

**Bundle of documents for Oral hearings
commencing from 19 August 2024 in
relation to the Queen Elizabeth University
Hospital and the Royal Hospital for
Children, Glasgow**

**Bundle 22 - Volume 2
Core Participants response to Provisional
Positioning Paper 14 (Isolation Rooms)**

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1 Introduction

- 1.1 The following is a response by Multiplex Construction Europe Limited ("Multiplex") to:
 - 1.1.1 Provisional Position Paper 14 titled: "*Isolation Rooms*" ("PPP14").
- 1.2 Multiplex notes the terms of PPP14, where the Inquiry highlights the importance of Core Participants understanding the factual basis on which the Inquiry is proceeding and having the opportunity to correct any misunderstandings or misapprehensions. Multiplex is grateful for this opportunity to assist the Inquiry.
- 1.3 The above being said, the breadth and depth of issues covered in PPP14 cannot be underestimated, where PPP14 encompasses the ventilation systems relating to Ward 4B, Ward 2A, PICU, Clinical Decision Unit, Cardiology Ward, Acute Receiving Ward and Level 3 Isolation Rooms. A period of 4 weeks to respond to PPP14 has not allowed Multiplex sufficient time to investigate the whole factual background and formulate a response to the matters raised in PPP14.
- 1.4 In the limited time made available, and with a view to assisting the Inquiry, Multiplex would direct the Inquiry to its response to Provisional Position Papers 11 and 12, which response seeks to generally place matters of ventilation and water systems at QEUH in context.
- 1.5 Having regard to Section 2(1) of the Inquiries Act 2005, Multiplex's position set out in this response is provided solely to assist the Inquiry's understanding and is without prejudice to and under reservation of any further submissions Multiplex may make or evidence it may lead in any forum.
- 1.6 Multiplex is happy to discuss this response with the Inquiry team if it would be of assistance.

THE SCOTTISH HOSPITALS INQUIRY

GREATER GLASGOW HEALTH BOARD

RESPONSE TO PROVISIONAL POSITION PAPER 14

1. INTRODUCTION

- 1.1. This document is Greater Glasgow Health Board's ("**NHSGGC**") response to Provisional Position Paper 14 (Isolation Rooms) ("**PPP14**"). NHSGGC has previously provided a response to the Provisional Position Paper 12 ("**PPP12**") which concerns the ventilation system within the Queen Elizabeth University Hospital ("**QEUH**") and Royal Hospital for Children ("**RHC**"). The response to PPP12 is relevant to a number of issues raised in PPP14. NHSGGC invites the Inquiry to have regard to its response to PPP12 when considering the issues raised in PPP14.
- 1.2. NHSGGC welcomes the opportunity to comment on PPP14. NHSGGC wishes to reiterate that, on the basis of the evidence currently available it does not accept that any aspect of the water, drainage or ventilation systems in the QEUH or RHC has at any stage posed a risk to the safety of patients beyond that which may reasonably be expected in any comparable hospital environment. Based on evidence currently available, NHSGGC does not accept, and its investigations have not demonstrated, that there is any link between incidents of infections and the built environment beyond what would be ordinarily present in a comparable hospital environment. With the exception of two discrete cases of paediatric infection in 2016 and 2019, the details of which have already been shared with the Inquiry, NHSGGC does not accept, and its investigations to date have not demonstrated, that there was any causal link between the built environment and any infection suffered by a patient within the QEUH.
- 1.3. NHSGGC has provided some general comments on the approach of PPP14 below. The appendix to this response contains comments on the detail of PPP14.

2. SCOPE OF PPP14

- 2.1. NHSGGC notes that the PPP is titled "Isolation Rooms". However, PPP14 considers other aspects of ventilation, not just in relation to isolation rooms. As a result, NHSGGC considers that much of its response to PPP12 is directly relevant to the issues raised in PPP14.
- 2.2. NHSGGC also notes that there are points in which it appears that treatment and procedure rooms are being conflated with "isolations rooms". These are distinct areas with differing requirements.

3. CONTRACTUAL DOCUMENTATION

- 3.1. PPP14 summarises some of the contractual documentation that is relevant to the design and construction of the QEUH/RHC. Relevant documentation includes the Employer's Requirements and Clinical Output Specification.
- 3.2. The Inquiry has not yet heard any evidence from those responsible for the design and build. Such evidence is essential in understanding what specification NHSGGC sought for the ventilation systems and whether the as-built systems complied with those requirements. There are legitimate reasons why the design may derogate from guidance. Those involved in the design and build process can speak to any derogations and the process involved. PPP14 also seeks to summarise how the contractual documentation interacted with guidance. The PPP narrates a significant amount of email correspondence which passed amongst those responsible, including between infection control and estates. NHSGGC is concerned that these communications are being taken out of context. Again, NHSGGC submits that these issues can only be understood once evidence has been heard from those responsible. For example, NHSGGC notes that the clinical output specification was prepared with input from those with clinical and infection control expertise. The PPP may be read as suggesting that there was no such involvement.
- 3.3. NHSGGC notes that the baseline requirements considered by the Inquiry to be necessary in a hospital such as the QEUH/RHC are not clear and there is no evidential basis stated for the perceived requirements. The PPP suggests that insufficient isolation rooms were provided for in the clinical output specification. It is also suggested that the rooms as built were not of the correct type. However, it is unclear what the PPP is comparing the QEUH/RHC with.

- 3.4. There is a considerable amount of detail in PPP14 that can only be understood after hearing evidence from those responsible. Without hearing evidence, NHSGGC considers that the Inquiry cannot reach any conclusion the issues raised in PPP14.

4. IMPACT OF ANY DIVERGENCE WITH GUIDANCE

- 4.1. PPP14 identifies what are termed as “deficiencies” with isolation rooms and the wider ventilation system. Those “deficiencies” relate to areas where the Inquiry has identified non-compliance with standards and, in some instances, contractual documentation. As with PPP11 and 12, NHSGGC recognises the work done by the Inquiry but submits that it is premature to consider any feature of the ventilation in isolation rooms was “deficient”.
- 4.2. In particular, many of the standards referred to in PPP14, not least SHTM03-01, are guidance. This is noted by the Inquiry in places, for example at 3.8. The guidance is not mandatory. There may be perfectly legitimate reasons for derogating from guidance. Where appropriate mitigations are out in place, such derogations do not present any additional risk to patients beyond what would be expected in a comparable hospital environment.
- 4.3. NHSGGC also notes that the value of protective room ventilation, such as HEPA filtration and positive pressure-directed airflow for haemato-oncology patients is unclear. A systematic review in 2006 reported on 16 trials (9 with death as an outcome and 10 with fungal infection as an outcome) that compared HEPA filtration with non-HEPA filtration. No significant advantages of HEPA filtration were found in the prevention of death among patients with haematological malignancies with severe neutropenia [Eckmanns 2006]. There therefore remains a question about the practical effect of any non-compliance with SHTM guidance from the perspective of infection prevention and control, and patient safety.
- 4.4. Ventilation specifications represent only one factor amongst many for managing the risk of infection. It is essential to appreciate that no hospital can be a fully sterile environment. Pathogens can enter the environment from a range of sources, including through the patients themselves. Accordingly, it is necessary to consider all steps taken to mitigate against risk of infection, not just ventilation in isolation. NHSGGC considers that the question that must be asked and answered is whether the combined systems in the QEUH/RHC, taking into account the accepted background level of infection and all mitigations put in place to manage risk, present an increased risk of infection beyond what would be expected in a comparable hospital environment. Consideration of the nature of

a hospital environment and the various steps taken to manage risk is therefore essential, as is an understanding of what is a base level of infection within a comparable hospital environment. Steps taken to manage risk within the QEUH/RHC include, but are not limited to: use of single en-suite rooms, prophylaxis, PPE, air filtration, air pressure differential, limiting access to patients, staff vaccination, cleaning regime, screening, testing and monitoring. Infection control is multifactorial. The combined impact of these features in a hospital environment, particularly one used to treat neutropenic patients, must be understood.

Andrew McWhirter, Advocate

21 August 2024

Appendix – detailed response to PPP14

Paragraph No	Comment
General	<p>In some instances, the evidential basis for statements being made in the PPP is not clear and has not been stated.</p> <p>There are inaccuracies in the locations of the isolation rooms being referred to. For example, section 7 has the heading “Deficiencies in Ward 4B Isolation Rooms” but then has sub-headings for ICU, HDU, Renal Ward and Infectious Diseases. Section 8, entitled “Review of existing facilities”, contains sub-sections on the Pentamidine Room, Respiratory Ward (level 7) and Endoscopy Rooms.</p>
4.5	<p>In respect of the first sentence, an alternate isolation design provision was made. All the rooms identified as “isolation rooms” were designed as PPVL. These rooms were able to be used for both types of protective isolation.</p> <p>SHTM 03-01 (draft 2009, 2013 and 2014) do not state isolation facilities in general should have HEPA filtration.</p>
5.7.	<p>The Inquiry is asked to clarify what “Level 5 isolation rooms” are being referred to. There are no isolation rooms on level 5. Where Wards were designed as general wards, they had single rooms. As single rooms, the ventilation requirements are different from isolation rooms.</p>
5.9	<p>Each lobbied isolation room was provided with its own dedicated vent system. The paragraph may be read as suggesting that is not the case.</p>

6.8	NHSGGC notes that no Negative Pressure Isolation Rooms were required in the Employer's Requirements.
6.9	SHTM 03-01 (draft 2009, 2013 and 2014) does not state isolation facilities in general should have HEPA filtration.
7.2	This paragraph does not accurately reflect the wording of the Change Order.
7.3	This paragraph is placed immediately under a section heading "What was deficient about isolation rooms at handover?" Ward 4B was a positive pressure "ward area" and had no isolation rooms.
7.8	Works "commenced" in July 2015.
7.9.	NHSGGC notes that rooms with positively pressured ventilated lobbies (PPVL) would still provide protection to patients.
7.10	The 24 rooms are not stand-alone isolation rooms with lobbies and individual AHU's. The 24 rooms referred to provide "isolation" in that they are positively pressured to the corridor and have higher ACH than the standard wards. The reference to HEPA filters being installed in the works is mis-leading as it may suggest HEPAs were not fitted originally, when they were.
7.13	This paragraph is inaccurate. NHSGGC requested a feasibility study, not for a programme of works to commence.
7.21	This paragraph is inaccurate. It was the BMT rooms in RHC ward 2A that did not have HEPA fitted. Reference is made to the email footnoted in the PPP. There are no PPVL rooms in Ward 4B.

7.29	The BICC referred to is from 2015 and there were no negative pressure rooms at that time. It is not clear what rooms are being referred to in this paragraph.
7.30	It is inaccurate to refer to the isolation rooms in HDU as “negative pressure”. All isolation rooms at handover were PPVL.
7.32 – 7.33	The PPP makes comment on the number of isolation rooms provided being insufficient, but does not state the factual basis or opinion evidence for the suggested required number of rooms.
7.43	<p>The author is quoting the content of an email from Dr Christine Peters. However, NHSGGC considers that the content is factually incorrect.</p> <p>Further, it states “Most of the rooms on 5B Haemato-oncology ward”. It is believed that this should read 4B.</p>
7.46	The first sentence appears to be unrelated to the remainder of the paragraph which relates to Negative Pressure Isolation rooms. The first sentence is related to the rebalancing of the wards in the preceding paragraph.
8.6	This paragraph is incorrect. Ward 4B was originally designed to have ten haemato-oncology rooms with a ventilation rate of 6 ACH. This was known and was part of the reason for the selection of this ward in 2013. After the change notice, the additional rooms were increased to 6ACH (from the standard 3ACH).
8.15	Decisions and plans for the move of the “Brownlee” and the “Beatson” services should not be conflated and described together. There were separate reasons for the moves and plans in place in respect of them. Regard should be had to these facilities separately.

	It is correct to say there were no lobbied bedrooms in QEUH Ward 5D however there were lobbied bedrooms for the use of Infectious Diseases in critical care.
8.46.	The Inquiry is asked to clarify the meaning of the numbers in this paragraph.
Table	The content of the table for the period between September 2018 and March 2022 is not relevant as the ward was not occupied during this period.
11.13	Item 8 is factually incorrect. The 36 PPVL isolation rooms each have a dedicated supply and extract system. Item 9 is factually incorrect in that this is not relevant for the PICU extract vents.
11.14	The first two bullet points are not relevant to PICU.

Scottish Hospitals Inquiry

Response by National Services Scotland to Provisional Position Paper 14

1. In this Response, National Services Scotland (“NSS”) provides comments on Provisional Position Paper 14 (‘Queen Elizabeth University Hospital and Royal Hospital for Children Isolation Rooms’).
2. 3.7 states that “the SHTM 03-01 series superseded the SHTM 2025 series in February 2013”. NSS notes that SHTM 03-01 Part B was introduced in 2011.
3. 4.6 states that for Ward Isolation Room parameters “SHTM 03-01 directed readers to Health Building Note (HBN) 4: Supplement 1 (2005)”. As far as NSS is aware, no version of SHTM 03-01 has referred to HBN 4. This may not be material, though, as they do refer to equivalent Scottish guidance.
4. 5.3 mentions that all references to isolation rooms in generic ADB sheets have room code B1602. Looking at ADB sheets in their entirety rather than just in relation to the Schedule of Accommodation for QEUH/RHC, though, this is not correct.
5. 5.9 refers to SHBN 04. This appears to be a typographical error, and it may be that the reference should be to SHPN 04 Supplement 1.
6. Section 6 makes reference to multiple guidance documents. NSS notes that these guidance documents are updated over time, and in some cases they were updated over the period with which the Inquiry is concerned.
7. 6.3 lists specific guidance that ventilation and air conditioning rooms systems for isolation rooms should be designed and installed in accordance with. NSS notes that guidance should be applied as a whole. There is some other guidance on particular areas of a hospital that may also be relevant. For example, SHPN 27 for critical care units and HBN 07-02 for renal care units include guidance on isolation rooms.

8. The title of section 7 is “Deficiencies in Ward 4B Isolation Rooms”. NSS notes that the content of the section is broader than just Ward 4B Isolation Rooms and covers other wards.
9. 8.26 refers to HFS’s review of isolation rooms, stating that “HFS recommended that patients should not be cared for in the PPVL rooms (either with or without ensembles).” To clarify, the review only stated that “highly infectious/infectious” patients should not be cared for in those rooms [see bundle 13 for the February 2024 hearings at volume 8 page 604]. The document refers to the recommendation of HPS, but this is an error and the recommendation was by HFS.
10. NSS will be happy to provide further input and clarification as required.

National Services Scotland

15 August 2024

15 August 2024

For the attention of Inquiry Team
Scottish Hospitals Inquiry

By e-mail only: [REDACTED]

Our Ref: AVIV/1/17

Direct e-mail: [REDACTED]

Dear Sir,

**TUV SUD Limited/Wallace Whittle Limited (TSWW)
QEUH and RHC Glasgow
Response to Provisional Position Paper 14 – Isolation Rooms in QEUH and RHC**

TSWW welcomes the opportunity to comment on Provisional Position Paper 14 (PPP 14), setting out the Inquiry's review of the material available on the Isolation Rooms in the new hospitals.

Core Participants are directed to confine their comments to those matters requiring material clarification or correction, particularly in relation to matters of fact.

In introduction we feel it is important to reiterate previous comments made about TSWW's involvement in this project. The building services design for QEUH/RHC was originally carried out by Zisman Bowyer & Partners LLP ("ZBP"). ZBP ceased trading in 2013 and Multiplex (MPX) appointed TSWW to assist in completing the project, at a point after the detailed design phase. The ability of TSWW to consider and comment upon certain issues raised in PPP14 is limited. TSWW does, however, have access to ZBP design records and will support the Inquiry as best it can using this information.

We have considered PPP 14 with our clients and acknowledge that it contains and records the various issues which have arisen in various locations across the hospitals over a lengthy period. It is difficult to comment on PPP 14 in any meaningful way as it is not clear whether the various issues are related to the original briefing to Brookfield. Indeed it is unclear whether that which was delivered at handover of the Hospitals was in accordance with the original brief

It would be helpful to the Chair if PPP 14 contained a narration of what was initially briefed to Brookfield in each of the areas reviewed within the paper together with the detail of what was delivered at handover to demonstrate whether it was in accordance with that brief.

We note that Inquiry Counsel accept that there is no design guidance for certain types of isolation rooms (paragraphs 10.46 and 11.24 of PPP 14). Our clients take the view that given that lack of guidance, then either Brookfield ought to have received specific instructions for the provision of these isolation rooms or the proposals prepared for the isolation rooms ought to have been discussed and approved. We have no evidence of either course of action. It appears to our clients that the initial briefing did not call for these facilities, although it is not entirely clear from PPP 14. We do however note, for example, that Currie & Brown UK Ltd, in their response to PPP 12 stated "*Infectious Diseases was not part of the QEUH design brief. The Schedule of Accommodation for Level 5 (copy enclosed) provided for four generic Medicine Wards. There was not clinical brief for an Infectious*

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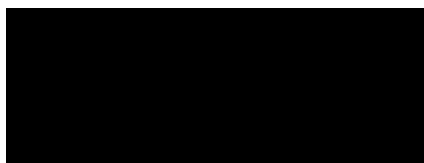
Diseases ward provided as part of the Employers Requirements." This reference may be found at page 359 of Bundle 22, Volume 1.

Our clients comment that they have detailed knowledge of negative pressure isolation facilities specifically for Infectious Disease Departments (where some of the most dangerous infectious diseases (eg Ebola) are treated) in England. It is apparent that the inclusion of the required building solution has significant architectural implications. There does not appear to be any record of this magnitude of involvement in Glasgow and it may be something the Inquiry wish to consider.

Our clients have not instructed us to make a detailed response to PPP 14 but this does not signify acceptance that PPP 14 is accurate in every regard, they simply feel it is not their place to comment in circumstances when they were not involved in the design phase.

Finally, we note that there are various references to an apparent reassurance having been given by Wallace Whittle about the isolation rooms (paras 5.10, 8.24 and 11.4). It is not clear how that reassurance was given as it is referred to in an SBAR which appears at page 20 of Bundle 4. We have reviewed that document, but there are no supporting papers for it. It is essential that the original email from Colin Grindlay to David Hall on 5 January 2015 is produced (correspondence is attached to that email), if this reassurance is to be relied upon. The actual correspondence from Wallace Whittle is the best evidence and the SBAR cannot be substituted. Our clients are concerned that the context of the reassurance is not apparent from the quotes of the subsequent email chain. They have concerns that they may be being misquoted here or that comments are being taken out of proper context. We have asked the Inquiry team to provide the emails to us but to date they have not been furnished to us. This response is being submitted early due to annual leave commitments. Should the appropriate emails/document be sourced we will be happy to ask for our clients to provide instructions. Our clients cannot trace any relevant emails around that date.

Yours faithfully,



Laura J Donald
Consultant
For and on behalf of BTO Solicitors LLP

SCOTTISH HOSPITALS INQUIRY**RESPONSE****TO****PROVISIONAL POSITION PAPER 14 – ISOLATION ROOMS****SUBMITTED ON BEHALF OF DR CHRISTINE PETERS**

1. INTRODUCTION

- 1.1 This response to Provisional Position Paper 14 – Isolation Rooms (“PPP 14”) is submitted on behalf of Dr Christine Peters in accordance with the procedure set out in paragraphs 2.1 to 2.3 of PPP 14 and the email sent by the Scottish Hospitals Inquiry Team dated 25 July 2024. References herein to chapter and paragraph numbers and to defined terms are to such numbers and terms used in PPP 14 unless otherwise stated.

2. CHAPTER 3: CONTRACTUAL CONTEXT

- 2.1 **Paragraph 3.12** states:

“In accordance with the Scottish Building Standards, the minimum mechanical ventilation requirement for an occupied space is to provide an average eight litres of fresh air per person per second. There is no further specification in the Scottish Building Standards as to the air quality for a building such as a hospital.”

- 2.2 In relation to air quality, Dr Peters submits that it is important to understand the relevant governing statutory obligations (as opposed to guidance and codes of practice etc) throughout the UK and where any differences lie. Therefore, Dr Peters submits that the following should be investigated and clarified:

- 2.2.1 what are the statutory requirements/obligations (if any) in England and Wales which govern the air supply to an occupied space in a hospital?
- 2.2.2 Are the statutory requirements/obligations (if any) different in Scotland?
- 2.2.3 if there is a difference, when did that difference arise?

3. CHAPTER 4: INTRODUCTION

3.1 In relation to the discussion in **paragraph 4.3** on ventilation systems in isolation rooms, Dr Peters would add the following:

3.1.1 Individual rooms can also be designed to have an entrance lobby. This lobby can have different functions, and the ventilation strategy will need to consider them. In a negative pressure setting, the lobby provides an extra level of protection to prevent air from the bedroom moving into the corridor – with supply and extract to provide negative pressure to the corridor, but positive to the bedroom. This set up can be used for donning and doffing. However, a further exit lobby can be used for a high consequence infectious diseases (HCID) unit.

3.1.2 The lobby can be positive pressure to the corridor with supply to give additional protection to the bedroom for immune compromised patients.

3.1.3 Finally, the PPVL model has a positive pressure supply lobby, but the room is neutral pressure to corridor.

3.1.4 Each of the above configurations has a different function and needs to be thought through for the needs of the patient population being served.

3.1.5 Different countries have variations on the preferred options and, when guidance is not available in the UK, European and USA (ASHRAE) designs can be consulted.

4. CHAPTER 5: INTRODUCTION (QEUH SECTION)

4.1 **Paragraph 5.3** notes that the SoA made provision for “*one ‘Gowning lobby: single bedroom. (no ABD code is provided for this room) but not an isolation room.*” Dr Peters observes that the proposed “gowning lobby” misses the point of the suite because it does not take into account ventilation requirements. Dr Peters believes that the request for a gowning lobby would be in preparation for the likes of Viral Haemorrhagic Fever and less for consideration of air borne ventilation requirements.

4.2 **Paragraph 5.6** states that “*In May 2009, the Inquiry Team understands that NHS GGC agreed to different provision of isolation rooms and clarified this change with bidders*

during competitive dialogue. This change is confirmed in an email stating: “There are no lobbied bedrooms in the adult tower...this was agreed in 2009 with microbiologist/ICT involvement.” Reference is then made to an email chain between C Williams, J Brown, S McNamee, F McCluskey regarding Highly Infectious patients in the NSGH and other issues – 11 to 12 August 2014. Other than the 2014 email, is the Inquiry able to provide evidence that supports the statement that Microbiologists agreed there would be no isolation rooms in wards? Further, is the Inquiry able to advise who agreed this?

- 4.3 In **paragraph 5.10**, and by reference to an SBAR dated 26 April 2016 (SHI document A38694871), it states:

“Wallace Whittle confirmed prior to handover in January 2015 that isolation rooms throughout the hospital had been designed in line with SHPN 04 Supplement 1. They further confirmed that they saw no reason why the isolation rooms could not be used under the guidance issued previously by the NHS.”

- 4.4 The April 2016 SBAR was written by the IPCT (no name is given) for Dr Jennifer Armstrong. Please can the Inquiry clarify:
- 4.4.1 what triggered the SBAR?
- 4.4.2 why the SBAR was being written as late as 2016?
- 4.4.3 what evidence Wallace Whittle relied on in making the above statements?

5. CHAPTER 7: DEFICIENCIES IN WARD 4B ISOLATION ROOMS

- 5.1 In **paragraph 7.27** it states:

“On 4 September 2015, Ann Harkness stated that the isolation rooms tested in critical care had passed the full range of tests and that patient placement would be in the ICU area until the full test programme had been completed for medical HDU.”

- 5.2 The Inquiry should note that, prior to the above statement, on 29 June 2015, Dr Peters prepared a gap analysis identifying: (i) what the PPVL rooms for ID patients needed, and; (ii) what the BMT patients needed from their rooms (see Dr Peters’ Inquiry

statement, para. 41). This gap analysis was shared with Professor Jones. Dr Peters has provided the Inquiry with the gap analysis and the covering email.

- 5.3 Of additional relevance are the emails which Dr Peters sent in August 2015 (and indeed for several years thereafter) advising that the PPVL rooms were not fit for purpose. Reference is made to Dr Peters' Inquiry statement, paras. 58-59).
- 5.4 In **paragraph 7.32** the Inquiry notes that “[t]he QEUH Renal Ward COS stated that ‘two single rooms per ward will have associated gowning lobbies for infection control purposes (source and protection).’ The Inquiry Team understands that this is a reference to the PPVL rooms.” It should be noted that the request was not for a PPVL but for a NPVL with positive pressure room. Therefore, the wrong type of room was provided. In addition to the rooms on level 4 not being NPVL, they had not been leak tested and did not comply with their design specification.

6. **CHAPTER 10: WARD 2A – PAEDIATRIC BONE MARROW TRANSPLANT (BMT) UNIT**

- 6.1 In relation to **paragraph 10.52**, please can the Inquiry advise why the Morris & Spottiswood tender award report is not available? It is important to obtain a copy of this document in order to know what was being offered and, thus, what the Board accepted.
- 6.2 **Paragraph 10.66** notes that, in the report prepared by Jim Leiper, consideration is given to SHPN 04 Supplement 1. More specifically, it is noted that Mr Leiper comments:

“It could be argued, from a technical perspective, placing the extract within the isolation room is a modification to the normally expected design of this kind of isolation facility, particularly for the nursing of neutropenic patients...but it would be difficult to argue this on a ‘legal’ basis as the guidance itself allows a degree of design latitude and there is an absence of standard guidance for specialist isolation facilities.”

Dr Peters takes issue with the assessment that the placing of the extract within the isolation room (rather than in the en suite bathroom) is not a design change and could be described as a modification. This is because such placement means that the extract will not function as per the specification design and is not validated.

6.3 In considering Mr Leiper's comments, it is important to understand that the design latitude permitted in SHPN 04 Supplement 1 is extremely narrow. Allowance is made for one specific variation which is that an additional extract can be provided close to the patient's head, provided the patient at issue is an infectious patient rather than an immune compromised patient.

7. CONCLUSION

7.1 In relation to the above and PPP 14 more generally, Dr Peters would be happy to provide further input, information and/or clarification as required.

Helen Watts KC and Leigh Lawrie, Advocate

On behalf of Dr Christine Peters

13 August 2024

SCOTTISH HOSPITALS INQUIRY**RESPONSE****TO****PROVISIONAL POSITION PAPER 14 – ISOLATION ROOMS****SUBMITTED ON BEHALF OF DR TERESA INKSTER**

1. INTRODUCTION

- 1.1 This response to Provisional Position Paper 14 – Isolation Rooms (“PPP 14”) is submitted on behalf of Dr Teresa Inkster in accordance with the procedure set out in paragraphs 2.1 to 2.3 of PPP 14 and the email sent by the Scottish Hospitals Inquiry Team dated 25 July 2024. References herein to chapter and paragraph numbers and to defined terms are to such numbers and terms used in PPP 14 unless otherwise stated.

2. DOCUMENTS RELEVANT TO PPP 14

- 2.1 Dr Inkster wishes to direct the Inquiry Team to the following documents which she believes are relevant to a proper understanding of the history of the issues concerning the isolation rooms at the QEUH/RHC and to the issues raised in PPP 14 more generally.

- 2.2 **Paragraph 11.36 in Chapter 11 (Paediatric Intensive Care Unit (PICU))** states

“[a]n ‘Isolation room steering group’ was set up, with the first meeting on 31 May 2019. The Inquiry has not had sight of the minutes of those meetings.”

Dr Inkster is not aware of minutes being taken at that meeting. However, she provided the Inquiry Team with a pdf document entitled “spec.vent2” which (on page 4 of the pdf) details actions and notes arising from the meeting (*see* SHI reference A39465128). She also advises that there are minutes for subsequent meetings of the group in the same document (*see* the Critical Ventilation Steering Group Minutes from page 18 of the pdf onwards).

2.3 From her reading of PPP 14, Dr Inkster is concerned that it would appear the Inquiry has not seen the verification reports for Ward 4B or the negative pressure isolation reports for the isolation rooms in the Critical Care Unit of the QEUH which she signed off in May 2019. However, she believes NHSGGC should be able to provide access to these reports.

3. CONCLUSION

3.1 In relation to the above and PPP 14 more generally, Dr Inkster would be happy to provide further input, information and/or clarification as required.

Helen Watts KC and Leigh Lawrie, Advocate

On behalf of Dr Teresa Inkster

12 August 2024



Scottish Hospitals Inquiry

[Uploaded via Objective Connect]

Our Ref: RIL.10513091
 Your Ref:
 Date: 13 August 2024
 Please Ask For: Ruth Lawrence / Rachel Blair

[Redacted]
 [Redacted]
 [Redacted]

Dear Sirs

Our Client: Currie & Brown UK Limited
Re: Queen Elizabeth University Hospital, Glasgow

We write in response to Provisional Position Paper 14 - Queen Elizabeth University Hospital and Royal Hospital for Children - Isolation Rooms dated 24 July 2024 (“**PPP 14**”) on behalf of our client, Currie & Brown UK Ltd (“**Currie & Brown**”), in accordance with the directions in the Inquiry Solicitor’s email of 25 July 2024.

References in bold to paragraph numbers below are to the numbered paragraphs of PPP 14. References to Bundle numbers are to the numbered bundles issued by the Inquiry for the Glasgow 3 hearing commencing on 19 August 2024 (unless otherwise stated).

Responses to PPP 14

1. **Paragraph 4.5** refers to, “*the versions SHTM 03-01 (draft 2009, 2013, and 2014) that applied during design and construction of the Queen Elizabeth University Hospital (QEUH).*” SHTM 03-01 (January 2009) ‘Ventilation for Healthcare Premises’ (Draft for Consultation) was in use at the time the Main Contract was executed and was included in the Employer’s Requirements.
2. **Paragraph 6.4** states that, “*There is no current NHS guidance providing recommendations on the ventilation system for single (or multi-bed) rooms in an IDU. An exclusion in SHPN 04 Supplement 1 states the guidance on PPVL isolation rooms does not apply to infectious disease isolation. SHTM 03-01 (draft 2009) and HTM 03-01 (2007) recommend 10 ACH and 5 Pa for IDU isolation rooms.*” Currie & Brown understands that the recommendation was not for “5 Pa” but instead for **-5 Pa** i.e. it should be negative. Furthermore, Currie & Brown do not consider that **paragraph 6.4** contains an accurate summary of the exclusion in SHPN 04 Supplement 1, which provides as follows:

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“Exclusions

1.10 *This Supplement does not describe the specialist facilities required in infectious disease units or on wards where severely immune-compromised patients are nursed. Guidance for these facilities will follow in a further Supplement to SHPN 04.”*

3. **Paragraph 7.13** refers to “room pressures of 2.5-8 ACH”. However, ACH stands for air changes per hour and relates to air flow rate, not pressure.
4. With reference to **paragraph 7.21**, as a consequence of the change in use of Ward 4B from a general ward to a specialist haemato-oncology ward by Project Manager’s Instruction No. 228 dated 2 July 2013 (“PMI 228”),¹ NHS GGC instructed the installation of HEPA filters in patient bedrooms in Ward 4B by Compensation Event 10675 No. 51 dated 2 October 2013 (“CE 51”).²
5. There appears to be an inconsistency between **paragraph 7.28**, on the one hand, and **paragraphs 7.29 and 7.30**, on the other. The penultimate sentence of paragraph 7.28 states, “There were no negative pressure rooms in the QEUH.” However, **paragraph 7.29** refers to “all negative pressure rooms” and **paragraph 7.30** states, “...there was an issue with the negative pressure HDU isolation rooms in the QEUH...”
6. With reference to **paragraph 7.32**, the Board Schedule of Accommodation, which was approved and issued as part of the tender pack, noted only two isolation rooms in the renal 20-bed higher acuity ward. A copy of the Schedule of Accommodation is enclosed.³
7. **Paragraph 7.34** states that, “On 30 May 2015, adult patients moved to the QEUH. There is no guidance specifying the number of negative pressure isolation rooms required for an ID ward. That would be a decision for clinicians. However, the Brownlee Unit at Gartnavel General Hospital (later moved to QEUH) had 4 negative pressure isolation rooms.” This refers to a move after construction of the QEUH was completed. NHS GGC’s design brief for Level 5 of QEUH was for four general medicine wards.⁴ Currie & Brown was unaware at the time of the decision by NHS GGC to relocate the Infectious Disease Unit (“IDU”) from Gartnavel General Hospital to Wards 5C and 5D on Level 5 of the QEUH, as set out in paragraphs 21 to 23 of Currie & Brown’s response to Mr Poplett’s SHI Ventilation Report by letter dated 25 July 2024. The IDU was not part of the QEUH design brief, and no clinical brief for an IDU was provided in the Employer’s Requirements.
8. Currie & Brown believe that there may be some typographical errors in **paragraph 7.3** of PPP 14 and that reference was intended to be made to Ward 4B rather than to the “rooms on 5B” and the “5B rooms”.

¹ PM1 228, titled ‘Change to NSGH Level 4 – HEPA filtration’, is in Bundle 16, page 1697.

² CE 51, titled ‘Adult Hospital – Level 4, Zones 512, 513 & 514 HEPA Filtration’, is in Bundle 16, page 1700.

³ Document 1 in Currie & Brown Inventory dated 13 August 2024.

⁴ See the Schedule of Accommodation for Level 5, a copy of which was provided with Currie & Brown’s response to Provisional Position Paper 12 by letter dated 16 April 2024.

9. With reference to **paragraph 8.6**, Currie & Brown understands that the change instructed was a redesign of the ward ventilation to remove chilled beams and replace them with full supply / extract ventilation system. This was constrained by the existing vertical riser dust and air handling that had been installed.
10. Any plans there may have been to move the Brownlee or the Beatson, referred to in **paragraph 8.15** of PPP 14, were not communicated to Currie & Brown (or, so far as Currie & Brown is aware, to the QEUH project team more widely). As explained above, there was no IDU design brief.

If any further information or clarification is required by the Inquiry, Currie & Brown would be happy to provide this.

Yours faithfully



Keoghs LLP



**Bundle of documents for Oral hearings commencing from 19 August 2024 in relation to the
Queen Elizabeth University Hospital and the Royal Hospital for Children, Glasgow**

Bundle 22 - Volume 2

**Core Participants response to Provisional Positioning Paper 14 (Isolation Rooms)
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