Scottish Hospitals Inquiry

Supplementary Witness Statement of

Graeme Greer

Preamble

1. This is a supplemental statement for the Scottish Hospitals Inquiry ("**SHI**"). This supplemental statement follows upon my principal statement to the SHI for the hearings due to commence on 26 February 2024, dated 8 December 2023. My first statement was dated 23 February 2023. I provided oral evidence to the SHI on 5 May 2023.

2. In preparing this supplemental statement I have had regard to the report prepared by Mr Stephen Maddocks of Cundall, together with the documents referred to within the report. I have also reviewed contemporaneous correspondence and documents which I sent, was copied into or have since been shown, as well as my own recollections. I have endeavoured to provide clarifications to the best of my recollection, whilst noting that I am not a mechanical engineer.

Background

3. I am Graeme Greer. At the material time I was employed by Mott MacDonald Limited ("**MML**") as a Consultant and then from 2016 as an Associate. During the course of my employment with MML I became involved with the Royal Hospital for Children and Young People & Department of Clinical Neuroscience ("**RHCYP/DCN"**) project ("**the Project"**). My role within the Project was MML's internal Project Manager and Lead Technical Advisor. From around 2019 I handed over my other roles within MML to focus exclusively on the remedial works on the Project. My professional background and involvement with the Project is fully described within my previous statements to the SHI.

4. Some of the correspondence referred to within this supplementary statement I was copied into, however I may refer to other items of correspondence which I was not copied into and have retrospectively found on reviews of the project files. The correspondence issued by MML to Project Co, would have in the majority, been discussed and agreed with NHSL prior to issue to Project Co. There is generally a significant amount of correspondence that sits behind the final issued copy to Project Co.

Scope of Statement

5. In this Supplemental Statement I will address the following matters arising from the report of Mr Maddocks:

   a. Board's Construction Requirements ("BCRs")
   b. Draft status of the Environmental Matrix ("EM")
   c. Ambiguity & hierarchy of standards
   d. Purpose of the Reviewable Design Data ("RDD") process
   e. Inclusion of the EM within Reviewable Design Data ("RDD")
   f. TUV SUD/Wallace Whittle interpretation of critical care ventilation requirements
   g. Inclusion of critical care within Supplemental and Settlement Agreement 1 ("SA1").

Board's Construction Requirements

6. I understand that in preparing his report, Mr Maddocks has referred to a TUV SUD document entitled 'Critical Care Briefing Review' from April 2022. Mr Maddocks highlights the documents identified by TUV SUD as informing their design for the ventilation system, see **(A46416507 – Scottish Hospitals Inquiry – RHCYP/DCN Critical Care Ventilation Systems Review by Stephen Maddocks – Witness Bundle – Volume 1 – Page 12)**. Upon reviewing the list of documents highlighted, I observed that TUV SUD did not include the Board's Construction Requirements ("BCRs") within the list of documents referred to.

7. I would have expected the BCRs to be listed as a fundamental part of the brief given to the designer by Project Co. As I explained in my first statement to the SHI, the BCRs are in essence the Board's specification for the hospital, see **(A42760846 – Witness statement of Graeme Greer – Final (Redacted) – Bundle 13 – Vol 5 – Page 10).** It is against the BCRs that Project Co are required to ensure compliance in terms of the standard NPD risk allocation applicable to the Project. It is not clear from the TUV SUD document whether they took the BCRs into account.

8. The TUV SUD document does not appear to set out accurately the design brief. Mr Maddocks identifies that it is typical to include the HTMs (or equivalent Scottish versions) as a mandatory requirement within the BCRs on PFI/NPD projects. That was the case in this project. The BCRs included an obligation for Project Co's design to comply with SHTM 03-01 and for Project Co to adopt as mandatory all recommendations and preferred solutions contained in the SHTM, see **(A40236052 – ITPD Volume 3 – The Board's Construction Requirements, Revision C – dated August 2013 – Bundle 13 – Vol 10 – Page 22)**. If there was any apparent ambiguity or inconsistency between the applicable standards, then the most onerous standard/ advice was to take precedence, and the most recent standard was to take precedence. If there was any inconsistency between complying with the SHTM guidance or any other requirement of the BCRs and with another part of the brief, then the designer is required to comply with whichever standard is most onerous, see **(A40236052 – ITPD Volume 3 – The Board's Construction Requirements, Revision C – dated August 2013 – Bundle 13 – Vol 10 – Page 27).**

<u>Draft status of Environmental Matrix</u>

9. Mr Maddocks states: *"…the production of a project specific EM would, in my opinion, be viewed by an engineer as a statement of the client's specific requirements unless the contrary intention was clearly stated." see* **(A46416507 – Scottish Hospitals Inquiry – RHCYP/DCN Critical Care Ventilation Systems Review by Stephen Maddocks – Witness Bundle – Volume 1 – page 13).** As I have set out in previous evidence, the original draft EM was issued

strictly as a starter for ten for bidders to then develop their own design. That is what the successful bidder then went on to do, as I set out in the principal statement I have provided for these hearings. I understand the Board's specific requirements to be provided within the BCRs. It is my understanding that if there were any inconsistencies in those requirements, then the hierarchy of standards provision would apply.

10. Although preparation of the Invitation to Participate in Dialogue ("**ITPD**") documentation pre-dated my involvement with the Project, I understand from my involvement in the procurement process and afterwards the position to be that the draft EM supplied to bidders by the Board was clearly identified as a draft within the ITPD, see **(A42760846 – Witness statement of Graeme Greer – Final (Redacted) – Bundle 13 – Vol 5 – Page 32).**

11. Mr Maddocks observes that there would be no point in issuing a draft EM unless it could be relied upon by bidders. The decision to adopt the use of a Reference Design, including the provision of a draft EM, for the Project pre-dates my involvement. Nevertheless, I understand the purpose of supplying Reference Design items, such as a draft EM, to bidders was to mitigate wasted costs from the capital funded stage and expedite the procurement process, see **(A42760846 – Witness statement of Graeme Greer – Final (Redacted) – Bundle 13 – Vol 5 – Page 33).** As I discussed in my previous evidence to the SHI, all information, including the draft EM, was issued to bidders as Disclosed Data. This meant that although it was intended to provide bidders with a starting point, the Board accepted no design responsibility for the draft EM and offered no warranty as to its accuracy, see **(A42760846 – Witness statement of Graeme Greer – Final (Redacted) – Bundle 13 – Vol 5 – Page 33).** In my experience, this is typical of many major healthcare PFI/NPD projects.

12. Elsewhere in his report I observe that Mr Maddocks describes that TUV SUD took the draft EM to be a key briefing requirement, see **(A46416507 – Scottish Hospitals Inquiry – RHCYP/DCN Critical Care Ventilation Systems Review by Stephen Maddocks – Witness Bundle – Volume 1 – pages 14-15)**. It is not my understanding that the EM was issued by the Board as a key briefing

document. The draft EM was issued as a starter from which bidders were to develop their own design. I do not recall any of the bidders being informed during the procurement stage of the Project that the draft EM was to be mandatory for bidders to follow. Indeed, as I say it was made clear within the ITPD that the EM was issued in draft form only and was to be developed further by bidders.

13. Any description of the draft EM as a key briefing document does not appear to be consistent with the fact Project Co made significant changes to the draft EM both prior and subsequent to Financial Close. I discuss examples of such changes in my principal statement and also during my previous evidence to the SHI, see **(A46352254 –Witness Statement – Final – Witness Bundle – Volume 2 – Page 9)** and **(A43708639 – Transcript – Graeme Greer – 05.05.23 – Bundle 13 – Vol 10 – Page 18)**

14. As I say at paragraph 30 of my principal statement, see **(A46352254 – Graeme Greer – Witness Statement – Final – Witness Statements – Volume 2 – Page 13)**, multiple reminders were sent to Project Co after FC that the draft EM issued as part of the Reference Design could not be relied upon as a mandatory or approved briefing document. It was always up to Project Co to develop its own design. For example, on 15 April 2015 MML issued MM-GC-001398 on behalf of NHSL which stated the following:

IHSL are also reminded that the reference design has no relevance to the current contract, and IHSL are to comply with the Project Agreement and in particular the BCRs and PCPs. Any non-compliance with the BCRs and PCPs should be highlighted to the Board.

The “reference design” referred to in this email included the draft EM issued to bidders at ITPD stage. As I have stated, the key briefing information for the Project was provided by the BCRs. Responsibility for ensuring their design complied with the BCRs, and in particular SHTM 03-01, rested solely with Project Co.

Ambiguity & Hierarchy of Standards

15. It was a mandatory requirement of the BCRs for Project Co's design to comply with SHTM 03-01. If Project Co had encountered ambiguity, then Project Co was required to have regard to the hierarchy of standards within the Project Agreement. This provided that where there was any conflict between the applicable standards and guidance within the BCRs, then the most onerous, and most up to date, standard must be followed, see **(A40236052 – ITPD Volume 3 – The Board's Construction Requirements, Revision C – dated August 2013 – Bundle 13 – Vol 10 – Clause 2.5 (Page tbc)).** I understand Project Co were required to consult the Board had any ambiguity within the design requirements been encountered. As I have previously stated in evidence to SHI, I understand a hierarchy of standards clause to be a standard feature of PFI/NPD project agreements, see **(A42760846 – Witness statement of Graeme Greer – Final (Redacted) – Bundle 13 – Vol 5 – Page 27).**

16. While I was not involved in the mechanical & electrical workstream, I do not recall Project Co raising specific ambiguities between the requirements of SHTM 03-01 for ventilation in critical care areas and the draft EM during the lifetime of the Project.

Purpose of RDD process

17. In his report Mr Maddocks observes that as the pre-FC Room Data Sheets ("**RDS**") were approved by the Board without comment, that it is understandable that Project Co believed their solution based on 4 air changes per hour in critical care had been agreed, see **(A46416507 – Scottish Hospitals Inquiry – RHCYP/DCN Critical Care Ventilation Systems Review by Stephen Maddocks – Witness Statements – Volume 1 – page 29).** As I explained in previous evidence to the SHI, by Financial Close ("FC") IHSL had not produced a complete set of Room Data Sheets (RDS). This meant the Board was unable to approve IHSL's RDS at FC, with the solution being to include RDS as RDD. Accordingly, at FC the RDS had not been stamped and remained unapproved. This was communicated to and agreed with IHSL, see **(A42760846 – Witness statement of Graeme Greer – Final (Redacted) – Bundle 13 – Vol 5 – Page**

29). My understanding is that no matter what reviews were undertaken during the RDD process, the design risk remained with Project Co for all matters other than Operational Functionality.

18. As I set out in my principal statement, RDD items, such as RDS, were reviewed in accordance with the Project Agreement Review Procedure. The outcome of this review was that each item was awarded Level A, B, C, or B. Levels A & B constituted Board "approval". Nevertheless, irrespective of which level was awarded, the approval granted by the Board under the RDD process related only to Operational Functionality. The definition of Operational Functionality was set out in the Project Agreement, see **(A37699200 – Project Agreement – Schedule 1 – pp. 164-165 – Bundle 13 – Vol 10 – Page 17)**. Any "approvals" granted by the Board were accordingly restricted to matters relative to Operational Functionality, and this did not include ventilation. For all matters other than those relative to Operational Functionality, Project Co remained responsible for ensuring wider compliance with the BCRs. It was never the purpose of the RDD procedure to review or approve Project Co's ventilation solution, regardless of whether RDD items were approved without comment.

19. When considering whether a discrepancy of this nature ought to have been identified, it may be helpful to have regard to the nature of review undertaken by MML, together with the Board, during the RDD process. This is described in detail within my principal statement, see **(A46352254 – Graeme Greer – Witness Statement (Final) - Witness Statements - Volume 2 – Page 8)**. In summary, the review undertaken was on a sample basis only and was from the perspective of Operational Functionality. Where issues not relating to Operational Functionality were identified within items of RDD these would be commented on as a helpful pointer but for all matters other than those relative to Operational Functionality the obligation to ensure compliance with the BCRs always remained with Project Co.

Inclusion of EM within RDD

20. Mr Maddocks states that the IHSL EM should not have been included as RDD. Finalisation of the draft EM prior to FC was the original intention for this Project.

However, as I have previously discussed in my evidence to the SHI, for a variety of reasons, this did not prove to be possible.

21. By October 2014 the draft EM had been noted on the design risks register as it did not appear to have been sufficiently developed by Project Co by that stage. Nevertheless, I understand both the Board and Project Co were under commercial and practical pressure to reach FC. In particular, from the Project Co perspective a significant amount of expenditure had already been incurred by this point. By winter of 2014, I understand from NHSL, that Multiplex had indicated that it would undertake no further design work until the Project Agreement was signed. Prior to the decision to include IHSL's EM as RDD, I do not recall Project Co giving any indication that they intended to design a ventilation system which did not comply with SHTM 03-01.

22. Although IHSL's EM became an item of RDD, this must be understood in the context of the RDD process. An item was RDD only insofar as Operational Functionality was concerned. The obligation for ensuring compliance of all other items, including ventilation, remained solely with Project Co. It remained up to Project Co to produce a compliant design.

23. As I have already stated while the ventilation specification for the Project was not finalised at FC, the brief was defined in the BCRs, see **(A42760846 – Witness statement of Graeme Greer – Final (Redacted) – Bundle 13 – Vol 5 – Page 37).** These contained an overarching requirement for Project Co to treat as mandatory the ventilation requirements of SHTM 03-01, see **(A42760846 – Witness statement of Graeme Greer – Final (Redacted) – Bundle 13 – Vol 5 – Page 37**).

TUV SUD/Wallace Whittle interpretation of critical care ventilation requirements

24. During the lifetime of the Project, I do not recall being made aware by Project Co that TUV SUD's interpretation of SHTM 03-01 in relation to critical care ventilation was that the need to provide 10 air changes per hour was limited to isolation rooms only. In his report Mr Maddocks states that it is TUV SUD's position that

the Board was made aware of this interpretation in emails of September 2015. I understand TUV SUD to be referring to an email exchange between Maureen Brown of MML and Ken Hall of Multiplex on 25 September 2015. Although I was not copied in, I have retrospectively reviewed these emails in preparation of this supplementary statement. My understanding is that the emails are limited to discussion of specific requirements for isolation cubicles within the critical care department, not for the ventilation requirements in the broader critical care department. Nowhere in these emails do I see any statement to the effect that 10 air changes are *only* required in isolation rooms. I do not understand the emails to include discussion of, or agree, general ventilation requirements for critical care. As a general observation, the design of the ventilation system for critical care was the sole responsibility of Project Co in terms of the Project risk allocation.

Inclusion of critical care ventilation within SA1

25. I do not recall any discussions with Project Co where it was brought to our attention that their proposed solution involved any derogations from 10 air changes per hour to 6 air changes per hour. My understanding, and I understand the wider Project Team's understanding, was that the proposed derogation was from 6 air changes per hour to 4 air changes per hour. I have explained in my principal statement the process by which 4 air changes per hour was agreed for the 14 multi-bed rooms.

26. I have described in detail within my principal statement my understanding of the application of Agreed Resolution 13 to single bedrooms within critical care. As the Agreed Resolution seeks to reduce ventilation rates from 6 air changes per hour to 4 air changes per hour, my understanding is that it is not altogether clear Agreed Resolution 13 applies to critical care single bedrooms at all.

Declaration

27. 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.