SCOTTISH HOSPITALS INQUIRY

Hearings Commencing
26 February 2024

Day 12
Thursday, 14 March 2024
Ms Julie Critchley
Mr Thomas Rodger

C O N T E N T S

10:03

THE CHAIR: Good morning. Now, good morning, Mr McClelland.

MR MCCLELLAND: Good morning, my Lord.

THE CHAIR: We are ready to begin with Ms Critchley?

MR MCCLELLAND: That is right. Julie Critchley.

THE CHAIR: Good morning, Ms Critchley. Now, as you understand, you are about to be asked questions by Mr McClelland, who is sitting opposite you, but first, I understand you are agreeable to affirm?

THE WITNESS: That's correct.

THE CHAIR: Sitting where you are, can you repeat these words after me?

Ms Julie Critchley

Affirmed

THE CHAIR: Thank you, Ms Critchley. Now, the plan is that we will sit-- I do not know how long your evidence will take, but we will sit between ten and one. We take a lunch break at one, but we usually break at about half past eleven for coffee. However, if, for any reason at all, you want to take a break at any other time, just give me an indication, and we will take a break.

THE WITNESS: Thank you.

THE CHAIR: The other thing I would say is that it is quite a big space to fill. You have got the assistance of the microphones, and it should not be necessary to, sort of, lean into them. They should be able to pick up what you have to say, but even with the microphones, it is advisable to speak a little more slowly and a little louder than you would in conversation. I appreciate it is not always easy just to remember that, but if I could ask you to try, I would be very grateful. Now, Mr McClelland.

MR MCCLELLAND: Thank you, my Lord.

Questioned by MR MCCLELLAND

Q Good morning.

A Good morning.

Q Could I ask you, please, just to confirm your name?

A Yes. It's Julie Critchley.

Q You have, I think, provided a witness statement to the Inquiry?

A I have.

Q Could we have up on screen, please, witness statement bundle, volume 1 at page 237? Is that

your statement that we see up on screen?

A It is.

Q Does that statement set out fully and truthfully your evidence on the matters that it addresses?

A It does.

Q Is there anything in it that you think needs to be changed or corrected?

A No.

Q As your statement tells us, you are the director of NHS Scotland Assure?

A Mm-hmm.

Q And have been since September 2021?

A That's right.

Q Can I just check, is it the director, or are there other directors of Assure?

A No, it's the director. I'm the only one.

Q In terms of reporting lines, do you report into Mary Morgan, the chief executive of NHS NSS?

A I do.

Q Thomas Roger, who is giving evidence later today, the head of engineering, does his reporting line come in to you?

A It does, yes, via his associate director Ian Storrar.

Q Okay. Now, you set out your qualifications and expertise in your statement, and it may be helpful just to clarify at the outset that your background is not in construction or engineering.

A No, it isn't.

Q Your statement says that you began as a podiatrist in 1992, but that much of your career since then has been spent in the management and administration of healthcare services. Is that right?

A That's correct. Yes.

Q You refer in your statement to having worked predominantly on large-scale integration agendas, change management and the equalisation of service delivery. Could you just explain for us what those things mean?

A Yes. So, integration. So, I come from a community care background, so providing care out into the community. However, I then moved into a mental health trust and integrated mental health services with community physical health services. That was an integration role.

I then went on from there to work in the acute sector and to bring community services into an acute trust in NHS England. Finally, just before I came up to Scotland, I worked for an

NHS acute trust on a mandated transfer of five hospitals into that acute trust.

Q Okay. So, in sort of very broad and general terms, is your experience in merging services or rearranging services to be delivered in a different way? That kind of thing?

A It is. Yeah. To get the best value for money and the best care that we can.

Q Okay, and you say in your statement that you are now the executive management lead for the healthcare-built environment in NHS Scotland----

A Yes.

Q -- and are responsible for the strategic direction and operational delivery. Again, could you just expand a little bit on what that means?

A So, when I came into NSS as director of NHS Scotland Assure, NHS Scotland Assure had only just started delivering services. Part of my role has been to look at the governance behind that and the strategic direction for that service in conjunction with Scottish Government.

Q Okay, so given your background and expertise, are we right to infer that the skills you bring to bear on this role are about how to organise and deliver Assure services rather than on the technical content of them?

A Yes.

Q Now, you also explain in your statement that NHS Scotland Assure was formed by merging two existing divisions of NSS, being HFS or Health Facilities Scotland----

A Mm-hmm.

Q -- and ARHAI, the Antimicrobial Resistance and Healthcare Associated Infection division.

A Mm-hmm.

Q And you say that Assure does everything those divisions did before, but with additional services.

A That's right.

Q So, what are the additional services that are provided over and above what those divisions delivered previously?

A So, there is a number of additional services. So, there's the assurance service which contains the KSAR type of service delivery. There is the research intelligence service that provides research and intelligence around guidance and how we should deliver services. There is the addition to Infection Prevention and Control of the assurance service. So, that's an add-on to what that service used to provide. We also have a response service that we deliver for the health

boards.

We have an area of workforce where we're looking at how we can develop the workforce in the healthcare-built environment, and we work very closely with NHS Education Scotland around that.

Q Okay, and you mentioned there a response service for health boards. Can you just explain what that service is?

A So, the response service is if a health board has an issue with anything to do with the healthcare-built environment, they can contact NHS Scotland Assure for support in how to either reduce the risk or mitigate the risk in that area, or for advice on how they need to go forward to correct whatever has gone wrong. For instance, if there's a flood and a ceiling's come down and it's affected the electrical, then one of our electrical engineers would be involved in that, as would one of our IPC nurses from an Infection Prevention and Control perspective.

Q Okay, and would that service also cover things like if there was a query about what the guidance said, or what it meant, or that kind of thing?

A Yes.

Q If we could go, please, to bundle 13, volume 4 at page 424. This is a document taken-- or which has been supplied in relation to the services of NHS Assure.

A Mm-hmm.

Q You will see there, if you just scroll up a little bit, please, so we can see all of the bullet points at the bottom. You see the heading there, "**What will Assure do?**"

A Yes.

Q It says, "NHS Scotland Assure will consider all types of risk as they relate to the built environment." Then, it goes on to say, "NHS Scotland Assure **will not**…" and then there is a list of bullets. These are the things that NHS Scotland Assure will not do are:

> "- address or seek to change legal responsibilities of NHS Boards or primary legislation
> - [or] create a central Building Division as NHS Boards need to remain accountable for their projects and current estate…
> - Address non NHS Healthcare environments e.g. private dental practices
> - Develop an inspection function…"

So, are those the limits within which Assure is operating? It is not

going to do any of those things?

A Currently, they're not within our target operating model or our strategic direction. So, I would say no, we wouldn't be doing any of those things.

Q Yes. Now, in terms of staffing of Assure, you say in your statement that Assure has about 300 staff.

A That's correct.

Q And that many of those are highly skilled and experienced people.

A Mm-hmm.

Q The first category that you refer to is "Clinically qualified staff," and at least at the time you prepared your statement, there were about 60 of those.

A Yes.

Q Does that figure remain about correct?

A That remains about correct, and that consists of Infection Prevention and Control nurses, our nurse consultants and our health care scientists, of which we have a large number.

Q Okay, and are microbiologists included in that?

A They are. Yes.

Q Yes, and in broad overview, what kind of work are these people doing in Assure?

A So, there's a number of different roles. So, the Infection Prevention and Control nurses are involved in the assurance aspect – KSARS and NDAPs. They're also involved in HAI-SCRIBE. They also involved in reactive type of work, and they have six programmes of work that are agreed with the Chief Nursing Officer's department, on which we respond on an annual basis. So, there are lots of different areas that the Infection Prevention and Control nurses, microbiologists and healthcare scientists work in, but the healthcare scientists also support the production of research, which in turn supports the production of guidance.

Q Okay, and by guidance, are we including things such as the SHTM series of guidance?

A Yes.

Q Yes, and you mentioned there that there were categories of work that came-- I think what you said was from an annual note or requirement from the Chief Nurses Directorate.

A That's correct. Mm-hmm.

Q So, is that something which will vary from year to year depending on the policy priorities?

A It can do. However, it tends to have a core number of deliverables within that service.

Q Okay. So that is the clinical experts. You also say that Assure has a team of technical experts.

A Mm-hmm.

Q Again, at the time of your statement, there were about 115 of those. Again, does that number seem still to be about right?

A It does, and again, they're split across a number of different professions, from engineers to surveyors to architects to FM specialists. We have a large-- authorising engineers, decontamination specialists. We have a large number of technically qualified staff.

Q Okay, and again, in broad overview, what kind of work are these technical experts doing?

A So, that depends on where they sit within the organisation. So, we have a number of different areas where we have-- So, we have our property capital planning, which is involved in the NDAP type of services, so design. We have a sustainability team that are a national team that support the health boards in achieving or working towards net zero aims. We have a number of chartered surveyors who you'll probably recognise from this year, the Raac.

Q Mm-hmm.

A So, they have led on the RAAC surveys across the whole of the healthcare Estate.

Q By Raac, you mean, this is the issue with reinforced----

A Reinforced aerated concrete.

Q Yes. Thank you.

A Mm-hmm. So, we have a number of staff who have been involved in that. We also have an equipping service that supports the health boards in equipping delivery. So, if somewhere has had a new theatre suite, we would support them in the type of equipment that they may require in that suite to deliver services.

Q Okay, and in terms of the allocation of technical experts across these different work areas, are those sort of watertight areas, or are there people working in more than one of these divisions at a time?

A One of the things that I've looked at since I came into NHS Scotland Assure is an internal integration programme. So, how we can support one another by working as a multidisciplinary team? So, that's not that the technical experts would

work out with their sphere of technical competency, but that they could complement one another by working together.

Q Okay, and is that something which remains at the stage of an idea to be worked upon, or has that been implemented to any extent?

A We're starting to think about implementation now, so we have done some of the primary work around what areas we could consolidate some of our skills in and how that would work in reality in response to an ask from a health board.

Q Okay. I mean one of the things we may come on to later is the matter of recruitment, and I think in your statement you say that it can be difficult to recruit people with the right sort of technical skills?

A Yes.

Q And is this way of organising the workforce going to help address that difficulty to any extent?

A I think what it does is we're looking at a commissioning process, so if a board has or Scottish Government have an ask of NHS Scotland Assure, we would put that through a commissioning process to ensure that it gets to the right area. So anecdotally, HFS may have had a number of identical requests into, say, property capital planning, engineering, even ARHAI may have had the same request from the same board. When you work in isolation, all three areas could be working on the same request. So, what we've done is we've developed a commissioning process where the ask will come in centrally and we will then allocate who needs to respond to that.

Q Okay. So, is that a way of avoiding duplication of work----

A Yes.

Q -- and making internal processes a bit more efficient?

A That's right, and ensuring that we've got the right multidisciplinary team who respond to that ask.

Q Yes. Okay. You also say, just to complete the complement of staff in Assure, about 120 people in facilities management?

A That's right.

Q What do these people do at Assure?

A So, facilities management, as any other health board does, we have an Estate of our own, and the facilities management team look after that Estate. They consist of our-- So, they will look after the Estate. They will be our catering staff, they will be our reception staff,

they will be our domestic staff. So, there are a number of staff that perform functions like that, but there's also the facilities management function that looks after our Estate itself.

Q Okay, and when I saw this category of people, I wondered whether you had people who were experts, if you like, in the field of facilities management who are providing that kind of support and advice to health boards?

A Yes.

Q Are these people also in the Facilities Management Team?

A Yes, they are. Yes. So, we're looking currently at a whole system plan which we will support other areas on as well.

Q Okay, and just in very broad terms, of that 120, how many are effectively servicing the needs of Assure itself, and how many of them are these experts who can provide facilities management support to the boards?

A Well, we also provide that facilities management support to boards as well, so we provide some of the boards with staff who will perform those functions in the board. So I think it's quite difficult to categorise them in that way.

Q Mm-hmm.

A I would say, probably, we have an Estates team that sits within facilities management that looks after our estate, and then we have a Facilities Management Team who are multi-skilled to perform any of the other tasks that we might require, from cleaning to domestic work to----

Q Okay. All right, and really, I am most interested in the clinical team and the technical expert team, but how do these staff numbers compare with the numbers that were in the predecessor departments, HFS and ARHAI?

A So, HFS has gone from a department of about 2-3 engineers to-- we currently have 16 engineers, an associate director and a head of engineering, but it has taken us quite a while to develop that staffing cohort because of the particular needs----

THE CHAIR: Sorry, did you say 60?

A 16.

Q 16.

A One-six.

Q Yes. Thank you.

A I'd love to have 60.

Q Yes. I can see that.

A And ARHAI, there has been a bit of a circular economy on that one. So, although we have had a small number of additional posts within

Infection Prevention and Control nurses, we have actually, equally, lost a number of our Infection Prevention and Control senior nurses and nurse consultants out into the wider NHS as well. So, I think that we have taken six or seven from NHS Scotland as a whole; however, our hybrid working has supported that because previously, when we were in the office all of the time we tended to take people from the central belt because travel was an issue. Now we hybrid work, we can take people from a wider-- so, that's diluted that somewhat. However, on the same token, we have lost six of our nurses out to the wider NHS as well.

Q Okay. I mean, other witnesses have spoken about the shortfall in numbers of infection control specialists to meet the demand.

A Yeah.

Q But did I understand you saying that flexible working methods are helping you address that shortfall, at least to some extent?

A They are, yes, and I think that, you know, we have had more interest from further afield than we traditionally would have had because of the hybrid working.

Q Okay, and by further afield, how far afield are we talking?

A Well, we have had somebody who works in the Highlands who still lives in that locality, Ayrshire and Arran, and Lanarkshire, whereas historically we would have taken perhaps from NHS Lothian or Glasgow.

Q Okay, and I should actually have asked, where are your premises physically?

A So, physically we have a mixed model, so a lot of our nurses are hybrid working and as long as they are willing to travel to the boards that they are supporting through whatever process, then I really don't mind where they are located.

Q Okay, but your office space-- I presume there is an Assure office somewhere?

A There is, there's two headquarters, one in Gyle Square in Edinburgh and one at Delta House in Glasgow, but again, we have other Estate, such as our warehouses at Coddington and Canderside, we have some buildings up in Aberdeen, so we do have an Estate that is scattered across.

Q Mm-hmm, and you referred to recruiting some infection control people from boards and then the reverse process where you have lost some of your people to boards. I

mean, you might not put it quite in this way, but is there an element of competition between the boards and Assure for these skills?

A Potentially there is, but it's not the only area within the NHS where there is a shortage of skills.

Q Yes. Okay. If you could go, please, to bundle 9, page 54. This is partway through a document which you may have seen before. It was the target operating model for what became NHS Assure.

A Mm-hmm.

Q And this is a slide which is estimating, or setting out estimates, of the costs. I will just check I have got the right page. Yes. So, we see on this page, down the left-hand column, an estimate of costs of £6.3 million----

A Mm-hmm.

Q -- and then a revised cost of £4.2 million, and I think these were an estimate of the first year costs for setting up and operating Assure. What does it cost to run Assure services?

A So, the estimate for the last financial year is nearly the 6.3 million now. I can't comment on the year 2021 because I think that we were in shadow format. I wasn't here then; I didn't arrive until September 2021. So, I think that services were not fully functioning then.

Q Okay. Actually, if you go on to the next page, which was an estimate of the operating costs, and IU take your point that this is prior to your arrival----

A Mm-hmm.

Q -- the estimate at that time of the annual costs was about £6 million, and just a little bit more than that is what it currently costs to run Assure?

A Around about six, yeah, or just a little bit more.

Q Okay and how does that compare, if you know-- you may not know if it predates your time, but how does that compare to what was previously the cost of running ARHAI and HFS?

A I'm really sorry, I don't know that.

Q Okay.

A But I think that this is the cost just for the additional service delivery. This doesn't include the HFS services that are still provided.

Q Ah, okay. Well, that is helpful to know, so thank you for that.

THE CHAIR: Sorry, I did not catch that. The figure does not include the-- Did you say HFS, sorry?

A And ARHAI existing service provision.

Q Right.

A So, this is just for the additional bulk of----

Q Right, okay.

A -- NHS Assurance services.

Q Thank you.

MR MCCLELLAND: And in terms of the Key Stage Assurance Reviews, the KSARs, what is the size of the workforce at Assure that is devoted to those?

A So, each KSAR is different and as you know, we have the tube map that describes the program of KSAR delivery across the lifetime of a build. Depending on where we are on the stage of the KSAR will depend on what the multidisciplinary team is required to perform that KSAR. So, each KSAR will have a multidisciplinary team that will always have Infection Prevention and Control, it will always have engineering, it will usually have an element of fire, it may have an element of property capital planning, as in design, architecture, and it may have facilities management depending on what the requirement for that build is as well.

Q Okay, and this this may be a how long is a piece of string sort of question, but can you give us an indication of the range in size of a KSAR team, from a small team for a simple project up to a big team for a complicated one?

A So, if we have a complicated project then we may well bring in other members of the teams to support that project, so you could go from a core team of five or six to somewhere where perhaps potentially nearly all of the engineers may be involved, or a number of the IPC nurses may be involved. So, it could be two or three times that amount of staff depending on the size of the KSAR and the function of the building as well.

Q Okay. So, I mean, what kind of thing would be at the complicated end, for example----

A A very large build----

Q -- the construction of an acute hospital or----?

A Yeah, a very large build that will have multiple uses.

Q Yes, and is there a pattern to the size of team that is devoted to the different KSARs? I mean, we will come on to the tube map in a moment.

A Not particularly. It's just what is required for that build programme.

Q Okay.

A So, we will resource

however we need to, and whilst we were in recruitment phase over the early inception of NHS Scotland Assure, we may have commissioned out those KSAR processes if we didn't have enough staff.

Q By commissioned out, you mean-- Can you just expand on what that means?

A Then we would have commissioned an engineering firm to provide some of that service for us.

Q Okay. Is that something that happens on an ongoing basis, or does Assure now have enough staff to meet the needs of the KSAR programme?

A As we have built our numbers of staff, that requirement has become less. So, we have a current totality of 7 builds with an expectation of those 7 builds requiring 22 KSARs. We think we may be able to do that in-house.

Q Okay. I mean, you may not have the exact figures, but just give us a rough idea, what proportion of the KSARs to date have been done by external consultants and to what extent has it been done in-house?

A So, even if they are externally commissioned, we will always have one of our engineers who is part of that process. So, they will never solely be done externally, so we will always have an engineer who is part of that process. So, even though some elements of it may be commissioned out, we will always have an internal view of that as well.

Q Yes. Approximately how many of these KSARs are being supported by external teams?

A So, we've done to date 40 KSARs. I couldn't say in all honesty how many of those have been supported externally, but I know that the number is reducing.

Q I mean, if you have done 40, do you have even a rough-- Are we talking half of them? Are we talking the majority? The minority?

A I don't know, really.

Q Okay. Now, two other services that Assure provides, I would just be interested in the allocation of workforce to these. The first, the production or revision of the guidance. How many people are working on that from time to time?

A So, guidance, we have a number of healthcare scientists who are involved in guidance. So, we have-- I think it's about 35 healthcare scientists who are involved in all aspects of research, some of which will translate into guidance. So, we have a full team who look at-- Yes,

33.8 healthcare scientists within Infection Prevention and Control, and then a number within our research department as well.

Q Okay, and are they doing this on a full-time basis or do they have other tasks that they perform too?

A They do have other tasks that they perform as well. So, they will be involved in the type of information that we may publish, for example, COVID. When we're in the pandemic, we provided information on a weekly basis about the number of COVID cases, both in hospital and outwith.

Q Okay, and are they involved in the KSARs at all, the healthcare scientists?

A No, beyond the research element or literature reviews, if we require that.

Q Okay. So, if a bit of research or literature review is needed in support of a KSAR, they might be brought in----

A Yes.

Q -- for that purpose?

A Yes, potentially.

Q Yes, okay. The other service is the handling of queries from health boards for advice and so on. What is the workforce allocation to that?

A Again, that links into the commissioning process that we talked about a little bit earlier. So, that will depend on what the commission is. So, when we get an ask from a health board, we will then look at that ask and we will allocate that to the right department so that the ask is resourced in the correct way. I think through that new service we've had almost 50 commissions now, and I do know that 61 per cent of those have gone on to engineering. The rest of them have been spread across Property Capital Planning, IPC, FM services, decontamination, that sort of thing.

Q Okay. Now, you used the term commissions. It sounds from that that you view each query as being a sort of formal task to be considered and then responded to. This may have been my mistake, but what I had envisaged was a health board picking up the phone and saying----

A They do.

Q -- "Oh, can you clarify this for us?" Is each of those regarded as a commission or are those sort of ad hoc, informal queries over and above----

A Not necessarily. If there is just a telephone call, then that may not make it to a commission, because

if we can solve it there and then, we will.

Q Yes.

A But actually, if it requires a dedicated amount of work, then we have an amount of time that is allocated in the work planning for all of my services for reactive commissioned work.

Q Okay. So, in addition to the sort of query I had in mind, there are also ones that are more difficult to answer or more substantial pieces of work for Assure?

A That's right. Mm-hmm. So, some of them can take-- may require a piece of research to be done or may require a significant literature review to be done before we can come back to a Board.

Q Yes, okay. If we could just have paragraph 44 of your statement up on screen, please. That is witness statement bundle 1 at page 250. I am just going to read what you say at paragraph 44. You say:

> "The fact that ARHAI now sits within NHS [Scotland] Assure is an enormous advantage for the Health Boards in terms of advocating the clinical delivery requirements of the healthcare-built environment to all parties involved."

Can you just expand on that point that you make there and explain what you mean?

A So, being clinical myself, I think that the earlier that we get clinicians involved in a healthcare-build programme, the better. So, actually, you will need to link in with your clinical strategy because that clearly articulates what you're going to utilise the space for. If we have a clear understanding of that right from the start, then we can think about risk mitigation straight away. If we don't have an idea of how that space is going to be utilised and we don't understand that from the clinicians who are going to be delivering services in that space, then we may not design the right type of space.

Q Okay. So, one can understand – we will maybe come to this later – that in a particular health board which is going to be building a new building, they will need to get their clinical people involved early and speaking to the project team.

A Mm-hmm.

Q But in the particular context of your organisation, Assure, what do you see as the benefits of having both the clinicians and the technical people working under one roof?

A Well, because providing healthcare within a healthcare environment is a complex, complex thing, I truly believe that we cannot just have a technical solution to that. We absolutely need to have a clinical voice in that right from the start of the process. I think that that way, we are much more able to understand the aspirations of the space from the healthcare provision and the Board, and also it enables us then, for our clinicians, to speak to the clinical staff who are going to be delivering the services as well as the IPC staff who are going to be involved in the build as well.

Q Okay.

A So, I think it's key.

Q Okay. So, is there an element of Assure having people who can speak the same language as the people at the Board who are developing the building?

A Mm-hmm, absolutely.

Q Okay. If we can look in overview at the KSAR process. I really just want to deal with this at the overview level, because we have got Mr Roger coming in to talk about it in a bit more detail. Just to put it in context, if we can first of all look at why it matters. If we can go, please, to bundle 9, page 70. So, this, as you can see up on the screen, is a letter from the Health Finance Directorate of the Scottish Government, DL(2021) 14 of 27 May 2021. If we just scroll down to the bottom of the letter. So, this is a letter going out to all of the health boards, and what they are told is that:

> "From 1 June 2021 all NHS Board projects that require review and approval from the NHS Capital Investment Group (CIG), will need to engage with NHS Scotland Assure to undertake Key Stage Assurance Reviews (KSARs). Approval from the CIG will only follow once the KSAR has been satisfactorily completed. The KSARs have been designed to provide assurance to the Scottish Government that guidance has been followed. The Scottish Government may also commission NHS Scotland Assure to undertake reviews on other healthcare built environment projects. This does not change accountability for the projects; NHS Boards remain accountable for their delivery. NHS Scotland Assure will be accountable for the services it provides that support delivery of the projects."

So, we see there that the CIG approval now requires satisfactory completion of the KSARs conducted by Assure. Do we also see there that it is the purpose of the KSARs to provide assurance to the Scottish Government?

A Yes.

Q But that the accountability for the projects themselves remains with the health boards?

A Yes.

Q Can you just explain from your point of view what accountability is borne by NHS Scotland Assure?

A I think that our accountability cannot be the same as that of the health boards because we are not then going to deliver services within those build environments. So, I think that we are responsible for the advice that we give and the support that we give to the health boards, but they will remain accountable and responsible for delivery in those areas.

Q Okay. If we go over, please, to page 71, just the second paragraph on that page. What the letter says is that:

> "It [which I think we can take to be Assure] will undertake a leadership role supporting NHS Boards while they deliver oversight for the design, construction, and maintenance of major infrastructure developments within the NHS."

Now this, at first sight, appears a little bit confusing because Assure is said to take the leadership role but also to support the health boards and it is the health boards that are delivering the oversight. Just from your perspective as the Director of Assure, who is providing the leadership and who is providing the oversight?

A I would say that we collectively have leadership but the oversight would be provided by NHS Scotland Assure in line with the KSAR process.

Q Okay.

A However, most health boards do have a governed structure for major projects and some of the oversight will come through that as well.

Q Okay. So, there is an element of governance and oversight within the boards----

A Yes.

Q -- themselves, but in relation to the services that it provides, Assure has oversight of the projects to that extent?

A Yes.

Q Yes. The Inquiry has

heard some evidence that there is, at least within health boards, some uncertainty about the division of responsibility between-- or the division of accountability between health boards and Assure. If we go to the witness statement of Tracey Gillies, who is the Executive Medical Director of NHS Lothian, which is witness statement bundle 1, page 524. It is paragraph 24, which just straddles this page and the next, and what she says is that she is familiar with Assure and she says:

> "I have listened to presentations from NHS Scotland Assure about their purpose and function. I have raised questions to ask that increased clarity is brought to the distribution of accountability between individual boards and NHS Scotland Assure, for any future situations where the suitability or otherwise of a building is subject to review and challenge. That clarity should cover the corporate governance responsibilities of the territorial board and NHS Scotland Assure's role as part of NSS."

Now, is that a concern that you recognise and, if so, is there anything that is going to be done to clarify that accountability issue?

A I think that we had some clarity with the DL that was issued in February 2023 from Alan Morrison, which actually states that a commissioning or handover KSAR has to have a supported status from NHS Scotland Assure before it will be permitted to open to the public and patients.

Q Yes. Okay, and in what way do you see that as clarifying the division of accountability between Assure on the one hand and the boards on the other?

A I think that that will give some assurance to the Board itself that they have been compliant in the way that they should be around their healthcare build, but also to SG that the Board has been compliant and that, actually, that has been tested out through the KSAR process.

Q Okay. So, we can see that the origins of Assure were focused on assurance to the government that the standards are going to be met and so on, but do you see this evolving into a situation where Assure's involvement is also providing assurance to the boards themselves?

A Yes, and I think that a number of KSARs that we have completed, particularly for the national

treatment centres that opened, that actually that has proved to be the case. So, the KSAR process has been a good process for the boards to go through for them to understand that they have assurance that they have built their building to the best standards that they possibly could.

Q Okay, and is it also something that the public at large, the users of the facilities, can take assurance from?

A I think that the KSAR process is a very technical process that ensures that compliance is part and parcel of that process at a number of different points throughout the build. So, from the design-- I mean, as you know NHS Scotland Assure has only been in place since 2021. We have yet to follow an entire programme for a build through from initial assessment to handover and occupation, because obviously, of necessity, they take quite a long time to go through. However, those boards that have been through more than one KSAR have said that that process brings them assurance for their governance processes that they are doing the right thing.

Q Yes. Just returning to the perspective of the public on this, if the public are aware that a hospital has come through a handover KSAR, and that it has been supported by Assure, can they place confidence in that as a demonstration that the hospital is going to be safe for them to use?

A I think it is a mechanism by which they can take some assurance, yes.

Q Just in the context of how other people see Assure, I am going to read to you an answer which was given by one of the witnesses to the Inquiry. This was Lindsay Guthrie, who is the lead IPC nurse at NHS Lothian, when she was in, I think, last week, 1 March, and this is what she had to say about it, and I would just be interested in your response to this. So, she says-- and for anybody who wants a reference, it is page 155 of the transcript for 1 March. She says:

> "So, if I'm honest, I'm still not entirely sure I fully understand the role of NHS Assure in relation to some of these projects. It feels somewhat contradictory that there's an external scrutiny of the processes, which I think there is value in, but they don't have a scrutiny function. That's what we keep being told. So, I think, from a project perspective, yes, perhaps the role could be akin to

a clerk of work's role, but at arm's length, because again, my understanding is that NHS Assure don't involve themselves in the detail or any decision making around a project. It's really more about asking the project team to bring forward information for their review. From an IPC perspective, I think I'm still unclear what the role is or how that's anticipated to benefit Infection Control teams at Board level."

Now, you may be hearing this for the first time, so we can take your answer in that context, but this is the, sort of, anecdotal response of an IPC nurse. What is your reaction to that, and is there anything that can be done to help people in Ms Guthrie's position understand what Assure's role is?

A I think that that's quite interesting, in as much as NHS Lothian have only undergone one KSAR, and it was a limited KSAR that was an engineering infrastructure KSAR. So, I think that it is always incumbent to have an IPC person involved in that process, and I think, actually, one of our lead authors on the KSAR and involved in that process was one of our Infection Prevention and Control consultant nurses. So, it's always important for us to have IPC involvement.

We would hope that IPC understand through the HAI-SCRIBE process, which is part of the KSAR, that actually it is really important for IPC to be involved, and that ARHAI are there to help support the boards to mitigate any IPC risks that come to light during the KSAR process. So, we can't only have a technical solution to a healthcare build, we need to make sure that that dovetails with the clinical provision and that we take into account IPC practice.

Q One of the things that you refer to in your statement is an education programme.

A Yes.

Q Is there anything in that which is going to help people in health boards understand Assure's role and where they fit into it?

A So, we've already had some senior leadership sessions for execs and board members around the role of NHS Assure, the assurance services. We have a number of sessions around lessons learned to date, including lessons learnt from NDAP and KSAR. We also have some formal education that we have sponsored as well for IPC individuals, so the University of the Highlands and

Islands has an MSc healthcare module in the healthcare-built environment, and NHS Scotland Assure sponsored 15 places on this module for Health Board staff, including IPC staff. HAI-SCRIBE has been in place since 2007, and that also states the MD-- multidisciplinary team requirement for the healthcare-built environment and the risks therein.

Q Okay.

A So, we also have-- I know that there's also a national learning and development strategy, and I believe that the Chief Nursing Officer talked about his IPC framework which will replace the framework that was brought in in, I think, 2011 and that will have some role descriptors in it as well and refreshed domains of practice. So, I think that that will also help.

Q So, just-- In terms of the IPC involvement in these processes, there does appear to be some recognition that this is something that needs to be looked at and defined a bit more closely. Is that something that you would agree with from your perspective?

A I think that a lot of these actual education opportunities have been in place for a number of years. The addition that we could bring to that is the sponsorship of, perhaps, the MSc module, which we have. We also provide HAI-SCRIBE training whenever we are requested, and I think the last time that we went to Lothian was in 2022, and we provided some training for them there as well. So, we're always happy to do that on an ad hoc basis.

Q Okay. Just picking up what you say there about the MSc module at the University of the Highlands and Islands, is that something that is designed for IPC nurses or IPC doctors, or-- Who is that designed for?

A I think it's designed for anybody who has a role to play in the healthcare-built environment.

Q What is-- So, far as you know, what is the content of the course?

A I'm sorry, I don't know.

Q Okay. All right. So, Assure's involvement in relation to that is funding places on it----

A Yes.

Q -- rather than helping drive the content of it or anything like that?

A We may not have done that, but we are working very closely with NES around their healthcare-built environment framework.

Q Okay. NES, that is National----

A National Education Scotland.

Q Okay.

A And they've just completed a learning needs analysis around the healthcare-built environment.

Q Okay. That sounds like that is, perhaps, a staging post on the way to rolling out a programme of training?

A Mm-hmm. Yeah.

Q Okay. If we go back, please, to bundle 9 at page 73. Just to reorientate everybody about where we are, this is-- remember we looked a while back at the letter from the Scottish Government announcing the formation of NHS Assure? If we just go back up to page 70, so that everybody can see which document I am talking about. So, that was the letter which announced NHS Assure. So, page 73 is just part of an appendix to that letter which is providing a bit more information about Assure, and just picking up under the heading of "Governance," it says that:

> "Alongside building robust relationships across the system, NHS Scotland Assure and NHS Boards will jointly sign off Key Stage Assurance Reviews (KSARs) at relevant stages of the project."

What, in your view, does the sign-off mean? What does Assure sign-off to the Key Stage Assurance Review mean?

A So, I would say that the sign-off means that we have a supported status for the movement forward of that build, and that may not mean that everything that we require in the KSAR workbooks – and I think that probably Thomas will take you through one of those in more detail this afternoon – is forthcoming, but that an action plan will be developed alongside the KSAR which will allow risk mitigation that's been identified through that process. So, for instance, if we have a health board that have identified that they, perhaps, have not got-- I don't know, an electrical certificate or something like that, they will make sure that that sits on their action plan and is actioned before they move on to the next stage KSAR.

Q Yes. Okay. The way that it was put in the Target Operating Model, which was essentially setting the foundation for the development of Assure-- We do not need to bring this up on screen, but the reference, for anybody who needs it, is bundle 9,

page 19, and what it says is that:

> "The QHBE [which I think stood-- was an acronym standing for 'Quality in the Healthcare Built Environment'] will work with NHS Boards to deliver its services, ensuring transparency and ongoing reciprocal discussion of issues as they arise. Each report and remedial action plan will be jointly signed off by the QHBE and NHS Board, with the QHBE being jointly liable along with the NHS Board."

It is really that phrase, "Jointly liable," is-- The way that Assure has developed, has it been slightly watered down from what was originally in mind?

A I mean, bearing in mind I didn't join till September 2021, that has never been my interpretation of how NHS Scotland Assure would work.

Q Okay. So, for as long as you have been involved, it has always been the idea that the, sort of, legal responsibility for the project will remain with the boards and the boards only?

A Mm-hmm. Yes.

THE CHAIR: Right. I mean, at risk of just repeating what you have already said, Ms Critchley-- So, since 2021, it has not been your understanding that Assure was jointly liable in any way?

A No. That's correct.

Q Thank you.

A Thank you.

MR MCCLELLAND: If we could just go back to page 73 of bundle 9, just picking up from where we left off, the second paragraph under the heading "Governance" says that:

> "Healthcare Improvement Scotland (HIS) will continue inspections of NHS hospitals and services through the Healthcare Environment Inspectorate (HEI). NHS Scotland Assure will work with HIS to ensure inspections carried out by the HEI are supported by relevant expertise."

Can you just expand on the sort of expertise that Assure contributes to that process?

A I don't think that we do actually contribute to that process.

Q No. Okay. So, that is perhaps something which was intended at the outset, but is not done now?

A Potentially.

Q Okay.

A You know, I can't comment.

Q I mean, are you familiar with the inspections that the HEI carry out to any extent?

A Not particularly.

Q Okay. I mean, you may not know, and if you do not, please just say, but do you know whether their inspections cover the engineering systems in hospitals and their compliance with guidance?

A I don't know whether they do or not.

Q Okay, and then, just the next paragraph down, it says that:

"NHS Scotland Assure will form a strategic partnership with National Education Scotland to deliver the Workforce Education Development Service and will collaborate with PHS to share intelligence and expertise."

Is that something that is underway?

A Yes. So, we are working with National Education Scotland around career frameworks for our healthcare-built environment (inaudible) to build a framework wherein we take engineers earlier on in their career and develop them with the skills that we would require across NHS Scotland as a whole. So, we're not just looking at that as a recruitment for NHS Scotland Assure; we're looking at how we can do that to support all of the health boards.

Q Okay, and is that something which is still being developed, or is that in operation yet?

A No. It's in its early stages at the moment, but we're working with NES around how we could do that and what the career framework and pathways might look like.

Q Okay.

A We do have a model that we could base it on because we have that for our healthcare scientists.

Q Are you able to say at this stage – again, you may not if it is still at an early stage – but do you have any feel for when that idea might start to generate engineers with the right kind of expertise?

A Not yet.

Q Not yet. Okay. If we go, please, to page 75 of bundle 9. This was, I think, the letter you referred to earlier. It is "DL (2023) 03," again, from the health finance directorate of the Scottish Government. This is the letter which says to health boards that:

> "…all building projects going through a KSAR, should not open to patients or the public until you receive a 'supported status' from NHS Scotland Assure."

Was that the letter that you were referring to earlier?

A It was.

Q Yes. So, I think it is the

case that Assure does not have any formal enforcement or inspection powers, but would you agree that it does, in practice, have a power of veto over the opening of health care facilities?

A I would say that, yes, potentially it does. However, practically, this has encouraged the closer collaboration between NHS Scotland Assure and the health boards. So, actually, we have become a supportive mechanism in ensuring that the health boards want to get this right first time.

Q Yes.

A And it has been a positive move, I would say, particularly for those buildings that we have opened since this DL came into place.

Q Yes. I mean, one can see that everyone involved in this process wants to have a hospital which meets the requirements.

A We do.

Q Would you agree that the potential of a veto, the potential of that power sitting in the background, is what encourages the health boards to go along with what Assure are suggesting, if I can put it that way?

A I don't think it does necessarily. So, the relationships that we have built, both the KSAR teams and myself with the SROs for the majority of projects that have opened, have been really positive and fruitful. We are all wanting to provide the best quality care that we can for the public of Scotland.

So actually, there isn't any difficulties around the suggestions that we might be making to support the health board to get it right.

Q Yes. So, I think what you are describing is perhaps a more collaborative approach than my question might have suggested.

A That's right. Yes.

Q Yes?

A Yes.

Q Okay. Would you accept this much, that the KSAR process gives Assure a substantial degree of influence on the way that health boards proceed with their projects?

A I think it is an encouragement to get it right first time. I think that, as we move from a build that has the entire programme utilising the KSAR and NDAP process, that actually health boards will find this more and more easy.

So, as we look at a project from design phase right through to occupation, I think that we will solve problems earlier on and identify issues earlier on, which will lead to less and

less derogations and remedial actions closer to commissioning and handover.

Q Okay, that is an interesting point. Does that work in two senses? So, on a particular project, if the project is going through the KSAR process, would you anticipate that that process will become more streamlined and easier as it goes on on the basis that if you have confronted the problems earlier, there are fewer of them later?

A Potentially, yes.

Q Does it also work in a broader sense, that once a health board has been through the KSAR process for one project, it will perhaps have a clearer idea of what is required for future projects?

A Yes.

Q And learn from the experience?

A Yes, and we've had feedback exactly echoing that.

Q Okay. So, is the expectation that the KSAR process is one which might be quite resource-intensive at the early stages of its existence, but become a more streamlined thing in the future?

A I think it will always be resource-intensive, particularly around commissioning and handover. When you've actually got the shell of a building there that is ready to deliver services, one must always make sure that that is actually correct.

Q Okay. If we could go then to page 90 of bundle 9, please. This is the document I think everyone refers to as the "tube map."

A It is. Yes.

Q Okay, and if we can just imagine ourselves starting our journey-- I think the start point is up in the top left-hand corner. Is that correct?

A It is. Yes.

Q We see there a blue line which goes from the start, and it goes through "Strategic Assessment," then "Initial Agreement," "Outline Business Case," and "Full Business Case." So, do we see at each of the initial agreement, outline business case and full business case, there is a Scottish Government Capital Investment Group decision point?

A That's right.

Q Also, we see there that at the initial agreement stage, there is our NHS Scotland design assessment process box. So, that is an NDAP?

A That's an NDAP, yes.

Q Then, if we look at the outline business case and the full business case, we see that at those CIG decision points, we have got both

a Key Stage Assurance Review and an NDAP.

A Mm-hmm.

Q So, are these-- Just in overview, are these the processes that are intended to provide the level of assurance that the CIG needs to allow the project to proceed on to the next stage?

A Yes, they are. However, we are looking at an integration programme within NHS Assure. We are only in our infancy.

Q Yes.

A We are still revising our governance frameworks and the requirement that we have for boards. So, I'm not saying that that will remain exactly the same moving forward.

Q Okay. Then if we move from the blue line onto the sort of olive-coloured line and then the green one, do we see there that in the construction phase there is Key Stage Assurance Review, and it says there, "…the number to be determined on a project-by-project basis"? Is that something that still happens, or is there just one KSAR?

A No. It's something that happens depending on what the build is and how large it is and also how complex it is.

Q Okay. So, can we take it that the more complicated or large-scale project, the more likely it will be that there is more than one KSAR?

A There is the potential to be more than one. Yes.

Q How is the number of KSARs determined? Is that decided by the CIG? Or is that done in consultation with the board?

A In consultation with the board.

Q Okay, and then if we just move on round to the green, we see that at the handover and commissioning stages, there is a Key Stage Assurance Review.

A Mm-hmm.

Q Then after that, there is a box that says, "Project KSAR Lessons Learned."

A Yeah.

Q Can you just explain to us a little bit about what that involves?

A So, in lessons learned we have done a programme of learning network events with presentations to the health boards, and also sometimes their supply chain partners, around what lessons we've learned from that process and how we can be reactive to the support that another board going through that process might require, if there are any themes that were particularly difficult, if

there is any way that we can revise how we do that, and also if there are any recurring themes from build projects as well.

So, we're very keen to have lessons learned. Even around the outline business case and full business case, we've done some lessons learned and learning networks. We've also done some Key Stage Assurance Review from the health board's perspective. So, actually they've given us feedback around how it's felt for them and where we could have perhaps done things differently. So, we're really keen.

We know that we're in our infancy. We know that we may not stay in the format that we currently have, but we're very keen to do that in collaboration with our partners.

Q Okay.

THE CHAIR: Just so that I am following this. In each project, irrespective of how many other KSARs there are, there will be an identifiable stage in the process where the object is simply lessons learned?

A Yes.

Q That will be, typically, a meeting?

A It could be a meeting, or it could be a number of meetings or a workshop. We will deliver that however the board wish to do it. They may wish to deliver to us their lessons learned, and we would deliver to them our lessons learned, and from that, we would make some improvements if they were necessary.

Q Thank you.

MR MCCLELLAND: We have discussed the issue of accountability already this morning, but if I could just return to it briefly. Do you think it is likely that success in the KSARs will come to be seen as a kind of benchmark of compliance for projects?

A I think so. We don't have anything else like the KSAR process in any of the other devolved nations, and we have had some very interesting discussions around that. In fact, last year, I presented at the IHEEM conference around our governance process and the KSAR process. I meet regularly with my counterparts from the devolved nations. So, I think that there is something around we are seen to be leading the way in this.

Q Yes. Okay. So, there were a few things there. First of all, IHEEM. That is I-H-E-E-M?

A It is.

Q An acronym.

A Yeah.

Q Do you happen to know what that stands for?

A I don't.

Q No? I think it is something to do with healthcare engineering, but----

A It is. Yes.

Q -- we can, no doubt----

A **I** can't remember the exact words.

Q Okay. So, I think what you were saying is that you think this might be regarded as a model for other devolved nations to pick up on. Is your impression that they are interested in doing something like that?

A It is. So, we each talked about our governance structures and how we gained assurance in the healthcare-built environment. There was a large amount of interest in how we are doing that here and what that means for our healthcare care build risks and the reduction and mitigation of risk.

Q Okay. It is very helpful to have that answer. When I asked about coming to view the KSARs as a benchmark of compliance, I was not so much thinking about how other people view it as how the health boards themselves view it. I was wondering whether they will come to see the KSAR as the way in which they satisfy themselves that their hospital is compliant. Do you think that is how they will come to view it?

A Yes, and we have had some feedback to that effect as well.

Q Okay. Now, on major infrastructure projects, boards will typically engage both designers and technical consultants.

A They will.

Q Part of their function is likely to be ensuring compliance with applicable guidance.

A Mm-hmm.

Q The question is, how do you see that mix working? If you have got designers, technical consultants and Assure all contributing to compliance with guidance-- Well, first of all, is there a risk that one is duplicating effort and expense?

A I don't think so, because the KSAR process, the KSAR workbook process, just allows the Health Board and their supply chain partner to demonstrate their compliance and their achievement of standards and guidance. So it gives them an explicit way in which to document the processes that they've been through and thus show how they are mitigating any risks that might have arisen.

Q So, you see Assure as doing something quite different from what the designers and the technical

consultants are doing?

A Yes. I think that they are looking at how operationally a building will function as well as the compliance around that.

Q Okay. I mean, I never want to put words in a witness's mouth but is one way to look at this that Assure is holding up a mirror to the designers and the technical consultants and the Board, so that they can reflect on what they are doing in relation to the compliance with guidance?

A I suppose-- Yes, I suppose in a way it could be.

Q And is it another risk that perhaps arises that if Assure are effectively the gatekeepers to the opening of a hospital, that at least de facto, even if not in law, it will be Assure rather than the designers which is determining what constitutes a compliant facility?

A I think that what we're doing is allowing them to give themselves assurance around whether or not they are compliant with any kind of guidance, building regulations, etc. I don't think that it is us stating that, it is them demonstrating.

Q I mean, is there any risk as you see it of blurring the lines of responsibility for compliance with guidance----

A No.

Q -- between designers and Assure?

A No, I don't think that there is.

Q And why do you say that?

A I think that it's very clear when we go through the Key Stage Assurance Reviews and the workbooks, the requirements that we have around documentation. So I think it is very clear what we're asking them to be able to demonstrate.

Q Okay. If you could go, please, to bundle 9 at page 14. This is returning to the target operating model and just really looking at the vision box. So, again, this is obviously before Assure comes into existence, but the vision was-- Oh, I have just lost my screen.

A So have I.

Q There we go. What it says in the vision box is:

> "To be an internationally recognised national centre for reducing risks in the healthcare-built environment."

And it is really that vision of being internationally recognised, and to what extent has that aspiration been achieved?

A I think we touched on that in the last set of questioning around the fact that the devolved nations are quite interested in how and what we are doing. We are happy to work with the devolved nations around what their processes are, and we have been open and transparent about sharing what we are doing here.

Q Okay, and has there been any interest-- I mean, I appreciate you are still in your infancy, but has there been any interest from beyond the devolved nations?

A I don't know that there has been specific interests, but we are quite often asked to present at conferences. So I think that there is some interest in how we're approaching this.

Q Okay, and do you see any particular benefits accruing to Assure or to the NHS in Scotland from any international recognition that is achieved? What would you see the benefits of that being?

A I think the benefits would be around validation of a process for a new build, so that actually we are working in collaboration with a health board to produce a building that is fit for purpose and actually delivers safe clinical care, and I think that that would probably be the outcome that we would want replicated.

Q Yes, I am just trying to understand if-- whether there is a sort of-- I mean, one can see that wanting to be internationally recognised is a sort of badge of approval, but I just wondered whether you saw any benefits deriving from that?

A I think that the benefits are around the research that we're doing. So we have a research partnership with Edinburgh Napier University that we're looking to produce more research around the healthcare-built environment explicitly and exclusively. So I think that that will benefit the wider audience, not just NHS Scotland, England, Wales, Northern Ireland. It would probably benefit wider than that.

Q Okay. Now, if we stand back and ask ourselves why the need for assurance arises, would you agree that it is at least in part due to the fact that complying with the guidance is a difficult thing to achieve?

A Yes.

Q And that there is a lot of it. You know, if one adds up all of the SHTM series alone there is a lot there, and as guidance it is by definition not prescriptive and so judgment is needed when health boards come to apply it. I appreciate that you are not a

technical building person, but, in your view, is there a scope for simplifying the task of health boards by making some of the guidance more prescriptive or mandatory?

A I think that it would be really difficult to cover or mandate for every potential scenario. So it is more simplistic for a new build, it is much more difficult for an existing build. I think from a technical perspective, it would be very difficult to write the guidance that covered every eventuality.

Q I mean, in the particular context of refurbishment, is the difficulty there that one is constrained by the existing building and the way that it was built, perhaps, in the Victorian era?

A Yes, in a very non-technical layperson----

Q Yes.

A I would agree with you, yes.

Q Yes, okay. So, is there perhaps more scope for being prescriptive in the context of new builds than there would be in the context of refurbishment?

A Potentially, but then you run the risk of having a two-tier guidance system, which I think may complicate things further.

Q Okay. One of the things that you cover in your statement is the standardisation of rooms and repeatable rooms and standard designs and so on.

A Mm-hmm.

Q If we could just go there, it is witness statement bundle 1, page 262. It is paragraph 81 of your statement. Yes, and you are talking here about-- You say:

> "Repeatable rooms, standardised room configuration and standard designs that will meet requirements of the function of that space, are being used to reduce design costs, embed quality and benefit patient care. Standardisation is one of the areas NHS Scotland Assure has engaged in from a research perspective and has developed repeatable rooms for use, linking in with national and international research."

A Yes.

Q Can you just explain what is meant by the "repeatable rooms" and what you see as the benefits?

A So, a repeatable room is something that is a standard room in every hospital. So you may take a treatment room and actually the

requirements for that room will probably be the same wherever it is situated in whichever hospital, and therefore you can standardise the room configuration and design so that it will meet the requirements and the function of that space. That actually reduces the need for a design and if it's standardised, you will embed that standard and quality will be easier to replicate. So, for instance, if you have a treatment room, you will say for this treatment room it should be this size, it should have this type of equipment in it and it will be utilized for the following clinical scenarios.

Q Okay, and we have been supplied with a document about repeatable rooms. So if we could go to bundle 13, volume 10, page 159, and we can see there just down from the bottom left-hand corner that this is an HFS document from December 2020 and it is just described as a draft. So this is preceding the existence of Assure, but, I mean, is this a document that you are familiar with? Did you recognise it or----

A I have seen it before.

Q And to what extent does that represent the current position in relation to repeatable rooms, or have things moved on?

A It doesn't. We've moved on.

Q They have moved on?

A From there, yes. So, we have three repeatable rooms or standardised room fit-outs now, and we have another seven in the pipeline.

Q Okay. Now, this document, at the time that this one existed, if we just go to page 161, for example, we see there the rooms that were covered at that point in time which were, I suppose, what one might call reasonably straightforward rooms, so adult single bedrooms----

A Mm-hmm.

Q -- and en suites and a consultation room at the bottom. What has that expanded out into? Which other rooms are now available in a standardised format?

A I'm sorry, I couldn't tell you.

Q Okay. Well, maybe Mr Rodger can help us this afternoon.

A He might be able to.

Q Okay, and I think you said-- Did you say there were ten rooms, I think?

A We've got three, which is the bedroom, en suite, exam room, and then we have a further seven in development.

Q A further seven in development. Yes, okay. Now, one of

the things that you mention in your statement, and I think you may have mentioned it again this morning, is the NDAP process. That is something else that Assure runs----

A It is.

Q -- together with the KSARs. Can you explain how the NDAP and the KSARs interrelate and, really, in particular, when it comes to the compliance of design with guidance for engineering systems?

A So, the NDAP has been in use since 2010, and it is looking at the design and practicality of a build. The NDAP process typically ends at full business case because the design should be locked in by then. So KSAR will look at electrics, medical gases, ventilation, water, fire. NDAP is broader than that. It looks at the design process for a building. It will also look at the energy requirements, the amount of light that's let in, the usage of those rooms and how that will link in. So it is more of a design type of review than the KSAR. So I think that the NDAP process is managed by property and capital planning team within NHS Scotland Assure and the KSAR is predominantly managed by engineering. So NDAP, the process is also mandated and is part of the Scottish Capital Investment Manual process.

So I think that we acknowledge that we are asking boards to complete an NDAP and a KSAR at certain points around the tube map, as we looked at earlier. As I said, at that point, we are doing some internal integration processes and that may not remain for the long-term future.

Q Okay, and is that in recognition of the fact that the NDAP, at least as traditionally envisaged, overlaps to quite a large degree with the content of the KSAR?

A Some of it does, but some of it is very different, and we wouldn't want to lose what we capture with that because it gives a differing view of the build requirements.

Q If we could go, please, to 2022 bundle of documents, bundle 8. I do not, unfortunately, have a page number, but if we could go to the inventory. Yes. If we can go, please, to page 63 of that bundle. So, this is the Scottish Capital Investment Manual, Supporting Guidance: Design Assessment in the Business Case Process. We can see down at the bottom it is from July 2011. Now, is this a document that you are familiar with? I do not want to----

A It has been superseded in 2017.

Q It has been superseded? Okay.

A Or updated in 2017----

Q All right.

A -- is my understanding.

Q Well, it may be that this particular question has been superseded by the 2017 guidance, but if we could go, please, to page 65. We see there a heading, "Compliance with Healthcare Design Guidance," and it refers to the Policy on Design Quality for NHS Scotland, and that was introduced in 2010. It says:

> "The SGHD [so, Scottish Government Healthcare Directorate] must provide guidance on compliance with those aspects of statutory and mandatory requirements which are particular to the procurement, design and delivery of healthcare buildings and guidance on best practice. This will be effected through the support to be provided by Health Facilities Scotland [and others]…"

And then it goes on to say that:

> "Accordingly projects submitted to the Capital Investment Group (CIG) for business case approval will be assessed for compliance with current published guidance. To facilitate this, Boards will be requested to submit a comprehensive list of the guidance that they consider to be applicable to the development under consideration (see inset on next page), together with a schedule of derogations that are required for reasons specific to the project's particular circumstances."

Now, if we go over the page, we see a list of the kind of guidance that we are talking about. So, it includes the SHTMs, and then just in the text underneath the box, it says that:

> "The NHS Scotland Design Assessment Process will then make an assessment of the design information available each business case stage for compliance with the guidance."

Now, it may be that in this respect the 2017 guidance supersedes this, but my question was simply, to the extent that the NDAP covers compliance with SHTMs and so on, is the view that that has now been superseded by the KSAR process?

A I don't think that it is. I think that there are some similarities between the NDAP and the KSAR process and there may be a bit of duplication, however that isn't

everything that the NDAP does.

Q No, I appreciate that. I am really just focused on the question of compliance with SHTM guidance, whether that is something that now leaves the NDAP and is dealt with by the KSAR.

A I think it's probably dealt with by both----

Q By both?

A -- currently.

Q Yes, okay. I think you said that there is a review under way to----

A Yes.

Q -- look at all of this, and is streamlining it in the event of overlaps one of the things that you will be addressing?

A Yes, it is.

Q I note the time, my Lord. I still have a few minutes' worth of questions for Ms Critchley, so that may be an appropriate time to stop, if convenient.

THE CHAIR: Well, I will be guided by you, Mr McClelland. It would seem a convenient moment to take a coffee break. If you could be ready again to resume at ten to twelve? Thank you, Ms Critchley.

THE WITNESS: Thank you.

(Short break)

THE CHAIR: Mr McClelland.

MR MCCLELLAND: Thank you, my Lord. Ms Critchley, we talked earlier about the range of services that NHS Scotland Assure provides to health boards. Are any of those services for which the health boards have to pay Assure, or are they all just provided in the course of the NHS's work?

A They're all provided in the course of NHS's work.

Q So there is no-- for example, the advice, if a health board calls up for advice----

A We don't charge them.

Q There is no charge, okay. There was a reference, I think, in your statement to the provision of authorising engineer services. Again, is that something which is just provided or is that charged for?

A It is. It's just provided.

Q It is just provided, okay.

THE CHAIR: Sorry, what was that again?

A Authorising engineers, we'd just provide that service.

Q You provide that-- Well----

A Yes.

Q You do not make a charge?

A We don't.

Q Thank you.

MR MCCLELLAND: Another topic that you touched upon in your statement, I think, is what happens if, through the KSAR process or perhaps otherwise, a conflict arises, or a disagreement arises, between the views of the Assure engineer on the KSAR team and the design engineer engaged by the Health Board, perhaps. How are those sorts of disagreements resolved?

A So, we have an escalation process, although I must state that we have never had to use it. So, in the first instance, if we have a disagreement on something that's in a KSAR report, then that would be referred to the KSAR team to have that discussion first. If that that didn't resolve the issue, then it would potentially go to our head engineer, Thomas, who you will see this afternoon. If that then didn't resolve, we would-- it would go up to the assistant director of engineering and assurance. If that didn't resolve, it would come to myself, and then if that didn't resolve, it would potentially escalate to our chief exec, Mary Morgan. However, as I've stated, we have not had to use that escalation process.

Q Okay. I appreciate this is a hypothetical question, but if the disagreement concerned something like the SHTM guidance, something for which Assure is responsible, something which Assure itself publishes, would Assure regard itself as the gatekeeper of what that guidance means?

A I think it depends on the circumstance. So, that could be quite different in different circumstances. However I think that we understand that the extent of the guidance isn't always totally, totally up to date because of the cycle of updating. So, most of our SHTMs come from HTMs from NHS England. Their cycle is round about every five years. We know that sometimes research will supersede that. If we feel that that is appropriate, then we'll have that discussion with the Health Board.

Q Okay. So, I think you are describing there a sort of open-minded attitude. If a question comes up about the guidance, you are, potentially at least, open to persuasion of the view taken by a design engineer, but if there is a situation where Assure sticks to its guns and thinks that the design engineer is wrong, does that then come down to what we were describing earlier as the sort of

practical power of veto? That, ultimately, Assure would be able to say, “Well, we think that your interpretation is wrong, and we are not prepared to support the project if you continue on that basis”?

A Well, in that instance, if necessary, we would escalate to SG as well.

Q To the Scottish Government?

A Yes, and they would become involved in the discussion.

Q Ultimately, the KSAR process is there to support the decision-making of the Capital Investment Group.

A Mm-hmm.

Q So, in that sort of situation, if there was a genuine dispute over a technical issue like that, rather than Assure simply determine the matter by saying, “We do not support the project,” you are saying that you would be able to lay that information in the open to the CIG and let them decide how they wanted to proceed?

A Yes. Potentially, yes.

Q Yes, okay.

A Although, as I state, we haven’t had to use any escalation process.

Q You have not-- Yes, that hypothetical has not yet been crossed.

A Yeah, no.

Q Yes. You say in your statement that no project has yet gone the full way around the tube map, through all of the KSARs, but that, nonetheless, lessons are being learned on an ongoing basis. So, I take it from that that the KSAR process is one which is likely to evolve as time moves on?

A Yes, I think so. I mean, we are in our infancy; we’re only two years old. We’ve done an awful lot of looking at the governance processes that we have in place. We work very collaboratively with the health boards. We understand that, actually, we may evolve from where we are now. We work also very closely with Scottish Government, they are very content with our direction of travel, and obviously we would discuss anything with them as well.

Q Okay, and are there any particularly big lessons that have been learned from the KSAR so far that have had an impact on the way that they are carried out?

A I think that there is something about how much information we may require or could potentially be submitted as part of one of the KSAR workbooks. If we’re

looking at a very large-scale build project, then that can be many thousands of pages of documentation. I think what we have learned is that we will not wait to publish a report before we find any issues.

So, if we're looking through a KSAR workbook and we're coming to the conclusion that there is an issue that has not been risk mitigated, then we would contact the Board directly. So we wouldn't wait until we'd done the whole of the workbook before getting back to the Board. I think that that speaks to the collaboration and the relationship that the KSAR team will have with the Board.

Q Okay, so, are you, by that by that process, intending to give the Board the earliest possible notice----

A Yes.

Q -- that there is an issue that might need to be addressed?

A Yes.

Q In terms of the volume of documentation, as you say in your statement, you say that some of the complicated projects can lead to thousands of documents----

A They can.

Q -- being provided to Assure. Is that something that you have been able to streamline or, again, is that something where it is just on the radar screen as something to be looked at?

A I think for some of the projects, it's absolutely necessary that we see that level of detail and documentation. I think that as we work our way through the processes, as I said, we haven't gone all the way around the tube map. It may be something that we actually look to address, but currently we're thinking that actually it is appropriate.

Q Okay, and does Assure recognise that there may be, on any building project, time pressure or commercial pressure to move things on?

A Yes.

Q Whereas Assure perhaps has the luxury of being free from those pressures, and does Assure take steps to make sure that it is fitting in with the sort of timescales that affect----

A We are----

Q -- health boards and their project?

A Yeah, we are endeavouring to do that. As I stated earlier, once we start to go through a project right from the start, we're hoping that as we pick up risks and mitigate those earlier on, then actually that slows the amount of derogations

or anything that might need to be done at the commissioning and handover stage.

Q Okay.

A So, whilst it might take a little bit more time earlier on, it should save time later in the process.

Q Okay. We touched earlier upon the topic of involvement in the KSAR process by infection prevention and control staff, and the Inquiry has heard evidence from IPC team members at NHS Lothian, and I take what you said earlier that NHS Lothian, I think, has only been through one KSAR and it was restricted to a particular topic, I think.

A Yeah, electrical infrastructure I think it was.

Q Okay, but the witnesses from NHSL have expressed concerns about the extent to which the burden of compliance with built environment guidance is falling on them, the IPC teams. If we could go, please, to the bundle 13, volume 7 at page 332. Page 332, please. Now, there is no reason to think that you will have seen this email before, Ms Critchley. It is an email which is passing around within NHS Lothian, and it is in the context of the Assure Key Stage Review that NHS Lothian was undergoing. I am just going to read from it. I am going to ask you some questions about it.

So, it is from Lindsay Guthrie, who is the lead IPC nurse at NHS Lothian, and she says:

> "Hi all
>
> Can I ask if the attached NHS Assue tool has been shared with others at an Exec/Board level please? The Assure process or KSAR tools have not been discussed or shared with the IPC Managers Network nationally but is now live…
>
> Is a gap analysis planned to identify any weaknesses in capacity, system/process or governance as outlined in the attachment?
>
> I have to highlight my significant concerns re the NHS Assure expectation about the level of IPCT involvement in projects following a discussion between Assure and my HAI lead nurses and make you aware that we do not have the capacity in the short or medium term to provide this.
>
> There is a policy/national ask here which has not been informed by IPC workforce or capacity scoping exercise and is in direct conflict with the wider workforce issues already

identified in the SG IPC National Workforce review.

I am not aware of any plans nationally for additional investment in IPC capacity, but even if funding is available, there is simply not a pool of suitably qualified and experienced IPC nurses or doctors to provide the required expertise."

Now, can I just ask in general terms, what is your reaction to what you see here, which is the reaction of an IPC nurse on a health board to what is being expected of her in a KSAR context?

A That isn't something that's echoed through the other health boards. So I don't think that we have had that level of pushback from anybody else. I think that the skills that we're asking for are those that are in HAI-SCRIBE, which has been in place since 2007, and also there was the 2011 piece of work which is now being repeated by the Chief Nursing Officer Directorate around healthcare build knowledge and skills and the role descriptors.

So, I think that whilst I do understand what she's saying, I don't think that, as we've discussed earlier, that actually the IPC capacity has diminished in the boards because we've had a circular move of staff around. I would be very, very surprised if we hadn't gone through the IPC networks around the KSAR process. Also----

Q Sorry to interrupt you, but----

A No.

Q -- was that something that happened prior to your arrival at Assure?

A Yes. Yes.

Q Yes, okay.

A But also there is a section in the National Infection Prevention and Control Manual which has been developed for IPC teams to support them through the KSAR process.

Q Do you know when that came online?

A No, I don't know the exact date, I'm afraid.

Q Okay. I mean, might it have become available subsequent to that email which is-- that email is from March 2022?

A I don't know.

Q Do not know. Okay. I mean, from your perspective in Assure, do you see the KSAR process as one which is adding to the burden of IPC teams in health boards?

A I don't think that it is,

because they've always been ascribed to be part of the process of a healthcare build. So, from 2007 when HAI-SCRIBE came in, there has always been a role for them. I don't think that the ask is much more onerous than it ever has been.

Q Okay, so if the perception of IPC teams and health boards is that the KSAR process is massively increasing the burden on them, is that likely to reflect a misunderstanding of what is expected of them?

A I don't know because I haven't had feedback like that. So I would just be guessing if I responded.

THE CHAIR: I mean, I am right in thinking that with, let us take the example of a new build, there are the requirements-- strictly speaking, not specific to the Infection and Prevention Control team, but there are requirements on the health board to go through the HAI-SCRIBE process.

A Yes.

Q That will involve pieces of work at specific times, and the KSAR process will involve maybe similar sorts of work but at different times and additional pieces of work. I mean, I have got that correct?

A I think so, but there would also be the submission of some of the HAI-SCRIBE documentation as part of the KSAR.

Q Yes, but the KSAR process is additional.

A It is.

Q I can see that work done in one process might inform work in the other process, but it is not just the same bits of work.

A It's not entirely the same.

Q No. Thank you.

MR MCCLELLAND: You said that you had not had feedback from IPC nurses about the KSAR process. Is this an area where there is scope, perhaps, for dialogue with IPC representatives to make sure that they are correctly understanding what is expected of them----

A Yes.

Q -- through the KSAR process?

A Yeah, and, you know, we are happy to support that process from an ARHAI perspective, and we do take part in the IPC networks, we do provide training opportunities and learning networks around IPC and the healthcare-built environment. As I've said, we are happy to sponsor training opportunities as well.

Q Okay. Would you see that as a route through which there might be possible further refinement of

the KSAR process to make sure that the demands placed on IPC teams are demands that they are sufficiently resourced to meet?

A We're always happy to have a look at the processes that we've got in place to make sure that they are as efficient and effective as possible.

Q Yes. Okay.

A And ARHAI are part of our internal integration programme.

Q Okay. Now, one of the themes that comes through from the evidence from the IPC people is that they do not want to be seen as building control officers, but they feel that that is the nature of the burden that is coming on them. What they want to do is to confine their input to things that fall within the recognised scope of their professional qualifications. I would assume that Assure would want to proceed in that way too.

A Yes, and, you know, I think that the work that the CNO is doing to replace the 2011 programme will help to support that process too. I would say that HAI-SCRIBE actually clearly articulates that it is not just IPC nurses who need to be involved in that process, as does the KSAR process.

Q Yes.

A We would not wish for them to do anything outwith of their competency.

Q Yes. Could I ask you a question about knowledge transfer? The Inquiry has heard evidence again from NHS Lothian's IPC team that when concerns about water and ventilation systems at the Queen Elizabeth Hospital in Glasgow were emerging, from around March 2018 to July 2019, this will be before your time---

A Yes.

Q -- but this is the period that we are talking about. What they say is that there was a lack of proactive information provision from HFS and HPS to IPC teams in NHS Lothian, and the question is simply does Assure have arrangements in place to keep health boards informed as and when IPC risks start to emerge elsewhere within the NHS?

A We do, and we would use the lessons learned process for that. However, my understanding is, in this particular case, that the medical director from Glasgow was going to feed back directly to the medical director from Lothian and asked our staff not to do so, and that is minuted in a meeting.

Q Okay, and just moving

from that specific issue to the general one, one can imagine that IPC risks may start-- or IPC concerns may start to emerge in a particular part of the NHS, but it may not always be clear what the cause is, or what the source is, perhaps even what the solution is. How is something like that handled within Assure, where there is that sort of growing issue, perhaps an element of uncertainty associated with it, but there may be a need to let other health boards know what is going on? How is that dealt with?

A So, we have a process by which we-- that's described in the National Infection Prevention and Control Manual which describes how a health board should report an infection. We would look at that. We would then look at if there were any other infections in the same health board that were caused by the same organism, and then we would have a dissemination process by which we would be able to discuss that. That potentially may go through the infection prevention control networks. I think that we would also do some research into that. So we would look at whether or not there is any literature reviews that we may be able to do, and then we would hope to share that information wider.

Q And is there an existing, established and recognised process for doing that which is followed when that sort of information emerges, or are you just simply saying how you would expect to react when that sort of information came in?

A I think that there is an existing process through which that will happen.

Q Okay. Now, at paragraph 126 of your statement, which is witness statement bundle 1, I think page 277 or maybe 276. Yes, paragraph 126. So you say there that:

> "Assure, SG and the Health Boards now have governance systems and processes … that significantly mitigate health care build risks. In relation to the RHCYP/DCN, I consider it would be likely that such significant issues as did emerge could be identified through the governance processes that NHS Scotland Assure and Health Boards now have in place."

Could I just ask, why do you say that?

A I think that because we now have the tube map with the KSAR and the NDAP process, that we would have a number of points within a healthcare build programme at which

we would seek to identify any risks and any non-compliance with guidance, and whilst I cannot say categorically that that wouldn't happen again, I think that we would have the opportunity to identify risks now in perhaps a way that we didn't before.

Q To what extent are you familiar with the particular details of the way the issue occurred at the RHCYP in relation to the critical care ventilation?

A I have no real in-depth knowledge of that at all.

Q Yes, okay. I mean, just at a very high level, on one view of the evidence at least, the Health Board engaged a designer which produced a design, which the designer believed and still maintains was compliant with the guidance. The contractors told the Health Board that the design was compliant with the guidance and the ventilation system as built had been supported by a clinical risk assessment, which supported some of its parameters. Now, given all of these elements, do you still think that the KSARs would have picked up the non-compliance issue?

A I don't know. However, if we had a situation similar to that now, the KSAR workbook documentation would allow us to seek assurance around some of those things.

Q Okay, so in responding to the workbook questions, do you mean that documentation would be produced, and at the very least, that would present an opportunity for a second pair of engineering eyes to look over what was going on?

A Yes.

Q Yes, okay, and I take what you said, that you cannot be categorical that it would have picked it up. Now, if we look to the future, one of the things that has arisen is what is sometimes described as a more challenging fiscal environment, and so there is perhaps a reduced prospect of new-build hospitals and more likelihood for refurbishments and maintenance instead.

A Yes.

Q Do you see that as affecting the way that Assure does its work, and if so, in what way?

A I think that it will mean that we have less new builds, but I don't think that it will mean that we have less work. I think what it means is that we will need to pivot and look at refurbishment opportunities and realignment of service delivery, perhaps in a different environment, and I don't think that the requirement for my staff's skills will be reduced by

that at all.

Q We mentioned earlier that it can be more difficult to comply with guidance in the context of a refurbishment. Do you anticipate, therefore, that there might be more pressure on this question of compliance and a need for greater judgment about whether design solutions are appropriate or not?

A I think that that is a possibility. I think that we will have to be very clear when we're looking at refurbishments in the future around the clinical strategy linking in with how we're going to deliver services and where we're going to deliver them, and, yes, I do think that there may be a requirement for more collaboration around the solutions that might be required.

Q And then finally, on the question of recruitment, we touched upon this earlier and you explained that there were processes underway to deal with the way the workforce does its work, which in some way is going to free up resource, I think, was the broad effect of it. Do you feel that Assure has enough engineers and enough infection control people to do what is expected of it, or are there still pressures which are going to have to be confronted?

A I would say that we've gone from an organisation with a very small number of engineers to an organisation with 16 to 18 engineers now. We are able to probably consume our own smoke at the moment with the work that we have on hand----

Q I have never heard that phrase before. What does that mean?

A Sorry, that's a Lancashire colloquialism. I'm really sorry.

THE CHAIR: No worries. We are open to education.

A It means that we are able to cope with the work that is coming in that we know about. So the remaining builds and the KSARs that we've got on the books at the moment, we're probably able to think about being able to do that ourselves. However, we will need to monitor very closely our work plans and the work that will be coming in because of the pivot to refurbishment and delivering services in a different way.

MR McCLELLAND: Yes, okay. Thank you very much, Ms Critchley, for answering my questions. It may be that others have some questions, so please stay where you are for the time being.

THE CHAIR: Ms Critchley, just

really a small point, picking up on your answer about provision of authorised engineers.

A Mm-hmm.

Q Now, as I understand it, the authorised engineer is a term of art used in, for example, SHTM 04-01.

A Mm-hmm.

Q And the effect of the technical memorandum is to impose certain obligations----

A That's right.

Q -- on the health authorities to instruct authorised engineers to do certain things. Now, as I understand it, at present, a health board would usually go to the private sector for that.

A Yes.

Q They may have their favoured consultant and it may depend on the availability of that consultant, but do I understand from your answer that if a health board wished, they could apply to Assure and say, "We require an authorised engineer to do this", and you would simply respond to that?

A Currently we would; however, we do not have the capacity to respond to every board. So, currently some boards employ their own authorising engineers. We were providing that service as a supportive mechanism as a proof of concept to see whether that worked or not, but if we were going to provide that holistically across the whole of NHS Scotland, we wouldn't be able to do that without an additional resource.

Q Yes. Right, thank you. Now, as Mr McClelland indicated, there may be questions which the legal representatives would wish him to add to the questions he has already directed to you----

A Mm-hmm.

Q -- and our practice is to allow about 10 minutes or so for discussion of that. So could I ask you to return to the witness room in the expectation of coming back in 10 or 15 minutes to confirm what the position is? Now, could I ask you----

A Thank you.

(Short break)

THE CHAIR: Mr McClelland?

MR MCCLELLAND: Thank you, my Lord. There is a line of questioning which I have been asked to raise, which I am content to deal with, although given the scope of it, I think I should perhaps run it past your Lordship first.

THE CHAIR: Right.

MR MCCLELLAND: It arises in

the context of this hearing of course being concerned with the Edinburgh Hospital, and you may recall at the tail end of my examination of Ms Critchley, there was a reference to communication to health boards about issues arising in other health boards. In that context, Ms Critchley referred to a minute recording a request by Greater Glasgow and Clyde Health Board that communications about the issues arising there were carried forward directly with NHS Lothian and not through-- I think it must have been HFS at the time. So, I have been asked to ask some questions arising out of that. Essentially, whether that was a request which caused concern to HFS, what reason or reasons were given for it, when the meeting was, and who was at it.

Now, since that does concern the communication of information to NHS Lothian, I have taken the view that it does fall within the scope of this hearing, but I am of course conscious that the Glasgow hospital is going to be the subject of other hearings by other counsel. I think that matter should be capable of being the subject of fairly circumscribed questions.

THE CHAIR: Remind me if that information actually was provided by the witness when this happened.

MR MCCLELLAND: I cannot remember the precise detail of it, but I was putting to her evidence which had come from, I think, Lindsay Guthrie, about the information received by NHS Lothian in relation to events as they were emerging at Glasgow, and it was in that context that Ms Critchley referred to a minuted decision that communications should be direct between the health boards rather than relayed through, as I say, I think it must have been HFS at the time, or perhaps HPS.

THE CHAIR: It seemed to be sometime before 2021.

MR MCCLELLAND: Yes, indeed. From her answer, Ms Critchley is plainly aware of a minute recording this, and it was----

THE CHAIR: Well, I can see that one might take longer in considering whether to ask the question than actually asking the question or the line. Right. I am content that you go ahead but, apart from anything else, this does not seem to be the best witness to deal with this matter. All she can say is she saw a minute.

MR MCCLELLAND: Yes.

THE CHAIR: However, let us open the line with caution.

MR MCCLELLAND: Indeed, my Lord.

THE CHAIR: Ms Critchley, there is one matter which Mr McClelland will explore with you.

THE WITNESS: Okay.

THE CHAIR: Mr McClelland?

MR MCCLELLAND: Thank you, my Lord. I have to be fairly careful about this, Ms Critchley, because the subject matter of this hearing is the Edinburgh hospital and not the Glasgow one, but in the context of your answers earlier on, one of the questions I had asked you was about information transfer where an infection control issue arises in one health board, how that information gets to another health board. The question was particularly directed about how NHS Scotland Assure now handles that sort of thing. In that context, however, you referred to a matter which must, I assume, have arisen at an earlier stage, and it concerned the transmission of information from Greater Glasgow and Clyde Health Board in relation to the Queen Elizabeth Hospital to NHS Lothian in relation to the RHCYP.

A Mm-hmm.

Q In that context, you referred to a minuted request or decision that communication be direct by Greater Glasgow and Clyde Health Board to NHS Lothian rather than mediated through-- and I am not sure which organisation it would have been, but perhaps HFS or HPS?

A Yes.

Q Is that a fair summary of what you had said earlier?

A Yes, but that is the full extent of my knowledge.

Q Okay. Now, you referred to a minute of that. Was this something that happened before you arrived----

A It was.

Q -- with Assure?

A Yes.

Q But is this a minute that you have seen?

A No, I've heard anecdotal evidence that there was a minute stipulating that.

Q Okay, and apart from what you have said about that so far, and the anecdotal information about the minute, do you know any more about the matter than that?

A I'm afraid I don't, no.

Q Okay. Well, I can leave it there. So, thank you very much, Ms Critchley.

THE CHAIR: Right. I would propose to accept Mr McClelland's analysis of that. Now, does anything arise that any legal representative wishes to raise? I am taking silence

as no. Ms Critchley, thank you very much for your evidence. You are now free to go, but you go with the thanks of the Inquiry, not only for your attendance but for the preparatory work that that attendance will involve. I mean, I appreciate it will have been significant, but thank you very much and you are free to go.

THE WITNESS: Thank you, Lord Brodie. Thank you, Mr McClelland.

THE CHAIR: Now, my understanding of the position is that we will hear next from Mr Rodger, but he was scheduled to arrive at two and that is when I intend to take his evidence. So, we will rise just a little earlier than we might otherwise have done and we will sit again at two o'clock. Thank you.

(Adjourned for a short time)

THE CHAIR: Now, Mr Rodger.

MR MCCLELLAND: Thomas Rodger, my Lord. Thank you.

THE WITNESS: Sorry, it just (inaudible)----

THE CHAIR: No, go ahead. Go ahead.

THE WITNESS: Thank you.

THE CHAIR: Good afternoon, Mr Rodger. As you understand, you are about to be asked some questions by Mr McClelland, who is sitting opposite you, but first of all you are agreeable to affirm?

THE WITNESS: That's correct, yes.

THE CHAIR: Yes. Sitting where you are, can I ask you to repeat these words after me?

Mr Thomas Rodger
Affirmed

THE CHAIR: Thank you very much, Mr Rodger. Now, I do not know how long your evidence will take, but if at any point you want to take a break, just give an indication to me and we will take a break for whatever reason. Bear in mind that it is quite a big space. You seem to have quite a clear voice, but maybe just speak a little slower and a little bit louder than you would normally. Mr McClelland.

MR MCCLELLAND: Thank you, my Lord.

Questioned by Mr McClelland

Q Good afternoon. Could I ask you just please to confirm your name?

A Yes. It's Thomas Rodger.

Q Have you provided a

witness statement to the Inquiry?

A I have, yes.

Q Could we, please, have on screen witness statement bundle volume 1 at page 444. Sorry, 444. Do you see there on screen your witness statement, Mr Rodger?

A Yes.

Q Does that statement set out fully and truthfully your evidence on the matters that it addresses?

A It does.

Q Is there anything in it that you think needs to be changed or corrected?

A No.

Q Okay. Now, we see from your statement that you have been employed by NHS Scotland Assure since April 2021?

A Yes. That is correct.

Q Since September of 2022, you have been Assure's head of engineering?

A That is correct.

Q You have provided a great deal of detail in your statement for which the Inquiry is grateful. We can take that as read, and my intention today is just to highlight certain parts of it and ask you to expand on some of them.

So, you set out your qualifications and experience in your statement, but it is worth going over some of this just to put your evidence in context. You are a chartered engineer and a member of the Chartered Institute of Building Services Engineers. Is that correct?

A That is correct. Yes.

Q You are also a fellow of the Institute of Healthcare Engineers?

A That is correct. Yes.

Q Yes. Your statement says that you graduated in 2006 with a master's degree in electrical and electronic engineering.

A That is correct, and I'm also a member of the Institute of Engineering and Technology.

Q Okay. Thank you. Since graduating, you have built up 17 or 18 years of experience in the healthcare engineering field. Is that correct?

A That is correct. Yes.

Q Is that in both the private and the public sectors?

A Yes, it is.

Q And you say that your industry experience has included being the lead designer on multiple projects. Can we take it that those were all healthcare projects?

A Not solely healthcare. I took, in my statement, to focus primarily on healthcare given the context of the Inquiry, but I do have

experience in other sectors. I have worked on schools, retail establishments, colleges, universities, office blocks. So, quite a diverse range of experience.

Q Okay, and so those projects on which you were the lead designer, just in approximate terms, how many of those were healthcare projects?

A I would probably say about maybe 70 to 80 per cent.

Q Did your work on those include work on the design of ventilation systems?

A Not directly under my responsibility. I'm an electrical engineer, but I would have had responsibility for managing those who would have undertaken the ventilation design directly.

Q Okay, so the mechanical engineers, the ventilation engineers, they would have been under your direction, supervision?

A That is correct. Yes.

Q Okay. Did your work include other engineering systems? So, systems to do with water or medical gases or that sort of thing?

A That is correct. So, historically, it would have been a building services team, which we would refer to as MEP, which is Mechanical, Electrical and Public Health. Sometimes that's substituted for plumbing, but traditionally, that would lead to the design of your electrical infrastructure, fire alarms, security, lighting. Then the mechanical disciplines would cover your traditional sort of HVAC, as it would be known – so Heating, Ventilation, Air Conditioning – domestic water systems, above ground drainage systems and various different specialist systems as well, but in my experience as a designer, I would have designed the electrical systems, but as a sort of senior member of various teams, I would have managed people designing other systems, just for context.

Q Okay, thank you. Now, in addition to that design team work, you say that you have also been the technical advisor to health boards on various projects.

A That is correct.

Q So, just to be clear, was that a role distinct on those projects from the design role?

A That is correct. That would have been a separate role to the design role.

Q Okay, and what did your work as a technical advisor to health boards entail?

A The work can vary sometimes. It would have constituted strategic advice when they were looking to develop a briefing for a project, for example, to help them to define their engineering requirements potentially, to look at what guidance would be applicable to a project, to potentially look at any challenges that existed around their infrastructure, to potentially look at helping them define their almost engineering success criteria. That would almost be out with a kind of traditional design spectrum.

It would also have entailed, depending on the projects, actually undertaking a review of the design for compliance, either directly or managing a team of people that would be obviously working for me in the manner I described earlier. That also then extended, potentially, to some site duties as well, where you would inspect the works in situ, undertake what we would describe as witness testing of the installations to make sure that they complied with the relevant guidance and potentially the employer's requirements, depending on the type of contract, and how that information would be referred to, and ultimately, looking to support the client in their assessment as to whether the building was ready to be put into operation.

Q Okay. In your statement, you talk about some technical advisory work that you did at the Golden Jubilee Hospital. What you say there is that your work included, and I am just quoting here from paragraph 7 of your statement:

> "…reviewing the works to ensure they were progressing in accordance with the relevant standard, highlighting any technical problems & defects and providing technical advice to the Boards."

So, when you refer there to relevant standards, would that include such things as the SHTMs?

A That is correct. Yes.

Q So, your role there on the Golden Jubilee that was helping the Board to essentially to supervise the work of its designers. Would that be fair?

A That is correct, yes. The role specifically in Golden Jubilee, at the time in the private sector, we were employed through Framework Scotland as, formerly, the NEC3 supervisor on the project. So, that would be a defined set of duties under the NEC3 contract.

So, I would have been allocated as the supervisor in that capacity, but

in terms of your commercial bid at the time from the organisation, we did almost like a supervisor plus role that would be akin to the technical advisor-- sorry, to the supervisor role. Apologies. The supervisor role would be a very defined set of duties in terms of reviewing compliance with the works information, whereas the technical advisor was almost like a phone a friend to the health board in that instance.

Q Okay. Now, it is really my fault for asking you to cover so much ground with straightforward questions, but keep in mind that Lord Brodie will be trying to take notes on what you are saying. So, if you could just keep that in mind when you are thinking give out the pace of your answers, that would be helpful.

A Yeah. Apologies.

Q Thank you.

THE CHAIR: Yes.

MR MCCLELLAND: So, on those projects that you worked on when in the private sector, would we be correct to understand that there were really two layers of consultants dealing with compliance with guidance? The designers and then also the technical advisors?

A Depending on the contract structure, that's quite common. Under a Framework Scotland project, for example, the supervisor would normally undertake that role subject to how the health board had packaged that up as, basically, a role to be undertaken by a constituent company sort of thing, but the ones that I was involved in, we would have been overseeing the construction works in accordance with the design information.

That would include an element of assessing the design for compliance with the standards that would be noted under the contract because we would, in that role, ordinarily have expected that to be part of either a client briefing document or as part of a designer or a contractor's specifications or technical information.

Q Yes.

A Again, referring to an NEC contract, quite often that would have then been reinforced through the contract through what would be known as the "Works information" on that particular type of contract.

THE CHAIR: So, what we are talking about at the moment, at least, are design-- I will use the word conventional, but design and build contract?

A Yes.

Q Such as NEC3?

A Yes. So, an NEC3 contract would be the design and build. In terms of my involvement, just coming back to your question, it would depend on the actual stage of your appointment as to the ability a technical advisor would have to influence that because in some instances, that was purely once the project was at a construction stage. So, your ability to influence what had went before was potentially minimal whereas, on other projects, we were engaged much earlier and, as a result, were able to support the health boards in actually understanding some of the technical propositions that were put their way by the designers.

MR MCCLELLAND: Okay, but just at the most general level, I think what I take from your evidence is it is not uncommon to have two separate sets of consultants, each dealing at least in part with ensuring that the building complies with the applicable guidance.

A That's correct.

Q To what extent, thinking back to your time on those projects, whether as a designer or a technical advisor, did you consider that there was a gap in the assistance available to the health boards to ensure compliance with the guidance?

A I wouldn't necessarily say that that was something that ever came to mind. We would always be clear on what the escalation pathways were and, in my time in the private sector, where there was maybe clarification required, I was aware that HFS as an organisation existed. I didn't have a huge amount of contact with them in my role, but that would have been taken via the health board to Health Facilities Scotland, and there's a few instances that I can recall where that would have happened.

Q Okay, so when you were working in that sort of consultant role on those projects, always aware that HFS was there in the background, able to answer questions about the guidance if need be?

A Correct, but it didn't happen very often because the situation just simply never arose in the projects that I was working on.

Q Yes. Okay, and is that because, on those projects, it was always sufficiently clear what the guidance required or----?

A Generally, yes, or where there may have been an occasion where a clarification was required through open dialogue with the design team in a collaborative way, which is what the NEC contract promotes, that I

can only recall one instance where there was further escalation required.

Q Yes. Okay. So, moving on to your current role at Assure as the head of engineering, you lead a team of engineers at Assure. Is that right?

A That's correct, yes.

Q I think at the time you drafted your statement, there were 14 of them. Is that still the number, or there or thereabouts?

A There or thereabouts. Yes. We have had, I think, two new people start, so I think we're up to a team of 16----

Q Okay.

A -- and we are in the process of recruiting another two or three.

Q Okay, and that team that is working under you, is that the total number of engineers at Assure or are there others in other departments?

A In terms of what we would describe as mechanical, electrical and public health engineers in the context of building services, that would be it in its entirety. We do have other specialist departments within NHS Scotland Assure that we'd focus on, for example, decontamination. So, for example, within my statement, we talk about authorising engineers. In the context of my statement and my area of expertise, that would relate primarily to your mechanical, electrical and public health disciplines. The decontamination example, that would be a separate specialism, if that makes sense.

Q Okay. Yes. Thank you, and as you explain in your statement, you and your team have broadly two main responsibilities, at least as I have understood it. First of all, running the Key Stage Assurance Reviews?

A That's correct, yes.

Q And then secondly, responsibility for the technical guidance, SHTMs and so on, and providing advice to health boards on that. Is that right?

A That is correct, and then an extension of that would then be the provision of subject matter expert advice to health boards.

Q Yes. On a sort of ad hoc basis if they were to get in touch with Assure looking for some help?

A That is correct, or it could be in the context of an adverse incident that had occurred. It could potentially be to support colleagues from ARHAI in an infection control incident, which would be managed by ARHAI, or it could, for example, be in support of our colleagues in the IRIC department, which is the Incident

Reporting and Investigation Centre, where myself and several team members are what would be described as a product specialist. So, for example, if a battery had exploded, we would potentially support the Health Board in their assessment of that and work with colleagues at IRIC to understand is that something that would be a one-off, or is that something that would require wider discussion, either at a Scottish level or, potentially, whether that required engagement with colleagues in the devolved nations.

Q Okay. So, as I understand it, you are describing there really a sort of responsive function that Assure has to events as and when they happen in the NHS as a whole.

A That is correct, yes.

Q Yes, and between those two functions, the Key Stage Assurance Review function and that more responsive function, advisory function, in broad terms, how is the engineering resource allocated between those two functions?

A So, that has evolved over the almost three years that I have been in the post. Initially, the focus was very much on the Key Stage Assurance Review process. As it was a new process, there was a lot of resource and effort required to get that service up and running, and over time, that has evolved. I think if you were to look at the resource at the moment, possibly around about maybe 50-60 per cent of that time would be spent on the Key Stage Assurance Reviews and the rest of that time would be spent between guidance and other reactive matters and any other commissions that we may have taken in from health boards through a commissioning process that we have within NHS Scotland Assure.

Q Okay, and that relative change in the amount of time spent on the Key Stage Assurance Reviews, is that because there are fewer building projects underway? Or is that because everybody has got better at the Key Stage Assurance Review process or-- What would you attribute it to?

A I think it would be difficult to attribute it to any one single factor. I think all the factors that you've mentioned would be relevant to that. We have a larger team; we have a team that ourselves are more experienced in the process; we have refined our processes, and there has been a slight reduction in the number that we are seeing coming through. Initially, there were a lot of projects in

the design stage that, ultimately, didn't progress to construction. Now, we have almost settled in a quiescent state where the majority of the projects are now in that construction cycle and we've been able to program that a little bit more efficiently from a resource management perspective.

THE CHAIR: I should just say, again, you do speak quite quickly. You used the word commissioning, and I rather suspect that it has a particular meaning in the context of the work of Assure. Could you just repeat what you said about two or three minutes ago?

A Yeah. Sorry, Lord Brodie. So, I may talk about commissioning in several different contexts----

Q I anticipate that.

A -- but the context there is if a health board approaches us with an inquiry or a request for help, we have an internal new work commissioning process. So, effectively, it almost acts as a triage system where we would assess the nature of the ask and our capacity to support that ask, and also whether that ask was-- in the case of engineering, if that was solely related to engineering, or whether we had to bring in additional subject matter expertise within the wider NHS Scotland Assure team, for example, infection control specialists, architectural support, structural engineering support, etc. So, it was in that context.

Q Yes, all right. I have got that. Thank you.

MR McCLELLAND: Forgive me, we may have already covered this, so if I am repeating myself, I apologise, but the engineers in your team, what particular areas of expertise do they have?

A So, broadly speaking, you could divide us into four almost core disciplines. We have electrical engineers, we have mechanical engineers – which I would include your HVAC disciplines in, we have public health specialists that would focus on domestic water systems and above ground drainage, and then we would have medical gasses. The cohort of engineers I have come from different backgrounds. We have people who have came from a design background; we have people that have came from a construction background, and we have people that have came from an operational healthcare estates background, and that allows us to have a multi-faceted view on the nature of the sort of technical queries that we see coming to us.

Q Okay and so, that range of technical expertise, does that cover the spread of subject matter of the SHTM range of guidance, for example?

A Essentially, in terms of the core engineering SHTMs, it does, which would be your 02-01 for medical gas, your 03-01 for ventilation, your 04-01 for water, and your 06-01 for electrical services.

Q Yes. Okay. Is it now the case that health boards will typically have authorising engineers in each of those disciplines?

A It has been the case for some time.

Q And are the Assure engineers similarly qualified and experienced to the authorising engineers?

A Yes.

Q So, would they regard themselves as peers of one another? If I can put it that way.

A Yes.

Q Now, an important point to pin down, which you in your statement and other witnesses have emphasised, is the nature of Assure's role. So, first of all, in relation to the SHTM guidance, are we correct to understand that that is not laying down legal standards which have to be complied with, it is guidance?

A That is correct, yes.

Q Yes, and so judgments are required by health boards and their advisors when seeking to follow that guidance?

A Sorry, could you repeat the question?

Q Judgment has to be brought to bear by health boards and their consultants or advisors when it comes to the application of that guidance?

A Yes. The guidance should be implemented by appropriately competent people.

Q Yes. Okay, and it is also emphasised that Assure does not certify as such that healthcare buildings or their designs comply with guidance. Is that fair?

A That is correct. We won't issue a final certificate to say, "You have a compliant facility." There are elements of the KSAR that it could be perceived that that is the case, but that is not the function of the KSAR itself.

Q Mm-hmm, and when you say there are elements of the KSAR which could be perceived in that way, are there any particular elements that you are thinking of?

A I think in terms of the KSAR journey and how it was

perceived in the initial stages, it was looking that Assure would provide the assurance to everyone. The mechanic of it is we must first seek the assurance from the Health Board and their project teams that they have a safe facility, that is compliant with the relevant guidance, or if they have a derogation, for example, that the derogation does not impact on, for example, safety risk or reliability of the facility, and through receiving that assurance, we would assess that in the mechanic of the KSAR and provide a recommendation to Scottish Government via the Capital Investment Group whether a project would be supported or unsupported.

Q Yes, and one of the things we looked at this morning with Julie Critchley when she was in is the letter from the Scottish Government Healthcare Directorate which lets health boards know that hospitals and other healthcare buildings cannot open unless they get a supported status in the handover KSAR. So, does that, in your view, effectively make Assure the gatekeeper to whether or not a new healthcare facility can open and whether it is compliant with the guidance?

A I personally wouldn't use the phrase gatekeeper. We don't perceive ourselves in that way. We always set out to undertake a KSAR in a collaborative form with both Scottish Government and with health boards. Again, I can see why people may have that perception. Ultimately, the decision as to whether a project-- a facility will open will not be that of NHS Scotland Assure. Their advice would be part of a decision that would have to ultimately be taken by others.

Q Yes, but would you accept that it is likely, in the context of compliance with guidance, the Capital Investment Group within the Scottish Government is going to be pretty heavily influenced by Assure's view on the compliance of a project with the guidance?

A I think that would be fair. Yes.

Q So, in the particular context of ventilation, SHTM 03-01 now recommends the formation within health boards of a Ventilation Safety Group, and their role, as I understand, it is to assess all aspects of ventilation safety, including the design of new ventilation systems. Is that correct?

A That is correct, yes.

Q Yes, and they also are expected to have a reporting line direct to board level within the Health Board?

A That is correct.

Q So, if one is looking where responsibility lies for ensuring compliance with guidance and whether or not any exercise of judgment in relation to ventilation is appropriate, is that where it lies? Within the Ventilation Safety Group?

A I think that would afford a health board a good opportunity to assess that. That would have to be supported by a health board's own management governance structure. As you recited a few moments ago there, we recommend that the Ventilation Safety Group has that escalation pathway through a health board, but by the nature of what the Ventilation Safety Group-- and we also have Water Safety Groups, Electrical Safety Groups-- they are intended to bring together the various different stakeholders who would be able to make an informed decision, or to identify in an informed way where risks would exist that could then go through the appropriate governance escalation pathways.

Q Yes. Okay, and in that context, and I am focusing on ventilation, but you helpfully pointed out that there are similar approaches taken for the other building engineering systems If we imagine ourselves in a big hospital construction project, and you have the Ventilation Safety Group taking responsibility for compliance with guidance, and if there are also consultants engaged by the health boards, so designers, technical advisors, and so on, what do you see as the role of Assure? What do Assure add to the process when it comes to the question of compliance with the guidance?

A So, going back to what I said a few moments ago there, we seek assurance from the health board in the initial stages of that KSAR that they can demonstrate their facilities will be safe, free from avoidable risk, and compliant with guidance. So, the organisational structure to which you have referred if a health board, for example, in the scenario that you provided, could demonstrate how the Ventilation Safety Group had for example engaged with the design team, what information was being used to support an assessment of that through for example a technical advisor. How the board had then assessed that information through the Ventilation Safety Group, for example, how they had assessed derogations, we would seek that picture of assurance.

So, on a good project where everybody's happy, there's no risks,

there's no issues, we would probably have very little interaction at that point in time. Potentially, if there were risks identified either by the health board or through a subsequent review of the technical information, that may lead to further engagement with the health board, again, in a collaborative manner, to identify what the issue was, to support the health board in their assessment of what measures they may need to take to address that risk or issue, and then ultimately to look at how in time they would then provide the assurance required to us in order for us to then provide that assurance to Scottish Government.

Q Okay. I have been trying to find a way to sort of distil down Assure's role, and it may be that it cannot be distilled down into a simple phrase, and as I have been at pains to say to other witnesses, do not let me put words in your mouth, but is it fair to put it this way, that the KSAR process aims to ensure that the Health Board's project governance and procedures are such that the risk of inadvertent non-compliance with guidance is reduced?

A That is correct, yes.

Q Would that be a fair way to sort of summarise what it is aiming at?

A Yes.

Q Yes, okay. I think fair to acknowledge that you would aim to reduce that risk, but you could not guarantee that it would be eradicated.

A That is correct, yes.

Q Yes. So, if we can move on then to the KSARs, the Key Stage Assurance Reviews, and if we could just bring up on screen the tube map. So, bundle 9, page 90. First of all, just as the name would suggest, these are assurance reviews at key stages of a project.

A Yes, that's correct.

Q We looked at this diagram this morning with Julie Critchley and we saw that at each of the outline business case, full Business case, construction, commissioning and handover stages, there is provision for a Key Stage Assurance Review to be carried out.

A That's correct, yes.

Q I would like to focus for the time being on what I would refer to as the pre-contract Key Stage Reviews. So, the outline business case and the full business case stages and also the initial agreement stage. What I am interested in understanding is the impact of the Key Stage Assurance Reviews on the project brief and the development of the

project design. Just in very broad terms, what would you see as the objective of the KSARs in relation to the brief and the design at these stages of the project?

A So, if I start at initial agreement stage, I liken that to still very much the light bulb idea. There has been a need identified. That might be driven by a clinical service, it may be driven by an estate strategy, but nonetheless there's been a need identified for a project. We initially, through the initial agreement KSAR, would look at the foundations that were being laid there almost at health board level to take that project forward.

What we found in practice – and I noted this in my statement – is that because there was very limited technical information available there, after going through a cycle of several initial agreement KSARs in consultation with Scottish Government colleagues and health board colleagues, we felt there would be more value in undertaking a lessons learned exercise with a health board at that stage and focusing on supporting the NDAP process at that stage.

So, the assurance team, if you like, would liaise with a health board at that particular juncture and in discussions with Scottish Government that would almost be the two factors that they would consider, whether an NDAP had been undertaken and the outcome of that NDAP and whether we had engaged through that lessons learned, which would take the form of a presentation from NHS Scotland Assure and an interactive workshop with any stakeholders from the health board that the health board had deemed appropriate to attend.

Q So, in relation to the brief and the design, what is it that you are aiming to achieve at that initial agreement stage?

A So, at initial agreement stage, really you would be looking at what the clinical objectives were for a particular facility and starting to look at what your success criteria would be. From an engineering perspective, depending on the nature of the project, you may start to see some technical detail at that stage. In my experience that is (inaudible), and that would start really at the early stages of the outline business case, which would be akin to the RIBA Stage 2, which is the Royal Institute of British Architects plan of work.

Q Now, one of the purposes of the NDAP is, as I have understood it, to get the health board to focus on the guidance that it is

going to set out to comply with. Is that right?

A Correct, yes.

Q Is that level of technical engagement possible at the initial agreement stage? So, if there is an NDAP being carried out then, is the health board already at that stage being expected to focus on the guidance that it is going to have to comply with?

A There would be an expectation that they could demonstrate they've started to think about it and how they would actually plan for that. I mentioned looking at a solid footing for a project, because if you move into your outline business case very quickly, for example, and if you don't have the structure in place to support that and have the competence of individuals within that structure to take that project forward, you are introducing risk at a very early stage of that project.

So, in and around that initial agreement stage, they might not be able to say, "Here are all the pieces of guidance that we will comply with." They might not be able to say, "Here as your technical team," but they should be able to tell us about how they have started to plan for that, and that would be considered as part of the initial agreement, but it would also help us to identify how we could potentially support the health board through early outline business case activities, either through the NDAP or through early engagement with the Key Stage Assurance Review.

That's perhaps something that isn't explicitly clear on the tube map. The Key Stage Assurance Review is a finite element that happens at a particular stage, but we may have had engagement with a health board for several months prior to that as ultimately we try to help the health boards to give us the best version of them as they can.

Q Okay. It is possibly quite difficult to get a handle on this in abstract terms, so if we try and think of a concrete example: maybe some sort of health facility, and because this phase of the hearings is concerned with the Edinburgh Hospital, we have a particular interest in ventilation. If we imagine a health board comes to you and says, "We are thinking of building this facility and it has some sort of specialised ventilation need," what sort of things are you discussing with them at the initial agreement stage to help them get on the right track for compliance with guidance?

A I think experience would

say that that type of dialogue would be unlikely to take place at initial agreement because you have the need for a facility but you won't have a building form. You might not even have a site at that point in time.

Q Okay.

A I think the nature as to how we would engage with that, regardless of the stage, would remain the same. Perhaps if I fast forward slightly to the outline business case, if that would be okay, there was an example recently of a large acute facility that was on its OBC journey. So, we were working up to an OBC. They had a specialist unit that was designed to deal with infectious diseases, and there were a few nuances within that particular concept in terms of the types of patients they would treat, how they were trying to maximise the usage of their space, and there were scenarios presented that weren't covered in extant guidance, and at that point, through NHS Scotland Assure, we provided support from both an engineering context and through ARHAI, which is part of NHS Scotland Assure.

There was engineering support, there was IPC support and there was microbiology support. We supported the Board in their assessment of current extant guidance. We also looked at whether there were examples in international guidance. In this particular instance, we looked to the CDC in America who had similarities to the type of facility, and ultimately that helped to inform a position that the Health Board could take forward. So, that would be an example of how we would be able to support a health board through the functions of NHS Scotland Assure.

Q Okay. So, just to try and unpack that a little bit, are you talking there about a KSAR at the outline business case stage for that project?

A That is correct, but I think the distinction there is it's almost a coincidental matter that there was a KSAR happening, but that is the type of support that a health board can access.

Q Okay. I understood you to say that what emerged in the context of that discussion was that the Health Board had a need for something which was not directly covered by existing guidance.

A Correct.

Q So, is that an example of a discussion or a dialogue which sort of flags something up to Assure that there is a need for engagement or assistance, or had the Health Board

itself already recognised that it needed help on these issues?

A I think in that instance, to be fair to the Health Board, they had asked us for help and that was identified quite early because of the communication that we had established with the Health Board in relation to their project journey.

Q Okay. Now, you explained in your statement, and I think you have explained again today, that a KSAR is no longer carried out at the initial agreement stage. I think you said that was because there tended not to be much in the way of technical information at that early point. Is that right? Is that why it does not happen?

A That is correct, and one thing we are very conscious of as well is that a health board has to commit time to support their response to the KSAR process. We would never like to think that we were wasting anyone's time, and undertaking a collaborative lessons learned exercise, we felt that that would offer the most value to the project and also help the project.

Q What kind of things are you saying to a health board in terms of lessons learned?

A So, at that stage, if we look at the initial agreement, is to think about their programme, to think about if they have enough time to undertake the activities that they need to do. Also, do they have enough time themselves to get the assurance that they require that their facility is safe? That can be a very complex thing to do because you're bringing so many stakeholders together, particularly on a large and complex build. I think the example you gave of the Ventilation Safety Group would be a very good example because, is the Ventilation Safety Group aware of that project? How does that relate back to their own work plans? So, if you have Estates personnel, do they have capacity to support the project? Your clinical teams, your IPC teams, do they have time to build that in? Because if you set an overly ambitious programme at that point in time, given how lots of colleagues in health boards have to react to an incident, primarily to maintain patient safety, their time can be difficult to predict and to preserve. So, they have to have a realistic programme, and I think that is one of the most prevalent lessons learned that we would look to articulate to a health board.

Q Okay, and if that is a lesson learned, can we take it that previous experience has been of health boards committing to

programmes that are over ambitious and do not leave enough time for all of that, sort of, consultation and consideration to be done?

A Programmes are always complex, but in my experience, a lot of the time, programmes are too ambitious and there can be a race to cut the ribbon, as it were.

Q Okay. Is that the big lesson learned that you are speaking to health boards about at the start, or are there other big points that can be flagged to them at that stage?

A I think, in addition to the programme, it's also around then the people that will be involved in the project and understanding, are all roles and responsibilities for the project identified? How do-- How has the health board started to think about how gaps may be plugged, for example? We appreciate there are staffing challenges so, for example, are they going to recruit the use of a third party, and is that then defined? Have they written down people's roles and responsibilities? Will people be clear on what they are doing on a project, and is that appropriately defined in terms of a governance pathway? We talk a lot about the golden thread of a project and, ultimately, we reinforce to a health board and their project teams that that is a vital stage so that, when you go to the very end of that construction journey, there is a thread that identifies why particular decisions were made and the factors that may have informed that, and I think that golden thread is a very important thing to maintain, and that is another key lesson.

Q When you refer there to the golden thread, is that a concept or a metaphor which is recognised more broadly within construction projects?

A I think it is becoming a more widely used term in light of things like this Inquiry. People are more aware now, I think, that they may be asked to justify a decision, and I think, therefore, the importance of the golden thread is being realised by more people. It has always been important, as an engineer I would have had a professional obligation to maintain my golden thread, but I think for other people, that hasn't always been at the forefront of their mind, and perhaps is becoming more so.

Q Okay, and by "golden thread," do you mean the ability to demonstrate the documented decision-making about why things are done from the beginning of the project through to the end?

A That is correct, yes.

Q If you could go please to bundle 9, page 120, we see here-- this is the Assure Key Stage Assurance Review Workbook for the Outline Business Case stage, and this version is version 1 from June 2021. Is this still the most up-to-date version, or has it been updated since?

A I'm not 100 per cent sure, but what I can say is there hasn't been any significant changes. There may have been some typos. I can't recollect if it's v1.1.

Q Okay. If we go, please, to page 122, and we just see down at the bottom there that it says that:

> "KSARs deliver an independent peer review. NSS staff outside the project use their experience and expertise to examine the progress and likelihood of successful delivery, with a particular emphasis on the safety of patients, staff and visitors using the facility."

Again, does that kind of sum up what the KSAR process is about?

A It does, yes.

Q Then, reading on, it says:

> "It is vital to receive feedback on the following elements of health facilities - Infection Prevention and Control (IPC), water, ventilation, electrical, plumbing, medical gases installations and fire. This ensures they are designed, installed and functioning from initial commissioning of a new facility and throughout its lifetime. Health Boards are required to have appropriate governance in place at all stages of the construction procurement journey."

Again, do we see there the sort of building systems that are covered by the SHTM guidance?

A Yes.

Q Yes. In your statement, you explain-- these are referred to as "workbooks," and you explain in your statement that they have the appearance of checklists, but that it is really better to view them as a framework. Can you explain what you mean by that?

A What we try to articulate is that we don't want people to see a KSAR as just another box that has to be ticked on a project. When you read the extract from the workbook around about the particular emphasis on the safety of patients, staff and visitors, that is something that should never, ever be taken for granted. The workbooks are not designed to be prescriptive because you couldn't

possibly list every question that you may have on a project, and it would also be impractical to ask a health board to respond to those questions because, as professional engineers, IPC professionals, fire safety colleagues, we would be able to go in and make a determination through looking at a drawing, for example, or reading a specification. So, not every question needs to be explicit in that sense. So, we almost set-- we want to make sure that people's expectations of what that process are are realistic. So, we may ask questions that are not in the workbook, but the workbook provides a framework for which we can build upon, and it talks around, much like we've talked about here today, in a generalist sense, and it allows us then to expand that detail where appropriate, or where we are not getting the initial assurances that the process would be designed to receive.

Q How does one guard against human nature being what it is in that once you have got a set of questions and people are under pressure or short of time, whatever it is, how do you avoid them simply turning that into a checklist? How do you make sure that they are always looking at things in a more holistic sense?

A So, in terms of how I prevent that from happening with the team that undertake the KSAR is, myself and other senior colleagues, we will always ask, "Why?" So, if a project is supported, I want to understand the reasons why. I want to understand the documentation that they have reviewed, and I want to understand what that documentation is telling them. The reports that we produce are very detailed and they're very long, it has to be said, and as an experienced professional, I will make a professional judgment call when checking that report if I am content that my staff have discharged their duties. I have a team that have regular meetings internally and we track progress, and again, depending on the level of detail that I'm getting back from the team, that builds a level of confidence in myself and other senior colleagues that the review is being done to the level that it should be.

Q Okay. You referred there to the question being, "Why?" Do you see the reports that are produced at the end of each KSAR as being the answer to that question?

A Yes, and one of the key premises behind the report is I will always ask the team undertaking those reviews to reference either guidance,

or the piece of information provided by the Health Board, or potentially the lack thereof evidence, to avoid it reading as a subjective report. If we provide a reference to our observations, that helps us in the factual accuracy checking of a report and today, in the 40 or so KSARs that we have undertaken, we have never had the factual accuracy of a report called into question, and I think that is testament to the internal quality assurance procedures that we have put in place.

Q Okay. I think you describe in your statement that part of the report writing process is an opportunity for the Health Board to review the report and draft and check and confirm that what is stated is factually accurate.

A Correct.

Q Would you regard these reports as forming part of the golden thread for any of these hospital projects?

A Absolutely. Yes.

Q So that, at some point in the future, if somebody wants to know why something is done, these KSAR reports are going to be there as part of the historical record for that?

A Absolutely. Yes.

Q Yes. Okay. If we go on to page 124 of that bundle, please, and if we just look at the heading "The KSAR Process," it says:

> "The KSAR process examines projects at key points in their lifecycle. It does not remove any legal or contractual obligations from the NHS Health Board, their designers or contractors. It provides assurance to progress successfully to the next review point and the process will be mandated for projects requiring CIG approval."

So, just pause there. "Those projects for which the process is mandated," is that really the determinant of whether the KSAR will apply to a project, that it is one that is going through the CIG approval process?

A That's currently the case. Yes.

Q Is the KSAR process available for any other project?

A Yes. Probably two points of relevance to your question is, we did trial a delegated authority process where a health board may request NHS Scotland Assure to undertake a Key Stage Assurance Review on their behalf, and from memory, I think we undertook two KSARs that would fall

under that delegated authority process. That was a pilot, if you like, but we didn't-- we identified that we would not have the resource to continue that currently based on the projects that we were seeing coming through in a mandated sense.

The second part of relevance to your question, if you like, is the workbooks are available on our website, and if you take out all the general information around Assure and you focus in on the actual questions, if the health board was to put a mirror in front of themselves and ask themselves those same questions and look to document that in a similar way, that again helps with that concept of the golden thread that we've just discussed.

Q Okay. So, you referred there to delegated authority. Are you talking there about projects which fall within the budgetary limits that health boards can do themselves without CIG approval?

A That is correct. Yes.

Q Okay. So, as things stand, because of resourcing, the KSAR can be used for those sorts of projects, but it is really up to the health boards to take the workbooks and do it themselves?

A That is correct.

Q But for the higher budget projects, the ones that require the approval of the CIG, it will be Assure that carries out the KSARs?

A That is correct.

Q Then, just reading on where we left off, it says that:

> "KSARs focus on the assessment of the delivery approach, and will work with the Health Board's project team to ensure there is comprehensive understanding of the patient cohorts using the facility. KSARs also ensure relevant guidance is fully implemented and any technical derogations have been fully reasoned, transparently discussed, the implications understood, recorded and signed off by the Health Board and their advisors."

There is a reference there in that paragraph to, "A comprehensive understanding of the patient cohorts using the facility." Can you explain the importance of patient need when it comes to the briefing and design process?

A That is one of the fundamental founding principles of any design. That's what differentiates designing a healthcare facility from so many other different facility types, and

it is back to understanding the "why." The clinical needs of a patient can be extremely complex, and it would almost be impossible to have room names, for example, that would give a true representation of the function that was being undertaken. So, for example, a treatment room, what does that actually mean? A treatment room could be something in a primary care facility where you could go to have a bandage replaced by a district nurse. A treatment room could be something where you are actually puncturing the skin to undertake a minor surgical procedure. These would have potentially very different requirements. So, understanding the clinical need and the function that that space is going to be required to serve, if you like. Only once you have that information can you even start to think about how you will engineer around that because the requirement for the patient has to be first and foremost in everything that we do.

Q Okay, and for anyone who has had the pleasure of reading through all of the KSAR workbooks, there is a sort of repeated reference to the patient and understanding the clinical need. So, is that a theme which runs through the whole of the KSAR process?

A Absolutely. Yes.

Q If we just move forward, please, to page 127. Sorry, page 126. We see there a reference to the KSAR relationship with the NDAP. To what extent is there-- Can you explain what the relationship is between these two processes, please?

A Yes. They are separate processes. NDAP, as a concept, predates the formation of NHS Scotland Assure and the implementation of the Key Stage Assurance Review. When we rolled out the KSAR process, we discussed internally where there may be duplications between the processes and where synergies may exist. The NDAP, as a function, has various different supporting functions through complementary processes like the AEDET process, which is the Achieving Excellence in Design Evaluation Toolkit, and that has other touch points as a project progresses whereas the KSAR workbooks in themselves and the KSAR assessment is at the end of that particular cycle, if you like.

Through that dialogue with internal colleagues, we identified that we would look to take any of the core topics that fall within the KSAR workbook out of the NDAP review so

that when it came to reporting findings, there would be one place of truth. So, for those particular KSAR topics, that would be the KSAR. The other elements of the facility, they would fall within the NDAP. So, that might be, for example, compliance with sustainability policies. It might be looking at building form, for example, spatial design, spatial coordination, architecturally focused items. We would meet internally to discuss potential consequential impacts.

The architectural design can have a significant impact on the engineering design and vice versa. So, whilst these are distinct processes, we do not operate in silos. There is an element of duplication that still exists, but we are looking at that internally at the moment. Again, it's about maximising the efficiency of the time that we engage with health boards on cutting down any elements of the process that may not be required anymore and looking at, again, just maximising those synergies.

So, NDAP is still a process that would assess compliance, but that would be relative to any other topic that is not within the KSAR workbook whereas the KSAR workbook assesses compliance on very specific topics.

Q Okay. Now, I do not think we need to go to it, but one of the documents that the Inquiry has seen is the Capital Investment Manual guidance on the NDAP process. One of the things it emphasises is the need for health boards to identify guidance which would apply to the project, including SHTMs. Part of the function of the NDAP in those days, back before Assure was formed, was to gain assurance, effectively, that the relevant guidance was being complied with. So, is that something which is now dealt with by the KSARs and therefore has come out of the NDAP?

A No. That would still remain part of the NDAP process because there will be other guidance and standards that would be applicable to other aspects of a healthcare build.

Q Okay.

A Again, we would assess that in conjunction with colleagues at NDAP as part of our internal coordination of activities. As an example, I meet regularly with the head of architecture for NHS Scotland Assure, as it is his team that drive the NDAP process. So again, communication internally is vital from an NHS Assure perspective.

Q Now, we all understand

that the NDAP and the KSARs have had different origins. Does it make sense in the long run to keep these as separate procedures, or is it, in the long run, going to be better to merge them all into a single review?

A I think there are discrete components there that would have to be considered very carefully to make sure that we didn't create an unintended consequence. I think from a compliance assessment perspective, it makes sense to have a singular process, but there are also a lot of good supporting functions that exist within the NDAP process that we would not want to lose because ultimately, that will help to support a health board to get to a position at that end milestone, if you like, to be able to demonstrate compliance and to provide assurance that their facilities will be safe.

Q Okay. So, just to put it the other way around, do you continue to see value in having these as separate procedures or not?

A I think, at the moment, the question of value is a difficult one to address because there is no other process. I think NDAP and KSAR do both bring value to the process, but it would be helpful for everybody to look at a more integrated approach. That is something that NHS Scotland are currently investigating internally.

Q Okay. If we just move on to page 128 of bundle 9, we see similar things to this in the other workbooks. It says:

> "At all stages of design development, knowledge of compliance in design and implementation will need to encompass (not limited to) the following…"

Then there is a list of various different sources of guidance in particular. One question that arises is why not just provide a comprehensive list that the health board can then have confidence in?

A I think, again, because of the complexity of a construction project in healthcare, that would be impractical. We have talked today in a patient-centric way around acute-type facilities, primary care, but there are also other support facilities, for example. That list would very quickly become unmanageable. I think what this list does is it provides a good reference point. Again, if you have competent people involved in your briefing of a project, they would be able to provide that specific to a project. I have seen, for example, instances where a project team will

take a list of SHTM guidance off a website, put it into a contract and say everything applies.

Q Yes.

A The reality is, it won't, because in the instance I referred to, they said that decontamination guidance was applicable. There were no decontamination facilities, nor any processes that would be relevant to that guidance. So, that in turn created an unintended consequence. So, I think, in my opinion, that was coming from the right place, but it hadn't been fully considered because then you say, "You comply with that guidance. Show me why." They say, "But that guidance isn't applicable," but yet it's in the contract. So, I think it's a very complicated question, but it comes back to having the right people able to advise you on what would be relevant to your project.

Q Okay. If we could go on, please, to page 130. We are now into the detailed questions of the workbook. There are lots and lots of questions. I am not going to go through all of them, but if we just look there at question 1.4:

> "Does the Health Board continue to demonstrate service / clinical input into design decisions based on a current and comprehensive knowledge of patient cohorts?"

Does that really reflect the point that you made a moment ago that it is important to make sure that there is an understanding of the patients to be treated in the facility?

A Absolutely. If I may just add a distinction to that question, what we aren't looking for is for clinical colleagues or infection control colleagues to make a decision on a technical system. I often refer to it as, through, for example, a Ventilation Safety Group, a very good opportunity to translate things. I am an engineer, I am not a clinician, but working with clinical colleagues and IPC colleagues, they can help me to understand that. In a similar way, an engineer can help an infection control colleague or a clinical colleague to understand the complexities of the engineering system.

Q Yes.

A I think that's a very important thing and that is something that has been misinterpreted in some early KSAR reviews. It was almost, "Are we looking for a clinician to say, 'I am happy with the ventilation'?" We are looking for a clinician to demonstrate, and an infection control colleague, for example, to demonstrate

they have been engaged in that process, and ultimately, the hierarchy of how that design has evolved very much starts with their input and, potentially, then the output of an engineering design specification.

Q Okay, so if 1.4 is designed to make sure you are getting that clinical input, if we then look at 1.5, it says that what you are looking for is that the:

> "Project team demonstrates a unified and recorded understanding of the needs of main users and patient cohorts of the proposed accommodation and how this will influence the design of critical building, engineering and infection prevention and control quality and safety standards."

So, is the point here that you have to move from that clinical input to a position where the project team as a whole understands what that clinical objective is?

A 100 per cent. Yes.

Q Then if we move on to 1.7-- Sorry, yeah, just over the page, please. We have here a question about:

> "How does the Health Board demonstrate that there is an effective infection prevention and control management structure in place and how does it relate to the development of the project? How does the Board demonstrate leadership and commitment to infection prevention and control to ensure a culture of continuous quality improvement throughout the organisation, and [so on]."

So, that is quite a general question. Then if we look over to the right-hand column for the evidence expected, what it says is that:

> "Evidence IPC and clinical teams have been integrated into all decisions regarding any derogations through the design process and are satisfied this will not impact on patient safety such as, specific sign off, supporting meeting minutes, risk assessments [and so on]."

So, what we see there is the left-hand column asking a very broad question, and then the right-hand column really being very narrowly focused on the issue of derogations, which just gives rise to the question what IPC involvement is Assure expecting to see?

A So, I think there are a couple of factors that you have to consider there, and if I start almost from a top down perspective, before

we get into the detail of what an individual may do, we are looking for assurance that the IPC teams are integrated and sighted on the projects that are happening and that they can demonstrate as well that there is time allocated there, if you like, within the organisational structure in order for them to support a particular project.

That doesn't necessarily say that we are looking here for this question to be answered by an IPC professional because that may be outwith their gift to answer that. This very much goes back to the point I made about setting off on the right journey and making sure you have the right people there. Somewhat anecdotally, through speaking to clinical colleagues, the perception there is that you can always pick up the phone and you will have a clinical person there. You will have an IPC person there, and their input on projects became reactionary. It wasn't embedded in the project and that can have an unintended consequence as well because again, the people that may be involved, they are project managers, engineers. They may have an appreciation of infection risks, but they are not infection specialists. So, at the most primitive level, we are looking for how an organisation, a health board, would support the provision of IPC expertise on a project. There are specific questions that come later in the workbook focused on the IPC itself.

So, we may ask for evidence like a resource plan, for example, to show that that resource has been ring-fenced. Now, whether that resource is available is maybe a different question, but that would be ultimately, again, looking for governance that the Health Board have considered. Do we have the right people available to support their project going forward? So, that question is intended to look at that from an initial perspective. I appreciate that is only one piece of evidence, that wouldn't be the extant nature of the review, but we find in practice that is a good starting point because if you can't evidence it for that, you're probably going to struggle to evidence it for other things, and we would then look to potentially probe that further.

Q Okay. I mean, one of the issues that evidence to the Inquiry has thrown up is that there may be a need to clarify exactly what is expected of IPC people in relation to building projects, and one of the themes in the evidence from the IPC witnesses has been that too much of the task of ensuring compliance with guidance is

falling to them and that they are being expected, effectively, to work like building control officers and are being called upon to sign things off to do with engineering systems, for example, which they would regard as being outside of their trained competence. That is why I was keen to ask that question, and also keen to highlight that there is a very broad question on one side of the workbook and then a very specific source of evidence on the other. Do you, in Assure, the people doing the KSARs, have a clear view of the extent to which you are looking for IPC involvement through a construction project and what you are expecting the IPC people to bring to it?

A Yes.

Q And if possible, can you try and summarise what that is?

A I think going back to the point that you made earlier, we do not perceive infection control specialists as building control, and I think when we have seen instances, I would be one of the first people to support IPC colleagues to say, “Absolutely not. That is not the role that you should be fulfilling. There would be other people there to support you in your journey,” and I think what we have seen in some projects is how that project is being managed is giving rise to angst within IPC colleagues' minds that they are being asked to do more than their clinical function. I have been in meetings where I have seen a ventilation engineer tell the IPC person, “You tell me what the ventilation needs to do and I will go and design it for you.” That is not what we are looking to do and in that instance, we provided support to the Health Board to help them to unpick that.

So fundamentally, coming back to how I described an engineering design evolving, if you like, we would seek evidence that IPC had been consulted at that point in time, and depending on the nature of the facility and the nature of the project, that involvement may vary. On a large acute project, there would be lots of complex spaces. Hypothetical example, if you were building something at £5 million that was for a laundry facility, perhaps less so. They may be able to give high-level principles to make sure that that doesn't impact on the journey of the laundry, for example, but they may be not as prevalent in that conversation as, say, a theatre designer, for example.

So, if they outline their risks through things like the HAI-SCRIBE,

for example, which is another mechanism to try and tease that detail out and that is designed to be multidisciplinary, we are looking for assurance that they have a voice on the project and that they are consulted relevant to any decisions that may impact on the other infection control protection measures that they may look to instil. So, if that was barrier nursing, for example, and they had defined a hierarchy of cleanliness in terms of the patient pathways, did the engineer understand the subsequent ventilation pressure cascade that would be required to support that clinical hierarchy of cleanliness? And for example, if they derogated from the ventilation pressure cascade, had you consulted IPC to advise what that might mean to the other protection measures that they have? So, at no point would we be looking for a sole endorsement from an IPC professional, but we would expect evidence that they had been consulted, and it's back to that translation piece that I described earlier.

Q Okay, I mean, as I have understood it, one of the concerns from the IPC people, or perhaps one thing that they struggle to understand, is why they are expected to have input in something which is, on the face of it, a straightforward application of guidance to a particular clinical function. So, in other words, if the clinical function has been identified, and there is a recognisable piece of guidance which says, for example, how the ventilation is to work there, you know, do they need to be involved in that decision at all? I think the contrasting situation is one where there is a need, or a perceived need, to derogate from the guidance, where I think they understand why they are being brought in because the question then is well, what risks arise from not complying with the guidance? Is that something that you would recognise, that in the former scenario there is, perhaps, an ability to say to the IPC people, “Well, you're free to get on with your other work, but you need to be brought into that derogation process”?

A I think there's a few levels to your question there. So, if you have a design that is compliant with guidance, there's not any nuances around that and, coming back to that briefing stage, they'd been involved in that, there would be limited engagement required. Dare I say, they would have the assurances that there was nothing abnormal that they would have to be involved in.

Your next point was around the perceived need to derogate. I would argue that before it even got to an IPC person, I would expect someone within that project spectrum to challenge why it was a perceived need to derogate for a new-build facility, where you would not have potentially the same constraints as an existing building. I would always look to challenge the need to derogate in that first instance before you get into the detailed technical analysis and at that point, again, it wouldn't be necessarily for your infection control person to come in and give you an answer, but it would be to help inform the risk of not having complied with guidance and to identify whether any other mitigations may be able to be put in place that, ultimately, would give them the assurance that that was not going to compromise anything that they would do in their day-to-day job.

Q Yes. Okay. If we just try and take that back to the most general level, can the Inquiry take it that there is an understanding within Assure that IPC resources and time within health boards is limited?

A Absolutely. I would agree with that, yes.

Q And is there an appreciation that it is helpful to the IPC teams and helpful to health boards if the engagement required of IPC staff is kept to those situations where their clinical abilities are really required?

A Yes. I think just to clarify that, on any project there would be targeted involvement. I mentioned the briefing stage. I'll come back to that quite a lot because if you get your briefing stage correct and you get your programme correct and that resource is identified, you are placing less of a burden on them for reactive activities, and if the design and the governance of that design is then controlled and you continue to do that, there will be strategic engagement points required with colleagues. So, I wouldn't say it would absolve them completely from having to be involved in a project, but it would reduce the need for them to be significantly involved in a reactive issue where, for example, a derogation had occurred.

Q Is this an area where you think you have got the balance completely right? Or is it one where there may be a little bit more work or engagement with IPC people just to get that to the right sort of balance?

A I would very much say more engagement is required there. Learning from them is important to understand the challenges that they

would face, some of which may be in your direct influence, some of which may not. It can also help us to understand why we may be seeing particular things within the confines of a KSAR, and it has, on occasion, through the KSAR process, identified opportunities for NHS Scotland Assure to provide a supporting function to IPC colleagues within the health boards. We've seen that in an example where there was water ingress on a facility and we supported them to identify things that they would need, themselves, assurance with to try to minimise the disruption to their events. So, we do have a facility to be able to support that.

We have, through the KSAR journey, the journey of Assure, held various different stakeholder meetings with IPC groups. In my capacity as Head of Engineering, I have spoken to the IPC network. I have had engagement with specific colleagues through health boards and worked with colleagues tasked on clinical assurance through ARHAI group and we are trying to evolve that support, and recently, I think within the last 12 months, we have added text to the National Infection Prevention and Control Manual to support health board colleagues in responding to a KSAR, but actually, that provides an added benefit of helping them to clarify their role to others outwith Assure.

Q Yes. So, in other words, first of all, it helps them understand what is expected of them as IPC professionals in the context of a KSAR, and secondly, allows them to go to a project team, perhaps, and point to it and say, “Well, look, you're asking me to do something beyond what's expected.”

A Correct.

Q Yes. Okay. If we go back to the workbook, so page 135 in bundle 9. So, we see here the heading, “Water and Internal Plumbing/Drainage Systems,” and then if we just scroll on down, please, to page 137, we see here a section dealing with ventilation, and just so that everybody can orientate themselves with this, do we see through all of the workbooks that there is a section for each of these distinct engineering services systems?

A That is correct, yes.

Q Okay. So, we will just take a slightly closer look at the ventilation one, and are the sort of questions that are being asked in each of these divisions for each of these engineering services broadly similar?

A Yes.

Q So the same sort of questions for each engineering system?

A Correct, yes.

Q Yes, and so if we move on to the next page, so page 138, and if we maybe just look at the questions in this order, so first:

> "3 .4 Does the Health Board have a strategy for ventilation?
>
> 3.5 Is there evidence of stakeholder input into ventilation strategies?"

And then back up to the top:

> "3.3 How does the Health Board assure itself all variations/derogations which may be required to the ventilation systems are investigated and agreed by all parties before they are incorporated in the design?"

So, do we see there questions aimed at identifying, has the Health Board worked out what its ventilation strategy is going to be; is there evidence that all the relevant stakeholders have had input into it, and then, if there are derogations, has that been properly considered?

A Correct.

Q And if we look then at the question of whether there is a strategy, 3.4, we have evidence expected, and there are various things listed there, one of which is "Evidence of an environmental matrix". Can you explain what you are looking for there?

A The Environmental Matrix is an example of something that wouldn't be uncommon from an engineering perspective. It is a tool that would be used by engineers, for example, to process data that would be derived from, for example, a Room Datasheet or ultimately from something like the ADB, and it would be a working tool, if you like, because they would then be able to demonstrate how that had been used to inform the final ventilation strategies. I can't recall if I've said it explicitly in my statement, an Environmental Matrix is not a mandated tool. It doesn't replace the need for ADBs or Room Datasheets. It's more a tool that we would see as engineers. It's not uncommon.

Q Okay. Just the way that this workbook is structured, with the question and then the list with the first thing on it being the Environmental Matrix, that might be taken to suggest an expectation on the part of Assure that there will always be an Environmental Matrix or there should be one. Would that be the wrong thing to take from that?

A That would be the wrong thing to take. Reflecting on what we've learned over the last three years, it says "Evidence expected", I would phrase it more as "Suggested evidence".

Q Yes.

A It wouldn't be an absolute term. There may be other things that they could demonstrate, for example.

Q Okay. Would you in Assure be happy with the use of an Environmental Matrix-- You referred to it as a sort of working document, but would you be happy with it being used as a briefing tool?

A If it was used in the correct way, I would have no objections to that. We would be interested in how the content of that had been produced. It's a repository for information, and again, going back to the golden thread, I would want to understand why. So, if you are populating that with information, where has that information came from? How does that relate to guidance? How does that relate to the use of other tools such as the ADB?

Q You mentioned there the ADB, and I take it you are familiar with CEL 19, the Scottish Government's policy on design----

A Yes.

Q -- and the fact that it mandates the use of the ADB for briefing and design. So, in the context of a KSAR, would you be asking, "Here is an Environmental Matrix, where has that information come from? Has that been taken straight from the ADB?" for example?

A Yes. So, if we were presented with an Environmental Matrix, we wouldn't see that in isolation providing assurance that they had a comprehensive briefing process, we would want to understand the origins of that. So, again I think I mentioned in my statement, before you can assess outputs, you have to assess the inputs. If your inputs are of poor quality, that could have a detrimental impact on your outputs. That's just maybe how an engineer thinks. So, we would look at the processes and the governance around that. That's why in a KSAR we start with the governance questions. So, if they could demonstrate that multi-faceted stakeholder engagement through that, starting with the clinical function, potentially linked back to an ADB, then that would start to provide assurance.

Q Okay. You may or may not be aware that the Inquiry has

heard evidence from Stephen Maddocks, who is an expert witness to the Inquiry on ventilation engineering design and so on, and what he said is that if an Environmental Matrix is being used, it should not be an independent matrix, but one which has been generated through the ADB system to avoid future contradictions or ambiguity between source data. Is that a view that you agree with?

A I would echo that view, yes.

Q Yes. I think what I am taking from the answers you have just given is that Assure already has processes in place to ensure that that is the case. Is that right?

A We would seek assurance that those processes had been followed as part of a KSAR, yes.

Q Yes. Then, sorry, if we go back to bundle 9, page 138, and 3.5, we see there that on this question of evidencing stakeholder input to ventilation strategies, what you are looking for there is an:

> "Addition to or supplement to the Environmental Matrix which confirms the following, on a room by room basis:
>
> a) the type of ventilation…
>
> b) patient group and/or function related to the space."

And then a list of various people and evidence of their agreement to the room requirements. So, listed there we have got a clinician, then an Infection Prevention and Control Doctor or equivalent, an Infection Prevention and Control Nurse, the Estates team or Facilities Management representative, the NHS Project Manager who has agreed, and then if we go over the page, we see also the name of the Decontamination Manager. Just explain those particular sign-off expectations.

A Again, the workbooks are indicative and I think we and the other stakeholders that were responsible for the development of the workbooks would have seen that as a fairly representative stakeholder cohort for the types of people that you would see involved in a project. The workbooks themselves were developed in conjunction with health boards and they would have had an opportunity to input to the content of them, and we have a consensus group that looks around them. So, I think it would be fair to say that that's a general consensus on what a stakeholder group may look like for that particular question.

Q Okay, and if we just try and imagine ourselves in a project for,

say, an acute hospital. We have already had evidence that the Environmental Matrix for a building like that has got a lot of data in it, but should we anticipate that what Assure is looking for is one of those matrices signed off by all of these people, effectively all in one place so we can see everybody having signed off all of the parameters in the matrix?

A Ultimately, we would look for that information to show that that had been accepted by the health board, but there would also be a step prior to that because you're absolutely right in saying that is a very complex document, and we would look at what levels of quality assurance had taken place to inform that sign-off by the health board.

Q Okay. Are you therefore looking to all of these people to have checked each of the rooms in the matrix and all of the parameters in it?

A I think to say that every individual had checked every line on that matrix, that would not be practicable. I think it would be coming back to assessment of the level of confidence that they would have to put their name to something. So, we would look at, again, what were the origins of the data for the Environmental Matrix? So, if I give you a contextualised example, on a recent large acute project, there was a room use matrix. That wasn't an Environmental Matrix, that was a room use matrix and that was broken down initially into different constituent departments and that evidenced the golden thread from the briefing requirements. That was then linked to the Environmental Matrix, so that golden thread was maintained.

So, from a clinical perspective and an IPC perspective relevant to those stakeholders, they would have assurance that their needs were captured in that Environmental Matrix because they could evidence how one was being used to inform the other, and then that was populated by an engineering team in terms of the environmental parameters.

In that instance, we said, "Well, how did you then inform, for example, your estates colleagues that that had been checked?" So, we would look for, in this instance, the designer who had created the Environmental Matrix to give us evidence that they had a quality assurance process in place. Now, nothing is infallible, it is still subject to human error, but I would expect that that data check would be done by the content creator of that matrix. When challenged, they should

be able to demonstrate that quality assurance, taking on, for example, ISO 9001-type principles from a quality management system, individual self-check, peer check, peer approval.

So, if that takes place at the design level, if you then have a technical advisor, they would provide another level of checking, and then ultimately that builds up to a picture to, say, a Senior Infection Control Doctor who may then say, “I have assurance in place.”

Q Okay. So, in terms of what Assure does, you are looking for evidence about what type of assurance process each of these individual signatories has gone through, but not actually going through each item in the matrix?

A Correct. We wouldn’t do a line-by-line assessment. We will interrogate elements of that data and that would be based on our professional judgment. So, for example, we would look at traditionally the more complex areas like theatres, like treatment rooms, like cancer wards where patients may be neutropenic, as ultimately those would have the most complexity associated with the ventilation systems. Wwe therefore may not check as much for things like office areas where there would be less complexity, if that makes sense.

Q Okay. Just so I can be completely clear about this, is Assure carrying out a sample review, for example, of parameters in these more specialised ventilation areas, or again is it simply focusing on the audit and review procedures that other people have put in place?

A There would be a sample review undertaken and, depending on the level of confidence that that generated, that sample size may then subsequently increase.

Q Okay. So, if on the first pass there were concerns being raised, you might carry out a greater sample review. Is that----

A That’s correct.

THE CHAIR: How deep would you go in your sample review? I mean, would it be looking at test certificates or would it be carrying out a test? Maybe that is not a good example.

A I think it is a good example, because it probably gives me two examples, one I can relate to design and one I can relate to the physical commissioning process at the end of a project. So, when interrogating a design, for example, we would assess the data in the matrix,

we would then look at-- and if we stick to the theme of ventilation, we would look at the Environmental Matrix, we would look at the other relevant briefing documentation that would inform the technical parameters of the design.

We would then look at the design and supporting information provided relative to that briefing information. So, we would start to review the outputs. So, that might be looking at ventilation reports, overheating reports, flow rate calculations, physical ductwork layout drawings, to again look at how these systems are being designed. An example might be what you shouldn't have is two theatres served from the one air handling unit, for example. So, you would look for interdependencies like that on the drawing to make sure that-- it's almost a Ronseal moment, to use a very colloquial term. You're looking that the design actually then does what that briefing information requires.

So, we wouldn't do calculations ourselves, we would interrogate the calculations etc. provided to us, and if we didn't feel we had enough information, we may request more information. It's not been uncommon that we end up having a workshop within the context of the KSAR where we would sit with the health board and their designers and go through their calculations with them relative to a particular area.

In the commissioning sense, Lord Brodie asked would we undertake a physical test ourselves. We don't do that. We don't do that currently. That may change in the future. We would have to discuss that with Scottish Government and other stakeholders to determine if that's what they would like, but we would look at the data provided to us by others. So, again sticking to the theme of ventilation, and if it was a critical ventilation system, we would first and foremost assess what the system had been commissioned against.

Again, that's that theme of the golden thread, because at that point you should be able to follow that golden thread back through the calculations, back through the drawings, all the way back to the function that that room is going to serve, and that should exist at that point in time. We would then assess the nuts and bolts, if you like, of the commissioning information: did it achieve the required flow rate? Did it achieve the required air change rate? Did it achieve the required hierarchy of cleanliness? How were they

demonstrating that? For example, the test equipment, did they provide calibration certificates to show that their equipment had been calibrated? And then, if we look at the ventilation, we would then look for evidence of independent validation in accordance with SHTM 03-01 that that had been independently validated. So, again, that is another element of that golden thread, but we wouldn't physically put a hood on a grill, for example, to test that flow rate. We would interrogate the information provided by others who had fulfilled that function.

THE CHAIR: Mr McClelland used, in his questioning, the word "audit," which to an extent-- I mean, I think that was his expression rather than yours. I am not an accountant, and maybe you are not an accountant either, but if we think of the usual understanding of the word "audit," would you be happy with that expression being used to describe the process which you have just very helpfully taken me through?

A In essence, it is an audit. It's not language that we use every day because we want to be seen as a collaborator, and people that have been familiar with audits-- if you embrace what an audit is intended to do, an audit is a very good thing; it's a very powerful tool. It identifies opportunities for improvement and it also provides assurances that things are going the way that they should be, and if you embrace it in its truest sense, then an audit is a good thing, not-- It's human nature, it's behaviour. Not everybody thinks like that, so we would try to use that word-- as an "audit," because people may perceive that as being confrontational, but in its essence, yes, Lord Brodie, it's an audit.

Q Mm-hmm. Thank you. Mr McClelland.

MR MCCLELLAND: Thank you, my Lord. One thing I am just trying to get a grasp of is-- We understand that Assure is not certifying that everything done on the project has been done perfectly in accordance with guidance, that that is beyond what you are being expected to do, but you are scrutinising things to a sufficient degree that you gain confidence that the appropriate approach has been taken. Is that fair?

A That's-- Yeah, that's correct, yes.

Q I think I understood you earlier as saying that the depth or breadth of the checks that you carry out might vary depending on what you have seen up until that point, and that

if there is anything that has given you concern then you might look a little bit deeper, but if you have gained that confidence at an early stage, you might feel the need not to go into that depth. Again, is that fair?

A At each stage of the project? Yes, that would be fair.

Q Yes.

A Every new stage would start with a clean slate, and that assurance would need to be built up again, but once we have almost the prerequisite assurances relative to what the scope of the KSAR is, we would be content at that point.

Q So, does that inevitably mean that, for different projects, the breadth and depth of the Assure process will vary?

A Theoretically, I think, yes. I think, in practice, given the fact that these are projects that are going through the Capital Investment Group and the level of funding relative to the projects, they will be of a size or complexity (inaudible).

Q I guess the question is, how do you decide when to stop? How do you know when that position of confidence has been reached and that you can stop digging into the detail?

A It's maybe the wrong phraseology, but you're almost looking at that-- the burden of proof, the burden of evidence. You're looking for almost-- and I appreciate I'm speaking to a legal professional here, so I'm going to do myself a complete disservice, so apologies, but, you know, it's almost that "beyond reasonable doubt," you know, once that's been demonstrated. So, when you build up that picture, if you have competent people, if you have robust procedures, if you have a strong quality assurance system in place, if there are very limited derogations, if any derogations at all, if the project has been monitored on site by a clerk of works or an NEC supervisor, if they have maintained the integrity of their programme and allowed sufficient time for checking opportunities, you would start to build up a picture of confidence that you have a very competent and capable team.

If we see things like programme activities being complicated, or patterns emerging from clerk of work reports or supervisor reports, if we see unresolved design issues still being discussed at construction stage, they almost set your "spidey senses" tingling and, again, as experienced construction professionals, we would look to probe further at that point in

time.

Q Okay, so does it ultimately become an exercise of judgment by Assure or whoever the Key Stage Assurance Review engineer is?

A Yes.

Q If we just go back to page 139 of bundle 9, please, and at question 3.6. Just to remind ourselves, we are still at the Outline Business Case stage here. The question there is whether there is "evidence of the Health Board developing Ventilation Commissioning Proposals." So just explain why it is that you are looking at the commissioning issue, even at that early stage.

A It's important that any strategies that you develop can be built, can be commissioned, can be validated and can ultimately be set to work. So, when you look at it at that stage, you have to think about who's actually going to oversee that, so we would seek assurance that the Health Board had a plan in place for that, and-- It's widely recognised now in industry that the earlier you engage with a commissioning specialist, the more likely you are to see successful outcomes during the commissioning because they can advise on sequencing of construction activities, sequencing of tests to be undertaken, time to be allowed for tests to be completed.

And recently, CIBSE, the Chartered Institute of Building Services Engineers, have produced an updated commissioning management document guide, and that really outlines the importance of that role. And again, we would look to see how a health board had considered, for example, CIBSE Guide M or if they had alternative approaches, and if they hadn't started thinking about commissioning, coming back to that level of confidence I described earlier, we would look to, again, probe that a bit deeper to assess, for example, did they understand the risk that that was potentially creating within their project?

Q If we just look at these two questions together up on screen, 3.6 and 3.7, 3.6 to do with commissioning, 3.7 to do with ventilation governance arrangements. The Inquiry has looked at the 2022 version of SHTM 03-01, and there are a couple of things that arise there. First is the Ventilation Safety Group as the main governance forum for ventilation issues, and the second is its suggestion or recommendation that the validating engineer be involved

right at the very start of the briefing and design stage to make sure that the two ends of the process tie up. One thing that occurred to me just as I was reading through this is that this workbook does not refer to either of those things. I just wondered, is that a consequence of-- The workbook, if you look down at the bottom, is dated June 2021. Has the SHTM guidance moved on from where the workbook was, and will it be updated to cover these sorts of things?

A Whether we put that explicit level of detail into the workbook, I couldn't say for certain here today. As I mentioned, the evidence is suggested evidence and by no means is it meant to be exhaustive, and by framing the requirements around how we assess compliance, we would then assess that relative to SHTM 03-01. So, by default, that would be assessed as part of the KSAR, as it were.

Q So, even though it is not mentioned in the workbook, it is something that Assure would be covering at the KSAR process?

A Correct, because we would be seeking assurance that the project had been developed in accordance with SHTM 03-01.

Q Yes, okay. If we imagine we go past the Outline Business Case stage and get to the Full Business Case stage-- I do not think it is necessary to look at the workbook for that, but one of the things you say in your statement is that, by the Full Business Case stage, you would expect there to be a full set of room data sheets in place.

A Yes, that's correct.

Q So, we might well, by this stage, have both a full set of room data sheets and an environmental matrix. I think we have probably partly touched upon this, but what sort of checks would you be carrying out with the room data sheets and the environmental matrix to gain the sort of assurance that you are looking for?

A There's probably two scenarios that would cover that, the first scenario being, had the project underwent a KSAR at a previous stage? If the answer to that question was yes, we would firstly consider any previous recommendations through the KSAR report and we would look at how the Health Board had addressed them. We would then look to understand from the Health Board whether there had been any change in the project since the Outline Business Case, and that would inform, effectively, the level of review.

So, from a room data sheet perspective, given that that would be a briefing tool, that would have been locked down, as it were. "Frozen" is a term that we would use in design. It would be frozen quite early on in that stage, I would suggest, in order for the detailed design solutions to be developed because the FBC is that detailed design stage and, coming back to the golden thread, if you're changing your requirements constantly, it's very difficult for the engineering to react to that. Again, we'll stick with ventilation because the duct work is going to be the single biggest space contributor within ceiling voids. The air handling unit plan would tend to be the biggest equipment that you have within your plant rooms.

So, we would look to understand the change, because-- and the certainty that existed around that and how that had informed the detailed design. So, we would look for that design journey to have been continued. We would look for assurance as to when those key decisions had been made and ultimately to gain a level of assurance around how robust those engineering solutions were, relative to the briefing requirements. If, and it has happened, we do our first KSAR at FBC, we would effectively go back to the start of that process because we have no prior assurance and we would need to understand the very origins of the design briefing process, as I've outlined earlier.

Q Yes, okay. One of the risks, I suppose, that arises is, if you have got a set of room data sheets, and then you have also got an environmental matrix, that there might be differences in one of the thousands and thousands of parameters. How do you address that risk? I think you maybe used the phrase earlier, "One source of truth," or something like that. Can you just explain how you would address that?

A So, again, coming back to-- Before you look at the detail, you would look at the process behind it, so if you have information that may exist in two different places, how is that being controlled? So, if the room data sheet in that example was a briefing document and the environmental matrix was seen as a working tool, how could a health board evidence the correlation between those two documents? So, for example, do the room data sheets have something as primitive as a revision number? Does the environmental matrix reference the particular revision of the room data

sheet that that was being developed from?

So, if they couldn't evidence that document control, if you like, that would cause us to probe further. I think we have identified examples of that within the Key Stage Assurance Reviews, where there has been a discrepancy between those two pieces of information because the room data sheets were continued-- continuing to be developed because they hadn't frozen that need, and that meant that the environmental matrix document, which the engineers were using as a working tool, was not keeping at pace with the briefing requirements. We identified that through both an interrogation of the briefing process and also an interrogation of the change control process, and we identified that the two were not interstitially linked, and that represented a risk that we were able to flag up. Thankfully, in that instance, it was resolved by the Health Board and the project team.

Q That is a real-life example from a Key Stage Assurance Review?

A Yes.

Q Okay. If we just briefly move on to the construction stage. There is a workbook for that: bundle 9, page 183. Just see that so you can see that that is the document we are looking at. If we can go, please, to page 199, paragraph 3.3:

> "How does the Health Board ensure that the ventilation systems are being installed to the correct standard and reflect the agreed design?"
>
> The evidence expected is:
>
> "Written, monthly evidence for the progress of work (including photographs) produced by a body which is independent of the contractor and which confirms compliance of the works to date."

So, simply by way of illustration, Assure are not themselves going in to check the progress of work. They are just looking to see evidence that somebody else is doing it independently?

A That is correct, yes.

Q In your statement, you recognise that, during the construction phase, there may well be elements of the design being progressed. So what assurance do the KSARs aim to achieve in relation to design being done at that stage?

A Yeah, so on-- I'm not-- Sorry, I'll start again there. BSRIA BG6 is a document I've referred to in

my statement. That is from the Building Services Research and Information Association. They produce a document that's called BG6 and that is almost an expansion to the RIBA planning work, which is very architecturally biased in nature. Within BSRIA, it acknowledges that, for what we would commonly refer to as "Contractor Design Portions or Packages," CDP, there can be an overlap between Stage 4, which would be your full business case, and Stage 5, which would be your construction activities.

So, when we go in to assess that as part of a KSAR, the starting point would be, what packages had been identified as Contractor Design Portions? Were there elements of what would be classified as reviewable design data? The actual assessment of that still takes place as well in the earlier stages because it's coming to plan for what you will do next, so we'll seek assurance that there is a plan. So, it won't be the first time that we have assessed the approach to Contractor Design Packages.

There are, historically, certain systems that would come under a Contractor Design Portion, and you don't see them finalised until early in the Stage 5 process. Fire detection and alarm systems is one that springs to mind. Sprinkler systems is another that springs to mind. We would seek assurance that, at that stage and the earlier stages, the design had been built up. It wasn't just a box that says, "Insert sprinkler system here" because that could have a consequential impact on other things, like access and maintenance strategies.

So, there will be a scope of works potentially created by your main designer, a performance specification, perhaps performance drawings that demonstrate spatial fit at the earlier RIBA stages. So we would seek an understanding of what packages fell into that Contractor Design Package, and we would look for them to be dealt with the same level of scrutiny that the other design packages that would form part of your more traditional elements were subject to during the earlier RIBA stages of design.

The programme would come into play at that point as well because you would be making sure that what you were seeing in terms of the physical works wasn't overtaking where they were in that relative design stage, but I wouldn't expect that to relate back to things like critical ventilation systems, for example.

Q Yes, okay. So perhaps

the key point is that these later elements of the design development are subject to the same degree of scrutiny as applied to the elements of the design that were looked at earlier?

A Correct.

Q Just briefly, then, in relation to changes or variations in the brief or the design during the construction phase, again, can you just talk through how you seek assurance in relation to those?

A So, in essence, we would be, again, looking for a level of scrutiny by appropriately competent people to have been undertaken, and that the consequential impact of the change had been fully established. Sometimes a change can be relatively minor; it can almost be cosmetic in nature. Other times you may see a change that could have a fundamental impact on other systems or other services.

Commonly, we would use phraseology of an assessment of safety, risk reliability of the system. Compliance would come into that as well. So, effectively, how had the health board interrogated that? Could they demonstrate that it was still safe? Could they demonstrate that it was still compliant? Had they assessed the consequential impact on other services relative to the change?

Q Is this approach taken for all changes, or, again, are changes just looked at on a sample basis?

A They would be on a sample basis. Again, a lot of the projects that we have reviewed to date have been undertaken under the NEC contract, and it is quite easy to get a log of those changes because it would require a project manager's instruction. So, very quickly, we can look to triage that, but the process would be uniform for other procurement routes because we would expect them to demonstrate, for example, a change log and demonstrate their change control process as part of the overarching project governance protocols.

Q When you talk there about a triage approach, do you mean looking at the log of changes and picking out the ones that look like the likeliest source of high risk?

A Correct, to inform our sample review.

Q Yes. Okay, and just for completeness in the specific context of ventilation, if we could look at page 201, please. This is question 3.9 in the construction phase workbook. It is:

> "How does the Health Board assure itself that all variations which may be required to

ventilation systems after tender are investigated and agreed by all parties before they are instigated?"

The evidence expected is:

"Evidence that each variation / derogation has a detailed technical analysis and has been referred to the Board and agreed with their clinical, Estates, infection control and FM teams."

So again, is that the approach that would be taken in the context of ventilation changes?

A It is, yes.

Q Again, no particular or explicit reference there to the ventilation safety group, which I think might now be involved in decision making in that particular context, but notwithstanding the absence of reference to it in the workbook, is that something that Assure would be looking for?

A Check. Correct, we would look for evidence that the change had been discussed with the Ventilation Safety Group.

Q Yes. Thank you. My Lord, I should just perhaps note the time. I have run past four o'clock. If it is acceptable to your Lordship and if it is acceptable to the core participants and if it is acceptable to Mr Rodgers, I am certainly happy to carry on perhaps until half past four today, if that is convenient.

THE CHAIR: Do you anticipate completing by half past four or not necessarily?

MR MCCLELLAND: It is possible. I would put it no higher than that.

THE CHAIR: Okay. Are you quite happy to go on for another half hour today?

THE WITNESS: I'm content to continue. If I may ask just for a short comfort break first?

THE CHAIR: Well, I had that in mind myself. Well, we will take a short comfort break. We will take another 15/20 minutes, Mr McClelland, but I will leave myself in your hands to judge when-- an appropriate time. It may be you have to come back tomorrow, Mr Rodger. Does that cause any particular problem to you?

THE WITNESS: Not at all, my Lordship.

THE CHAIR: No? Okay. Right, let us take a break.

(Short break)

THE CHAIR: If it does not inconvenience people, we might aim

for maybe quarter to five. Mr McClelland?

MR MCCLELLAND: Thank you, my Lord. If we can move briefly on to the commissioning stage workbook, which is at bundle 9, page 221. So, this is eight or so pages into this particular workbook. Just reading from that, Mr Rogers, you see where the brackets are about halfway through. Then just picking up after that, it says:

> "It is anticipated that the implementation of the Commissioning KSAR will differ from other reviews, as it will predominately take the form of a site-based audit of the processes and documentation associated with the Commissiong phase."

So the first question is, why is this stage different from the other ones?

A I think, again, it's relative to the types of information that will be available and where that information will be stored. It's also taking cognisance of the project being very close to completion. So, I'm going to say the speed at which we can undertake the KSAR process is really important because we don't want to take any more time than we need. So, a lot of the commissioning information at that stage will be held on site. It may be paper-based records that haven't yet been electronically transposed. We may see that at subsequent stages, such as the handover.

So, the purpose of it being predominantly site-based is to maintain an agility to support the health board in that sense. There is an element as well of the Ronseal moment that I referred to earlier because it also then gives us an opportunity to contextualise what is on the paper versus what we are seeing on site. Perhaps an example of that is if you have commissioned your theatre ventilation system and the theatres haven't been finished yet in terms of the construction work, that means that the validity of those commissioning records has to be called into doubt because that could impact on, for example, the performance of your air flows or potentially could lead to contamination within your airstream sources.

Q Okay, and is that the sort of thing that you are likely to pick up from being on site? You can actually see these things?

A Yes.

Q Is that what you mean? Yes. So, just to be clear about it, Assure are not themselves

commissioning or validating any of the systems?

A That's correct. We are not commissioning or validating.

Q But does their presence on site mean that this is a sort of higher level of assurance that is being applied to this stage compared to the earlier ones?

A No, I think the level of assurance provided would stand up to the same level of scrutiny as the previous stages.

Q Okay. You emphasise in your statement that Assure will do some inspection at the commissioning stage, but it will not reach the sort of detail or breadth of inspection as a check by a clerk of works or a site supervisor. This concept of the clerk of works is relevant because of what some of the witnesses have said about the policy objective that originally lay behind what became Assure. So does Assure, at any stage in its work, take on the role of a clerk of works?

A It does not, no.

Q No. If we can go, please, to page 224, and it is just picking up on the-- Well, the question is how the Health Board ensures that there is a planned approach to the implementation of the commissioning process to ensure compliance with design requirements and so on. Then the third bullet in the right-hand box looks for:

> "Evidence that a competent independent validation organisation has been appointed by the Health Board for all disciplines covered under the KSAR."

That is simply to highlight that one of the things looked for is evidence of independent validation of the ventilation systems?

A That is correct, yes.

Q In your statement, you address an important issue about whether the commissioning is carried out against the contract standards or against standards and guidance, and as I have understood your statement, what you explain is that, if the processes have been followed correctly, that should not be an issue. Can you just explain why you say that, what you mean by that?

A Sorry, could you direct me to the paragraph in my statement, just for context, please?

Q Yes, of course. It is paragraph 167. I will just give you a moment to read that.

A Okay, thank you. So, in reference to the question, when we go to do a commissioning KSAR, the

standards that should be being followed should have been outlined significantly earlier in the process. So, if we arrive on site and no one can tell us what they're commissioning to, then the commissioning has failed. There's not been a project yet where the first KSAR that we have done is the commissioning KSAR, so it's almost a hypothetical type of response that I'm giving you because we would have assessed that detail much, much earlier. So the potential for us arriving to a project where they can't tell us what they're going to be commissioning to, I think, it's highly unlikely that that would actually exist because that would have been identified much earlier in that KSAR journey.

So, by that point, either through the contract or through things like a commissioning brief-- So, for example, SHTM 03-01, SHTM 04-01, they call for designers to undertake commissioning briefs, so if we say a commissioning manager, by that point there should be a demonstrable plan. There should be a demonstrable programme. So, what I was alluding to there in my statement is, by the time we get to that point in that process, it would be highly unlikely that we would identify any discrepancies at that point; it would have been identified much earlier.

Q Okay, and is there also an element that, in so far as there is a difference between the contractual specification and the recommendations in the guidance, that is going to be explained by a formal derogation in place?

A I think it would depend on what the derogation was, for example. Obviously, we've referred to things like the design quality policy. We've talked about, in my statement, how SHTMs could become mandated through a contract. Traditionally, we would see a derogation to the SHTM suite of documents or an HBN, you know, some of the other ancillary documents. You wouldn't necessarily see a derogation from something like CIBSE Guide M, for example, because the derogation is applied to your healthcare guidance, if you like.

Q Right, yes.

A So if they hadn't adopted, for example, the best practices that were outlined within CIBSE Guide M, they may not have a derogation. We might still seek to understand what they have done, but it wouldn't be a major issue for us if they could demonstrate that they had controlled that process.

Q Yes, but then so far as there was a departure from the SHTM guidance, would you expect to see that documented in a derogation?

A Correct. Yes, we would.

Q Yes. Then if we move on to bundle 9, page 249, please. This is the handover Key Stage Assurance Review. How close in time is the handover KSAR going to be carried out in relation to the commissioning one?

A In practice, it's very close thereafter. They very often run back to back on the projects that we've experienced to date. There are a few projects at the moment where there is a period of time between those two as a result of-- one particular project as a result of recommendations through NHS Scotland Assure, and the other project as a result of matters that the Health Board themselves wished to seek assurance on before they would invite NHS Scotland Assure to come in. But the general rule is that they would follow within a matter of weeks, potentially, of each other. Again, the size and complexity of the project would take a bearing on that. Most of the projects that we've done have been around £50-60 million, but for bigger projects we may have to look at potentially going and doing multiple KSARs in that respect.

Q Okay, and if you go to page 257, please, and just under the heading "Handover KSAR." Again, picking up about three lines from the bottom, it says that:

> "It is anticipated that the implementation of the Handover KSAR will differ from other reviews, as it will predominantly take the form of a site-based audit of the processes and documentation associated with the Handover phase."

Are the reasons for this being a site-based audit similar to those for the commissioning phase being a site-based review?

A Essentially, yes. I think, in practice, we would try and remain agile in that respect. I think the greater the level of assurance that's provided at the commissioning stage, the less time we may need to spend on site, but we'll remain agile in our approach.

Q Okay, and when it says that it is a site-based audit of the processes and documentation, again, is that done only on a sample basis?

A Essentially, we would be assessing-- auditing the assurances, the evidence that they provide in response to the KSAR, and again, that would be on a sample basis, yes.

Q Again, how do you determine the depth and breadth of the sample?

A That would be based on our subject matter expertise, personal judgment and, again, the level of assurances that were being provided by the Health Board.

Q You explain in your statement that if the project remains supported by Assure at the handover stage that will normally mark the end of Assure's involvement in the project?

A That's correct, yes.

Q Okay, we can close down the workbook. One question about the HAI-SCRIBE process, the sort of sign-off process: how does that interrelate with the KSARs?

A So the HAI-SCRIBE is an independent process. That is outlined through SHFN 30. So the KSAR process will seek assurance that the HAI-SCRIBE has been undertaken in accordance with SHFN 30.

Q Okay. Is there a process under way of reviewing or revising the workbooks for the KSARs?

A There is, yes.

Q Can you just give us a brief indication of what that work involves and what it is based upon?

A So, the first point is around about streamlining the workbooks. We have seen in practice there is an element of duplication within the question sets. I can give a really easy example of that: we ask, "Is your ventilation ductwork coordinated?" We ask, "Is your water services pipework coordinated?" One system can't be coordinated if the other isn't, and we found that when we were writing the reports we were effectively saying the same thing in three or four different sections. That makes your report longer, it takes more time to read, so that's a natural efficiency.

We've talked today about the language behind some of the questions and how that has been perceived, so there will be a refinement of language based on the feedback that we've received from our stakeholders. And ultimately, as part of the workbooks, we are also considering whether it would be appropriate to include any other disciplines in that, which would be part of the potential integration programme that we were discussing earlier.

Q Okay, so do I take it from what you are saying that, to at least some extent, feedback from health boards is relevant to what the workbooks will look like in the future?

A Absolutely. The

workbooks, initially, albeit prior to my time at NHS Assure, they were developed in conjunction with our stakeholders, which would be Scottish Government and the health boards. There was a consensus group established to effectively act in a peer review manner for the workbooks. Any amendments that we have made subsequent would go through that same consensus group, and I don't see that process changing. It's important that we capture that feedback.

Q Okay. Just a brief question about the scale of the task involved in a KSAR. Ms Critchley, in her statement, talks about the process perhaps involving the gathering of thousands of documents. Again, I appreciate this will vary from project to project, but can you just give us an impression of the volume of documents involved, how long the review takes, how many people are involved?

A Yes. I think we have seen an evolution of the timings since we undertook the first KSAR. Like any new process, people learn from it. We produced an aide-mémoire of recommended deliverables to health boards. Some of the very early KSARs, just purely as a result of the timing of the DL, we were almost thrust upon the health boards to say, "You must do a KSAR" and I do have a level of sympathy for those boards. I said at the time we were doing them it was a challenge because we're not asking for things that they shouldn't already be doing, but having that in one place, the one repository, so that that could be audited, for want of a better phrase, was a bit of a challenge for the boards. And that led to some of the earlier ones being more challenging because they effectively had to collate everything all at once.

Since then, you know, it's not a surprise anymore to health boards that we have to go through a process and they can plan better as to how they are going to respond to the KSAR. We currently use Microsoft Teams as the main repository for information exchange, and we have standardised folders aligned to the KSAR questions and the aide-mémoire suggested deliverables document, where health boards can do that on a continual basis. So it's the analogy, you're not waiting till five o'clock on a Friday to press upload – they can do that on a on a more gradual basis – and I think that has helped the process because it reduces some of that time burden.

Q Mm-hmm.

A We have looked to explore other options to expedite that data exchange change so that, again, the time can be spent in the most productive way possible and not just around the collation of information. As yet, we haven't identified a clear mechanism that would provide an additional benefit. We look, for example, at the use of a common data environment. NHS Scotland Assure have looked into that in the past, but the uptake on that isn't where it would need to be to work across all projects, so we're trying to standardise that approach.

Q Yes.

A In terms of the number of people involved, from your perspective, it can vary. As a minimum, you would have one subject matter expert per section, so a ventilation specialist, a water specialist and so on, but for larger projects we would have to put additional resource on that, again, to ensure that we could do the review as timelessly as we can.

Q At the Health Board end of it, how many people are you typically seeing involved?

A I don't have that exact information. I think it varies from health board to health board, based on the feedback I've had through the process. Some of the larger health boards probably are more geared up to do that, from a resource perspective. Some have been supported through the supply chain partners, through the contractors, by allocating a detailed document-- a dedicated document controller, for example, but that would be a question that the Health Board would be better placed to answer.

Q Okay, and you refer in your statement to, well, first of all, to that process of gathering the documents and then that being followed up by in-depth technical workshops. Are those workshops essentially the forum in which there is a discussion about all of the questions that we have seen in the workbook?

A Yes.

Q Okay. Just a brief question about derogations and in particular derogations from guidance such as SHTMs. Some of the witnesses have suggested that it might be helpful to have a standardised derogation template or methodology, and some have also suggested that it would be helpful to have a centralised sign-off of derogations, and I think the implication is that that would be done by Assure. Do you have any views about either of those suggestions?

A If I take them in turn and if you look at a centralised process, the feedback that we are getting from stakeholders is that, yes, there is a need for that, and we have established a short-life working group internally within NHS Scotland Assure to explore the mechanics of that. That is very much something that's in its infancy, but it is something that we have had a lot of feedback on and we feel obliged to respond to that feedback. I disagree, though, that any derogations should come to Assure, effectively, for sign-off. I think there are far too many complexities on a local level for us to do that in a practicable sense because ultimately the health boards need to take ownership of the facility in operation and quite often derogations can be linked into how a facility would be operated, so I don't believe it would be appropriate for us to do that.

Q Okay. So, I understand that any derogation is going to have to be justified by the project-specific requirements, but is there not a flip side of that that Assure are effectively the owners of the guidance and perhaps best placed to determine when they have to be insisted upon?

A I think there are subtle distinctions in there that makes the mechanic of that different to how you've described that. Compliance and safety can be one and the same, but they can also be different things. For example, if through derogating from a particular piece of guidance you put a greater onus on operational maintenance, for example, it wouldn't be within Assure's gift to be able to say that that represented a safe solution because we would not be responsible for the provision of that ongoing maintenance. So, the ownership, again, complicates that. What we could do and what we do do is we can support health boards in their assessment of derogations. We can help them to understand the risks that they face, but ultimately that ownership and that accountability, I can't see any other way that it would work other than retaining with the Health Board.

Q Okay. Now, just the practical impact of KSARs, and you referred earlier to an instance where the KSAR detected a discrepancy between Room Datasheets and an Environmental Matrix. Are there any other practical examples that you can give us of the KSAR process uncovering things that might have been a problem down the line?

A Yes. Probably the one place I would direct the Inquiry to to assist in the matters that you're looking

into-- We did publish a lessons learned paper on our website and that collated a lot of the early findings from the first batch of KSARs and it also took on board some learning from the interim review service that predated the launch of NHS Scotland Assure. The lessons learned paper, we are currently planning a revision to that document and we anticipate that that would be published this year.

In addition to the lessons learned paper, we have created a number of lessons learned presentations that we have shared with health boards in different forums through what we call the learning networks, which is something that NHS Scotland Assure facilitate, and it provides health boards and ourselves an opportunity to come together to share that learning. It's an open forum and a protected space. We have also presented those lessons learned presentations to health boards at various stages within the KSAR journey.

If you were to ask me to pick a few examples in no particular order, we have seen concerns around the derogations process and that not being as informed as it should be. I'm often asked, what's a bad delegation when it's only one line and there's no assessment of that safety, risk and reliability? So, I think that is something that we do see quite often which almost supports my argument, the argument that we need to have a central process.

We have had some issues with our electrical services: they haven't considered the practicalities of live switching and there's been scenarios where, if a certain sequence of events had taken place, there was an increased risk of electrocution. There's been issues with coordination of services. So, these are kind of some of the example themes, but in no particular order.

Q Yes. Okay, but that lessons learned paper is available on the Assure website, is it?

A That is correct, yes.

Q Is there a sense in which the health boards, having been through one KSAR process, learn from it so that the next time they do a project, their governance and procedures are better?

A Yes, we have seen evidence of that. There was one particular health board where the very first KSAR they underwent was at the outline business case. That was unsupported. We cited a lack of support and assurance around their governance procedures. They

remedied that, they got supported status for that, and the very next project that we went to do for that health board on a different project, you could clearly see how they had learned as a health board, and that was really encouraging to see.

We have also looked to share the feedback from health boards to other health boards and we have had colleagues from health boards that have underwent a KSAR present at the NHS Scotland Assure Conference – that would have been about 18 months ago – and they have also presented in the learning networks. I think one of the encouraging things that I have seen in terms of trying to promote that transparency and that collaboration, that health board colleagues have also offered to make themselves available to other health board colleagues to discuss, you know, how many people they may need to respond to a KSAR, how they may better expedite their own processes at health board level. Again, I think just that collegiate approach across NHS Scotland is something that I reflect as a success for the service.

Q Okay, and is this something which is raising standards across the board and may lead in the future to KSARs being a more streamlined process?

A I would hope so, yes.

Q Okay. A small point made by one witness is that sometimes Assure puts a different team onto a KSAR from the one which had done the preceding KSAR, and that this can lead to inconsistent feedback. Is that a comment that you accept and, if so, are steps being taken to address it?

A There is one instance that I can recall that would fit into that description. The original-- We utilised a third-party lead advisor to undertake the KSAR on our behalf based on the resource that was overseen by myself and other senior people within the Assure organisation. When it came to the next KSAR on that journey, the individuals within the organisation, the third-party organisation, no longer worked for that company and the company hadn't replaced them with the equivalent competence, in our view, so we took a view to put another team onto that review.

There were some, I'm going to say, bumps in the road on that review. Ultimately, we still were able to produce a factually accurate report. It wasn't the best of processes. I can understand the Health Board saying it

wasn't the best of experiences, but since then that has just reiterated the approach that we try and take, that the team that we put on your first KSAR will be the team that you get on your last KSAR, because that knowledge retention is really important.

Q Yes, okay. Right to the very start----

THE CHAIR: Sorry. Just so that I picked that up-- You try to maintain continuity at least between the first KSAR and the last KSAR?

A Yes.

Q How about the ones in the middle?

A Sorry, it would be a continual journey.

Q Right, okay. Thank you.

A So, the team that did the outline business case ideally would be the same team that did the full business case. Again, I think we've seen our supply chain settle down. We have managed to apply that consistency. As I said, there's only one KSAR that really springs to mind that didn't go as I would have liked to in the process, but ultimately the outcomes weren't compromised.

MR MCCLELLAND: Okay. If we move briefly off the KSARs on to the advice function where your team of engineers provide advice to health boards. There may be a view amongst some people that, since Assure is responsible for the guidance, it should always be able to provide an immediate and definite answer to any question. What would your response be to that?

A Again, I think that's an idealistic viewpoint. I think because of the complexities of the facilities that we design, we can and have been asked questions where the answer doesn't exist, and that requires, for example, further research to make an informed decision. So, whilst that might be something ideologically, in practice that isn't always possible.

Q Okay. I am just going to quote from some evidence from one of the witnesses. This was Dr Inverarity, who is the Lead Infection Control Doctor at NHS Lothian, and what he said was:

> "There have been occasions where we have asked questions for clarification on how to interpret guidance or where there is not clear steers of what to do, and sometimes that is batted back to the health board as, 'That is your decision to make.'"

Now, that is obviously an anecdote. It is not tied to any

particular example, but the point I think may be this: that if Assure is built up as the centre of excellence or centre of expertise, it is not helpful to health boards seeking advice to be told to go away and work it out for themselves. Again, what would your response be to that?

A I think in terms of the individual scenario that's been referred to there-- I don't know what Dr Inverarity is referring to, so anything I say would be anecdotal back. We do not set out to bat things back to the Health Board in that respect. We will always make it clear on where the responsibility for the decision making lies, but we will always try and support health boards in making the most appropriate decision.

Q Yes, so I think perhaps it is fair to point out what you said about derogations earlier, that the judgment about the derogations is still a responsibility for the health boards. So, they would have to decide for themselves if it was appropriate and what justification there was for it.

A Correct.

Q Yes. A theme which has emerged from some of the evidence is that, for those on the front line of developing hospitals – the designers, members of the project team, IPC team members – more certainty would be helpful about what they are required to do. To what extent do you think there might be scope for making the guidance more definitive or more prescriptive?

A I think that's quite a subjective question because I have heard criticism of guidance come from certain individuals and I would potentially question their competency to apply that guidance. It's very easy to make a broad-brush statement, but we do provide a forum through SETAG and the National Advisory Groups, and the way that we produce guidance that people have a voice, and if they feel that there are improvements that would benefit guidance, we would encourage them to use that voice.

We have active updates ongoing for guidance at the moment and that constitutes multidisciplinary input from designers, from contractors, through to academia and industry. So, there is a forum that exists where people can provide us that feedback, and I think it's very easy for somebody to make a broad-brush statement.

There are examples where people have given us-- and again I'll give you a ventilation example that came up in 03-01, where the latest version of SHTM 03-01 infers that

when an air handling unit reaches 20 years it will have exceeded its operational lifecycle and should be replaced. Now, that's had an unintended consequence because the money is not there to do that and there are air handling units that are 20 years old that are functional, that are safe, and they are providing the prerequisite number of air changes and pressure cascades. So, there may not be a requirement to do that.

So, we are currently working with SETAG and the National Advisory Groups to look at maintaining the ethos, if you like, of that particular example, which is ultimately about maintaining safety, understanding risk and looking at the reliability. So, that clause will likely change in the next 03-01. So, that's an example of something where people have said it's potentially ambiguous, it's potentially not doing what we need it to do, but we're listening and we're updating that and we're working with our stakeholders.

Q Okay. One topic we touched on briefly with Julie Critchley this morning was the Repeatable Rooms project, and she explained that there were a number of Repeatable Room designs – I do not know if that is the right word – which existed, and there were another seven, I think she thought there were, in development. Are you able to tell us, the ones in development, what kind of rooms are they?

A Apologies, I'm not directly party to that. My team are represented, but the process has been run by our Property and Capital Planning division.

Q I see, so it is not within your division?

A No.

Q No? Okay. I mean, is that an approach which could be taken for more and more rooms, including rooms where there are specialist engineering services such as ventilation?

A I think as a concept, yes. I think no two hospitals are the same. There's different models of care, for example. There's different staffing levels, geographical locations, for example, but I think the principles behind the standard room layouts that would provide a template for people to then adapt relative to the requirements of an individual facility, I think that is a good idea. I think we've seen that through the Repeatable Rooms that have been developed to date. Again, I think another important point to re-emphasise is, that's not just something

that Assure have done in isolation. That group is well represented by health boards as well. It's back to everything that exists in that healthcare built environment. It's important to maintain that multi-disciplinary, multi-stakeholder approach.

Q Moving beyond the idea of Repeatable Rooms, some witnesses have referred to possible benefits in having a template set of employers' requirements for healthcare building projects. Again, what do you think about that and is that something that Assure could be involved in?

A I think, in principle, Assure could be involved in that. If commissioned to do that, we would need to obviously discuss that with Scottish Government and our wider stakeholders. We have heard that through forums like SETAG before, but there never has been a driving consensus that that is a priority, but it might be something in the future that we do look at.

Q Okay. There is, in the papers, a template environmental matrix produced by Assure. Is that a document you are familiar with?

A I am, yes.

Q Does Assure issue any guidance about how that should be used?

A Not specifically. The origins to that template-- Through some of the stakeholder feedback, including SETAG, the stakeholders, particularly from an Estates and engineering background, were saying it would be useful to have a template, and we were asked to produce a template for people to use should they so desire. Again, it's not mandated through guidance and we haven't actually had any inquiries as to how people should complete it. If people did have questions, myself or one of the team-- we would be quite happy to support a health board in that. And ultimately, if we did see repeat questions coming in, we would look to, you know, potentially produce a short guidance note, for example, to go and accompany that, but it's not something we've been asked.

Q One of the things that Mr Maddocks, the expert witness to the Inquiry, has pointed out is that Talon, the company that operates the activity database, say that they can generate an environmental matrix direct from the database. Given what you said earlier about one source of truth and so on, again, is that an approach which you think might be advisable for

a health board that wants to build up a matrix?

A Yeah, I think that would be good. There's other digital tools as well. We've seen, as BIM becomes more prevalent, Revit becomes more prevalent, a lot of that information is containerised within the information model. It would be remiss of us not to explore the use of digital tools to try and make the documentation more robust in that sense.

Q The final question from me, Mr Rodger, is about knowledge transfer. If you have a situation where an infection control issue is arising in one health board, what arrangements are in place within Assure to make sure that information and knowledge about that is disseminated to other health boards? I should make clear, I am talking insofar as this gives rise to an engineering issue which would come up within your department.

A Yeah, so it's that-- If it's an engineering issue related to an infection control incident, we would be governed by the infection control protocols outlined in the NIPCM. Our role in that is very much to support our colleagues from ARHAI, and I would have to say that I would defer to them for a more detailed explanation as to how that mechanic would work. We would defer to them for the appropriate protocols, for example, using the Scottish Government. Certain elements may be bound by confidentiality, patient confidentiality, etc. As I say, colleagues from ARHAI would be better placed to answer that question.

Q Okay. Mr Rodger, you and probably everybody else in the room will be happy to know that that is the end of my questions, but if you wait there for a moment, it may be that other people have questions for you.

THE CHAIR: I have no more questions for you, at least at this point, but there may be questions coming from the room. So what I will ask you, Mr Rodger, is to go back to the witness room for maybe 10 minutes or so, so that Mr McClelland can just discover whether there are any other questions that might be asked of you. So, perhaps 10 minutes, and then you will come back and find out what the situation is.

A Okay, thank you.

(Short break)

THE CHAIR: Mr McClelland.

MR MCCLELLAND: My Lord, thank you. I should say, I am grateful to your Lordship and to Mr Rodger and

to everybody else for allowing us to go on until five o'clock, and I am glad to say that there are no further questions.

THE CHAIR: Thank you, Mr McClelland. Well, as you have heard, Mr Rodger, no questions in addition to what you have already been asked. You are therefore free to go, but before going, can I express my thanks not only for your attendance but the very considerable amount of work that will have gone in preparing your witness statement and considering documents. I am very grateful for that, so thank you, but you are now free to go.

THE WITNESS: Thank you.

THE CHAIR: Now, Mr McClelland, I understand that you will be conducting questioning again tomorrow just with one witness, is that right?

MR MCCLELLAND: That is right. Just Malcolm Wright tomorrow, my Lord.

THE CHAIR: Malcolm Wright. So, we will see each other again at ten o'clock tomorrow. Thank you.

(End of session)

17:16