question would have been, how come you can't remember that when it seems memorable to me, but you're----

A You were not doing the jobs I was doing. That's the only thing I can think of. I mean, I'm not disputing it happened, that's for sure, and the actions-- Ian Powrie gave us in his statement when he was doing it, I was watching it, and everything he says he did, I can imagine him doing. That's kind of the person Ian is, you know?

Q But does it follow from that that you can't remember the incident and you therefore won't be able to remember what happened next, what was the outcome of the bypass, what happened to it after you

put it in?

A No.

Q Okay.

A But I do know that over the times, after that when we got the tanks tested at various times, it was always clear.

Q The last set of questions I was going to ask you about, and you've-- you may have covered some of it already, but it's a few matters around taps, and this will be on the next page, I think. You've got a section-- 75 to 77 is about taps. First question 75 is about Horne taps – Horne Optitherm taps, I think they are, to give them the full name. Are you familiar with those items? Can you describe them?

A Yes. They're thermal mixing taps or thermal mixing valves. The ones here are thermal mixing taps, I think they're referring to, you know.

Q You're aware that their use in the hospital came to be questioned?

A I was aware after the event-- after them being installed – is that what you mean – in certain parts. I wasn't aware before they were installed there would have been an issue, because it's----

Q Okay. You became

aware that there had been a specific incident in Northern Ireland in which their use----

A No, I wasn't.

Q Your answer to B, midway down the page, I think explains your position:

> "The only incident I recall from Northern Ireland was during the Cupriavidus outbreak, when I asked Dr Inkster for guidance on how to deal/treat this water issue."

And her reply was, send you a document relating to a case which you didn't find very helpful.

A See, I don't think-- probably the two of them are not the same. The only thing I can remember from Northern Ireland was the document I got from Dr Inkster. I don't know if it's relating to the one above it, the question, actually, B. I don't know if it's relating to that. I don't know if it is or not.

Q Okay, fine. Slightly differently, we might hear from another witness that you were asked by Dr Peters within the hospital for assistance in dealing with Horne taps in early 2018. Do you recall that?

A What kind of assistance?

Q Specifically that you may have been asked by her to help out with opening up the taps with an Allen key----

A Yes, but setting them up to-- for the-- for the-- Yes. Yes.

Q Specifically by getting an Allen key to open up the taps.

A Yeah, but it wouldn't be in the ward. It would be outside the ward, away from any areas we'd open it up. We wouldn't open it up in a ward. It'd be taken out.

Q Okay, well, don't let me plant the memory in your head, but do you recall this happening with you and Dr Peters?

A Yes, yes. Yes.

Q And you got an Allen key to help open up the tap, wherever it was?

A Yeah, that wasn't-- that wouldn't be me, no.

Q And what happened?

A The parts were sent up to the lab. I think I said that earlier on, the parts got sent up to the lab and they were tested.

Q But I'm interested even more specifically than that. You were asked to get an Allen key to open up the taps. What happened next?

A Well, the taps got opened up, I would imagine.

Q You got the Allen key. Is

that right?

A I don't think-- No, I wouldn't have had Allen keys. Where did this happen? Did it happen in a room or something? Where did it happen? I'm not understanding the question, if I'm being honest with you.

Q No, what I'm interested in is really probing how much of a memory you have of a specific event, so, it's----

A I remember a tap was being stripped down and sent to the lab for analysis, yes.

Q And do you remember dealing with Dr Peters?

A I'm not too sure it was-- It might have been. I'm not too sure who it was in the lab block. I'm not too sure.

Q And do you remember being asked for an Allen key to open up the tap?

A I could have been, yes, I could have been, but-- Yes.

Q Can you remember what you said in response to that?

A No.

Q I think you said a moment ago, and perhaps I cut you off, but you said, "I wouldn't have had an Allen key."

A Me personally, no. I wouldn't have had an Allen key, no.

Q Why not?

A Because I'm not into tools anymore.

THE CHAIR: Mr Maciver, what you're, I think, putting to the witness is an incident where Dr Peters asks Mr Romeo to dismantle one specific tap. Is that-- That's correct?

MR MACIVER: Yes. Effectively, yes.

THE CHAIR: Right. Now, I had a note that you did remember such an incident, but I may have noted you wrongly.

A Well, that's right, my Lord. It says at one point a tap was stripped down and the straightener was sent to the lab for analysis.

THE CHAIR: Right, and we're talking about one tap?

A Yeah, I think-- I think it was. It might have been two, I don't know. I can't remember how many there was. I think sometimes they maybe need more than one just to cross-reference.

MR MACIVER: Yes, I don't want you to have the impression that I'm speaking about a bigger kind of framework than I actually am. I'm asking about a specific interaction that you'd had with Dr Peters, whereby you or she would be holding a tap or there'd be a tap on the table. The

tap's not open. She wants to get it open. She's asking for an Allen key from you in order to open it. Do you remember that type of interaction?

A I think I might now, yes. I think I might now, but I wouldn't have had an Allen key. I'd have to have got one off somebody. I don't carry Allen keys. You know, you're only doing that if you're a tradesman, but as a manager you don't carry Allen tools with you.

Q Do you happen to recall whether you did that, whether you got somebody to get an Allen key?

A I might have. I might have, but I'm not too sure, to be honest with you, but I know one gets-- I know at least one gets stripped down anyway for analysis, for the components, I'd say, so as they could test them at the lab.

Q Slightly differently, do you remember that those-- whether those particular taps do open with Allen keys?

A I can't remember now. You're saying about an Allen key, I don't know. To be honest with you, I don't know.

Q Okay, well, if I work on that hypothesis then, if they open with Allen keys, will there be people around to open them up?

A Yes, there would be, yes.

Q Okay, thank you. Coming to the end now, on the next page, there's a question about point-of-use filters. Do you recall being involved in fitting those?

A If my memory serves me right, I think we've got, was it DMA Canyon to fit them for us, if I remember.

Q In the last answer on the page, you refer to:

> "If I remember correctly, I was asked to order PAL filters as they could last longer [you think recommendation was] every three months. However [you think they were changed every month] I can't be sure as I was only involved for a short time before leaving the hospital."

THE CHAIR: Sorry, my fault, Mr Maciver, what is the page?

MR MACIVER: It's page 196 of the bundle, the answer to question 76(e).

THE CHAIR: Thank you very much, thank you.

MR MACIVER: (To the witness) Now, again, you mentioned something similar, I think, with the shower heads or the shower nozzles that the specification might have been every

three months but the change was in fact done monthly. The part I read out to you is effectively the same thing about point-of-use filters.

A Yes, uh-huh.

Q Is that right?

A As far as I can recall, I may be wrong, but I'm sure I read something like that was, like, 90 days or something, you know.

Q Do you know why the instruction might have been given to change them more often?

A I don't know if there's any evidence to change them earlier than that; I wouldn't know. That'd be a clinical decision to do that anyway. If they asked you to do it, you would do it.

Q And just to close off, the next page, just at the top, question 77 was about cleaning and maintenance of taps, and you say:

> "Early 2018, I organised DMA Canyon to clean the taps under instruction of the senior Estates managers and infection control once their RAMS"--

What does RAMS stand for?

A Risk and risk assessment.

Q

> -- "were accepted by senior Estates managers, infection control and ward/area manager, these works commenced."

Now, that is, you say, early 2018. Where was this? Which taps do you have in mind?

A That was Ward 2A. That was the Horne taps.

Q It was the Horne taps.

A Yes.

Q Why was this instructed in 2018? Do you know?

A I can only assume it was after the Allen key incident, stripping down the tap. Potentially, they maybe had found something, I don't know. Sometimes-- As I said before earlier, sometimes they don't tell us all the results they get. They just go and tell us to do a task and you've got to try and work out yourself, was that because of that? Sometimes you are not told.

Q Perhaps it passed me by, but can you remind me what prompted the interest in the taps in the first place?

A I think they were trying to find out-- it was just elimination. I think they just worked things out, what's causing-- whatever they're causing. Or it could have been the case of that tap being opened that they found something in it or they found

something that should be-- should be trying to clean them all to get rid of whatever was in it, I'm not too sure.

Q Okay, you don't know which----

A I don't know, that's correct.

Q Right, but you had been involved in maintenance and cleaning at least since June 2017. I think that was what you told us earlier when you moved to be Estates manager.

A Yes, yes. It was actually-- I think it was May actually, yes.

Q Had the cleaning of taps not arisen before as part of that job?

A I'm not sure, can't recall.

Q I think that's all the questions I have for Mr Romeo, my Lord. I wonder if we might take a short break at this point.

THE CHAIR: Shall we take a break? Mr Romeo, I need to find out whether there's any other questions coming from the floor, so you'll be taken to the witness room and I'd hope we could reconvene in about 10 minutes.

THE WITNESS: Thank you, my Lord.

THE CHAIR: Thank you.

(<u>Short break</u>)

THE CHAIR: Are we to have more questions?

MR CONNAL: I have a short list of questions (inaudible).

THE CHAIR: Mr Romeo, there will be some further questions from Mr Maciver. Mr Maciver?

MR MACIVER: Thank you. A fairly short list of questions for you, Mr Romeo. The first one is to do with maintenance. Now, you have discussed maintenance quite a lot in your answers to me, for which thanks. A question I wanted to ask you was about where there were-- in scenarios where there are specific strategies for maintenance that have been agreed, where would the information be held as to what those specific strategies were?

A I think probably in Zutec, probably.

Q Zutec being----

A That's a database where all the commissioning, verification, drawings, specification documents would be held.

Q Would that be accessible to you or to whoever required to do the maintenance?

A Yes. Well, yeah, it's difficult to find in Zutec, it was not easy to find. You had to be precise with your wording but there's also-- you

could also find it in SHTMs if it was like ventilation or water or electrical. I mean, there's-- still got guidance within them as well.

THE CHAIR: I have to say, Mr Maciver, I'm not absolutely sure what you're comprehending in maintenance strategies.

MR MACIVER: Maintenance instructions then would perhaps be a better way of putting it, my Lord. For example, if there were a piece of equipment, be that a tap, be that a duct, be that whatever, that had a specific method by which maintenance had to be carried out, where would that information be held and would that be accessible to you?

A That would be the specification for a Horne tap, say, if we're talking-- anything?

Q Any piece of equipment.

A Well, it would come with the Horne tap when it was installed, so that would all be in Zutec.

Q Okay, and Zutec is accessible to anyone working in the hospital. Is that right? Do you know?

A I'm not too sure about anyone, to be honest. I'm not too sure, but definitely for managers it was. It certainly wasn't the easiest to navigate.

Q Well, perhaps I asked too broad a question. It would be accessible to you. Would that be correct?

A Yes, uh-huh.

Q Next question I had is about the porting system, HAI-SCRIBE. In relation, you spoke about tap work that you carried out in Wards 2A or 2B. Did you complete HAI-SCRIBEs on that work?

A Yeah, but that might have been carried out by infection control because they were heavily involved with it. They would have seen a risk assessment from DMA Canyon. If I'm not mistaken, they would ascertain if a SCRIBE was required or not. If one was required, they would get one, yes.

Q Did you ever do one?

A For that particular job?

Q Yes.

A I don't recall doing one.

Q Next, I've got a short series of questions on various aspects of ventilation which I didn't cover with you to a great extent in your earlier questions.

THE CHAIR: Sorry to interrupt.

MR MACIVER: Yes.

THE CHAIR: Would it be fair to say, Mr Romeo, that you personally don't know whether an HAI-SCRIBE procedure was carried out in relation to

any work being done on taps?

A That's right.

Q Thank you. Sorry, Mr Maciver.

MR MACIVER: Thank you. Yes, a short series of questions on ventilation. You described to us what your tasks might be with the water system in terms of receiving an instruction and getting the work done. Did you also receive similar sets of tasks in relation to ventilation?

A Well, for the air handling units, the sort of thing that I was involved with for doing PPMs, and that all came from the HCI-- sorry, SHTM 03-01, and there's a list of things you do. I think it's an appendix, I can't remember which appendix it's in, but it tells you what you've got to do for a monthly inspection-- a monthly PPM, three-monthly PPM, six-monthly PPM, and the verification for, we call, isolation rooms and theatre suites, and the last one there I mentioned, that would be carried out by an external contractor. In another case, it was H&V carried that out.

Q Right. Now, in relation to air handling units, can you recall ever directing the changing of a filter on one of those units?

A Well, filter change is part of the PPM and it's probably-- Is it a six-monthly or three-monthly? I can't remember offhand. There's one of the PPMs that you do change the filters if required. You'd look at the differential pressure. The engineers know where that drop is and that will indicate that the filter's near the end of its use.

Q Can you recall ever actually having to do that, to instruct a filter to be changed?

A Out of its PPM? No.

Q I mean at all, in your dealings with those units.

A If a six-monthly PPM says you would change your filters, you'd change your filters, but it'd be up to the technician at the time carrying out the PPM.

Q Did you ever receive an instruction to put a damper on one of the filters?

A A damper?

Q Yes.

A I don't understand, why would you put a damper on the filter?

THE CHAIR: I'm not sure what a damper is----

MR MACIVER: A damper is a----

THE CHAIR: -- in this context.

MR MACIVER: Well, it may be that, once I explain, I can't take the question any further. As I understand it, a damper is a kind of reverse valve to stop air from going the wrong way.

A A filter's like paper, there's not-- Why would you put a mechanical thing on a filter?

Q My specific question was can you ever remember such an instruction?

A No. A lot of dampers in the handling unit, you know, but I don't understand the question, if I'm being honest with you.

Q Sorry, in that case, it may be my mistake in the way I've asked it. Can you recall any specific----

A No, no.

Q -- instructions----

A No, no.

Q -- to put a damper on an air handling unit?

A There air handling units, I don't recall ever getting the-- No.

Q No, that was my question----

A Sorry.

Q -- thank you.

A Now, I started out the ventilation section by noting that you had done some similar tasks or tasks of a similar level on some aspects of ventilation as you did for water, but you did tell us quite clearly that, at the time you were at QEUH, you did not consider yourself suitably qualified to act in the authorised person role. Can I ask you about the authorised person for-- excuse me, authorised person for ventilation role? You were quite clear that you didn't undertake that role when you were at QEUH.

A That's correct.

Q Can I ask you whether, at the time that you were there, would you have been qualified to undertake that role if it had come up?

A Not in the Queen Elizabeth, no.

Q Just to close off on ventilation, in respect of annual validation checks on the system, do you know whether those were done?

THE CHAIR: Do you mean validation or do you mean verification?

A I think it's verification, I think.

MR MACIVER: Excuse me, annual verification checks.

A On critical air handling units, be it isolation rooms and theatre suites, yes, annually, all the time I was there. At the time I was there, they get done, yes.

Q Who did that?

A That was H&V, external contractor.

Q The last question I have for you relates to testing results in the specific periods of May, June and July 2017, so shortly after you took on the duty manager-- the sort of-- the

Estates manager role. Do you recall seeing any out-of-specification water results during that period?

A Like for Legionella or Pseudomonas?

Q For anything.

A For anything? Without seeing any records, I couldn't really tell you but, on occasions, they were out-of-spec but, if they were out-of-spec test results, then we've got a sheet we fill in. It's like an action plan type thing. Out-of-spec sheet, you would send it to infection control, let them know, and then the actions you were taking, but I don't know----

Q The specific question was whether you could recall having received any of these results during that period, and you may not.

A I couldn't say.

THE CHAIR: Would I be right in thinking you would get what you've described as an out-of-spec sheet from DMA Canyon?

A No, we would have one ourselves.

Q You would prepare one yourself?

A Yes.

Q And you would start with-- Did you receive results from-- Let me start again. As I understand it, the results of testing would come from either the Health Board's own laboratory or an outside laboratory. Is that right?

A I think ours came from the one at the GRI in Glasgow, I think.

Q Right, so that would be a Board----

A That's a Board one, yes, I'm sure it did.

Q Right. So, you would get these routinely?

A Yes, yes.

Q And you would prepare what you describe as an out-of-spec sheet?

A Yes.

Q Right, so you're involved in looking at the results and extracting results which are out of specification.

A Yes, that's correct, my Lord. Yes.

Q Thank you.

MR MACIVER: Thank you. That was my last question, my Lord.

THE CHAIR: Can I take it that Mr Maciver has asked such questions as people wish to be asked? Well, I take that as a yes, and, therefore, Mr Romero, you finished your evidence and you're free to go but, before you go, can I thank you for coming today, but also for the work involved in preparing your statement. This will be very useful. Thank you.

THE WITNESS: Thank you, my Lord. Thank you.

THE CHAIR: I think we'll be resuming at ten o'clock tomorrow, is the plan. I understand that Mr Mackintosh would wish to take the opportunity to update legal representatives on witness order. So I anticipate Mr Mackintosh will have something to say to you, but until tomorrow, have a good afternoon.

(Session ends)

16:13