Scottish Hospitals Inquiry
Witness Statement of
Brian Currie

1. My name is Brian James Currie. I am a Senior Programme Director for NHSL. My previous statement provided to the Scottish Hospitals Inquiry for the purposes of the May 2022 Hearings sets out my professional background and experience.

2. This statement seeks to provide information to the best of my recollection. It was originally drafted in response to specific questions I was asked at interviews by the Scottish Hospitals Inquiry (SHI) on 17 November and 6 December 2022. It should be read in conjunction with my previous witness statement provided to the Inquiry in advance of the Hearings commencing on 9 May 2022 **(A37753091– Witness Statement Brian Currie – Bundle 13, Volume 9, Page 338)**. I was unable to finalise the witness statement prior to the SHI hearing commencing 24 April 2023 or to give oral evidence at that hearing.

3. I have now finalised my statement, including updating it to respond to specific issues I have been asked to clarify by the Inquiry.

Activity Database (ADB)

4. I am aware that NHS Lothian (NHSL) used the Activity Database (ADB) during the capital funded stage to prepare a Royal Hospital of Sick Children (RHSC) ADB, though I was not involved in the Project at that time. This RHSC ADB was provide to BAM, the Principal Chain Supply Partner (PSCP) to develop its design.

5. Hulley & Kirkwood (H&K) were appointed by BAM as their Mechanical and Electrical (M&E) engineers. This was before I was employed by NHSL in August 2009. However, I'm aware the NHSL Information Pack (HLIP) provided to BAM as the Principal Supply Chain Partner (PSCP) under the capital funded project refers to the use of the relevant design guidance and the ADB at paragraph 4.11 of Appendix C.

When the project switched to NPD, the requirement to use Chief Executive Letter (CEL) 19 2010 **(A37215536 – Chief Executive Letter (2010) "A Policy on Design Assurance for NHS Scotland 2010 Revision" – 2 June 2010 – Bundle 13, Volume 5, Page 2229)** was contained in the Invitation To Participate in Dialogue (ITPD) and the Project Agreement (PA).

6. I have been informed that H&K did not use the ADB when generating the Environmental Matrix (the EM). The only other way to prepare an EM would be to take information directly from the national design guidance, by which I mean the Scottish Health Technical Memorandum (SHTM), Scottish Health Planning Notes (SHPN) and Health Building Notes (HBN) and populate the EM directly from that.

7. During the reference design period, i.e. following the switch to an NPD funded model, H&K continued as the M&E engineers and Nightingale Associates and BMJ continued as the architects. There was a desire to utilise the operational functionality elements from the capital design – i.e. all the work done with the clinicians to develop the design in terms of layouts and adjacencies. Although I was not directly involved in the day to day management of the Reference Design Team, I would imagine the architects would have used their valuable knowledge from their meetings with the clinicians to develop the capital design to assess which elements of it could be salvaged to inform the reference design.

8. I do not know whether the Reference Design Team (Nightingale, BMJ, H&K and Arup) who were sub-contracted to our Technical Advisors, Mott MacDonald Ltd (Motts), used the ADB as a reference tool when developing the reference design. I certainly would have expected the Reference Design Team to refer to the national design guidance, including SHTM 03-01 for ventilation requirements. I note that the Reference Design Team did issue a compliance statement dated 16 March 2012 to Motts certifying that their design was compliant.

9. However, ultimately it was Project Co (IHSL) who were responsible for the final design given that the design risk transferred to them under the terms of the Project Agreement (PA), with the exception of operational functionality. NHSL brief was to

produce the Room Data Sheets (RDS), using the ADB and complying with SHTM 03-01. This was communicated to Bidders at the Bidders day\, in the Memorandum of Understanding, during Competitive dialogue, and in the ITPD, PA and Board Construction Requirements (BCR), which required compliance with SHTMs and CEL 19 2019. If there was doubt or inconsistency, it should have been flagged to NHSL by IHSL. It was not .I would be surprised if the ADB was not used by IHSL when generating RDS. It appears that it was used by HLM (IHSL architects) on the basis of the labelling evident on IHSL' RDS both at final tender and at financial close (FC) which quite clearly states at the bottom: "Department of Health Activity DataBase".

CEL 19 (2010) (A37215536 – Chief Executive Letter (2010) "A Policy on Design Assurance for NHS Scotland 2010 Revision" – 2 June 2010 – Bundle 13, Volume 5, Page 2229)

10. I was aware of CEL 19 2010. On 16 June 2010, MML provided a copy of CEL 19 (2010) and the Policy on Design Quality (**A37215536 – Chief Executive Letter (2010) "A Policy on Design Assurance for NHS Scotland 2010 Revision" – 2 June 2010 – Bundle 13, Volume 5, Page 2232**) by way of email to me for information and advised that BAM were aware of the revised information. MML were employed to recognise and incorporate all such requirements, which they did in the ITPD and BCRs. It is perhaps academic because IHSL appear to have utilised the ADB to prepare the RDS.

11. In my view, CEL 19 (2010) was drafted with capital funded projects in mind and did not anticipate NPD to the extent it transfers risk to the private sector. The whole point of NPD is to transfer sufficient risk to the private sector so that it can be accounted for as "off book" for national accounts purposes, which means it results in lower recorded levels of government debt and public spending in the short term. To get over that risk transfer threshold, the design, apart from operational functionality, sits firmly with the private sector and thus the production of RDS and EM, or other forms of specification, rests firmly with the private sector. I discuss the transfer of risk in more detail below.

12. CEL 19 (2010) imposed a requirement for NHS Scotland bodies to use ADB as a tool for briefing, design, and commissioning. If an alternative tool is used, it should be of equal quality and value to ADB in its application. However, the ADB was not deemed inappropriate for the project. Its use was specified in the ITPD and BCRs and was in fact used by IHSL to prepare the RDS. An alternative approach was used, i.e. that the onus was on the bidders to use the ADB to prepare the RDS, which reflects the transfer of risk inherent within NPD. So the ADB was used as a briefing tool but it was used by IHSL and not NHSL.

13. The ITPD and subsequent PA required bidders to comply with CEL 19 (2010) and a list of national design guidance (including SHTM 03-01) unless a specific derogation was made, which there was not. My assumption would therefore have been that the bidders were using the ADB to prepare their RDS. It would be difficult to produce RDS otherwise. The ADB provides template sheets from which the RDS are prepared.

14. I would, however, add that as noted in CEL 19 (2010), the ADB is not comprehensive nor project specific and has no reference to Scottish design guidance and accordingly requires extreme care and caution when being used in Scottish healthcare. What that means is that anyone using the ADB would have to cross-check the template ADB against the relevant SHTMs and HBNs.

15. An EM is not of equal quality and value to the ADB in that it only represents one aspect of the ADB, i.e. the environmental data. The EM was a supplementary tool which was used to capture the M&E information, but that M&E information was also contained in the RDS, which appear to have been prepared using the ADB. However, an EM contains additional M&E detail (more than can be found on the ADB alone) and so it could be said the EM was of equal (if not better) quality and value to the environmental data in the ADB on its own. The reality is that both an EM and, it would appear, the ADB were used by IHSL. RDS were produced by IHSL. Both the RDS and the EM contained the same errors. Any

errors/inconsistencies in the EM could and should have been flagged up by IHSL when they utilised the ADB to prepare the RDS.

16. NHSL were reassured by the fact that the documentation in the ITPD available to bidders, and the subsequent contract with the successful bidder, included a requirement for the successful bidder to ensure that the facilities (i) adhered to the requirements of CEL 19 (2010) and (ii) complied with Scottish design guidance SHTM 03-01 as mandatory in relation to ventilation requirements. I cannot recall specific discussions but we had numerous conversations with IHSL about compliance with guidance. IHSL were very much aware that NHSL brief was to deliver a building that complied with guidance. All the tender returns confirmed compliance with guidance. They would have failed if not. In addition, bidders would have to do their own due diligence on all contract documentation which would have highlighted the mandatory status in this particular contract.

17. In the ITPD and PA, Schedule Part 6, Section 3, **(A33405670 – Schedule Part 6: Construction matters, section 3 (Board's Construction Requirements), Subsections A, B and C – Hearing commencing 24 April 2023, Bundle 5, Page 194)** set out the Board's Construction Requirements and provided at paragraph 2.3(v) that, unless the Board had expressed elsewhere in the Board's Construction Requirements a specific and different requirement, which it did not, then IHSL had to *"take fully into account the guidance and advice included within such SHTM and HTM; ensure that the facilities comply with the requirement of such SHTM and HTM; and adopt as mandatory all recommendations and preferred solutions contained in such SHTM and HTM."* (**A33405670 – Schedule Part 6: Construction matters, section 3 (Board's Construction Requirements), Subsections A, B and C – Hearing commencing 24 April 2023, Bundle 5, Page 213**). The PA provided that, where there was an inconsistency in standards, the most onerous standard would prevail, unless there was an agreed derogation, which there was not. This reflected my understanding, i.e. that compliance with SHTM and HTM was mandatory, subject to any agreed derogations.

18. The EM was not NHSL brief. I refer to my first statement given to the Inquiry in advance of the Hearings in May 2022 where I explain the purpose of the EM in detail and to paragraph 31 below.

Reference Design

19. Motts were originally appointed as the NEC Supervisors in February 2010 during the capital funded project. Following the announcement of a switch to non-profit distributing public private partnership mode (NPD) in November 2010, NHSL re-appointed Motts to provide Project Management and Design Team Services on 13 June and 11 October 2011 (the Appointment). The Appointment was made under Framework Agreement RM457/1 signed on 20 October and 2 November 2009. The Appointment was varied and extended, as required, by a number of contract control orders.

20. Motts sub-contracted Davis Langdon as Project Managers. The designers who had been involved at the capital stage (NA, BMJ, H&K and Arup) were in turn sub-consulted by Davis Langdon to prepare the reference design. In terms of clause 50 of the Appointment, Motts were responsible to NHSL for services provided by sub-contractors as if they had been undertaken directly by Motts. (**A36878553 – Sub Consultancy Agreement between Mott MacDonald and Davis Langdon – 10 May 2011 – Hearing commencing 24 April 2023, Bundle 2, Page 144**).

21. Davis Langdon produced a Design Summary as at end of November 2010 (dated September 2010) (see earlier draft **A33146596 – Mott MacDonald, Davis Langdon Project Execution Plan – September 2011 – Hearing Commencing 9 May 2022, Bundle 3, Volume 2 (of 3), Page 488**). The document was a summary of the suspended design of the RHSC project at the point of suspension on 29 November 2019. Its purpose was to act as a reference document, detailing the outputs which had been compiled both by the design and advisory teams over the previous 18 months, as well as a schedule of actions which were ongoing as at the point of suspension and required further action. The design process, including the design monitoring system, is detailed and there is then a schedule of all current

design information, including generic and key room layouts and Clinical Output Based Specifications (COS).

22. From an NHSL perspective, the reference design team was being managed by Motts and Davis Langdon. Janice Mackenzie, Fiona Halcrow, Graham Gillies, and Neil McLennan from NHSL worked with the reference design team to ensure NHSL operational functionality requirements were being met in the reference design, e.g. that the departmental and room layouts and adjacencies were all as the users (clinicians, patients, and families) would wish.

23. Other work streams during this period included getting the supplemental agreements (SA) and a programme of enabling works agreed with Consort Healthcare (the Private Finance Initiative (PFI) provider running the Royal Infirmary of Edinburgh at Little France). I discuss the site constraints, SA6, SA7 and the enabling works in detail in my first statement at paragraphs 6 – 16 **(A37753091 – Witness Statement Brian Currie – Bundle 13, Volume 9, Page 338)** .

24. There was a collective discussion with The Scottish Futures Trust (SFT), Scottish Government, Motts and ourselves in relation to the use of a reference design. It was a step on from an exemplar design for the unique reasons that were brought to bear on this project. I discuss this in detail in my first statement generally and at paragraphs 22 – 30.

25. At paragraph 31 of my first statement I refer to the Approach to Reference Design paper prepared by Mott MacDonald **(A33432217 – Mott McDonald "RHSC+DCN Approach to Reference Design" - May 2012 – Bundle 3, Volume 2 (of 3) for the Hearing Commencing 9 May 2022 at Page 898)**. I authored a Reference Design paper for the Project Steering Board Meeting on 11 May 2012 which recommended that the Approach to Reference Design report was used as the basis for accurately conveying NHSL's intentions to bidders in relation to mandatory and non-mandatory elements of the design (**A32676784 – NHS Lothian, 'Reference Design Report', (11 May 2012) – Bundle 13, Volume 9, Page 369**). I wish to clarify, for the

avoidance of doubt, that the Approach to Reference Design Paper was never issued to bidders.

26. In addition to the comments on reference design in my first statement, I would add that SFT, as part of their programme of infrastructure which they were championing and delivering for the Scottish Government, were very keen to have a clear picture of the commercial outlays in this Project, and indeed all Projects, which the Scottish Government were running. SFT were keen that we should have a clear and informed view of risk in the cost appraisals and cost plans to avoid optimum bias. I understood this to be one of the reasons SFT were keen on the use of the reference design. A reference design provided one possible graphical representation of the Project incorporating satisfactory operational functionality requirements and would enable quantity surveyors to provide a cost plan with the degree of accuracy necessary to satisfy SFT in this regard.

27. I have been asked if it was NHSL's intention that the reference design would have fulfilled its purpose by FC. Paragraphs 24 – 26 of my first statement **(A37753091 – Witness Statement Brian Currie – Bundle 13, Volume 9, Pages 346 to 347)** clarify that NHSL laboured the point that the reference design was to be replaced with the Preferred Bidders' design. At preferred bidder stage our reference design had fulfilled its purpose in informing the bidders' during dialogue, through graphical or diagrammatic means, of our operational functionality requirements.

28. The bidders were very aware that the reference design was to fall away. This was communicated at the outset at the open day for bidders (see appendix to my first statement (**A37753091 – Witness Statement Brian Currie – Bundle 13, Volume 9, Pages 360 to 368**) and during competitive dialogue. We communicated continuously, as appropriate, the status of the reference design.

Operational Functionality

29. This project was set up on the basis of almost total transfer of design risk from the Board to IHSL. The only design aspect that NHSL as the employer was responsible

for was operational functionality; nothing else. That is the fundamental principle of NPD.

30. Operational functionality is narrowly defined in the PA and did not encompass M&E matters such as ventilation. We repeatedly explained to Multiplex (MPX) and IHSL that NHSL would be reviewing IHSL's design in terms of the Reviewable Design Data (RDD) protocol, giving approval ratings A, B, C and D, in relation to operational functionality only. That said, where we did find, collectively as a team with Motts, that there was something wrong with the design or construction, e.g. the drainage, the pressure regime, and the fire void detectors, we pointed that out to IHSL as our duty of care demands. There were hundreds of issues of this nature that we, in conjunction with Motts, picked up that went beyond operational functionality.

Review of the Environmental Matrix pre Invitation to Participate in Dialogue (ITPD)

31. H&K adopted the use of an EM as a reference tool for the M&E information**(example seen at A34691163 - Environmental Matrix Version 1 issued in September 2010 – Hearing commencing 24 April 2023, Bundle 4, Page 42)**. The draft EM could be used by IHSL as a starter for 10 but it could not be relied upon. IHSL had to do their own due diligence on all disclosable / design data provided in terms of clause 7 (discussed below at paragraph 57). Any designer would want to do their own due diligence. From a professional perspective, a designer cannot just take someone else's design data without reviewing it and accepting its accuracy and relevance or otherwise.

32. I have been asked about the costs involved. The cost of each bidder fully reviewing an EM would not be unduly prohibitive in my view and particularly given the benefit to each bidders tech team. The cost we and SFT were keen to minimise in preparing a reference design including COS, BCR's and SOA was in relation to the lengthy clinical interaction. M+E Engineers for each bidder would have needed to generate the environmental data in any case for construction and procurement reasons whether it was labelled an EM or something else.

33. As I understand it, H&K continued to develop the EM they had been developing for the capital funded project for the NPD project. The version of the EM that went into the ITPD pack was inconsistent in terms of the ventilation requirements for critical care. The Guidance notes which preface the EM stated that SHTM 03-01 had to be followed and explicitly stated that 10 ac/hr was required in critical care. However, the body of the EM incorrectly stated that there should be 4 air changes per hour instead of the required 10 in certain rooms in critical care. The body of the EM, however, referred the reader back to the Guidance Notes. How this error arose in the body of the EM is best answered by the author. I understand it was correct in an earlier version of the EM and suspect it was simply human error.

34. I have been asked if clinicians had any input to the EM. The best person to ask is Janice Mackenzie, the Project Clinical Director, but as far as I'm aware they did not. The lead clinicians met with the Reference Design Team on various occasions and provided input to the operational functionality elements of the reference design via: the Schedule of Accommodation; reference design drawings (1:500, 1:200 and 1:50); the COS. The clinicians were available to answer any questions via the Project Clinical Director both during competitive dialogue where input was requested; and, during the detailed design development meetings with IHSL post appointment of Preferred Bidder. However, clinicians would not review the EM – they would not be qualified to do so.

35. The COS are a really important briefing tool in terms of communicating the clinicians' needs for their department. The COS were reviewed by Motts and Capita (healthcare planners) in relation to the technical details, including ensuring there was reference to the relevant design guidance.

36. I have been asked if Motts should have picked up the inconsistencies in the EM during the reference design period before it was issued as part of the ITPD. Motts were not the designers; however, they did prepare the suite of documents for the ITPD including the design and construction output specification. One of the many reasons for employing a Technical Adviser was to ensure that the documents that

were being produced complied with SHTMs (a mandatory requirement in this project and not mere guidance) and were consistent. In terms of their Appointment, Motts had an obligation to check the reference design for compliance with all appropriate NHSL and legislative guidelines and requirements and identify any derogations (See Motts Appointment, Technical Advisor Scope, section A, Core Technical Advisors Role up to Financial Close (**A32618292 – Contract between Lothian Health Board and Mott MacDonald Limited – 22 March 2011 – Hearing commencing 24 April 2023, Bundle 2, Page 86**). It was unfortunate that Motts did not pick up the inconsistencies in the EM. However, they had obtained a compliance statement from the Reference Design Team so they may have been reassured by that. The compliance statement gave the reference design a degree of credibility and practicality. It was reassuring that there were indeed the bones of an architectural and engineering solution available which satisfied operational functionality and, as far as we were aware, complied with guidance.

Purpose of the Environmental Matrix (EM)

37. I have been asked what the purpose of the EM was. My understanding of the purpose of the EM is set out in my first statement at paragraphs 44 – 46 **(A37753091 – Witness Statement Brian Currie – Bundle 13, Volume 9, Page 351 to 352)**. The draft EM that was provided to bidders as part of the ITPD was disclosable data. It was provided for information but it was not a mandatory requirement. Disclosable data is defined in the PA as *"any Design Data and any other written information, data and documents made available or issued to Project co or any Project Co party in connection with the Project by or on behalf of the Board (or any Board party) whether on, before or after the execution of this Agreement."* (**A33405351 – Main Body of Contract – Bundle 13, Volume 10, Page 5**) *Clause* 7.3.1 of the PA also makes it clear that IHSL must have *"conducted its own analysis of the Disclosed Data and has, before execution of this Agreement, satisfied itself as to the accuracy, completeness and fitness for purpose of such Disclosed Data upon which it places reliance."* (**A33405351 – Main Body of Contract – Bundle 13, Volume 10, Page 4**) The draft EM provided by NHSL during

during the ITPD was Disclosed Data and IHSL had to conduct its own analysis of the EM, including its accuracy and fitness for purpose. NHSL had no design liability other than in relation to operational functionality. M&E matters such as the number of air changes per hour did not fall within the definition of operational functionality.

38. NHSL were not the designers on the Project. IHSL had to undertake their own M&E design, including review of all design data provided as disclosable data. They employed M&E sub-contractors, TUV SUD / Wallace Whittle, for the M&E design and it may be informative for the Inquiry to review the terms of that Appointment. We did not present bidders with a design solution. The only thing we were clear that bidders had to stick to were our operational functionality requirements. We specified and required compliance with SHTM 03-01 as mandatory and a whole host of other national design guidance and policies as a starting point.

39. Even if the EM was not perceived by IHSL to be disclosable data, that did not negate the need for IHSL to flag the inconsistencies within the EM, and the inconsistencies between the EM and SHTM 03-01, to NHSL and seek a derogation. The requirement for IHSL to produce a complete derogation register was discussed (and noted in the minutes) at competitive dialogue meetings 1, 2, 4A, 4B, 4C, 4D, 5, 5A and 6. Sample examples can be found at (**A34697046 – Competitive Dialogue Meeting 1 (Financial) Agenda – Bidder C – Action Notes - Bundle 13, Volume 9, Page 373), (A41322251 - 2- Bidder C Competitive Dialogue Meeting 2 – Action Notes 2 May 2013 – Bundle 13, Volume 9, Page 375), (A34700234 – Competitive Dialogue Meeting 5 – Finance Action Notes - Bundle 13, Volume 9, Page 385), (A34700260 – Competitive Dialogue Meeting 5A Agenda - Bundle 13, Volume 9, Page 386), (A41322385 – Competitive Dialogue Meeting 6 Agenda –- Bundle 13, Volume 9, Page 387)**

40. The minutes of the competitive dialogue meetings show that there was ongoing discussion to the extent that IHSL should not assume that reference design related derogations were already accepted. We made it clear that, even if IHSL thought that the EM contained derogations that were intentional, the onus was still on them to flag those derogations within the appropriate Schedule of Derogations. These

discussions are all minuted in the competitive dialogue action notes. No derogation in relation to critical care ventilation, specifically the requirements of SHTM 03-01, was ever sought by IHSL. IHSL had multiple opportunities to flag the inconsistency, seek clarification and/or seek a derogation at the final tender stage, during preferred bidder, at FC and/or during construction, but did not do so.

41. I do not recall ever saying during competitive dialogue (or at any point in the Project) that the H&K EM was mandatory or was, in any way, our "fixed brief". I do not recall ever referring to the EM as a "line in the sand" or "the bible". That was not my understanding so I would not have used that language. There are no discussions to that effect in the competitive dialogue action notes either.

42. The Guidance Notes of the EM identify and highlight the key overriding requirements to assist whoever is reading the document. The guidance notes preface the EM and are referred back to within the line items of the EM as "See Guidance Notes". Guidance Note 15 of the EM is particularly relevant in that it specifies 10 air changes in Critical Care and the need to comply with SHTM 03-01 **(A34691163 - Environmental Matrix Version 1 issued in September 2010 – Hearing commencing 24 April 2023, Bundle 4, Page 43**).

43. The EM is complementary to the RDS. For me, the EM extracts the environmental data and holds it in one place as an aid for engineers. I have been asked how I anticipated the process would operate in relation to the EM and RDS at FC. The IHSL EM and IHSL RDS were unapproved at FC and became part of the RDD process post FC, which I discuss below. To be clear, however, the draft EM provided in the ITPD was redundant at FC; it was contractually IHSL's EM from that point onwards. IHSL started reviewing and developing their EM post preferred bidder, effectively taking ownership of it from that point.

Room Function Reference Sheets

44. I have been asked about the room function sheet that was inserted at the front of the EM. I do not know anything about the room function reference sheet; where it came from or who introduced it.

45. I have been asked if a clinician engaged with the Reference Design Team when it came to assigning functions for rooms. I don't know. I know the clinical teams were very much an integral part of the development of the reference design and were involved in the detailed design following the appointment of IHSL as preferred bidder but I doubt they had any involvement in the EM itself, including the addition of a room function reference sheet.

46. The fact the term "HDU" was removed from the room function reference sheet was not fatal to the accuracy of the document given there was still reference to critical care.

Lessons Learned – Environmental Matrix (EM)

47. My preference would be that future healthcare projects in Lothian do not involve the production of an EM by NHSL. If the designer and/or contractor wants to produce an EM for their purposes they are free to do so. NHSL produced a paper for discussion with NHS Scotland Assure in November 2022 in relation to three NHSL projects setting out the pros and cons of utilising an EM.

48. I have been asked if the EM contributed to errors in the ventilation system, particularly in critical care. On the basis it contained inconsistencies which IHSL did not seek to challenge or correct, then of course it did. It would appear IHSL simply copied the draft EM over to their RDS (ignoring the SHTMs and ADB) and did not challenge it, seek to raise a derogation, or bring any inconsistences as between it and the SHTMs to our attention, all of which they were obliged to do under the terms of the PA. That definitely led to the issues we had with ventilation in critical care.

49. I have been asked if I think the use of an EM is best practice. I can see the logic and the rationale behind M&E engineers wishing to have one document which contains all the environmental data to assist them in their ongoing design and build. However, my view is that any decision to use it would be a decision for the builder and designer. An EM is a tool that design teams may or may not avail themselves of to assist their development of their design. From my point of view on the client side going forward, the information should be in the RDS.

50. In hindsight, the use of an EM could (and did) cause misunderstanding. However, that comment could be used in the context of various other complex design information/recording/documentation and communications in a large-scale project. It would appear that the misinterpretation of the Guidance by the M&E engineer responsible for IHSL's EM (discussed at para 50 below) was a key contributing factor to the issues in the ventilation system in critical care.

Design Guidance – Interpretation

51. The main interpretation of Guidance issues that we were aware of during construction was the issue of the multi-bed rooms and what status they had in terms of environmental and ventilation requirements. IHSL held the view that a multi-bed room was a general ward. Our view, confirmed by Health Facilities Scotland (HFS), was that a multi-bed room should be treated, in terms of a ventilation strategy for infection control purposes, in the same manner as a single bed room and not as a general ward.

52. NHSL sought the advice of HFS in relation to this issue in June 2017. The question posed to HFS was: What is HFS interpretation of the ventilation pressure requirements for 4 bed wards? The HFS response was: *"SHTM 03-01, Part A, Appendix 1, Table A indicates the air change rates and pressure regime for clinical areas within healthcare premises. There is no four bed ward noted in table A, however it would not be unreasonable to treat this area as one would a single bed ward with respect to ventilation as the measures for infection control would be the*

same. Therefore the room should be neutral or slightly negative with respect to the corridor." **(A40072413 – NonRFI_0080_20160619 IAN STORRAR HV REPORT (+4 Bed) - Bundle 13, Volume 8, Page 2344)**. This indicates that a multi-bed room should be treated as a single bedroom. IHSL disagreed with this interpretation but, further to protracted discussions, negotiations, and the threat of potential litigation by NHSL against IHSL, IHSL resolved the pressure issue as required by NHSL to ensure balanced or negative pressure, irrespective of what was in the EM. In other words, there was a recognition by IHSL that the Guidance prevailed over the EM.

53. I understand that Stewart McKechnie, the M&E designer from TUV SUD / Wallace Whittle, considers that the EM did not contain any errors because, in his view, the EM was compliant with SHTM 03-01. I understand this is because, in his view, the only rooms in critical care which require 10 ac/hr are isolation rooms. For the avoidance of doubt, I was not aware during the construction period that this was how Stewart McKechnie interpreted the Guidance and I disagree with his interpretation. There were various opportunities for IHSL and their supply chain to flag the error or inconsistency in the EM but they did not. This can perhaps be explained by the fact that TUV SUD / Wallace Whittle did not consider there was an error to flag.

54. In terms of environmental parameters, my understanding is that the requirements of table A1 of SHTM 03-01 applies to all patient rooms in critical care, though isolation rooms may have their own requirements. Indeed, this is set out specifically in the COS provided to bidders and which formed part of the PA. The first line states "*The department will provide a comprehensive critical care service this includes paediatric Intensive Care (PICU), High Dependency Unit (HDU), and Surgical Neonatal Unit (SSNU)."* (**A41179262 - Schedule Part 6 (Construction Matters), section 3 (Board's Construction Requirements) – Hearing commencing 24 April, Bundle 5, Page 377**). The COS states that bed spaces must be of the same specification to allow flexibility of use (**A41179262 - Schedule Part 6 (Construction Matters), section 3 (Board's Construction Requirements) – Hearing commencing 24 April, Bundle 5, Page 389**).

55. It is important to understand that the critical care department is a clearly defined zone and area within the hospital. There are not critical care areas scattered throughout the hospital as there are with isolation rooms. TUV SUD / Wallace Whittle did not consider the single rooms or multi-bed rooms in the critical care department were subject to the critical care requirements of table A1 of SHTM 03-01 and MPX did not build to those standards. We were not aware of this during construction of the Project. Thankfully, our independent validation process picked that up before the hospital opened. Given the significant variance of the final measured performance of the ventilation system in critical care against SHTM requirements, we didn't initially believe the independent validator's, Institute of Occupational Medicine (IOM), results and thought there must have been an error. We spent significant time with IOM checking and double checking the calibration of their measuring equipment and re-testing. It was not until a meeting with MPX and IHSL, during which they disclosed to me that they (MPX) never designed, procured, or installed the relevant air handling units to deliver ten air changes in critical care, that I understood the results were accurate and immediately escalated the issue to NHSL's executive team.

Invitation to Participate in Dialogue (ITPD)

56. Motts prepared the technical aspects of the ITPD. NHSL did not produce RDS for use by the bidders. A decision was made by NHSL, in conjunction with Motts, to place the responsibility for the production of RDS with the bidders. A suite of other room information was provided to assist bidders in the preparation of their RDS. That other room information included reference to the EM. This was the EM that had been produced by H&K originally as part of the capital funded scheme and then developed further by H&K as part of the reference design.

57. As detailed at paragraph 31 above, the ITPD EM was disclosable data, which means it was provided within the package of design data given to bidders for information only. It was not warranted in any shape or form as to its accuracy; indeed it is expressly stated at clause 7 that it is for IHSL to analyse and satisfy itself as to the accuracy of all design data provided before, during or after execution

of the PA. I do not recall exactly when the decision to use an EM was taken but it was during the capital funded days, so probably in around 2010. NHSL has submitted a narrative to the Inquiry in relation to the ADB and RDS which may be of assistance **(A42408446 – NHS Lothian's Narrative on ADB and RDS submitted 3 February 2023 – Scottish Hospitals Inquiry - Hearing commencing on 24 April 2023, Bundle 15, Page 4)**.

58. I have been asked whether within the suite of documents provided to bidders in the ITPD there was a lack of clarity in relation to the purpose of the EM. In hindsight, I think the ITPD was confusing in the sense that the EM was referred to as part of the suite of documents comprising the room information to be used in the preparation of RDS by IHSL. However, the ITPD and PA were explicit in terms of (i) all design data provided by NHSL (including during the ITPD) as being disclosable data, which IHSL had to analyse and satisfy itself as to its accuracy, and (ii) the hierarchy of standards such that where there were any inconsistencies, the most onerous standard, i.e. SHTM 03-01, would prevail. The hierarchy of standards alone should have prompted any experienced M&E designer to at least seek clarification on any perceived ambiguities and seek any derogations if required. IHSL did not challenge the inconsistencies or non-compliances in the EM, despite their contractual obligations to do so. "Why not?" is best answered by them. One possible explanation is the fact that their M&E engineer did not consider there was an inconsistency to flag.

59. In terms of ITPD, volume 2, I have been asked when it was decided that the EM would be added as part of reviewable design data. I cannot recall when that happened and whether I was involved with that particular decision or not.

Competitive Dialogue

60. Competitive Dialogue was a very intensive process. It was well catalogued and recorded. We had three bidders' submissions to review and the way it worked was that we had various one day competitive dialogue meetings/workshops with each bidder. We had two weeks between the workshops. The bidders provided

submissions a week before the workshops which the Project Team (including Motts) reviewed in advance of the workshops. On the day of the workshop, we broke into separate workstreams and brought in particular people where relevant, e.g. City of Edinburgh Council town planners who were keen to understand where the three bids were going in design terms.

61. We were able to satisfy ourselves through the months of competitive dialogue; the to'ing and fro'ing, the submissions, the conversations, the development, the resubmissions, the iterations, that the bidders all understood and could meet our operational functionality requirements. There was physical evidence of this via the drawings submitted and discussions had. When all three bids were of an acceptable standard, the decision was taken to close competitive dialogue and the invitation to submit final tenders (ISFT) was issued.

62. All three bidders developed their design to an extent during competitive dialogue and all focussed on developing different aspects of the design, as you would expect. What the bidders produced at final tender was nowhere near a final design. Their supply chain had much more design work to do if/when they were appointed as preferred bidder. I'm sure bidders would have expected their supply chain to produce designs that were compliant with the Scottish design guidance and I would assume that requirement was reflected in the sub-consultant's appointments with IHSL.

63. As noted above, I do not recall ever saying during competitive dialogue (or at any point in the Project) that the H&K EM was mandatory or was, in any way, NHSL's "fixed brief".

Project Steering Board – 29 November 2013

64. I have been asked to refer to the Project Steering Board meeting dated 29 November 2013 **(A32676816 – Project Steering Board Action Notes 29 November 2013 - Hearing commencing 24 April 2023, Bundle 8, Page 5)**. At that meeting it was agreed that the dialogue phase should close and the ISFT

should be issued on the conclusion of the key stage review (KSR). I have been asked why that decision was taken. The project team and our supporting external advisors were of the view that all three bids and all three bidders had satisfied us through submissions and dialogue that they could achieve our operational functionality requirements.

65. I have been asked if there were any outstanding issues with the prospective bids at the close of dialogue phase. While we knew there was significant design development still to take place, we had sufficient information to assess whether our operational functionality requirements had been met in the final tenders. We completed the Pre-Close of Dialogue KSR with SFT noting that there was a programme in place for the preferred bidder to develop the design through to FC **(A33337058 – Pre-Close of Dialogue Key Stage Review – dated 13 December 2013 – Hearing Commencing 24 April 2023, Bundle 9, Page 93 to 94)**.

66. There had previously been a lot of debate with SFT, particularly, in relation to the duration of the competitive dialogue. SFT's view was that we had a reference design and that should speed things up. In theory, having a reference design might have shortened the process but in practice, given the scale and complexity of the project, in my view no programme saving occurred through having a reference design.

67. We got halfway through the dialogue process and it was clear that more time was going to be needed for design interaction so we introduced another three or four rounds of dialogue. The eventual competitive dialogue period was sufficient to allow for a full evaluation of whether our operational functionality needs were being met and we were confident that the appointed Preferred Bidder would design, build, and maintain a compliant facility.

Scottish Futures Trust (SFT) Role

68. Donna Stevenson was a lawyer in SFT and was the main point of liaison between NHSL and SFT at Project level. Donna was interested in all aspects of the project

on behalf of SFT, for example making sure that we were giving sufficient space for the bidders to be innovative. Donna was also very interested in the supplemental agreements with Consort Healthcare in terms of SA6 and SA7 and the implications that they might have for bidders, which became part of the reference design, and one of the many reasons why there was a reference design.

69. SFT were kept well up to speed with and were very interested in the project as it was developing. Donna was not embedded in the Project team but spent a lot of time with us and participated in meetings such as the programme steering board. If Donna was not in attendance at the programme steering board then Peter Reekie would attend. I have checked the minutes and generally one or the other was in attendance at most, but not all, of the meetings from 2011 – 2019.

70. I was very aware that SFT's role in the KSR process was as a validator. It is a condition of Scottish Government funding support that all projects in the revenue funding programme are, in addition to any existing project approvals processes, externally validated by SFT.

71. This project was the first acute healthcare NPD project. I took comfort in SFT's involvement given they owned the process. SFT gave assurance to the Scottish Government that health boards were delivering value for money for the public purse. I remember being told many times: "Brian, it's about needs, not wants." SFT took on the role that had previously been undertaken by the Scottish Government Health Directorate through the Gateway review process. In coming to the judgement that the project was ready to proceed to the next stage, I believe SFT would by necessity require to be heavily involved and integral to the process.

Pre Close of Dialogue Key Stage Review (KSR) – 13 December 2013

72. I have been asked to look at the pre close of dialogue KSR dated 13 December 2013 Section 2, question 2 states "*Is the procuring authority and are its advisers satisfied with the overall quality and level of detail supplied by the bidders during dialogue, in respect of the design and build and service delivery solutions, and that*

bidders' proposals are capable of meeting its requirements?" and the SFT recommendation is that *"Recommendation: That prior to close of dialogue the board receives and copies to SFT letters in the form of drafts which the Board have earlier provided to SFT, from each of its financial, legal and technical advisers confirming that each consider that it is appropriate to close dialogue."* **(A33337058 – Pre-Close of Dialogue Key Stage Review – dated 13 December 2013 – Hearing Commencing 24 April 2023, Bundle 9, Page 59).** The letters referenced are those which were provided and presented at the F&R committee by each of our advisers – Ernst & Young as commercial advisers, MacRoberts as legal advisers, and Mott MacDonald as technical advisers that they were satisfied it was appropriate to close dialogue.

73. Question 3 asks: "*Based on dialogue with bidders, is the procuring authority satisfied that final tenders will contain solutions that satisfy its operational and functional requirements?*" The answer provided is "*yes.*" **(A33337058 – Pre-Close of Dialogue Key Stage Review – dated 13 December 2013 – Hearing Commencing 24 April 2023, Bundle 9, Page 59).** There were strong indications that the bidders would be able to develop all the supporting information, technical information, specifications, etc. to provide a compliant facility as they would be obliged to do in terms of the PA.

74. Question 16 asks: *Please confirm what further development of technical information is required from preferred bidders between now and final tender submission and from the preferred bidder between appointment and financial close.* The Answer is "*100% compliance for operational functionality and minimum room layouts has now been achieved with all bidders' programmes for design development through to financial close. The Board's view is that the programme from preferred bidder to financial close is challenging."* IHSL produced a programme to FC (as did the other bidders) based on what they considered to be appropriate from the resources at their disposal. As noted, the view from the board, certainly, was that it was ambitious or, as it says there, challenging **(A33337058 – Pre-Close of Dialogue Key Stage Review – dated 13 December 2013 – Hearing Commencing 24 April 2023, Bundle 9, Page 62).**

Pre Preferred Bidder Key Stage Review (KSR) – 28 February 2014

75. I have been asked to comment on the pre preferred bidder KSR dated 28 February 2014 where the response to question 3 is: *"The board has confirmed that all bidders have provided detailed programmes to cover the activities for the period until financial close, and that the development of the technical information is at least as advanced as the board anticipated at this stage. The board and its advisors are satisfied that any further development of technical information, from preferred bidder appointment to financial close, is achievable within the current project timetable."* **(A33337163 – Pre-Preferred Bidder Appointment Key Stage Review dated 28 February 2014 – Hearing commencing 24 April 2023, Bundle 7, Page 11)**

76. As above, the programme was undoubtedly challenging, as we'd stated in the December 2013 KSR, but IHSL were telling us it was achievable and they had a workable project timetable. Obviously SFT approved the KSR and thus presumably took this view also.

Evaluation of Final Tenders

77. Assessing a tender as compliant did not mean, and was not understood to mean, that NHSL and its advisors had reviewed the tenders and confirmed that the tenderers' technical specifications complied with all statutory guidance (see section 5 of ITPD vol.1) (**A34697102 - Invitation to Participate in Dialogue Vol 1, Revision B – Hearing commencing 24 April 2023, Bundle 2, Page 1001**). That said, it is important to say at the outset that, as far as we were aware, the EM that had been issued with the ITPD had been signed off as compliant by the Reference Design Team at the reference design stage. We were not aware of the inconsistencies that existed within it. The bidders were to use the EM to develop their own design. Any derogations within the reference design were to be flagged to NHSL and any inconsistencies in standards were to be flagged to NHSL. Otherwise, the most onerous standard, SHTM 03-01, would prevail. In terms of their Appointment Motts had to "*evaluate the design & construct and FM elements of Final Tenders, in particular, compliance with bid documents and legislative*

requirements" (See Motts Appointment, Ref 44 (**A32618292 – Contract between Lothian Health Board and Mott MacDonald Limited – 22 March 2011 – Bundle 13, Volume 9, Page 578**) so NHSL had a level of reassurance in that regard.

78. Bidders were assessed on an initial pass-fail criteria basis and, if they passed, then certain evaluation criteria were scored as well. C.21 provided that compliance with the BCRs (including SHTM 03-01) was mandatory and accordingly could only be pass or fail. If a bidder had not met the provision of C.21 (i.e. a pass/fail on compliance with BCRs), then their bid would not have proceeded any further in the tender process and would be deemed a non-compliant tender. MML were employed to verify elements of the bids in relation to compliance as far as I recall. However, there is naturally also a degree of self-certification given the statements provided by the bidders that they will comply with Guidance and the ultimate transfer of risk and design responsibility held by the bidders.

79. At Final Tender, as part of submission C.21, IHSL confirmed compliance with the BCRs subject to any derogations scheduled in submission C.30. No derogations were identified in C.30 in relation to SHTM 03-01. No derogation in relation to critical care ventilation, specifically the requirements of SHTM 03-01, was ever sought by IHSL at any stage in the Project. All bidders passed C.21 and had compliant bids and did not fail any evaluation criteria.

80. C.30 was a Schedule of Derogations which the bidders had to populate. It was clearly communicated by NHSL to IHSL throughout competitive dialogue that the onus was on them to flag any derogations within the appropriate Schedule of Derogations in C.30, even if they perceived it to be a derogation from the reference design. This is evidenced in the minutes of the Competitive Dialogue meetings.

81. C.8.3 provides that *'Whilst Bidders are required to undertake their own design, the Board has provided a draft Environmental Matrix as part of the ITPD documentation. Bidders must confirm acceptance of the Board's Environmental Matrix, highlighting any proposed changes on an exception basis.'* I have been asked for my views on the wording of C8.3. Read in isolation it is poorly worded by

MML. However, when the ITPD (and the EM itself given the guidance notes refer to compliance with SHTM 03-01 and expressly state 10 ach in critical care) is read as a whole, compliance with Guidance is the overriding and mandatory requirement.

82. IHSL stated that they were not proposing any changes to the EM but would continue to review and advise back. The final tender evaluation sheet C.8 for IHSL, completed by NHSL, clearly demonstrates a bare but satisfactory pass by IHSL. It was remarked upon at the time of evaluation that no EM had been provided, but environmental layout drawings had.

83. Bidder C was the only bidder to submit their own EM at final tender. From recent examination, while bidder C's EM did correct the inconsistency in critical care, it also introduced other errors. However, at the time of evaluation I have no recollection of reviewing bidder C's EM.

84. I have been asked how, if Mosaic marked up amendments to the EM and IHSL didn't, they both be classified as compliant tenders. In terms of C.8, both Bidder B and C confirmed acceptance of the Board's draft EM so were both compliant with that requirement in terms of the ITPD. Bidder C revised the EM whereas Bidder B accepted the draft EM noting no proposed changes but that they'd continue to review and advise back. It was not necessary to look behind the bidders' response.

85. This should also be seen in light of submission C.21 where both bidders confirmed compliance with the BCRs submission C.30, where there were no listed derogations. In the circumstances, there was no requirement for NHSL to check every detail of the bids to assess whether those claims were correct prior to the preferred bidder carrying out their detailed design.

86. I can remember being in ventilation workshops and dialogue sessions with the bidders but cannot recall the specifics. I cannot remember the specifics of any discussions with any of the bidders during competitive dialogue phase regarding the EM. I don't think we ever discussed that bidder C had corrected the air change rate for some critical care rooms in their EM.

87. I do not recall reviewing the bidders' EMs. I am not a building services engineer so would not be qualified to do so. A detailed examination of the EM was not necessary to assess whether the submissions met our operational functionality requirements. This, and the fact that the design process naturally had a long way to complete post final tender, was not seen as an impediment to awarding a bare pass. It was recognised that no bidder would develop the detailed building services design to a level at final tender where all specifications would be available given the commercial risk and abortive costs associated should they fail to make preferred bidder status.

88. In terms of the scores, IHSL was the weakest of the three bidders for Mechanical, Electrical and Plumbing (MEP) matters. Bidder B scored 5 and Bidder C scored 8. Overall, Bidder C had a higher quality score but lower price score – so, on the face of it, Bidder B scored comparatively on quality but bid lower on cost equating to a higher score for evaluation purposes (although the highest score (lowest bid) on cost was Bidder A).

89. If the errors in IHSL's tender in relation to SHTM 03-01 had been spotted at final tender it would not have been sufficient to reject them as a bidder, in my opinion. It would have been an issue to be addressed in their EM while developing design post preferred bidder, and certainly to be addressed through the RDD process.

90. I would say that the experience and qualifications of the individuals involved in assessing the technical aspects of the tenders was sufficient for the task. Motts were evaluating the design & construct elements of Final Tenders, in particular, compliance with bid documents and legislative requirements as required per their Appointment. From NHSL, Ernie Bain was very experienced from an Estates and Facilities perspective. He had decades of experience in healthcare and hospitals, particularly in relation to building services and the maintenance of them. He would have been aware of the SHTMs and the need for compliance but would not have had the technical expertise which Motts brought. Colin McCrae, Motts, was the engineer on the mechanical side and absolutely a very experienced guy. If I recall

correctly then Willie Stevenson from Motts was the lead for the electrical side. Motts had other engineers and architects that were supporting the evaluation workstreams.

91. I have been asked whether, at the point H&K exited the project, I would say the skillset they provided was replicated by members of the remaining team. We did not have that skillset internally within NHSL at this point in time, which is why we appointed Motts as technical advisors. While Motts were not the M&E designers, they did have members of their team with a similar mechanical engineering skill set to H&K. The key point is that IHSL's supply chain, namely their M&E designers TUV SUD / Wallace Whittle, would absolutely have replicated the skillset of H&K. The other key point is that NHSL did not know the H&K EM did not meet the requirements of SHTM at the time. The intention and understanding was that it did – as per the compliance statement and as is clear in the guidance notes of the EM itself. It was then for IHSL to then undertake its own due diligence on their own EM.

Evaluation Criteria

92. The 60:40 ratio of price to quality came from SFT as one of their requirements. We had been used to a 40:60 ratio (price/quality), which was the HFS framework requirements for capital-funded projects. We were concerned at this change and expressed our concerns at the time. I can't remember the exact discussions, but the SFT ratio of 60:40 (price/quality) prevailed.

Design at Final Tender

93. In terms of an NPD contract, in my opinion, we could not expect to have 100 percent design complete by preferred bidder or final tender stage because bidders would have been at risk of significant abortive costs. The market would never have bought into that in terms of the amount of work they would need to have done to get to a final tender, at their risk. I don't know what bid competition costs were to these bidders, but certainly millions of pounds. For us to demand that they complete the design of the whole building at final tender stage would have been unacceptable to

the market. We wouldn't have got any bidders interested in participating. However, SFT would be better placed to answer this – it was their programme of infrastructure.

94. The only time this complete design approach prevails, in my experience, is the original Joint Contracts Tribunal (JCT) traditional build type of project where the employer prepares a complete and very comprehensive suite of information with everything designed and specified that goes to the market for tender and the builder bids on that basis. JCT traditional contracts are rarely used these days and could not have been used in a PPP / NPD style contract given the purpose is to transfer the design risk to the private sector.

95. I have been asked what briefing tool should be used in future projects. That very much depends on the agreed risk transfer in the contract and who is best placed to create what briefing information. Who has accepted the design & construction risk? The clinical and operational requirements (e.g. the layouts and adjacencies of departments) should be defined by the Employer and compliance with the technical Guidance is part of that. The designer, in particularly here the M+E designer, can use whatever tools available to them to meet those requirements. Even if a briefing tool such as RDS or an EM is provided, it is for the M+E designer to undertake their own due diligence on all aspects of the M+E design.

Appointment of Preferred Bidder

96. Overall, IHSL were the highest scoring bidder. The Project Steering Board recommended to the F&R Committee that IHSL were appointed as the Preferred Bidder on that basis. The decision was discussed at the F&R committee on 5 March 2014 (**A33887882 – Minutes of the Lothian NHS Board, Finance and Performance Review Committee Meetings from 2005-2021, dated 5 March 2014 (excerpt 650-653) – Hearing commencing 24 April 2023, Bundle 10, Volume 1 (of 2), Page 5 onwards**). Representations were made to the committee from the Core Evaluation Team and our external legal, commercial, and technical advisors.

97. At this meeting, I stated that all bids were of an acceptable quality and that everything possible had been done to mitigate the risk of poor quality facilities and/or poor services being provided to NHS Lothian. This was based on my personal understanding and knowledge following competitive dialogue and tender evaluation in conjunction with views expressed by technical, legal, and financial advisers and NHSL project team members. This followed a hugely demanding and intensive Competitive Dialogue process. It was felt at the time to have gone well and been a very successful process. The design at tender stage had a long, long way to go. We were assessing the bid on what could be reasonably expected to be produced and reviewed. IHSL were offering to produce a compliant facility. It's important to bear in mind that the technical and design submission is one very small element of a broad and extensive contract. The legal; commercial; and FM side were hugely significant.

98. In relation to the technical workstream, it is noted in the F&R Minutes at 61.10 that Mr Cantlay, Motts, advised the Committee that: *"he believed from a technical perspective that the technical evaluation had been carried out in a manner consistent with the evaluation methodology. From their involvement in this process, the considered scores awarded form the technical evaluation criteria seemed to be correct and it appeared appropriate for the Board to conclude the evaluation process and appoint the bidder identified as having the most economically advantageous tender as the preferred bidder."* Mr Cantlay also confirmed that: *"the scores were all appropriate and he was happy with the evaluation and satisfied that the preferred bidder was in full accordance with the requirements."* **(A33887882 – Minutes of the Lothian NHS Board, Finance and Performance Review Committee Meetings from 2005-2021, dated 5 March 2014 (excerpt 650-653) – Hearing commencing 24 April 2023, Bundle 10, Volume 1 (of 2), Page 6**). I have been asked whether NHSL placed significant reliance on these comments and I would say that, yes, we did.

99. The preferred bidder was appointed by way of letter dated 5 March 2014 **(A36382455 – Preferred bidder letter from NHSL to IHSL – 5 March 2014 –**

Hearing commencing 24 April 2023, Bundle 10, Volume 1 (of 2), Page 87). It sought to hold to task IHSL and their supply chain to deliver certain key documents and key design deliverables as well as legal, commercial, and financial deliverables within a certain time scale to enable FC. IHSL developed and submitted a programme demonstrating how they would achieve this. Unfortunately, they failed to meet their programme and deliver all the information originally required.

Preferred Bidder to Financial Close (FC)

100. IHSL had submitted a programme of work to FC, which included a series of technical work streams and user groups for detailed design development from preferred bidder to FC. Janice MacKenzie and Fiona Halcrow led on the design development with the Project Team (including Motts), user groups (clinicians), and the IHSL design team in terms of ensuring our operational functionality needs were being met in the developing design in terms of the 1:200 and 1:50 drawings. Basically, it was picking up the design as at final tender and developing it further with the relevant users. I did not attend these user group meetings.

101. I have been asked whether I was aware ventilation was considered by MML to be high risk. Yes I was aware of that and agreed with MML that ventilation, along with all other critical building services, are high risk in acute healthcare projects. As stated previously, it was considered by NHSL and MML at this point in time that IHSL had sufficient time, expertise, motivation, and obligation to provide a compliant product.

102. When the detailed design got to a sufficient stage, there was provision for the cost that IHSL had bid on at final tender to be adjusted, within reason. SFT introduced a cost cap on that. From memory, IHSL's tender was £137 million. I think SFT's cap was £159 million but I would have to check the figures. We eventually got to an adjusted contract sum based on the detailed design that had then been developed. As discussed below, there came a point when MPX, the building contractor, refused to undertake any further design. I think we were at £151 million at that point and that became the agreed contract sum that formed part of the financial model and the PA.

103. What we were keen to do working with MPX was to identify and develop areas that still had to be fully scoped to a point where MPX could confidently agree a contract sum with us. Identifying these type of cost issues at an early stage should result in a more cooperative builder, because they knew their profit margin stood more chance of being protected. An example is the appropriate reverberation times in the public areas at reception desks in the large public spaces and the acoustic design necessary to achieve a satisfactory solution. With the introduction of acoustic panels on the wall and doing some quick desk top tests, MPX got to a position where a clearer scope could be costed and introduced into their adjusted figure.

104. I was involved in the commercial side of that quite a bit, and I remember two or three quite difficult meetings with MPX and respective cost advisers to agree the contract sum. Until that contract sum was concluded, the legal, commercial, and funding side of the IHSL could not proceed. The lenders and their technical advisers were heavily involved at that stage.

105. I have been asked to clarify whether I recall having "lengthy discussions" with John Ballantyne, Project Director for MPX, during the preferred bidder phase where the phrase "Environmental Matrix" kept reappearing.

106. I did have lengthy discussions on a wide range of topics with John Ballantyne during the preferred bidder phase but none specifically about the EM. I certainly did not communicate that the EM was a prescriptive and mandatory brief of the Board's environmental requirements.

107. The Board were indeed keen to avoid a similar situation to other PFI projects which they had been involved with (most notably the Royal Infirmary of Edinburgh) where through imprecise and ambiguous requirements and different interpretations of those requirements, arguably less than the optimum solution was delivered by the PFI provider. Topics such as compliance with standards and the need for IHSL/MPX to carefully absorb our specific clinical and operational requirements

were, as I recall, discussed with JB in this period whilst not seeking to inhibit innovation by IHSL/MPX if appropriate.

108. However, in practice, I would say whilst MPX's architects did grasp this and developed positively the mandatory requirements of the Board illustrated by the Reference Design, MPX M&E Engineers simply took all information they had been provided with and apparently adopted it as theirs without further thought. That goes against clause 7 of the PA where it is clear that IHSL had to review design data to satisfy itself as to its accuracy prior to execution of the PA. This highlights, in my opinion, an ignorance of the obligations and responsibilities of parties to the PA in parts of MPX's supply chain.

109. Undoubtedly IHSL / MPX will have had to commit to essential components of M&E systems immediately after FC and one would have thought that is another reason why they would have verified the accuracy of all data upon which they were placing reliance.

Payment Mechanism

110. The Payment Mechanism within the PA (Paymech) was another big issue to sort. I have been asked to refer to the minutes of the Project Steering Board Meeting 20 June 2014. It states that there has been "*extensive payment mechanism discussions*" **(A32676819 – Project Steering Board Meeting – 20 June 2014 - Hearing commencing 24 April 2023, Bundle 10, Volume 1 (of 2), Page 31)**. The Paymech proposal was very detailed. Iain Graham with Mott MacDonald and Ernst Young were more involved with the detail than I given Iain's responsibility for the commercial workstream. I got involved at some points however because of some of the implications, technically and physically, with the construction. As I understand it, PayMech was the mechanism by which NHSL sought to ensure availability and meaningful performance standards during the operation of the hospital. I can't remember the detail now, but NHSL and IHSL had to agree the parameters of PayMech and there were often opposing views. The outcome was all parties were obviously satisfied that the position was maintained or catered for but it was a long

and tortuous process. It has far-reaching financial consequences for both parties because it's over the 25-year concession period.

Special Project Steering Board – 22 August 2014

111. IHSL's programme to reach FC was originally summer 2014. That target date was pushed back on various occasions to: 2 October 2014, 27 November 2014, 12 December 2014, 23 January 2015, and 5 February 2014. FC was ultimately achieved on 14 & 15 February 2015. I have been asked to look at the minutes of the Project Steering Board meeting, 22 August 2014 (later known as the Project Steering Board Commercial Sub-group) **(A43277749 – Minutes of a Meeting of the Project Steering Board on 22 August 2014 – Hearing commencing 24 April 2023, Bundle 14, Page 71)**. I had flagged my concerns to Susan Goldsmith, our Finance Director, that IHSL's programme to FC was slipping and that various milestones (including productions of the RDS) were not being met. Susan escalated my concerns to George Walker, the chair of the F&R committee, and it was agreed that a special Project Steering Board meeting was required to allow IHSL to discuss progress with the Project Steering Board directly. The meeting was chaired by George Walker and attended by senior people from across the respective organisations: Peter Reekie from SFT, Mike Baxter from Scottish Government; Richard Osborne from Macquarie Capital (for IHSL) and Ross Ballingall from MPX (for IHSL). Susan Goldsmith, Iain Graham, and I were also in attendance from NHSL. The purpose was to escalate my concerns as Project Director and bring senior heads together and consider the issues or impediments in getting to FC in an effort to resolve them.

112. I have been asked whether NHSL considered walking away at this point. It certainly was discussed as an option but dismissed as impractical given the time pressure and prevailing view that we could work though the issues to arrive at a satisfactory outcome with IHSL.

113. The minutes of the 22 August 2014 meeting record me stating that NHSL were comfortable that 100% of RDS would not be completed for FC, although

prioritisation of what was definitely required was still to be agreed. There must have been prior discussion about this for me to make that statement. That is not a decision I would have made unilaterally. I would have discussed it with the Project Team and Motts, though I cannot recall the specific discussions. We had to take a pragmatic view about the amount of RDS that needed to be provided. There was a necessity to get on with the job and that meant not being as prescriptive in terms of deliverables, knowing that we'd get the balance of those deliverables during the RDD process, post FC. There was an acceptance that not insisting on 100% of RDS would result in more reviewable design data post FC and that did cause concern, as recorded in relevant risk registers.

114. I have been asked whether I was concerned about (i) the number of derogations from the published criteria and (ii) a potential challenge under the procurement regulations. Many concessions were made with IHSL as preferred bidder which were not anticipated at the drafting of ITPD stage – technical, legal, and financial. A challenge from an unsuccessful bidder was a risk but the changes agreed were seen ultimately as below the threshold to trigger such a challenge.

115. This decision should be read in the context of the remainder of the minutes, within the Action Notes where Mr Ross Ballingall of MPX states that there was a *"genuine mismatch in NHSL's and IHSL's expectations, where IHSL were being asked to deliver much more than on other projects, and considerably more than was required for the comfort of operational functionality"*. MPX felt that this demonstrated "*paranoia and lack of trust*" in IHSL, by NHSL **(A32676824 – Action notes RHSC and DCN Special Project Steering Board – 22 August 2014 – Hearing commencing 24 April 2023, Bundle 8, Page 13)**. To me, this demonstrates that MPX/IHSL understood that all NHSL had design responsibility for was operational functionality and that we should trust them to deliver the rest, i.e. a compliant facility.

116. My response is minuted as follows: "*BC noted that NHSL has developed this revised programme in conjunction with IHSL and proposed to be pragmatic as to the level of detail required, but that that NHS governance process means that*

operational functionality must be satisfied." **(A32676824 – Action notes RHSC/DCN Special Project Steering Board – 22 August – Hearing commencing 24 April 2023, Bundle 8, Page 13)**. We took a pragmatic approach by being more understanding in terms of deliverables subject always to our operational functionality requirements being satisfied.

117. I have been asked if I felt there was a mismatch in expectations as stated by Ross Ballingal. We were clear, as clear as we ever could be, to communicate to IHSL what our expectations were, not least in the preferred bidder letter, as to what was required for FC. In my view IHSL's supply chain, including MPX and TUV SUD / Wallace Whittle, should have entered into this arrangement as preferred bidder with eyes wide open, knowing exactly what they were required to deliver.

Project Management Group Meeting – 27 August 2014

118. I have been asked to refer to the minutes of the Project Management Group Meeting at paragraph 2.8 where it is stated "*LE* [Liane Edwards, Multiplex] *advised that during a review of the environmental matrix a number of discrepancies have been uncovered, impacting on RDS production, and requested input from NHSL. IHSL to raise RFI.*" **(A34225367 – Project Management Group Meeting Minute – 27 August 2014 – Hearing commencing 24 April 2023, Bundle 8, Page 55).** This could be in relation to what eventually became the single-bed room pressure differential issue. I do not know what steps were taken after this particular meeting to action any subsequent request for information that IHSL may or may not have raised but I do know their EM was not approved at FC. There could have been other issues of concern but I cannot recall.

Room Data Sheets (RDS)

119. The requirement for RDS for every room in the hospital to be produced by the preferred bidder by FC as set out in the ITPD and the ISFT was relaxed at FC. MPX, possibly for the commercial reasons set out above, refused to generate the

full set of RDS and so we agreed they could produce RDS for Generic and Key Rooms at FC, with the remaining RDS to be produced during RDD.

119. It would have been my colleagues, Janice MacKenzie, and Fiona Halcrow, who determined the classification of rooms as Key Rooms and Generic Rooms. Janice Mackenzie prepared a paper for the Board "Design Development to Financial Close" for the Project Steering Board dated 29 November 2013 **(A39472521 - PB_0219_Project Board Paper Design Development PB to FC 29 November 2012 – Bundle 13, Volume 9, Page 393)** It has a list of Generic Rooms in Appendix 1 and List of Key Rooms in Appendix 2 **(A39472521 - PB_0219_Project Board Paper Design Development PB to FC 29 November 2012 – Bundle 13, Volume 9, Page 393)**. I understand that key rooms were those rooms that had critical operational requirements, including all rooms in critical care; and generic rooms were rooms that were replicated more than 4 times in a building, for example a dirty utility and a single bedroom children en-suite. I understand that the combination of the two represented 52% of the rooms in the building. The remaining 48% of the rooms comprised a range of rooms, for example, ward kitchens and play rooms.

120. While the original intent was to have 100% RDS at FC, MPX refused to do it. We agreed that they could concentrate on key & generic rooms, which were rooms that were significant in terms of the operational functionality of the facility. We were satisfied with this approach because there was time to develop the other, less significant, RDS. Subsequent approval of the RDS was only ever in relation to operational functionality. See Schedule part 8, Appendix 1, Table A which clarifies that, in relation to a Level A or Level B endorsement of any room data sheet: *"means that Project Co may proceed to construct in accordance with the Submitted item and that the Board is satisfied that the design and other information in the relevant room data sheet states Operational Functionality". (***A33405351- Main Body of Contract – Bundle 13, Volume 10, Page 6)**

121. I have been asked if the decision to not have 100% RDS at FC resulted in the EM continuing as a concept at FC which was beyond the period originally intended. I

don't think so. At FC, we asked for an EM generated by the preferred bidder regardless of whether all RDS's were available to us or not. IHSL did generate an EM and we gave it Approval Status C, meaning IHSL's EM was not approved at FC. This means it did not pass operational functionality requirements. At FC, the EM was IHSL's EM and any design risk transferred to them.

IHSL's Room Data Sheets (RDS) at Financial Close (FC)

123. I do not know how IHSL produced the RDS at FC. What is clear to me is that the RDS are labelled "Department of Health" and "Activity DataBase" so it would appear they were prepared using the ADB template. However, in my opinion, it appears that IHSL have taken the ADB template and manually altered the template from 10 air changes per hour to 4 air changes per hour in relation to critical care. I did not know that at the time. We would have expected IHSL to have flagged this to us via Motts as a proposed derogation. We would have expected Motts to draw our attention to any issues with the environmental data in the RDS and/or the EM.

124. I have been asked how rigorous the review of IHSL' RDS provided in September 2014 was. I was not involved in that so cannot answer the question. Janice Mackenzie as Project Clinical Director and Motts as Technical Advisor would be better placed to answer. However, the assessment of RDS supplied prior to FC was not the final opportunity to review. We were very much aware that further detailed design was required. Indeed, IHSL' RDS were unapproved at FC.

23 September 2014 – Areas of Concern

125. On 23 September 2014 I emailed Susan Goldsmith copying in Iain Graham and Moira Pringle, flagging areas of concern in relation to IHSL's progress to FC **(A35616638 - Email chain Brian Currie to Susan Goldsmith and Iain Graham to B Currie and S Goldsmith re Progress to Financial Close Areas of Concern, 23 September 2014 – Hearing commencing 24 April 2023, Bundle 10, Volume 2, Page 18)**. This was in advance of the Project Steering Board commercial sub-group

meeting we had with IHSL, SFT and SG on 26 September 2014. It was helpful to set out my thoughts to my colleagues via email before the meeting itself.

126. Iain Graham responded by email on 24 September and noted that he didn't consider the position would be significantly different with any other bidder – just potentially different issues. Iain goes on to note his concerns, and states his main consideration is the risk of where and why IHSL have got to the position we're in. He notes that it had been made clear that IHSL had expended their pre FC funds and it was questionable whether any further delay to FC would be likely to elicit significant improvement. Iain goes on to discuss a number of options, one of which was to reject IHSL as preferred bidder, but ultimately his recommendation was to accept the position presented by IHSL, which was that they were going to meet their proposed programme.

127. There was a definite change in behaviour and attitudes from IHSL and particularly MPX after the preferred bidder was announced. This email was an escalation of my frustrations and my concerns that a lot of the deliverables were not being satisfactorily addressed by IHSL and certainly not within the time frame set.

128. We were growing increasingly concerned as to IHSL's ability to follow through and successfully deliver the project, hence the reason I listed out my areas of concern. I think the value judgment call that was made collectively by everybody at the time was whether we thought those issues could be resolved and we could move forward with IHSL. At that point, from my point of view as project director, there was still reasonably good communication and understanding between myself and MPX's project director and their other directors on most issues that arose. Because of that we felt able to manage the process, resolve the issues and move forward with IHSL.

129. Although there were issues which might have meant that FC was, in terms of timescales, deferred or pushed out, I did not ever think the best option would be to reject IHSL as preferred bidder. Rather, my thinking was that the issues were all resolvable.

Project Steering Board Commercial Subgroup - 31 October 2014

130. The next meeting of the Project Steering Board Commercial Subgroup was 26 September 2014 and then there was another meeting on 31 October 2014 Mike Baxter and Susan Goldsmith gave apologies but otherwise there was representation from SFT, NHSL and IHSL (by way of MPX and Macquarie Capital Group Ltd) **(A33044797 – Steering Board Sub-group 31 October 2014 – Hearing commencing 24 April 2023, Bundle 8, Page 27)**. The purpose of the meeting was to address the continued slippage in IHSL programme and lack of progress by IHSL towards FC. IHSL had not produced a revised programme but Macquarie confirmed that the revised FC target date of 27 November 2014 would not be possible and that 12 December 2014 was being targeted but would be challenging.

131. I have been asked to comment on the following section in the minutes: "*Peter Reekie asked John Ballantyne if, in his opinion, the board had changed what it was asking for since the invitation to tender. JB replied that there was a difference of opinion over the level of detail expected in Project Co's Proposals (PCPs), but the open-ended requirement that 'the Board has to be satisfied' was difficult to achieve. JB acknowledged that the Board had agreed latitude on signing off operational functionality where 100% technical info not yet produced*". **(A33044797 – Steering Board Sub-group 31 October 2014 – Hearing commencing 24 April 2023, Bundle 8, Page 28)**

132. This is a reference again to the mismatch as between IHSL and NHSL re the level of design detail required to satisfy operational functionality for FC. IHSL felt NHSL were asking for too much design detail. The resolution was to take a pragmatic approach and ensure that the PA was caveated so that all outstanding design information was to be made available to NHSL for approval (as regards operational functionality only) through the RDD process.

133. The RDD process was an approach that SFT were aware of and endorsed: "*Peter Reekie advised the board and the IHSL to resolve these issues or to ensure that they were captured as reviewable design data post FC. BC undertook to review the*

board's outstanding PCP queries with their technical advisor and collate any such non-material issues into the schedule to be addressed post FC" see **(A32676832 – RHSC and DCN Steering Board Commercial Sub-Group minutes - 31 October 2014 – Hearing commencing 24 April 2023, Bundle 8, Page 17)**

Single Room – Pressure Issue – November 2014.

134. I have been asked to refer to an email trail **(A35614364 – Email – G. Greer to Brian Currie – Single Room Ventilation (with attachment) 13 November 2014 – Hearing commencing 24 April, Bundle 8, Page 69).** In this email, Motts are commenting on and assessing IHSL's EM in circulation at that time. The issue highlighted in the email from Motts to me relates to the pressure regime in the single bedrooms (not in critical care) as I read it. Motts are flagging to me there that this is potentially a compliance issue. The outcome of this email was that this single room pressure issue became part of the Schedule 6 list of outstanding information or issues to be resolved post FC via the RDD process, see **(A32435789 - Schedule Part 6: Construction matters, section 5 (Reviewable Design Data) – Hearing commencing 24 April 2023, Bundle 5, Page 793).** This document was prepared by Motts and lists various issues in relation to IHSL's Project Co Proposals (PCPs). IHSL's EM is included, see **(A32623049 - Schedule Part 6: Construction matters, section 6 (Room Data Sheets), Appendix 2 (Environmental Matrix) – Hearing commencing 24 April 2023, Bundle 5, Page 1454)**. This is of course IHSL's EM which was unapproved by NHSL. The comments include: "*Detailed proposal awaited on bedroom ventilation to achieve balanced/negative pressure relative to corridor.*"

Board Commentary on the Technical Information Requested by the Board and Technical Information issued by IHSL – 19 November 2014

135. I have been asked to refer to Board Commentary dated 19 November 2014 **(A33044733 – Board Commentary on the Technical Information Requested by the Board and Technical Information issued by IHSL – 19 November 2014 – Hearing commencing 24 April 2023, Bundle 8, Page 23).** I cannot recall this

document specifically. It is not in the format of Board Papers that we tended to present to the Project Steering Board, (there is no author or indication that it is to be discussed at the Project Steering Board or any other meeting) but it does contain the type of information we were discussing at that time. There is no author on it but I suspect Motts were the prime author and I would have contributed to it but I cannot say for certain. I cannot recall exactly what the purpose of the document was but it does accurately record the position at the time. The conclusion is that: "*The level of information requested is considered reasonable and in line with other projects. Preferred bidder has been late in providing information at each stage. The quality of information submitted has not been in line with the level expected.*" **(A33044733 – Board Commentary on the Technical Information Requested by the Board and Technical Information issued by IHSL – 19 November 2014 – Hearing commencing 24 April 2023, Bundle 8, Page 25).** There is then an appendix which details what information had been provided by IHSL and when, which would have been prepared by Motts.

Project Steering Board Commercial Sub-Group - 21 November 2014

136. The next meeting of the Project Steering Board Commercial Subgroup was 21 November 2014 **(A33328602 - SFT - RHSC DCN - Project Steering Board - Commercial Sub-Group - Action Notes 21 November 2014 – Hearing commencing 24 April 2023, Bundle 10, Volume 2, Page 4080)**. Iain Graham gave his apologies but otherwise there was representation from SFT, Scottish Government and IHSL (MPX and Macquarie Ltd). IHSL were presenting their fourth FC target date, which was to reach FC on 23 January 2015. MPX confirmed that all technical information had been agreed and shared with the Lenders' Technical Advisers for review and recommendation. The remainder of the meeting was generally focused on commercial, financial, and legal in an effort to iron those issues out and meet the target FC date.

January 2015

137. I have been asked to refer to which is an email trail relating to ventilation pressure differentials and the impact of opening windows dated 14 January 2014 **(A35614504 – Email from David Stillie to Janette Richards – 13 to 14 January 2015 – Hearing commencing 24 April 2023, Bundle 8, Page 58 to 62)**. I was not copied into this correspondence. I might have been aware of these emails at the time but I cannot remember. I cannot remember the input of HFS into this specific issue but I know generally, if we needed advice beyond the expertise available to us in Lothian, we would go to HFS / Health Protection Scotland (HPS) and seek their opinion. It was on an as-needs basis.

138. I have been asked to refer to **(A34813021 – IHS Lothian RHSC & DCN Request for Information Summary, 20 January 2015 – Hearing commencing 24 April 2023, Bundle 10, Volume 2, Page 15)**. I do not recognise this document. It appears to be a MPX document summarising their RFIs as at 21 January 2014. There is reference to a meeting on 13 January 2015. I have been advised this was a HAI-SCRIBE meeting. I was not in attendance at the HAI-SCRIBE meetings. As far as I can recall, I was not made aware of the risk of MRSA and Norovirus specifically. If I had I would have discussed with the Project Clinical Director and Infection Control Nurse and taken their view as central to allowing this problem to be resolved at a future date. I understand those discussions did occur, but I was not part of them and did not need to be given the Project Clinical Director's involvement.

139. I have been asked to refer to a document dated 28 January 2015 **(A36308801 – Design Risks to the Board to Financial Close – Hearing commencing 24 April 2023, Bundle 8, Page 84)**. This is a Mott Macdonald risk register. It states that it should be read in conjunction with the detailed feedback that has been provided through each Workstream. One of the risks highlighted in red is an M&E Ventilation risk. The mitigation measure in place is noted as follows: "*The single room with en-suite ventilation shall comply with SHTM 03-01. The design solution should not rely in any with the opening windows as these will be opened or closed by patient choice. The critical factor from SHTM 03-01 for infection control will be the resultant*

pressure within the room being balanced with or negative to the corridor. Isolation room ventilation shall comply with SHPN 04 Supplement 1." **(A36308801 – Design Risks to the Board to Financial Close – Hearing commencing 24 April 2023, Bundle 8, Page 84)**

140. This design risk was appropriately mitigated at the time in that it became subject to the RDD process post FC under Schedule 6 of the PA. I have been asked why this was not flagged as a risk in the Pre- FC KSR. While this specific RDD item was not flagged in the KSR, it was flagged in the KSR that some technical documentation was subject to further development through the RDD process, which was a process that SFT were very much aware of and content with.

141. I have been asked to refer to **(A36308810 – Technical Risks to the Board at Financial Close – 31 January 2015 – Hearing commencing 24 April 2023, Bundle 10, Volume 1 (of 2), Page 84)** dated 30 January 2015. This is a Mott MacDonald Risk Register. One of the issues noted is that "*Despite best efforts of the Board, more RDD than was expected by the Board*". The mitigation measures employed by the Board up to FC to manage this risk is as follows: *"IHSL pushed very hard to achieve maximum information during PB stage. Further Developed RDD schedule for the Board."* **(A36308810 – Technical Risks to the Board at Financial Close – 31 January 2015 - Hearing commencing 24 April 2023, Bundle 10, Volume 1 (of 2), Page 84).** For clarity, this means that IHSL were pushed very hard by the Board to achieve maximum information during PB stage. The RDD process was developed further to manage this risk.

142. We did have concerns about the volume of reviewable design data at FC and what is recorded in the risk registers reflects that. Our main concern was that the volume of RDD required additional resources to allow for appropriate review. We bolstered our Project Team and reliance on Mott MacDonald to cope. We tried to ensure there was a controlled or steady stream of information coming in for review from IHSL but unfortunately that did not transpire. Sometimes there were gaps in time where we didn't get anything from IHSL; other times there was a tsunami of information. We knew we had turnaround times contractually to adhere to in terms of reviewing the

RDD and getting it back to IHSL and MPX, so it was a very demanding process. It went on for months, if not years, as a result of the sheer volume of design information that was coming in.

Pre-Financial Close (FC) Key Stage Review (KSR) – 11 February 2015.

143. The Pre-FC KSR dated 11 February 2015, asks at Question 2 whether the Board is satisfied that the preferred bidders' solution satisfies its operational and functional requirements. The answer is "yes" and it is commented that the detail of the design has been discussed with user groups to ensure clinical support and the Board confirms that there was appropriate internal sign off. **(A33336933 – Pre-Financial Close Key Stage Review – 11 February 2015 – Hearing Commencing 24 April 2023, Bundle 9, Page 11)**.

144. Question 3 seeks confirmation re the status of the technical documentation and asks whether NHSL, and its advisers, are satisfied that the further development / document production is achievable. It is answered that the Board is content with the documentation subject to further development through RDD following FC and that the construction proposals are of sufficient detail to provide sufficient certainty to the Board as to what is to be provided. **(A33336933 – Pre-Financial Close Key Stage Review, 11 February 2015 – Hearing Commencing 24 April 2023, Bundle 9, Page 11)**

145. The format of the KSR and the purpose of the KSR is for SFT to satisfy themselves that they could give the go-ahead to Scottish Government to release the funding. It was an SFT process, an SFT template and SFT questions. The KSR was a standard template as far as I'm aware. We were never given the option to introduce another question or take one out. We would endeavour to answer the questions laid out in the KSR as best we could. Donna Stevenson and Peter Reekie, in particular, were very well-informed. Peter Reekie attended the Project Steering Board commercial sub-group meetings detailed above so he was very much aware, as was the Scottish Government who also attended the meetings, of the issues encountered with IHSL from preferred bidder to FC.

146. The process and the ensuing period between the two meant that these risks were reduced to a point where it wasn't seen as significant enough to not agree the KSR and not move forward.

Financial Close (FC) – 15 February 2015.

147. Iain Graham and Susan Goldsmith from NHSL and others from SFT and Scottish Government would be better placed to discuss the mechanics of FC. The linkage between SFT and The Capital Investment Group (CIG) is an area I have no real knowledge of.

148. I have been referred to a CIG meeting some 6 months earlier, on 26 August 2014, it is stated that the business case is: "*Not approved at this meeting due to a number of outstanding comments.*" **(A35001841 – Capital Investment Group Minutes – Meeting of 26 August 2014 – Hearing commencing 24 April 2023, Bundle 10, Volume 1, Page 36).** I was not at this meeting and neither was anyone else from NHSL. I don't know why this issue arose in August 2014. It may have simply been a standing item on the agenda and/or because the original programme for FC was around that time.

149. I have been asked how the original date was arrived at for FC. From memory, it was arrived at from discussions with all relevant parties, looking at benchmarking, past experience and looking at what would be the normal expectations in the PFI market to get through the process. It was also based on IHSL's own programme to FC. However, IHSL's programme was pushed out many times and I'm not sure if there were any particular commercial factors around the final date for FC.

150. SFT were concerned about the affordability side of the Project. It was part of an infrastructure programme of works that they were managing on behalf of the Scottish Government. We had received, as it transpired, three very competitive bids at the end of competitive dialogue phase, which was seen as a good outcome and confirmation of the appropriateness of a three bidder competitive dialogue process.

I think we also hit a sweet spot in the funding market where we were one of the most economic or certainly the best value for money NPDs at the time. I remember Ernst & Young, or EY as they now are, presenting a comparison chart showing that we had benefitted from an optimum point in the funding markets.

151. Iain Graham and Susan Goldsmith are better placed to discuss the commercial aspects of FC. My understanding is that there were two senior debt providers (M+G Investments and the European Investment Bank) and there was Macquarie Capital Ltd as provider of junior debt with all their individual teams of technical and legal advisers. If FC had continued to be pushed back then no doubt there would have been commercial implications.

152. I cannot comment on any funding or NPD implications in terms of a continuing delay to FC. SFT are best placed to answer this. They were looking after expenditure across Scotland through their infrastructure programme, so there may very well be good reasons why FC needed to be concluded sooner rather than later.

153. I would also imagine that MPX were keen to make a start on site given construction would trigger payments to them from IHSL as Project Co under the PA arrangements. MPX would be keen to commence cash flow and start earning an income from the Project.

154. I do recall that there was an astounding amount of money to be made or saved on the final interest swap rate but again I'm not sure what, if any, relationship this bore to the final date for FC.

Reviewable Design Data (RDD) – post-Financial Close (FC)

155. What was agreed at FC was the status of design at the time. It was not a complete design and we went to great pains to introduce Schedule 6 in the PA, which was a list of design deliverables for the RDD phase that IHSL had to address.

156. In terms of their appointment Motts were to provide necessary input to Design & Construction, FM and Paymech elements of FC, including the initial RDD process, and were to manage the RDD process on behalf of NHSL including progress reporting, attendance at workshops, administration, and stakeholder input during construction.

157. There was a process set up by NHSL and Motts post FC whereby IHSL met with user groups (clinicians) and the Project Team (including Motts and the architects) to finalise the very detailed 1:50 room layouts, equipment lists and so on, which was part of the RDD process. While the RDD process was ongoing, early construction activity could commence at the same time. This is not uncommon in the building industry. Design for early construction activity such as piling, drainage and sub-structure would come first so that construction could commence whilst room layouts and finishes would come later.

158. There was a need and desire to get on site and get the project underway. The need and desire to commence construction was very much there from Scottish Government, from SFT and from the main board in NHSL. The Project had already suffered delays as a result of the change from capital to NPD; the ultimately successful but protracted negotiations with Consort; and the NPD procurement process in general. There was a lot of pressure to get to FC. But that's the job and it's normal in large and important projects.

159. It could be argued that including the EM in the RDD rather than insisting that IHSL' EM was concluded and approved before FC contributed to issues that arose in relation to the ventilation system. However, I understand that Stewart McKechnie, the M&E designer from TUV SUD / Wallace Whittle, considers that the EM did not contain any errors because, in his view, the EM was compliant with SHTM 03-01. I understand this is because, in his view, the only rooms in critical care which require 10 ac/hr are isolation rooms. For the avoidance of doubt, I was not aware that this was how Stewart McKechnie interpreted the Guidance and I disagree with his interpretation. There were various opportunities for IHSL and their supply chain to

flag the error but they did not. This can perhaps be explained by the fact that TUV SUD / Wallace Whittle did not consider there was an error to flag.

160. If we or Motts had spotted the error in the IHSL's EM or the RDS before FC we would have drawn it to IHSL's attention and highlighted it as an issue to be corrected post FC. That said, I do not believe such an issue on its own would have held up FC, rather, it would have been an item for RDD in the way the ventilation pressure issue was. After all, MPX had informed us long before FC that they were doing no more design until the contract was signed, which may have been because that was when monies began to flow to MPX from IHSL.

IHSL's EM at Financial Close (FC)

161. IHSL's EM and the form in which it appears in the PA at FC constituted RDD by virtue of part 4 of section 5 of schedule 6 to the PA. It was not approved by NHSL at FC. We expected to review IHSL's EM during the RDD process and we did comment on it regularly back and forth. From memory, the Project Team (including Motts) kept pointing IHSL generally to SHTM 03-01 and flagging that they needed to comply with those requirements.

162. I have been asked whether the EM should ultimately have been superseded by completed RDS and, if so, why the EM needed to be included as RDD rather than just requiring completed RDS. I cannot recall the exact reasoning at the time, however, IHSL's EM contained far more detailed environmental data than included in the RDS and presumably we were keen to evidence it's development, particularly given its unapproved status at FC.

163. I have been asked why Schedule 6, Section 5, Part 4 includes a comment that the EM should be updated by IHSL to reflect all rooms and room types based on the updated Schedule of Accommodation **(A33644029 – Section 5 of Part 6 of the Project Agreement – Reviewable Design Data RevHClean (NHSNSS) – Bundle 13, Volume 9, Page 404)**. I cannot recall exactly. There would have been some minor changing of certain rooms post preferred bidder, e.g., an extra room here, a

lesser room there. Janice Mackenzie would be better placed to comment on this. She will have a better memory than me of it, but it was necessary to adjust IHSL's EM to reflect the accurate schedule of accommodation.

164. The whole of the EM was subject to RDD. That is self-evident from the amount of correspondence on the EM during construction that focussed on various parts of it, not just the points noted in the schedule of the Project Agreement at FC.

Escalation / Oversight

165. I have been asked about escalation and oversight of the Project at Scottish Government level. Mike Baxter or Alan Morrison's attendance at the Project Steering Board (including the additional Project Steering Board commercial sub-groups discussed above) was deemed, I would imagine, to be sufficient escalation of issues that arose in the Project to the Scottish Government. They would also have received the relevant Project Steering Board papers and minutes and been party to any ongoing discussions where appropriate. In addition, SFT were in close and regular contact with the Project Team and also engaged with us through their KSR validation exercise. There might have been other conversations, either formal or informal, between Executives of NHSL and the Scottish Government, that I don't know about. However, from a Project Director and Project Team point of view, this was Scottish Government's visibility and eyes on the project.

166. I have been asked if NHSL should have been signing a contract with IHSL when parties seemed so far apart. That was a collective value judgement by the Scottish Government, SFT, our main board, our Chairman of the F&R committee and our Director of Finance, Susan Goldsmith. There was sufficient comfort that any issues that had not been fully resolved could be resolved post-FC. That would be my take on it and recollection of it. I would have been party to those discussions and would have been asked for a view and provided an opinion.

167. I have been asked if NHSL were influenced by the fact that MPX had been involved with the Queen Elizabeth University Hospital (QEUH) in Glasgow. In my experience

over many years, if not decades, on projects of various sizes, where such as in this case, a contractor is rolling on from another project of a similar scale, size, and complexity with substantially the same individuals and teams, that is usually a very positive factor because of that in-built experience and know-how. From my point of view, it certainly was an advantage to have a team from MPX who had worked on what was deemed to be, at that point, a successful major new hospital in Scotland. We had key players that had worked at the QEUH involved in our Project, although some of them left very quickly after FC.

168. We consulted with HFS and HPS, Scottish Government bodies, on an ad hoc basis as/when we needed to.

169. In terms of design assurance, my view would be that Scottish Government and SFT took comfort and reassurance from the contractual obligations and duties of the parties in an NPD contract. I think Scottish Government and SFT's assumption was that IHSL would deliver a compliant facility in line with their contractual obligations and the transfer of risk.

The Atkins Review

170. SFT commissioned WS Atkins to undertake an independent design review **(A33335814 – Atkins Independent Design Review Report dated 12 December 2011 – Bundle 13, Volume 9, Page 580)** during the reference design period. It was mainly about efficiencies and affordability. For example, it was to ensure that the circulation, communication, areas, ratio of support and public space to clinical accommodation were within an affordability envelope and that the building was efficiently designed with no surplus space. HFS reviewed the Atkins report and provided comments.

Achieving Excellence Design Evaluation Toolkit (AEDET)

171. AEDET is an architectural assessment rather than one concerning building services engineering. AEDETs were undertaken at various stages during the Project: (i) the

capital funded project (October 2009, April 2010, and August 2011); (ii) the reference design phase following the switch to NPD (August 2011 and March 2012); and (iii) by each of the bidders during competitive dialogue (June 2013). The reference design was subject to an AEDET review as was the bidders' schemes in competitive dialogue though I was not part of that.

172. From memory, either the Architects or HFS would facilitate the AEDETs. I did not attend the AEDETs from the NPD phase onwards because it was essential not to influence the process by Project team members who could introduce a biased perspective having been the facilitators of the design being assessed. Contributors should be impartial. I would doubt any of the design team had an active role in the AEDETs for the same reason. If they did, it would be a passive one. The process is used all the time, it's still used to this day. It is a useful tool which is in use right across the construction industry, not just in healthcare.

173. I have been asked for my view on at what point RIBA stage E should have been reached. In order to comment on this I would have to map MPX's release of design information against this now old RIBA stage. It would be very difficult, impossible really, given the nature of the NPD contract, to try and draw a direct comparison.

Healthcare Associated Infection - HAI-Scribe Review

174. HAI-Scribe is a process that health boards go through at all the different stages of a project to assess the risk to patients and staff in relation to planned construction works. HAI scribes are undertaken: (i) at the outset of a Project; (ii) at the design and planning stage; (iii) during construction; and (iv) prior to occupation. The focus is on infection control and infection control nurses, along with the relevant members of the Project Team and IHSL, attend the HAI-scribe meetings. Janice Mackenzie, Project Clinical Director, is better placed to advise on HAI-scribes than me. I did not have a direct role in the HAI-scribes.

NHS Scotland Design Assessment Process (NDAP)

175. An NDAP wasn't required because we had already secured business approval and the project fell into transitional arrangements. Architecture + Design Scotland (A+DS), who are part of NDAP, reviewed the three bidders design proposals during competitive dialogue, as did the City of Edinburgh Council's planning department. I am not convinced that an NDAP would have identified the critical care ventilation issues which led to the failure to open in July 2019. I address this further in my first statement at paragraphs 66 and 68.

Transfer of risk

176. In my view, this all goes back to the inherent NPD transfer of risk principle enshrined in the PA. The public sector utilised an NPD contract to transfer the risk to deliver a compliant facility to the private sector. However, the Board, the procuring authority, remained responsible for the operational functionality side. As long as we were satisfied that the bidder could deliver a building that would allow us to operate as a hospital in the way we desired (e.g. which departments were located next to each other), then in theory the responsibility of achieving compliance with Guidance did not rest with us.

177. I say in theory because in practice the Project team and its advisers have a duty of care to the patients and staff who will use the facility to ensure that it is safe on completion and so we did pick up more than we contractually had to. Most regrettably, and even after all our interventions in terms of picking up non-compliances during the build, nobody spotted the inconsistency in the EM re critical care. It transpired there were many more construction issues picked up during the build which manifested and eventually resulted in the Settlement Agreement between IHSL and NHSL (SA1). There were 81 items that required resolution within SA1 alone. Some of them were significant technical issues that would have threatened health and safety of patients and staff. To me, the fact we had to enter into SA1 at all speaks to the underlying behaviours and failures of IHSL, MPX and their supply chain throughout the Project.

178. There was an assumption on our part that all parties knew their responsibilities and obligations under the PA. IHSL should have been policing their supply chain. IHSL's supply chain, as I understand it, would have back-to-back agreements where the obligations of the parties flow down, for example to the Building Contract with MPX and the FM Contract with Bouygues Ltd.

179. IHSL were responsible, given the transfer of risk necessary in NPD, for the design, procurement, construction, funding and operation and maintenance of the facility. That is the whole point of NPD – to get it "off book". The Scottish Government and SFT are better placed to answer than me why NPD was chosen as the procurement route. Paradoxically, the project was never taken "off book" because that transfer of risk, significant as it was, did not reach the required threshold prescribed by ESA 10 when it was published in Sept 2014 some five to six months before FC. SFT is best placed to explain why this occurred.

180. Compliance with Guidance was mandatory in the PA. I understand that the M&E engineer from TUV SUD / Wallace Whittle who was responsible for IHSL's EM does not think there was an error in their EM and, accordingly, that the hospital as built in 2019 was compliant with Guidance. Thankfully, NHSL provided for an independent validation process prior to the hospital opening and through that process discovered that the critical care ventilation system designed and installed by IHSL, MPX and TUV SUD / Wallace Whittle was not compliant with Guidance. As soon as NHSL were aware of this, the matter was escalated to Scottish Government, who decided to delay the opening of the hospital so that no patients were put at risk.

Concluding Remarks

181. I have been asked how the error in the EM arose. The EM was not entirely incorrect, it was inconsistent. The guidance notes, indeed, the front page of the EM, explicitly required 10 ach critical care but the body of the EM mistakenly required 4 ach. In terms of the reference design, the original designer, H&K, have confirmed that the requirement for 4 ach in the body of the EM was a result of human error.

H&K consider the body of the EM should have reflected the guidance notes and all rooms in critical care should have had 10ach. In terms of IHSL design, the M+E designers, TUV SUD, confirmed that they consider 4 ach in critical care (other than in isolation rooms) was and is compliant with Guidance. This is a unique interpretation and may explain why TUV SUD, Multiplex and IHSL did not flag and remedy the situation.

182. There were systems in place to try and avoid such a scenario:

i. Project Agreement and BCRs specified compliance with Guidance, subject to any agreed derogations.

ii. Requirement to submit derogations from guidance was clear and discussed throughout ITPD with IHSL – there were no such derogation submitted re critical care.

iii. Requirement for IHSL to satisfy itself as to the accuracy, completeness, and fitness for purpose of disclosable / design data as per clause 7, and the EM was design data.

iv. Requirement to comply with CEL 19 2010 and utilise ADB to prepare RDS. This should have flagged to IHSL the errors in the EM, and IHSL should have flagged the non-compliances to NHSL and/or submitted a derogation.

v. The guidance note of the EM itself actually specified 10 ac/hr for critical care. Again, that inconsistency should have been flagged by IHSL and a derogation submitted.

vi. Appointment of Technical Advisory team throughout who did review the EM on various occasions.

vii. Independent tester role from FC onwards. Included obligations to familiarise itself with the Project Agreement and project documents and flag any inconsistencies – which they did not.

viii. Assurance Letter from IHSL dated 31 January 2019 which states that all critical vent systems installed and compliant with SHTM 03-01.

ix. Ultimately: NPD style contract. Risk and obligation sits with IHSL to deliver a fully compliant facility. In other words, reliance on bidder's quality control.

183. I have been asked how the issues that arose on this project could be avoided in future projects. Firstly, I would say that the project team worked tirelessly from the outset to deliver a building which would make a measurable difference to the experience of patients, staff and visitors and used resources more efficiently, costs less to run and maintain and is more readily adapted as service needs evolve and change. Patient experience was central to the design.

184. Turning to lessons learned, many of the issues that arose in this project resulted from the fact this was an NPD style project. However, some of the issues and lessons learned are applicable to all healthcare projects. With that in mind, and with the benefit of hindsight, my thoughts are as follows:

i. Increased sharing of information between health boards, in particular: a fuller exchange of performance of contractors on projects.

ii. Independent validation of all key building services operational performance before practical completion.

iii. Role of Independent Tester enhanced to incorporate more thorough testing and commissioning and undertaking a Clerk of Works and Resident Engineer role.

iv. Insisting on a more modular and "off site" approach to design and construction.

v. More fully testing bidding consortia on their understanding and their knowledge of the specific contract and their risk and obligations through the incorporation of an agreed risk matrix in the contract.

vi. Special Purpose Vehicle to appoint an accountable Project Director to oversee overall delivery and in particular performance of builder.

vii. Builder in consortium to have a long-term financial stake in facility.

viii. Insisting on design being more fully complete prior to FC with attendant time and cost implications.

ix. Close loopholes/ambiguities in mandatory SHTM requirements to mitigate disputes through ignorance, commercial gain, or incompetence or all three.

x. Wording of technical ITPD documentation checked by procurement lawyers to ensure continuity and clarity of intent across all sections.

xi. Long term and consistent pipeline of major acute healthcare projects encouraging investment in resources and knowledge acquisition across construction industry.

xii. Increased investment in procuring authority project teams particularly in relation to clinical input, infection control and MEP.

Declaration

185. I believe that the facts stated in this witness statement are true. I understand that this statement may form part of the evidence before the Inquiry and be published on the Inquiry's website.

22/02/24