

# SCOTTISH HOSPITALS INQUIRY

**Hearing Commencing 26 February 2024**

**Bundle 13 – Miscellaneous  
Volume 9**

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Date: 22 June 2018  
Our Ref : BC/IHSL  
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Dear Sirs,

SETTLEMENT AGREEMENT AND SUPPLEMENTAL AGREEMENT  
RELATING TO THE PROJECT AGREEMENT FOR THE PROVISION  
OF RHSC AND DCN AT LITTLE FRANCE – **TECHNICAL SCHEDULE**

**WITHOUT PREJUDICE**

Further to our letter of 21 June, 2018, we enclose the Technical Schedule referred to in that correspondence.

As previously advised, this schedule sets out what the “Agreed Resolution” for each Dispute item is as well as describing the technical solution for each Dispute item. Further obligations incumbent upon Project Co and the Board to achieve the technical solution are also stated.

Please note that this letter is issued entirely without prejudice to our whole rights, remedies and pleas and may not be referred to or founded upon by you without our express consent.

Yours faithfully

[REDACTED]  
**Brian Currie**  
Board's Representative  
For and on behalf of Lothian Health Board

cc.  
Dep. Chief Exec – NHSL  
Finance Director – NHSL  
Director of Capital Planning – NHSL

RHSC + DCN Project Office  
Little France Crescent  
EDINBURGH  
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**IHS LOTHIAN LIMITED ("IHSL")**

**PUBLIC INQUIRY: QEUH, GLASGOW AND THE ROYAL HOSPITAL FOR CHILDREN AND YOUNG PEOPLE AND DEPARTMENT OF CLINICAL NEUROSCIENCES (RHCYP/DCN), EDINBURGH ('THE SCOTTISH HOSPITALS INQUIRY OR 'SHI')**

**RESPONSE TO ITEM 6 TO ANNEX 1 TO REQUEST FOR INFORMATION ISSUED BY LORD BRODIE  
ON 1 February 2021**

**1. INTRODUCTION**

- 1.1 IHSL understands the request from the Scottish Hospitals Inquiry ("**SHI**") issued on 1 February 2021 ("**SHI Request**") to be seeking to better understand the communication, engagement, relationships, obligations and other interactions between NHS Lothian and IHSL, and IHSL and its subcontractors through the stages of the project up to present day. This considers a period from 2013 through to 2021.
- 1.2 IHSL has structured this response to item 6 to Annex 1 to the SHI Request as a combined response to the following requests:-
- Further to the organograms already supplied, organograms showing:-
    - the hierarchical structure and relationship between project subcommittees of NHSL and IHSL (6.1.1); and
    - the hierarchical structure and relationship between IHSL and its sub-contractors (6.1.2),

as they evolved during the lifecycle of the project. Such organograms should reference detailed descriptions of each contractor and sub committees' remits, functions, membership/staffing, leadership, reporting relationship/obligations, escalation routes, and relationships with each other.
  - A detailed description of the channels for reporting progress to NHSL and frequency and nature of communication between IHSL and NHSL (6.5).
  - A detailed description of project management and operational decision-making authority within IHSL, including reference to named individuals with the authority to make decisions (6.3).
  - A detailed description of the channels available to IHSL for obtaining technical advice or appointing sub-contractors (6.7).
  - Further to the organograms already supplied, a detailed description of IHSL's financial structure, including details of junior debt providers, financial advisers, senior debt holders, and junior debt equity interests (6.4).
- 1.3 IHSL has not currently responded to the request for information at item 6.2 of Annex 1 (contractual programmes) or 6.6 (all formal and informal communication (whether scheduled meetings or otherwise) between IHSL and NHSL). In relation to the former, IHSL is not in possession of all programmes and suggests that this information will be better obtained from MPX (defined below). In relation to item 6.6, IHSL has discussed the wide-ranging nature of this request with the Inquiry and agreed in the first instance to focus on more specific requests for information.
- 1.4 As the information request calls for the consideration during the lifecycle of the project, IHSL has divided the project lifecycle into the following stages for the purposes of responding to this request:-

Stage	Description	Start Date	End Date
<b>Stage 1</b>	Procurement Phase including Preferred Bidder through to Financial Close	Mar 2013	Feb 2015
<b>Stage 2</b>	Construction Phase up to issue of certificate of Practical Completion	Feb 2015	Feb 2019
<b>Stage 3a</b>	Commencement of Operational Phase. Hospital handed over to and accepted by NHSL. Includes design and delivery of enhanced ventilation works to Critical Care and Haematology. Partial occupation of hospital with NHSL clinical services from May 2020.	Feb 2019	March 2021
<b>Stage 3b</b>	Operational Phase, post completion of enhanced ventilation works, and hospital fully occupied with NHSL clinical services	March 2021	Present Day

## 2. KEY PARTIES

2.1 When referring to organisations in this response IHSL is doing so in accordance with the hierarchy and relationships as detailed in Figure 1 and Figure 2 of its response to the SHI dated 30 October 2020. For ease of reference:-

- NHS Lothian ("**NHSL**") is the client to IHSL as set out in the Project Agreement.
- When IHSL refers to engagement or meetings with NHSL or NHSL Project Team, IHSL includes within this term NHSL's internal team and external advisors (e.g. Mott MacDonald, MacRoberts).
- Where IHSL refers to IHSL, that includes the SPV Manager, who under the Management Services Agreement acts on behalf of IHSL. HCP Management Services ("**HCP**") conducted this role, later replaced by George Street Asset Management on 1 December 2019.

2.2 As detailed in the organograms provided to the SHI, IHSL has two Sub-Contractors:-

- Brookfield Multiplex Construction Europe Limited ("**MPX**") – Design and build contractor; and
- Bouygues E&S FM UK Limited ("**BYES**") – Services/ Facilities Management contractor.

2.3 When IHSL refers to engagement with IHSL's Sub-Contractors, IHSL will mean MPX or BYES or both (where appropriate).

2.4 In addition to NHSL and IHSL's Sub-Contractors, IHSL has a relationship and regularly engages with a number of additional parties (referred to collectively as "Other Parties") as follows:-

- **Senior debt Funders** – M&G and European Investment Bank ("**EIB**").
- **Intercreditor Agent** – M&G Investment Management.
- **Lender's Technical Advisor** ("**LTA**") – Sweet Group, who later became part of Currie & Brown.
- **Independent Tester** ("**IT**") – EC Harris, who later became part of Arcadis.

## 3. RESPONSE STRUCTURE

3.1 In responding to item 6 to Annex 1 to the SHI Request, for all stages of the project, IHSL will outline the project management structure and responsibilities within IHSL in Section 4 of this response. IHSL

will address the relationship between NHSL and IHSL in Section 5 and in Section 6 IHSL address the relationship between IHSL and its Sub-Contractors and Other Parties.

- 3.2 ISHL would like to note that it has drafted this response on the communications and meeting structure agreed or established at the commencement of each stage, based on normal operating conditions i.e. Business as Usual. ISHL acknowledges there have been exceptional events on the project where additional more frequent and often *ad hoc* communications/meetings have taken place which were less structured as a response to a particular set of circumstances, and IHSL has tried to provide an indication of arrangements during these times within Section 5.
- 3.3 ISHL has set out the channels available for IHSL to obtain technical advice or to appoint subcontractors in Section 6 and the detailed description of IHSL's finance structure in Section 7.
- 3.4 Where IHSL refers to reports or meetings between the various parties, IHSL include, where available, sample reports, agendas and Minutes/Action Notes in the Appendices to this response. Should the SHI find these samples of assistance, IHSL can provide any specific report or Meeting Minute or all copies IHSL has available to it; although IHSL appreciates these will be significant in number and the SHI may have already received copies from other participants.
- 3.5 IHSL hopes that SHI appreciates and recognises the inherent difficulty in providing a record of all communications, engagements and relationships with multiple stakeholders across an 8-year period on a project that has faced some considerable challenges. IHSL has, however, sought to provide as much clarity as is practicable that best addresses the questions which SHI has raised. IHSL will be happy to clarify any aspects or provide further detail as requested.

#### 4. **PROJECT MANAGEMENT AND DECISION-MAKING RESPONSIBILITY WITHIN IHSL THROUGHOUT THE PROJECT LIFECYCLE**

##### **Stage 1 – Tender Period up to Financial Close in February 2015**

- 4.1 During Stage 1, a tender consortium acted together under a preliminary consortium agreement that regulated the roles to be undertaken by the principal consortium members who were: Macquarie Capital Group Limited (UK Branch) ("**Macquarie**"); MPX; and BYES, whom together formed the "**Tender Consortium**". Note that each of these company names changed over time (as noted elsewhere), although the underlying entity did not, so IHSL has used the same abbreviations as elsewhere. IHSL as a Special Purpose Vehicle entity was only formed at Financial Close.

The agreed roles between the Tender Consortium during Stage 1 were as follows:-

- MPX as the design and build contractor was responsible under the preliminary consortium agreement for performance and management of all design and build aspects of the tender, including *inter alia*: (i) scoping and analysing the Tender Consortium's design and build obligations; (ii) developing a competitive design and build solution; (iii) management of all design and build sub-contractors and advisors; and (iv) investigation and development of alternative design options identified and agreed by the Tender Consortium.
- BYES as the facilities manager was responsible under the preliminary consortium agreement for the performance and management of all hard FM aspects of the tender including *inter alia*: (i) scoping and analysing the Tender Consortium's hard FM obligations; (ii) developing a competitive hard FM solution; (iii) management of all hard FM sub-contractors and advisors; and (iv) investigation and development of alternative design options identified and agreed by the Tender Consortium.
- Macquarie as the sponsor was responsible for providing a project director for the Tender Consortium in Stage 1 to: (i) maintain a working relationship with the client; (ii) manage the overall co-ordination of activities required for the preparation and negotiation of the tender up to financial close; (iii) co-ordinate the assembly of the tender. Furthermore Macquarie was responsible for: (i) the engagement of Macquarie Capital Europe Limited as the financial advisor to arrange third party senior debt financing for the Project; and (ii) arranging the provision and incorporation of a project special purpose vehicle (to become IHSL).



**Stage 2, 3a and 3b (Feb 2015 to Present Day)**

- 4.2 At Financial Close, the IHSL Project Company was incorporated in accordance with the hierarchy, relationships and other agreements as detailed in Figure 1 and Figure 2 of IHSL's response to the SHI dated 30 October 2020.
- 4.3 IHSL is the Project Company under both the Project Agreement with NHSL and the Construction Contract with MPX in relation to the design and construction of the Royal Hospital for Children and Young People in Edinburgh.
- 4.4 As the Project Company, IHSL is responsible for delivering the services outlined in the project agreement: to design, build, finance and maintain the hospital through entering into a construction sub-contract and a facilities management ("**FM**") sub-contract.
- 4.5 The Project Company is also responsible for financing the project (see Section 6 for the commercial structure of IHSL and key parties).
- 4.6 This project was procured under the NPD model. The NPD model follows the broad principles of PPP projects which have been delivered across the acute health sector within the UK with similar commercial principles and service specifications.
- 4.7 The Project Company has Directors who have a fiduciary responsibility for the undertakings of IHSL in relation to the Agreements noted above. The Directors of IHSL and the duration of their appointment are as follows:-

<b>Director</b>	<b>Appointment Tenure</b>
Jonathan Dooley	December 2014 to July 2015
Mark Bradshaw	December 2014 to September 2019
Olivia Shepherd	December 2014 to August 2015
Helen Everitt	December 2014 to August 2015
Brian Saunders	December 2014 to August 2016
Anthony Rose <sup>1</sup>	February 2015 to July 2019
John McDonagh	July 2015 to January 2019
Andy Clapp	August 2016 to July 2018
Richard Osborne	May 2018 to present
Stephen Gordon	July 2018 to present
Matthew Templeton	January 2019 to present
Vivienne Cockburn <sup>1</sup>	July 2019 to 30 June 2021

- 4.8 An SPV Manager acts on behalf of IHSL under the terms of a Management Services Agreement ("**MSA**") in undertaking the following responsibilities:-
- Operational Services
  - Company Secretary Services
  - Financial Management Services
  - Insurance Management Services

<sup>1</sup> Denotes B Director of IHSL Limited, also known as the Public Interest Director. All Board meetings require at least 1 A Director and the B Director to be present to be Quorate.

- Construction Liaison Services

- 4.9 The detailed responsibilities of the SPV Manager are contained in Appendix 1.
- 4.10 HCP were the appointed SPV Manager from Financial Close until 1 December 2019 when they were replaced by George Street Asset Management.
- 4.11 IHSL Board meetings are conducted 4 times a year from 2015. These Board meetings are organised by the SPV Manager (including establishing the Agenda and Board Paper preparation) on behalf of the IHSL Directors. The meetings are attended by the Directors of IHSL, one of whom acts as Chair, and the SPV Manager. An Observer from NHSL is also invited to attend the Board meetings.
- 4.12 In addition to these formal Board meetings, additional *ad hoc* and periodic meetings were held usually on a monthly basis during the Construction period and continue during the Operational period as well. These were organised in the periods between the Board meetings to enable the SPV Manager to update on project progress or to address specific issues that arise with the IHSL Directors.

## 5. RELATIONSHIP, ENGAGEMENT AND COMMUNICATION BETWEEN IHSL AND NHSL THROUGH PROJECT LIFECYCLE

### Stage 1 – Tender Period up to Financial Close in February 2015

- 5.1 During the tender period within Stage 1, the Tender Consortium engaged with NHSL according to the roles described in Section 2 in prescriptive dialogue sessions set up in accordance with the Invitation to Participate in Dialogue as issued and updated from time to time by the Lothian Health Board (the "ITPD") as part of Contract Notice Ref: 386758-2012 (2012/S 235-386758). An extract of the proposed timeline of dialogue meetings is set out in Figure 1 below (from Volume 1, Revision A of the ITPD). The ITPD set out that the dialogue meetings would break into the legal / technical and financial aspects of the Tender Consortium's proposals. It is IHSL's understanding that the Tender Consortium undertook the engagement with NHSL in this manner, with MPX and BYES leading the respective technical dialogue engagement, Macquarie leading the financial dialogue and the legal dialogue being shared between the Tender Consortium.

**Figure 1**

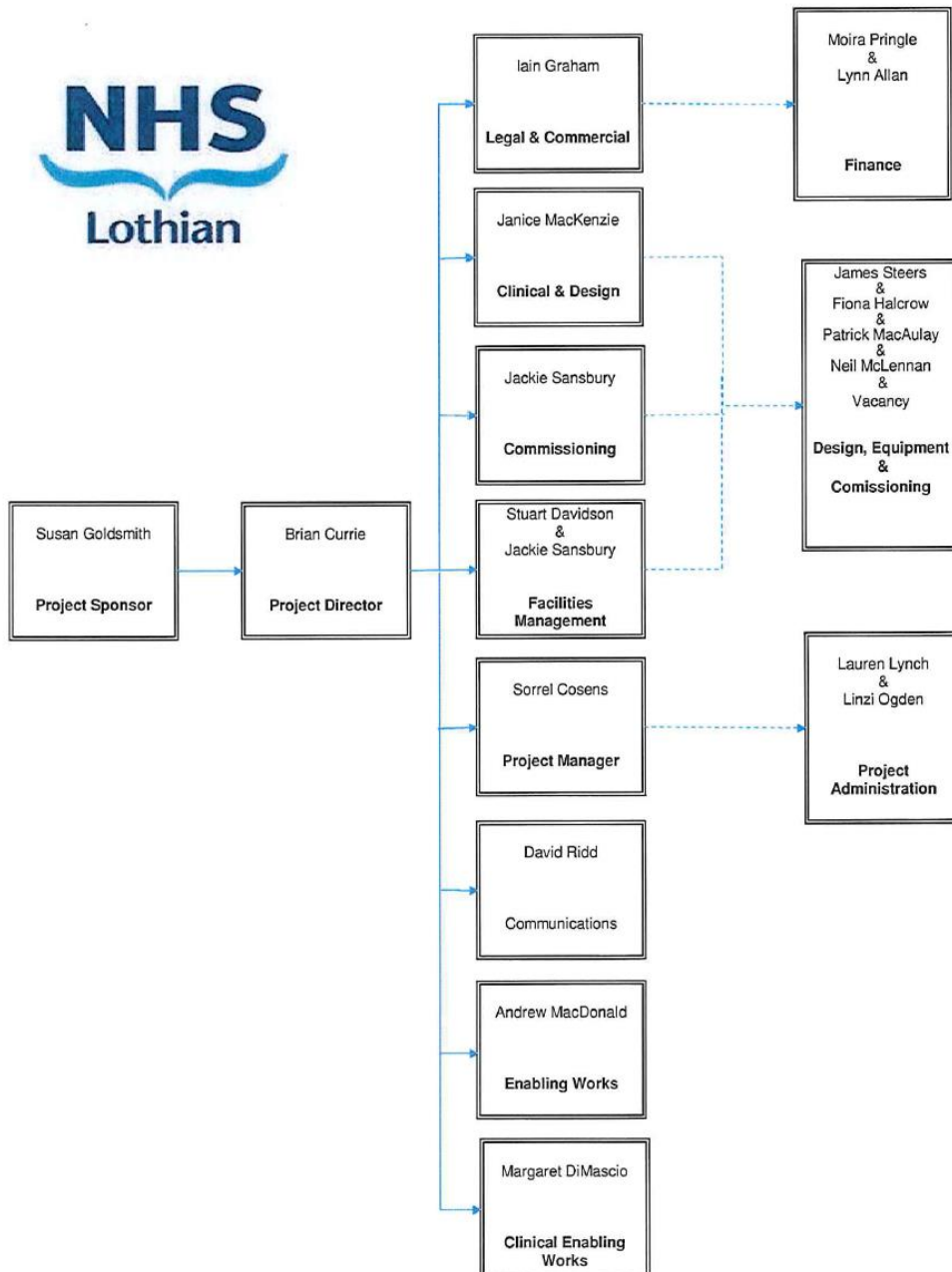
Task	Date
Issue Invitation To Participate In Dialogue	12/03/13
Briefing Meetings	w/c 18/03/13
Board to propose draft Site Survey	22/03/13
Bidders to provide comments in relation to draft Site Survey	05/04/13
Dialogue Meeting 1	w/c 01/04/13
Dialogue Meeting 2	w/c 29/04/13
Dialogue Meeting 3	w/c 27/05/13
Dialogue Meeting 4	w/c 24/06/13
Dialogue Meeting 5	w/c 22/07/13
Draft Final Tender submission	26/08/13
Dialogue Meeting 6	w/c 23/09/13
Close dialogue	30/09/13
Invitation to Submit Final Tenders	11/10/13
Final Tender submission	11/11/13

- 5.2 During the tender period, all communication with NHSL was controlled in accordance with the ITPD where "*all information and communication flows between the Board and Bidders out with Dialogue Meetings will be via Conject.*" As the majority of information to be communicated was technical in nature, MPX controlled all information flow during the tender to and from Conject including the upload

of all the dialogue submission, draft final tender and the final tender. Where relevant, MPX would then share information with the wider Tender Consortium.

5.3 At the receipt of the preferred bidder status (5th March 2014), the Tender Consortium was to continue in its roles in engaging with NHSL. NHSL issued a structure chart as follows:-

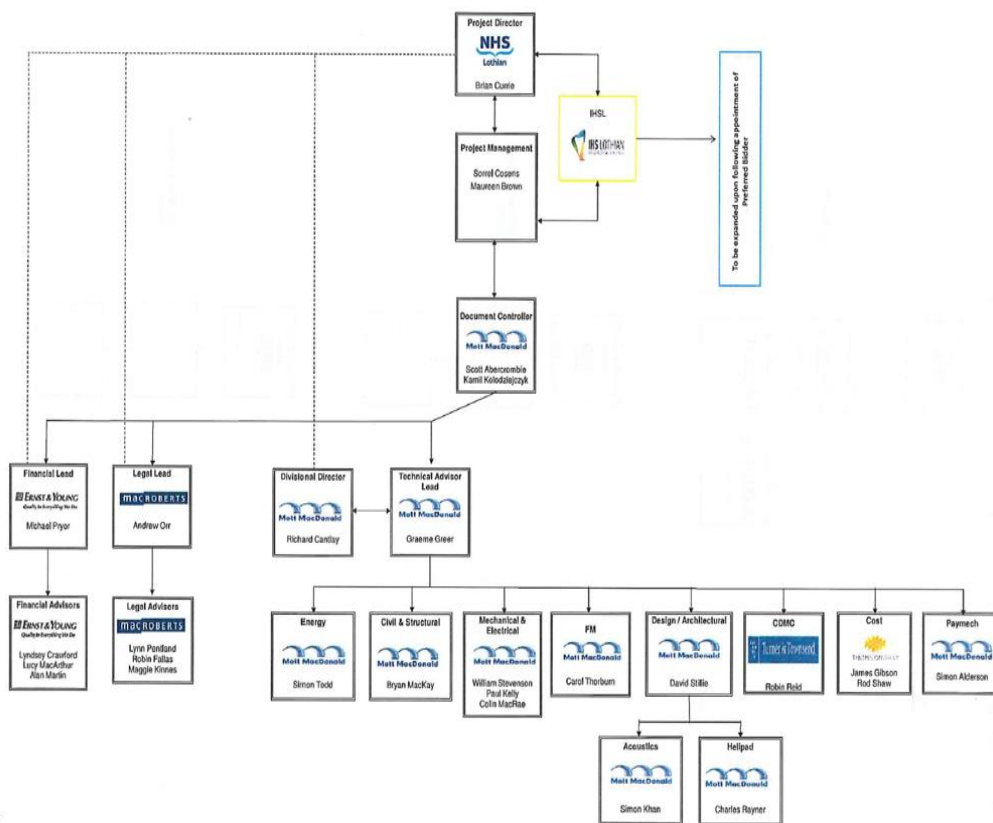
**Figure 2**



together with a structure chart showing the advisors:-

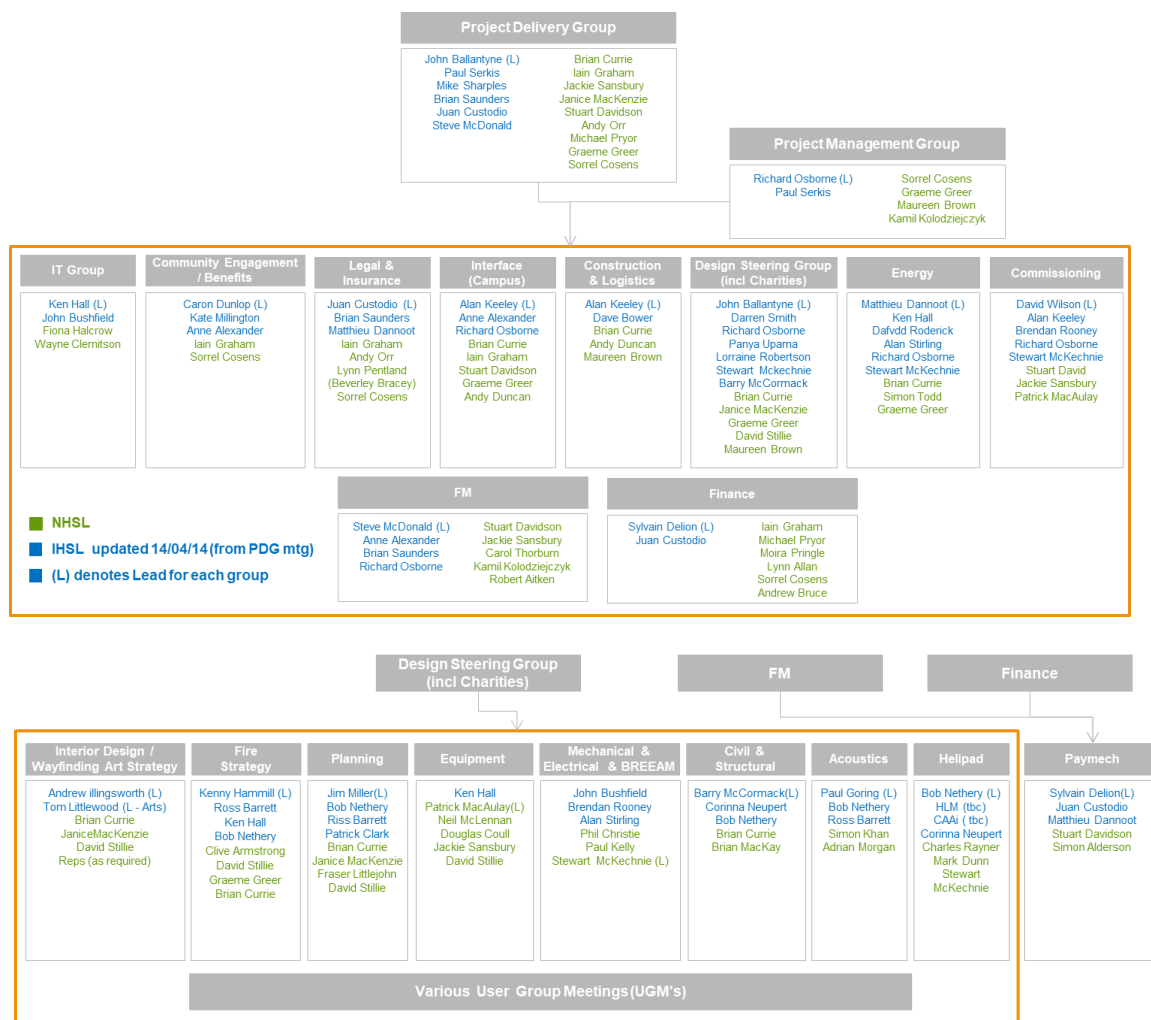
Figure 3

RHSC + DCN - Little France  
NPD Project Partners Project Delivery Structure



5.4 During the preferred bidder period (starting 5th March 2014 with notification by letter from NHSL to the Tender Consortium that the Tender Consortium was invited to progress the project to financial close), the Tender Consortium and NHSL engaged through a number of "sub-group" meetings on a regular basis up to financial close. This included regular meetings with end users and clinical groups (within the structure in Figure 4 below). The intention of the meetings and dialogue was to progress the Tender Consortium's tender across all the technical, legal, financing and commercial workstreams sufficient to be able to achieve financial close (being the moment the contractual documents between all the parties, including Other Parties and NHSL are executed and senior debt financing is raised to fund the commencement of the project). The majority of the sub-groups that were an interface between NHSL and the Tender Consortium were technical in nature and sub-group attendees, leads and timings altered over the period of 5th March 2014 to February 2015. However, the initial structure is shown below:-

Figure 4



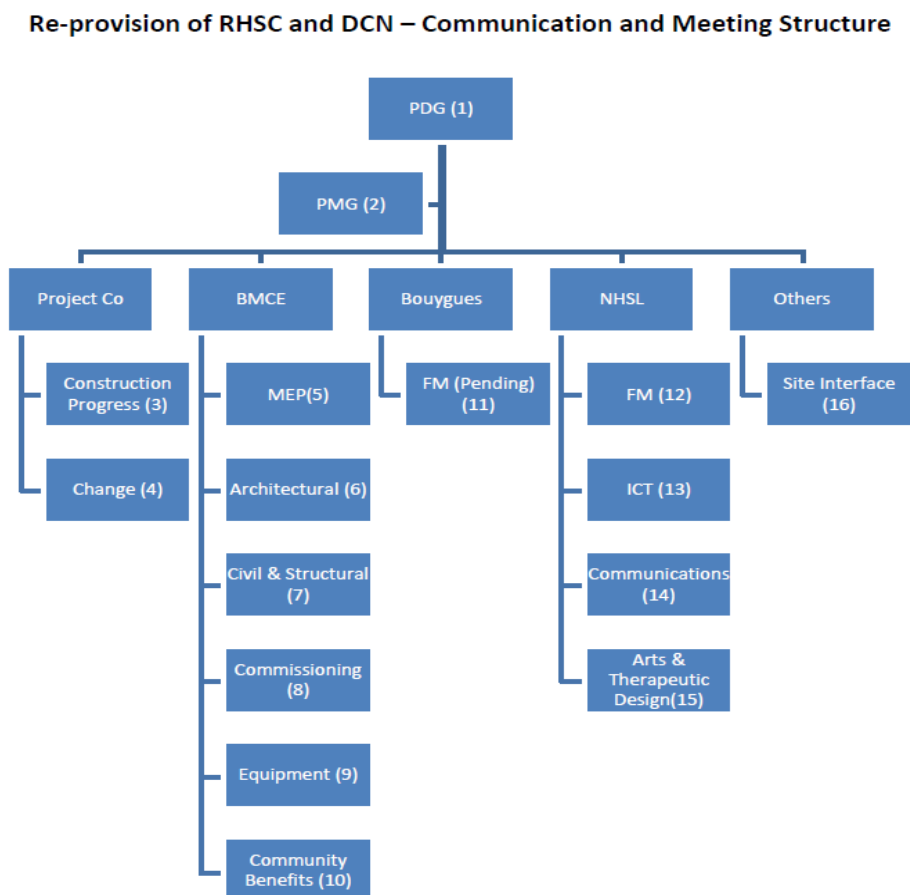
5.5 Many of the sub-group meetings were minuted. Principally the user group meetings were led by the architects (HLM) of MPX. However, a number of meetings were chaired and led by NHSL (as shown in Figure 4 above). The "Project Delivery Group" meeting was the key senior liaison group between the Tender Consortium and NHSL that was rolled over post Financial Close (see below Stage 2).

5.6 Following Financial Close all arrangements and agreements between the Tender Consortium were replaced by the project documents that were executed at Financial Close, 13th February 2015 (and any amendments thereafter) and IHSL was incorporated as an SPV.

**Stage 2 – Construction Period (Feb 2015 to Feb 2019)**

5.7 IHSL includes within Appendix 2 the 'Re-Provision of RHSC and DCN – Communications and Meeting Structure' for the construction period of the new Royal Hospital for Sick Children & DCN (extract of structure included in Figure 5 below). This communications and meeting structure was established within the first 6 months of the construction period and agreed between NHSL, IHSL, MPX and BYES. This meeting structure, whilst flexed on occasion, was generally maintained for the duration of the construction stage. The full Communications and Meeting Structure document included within Appendix 2 provides details including, attendees, frequency, and meeting chair.

**Figure 5:** Construction Stage Communication and Meeting Structure  
 Note: Project Co = IHSL and BMCE= MPX.



Explanatory Notes on the Communications and Meeting Structure:-

- (a) The PDG is the Project Delivery Group and the PMG is the Project Management Group. The PDG morphed by agreement to a quarterly Liaison from 25<sup>th</sup> November 2015 with any outstanding actions and agenda items transferred to the PMG from 21<sup>st</sup> October 2015.
- (b) NHSL's design approval of the Reviewable Design Data ("**RDD**") in accordance with Schedule Part 8 (Review Procedure) of the Project Agreement, including Clause 12.6 of the Project Agreement, occurred over the online document management system Aconex (Oracle) and in the above listed meetings. Aconex creates a common data environment which assists in coordination, sharing and recording of information during the design and construction phase. NHSL, HCP (on behalf of IHSL), MPX, BYES and Mott MacDonald all had access to Aconex.

For example, RDD approval of finishes to the external envelope would have occurred in meeting 6- Architecture.

- (c) In addition to the above formal meetings there would have been numerous *ad hoc* meetings on specific design or specification matters between NHSL and their technical advisors. These occurred on a daily basis.
- (d) Whilst NHSL clinical representatives attended a number of the listed meetings, IHSL understood that the NHSL Project Team were engaging separately with NHSL sub-committees e.g. Control of Infection, clinical leads, Soft FM & Estates on the design approval process and collating comments, observations, suggested amendments and feeding these back into the above technical meetings.

- (e) The flow of information which was often the subject matter of agenda items within these structured meetings was generally distributed through Aconex.

- 5.8 As stated in paragraph 3.4 of Section 3, IHSL has included sample agendas and meeting Minutes/Actions Notes for each of the above meetings in Appendix 3. Further editions can be provided upon request.
- 5.9 There were two regular meetings which are not detailed within the above structure which IHSL considers are worth referencing (sample agendas and meeting notes also included in Appendix 3):-
- **Liaison Committee:** The Liaison Committee was operational from November 2015 and was established "*to provide strategic direction and leadership to ensure a true partnership and collaborative approach*". IHSL encloses within Appendix 4 the draft Terms of reference discussed between NHSL and IHSL. The Liaison Committee was attended by the project teams and senior management/directors of NHSL, IHSL, MPX and BYES. From IHSL's records, the Liaison Committee ceased to continue at a point in 2018. Please note the Liaison Committee was in effect replaced with the Joint Steering Group from February 2019.
  - **Weekly Reviews/Catch-up Meetings:** In addition to the various workstream meetings as set out in the organogram in Figure 4, the project leads from NHSL, IHSL and MPX met on a weekly basis for a 'Catch-up/Review Meeting'. These meetings were operational between 20<sup>th</sup> April 2015 to early 2019.
- 5.10 In addition to the structured meetings, because NHSL, IHSL, MPX and BYES shared an office complex for the majority of the construction period, there were daily interactions between the parties. The shared office presented the opportunity for collaboration and direct informal communications and interactions individually between the various parties. For example, NHSL (including technical advisors) and MPX would regularly engage directly and this direct communication channel was absolutely necessary to ensure design development progressed at the pace required to meet the construction programme. Due to IHSL's role within the project structure, IHSL were not, and were never intended to be, involved in every design, technical and operational meeting which was required to deliver the project. The direct communication and interactions between NHSL and MPX and BYES were standard industry practice to create partnership and successful outcomes for the project.

### Stage 3a – Operational Hospital & Ventilation Works

#### Background/Context

- 5.11 On the 22 February 2019, NHSL and IHSL entered into a Settlement Agreement (referred to as "SA1") which, amongst other things, settled a number of technical disputes and enabled the Independent Tester ("IT") to issue the certificate of Practical Completion. The issue of the certificate of Practical Completion is significant as, first, it confirms that construction is sufficiently complete to allow NHSL to occupy the new hospital and, second, it is the trigger to commence the Annual Service Payment (the fee paid by NHSL to IHSL). Essentially the issue of the Certificate of Practical Completion is the notification by an independent third party that the project can move from the construction phase to the operational phase. The new building also obtained sign-off from Edinburgh City Council Building Control department.
- 5.12 A condition of the SA1 was that IHSL/MPX would complete Post Completion Works (a defined term within SA1), after 22<sup>nd</sup> February 2019 but importantly prior to NHSL's intended 'go-live' date for the new hospital on 5 July 2019 (i.e. patients transfer to new hospital and the commencement of clinical services). In the period between February and July 2019, MPX were completing the agreed Post Completion Works and NHSL were undertaking their own commissioning, equipment installation, mobilisation, staff familiarisation, etc. in advance of hospital going live. It is worth noting that even in advance of SA1, there was intended to be a period of post completion activity to be undertaken by IHSL and NHSL prior to the original "go-live" date.
- 5.13 As is well documented now, in June 2019 NHSL's ventilation validation engineers, the Institute of Occupational Medicine ("IOM"), advised that elements of the ventilation in Critical Care, whilst compliant with contractual standards agreed between NHSL and IHSL in the Project Agreement and SA1, did not meet national guidelines. Initially NHSL, MPX and IHSL developed options to

immediately enhance the air flow rates in Critical Care above those required in the Contract, whilst a programme of work could be delivered to meet the desired requirements whilst the new hospital was fully operational (from July 2019). However, shortly after those options were developed, a decision between NHSL and Scottish Government postponed the opening of the new hospital indefinitely, to deliver the identified works to the discrete areas of the hospital; IHSL were not engaged with nor consulted on in relation to that postponement decision. From around this time, a Scottish Government representative, Mary Morgan, became directly involved in the management of the project.

- 5.14 IHSL provides this as background to explain a revised approach to meeting and communication reporting and structure that was established post-June 2019. Paragraphs 5.17 to 5.22 of this Section 5 focus on the technical meetings to deliver the enhancements to the ventilation works in critical care (and latterly Haematology), whilst paragraph 5.23 addresses the Operational Meetings between NHSL, IHSL and BYES as Services Provider.
- 5.15 It is also worth noting that IHSL appointed a third Sub-Contractor, Imtech Engineering Services Central Limited ("**Imtech**"), a specialist mechanical and electrical main works contractor, to deliver the enhanced ventilation works to meet NHSL's revised requirements in Critical Care and Haematology in late 2019. These works are captured in the following agreements:-
- **Settlement Agreement 2 ("SA2")** – An agreement between NHSL and IHSL to deliver the ventilation works (as defined), dated 5 August 2020.
  - **Ventilation Works Contract** based on NEC4 ECC Option E between IHSL and Imtech dated 5 August 2020.
- 5.16 It should be noted that whilst Imtech were on-site delivering the above works, they also delivered other additional works requested by NHSL in Child and Adolescent Mental Health Unit and Emergency Dept. These variations were additions or amendments to the original design brief/specification.

#### **Communications and Meetings during early operations and delivery of ventilation works**

##### **Completion of SA1 Post Completion Works to June 2019.**

- 5.17 A requirement within SA1 was that a Joint Steering Group be established, principally to provide a mechanism at Senior level (IHSL Director, MPX Director and NHSL Director) to monitor the progress of the Post Completion Works, to escalate any operational issues that required to be addressed in relation to those works and then latterly to escalate any other issues for commissioning of the Facilities until completion of the Post Completion Works. Full details of the Joint Steering Group are provided in paragraph 8 of SA1. The Joint Steering Group was effective from February 2019 through to June 2019 when the Post Completion Works were completed, in advance of notification of the ventilation issues identified by NHSL's ventilation validation engineers, IOM. Attendees at these meetings to June 2019 were from the following designates from each organisation:-
- **NHSL:** Susan Goldsmith, Jim Crombie, Iain Graham, Brian Currie.
  - **IHSL:** Matt Templeton, Tony Rose and Wallace Weir.
  - **MPX:** Callum Tucket and Ben Keenan.
  - The meeting was chaired by Roger Thompson of IHSL.

##### **June 2019 to present:-**

- 5.18 Upon discovery of the ventilation not meeting national guidelines in June 2019, the Joint Steering Group continued as the executive management group and escalation point with senior representatives from NHSL, IHSL, BYES and Scottish Government (Mary Morgan). MPX did not attend the Joint Steering Group meetings from approximately June 2019, due to the completion of the Post Completion Works and the focus on the ventilation works.
- 5.19 From Summer 2019 through to March 2021, the Joint Steering Group was active and met on a frequent basis which varied between weekly, fortnightly or monthly depending on the issues being



managed. The agenda for the Joint Steering Group considered matters such as development and delivery of the enhanced ventilation works, completion of building Snagging, Operational FM and preparing the hospital for progressive occupation from May 2020 through to full occupation in March 2021. Representation at the Joint Steering Group during the period from Summer 2019 through to March 2021 included *inter alia* as follows :-

- Scottish Government: Mary Morgan.
- NHSL: Susan Goldsmith, Iain Graham, Brian Currie and Michael Pryor (latter replaced by Martin Gallagher).
- IHSL: Matt Templeton, Richard Osborne, Viv Cockburn, Gordon Morrison, and Stephen Kelly.
- Bouygues: Lee Beard and Nicola Searle
- The meeting was chaired by Roger Thompson of IHSL.

5.20 Sample agendas and meeting minutes of these meetings are provided in Appendix 5.

5.21 At a project level during the same period the following design/technical and progress meetings took place.

**Table 1: Ventilation Works (SA2) & Hospital Readiness Meetings**

Meeting	Purpose	Frequency	Representations
<b>Project Delivery Group</b>	Required actions to open new hospital, including closing out HFS/NSS Audit Reports	Monthly	<b>Chair: Mary Morgan</b> IHSL/NHSL/ BYES/ Mott MacDonald
<b>SA2 / Ventilation Project Meeting</b>	To progress the scope, design, construction and commissioning of the ventilation works.	Fortnightly	Chair: Faithful & Gould IHSL/NHSL/Imtech/ Watermans/ Hoare Lee/ Mott MacDonald/ Bouygues
<b>Ventilation Works Progress Report</b>	Update all parties on progress of design, construction and commissioning of SA2 ventilation works	Monthly	Chair: Imtech (same parties as above)
<b>Ventilation Works Cost Reviews</b>	Monthly cost forecast as required under NEC4 Contract	Monthly	Chair: Faithful & Gould IHSL/NHSL/Thompson Gray/Imtech

5.22 It is worth noting that, in addition to the above, there were also related and similar meetings with respect to Settlement Agreement 4, NHSL Board Change Variation Works, which were taking place over a similar period. Also, there were several *ad hoc* meetings between NHSL, IHSL, Imtech and MPX to facilitate the delivery of the works required to open the new hospital.

### **Stage 3b – Operations post full transfer of full clinical services**

5.23 NHSL accepted occupation of the new hospital on 23 February 2019. NHSL staff started occupying the building thereafter although it was not until the transfer of DCN clinical services in May 2020 that this became a material number. Upon completion of the SA2 ventilation works, full patient services transferred into the new hospital in March 2021.

Within this section IHSL details the communications and engagements between NHSL and IHSL to manage operational services. The key meetings are listed below; however IHSL includes within Appendix 6 sample agendas/meeting notes of the Service Review Meeting, Change Order Meeting and Risk Review Meeting.

**Table 2: Operational Services Meetings**

<b>Meeting</b>	<b>Frequency</b>	<b>Representations</b>
<b>Liaison Meeting</b> (formerly Joint Steering Group)	Monthly	NHSL, IHSL (chair) and Bouygues
<b>Service Review Meeting</b>	Monthly	NHSL, IHSL and Bouygues
<b>Change Order Meeting</b>	Monthly	NHSL, IHSL and Bouygues
<b>Risk Review Meeting</b>	Quarterly	NHSL, IHSL and Bouygues
<b>Principals Update Meeting</b>	Weekly	NHSL: Martin Gallagher IHSL: Gordon Morrison Bouygues: David Gordon {this meeting is not minuted}
<b>Operations 'touch-base' Meeting</b>	3 x per week	Representatives from NHSL's Hard & Soft FM Teams. Supervisors. Bouygues

In addition to the above, NHSL (as building user/occupier) is also required to establish the following safety committees which IHSL and BYES are then invited to attend:-

- (a) Health & Safety
- (b) Fire Safety
- (c) Medical Gases
- (d) Electrical
- (e) Ventilation
- (f) Environmental.

## 6. **ENGAGEMENT AND RELATIONSHIP WITH SUB-CONTRACTORS AND OTHER PARTIES THROUGH THE PROJECT LIFECYCLE (EXCLUDING TECHNICAL INPUT)**

### **Stage 1 – Tender Period up to Financial Close in February 2015**

- 6.1 In the tender period, the Tender Consortium's primary roles were as set out in the preliminary consortium agreement described in paragraph 4.1 above. The engagement within the Tender Consortium prior to the preferred bidder period was on an on-going and regular (minimum weekly) basis to coordinate a tender and negotiate the commercial proposition between the parties (to submit a fixed price tender as required under the ITPD). However, each Tender Consortium member had distinctive and discrete roles (as set out above) and the engagement between the parties comprising the Tender Consortium focused on: (a) tender management, programming and submission; and (b) management of the interfaces including: (i) lifecycle programming and design; (ii) facilities management engagement in the design; (iii) negotiation of the D&B heads of terms, FM heads of terms and interface agreement; (iv) legal dialogue planning and negotiation to feed in to the project agreement; (v) pricing and programme proposals. The Tender Consortium's respective sub-consultants, sub-contractors etc. were managed by the relevant Tender Consortium member in accordance with the preliminary consortium agreement (e.g. HLM architects were managed by MPX).
- 6.2 During the financial close / preferred bidder period of Stage 1, the Tender Consortium engaged with each other as part of the meetings set out in Figure 4 (above) when dealing in particular with technical

matters. In relation to the technical aspects of facilities management or the design and build of the project, the Tender Consortium met as a group, rarely outside of the shared forums with NHSL (though each respective Tender Consortium member may have had several meetings with their respective sub-consultants without the other Tender Consortium members, e.g. MPX with HLM Architects). In addition to the shared engagement with NHSL as part of the Sub-contractors technical solution, the Tender Consortium also continued regular commercial and legal meetings to draft, comment and negotiate the full form D&B sub-contract and FM sub-contract that IHSL (as a newly incorporated SPV) would enter in to at Financial Close. In relation to key "other parties" that were engaged, Macquarie undertook all negotiations and discussions with senior lenders and their advisors (including *inter alia* the lenders technical advisor, the lender's legal advisor, the T&A advisor and the model auditor) with the aim of incorporating IHSL and executing all the required finance documents between IHSL and the senior lenders. These other parties comprising the funders are described elsewhere in IHSL's answers.

### Stage 2 – Construction Period (Feb 2015 to Feb 2019)

- 6.3 During the construction period and under the terms of the MSA, the SPV Manager was required to monitor subcontractor work and liaise with them on progress against the requirements of the Project Agreement. Progress Reports and monitoring of the construction works was also reported to the IHSL Board on a regular basis. This was undertaken within the joint NHSL/IHSL and MPX meeting schedule, reporting and communication approach as outlined in Section 5 that involved multi-party meetings with all interested parties and covering all the relevant subjects.
- 6.4 As stated previously, as IHSL and its Sub-Contractors shared offices during the construction period, the interactions were daily with numerous informal meetings and interactions to discuss key matters and issues.
- 6.5 During the construction period IHSL Sub-Contractors and Other Parties prepared multiple reports documenting progress, quality and compliance, whilst noting any material issues affecting any one of those categories. These are noted below:-

**Table 3: IHSL Construction Period Reporting**

Report	Distribution	Author	Frequency
Multiplex Construction Liaison	IHSL/ NHSL/ Bouygues Senior Debt Funders	Multiplex	Monthly
Funders Construction Report	Senior Debt Funders	HCP (on behalf of IHSL)	Monthly
Lenders Technical Advisor Construction Report	Senior Debt Funders/ IHSL	Currie & Brown	Monthly
Independent Tester Construction Report	IHSL/ NHSL/ Bouygues /Multiplex/ Senior Debt Funders/	Arcadis	Monthly
BYES FM Services Report*	IHSL/ NHSL/ Multiplex	Bouygues	Monthly
IHSL Board Report	IHSL Board/ NHSL Board Representative	HCP	Quarterly

*\*BYES FM Services Report would have commenced when the project was nearing construction completion as report focussed on mobilisation of FM activities ready for operational service commencement.*

- 6.6 Site visits, inspections of works, telephone conversations, and informal meetings would take place between the various parties to assist in the drafting of these reports. A sample copy of each report is provided in Appendix 7, where all editions can be provided upon request.

6.7 From early 2017 when the Planned Completion Date was at risk and an increasing number of technical disputes were arising between NHSL and MPX, communications increased between IHSL board directors and the Managing Director of MPX.

6.8 IHSL and the Senior debt funders (M&G and EIB) had regular update meetings throughout the construction period. However, the frequency of those meetings, whilst never fixed, did increase when the Planned Completion Date for the Works was not going to be achieved.

### **Stage 3a – Operational Hospital & Ventilation Works**

6.9 As referred to above, there were no additional formal bilateral meetings between IHSL and MPX during the delivery of the SA1 Post Completion Works between March 2019 and June 2019. Multi-party design, technical and progress meetings described above involving NHSL, the Independent Tester and BYES did continue.

Following the issue of NHSL Board Change (HVC107 – SA2) requesting IHSL design and install new ventilation infrastructure to meet revised ventilation requirements, IHSL engaged with a third Sub-Contractor (Imtech) around November 2019 to deliver these works. As during the main construction works all design, technical and progress meetings were held involving multiple parties, including NHSL. IHSL did not hold specific meetings with Imtech and their design team - these were held with NHSL as set out in Table 1 in Section 5.

### **Stage 3b – Operations post full transfer of full clinical services**

6.10 As per previous Stages, during the operations period there was no equivalent formal meeting structure solely between IHSL and BYES as there is with NHSL. IHSL's participation in formal meetings with BYES is generally as detailed within Table 2 in Section 5. However, there has been frequent dialogue between IHSL's General Manager and team and BYES' Manager/Team regarding performance improvements and performance monitoring/reporting.

## **7. ENGAGEMENT DURING EXCEPTIONAL EVENTS AND SETTLEMENT NEGOTIATIONS**

7.1 The development and delivery of the Royal Hospital for Sick Children and DCN has encountered numerous challenges, some of which are now subject to this Inquiry. As these challenges unfolded, broadly from late Summer of 2017 through to the signing of SA1 in February 2019 the response required a more bespoke series of interaction between the parties and in particular the senior leadership from the various organisations. These interactions were issue-driven and hence reactionary on a need basis. There was, therefore, no detailed or agreed engagement structure during the period outlined. It is difficult, therefore, to set-out the exact arrangements in which these meetings and interactions occurred.

7.2 In general, once matters were escalated above the Project Management Group (PMG) and Liaison Group, they were elevated to 'Board to Board' meetings, involving NHSL, IHSL, MPX and on a few occasions BYES.

7.3 Representation at these meetings varied, however typically involved the following attendees:

**Table 3: Senior Representatives from Key Parties**

<b>NHSL</b>	Susan Goldsmith (Finance Director) Jim Crombie (Acting/Deputy Chief Executive) Iain Graham (Director of Capital Projects) Brian Currie (Project Director) Michael Pryor (Consultant) Mary Morgan (Scottish Government) – meetings post July 2019
<b>IHSL</b>	Andy Clapp, later replaced by Stephen Gordon (both IHSL Directors) Tony Rose, later replaced by Viv Cockburn (both IHSL Directors) Richard Osborne (IHSL Director) Matt Templeton (IHSL Director)
<b>Multiplex</b>	Calum Tuckett (Managing Director)

	Ben Keenan (General Counsel)
<b>BYES</b>	Fabienne Viala (Chair of Bouygues Construction UK) David Carr (Managing Director) Mark Griffiths (Consultant)

- 7.4 On several occasions NHSL would request their legal advisor attend too which they did. Where appropriate, IHSL's legal advisor would also attend although not as frequently.
- 7.5 Furthermore on a few occasions, Peter Reekie of Scottish Futures Trust would participate in meetings to facilitate constructive dialogue.
- 7.6 There were also on occasion tripartite meetings involving NHSL, IHSL and representatives from the senior debt funders.
- 7.7 The negotiation and drafting of Settlement Agreements 1, 2 and 4 all involved detailed protracted legal discussions with the senior representatives detailed in Table 3 above and respective legal advisors. On occasion, the Chief Executive from Scottish Futures Trust facilitated discussions in the interests of finding common ground/a solution.
- 7.8 A broad chronology of events that necessitated more concentrated senior level interaction through to SA1 is summarised below:

When	Issues	Parties
Late Summer 2017	Escalation of issues regarding ventilation design, most specifically whether the pressure regime in bedrooms should be positive or negatively balanced to the corridor (+ve/-ve).	IHSL/MPX/NHSL
Winter 2017	Series of engagements regarding resolution of ventilation and a range of additional identified design issues. This culminated in NHSL issuing an initial notice to enact Court proceedings against IHSL in March 2018.	IHSL/MPX/NHSL
Early 2018	A series of engagements to seek to resolve the Court Order proceedings, that culminated in a removal of the Court Order and initiation of facilitated discussion.	IHSL/MPX/NHSL
Spring-Autumn 2018	Engagement to take forward the outcome of the mediation process. As further issues arose, escalation of discussion that also, in part, involved other parties.	IHSL/MPX/NHSL/ Funders/SFT
Winter 2018- February 2019	Engagement to reach resolution and agreement in relation to the design and commercial issues contained in SA1.	IHSL/MPX/NHSL/ Funders/SFT

## 8. CHANNELS AVAILABLE TO IHSL FOR APPOINTMENT OF ADVISERS AND ADDITIONAL SUBCONTRACTORS

### Technical Advice

- 8.1 IHSL was established as a Special Purpose Vehicle (SPV) to finance, design, build and operate the new Royal Hospital for Sick Children & DCN (RHSC/DCN). In accepting the obligations passed to IHSL via the Project Agreement with NHSL, IHSL further passed down the design and build obligations to MPX and the FM and Lifecycle Services obligations to BYES. IHSL appointed HCP, an experienced asset manager within healthcare PPP/NPD, to provide day to day operations, oversight, governance and financial management on behalf of IHSL. These reflect industry standard arrangements for PPP/NPD projects.

- 8.2 The channels available to IHSL for obtaining technical advice primarily reside in these three appointments. For design, compliance, or construction technical advice, IHSL's first point of contact would be to consult with MPX (and their wider design team and supply-chain expertise) and request their opinion as specialist healthcare infrastructure developers. For FM Maintenance and lifecycle matters, IHSL would consult with BYES. IHSL also sought advice from HCP recognising their 20 years of experience in developing and managing acute healthcare facilities. IHSL is not precluded from seeking alternative third-party technical advice and indeed on occasion has done so. In addition to the above, there were also occasions where the Independent Tester or Lender's Technical Advisor would offer an opinion that IHSL would consider in respect of any assessment.

### **Appointing Sub-Contractors**

- 8.3 As more fully described in Section 4, Macquarie (IHSL founding shareholder), MPX and BYES formed a consortium in 2013 to bid for the RHSC/DCN, where if successful, they would fulfil the roles set out in the organograms previously provided. Once the SPV (also referred to as "Project Company", "ProjectCo" or "PCo") was established at Financial Close it was not anticipated that any further Sub-Contractors would be appointed directly by the SPV/ProjectCo as IHSL had entered into contracts with MPX, BYES and HCP to fulfil the obligations under the Project Agreement. This is the industry standard approach.
- 8.4 Through the term of the contract, NHSL are permitted to request changes to the physical works or services for an agreed increase or decrease to the Annual Service Fee. These are referred to as Board Changes and the process is governed by the terms of the Project Agreement. During the construction period all Board Changes would be delivered by MPX as controller of the construction site. During the operational period, there is greater flexibility and with the agreement of NHSL and BYES, IHSL can appoint a third-party Sub-Contractor to deliver Board Changes. Following construction completion and early into the operational period of the contract, IHSL appointed a third Sub-Contractor, Imtech, to deliver the SA2 Ventilation Works and the SA4 (Fire Works and alternations to the Child and Adolescent Mental Health department). It should be highlighted that the normal operating assumption is that BYES would deliver the majority of Board Changes during the operational period, however the option is there for IHSL to appoint other sub-contractors if agreement between all parties, including Senior debt funders, is agreed (subject to legal advice).

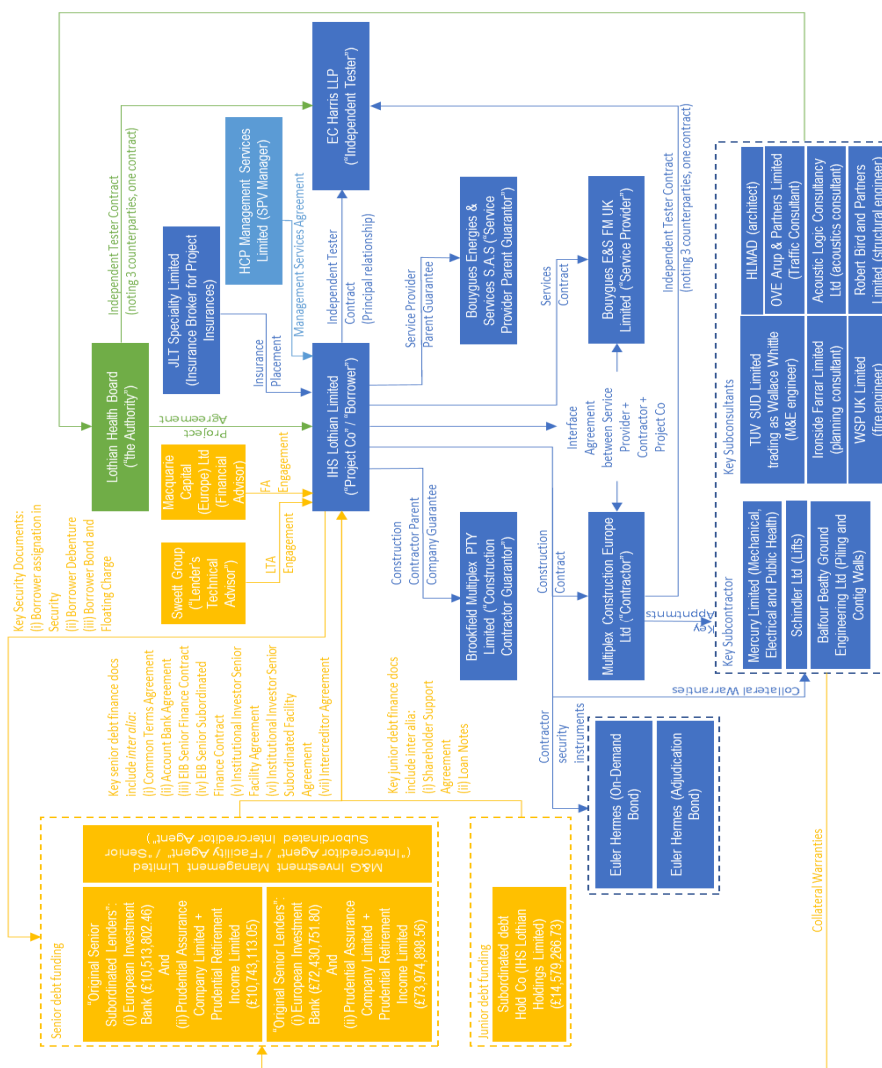
## **9. UPDATED DETAIL OF IHSL'S FINANCIAL STRUCTURES**

**This section provides a response to item 6.4 of Annex1 to the SHI Request:** *"Further to the organograms already supplied, a detailed description of IHSL's financial structure, including details of junior debt providers, financial advisers, senior debt holders, and junior debt equity interests."*

### **Updated Structure Chart**

- 9.1 The below structure chart, Figure 6, has been updated to include the financial advisor to IHSL at Financial Close as requested. This mandate was between IHSL and Macquarie Capital (Europe) Limited and covers financial advice and structuring up to and including Financial Close. HCP (later replaced with George Street Asset Management Ltd) provided on going accounting support post Financial Close.

Figure 6



9.2 For completeness, further advisors involved prior to Financial Close (but not shown in the above structure chart) that were engaged by the sponsor at tender prior to IHSL becoming incorporated were as follows:

Company	Role
A&O	Sponsor's legal counsel
Burness Paul LLP	Sponsor's Scottish legal counsel
Mazars	Model auditor
PwC	Tax and accounting advisor
Hogan Lovells	Lenders' legal counsel
Clifford Chance	EIB Legal Counsel
Brodies LLP	Lenders' Scottish legal counsel
J.C. Rathbone Associates Ltd	Base rate checker

### Sources and use of funding

9.3 During construction, the project costs (excluding any variations or agreements between the parties to amend) were funded through a combination of pinpoint equity, junior debt and senior debt and senior subordinated debt funding. The planned structure at Financial Close was as follows:

- Pinpoint equity amount of £101
- Junior debt amount of c. £14,579k<sup>2</sup>
- M&G and EIB provide the senior debt amount on a c.50/50 basis (c. £146,404k of total senior debt)
- M&G and EIB provide the senior subordinated amount on a c.50/50 basis (c. £22,256k of total senior subordinated debt)

9.4 The debt service reserve account amount was to be funded at the end of the construction period out of the total sources of funds above. A table of sources of funds during construction as per the results of the financial model base case at Financial Close is presented below:

Sources of funds at Financial Close (13th February 2015)	£'000	Approx. %
Total Shareholder funding	14,579 <sup>2</sup>	8.0%
M&G senior debt, split as follows	<u>73,974</u>	40.2%
The Prudential Assurance Company Limited	31,000	
Prudential Retirement Company Limited	42,974	
EIB senior debt	72,430	39.5%
M&G senior subordinated debt, split as follows	<u>10,743</u>	5.9%
The Prudential Assurance Company Limited	3,000	
Prudential Retirement Company Limited	7,743	
EIB senior subordinated debt	10,513	5.7%
Unitary Payment (in construction / drawdown period)	1,304	0.7%
<b>Total approx. sources of funds</b>	<b>183,543<sup>2</sup></b>	<b>100%</b>

9.5 The small difference between the M&G and EIB funding (as a sum of their respective facilities) is driven by EIB condition of not exceeding 50% of the project's senior debt requirement (comprised of both senior and senior subordinated facilities). EIB's facility size was fixed the day before Financial Close and special consideration was therefore given to the sizing of EIB debt to maintain a buffer in the case of a reduction in fixed rates on the day of Financial Close. As a result of EIB fixing its disbursement profile prior to Financial Close, a strictly pro-rata drawdown between M&G and EIB was not possible. Therefore, the drawdown profile of M&G varied slightly against a pro-rata position and the sizes of the combined facilities from the two senior debt providers are slightly different (with EIB being slightly smaller, thus fulfilling their mandate requirement of <50%).

### Financing structure

9.6 One of the features of the M&G financing structure is that it includes a tranche of senior debt and a tranche of senior subordinated debt (with the senior subordinated debt contractually and structurally subordinated to the senior debt). This drives the financing structure of the project (where the required structural subordination permits the Project Company's immediate creditors as the senior debt to be made whole first prior to the senior subordinated debt in the event of winding up, with any remaining

<sup>2</sup> The shareholder support agreement (dated 13th February 2015) was amended on 22nd February 2019 as part of the settlement agreement also dated 22nd February 2019 between the Lothian Health Board and IHS Lothian Limited (the "Settlement Agreement"), to increase the amount of shareholder commitment by £5,400,000 by means of additional junior debt. The additional shareholder commitment, combined with the sums payable by the Lothian Health Board under the Settlement Agreement increased the total source of funds by £17 million to c.£200,543k (the additional source of funds was utilised as construction costs, payable to the Contractor and Senior Debt repayments).



equity distributed to the holding companies and their creditors as shown below). The structure was driven exclusively by M&G since it facilitated M&G obtaining an enhanced internal credit rating and therefore providing more competitive pricing. Key highlights include:

- Senior debt is injected at Project Company (IHSL) level, key documents that detail the terms of this arrangement (which are part of the suite of project and finance documents created at Financial Close and dated 13th February 2015) include:
  - Common Terms Agreement<sup>3</sup>
  - Intercreditor Agreement<sup>4</sup>
  - Institutional Investor Senior Facility Agreement<sup>5</sup>
  - EIB Senior Finance Contract<sup>5</sup>
- Senior subordinated debt is injected at IHS Lothian Investments Limited level, key documents that detail the terms of this arrangement (which are part of the suite of project and finance documents created at Financial Close and dated 13th February 2015) include:
  - Common terms Agreement
  - Intercreditor Agreement
  - Institutional Investor Senior Subordinated Facility Agreement (and on loan agreement)<sup>5</sup>
  - EIB Senior Subordinated Finance Contract (and on loan agreement)<sup>5</sup>
- M&G and EIB participated in these two facilities on a c.50/50 basis (note it is not exactly 50/50 owing to the EIB mandate described above).
- Under the original terms of the Shareholder Support Agreement, a junior debt loan is injected at the planned end of construction (July 2017) by IHS Lothian Corporate Limited, the obligation to inject was backed off at Financial Close by the letter of credit provided in favour of the Security Trustee (Prudential trustee Company Limited) by Macquarie. The beneficiary as the registered holder of the £14,579,266.73 nominal of the TopCo Loan Notes (being the loan instrument recording the terms and conditions of the junior debt) is IHS Lothian Corporate Limited. The TopCo Loan Notes are mirrored in the corporate structure below between the 100% owned subsidiaries, until the Project Company participates in the Borrower Loan Note). The TopCo Loan Notes are contractually and structurally subordinated to the Senior Subordinated Debt and the Senior Debt (and hence described as “junior debt”). Key documents that detail the terms of this arrangement (which are part of the suite of project and finance documents created at Financial Close and dated 13th February 2015) include:
  - TopCo Loan Note
  - HoldCo Loan Note

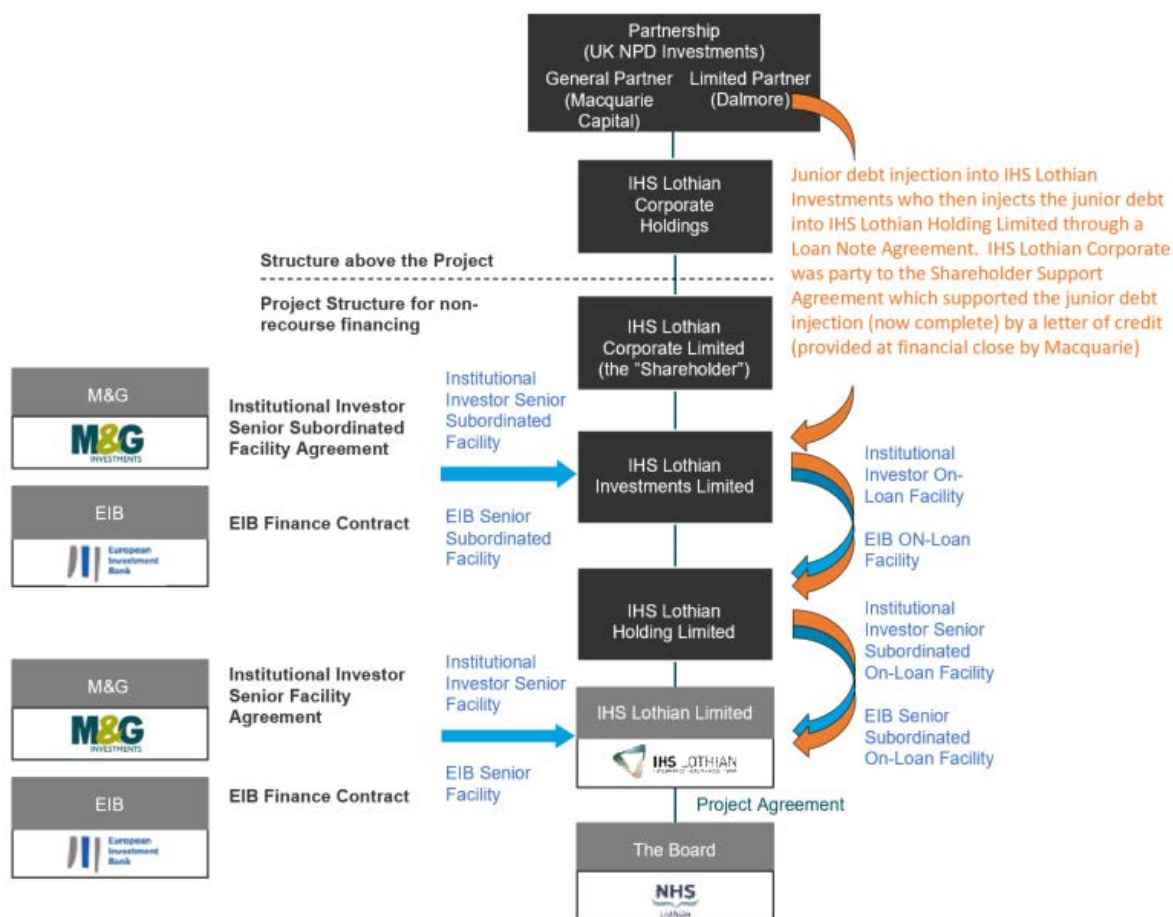
<sup>3</sup> Being the agreement executed at Financial Close between the “borrower” (as IHS Lothian Limited which is also the Project Company), the security trustee, the intercreditor agent and the senior lenders (M&G and EIB) that *inter alia* sets out the common terms shared by and agreed between the debt facilities for the Project Company to adhere to (e.g. common terms of default, agreed cashflow waterfalls between the project costs, creditors and junior creditors to be implemented by the Project Company and the methods of control that senior lenders exert over the performance and activities of the Project Company).

<sup>4</sup> Being the agreement executed at Financial Close between the “borrower” (as IHS Lothian Limited which is also the Project Company), the security trustee, the intercreditor agent and the senior lenders (M&G and EIB) that *inter alia* sets out the agreed terms by which the lenders will act during the project including their respective rights under contractual subordination, actions required to maintain the credit structure and actions in event of winding up or enforcement of security. The agreement also sets out the required activities of the intercreditor agent and security trustee (and how they may act on behalf of senior lenders).

<sup>5</sup> A facility agreement between a borrower and a debt provider containing *inter alia* terms that are not common to all the lenders (and therefore not included in the common terms agreement).

- Borrower Loan Note
- Shareholder Support Agreement<sup>6</sup>
- Equity LC

9.7 The chart below, Figure 7, shows the overall financing structure that was implemented at Financial Close showing all the provision of funds required to finance the project:



**Figure 7**

9.8 As shown in the chart, the senior subordinated debt is contributed into Project Company through on loan agreements with separate agreements for M&G and EIB at all levels. An Intercreditor Agreement was executed between the senior debt holders. The junior debt injection timing is required and as governed under the Shareholder Support Agreement (the obligation being backed off by a letter of credit to the value of the junior debt). The junior debt monies were injected by a Dalmore managed fund as the limited partner (UK NPD Investments LP) of the partnership with Macquarie (UK NPD investments GP Limited).

### Financing terms


9.9 The table below shows a summary of the key terms of the financing structure at Financial Close (which are further detailed in the documents listed above).

<sup>6</sup> Being the agreement executed at Financial Close between IHS Lothian Limited, its relevant holding companies and the security trustee to *inter alia* regulate the required timing, quantum of junior debt and rights to subscribe to junior debt funding in the project, together with the required credit support to back off these requirements and rights until the required junior debt funding date. This agreement was amended on 22nd February 2019 and as further described above.

<b>Term</b>	<b>Senior debt</b>	<b>Senior Subordinated debt</b>	<b>Junior Debt</b>
Amount	£146,404k	£21,256k	£14,579k <sup>2</sup>
Gearing	80.3%	11.7%	8%
Maturity	23 years	23 years	25 years
Fixed All In Rate	3.288% (M&G) 2.881% (EIB)	4.538% (M&G) 4.560% (EIB)	9.47% (borrower loan note)
Commitment Fee	0.50%	0.45%	N/A
Sizing DSCR	1.40x	1.20x (combined)	N/A
Sizing LLCR	1.25x	1.25x	N/A
Lockup DSCR	1.10x	1.10x	N/A
Default DSCR	1.05x	1.05x	N/A

22 July 2021

## APPENDICES

#	Appendix	Contents
1	Schedule 1 to the Management Services Agreement	The detailed responsibilities of the SPV Manager.
2	<i>Re-Provision of RHSC and DCN – Communications and Meeting Structure</i>	 150812 Meeting Structure - Final.1.0.
3	Sample Agendas and Action/Minutes from meetings within the ' <i>Re-Provision of RHSC and DCN – Communications and Meeting Structure</i> '	Sample Agenda and Action Notes from the following Meetings:- (a) <b>Pdg</b> (b) <b>Pmg</b> (c) Construction Progress (d) Change (e) <b>Mep</b> (f) Architectural (g) Civil & Structural (h) Commissioning (i) Equipment (j) Community Benefits (k) FM (Bouygues) (l) <b>Fm (Nhs)</b> (m) <b>Ict</b> (n) Communications (o) Arts & Therapeutic Design (p) Site Interface (q) Liaison (r) Weekly Catch-ups
4	Draft Terms of Reference for Liaison Committee	Draft Terms of Reference discussed between NHSL and IHSL for the Liaison Committee
5	Sample Agendas for Joint Steering Group	Sample Agendas from the Joint Steering Group meetings
6	Sample Agendas and Meeting Notes of meetings referred to in Table 2	Sample Agendas and Reports from the following meetings: (a) Service Review Meeting (b) Change Order Meeting

		(c) Risk Review Meeting
7	Sample Reports and Agendas of meetings referred to in Table 3	<p>Sample Agendas and Reports from the following meetings:</p> <ul style="list-style-type: none"> <li>(a) Multiplex Construction Liaison</li> <li>(b) Funders' Construction Report</li> <li>(c) Lenders' Technical Advisor's Construction Report</li> <li>(d) Independent Tester Construction Report</li> <li>(e) BYES FM Services Report</li> <li>(f) IHSL Board Report</li> </ul>



## NHS Lothian and IHSL Limited

Royal Hospital for Sick Children and Department of Clinical Neurosciences, Little France, Edinburgh

### Opinion on whether IHSL's proposed ventilation design for the 4-bed rooms complies with the relevant contractual provisions

#### 1.0 Introduction

- 1.1 This opinion has been written by David Rollason BSc(Hons) CEng MCIBSE. I am a chartered engineer and a Director of David Rollason Associates (DRA), a practice of consulting engineers offering specialist mechanical and electrical (M&E) engineering advice. I have 30 years' experience of design, inspection, administration and investigation of M&E engineering services systems for buildings. My curriculum vitae is included at **Appendix A** to this opinion.
- 1.2 I am instructed by MacRoberts LLP (MacRoberts), Solicitors acting on behalf of NHS Lothian (the Board). The Board entered into a Project Agreement (PA) with IHSL Limited (IHSL, Project Co) for design, construction, finance and maintenance of a children's Hospital and new department of clinical neurosciences under a form of public private partnership procurement.
- 1.3 With regards to pressure regimes, the Board believes that Project Co's proposed ventilation design for the 20 "4-bed rooms"<sup>1</sup> does not comply with the Board's Construction Requirements (BCRs), Project Co's Proposals (PCPs) and guidance in Scottish Health Technical Memoranda. I understand that the Board may also have concerns regarding Project Co's proposed air change rates, but this is not an issue upon which I have been asked to comment at this stage.
- 1.4 I have been provided with a timeline of relevant documentation/correspondence (**Appendix B**), an extract of relevant sections of the PA and BCRs (**Appendix C**) and a schedule of design data extracted from various revisions of IHSL's Environmental Matrix (EM) (**Appendix D**).
- 1.5 I have been instructed by MacRoberts to give an opinion on whether Project Co's proposed ventilation design for the 4-bed rooms complies with the relevant contractual provisions.

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<sup>1</sup> The 20 rooms having Room Function "Multi-bed Wards" listed in **Appendix D** to this opinion.



- 1.6 This opinion has been prepared from a desktop study of documents provided by MacRoberts.
- 1.7 Text quoted verbatim from documents is denoted by enclosure between quotation marks and *italicised* script.
- 1.8 No statement or opinion contained in this opinion is to be taken to express an opinion on matters of law. The opinions expressed in this opinion are based on my experience as a practising building services engineer involved in the design and investigation of ventilation systems for hospitals.



## 2.0 Project Co's proposed ventilation design for the 4-bed rooms

2.1 It is evident from the schedule of design data extracted from various revisions of IHSL's Environmental Matrix (EM) (Appendix D to this opinion) that Project Co's proposed ventilation design for the 4-bed rooms includes:

- (i) mechanical supply to the 20 4-bed rooms at a rate of 4ac/hr (based on the room volume of the 4-bed rooms);
- (ii) mechanical extract from the four 4-bed rooms (1-B1-009, 1-B1-031, 1-B1-063 and 1-B1-065), which do not have adjacent en suites/accessible WCs/wet rooms, at rates of 1.7 to 4ac/hr (based on the room volume of the 4-bed rooms); and
- (iii) mechanical extract from en suites/accessible WCs/wet rooms adjacent to the remaining 16 4-bed rooms at a rate of 10ac/hr<sup>2</sup> (based on the room volume of the en suites/accessible WCs/wet rooms).

2.2 These characteristics of Project Co's proposed design result in:

- (i) one of the 4-bed rooms (1-B1-065) being balanced pressure relative to the adjacent ward corridor; and
- (ii) the remaining 19 4-bed rooms being positive pressure relative to the adjacent ward corridor.

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<sup>2</sup> For one en suite (3-C1.8-029) "minimum 10".





### 3.0 Whether Project Co's proposed ventilation design for the 4-bed rooms complies with the relevant contractual provisions

3.1 In this section I firstly set out my understanding of the relevant contractual provisions. I then provide my opinion on whether Project Co's proposed ventilation design complies with these provisions.

3.2 Under clauses 5 and 12 of the PA (see **Appendix C** to this opinion), Project Co has an obligation to comply with the BCRs, NHS Requirements, PCPs and Good Industry Practice.

3.3 There is an apparent conflict within the PA and within the BCRs, as explained below:

3.3.1 The Room Data Sheets (RDSs) for generic and key rooms at Financial Close (FC) (which form part of the BCRs) include one generic 4-bed room (B0405 "Multi-bed room: 4 beds RHSC") and two key 4-bed rooms (B1609-01 "4 beds Low Acuity" and B1609-02 "4 beds High Acuity"). The RDSs for these three rooms require the "Pressure Relative to Adjoining Space" to be positive.

3.3.2 IHSL document "Re-Provision of RHSC and DCN at Little France, Section 4.23 Specification – Building Services", 1<sup>st</sup> draft, dated July 2014 (which forms part of the PCPs), section 6 "Design Criteria" states on page 57 "For ventilation/air change rates used in the design, Project Co. shall refer to the ADB sheets."

3.3.3 The Activity Database (ADB) RDS for room B0405 "Multi-bed room: 4 beds" (which constitutes NHS Requirements, with which Project Co is obliged to comply pursuant to clause 2.3 of the BCRs) requires the "Pressure Relative to Adjoining Space" to be balanced or negative.

3.3.4 The unapproved Environmental Matrix (EM) at FC states the "Relative pressure" of the 4-bed rooms as "positive to en suite". This EM was endorsed Level C – meaning subject to amendment as noted – and had a Board comment, with which Project Co was obliged to comply pursuant to the BCRs, which stated "Detailed proposals awaited on bedroom ventilation to achieve balanced/negative pressure relative to corridor."

3.3.5 In addition, at FC, specific Completion Criteria (with which Project Co was required to comply pursuant to Schedule Part 10, Appendix B of the PA) in relation to the EM were included within the PA as follows:



*"2.1.31 Project Co shall provide completed Section 6 (Room Data Sheets) of Schedule Part 6 (Construction Matters) for all rooms and areas within the Facilities including the environmental data contained in the Environmental Matrix. These Room Data Sheets shall be complete in all respects;*

*"2.1.32 Project Co shall provide Environmental Matrix including Commissioning data test sheets as commissioned in accordance with CIBSE Commissioning Code C and demonstrating compliance with the Environmental Matrix;"*

3.3.6 Other sections of the BCRs that detail ventilation requirements highlight the importance of infection control. As noted below, I am of the opinion that it is Good Industry Practice to provide balanced/negative pressure in 4-bed rooms relative to adjacent ward corridors.

3.4 Where there is a conflict within the BCRs, clause 2.5 sets out the hierarchy of standards, as follows:

*"Where contradictory standards/advice are apparent within the terms of the Board's Construction Requirements and the appendices then subject to the foregoing paragraph then (1) the most onerous standard/advice shall take precedence and (2) the most recent standard/advice shall take precedence. When the more onerous requirement is to be used the Board will have the right to decide what constitutes the more onerous requirement."*

3.5 NHS Requirements highlight the importance of infection control.

3.6 CEL 19 (2010), Annex A, Mandatory Requirement 7 and Annex B, and also SHTM 03-01, section 2.60, require compliance with the ADB Sheets. The ADB Sheets clearly require balanced or negative pressure relative to the adjacent space for multi-bed rooms.

3.7 Good Industry Practice to ensure, inter alia, infection control requires the pressure in multi-bed rooms to be balanced or negative relative to the adjacent space.

3.8 It is understood that Project Co argues that multi-bed rooms should have a general ward ventilation design. It is not known what Project Co's reasoning for this is, because the Board has consistently commented to Project Co (on both the EM and BCRs) *"bedroom ventilation to achieve balanced/negative pressure relative to*



*corridor.*” It is understood that Project Co has updated the single bedroom ventilation design to achieve balanced pressure, but it has not done so for the multi-bed rooms, notwithstanding that this had been the subject of discussion with the board in February 2017. I understand that Project Co might believe that multi-bed rooms are a “ward” rather than a “bedroom.” Firstly, this does not appear to be borne out by the relevant correspondence referred to in **Appendix B** to this opinion. Secondly, it is not in line with SHPN 04-01, which clearly envisages wards being made up of single and (at times) multi-bed rooms (see SHPN 04-01, page 35, Figure 7). A ward is a larger space (24 beds is the typical example in SHPN 04-01 – see SHPN 04-01, page 7, last bullet point and page 20, paragraph 2.29) for the treatment of patients with similar medical conditions.

- 3.9 All comments on the EM from FC to date make it clear that any Level B endorsement is subject to the Board’s comments being taken into account (including the comment *“Detailed proposals awaited on bedroom ventilation to achieve balanced/negative pressure relative to corridor”*). Furthermore, Level B endorsement does not relieve Project Co of its design responsibility (see paragraph 4.5 of Schedule Part 8 of the PA).

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- 3.10 Project Co was required to provide balanced/negative pressure in the 4-bed rooms relative to the adjacent ward corridors. This is consistent with what I would normally expect, as providing balanced/negative pressure in the 4-bed rooms inhibits the spread of infection from patients in the 4-bed rooms to adjacent areas.
- 3.11 Project Co’s proposed ventilation design for the 4-bed rooms does not comply with the relevant contractual provisions because Project Co’s design provides positive (not balanced/negative) pressure in 19 of the 20 4-bed rooms relative to the adjacent ward corridors. My conclusion is consistent with MacRoberts’ legal analysis, as I understand MacRoberts to be of the view that when the Project Agreement is read as a whole, it is clear that it obliges Project Co to provide balanced or negative pressure relative to the adjacent space in the 4-bed rooms.



**4.0 How Project Co's proposed ventilation design for the 4-bed rooms can be made to comply with the relevant contractual provisions**

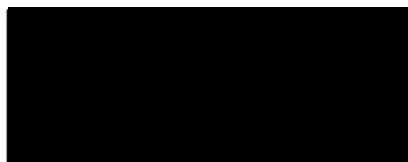
**Opinion**

- 4.1 It is not practical to provide balanced/negative pressure in the 4-bed rooms relative to the adjacent ward corridors solely by increasing the air change rate extracted from the en suites/assisted WCs/wet rooms, as I explain below.
- 4.1.1 Typically, for hospitals, the extract air flow rate from en suites/assisted WCs/wet rooms is designed to be approximately 10ac/hr (based on the room volume of the en suites/assisted WCs/wet rooms), as this air change rate is sufficient to remove odours within a reasonable period of time, without causing an excessive flow rate of air being drawn from the adjacent bedrooms. Project Co's proposed ventilation design is consistent with this, adopting an extract air change rate of 10ac/hr.
- 4.1.2 Based on the room dimensions stated in **Appendix D**, I calculate that in order to achieve balanced pressure between 4-bed rooms and ward corridors, in the order of 23 to 46ac/hr (and in the case of 3-C1.4-062, 80ac/hr) would need to be extracted from the en suites/assisted WCs/wet rooms, which would be excessive.
- 4.1.3 The extract rate from the en suites/assisted WCs/wet rooms would need to be increased still further in order to achieve negative pressure between 4-bed rooms and ward corridors, i.e. air flow from ward corridors to 4-bed rooms.
- 4.2 The solution could be a combination of a number of the following changes:
- (i) reduce the supply air flow rate to the 4-bed rooms, subject to complying with requirements for air quality and temperature control;
  - (ii) extract some air directly from the 4-bed rooms, such that the residual extract air flow rate from the en suites/assisted WCs/wet rooms would not need to exceed approximately 15 ac/hr; and/or
  - (iii) increase the extract air flow rate from the en suites/assisted WCs/wet rooms, up to approximately 15ac/hr.



**5.0 Declarations**

- 5.1 In preparing this opinion I have been impartial; the opinion is not knowingly biased in favour of the Board or Project Co.
- 5.2 I am not aware of DRA having had a working relationship with the Board or Project Co.



1 November 2017

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**David Rollason**

BSc(Hons) CEng MCIBSE

Appendix A – C.V. David Rollason



David Rollason Associates  
Consulting Engineers



**David Rollason**  
Director

**David Rollason Associates**  
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#### Education

- BSc(Hons) Building Engineering, University of Bath, UK

#### Employment

- David Rollason Associates
- Navigant Consulting
- White Young Green
- Jeffrey Gosnell Associates
- Hoare Lea & Partners
- R W Gregory & Partners

#### Professional associations

- Member of the Chartered Institution of Building Services Engineers
- Member of the Society of Construction Law

## David Rollason

### Current Position

Mr Rollason is a Director of David Rollason Associates.

He is a Chartered M&E Services Engineer, with specialist areas of expertise including heating, ventilation and air conditioning (HVAC).

He has considerable experience of working on projects spanning the institutional, industrial and commercial sectors, both in the UK and overseas.

In recent years he has combined design work with litigation/dispute resolution - providing advice to parties involved in disputes, assessing the technical merits of potential/actual claims and preparing expert evidence/advice.

Mr Rollason has extensive experience of contractual disputes and of advising clients on the duties of parties involved in the design, installation and inspection of mechanical and electrical works.

He has acted as single party independent expert for claimants and defendants, and as single joint expert. He has also provided expert determination.

He has given expert advice on matters that are the subject of litigation, mediation, arbitration and adjudication, has participated in mediations and given evidence in civil and criminal Courts and during arbitration and adjudication hearings.

Cases have involved major firms of contractors and consulting engineers and relate to disputes within the UK, Republic of Ireland, Channel Islands, Gibraltar, Cayman Islands, Middle East, Hong Kong, Thailand and Africa.

### Representative Engagements

Selected examples from Mr Rollason's work include the following:

- Engineering expert for a dispute relating to design of M&E services at a 1,400 bed PFI hospital.
- Engineering expert for various disputes relating to design, installation, commissioning, operation, maintenance and use of hot and cold water services systems at hospitals, to prevent the growth and spread of legionella bacteria.
- Engineering expert for a dispute relating to design of ventilation systems serving haematology wards at a PFI oncology centre. Also to assess potential claims in relation to design of the



aseptic pharmacy air conditioning system (including compliance of clean rooms), medical gases and vacuum services, electrical services to LINAC chambers and major equipment rooms, and fire alarm cause and effect.

- Engineering expert for a dispute relating to design of ventilation and air conditioning for the Positron Emission Tomography (PET) suite and Nuclear Medicine Radiopharmacy (NMR) at a hospital.
- Engineering expert for various disputes relating to internal and external corrosion, failure and/or deterioration of copper, thin-walled carbon steel and CPVC plastic pipework and water quality at hospitals.
- Engineering expert for various disputes relating to summertime overheating in naturally ventilated rooms at hospitals.
- Engineering expert for various disputes relating to energy use at hospitals.
- Engineering expert for a dispute relating to failure of chillers at a hospital.
- Engineering expert for a dispute relating to fire compartmentation and passive fire prevention measures at a 300 bed PFI acute hospital.
- Engineering expert for a dispute relating to the specification of Air Handling Units serving two modular operating theatres, recovery areas and ancillary areas at a hospital in the Middle East.
- Engineering expert for a dispute relating to defects at a hospital in the Middle East.
- Engineering expert for various disputes relating to design, installation and performance of M&E services in office buildings throughout the UK.
- Engineering expert for a dispute relating to the meaning of the winter and summer internal conditions referred to in the specification for an office building air conditioning system, whether blinds should be taken into consideration as an integral part of the cooling strategy and whether the air conditioning system was capable of maintaining the specified internal conditions; air conditioning system: displacement ventilation with perimeter and internal chilled beams. Gave evidence in Court.
- Engineering expert for a dispute relating to design of the ventilation system at a state of the art training facility for fire fighters (firehouse). Gave evidence in Court.
- Engineering expert for a dispute relating to performance of a





close control air conditioning system installed during renovation and conversion of a Grade I listed mansion to form an art gallery.

- Provision of expert engineering advice for a dispute relating to design and performance of a close control air conditioning system at a lace factory in Thailand.
- Engineering expert for a dispute relating to design, installation and performance of the M&E services at a swimming pool. Gave evidence in arbitration.
- Engineering expert for a dispute relating to design, installation and performance of the ventilation system at a recording studio.
- Engineering expert for a dispute relating to defective installation of electrical services associated with refurbishment and adaptation of a number of warehouse buildings on the Thames and the new build construction of 118 apartments.
- Engineering expert for a dispute relating to coordination of M&E services associated with the refurbishment and extension of a 365 bedroom 1830s hotel in Central London.
- Provision of expert engineering advice for a dispute relating to defects at a new 438 bedroom hotel in Hong Kong.
- Engineering expert for a dispute relating to the drawing approval process associated with refurbishment of a 490 bedroom hotel overlooking Hyde Park in Central London.
- Engineering expert for a dispute relating to failure of a chiller at a factory in Ireland. Gave evidence in Court.
- Engineering expert for a dispute relating to design, installation and performance of M&E services at a multi-million pound house in Jersey.
- Engineering expert for a dispute relating to damage of a 66kV underground electricity cable.

#### **Other Representative Experience**

- BP Sunbury Redevelopment - Phase 1 (18,700m<sup>2</sup>). Lead Project Engineer for first phase of redevelopment of the BP site at Sunbury; air conditioning system: displacement ventilation with perimeter chilled beams and internal chilled ceilings.
- Philip Morris European HQ, Lausanne, Switzerland (6,000m<sup>2</sup>). Preparation of scheme design, and subsequent supervision/assistance to Swiss Consultant during design development, for displacement ventilation system serving new restaurant and conference facilities within existing HQ. Aim of



ventilation system to permit smoking without causing discomfort to non-smokers.

- Hong Kong Football Club, first class club facility including bars, restaurants, function rooms, sports hall, bowling green and swimming pools (11,600 m<sup>2</sup>). Day-to-day management of M&E services design from early sketch scheme stage. Prime design involvement in air conditioning systems.
- Stamford Hospital, Hammersmith (22,700m<sup>2</sup>). Lead Project Engineer for refurbishment of 1930s hospital, including operating theatres, wards and central steam boiler plant.
- Kwong Wah Hospital, Hong Kong, 1,526 bed district general hospital. Design of replacement medical gases systems.

#### **Technical Papers**

- "Freshness, ventilation and temperature in offices" by Prof D J Croome and D H Rollason, presented at the CIB conference, Healthy Buildings, Stockholm, 1988.

Appendix B – Timeline re Ventilation to Multi-bedrooms

**Timeline re Ventilation to Multi-bedrooms**

<b>Date</b>	<b>Documentation</b>
11 March 2013	<p>ITPD issued. The following is an extract:-            2.5.3 Room Data Sheets            Standard format Room Data Sheets have not been prepared by the Board for the Project. The specific room requirements (the "Room Information") are detailed in a combination of the following documents:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The Board's Construction Requirements;</li> <li><input type="checkbox"/> The Environmental Matrix;</li> <li><input type="checkbox"/> The Schedule of Operational/Design Notes;</li> <li><input type="checkbox"/> The Equipment Schedule;</li> <li><input type="checkbox"/> The Equipment Responsibility Matrix;</li> <li><input type="checkbox"/> The Draft Schedule of Accommodation; and</li> <li><input type="checkbox"/> The Operational Functionality elements of the Reference Design.</li> </ul> <p>During Dialogue Bidders will be required to develop Room Data Sheets, incorporating the Room Information, for those rooms for which 1:50 layout drawings have been prepared. For the avoidance of doubt this shall include all Key Rooms and Generic Rooms in addition to those rooms identified in the table at paragraph 2.5.2 above. The Room Data Sheets will form part of the Bidders proposals. The Preferred Bidder will be required to complete Room Data Sheets for all remaining rooms prior to Financial Close.</p> <p style="text-align: center;">f.</p>
5 March 2014	<p>Preferred Bidder Status for Project Co</p> <p>Project Co Final Tender</p> <p><b>C20 Response</b>  <i>Room Data Sheets (RDS) Design Deliverables and Equipment Schedule – Enhancement and Improvement of the Design. The PBS Launch Meeting will be utilised to discuss the project set-up and project protocols. This is when the following items will be reviewed, to ensure that the RDS Work stream can progress to programme:</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Agree which Design Group will lead (assume Project Technical Design Group Lead). Possible detailed further review of rooms in appropriate Clinical Group – Key rooms and Generic rooms.</li> <li><input type="checkbox"/> Review Project Equipment Standardisation, including Equipment Unions.</li> <li><input type="checkbox"/> Project Database Set-Up.</li> <li><input type="checkbox"/> Review RDS already produced for the Rooms and agree proposed amendments based on above.</li> <li><input type="checkbox"/> Room Type Schedule – Review Room Types / ADB room briefing codes – agree number of types (encourage as much standardisation as clinically possible i.e., possible increase to Generic Rooms within the 31 types already established). Note this discussion will continue during the Technical Design Group / Equipment Design Workshops.</li> <li><input type="checkbox"/> Agree strategy for design development of Transfer Equipment. Note this discussion will continue during the Technical Design Group / Equipment Design Workshops.</li> </ul>

□ Agree strategy for design development of Specialist Equipment (e.g. Imaging Equipment). Note this discussion will continue during the Technical Design Group / Equipment Design Workshops. The RDS for the Generic and Key Rooms will be targeted for review in DDM 1 and remaining Room Types will be targeted for review in DDM 2 and agreed in principle in DDM 3 to allow the release the ADB database for commencement of the main 1:50 Design Programme. A summary of the initial RDS Production Programme (in ADB) is as follows:

□ Generic Rooms – RDS brief agreement and release for 1:50 Design in DDM 1

□ Key Rooms – RDS brief agreement and release for 1:50 Design in DDM 1

□ Remaining Room Types – RDS brief agreement and release for 1:50 Design in DDM 2 and DDM 3 (if required). A draft Equipment List (generated through our BIM) to supersede the NHS Lothian equipment list) will be available upon sign off, of the 1:50 loaded drawings.

14 October 2014

Technical review of Environmental Matrix by the Board before FC (MM-GC-000339):

a. Bedrooms 4ac/hr, SHTM says 6 ac/hr

b. Bedrooms have no extract

c. Bedroom en-suites 10 ac/hr, SHTM says 3 ac/hr

d. Bedrooms stated as positive pressure, SHTM says 0 or –ve pressure

e. The supply air to a bedroom has to be balanced with extract e.g:

i. Bedroom area 19m<sup>2</sup> and 2.4m high = volume 45.6m<sup>3</sup> x 6ac/hr = 273.6 m<sup>3</sup> / hr

ii. En-suite area 5 m<sup>2</sup> and 2.4m high = volume 12.0m<sup>3</sup> x 3ac/hr = 36 m<sup>3</sup> / hr

To achieve balanced pressure within room bedroom extract required = 273.6 – 36 = 237.6 m<sup>3</sup> / hr

19 January 2015

Ventilation sketches issued by Project Co as part of ongoing discussions re ventilation design.

27 January 2015

Board write to Project Co as follows:-

*“As the RDS are incomplete, the Board has not stamped the drawings.*

*In accordance with the requirements in Section 5 (Reviewable Design Data) of Schedule Part 6 (Construction Requirements) Appendix B (Completion Criteria) of Schedule Part 10 (Outline Commissioning Programme), Project Co has to submit to the Board through the Review Procedure completed Room Data Sheets for all Rooms whilst taking into account Section 3 of Schedule Part 6 of the Boards Construction Requirements.”*

29 January 2015

Mott Macdonald write to Project Co responding to ventilation sketches issued on 19 January 2015 as follows:-

*“The Single room with en-suite ventilation design shall comply with the parameters set out in SHTM 03 – 01”*

*“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.”*

13 February 2015

Financial Close ("FC"). Project Agreement signed.

Note the terms of clause 7 and 67. The effect of these provisions is that the final contract documents (including the FC BCRs and PCPs) supersede prior discussions / documentation regarding the design.

Project Co Proposals (PCPs)

At FC PCPs were incomplete in many respects. In the circumstances, the Board required to submit detailed comments on the PCPs, many of which were unapproved. In particular, the Board produced comments in relation to the Environmental Matrix ("EM") produced at FC within Part 4 of Section 5 of Schedule Part 6. The relevant section of Part 4 of Section 5 of Schedule Part 6 provides as follows:-

*"Project Co shall submit and the Board shall review the following Board comments in respect of relevant Project Co's Proposals (which shall be deemed to be Reviewable Design Data) not approved at Financial Close given that such Reviewable Design Data only received a Level C or Level D at Financial Close, with such Project Co submission addressing the following Board comments in relation to such Reviewable Design Data.*

*These Board comments shall be incorporated into each relevant item of Design Data (which shall primarily relate to drawings accompanying the relevant Project Co's Proposals) by Project Co and the drawings shall be submitted by Project Co to the Board through Schedule Part 8 (Review Procedure).*

*If Project Co considers that the Board comments below on any of the items listed in this Part 4 amount to a Change, Project Co shall, before complying with the comments and resubmitting the Endorsed RDD, notify the Board of the same and, if it is agreed by the parties or determined pursuant to Schedule Part 20 (Dispute Resolution Procedure) that a Change would arise if the comments were complied with, the Board may, if it wishes, implement the Change and it shall be dealt with in accordance with Schedule Part 16 (Change Protocol)."*

In relation to ventilation, the Board made the following comment in the FC EM:-

*"Project Co shall update the Environmental Matrix to reflect the following Board comments ....*

*Detailed proposals awaited on bedroom ventilation to achieve balance/negative pressure relative to corridor."*

Accordingly, at FC the EM was deemed to be Reviewable Design Data and had been endorsed level C status, i.e. the EM was not approved by the Board. Project Co was obliged to address the Board comments in relation to the EM.

## Room Data Sheets at FC

There are 20 rooms which are the subject of dispute between the parties being:-

Room Ref Location	Ventilation Layout Drawing No	Room Number	Room Description
A	WW-Z4-00-PL-524-001I	G-A2-054	Multi Bed (4)
B	WW-Z4-00-PL-524-001I	G-A2-046	Multi Bed (4)
C	WW-Z4-00-PL-524-002G	G-A2-028	Multi Bed (4)
D	WW-Z4-01-PL-524-001H	1-B1-063	Multi Bed (4)
E	WW-Z4-01-PL-524-001H	1-B1-031	Multi Bed (4)
F	WW-Z4-01-PL-524-001H	1-B1-009	Multi Bed (4)
G	WW-Z3-03-PL-524-001F	3-C1.3-011	Multi Bed (4)
H	WW-Z3-03-PL-524-001F	3-C1.3-013	Multi Bed (4)
I	WW-Z4-03-PL-524-001F	3-C1.2-026	Multi Bed (4)
J	WW-Z4-03-PL-524-001F	3-C1.2-023	Multi Bed (4)
K	WW-Z4-03-PL-524-002F	3-C1.1-018	Multi Bed (4)
L	WW-Z4-03-PL-524-002F	3-C1.1-046	Multi Bed (4)
M	WW-Z4-01-PL-524-001H	3-B1-065	Multi Cot (3)
T	WW-Z4-03-PL-524-002F	3-D9-022	Multi Bed (3)
N	WW-Z4-01-PL-524-002F	1-L1-100	Multi Bed (4)
O	WW-Z4-01-PL-524-002F	1-L1-097	Multi Bed (4)
P	WW-Z3-03-PL-524-001F	3-C1.8-027	Multi Bed (4)

Q	WW-Z3-03-PL-524-001F	3-C1.8-016	Multi Bed (4)
R	WW-Z3-03-PL-524-002G	3-C1.4-084	Multi Bed (4)
S	WW-Z3-03-PL-524-002G	3-C1.4-061	Multi Bed (6)

The room locations are noted on the plan attached as Annex 1.

Of those 20 rooms, only three "generic rooms" had Room Data Sheets at FC. Room Data Sheets for rooms G-A2-054, 1-B1-031 and 1-B1-063 were provided by Project Co. Copies of these Room Data Sheets are attached as Annex 2. The ventilation pressure relative to adjoining space is noted as either "positive" or "positive via en suite" for each of these three rooms.

15 June 2015

Project Co write to Board as follows:-

*"[Board comment] Detailed proposals awaited on bedroom ventilation to achieve balanced / negative pressure relative to corridor. [Project Co comment] The single bedrooms have had their ensuite extract increased to achieve a balance within the room, this has been noted within the matrix."*

22 July 2015

Board write to Project Co as follows:-

*"Note 26 and ventilation type have not been altered."*

4 December 2015

Environmental Matrix Rev 2 issued for RDD review

20 January 2016

Initial comments sent by the Board requesting a meeting to discuss (MM-GC-001145)

9 February 2016

Following the meeting between the Board and Project Co, updated comments on the matrix issued (MM-GC-001184)

18 March 2016

Environmental Matrix Rev 5 issued for RDD review by Project Co.

For the relevant rooms, the pressure was noted in Rev 5 as *"positive to en-suite."*

15 April 2016

Environmental Matrix Rev 5 endorsed Level B. Comments as follows:-

*"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 or PCPs should be highlighted to the Board."*



Level B endorsement means Project Co is entitled to proceed with construction subject to any amendment as noted on the design and that the Board is satisfied that the design and other information in the relevant room data sheet satisfies Operational Functionality.

The definition of Operational Functionality is set out in Annex 1. It concerns the functionality of the physical space for the Board to carry out the clinical services only. It does not extend any design risk to the Board in relation to the design of the mechanical and electrical services provided at the Facilities.

The relevant comment in the EM Rev 5 is as follows:-

*"Detailed proposal awaited on bedroom ventilation to achieve balanced / negative pressure relative to corridor."*

The initial response received from Project Co was *"The single bedrooms have had their en-suite extract increased to achieve a balance within the room, this has been noted within the matrix."*

Feedback from the Board is *"Note 26 and ventilation type have not been altered."* Note 26 does not appear to be relevant to the issue. The reconciliation comment states *"refer to matrix."*

3 June 2016

Derogations WW014 and WW015 submitted by Project Co seeking the following derogation:-

*"The air change rate has been decreased within the single bedrooms from 6ac/hr to 4ac/hr. Mixed mode ventilation has been provided with additional natural vent available from the opening windows. Single bedrooms without opening windows have been provided with 6ac/hr."*

The proposal is noted as:-

*"Single bedrooms with opening windows to have a mechanical ventilation rate of 4ac/hr."*

20 September 2016

Environmental Matrix Rev 7 issued by Project Co.

On the EM, the same comment about bedroom ventilation remained, with the same responses. The relevant rooms were noted as having either "positive" or "positive to en-suite" pressure.

22 September 2016

Derogations rejected and commented upon as follows:-

*"Following the review of PCo's derogations (WW014 & 015) the Board cannot accept this proposal."*

*As per the BCRs, PCo are required to provide heat recovery with balanced ventilation at specified air change rates. Based on PCo derogations, in order to achieve balanced pressure regime (in 4 bedded room 1-L1-100, the en-suite extract would have to be in order of 36ac/h. This is in excess of SHTM recommendation of 3ac/h. Also it means that heat recovery from this air cannot be achieved.*

*Can Project Co please confirm how compliance with SHTM in relation to air change rates, balanced ventilation and room heat recovery will be met."*

17 October 2016

Board issue initial response to Environmental Matrix Rev 7 as follows:-

*"The Board have reviewed the Environmental Matrix and still has significant concerns on items that do not appear to comply with the BCRs....some ventilation rates don't appear to comply with BCRs. The Board would like to point that is still awaiting response from PCo to the issued raised as per MM-RFI-00172 & MM-GC-002006 relating to ventilation rates."*

7 November 2016

Environmental Matrix Rev 7 endorsed Level B. Board write to Project Co as follows:-

*"The Board have serious concerns over the upgrading Environmental Matrix to Status B considering some of the issues raised (as per MM-GC-2084) being the same as the issues that had been raised since FC. There are also concerns over the potential inaccurate information being transferred to the Room Data Sheets being submitted through RDD.*

*However, as requested by Project Co, the Board has upgraded the Environmental Matrix to status B, noting the Board still does not believe the Environmental Matrix and resultant design complies with the Project Agreement. Project Co's failure to comply with the BCRs / PCPs (as per MM-GC-002084) the Board believes would result in a non-compliant Facility.*

*The Board would suggest that Project Co resolved the non-compliant and other issues as a matter of urgency, and requests that Project Co issues a strategy for resolution of these issues."*

11 November 2016

Board write to Project Co as follows:-

*"This is not a new issue by any means having been discussed at length many times in recent weeks and in relation to point 1 below since well before FC.*

*However, I feel compelled to write expressing our concern and alarm that ventilation ductwork is appearing on site which quite clearly does not reflect a compliant design. It is nobody's interest to allow this situation to continue.*

*Point 1 Ventilation to single and 4 bedded rooms*

*You are not providing heat recovery and your designed air changes rates in relation to extract through toilets are unacceptable...*

*Please confirm receipt of this communication and confirm by return that IHSL will be providing a fully compliant design."*

16 December 2016	Project Co respond to Board correspondence of 7 November with detailed comments on the ventilation design.
11 January 2017	Board comments on Project Co's 16 December correspondence issued. Project Co's comments and the Board's responses are attached as Annex 3.
13 January 2017	Meeting to discuss ventilation design.
19 January 2017	Project Co issues sketches provided at the 13 January 2017 meeting.
23 January 2017	Meeting to discuss ventilation design. Possible compromise discussed.
31 January 2017	Aconex received from Project Co with attachment "Bedroom Ventilation Key Considerations" suggesting single room en-suite extract at 17ac/h and multi bedroom supply circa 3ac/h and extract through en-suite at 17ac/h.
9 February 2017	Project Co (TUV SUD) issued a "Multi Bed Rooms – Ventilation Amendment Proposal to Achieve Room Balance, Proposed Solution to Rooms Identified As Being of Concern."
	Copy of this is attached as Annex 4. It is understood that this would have been an acceptable compromise for NHSL to achieve the balanced pressure relative to the adjacent room, albeit that it still exceeds the air change rates proposed by the relevant guidance.
23 February 2017	Project Co (TUV SUD) issues a "General Ward – Ventilation Amendment Proposal" document identifying potential impact on construction.
24 February 2017	Workshop to discuss ventilation design.
February – May 2017	Environmental Matrix on hold while bedroom ventilation design under discussion.
19 May 2017	Environmental Matrix rev 9 submitted for RDD
23 May 2017	Project Co issue Change Request and comment as follows:-

*"Please find attached updated ventilation drawings and associated narrative which accommodates the Board's request to have the 4 bedded ward at a negative or balanced pressure.*

*Our opinion is that this amendment to the environmental conditions and operation of these rooms constitutes a change for the reasons noted below.*

*1.0 Environmental matrix was signed off as status B with the noted design parameters that the current ventilation design represents – as per MM-GC-001398.*

*2.0 Full RDD ventilation zonal design pack and workshops have been through RDD and signed off.*

*3.0 Copy of WW design document outlining compliance with the SHTMs is attached.*

*We anticipate that the costs of this Change will be in the Medium Value category.*

*We look forward to the Board's positive response to this request."*

5 June 2017

Board respond to Change request as follows:-

*"As previously described under MM-GC-002408, the Board does not believe these updates to the environmental conditions constitutes a Board Change. Without these updates, PCo's design was not compliant with BCRs and relevant guidance, and also from a patient safety perspective, was not acceptable to the Board.*

*In relation to point 1 & 2 below, as per Schedule Part 8 (Review Procedure) of the Project Agreement, please note that the RDD review doesn't remove PCo's obligation under the Project Agreement, and the Board did not receive a derogation/change from PCo for an alternative design.*

*In terms of point 3, the WW design report states that current ventilation design for single room and general ward areas are fully compliant with SHTM 03-01, please note however that this is incorrect. PCo proposed air change rates do not align (as stated in*

*the report) with SHTM recommendations hence, without PCo change, the design as it stands is not compliant. The Board expects to receive PCo's Change for deviation of air change rates as recommended per SHTM 03-01.*

*Additionally, the Board notes that PCo used wrong design criteria for the multi bed rooms. As explained by the Board at the meeting on Monday 23 January, a "ward" constitutes the total bed complement of a designated area. Multi-bed rooms are much smaller sections within a ward that allow patients to be nursed as a small group. Within Children's Services these areas are important for the purposes of clinical safety as they allow cohorting of patients who require enhanced level of nursing observation/support either because they have the same type of infection, or are at similar stages of acute post operative recovery. Additionally, these rooms aid the normal socialisation and development of young children. Similarly, within DCN multi-bed rooms within the ward are used to cohort patients requiring enhanced levels of nursing/monitoring that is more difficult to achieve within single room environment. Please note that Table A1 is a summary extract from the Activity Database (ADB) and as stated in the SHTM, PCo should refer to the full ADB Sheets for further details relating to multibed rooms. Please find attached, for your information, the design criteria for multibed areas."*

18 July 2017

Board responds with comments on Environmental Matrix rev 9 as follows:

The Board reviewed the Environmental Matrix rev 9 and has noted there are still inconsistencies in the matrix, these have been highlighted red (but not limited to) in the attached, with examples provided below;

- The "Ventilation type" column states central general extract where no extract in this specific room is provided.
- Central supply air is indicated in "Ventilation type" column while the supply and extract are being provided. Refer to G-A1-038 & 1-B1-065 respectively.
- Refer to 1-B1-077 where the surface temperature is stated as 43 where all other DSR rooms have n/a indicated.
- In relation to the lighting control, the red highlight refers to inconsistencies with the patient assisted bathrooms and wheelchair accessible toilets/shower&wash. The patient assisted bathroom should have switch control, and all wheelchair accessible toilets/shower&wash should have automatic control.
- There are some minor inconsistencies with, but not limited to, "Normal lux" & "Local lux" levels, "Heating type", "Surface temp", "Plane"

Please note that no Project Co changes were highlighted other than the "All Rooms" sheet, hence the Board only reviewed "All Rooms" sheet and did not review the matrix line by line, noting any non-compliance with BCRs / PCPs / SHTMs etc is Project Co's responsibility.

The Board notes it is the Board's opinion the ventilation design for multi bedrooms is not compliant with the BCR's and separate discussions are ongoing relative to the satisfactory resolution of the design.

Please also note the Board rejected Project Co's derogation for single rooms and are considering the compliance of the alternative solution.

Thereafter certain without prejudice discussions took place. However, these discussions have now stalled.

Appendix C – Extract of relevant sections of the PA and BCRs

**EXTRACTS FROM THE PROJECT AGREEMENT-VENTILATION****Clause 5**

Clause 5 sets out Project Co's general obligations. It provides as follows:-

**Scope**

- 5.1 Subject to and in accordance with the provisions of this Agreement, Project Co shall perform its duties under this Agreement at its own cost and risk without recourse to the Board except as otherwise expressly provided in this Agreement.

**General standards**

- 5.2 Project Co shall at its own cost be solely responsible for procuring that the Project Operations are at all times performed:
- 5.2.1 in compliance with all Law and Consents (including without limitation the giving of notices and the obtaining of any such Consents) and so as not to prejudice the renewal of any such Consents;
  - 5.2.2 in a manner that is not likely to be injurious to health or to cause damage to property;
  - 5.2.3 in a manner consistent with the Quality Plans;
  - 5.2.4 except to the extent expressly stated to the contrary in the Board's Construction Requirements or the Service Level Specification, in compliance with all applicable NHS Requirements;
  - 5.2.5 in a manner consistent with the Board discharging its statutory duties and other functions undertaken by it as the same may be notified to Project Co from time to time;
  - 5.2.6 in so far as not in conflict with an express obligation of Project Co under this Agreement, or where in relation to a matter there is no express obligation or standard imposed on Project Co under this Agreement, in accordance with Good Industry Practice; ...

In the event that any ambiguity, uncertainty, dispute or discrepancy arises in the nature and scope of Project Co's obligations under this Clause 5.2 (*General Standards*), the provisions of this Clause 5.2 (*General Standards*) will be given meaning and have effect in descending order of precedence set out in this Clause 5.2 (*General Standards*).

**Clause 7**

Clause 7 sets out the status of Disclosed Data which is defined to include, inter alia, the ITPD documentation. It provides:-

**No liability**

- 7.1 Save where expressly provided otherwise pursuant to Clauses 10.3 to 10.5, (*Responsibility for Contamination*), the Board shall not be liable to Project Co for and Project Co shall not seek to recover from the Board (or from any Board Party) any damages, losses, costs, liabilities or expenses which may arise (whether in contract, delict or otherwise) from the adoption, use or application of the Disclosed Data by, or on behalf of, Project Co, the Independent Tester or any Project Co Party.



**No warranty**

7.2 The Board gives no warranty or undertaking of whatever nature in respect of the Disclosed Data and, specifically (but without limitation), the Board does not warrant that the Disclosed Data represents all of the information in its possession or power (either during the conduct of the tender process for the Project or at the time of execution of this Agreement) relevant or material to or in connection with the Project or the obligations of Project Co under this Agreement or under any of the Project Documents. In addition, the Board shall not be liable to Project Co in respect of any failure to disclose or make available to Project Co (whether before, on or after the execution of this Agreement) any information, documents or data, nor any failure to review or to update the Disclosed Data, nor any failure to inform Project Co (whether before, on or after execution of this Agreement) of any inaccuracy, error, omission, defects or inadequacy in the Disclosed Data.

7.3 Project Co acknowledges and confirms that:

7.3.1 it has conducted its own analysis and review of the Disclosed Data and has, before the execution of this Agreement, satisfied itself as to the accuracy, completeness and fitness for purpose of any such Disclosed Data upon which it places reliance; and

7.3.2 save where expressly provided otherwise pursuant to Clauses 10.3 to 10.5 (*Responsibility for Contamination*), it shall not be entitled to and shall not (and shall procure that no Project Co Party shall) make any claim against the Board or any Board Party whether in contract, delict or otherwise including, without limitation, any claim in damages, for extensions of time or for additional payments under this Agreement on the grounds:

(a) of any misunderstanding or misapprehension in respect of the Disclosed Data; or

(b) that incorrect or insufficient information relating to the Disclosed Data was given to it by any person, whether or not a Board Party,

nor shall Project Co be relieved from any obligation imposed on, or undertaken by it, under this Agreement on any such ground.

**Clause 12**

In addition to the foregoing obligations Project Co is obliged pursuant to Clause 12.1 to carry out the works :-

12.1.1 so as to procure satisfaction of the Board's Construction Requirements;

12.1.2 in accordance with Project Co's Proposals; and

12.1.3 in accordance with the terms of this Agreement.

12.2 To avoid doubt, the obligations in Clauses 12.1.1, 12.1.2 and 12.1.3 are independent obligations. In particular:

12.2.1 the fact that Project Co has complied with Project Co's Proposals shall not be a defence to an allegation that Project Co has not satisfied the Board's Construction Requirements; and

12.2.2 the fact that Project Co has satisfied the Board's Construction

Requirements shall not be a defence to an allegation that Project Co has failed to comply with Project Co's Proposals.

### Design responsibility

- 12.3 Project Co warrants that it has used, and will continue to use, the degree of skill and care in the design of the Facilities and the Retained Estate Handback Infrastructure that would reasonably be expected of a competent professional designer experienced in carrying out design activities of a similar nature, scope and complexity to those comprised in the Works.

...

### Board design approval

- 12.5 The Board confirms that, as at the date of this Agreement, it has reviewed such of Project Co's Proposals as have been initialled by the Board and that, subject to any qualifications and/or comments notified by the Board to Project Co in writing and set out in Section 9 (*Board's Qualification/Comments in respect of Operational Functionality requirements*) of Schedule Part 6 (*Construction Matters*) such proposals satisfy the Board's requirements in respect of Operational Functionality, so far as can reasonably be determined given the level of detail of Design Data which has been disclosed to the Board.
- 12.6 Project Co shall develop and finalise the design and specification of the Works and the Board shall review the Reviewable Design Data in accordance with Schedule Part 8 (*Review Procedure*) and the provisions of this Clause 12.6:
- 12.6.1 Project Co shall submit the Reviewable Design Data and the design of any Changes developed in accordance with the procedure set out in Schedule Part 16 (*Change Protocol*) to the Board's Representative for review under Schedule Part 8 (*Review Procedure*). Project Co shall not commence or permit the commencement of construction of the part or parts of the Facilities and/or Retained Estate Handback Infrastructure to which such Reviewable Design Data relates until it has submitted the appropriate Reviewable Design Data and either it is confirmed by the Board's Representative that Project Co is entitled to proceed with construction in accordance with paragraph 3.3 of Schedule Part 8 (*Review Procedure*) or Project Co is:
- (a) disputing the status of such Reviewable Design Data pursuant to paragraph 1.3.1 or paragraph 4.3 of Schedule Part 8 (*Review Procedure*); and
  - (b) proceeding at risk pursuant to paragraph 1.3.2 of Schedule Part 8 (*Review Procedure*).
- 12.6.2 with effect from the date at which any item of Reviewable Design Data is or becomes an Approved RDD Item in accordance with Schedule Part 8 (*Review Procedure*), such Approved RDD Item shall for the purposes of this Agreement be deemed to have satisfied the requirements of the Board in the manner and to the extent set out in, Table A in Appendix 1 of Schedule Part 8 (*Review Procedure*);
- 12.6.3 Project Co shall allow the Board's Representative, at any time, a reasonable opportunity to view any items of Design Data, which shall be made available to the Board's Representative as soon as practicable following receipt of any written request from the Board's Representative; and

- 12.6.4 Project Co shall procure that the Contractor establishes and maintains a computerised design database which Project Co and the Board's Representative may access remotely by computer to view drawings comprised within the Design Data (including Reviewable Design Data) and electronically store and/or print copies of such Design Data. In the event of the Board's Representative being unable to access such design database, Project Co shall procure that it is made available for inspection by the Board's Representative, or any other person authorised by the Board's Representative.

#### **Rectification of Project Co's Proposals**

- 12.7 Without prejudice to Clause 12.1, if it should be found that Project Co's Proposals do not fulfil the Board's Construction Requirements, Project Co shall at its own expense, and in accordance with Clause 12.8 below, amend Project Co's Proposals and rectify the Works or any part affected. Such amendment and rectification shall have the effect that:
- 12.7.1 Project Co's Proposals shall satisfy the Board's Construction Requirements; and
- 12.7.2 following the amendment or rectification, the structural, mechanical and electrical performance of the Facilities and/or Retained Estate Handback Infrastructure will be of an equivalent standard of performance to that set out in Project Co's Proposals prior to their amendment or rectification (for the purpose of this comparison disregarding the fault which required the amendment or rectification to be made).
- 12.8 Where Clause 12.7 applies, Project Co shall submit its proposal for amending Project Co's Proposals and rectifying the Works (or any part affected) to the Board's Representative for review under Schedule Part 8 (*Review Procedure*) and shall not amend Project Co's Proposals or commence or allow the commencement of the rectification of the Works (or any part affected) until it is permitted to proceed in accordance with Schedule Part 8 (*Review Procedure*).

#### **Clause 17**

Clause 17 deals with completion. Clause 17.12 provides:-

- 17.12 Pursuant to the terms of the Independent Tester Contract, the parties shall procure that the Independent Tester, when he is satisfied that the Facilities and the Retained Estate Handback Infrastructure are complete in accordance with the Completion Criteria, issues a Certificate of Practical Completion to that effect to the Board and to Project Co.

#### **Clause 67**

Clause 67 is the entire agreement provision. It states:-

- 67.1 Except where expressly provided otherwise in this Agreement, this Agreement constitutes the entire agreement between the parties in connection with its subject matter and supersedes all prior representations, communications, negotiations and understandings concerning the subject matter of this Agreement.
- 67.2 Each of the parties acknowledges that:
- 67.2.1 it does not enter into this Agreement on the basis of and does not rely, and has not relied, upon any statement or representation (whether negligent or innocent) or warranty or other provision (in any case

whether oral, written, express or implied) made or agreed to by any person (whether a party to this Agreement or not) except those expressly repeated or referred to in this Agreement and the only remedy or remedies available in respect of any misrepresentation or untrue statement made to it shall be any remedy available under this Agreement; and

- 67.2.2 this Clause shall not apply to any statement, representation or warranty made fraudulently, or to any provision of this Agreement which was induced by fraud, for which the remedies available shall be all those available under the law governing this Agreement.

## Schedule Part 8 – Review Procedure

### 1. REVIEW

- 1.1 The provisions of this Schedule Part 8 (*Review Procedure*) shall apply whenever any item, document or course of action is required to be reviewed, approved or otherwise processed in accordance with Schedule Part 8 (*Review Procedure*).

- 1.2 Subject to any express provision of this Agreement, the manner, form and timing of any submission to be made by Project Co to the Board's Representative for review under this Schedule Part 8 (*Review Procedure*) shall be a matter for Project Co to determine. Each submission under this Schedule Part 8 (*Review Procedure*) shall be accompanied by a copy of the proposed document to be reviewed (including, where applicable, any Reviewable Design Data) or a statement of the proposed course of action (the entire contents of a submission being referred to in this Schedule Part 8 (*Review Procedure*) as a "**Submitted Item**"). In relation to each Submitted Item, the following procedure shall apply:

- 1.2.1 as soon as possible and, if the Submitted Item comprises:

- (a) an item of Reviewable Design Data;
- (b) a revised Programme submitted pursuant to Clause 14 (*Programme and Dates for Completion*); or
- (c) a document or proposed course of action submitted in the case of (an emergency),

within fifteen (15) Business Days of the date of receipt of a submission (or re-submission, as the case may be) of the Submitted Item to the Board's Representative (or such other period as the parties may agree), the Board's Representative shall return one copy of the relevant Submitted Item to Project Co endorsed "no comment" or (subject to and in accordance with paragraph 3 (*Grounds for Objection*)) "comments" as appropriate; and

- 1.2.2 subject to paragraph 1.4, if the Board's Representative fails to return a copy of any Submitted Item (including any re-submitted Submitted Item) duly endorsed in accordance with paragraph 1.2.1, within fifteen (15) Business Days (or within such other period as the parties may agree in writing) of the date of its submission to the Board's Representative, then the Board's Representative shall be deemed to have returned the Submitted Item to Project Co endorsed "no comment" (and, in the case of Reviewable Design Data, endorsed "Level A - no comment"); and

## EFFECT OF REVIEW

- 4.1 Any Submitted Item which is returned or deemed to have been returned by the Board's Representative endorsed "no comment" (and in the case of Reviewable Design Data, endorsed "Level A - no comment") shall be complied with or implemented (as the case may be) by Project Co.
- 4.2 In the case of any Submitted Item other than Reviewable Design Data, if the Board's Representative returns the Submitted Item to Project Co endorsed "comments", Project Co shall comply with such Submitted Item after amendment in accordance with the comments unless Project Co disputes that any such comment is on grounds permitted by this Agreement, in which case Project Co or the Board's Representative may refer the matter for determination in accordance with Schedule Part 20 (*Dispute Resolution Procedure*) and Project Co shall not act on the Submitted Item until such matter is so determined or otherwise agreed.
- 4.3 In the case of a Submitted Item comprising Reviewable Design Data, if the Board's Representative returns the Submitted Item endorsed other than "Level A - no comment", Project Co shall:
- 4.3.1 where the Board's Representative has endorsed the Submitted Item "Level B - proceed subject to amendment as noted", either proceed to construct or proceed to the next level of design of the part of the Works to which the Submitted Item relates but take into account any amendments required by the Board's Representative in his comments;
- 4.3.2 where the Board's Representative has endorsed the Submitted Item "Level C - subject to amendment as noted" not act upon the Submitted Item, amend the Submitted Item in accordance with the Board's Representative's comments and re-submit the same to the Board's Representative in accordance with paragraph 4.4; and
- 4.3.3 where the Board's Representative has endorsed the Submitted Item "Level D - rejected" not act upon the Submitted Item, amend the Submitted Item and re-submit the Submitted Item to the Board's Representative in accordance with paragraph 4.4,
- unless Project Co disputes that any such comment or proposed amendment is on grounds permitted by this Agreement, in which case Project Co or the Board's Representative may refer the matter for determination in accordance with Schedule Part 20 (*Dispute Resolution Procedure*) and Project Co shall not act on the Submitted Item until such matter is so determined or otherwise agreed except at its own risk in accordance with paragraph 1.3.2.
- 4.4 Within ten (10) Business Days of receiving the comments of the Board's Representative on any Submitted Item comprising Reviewable Design Data, Project Co shall (except in the case contemplated in paragraph 4.3.1) send a copy of the Submitted Item as amended to the Board's Representative pursuant to paragraph 4.3 and the provisions of paragraphs 1.2.1, 4.1 and 4.3 shall apply (changed according to context) to such re-submission.
- 4.5 The return or deemed return of any Submitted Item endorsed "no comment" (or in the case of Reviewable Design Data endorsed "Level A - no comment" or otherwise endorsed in accordance with paragraphs 4.3.1 or 4.3.2) shall mean that the relevant Submitted Item may be used or implemented for the purposes for which it is intended but, save to the extent expressly stated in this Agreement including, without limitation, as specified in Appendix 1 Table A to this Schedule Part 8 (*Review Procedure*), such return or deemed return of any Submitted Item shall not otherwise relieve Project Co of

its obligations under this Agreement nor is it an acknowledgement by the Board that Project Co has complied with such obligations.

**APPENDIX 1**

**TABLE A**

Approved RDD Item (by category)	Scale	Meaning of "Level A - no comment" and "Level B – proceed subject to amendment as noted" endorsement of Reviewable Design Data under Schedule Part Error! Reference source not found. ( <i>Review Procedure</i> ) (including both the actual and deemed endorsement).
Room Data Sheets	n/a	A "Level A - no comment" endorsement or a "Level B - proceed subject to amendment as noted" 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 satisfies Operational Functionality.
Drawings –  Development Control  Plan	1:1250	A "Level A - no comment" endorsement or a "Level B - proceed subject to amendment as noted" endorsement of any 1:1250 scale development control plan 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 contained in the relevant drawing satisfies Operational Functionality.
Drawings –  Site Plan	1:500	A "Level A - no comment" endorsement or a "Level B - proceed subject to amendment as noted" endorsement of any 1:500 scale site plan 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 contained in the relevant drawing satisfies Operational Functionality.
Drawings –  Floor Plans	1:200	A "Level A - no comment" endorsement or a "Level B - proceed subject to amendment as noted" endorsement of any 1:200 scale floor plan 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 contained in the relevant drawing satisfies the Operational Functionality.
Drawings –  Room Layouts (including room elevations) &  Reflected ceiling plans	1:50	A "Level A - no comment" endorsement or a "Level B - proceed subject to amendment as noted" endorsement of any 1:50 scale room layout and/or reflected ceiling drawing means that Project Co may proceed to construct in accordance with the Submitted Item and that the Board is satisfied (to the extent of the design and other information contained in the relevant drawing) that the design and other information in the relevant drawing satisfies Operational Functionality.

Drawings –  Departmental plans	1:50	A "Level A - no comment" endorsement or a "Level B – proceed subject to amendment as noted" endorsement of any 1:50 scale departmental plan means that Project Co may proceed to construct in accordance with the Submitted Item and that the Board is satisfied (to the extent of the design and other information contained in the relevant drawing) that the design and other information in the relevant drawing satisfies Operational Functionality.
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### Completion Criteria

The Completion Criteria are provided in Appendix B to Schedule Part 10. The relevant sections state:-

- 2.1.4 All mechanical and electrical Plant and systems shall be tested, commissioned and operate satisfactorily in accordance with the specified design criteria, any manufacturers' operating requirements and the Room Data Sheets;
- 2.1.31 Project Co shall provide completed Section 6 (Room Data Sheets) of Schedule Part 6 (Construction Matters) for all rooms and areas within the Facilities including the environmental data contained in the Environmental Matrix. These Room Data Sheets shall be complete in all respects;
- 2.1.32 Project Co shall provide Environmental Matrix including Commissioning data test sheets as commissioned in accordance with CIBSE Commissioning Code C and demonstrating compliance with the Environmental Matrix;

### Definitions

**“Disclosed Data”**

means 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;

**“Good Industry Practice”**

means using standards, practices, methods, and procedures conforming to the Law and exercising that degree of skill and care, diligence, prudence and foresight which would reasonably and ordinarily be expected from a skilled and experienced person engaged in a similar type of undertaking under the same or similar circumstances;

**"Operational Functionality"**

means

- (a) the following matters as shown on the 1:500 scale development control plan and site plans;
  - (i) the point of access to and within the Site and the Facilities;

- (ii) the relationship between one or more buildings that comprise the Facilities; and
- (iii) the adjacencies between different hospital departments within the Facilities,

as indicated on the following drawings in Section 4 (*Project Co's Proposals*) of Schedule Part 6 (*Construction Matters*)

- HLM-Z0-00-PL-700-020 Rev 6;
- HLM-SZ-B1-PL-400-400 Rev 2;
- HLM-SZ-00-PL-400-400 Rev 3;
- HLM-SZ-01-PL-400-400 Rev 2;
- HLM-SZ-02-PL-400-400 Rev 2;
- HLM-SZ-03-PL-400-400 Rev 2;
- HLM-SZ-04-PL-400-400 Rev 2;

- (b) the following matters as shown on the 1:200 scale plans:

- (i) the points of access to and within the Site and the Facilities;
- (ii) the relationship between one or more buildings that comprise the Facilities;
- (iii) the adjacencies between different hospital departments within the Facilities; and
- (iv) the adjacencies between rooms within the hospital departments within the Facilities,

as indicated on the following drawings in Section 4 (*Project Co's Proposals*) of Schedule Part 6 (*Construction Matters*)

- HLM-SZ-00-PL-220-001 Rev 6;
- HLM-SZ-01-PL-220-001 Rev 6;
- HLM-SZ-02-PL-220-001 Rev 6;



- HLM-SZ-03-PL-220-001 Rev 6;
  - HLM-SZ-04-PL-220-001 Rev 6;
  - HLM-SZ-06-PL-240-001 Rev 5;
  - HLM-SZ-B1-PL-220-001 Rev 7;
  - HLM-Z5-SL-PL-220-001 Rev 6;
- (c) the quantity, description and areas (in square metres) and minimum critical dimensions of those rooms and spaces as indicated on the following drawings in Section 4 (*Project Co's Proposals*) of Schedule Part 6 (*Construction Matters*)
- HLM-SZ-00-PL-220-001 Rev 6;
  - HLM-SZ-01-PL-220-001 Rev 6;
  - HLM-SZ-02-PL-220-001 Rev 6;
  - HLM-SZ-03-PL-220-001 Rev 6;
  - HLM-SZ-04-PL-220-001 Rev 6;
  - HLM-SZ-06-PL-240-001 Rev 5;
  - HLM-SZ-B1-PL-220-001 Rev 7;
  - HLM-Z5-SL-PL-220-001 Rev 6;
- (d) the location and relationship of equipment, furniture, fittings and user terminals as shown on the 1:50 loaded room plans in respect of:
- (i) all bed and trolley positions;
  - (ii) internal room elevations;
  - (iii) actual ceiling layouts;
  - (iv) the Non-Clinical Services supplies, storage, distribution and waste management spaces; and
  - (v) the ICT requirements;
- (e) the location of and the inter-relationships between rooms within the departments within the Facilities, as indicated on the following drawings in Section 4 (*Project Co's Proposals*) of Schedule Part 6 (*Construction Matters*)

- HLM-SZ-00-PL-220-001 Rev 6;
- HLM-SZ-01-PL-220-001 Rev 6;
- HLM-SZ-02-PL-220-001 Rev 6;
- HLM-SZ-03-PL-220-001 Rev 6;
- HLM-SZ-04-PL-220-001 Rev 6;
- HLM-SZ-06-PL-240-001 Rev 5;
- HLM-SZ-B1-PL-220-001 Rev 7;
- HLM-Z5-SL-PL-220-001 Rev 6;

but only insofar as each of the matters listed in (a) to (e) above relate to or affect Operational Use;

**"Operational Use"**

means the use of a room or space to the extent that it is used by the Board or its employees, tenants, agents and/or contractors (but not to avoid doubt Project Co staff) for carrying out the Board Services;

**Board Construction Requirements**

Section 2 of the BCRs sets out the project wide requirements. It provides, *inter alia*,:-

*"Project Co shall ensure that the design of the Facilities draws upon and endeavours to further develop, improve and exceed current best practice (and Good Industry Practice) standards achieved in other similar schemes, and meets the requirements of the prospective patient groups, staff and the public. This philosophy of design and sustainability shall be extended across all parts of the Facilities including landscaped and external areas as well as the essential patient areas and these endeavours should extend to benefit the wider population of the community."*

**2.2 (b)**

*"Project Co shall ensure the Facilities comply with the following general requirements of the Board: ....b) Adherence to the requirements set out in CEL 19 (2010) "A Policy for Design Quality for NHS Scotland, 2010 Revision published by the Scottish Government..."*

Clause 2.3 of the BCRs deals with the NHS requirements it provides:-

*"In addition to the standards listed in paragraph 2.4 of this sub-section 3 of the Board Construction Requirements, unless the Board has expressed elsewhere in the Board's Construction Requirements, a specific and different requirement, the facilities shall comply with but not be limited to the provisions of the NHS requirements as same may be amended from time to time".*

This includes the health technical memoranda and Scottish health technical memoranda, the Scottish Health Facilities Notes and Health Facilities Notes and Scottish Hospital Planning Notes and Scottish Health Planning Notes. In relation to the HTMs, SHTMs, SHFNs, HFNs and SHPNs Clause 2.3 provides:-

*“Project Co shall in relation to all SHTM and all HTM (except HTM where an SHTM exists with the same number and covering the same subject matter): take fully into account the guidance and advice included within such SHTM and HTM; ensure that the facilities comply with the requirements of such SHTM and HTM; and adopts as mandatory all recommendations and preferred solutions contained in such SHTM and HTM”.*

*“Project Co shall, in relation to all SHFN and all HFN (except HFN where an SHFN exists with the same number and covering the same subject matter): take fully into account the guidance and advice included within such SHFN and HFN; ensure that the Facilities comply with the requirements of such SHFN and HFN; and adopt as mandatory all recommendations and preferred solutions contained in such SHFN and HFN.”*

*“Project Co shall take fully into account the guidance and advice included within SHPN. Project Co shall ensure the Facilities comply with the requirements of SHPN and shall adopt as mandatory any recommendations.”*

Clause 2.4 of the BCRs deals with Minimum Design & Construction Standards and provides, *inter alia*:-

*“Project Co shall also ensure that the Facilities comply with Good Industry Practice, NHS Scotland requirements, relevant statutory requirements (including highways) and required consents including, but not limited to, the following as the same may be amended from time to time:....  
v) relevant British Standards, Codes of Practice, or equivalent European industry recognised standards...”*

Clause 2.5 deals with the hierarchy of standards within the BCRs. It provides, *inter alia*:-

*“Where contradictory standards/advice are apparent within the terms of the Board’s Construction Requirements and the appendices then subject to the foregoing paragraph then (1) the most onerous standard/advice shall take precedence and (2) the most recent standard/advice shall take precedence. When the more onerous requirement is to be used the Board will have the right to decide what constitutes the more onerous requirement”.*

Clause 3.6.3 of the BCR’s specifically references the RDS.

It provides:-

*“Project Co shall provide facilities that, as a minimum, meet all the requirements specified in the room data sheets included in section 6 the Schedule Part 6 of the Project Agreement. If the room data sheet is not included in Schedule Part 6 of the Project Agreement shall be provided through RDD.*

*Project Co shall provide fully developed room data sheets submitted to the Board as reviewable design data for review by the Board in accordance with Schedule Part 8 and Clause 12.6 of the Project Agreement.*

*As part of the commissioning process, Project Co shall be responsible for demonstrating compliance with the requirements within the room data sheet.*

*For the avoidance of doubt, Project Co shall provide mechanical ventilation, comfort cooling and air conditioning to suit the functional requirements of each of the rooms in the facilities. Irrespective of the ventilation requirements in room data sheets, where rooms are clearly intended to be occupied and/or become internal spaces during design development and natural ventilation is not possible, mechanical ventilation and/or extract ventilation shall be provided as appropriate to suit the function of the space”.*

There are also the following additional specific comments in the BCRs regarding ventilation / infection control:-

### **3.5.3 Design for Therapy**

*The Board places a high priority on how the design of the Facilities impacts, both mentally and physically, on the treatment experience for patients, families, visitors and staff. It is therefore essential that Project Co develops a clear strategy which is interpreted through the design of the Facilities and focuses on providing an environment that takes every opportunity to enhance the experience of every person who comes in to contact with it.*

*This paragraph 3.5.3 shall be read in conjunction with the requirements for infection control. Whilst it is expected that there is a balance to be drawn between design for therapy and infection control requirements, the requirements of one over the other shall not preclude the use of well thought out design and good quality solutions.*

### **4.5.17 Completion Requirements**

*On completion of the Works, Project Co shall provide the Facilities as clean to comply with the Schedule Part 10 (Outline Commissioning Programme) of the Project Agreement. Project Co shall demonstrate how the proposals facilitate the control and management of an outbreak and spread of infectious diseases in accordance with SHTM 03-01 and SHFN 30.*

### **8.5.3 Air Quality**

#### **i. Internal**

*Air quality in all areas shall take account of occupancy levels, internal pollutants, heat gains, external pollutants and atmospheric conditions and shall be controlled to provide adequate comfort and fresh air levels appropriate to the functions of each department area.*

*Particular attention shall be given to the risk of cross infection within the hospital / healthcare environment and shall be such as to minimise the spread of infection. Project Co shall demonstrate through submission of information to the Board as Reviewable Design Data for review by the Board in accordance with Schedule Part 8 (Review Procedure) and Clause 12.6 (Board design approval) of the Project Agreement, how the proposals facilitate the control and management of an outbreak and spread of infectious diseases, and in particular shall comply with the requirements of SHTM 03-01 (Ventilation in Healthcare Premises). In order to reduce cross-contamination, the design of the Facilities shall incorporate 100% fresh air supply systems only.*

*Project Co's demonstration referred to above is to cover all aspects of the building, its services, spatial relationships, soft and hard FM proposals and incorporate requirements of the Board's Infection Control Team.*

*Project Co shall provide natural ventilation wherever possible, except where:*

- a) The level of outside noise is unacceptable;*
- b) Safety or security features must be provided;*
- c) Unpleasant smells are generated either inside or outside the building;*
- d) Where inflows of air are undesirable;*
- e) Clinical requirements, as detailed in the Room Data Sheets, do not allow in areas such as isolation rooms, where positive or negative pressure are required; and*
- f) Areas which are air-conditioned.*

### **8.7.8 Mechanical Ventilation and Air Conditioning**

*The heating, ventilation and air conditioning systems shall be logically designed to operate efficiently incorporating heat recovery and providing local control where required. Project Co should ensure avoidance of simultaneous heating and cooling, either by the ventilation system itself or between the ventilation system and any other heating and cooling system, The energy and power systems shall be appropriately designed to provide fully integrated designs in terms of the incorporation of engineering services into the building fabric and external spaces.*

*The need to maintain comfort conditions in accordance with the Room Data Sheets in all areas but particularly in clinical areas is of paramount importance and Project Co shall develop strategies for achieving these conditions together with minimum energy consumption.*

*Project Co shall provide natural and mechanical ventilation, comfort cooling, and air conditioning to suit the Facilities and clinical requirements and provision of the Clinical Services. Project Co shall provide a climate control facility in clinical and staff areas which are provided with comfort cooling (if applicable). The use of low carbon solutions is anticipated for such requirements.*

...

*Project Co shall ensure heat gain from all equipment and personnel is allowed for in sizing and selection of the systems.*

*Project Co shall demonstrate how the proposals facilitate the control and management of an outbreak and spread of infectious diseases in accordance with SHTM 03-01, SHFN 30 and HAI-SCRIBE.*

*Project Co demonstration is to cover all aspects of the building, its services, spatial relationships, Soft and Hard FM proposals (as appropriate) and incorporate requirements of the Board's Infection Control Team.*

*Project Co shall ensure that ventilation systems installed in areas classified as hazardous are designed to relevant standards.*

*Where grilles or diffusers are used within rooms Project Co shall ensure they are:*

- a) Arranged to avoid draughts; and*
- b) Designed to minimise noise intrusion into the space.*

*Project Co shall incorporate provision to include humidification to the AHU plant at a future date.*

The relevant SHTM for ventilation relative to multi-bedrooms is SHTM 03/01 section 2.60 – specific requirements for hospital departments. It provides as follows:-

*"Specific requirements for individual spaces and departments are included in the health building notes (HBNs) and activity database (ADB) A sheets, or Scottish health planning notes (SHPNs)."*

The relevant ADB sheet in respect of multi-bedrooms provides that multi-bedrooms should have balanced/negative pressure relative to adjoining space.

SHPN-04-01 is the recognised planning guidance for in-patient facilities in Scotland. It lists and describes all rooms which constitute a ward (see for example paragraph 2.46 re wards being made up of single and multi-bedded rooms and paragraph 3.1 which sets out a typical ward configuration.)

*"The example layouts for a single-bed room in Appendix 1 shows the zones to enable these activities to take place around a bed space.*

*3.9 The bed space should allow procedures to be carried out from either side of the bed with adequate circulation space so that medical emergency teams and equipment can gain access to the patient. There should be adequate space for moveable furniture and unobstructed access for wheelchairs, as well as space to accommodate overnight visitors.*

*3.10 The alternative to a single-bed room is a multi-bed room. These will only occur in refurbishment projects or in new build projects where a clinical need has been established. In a multi-bed room the different activity zones move to a greater or lesser degree further away from the bedside, and may be shared to support all the beds in the room. The acceptable maximum number of beds in a multi-bed room is four as it gives each patient a corner as a 'home base' and a neighbour on one side only.*

*A high percentage of single-bed rooms within a twenty-four bed ward will provide the flexibility necessary to allow gender separation and improved privacy.*

*3.11 All single-bed and multi-bed rooms must be provided with en-suite sanitary facilities and, whether in a single-bed or a multi-bed room, all bed spaces should be provided with..."*

It is clear from the foregoing that wards are made up of various bedrooms which may be either single or multi-bedded.

Appendix D – Schedule of design data from IHSL's EM





**PROJECT | Edinburgh Royal Hospital for  
Sick Children and  
Department of Clinical Neurosciences**

**Review of 4 Bed Ward Ventilation  
Design and the David  
Rollason Associates Report**



## This Version

Authored by:

name: Lindsay Wood  
role: Associate  
signed: \_\_\_\_\_

date: 06/12/17

Reviewed by:

name: Bill Chalmers  
role: Partner  
signed: \_\_\_\_\_

date: 06/12/17

Authorised for Issue by:

name: **Bill Chalmers**  
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date: **06/12/17**



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## 1. EXECUTIVE SUMMARY

Multiplex (“MPX”) has provided a design for certain 4-bed areas in accordance with the relevant Room Data Sheets (RDS) and Environmental Matrix. The design positively pressurises those areas.

The Board provided a Reference Design (undertaken by Hulley and Kirkwood) which stated single bedrooms, and 4 bed areas would be positively pressurised.

We have reviewed communications from the Board and now from David Rollason Associates (DRA) that take a different view. What seems clear is that there is genuine dispute over the interpretation of the various guidance and recommendations surrounding bedroom and ward ventilation. In particular, whether the 4- bed areas should be treated as a single bedroom or like a ward. I have tried to use the neutral term “area” throughout this report.

SHTM 03-01 notes that although natural ventilation means that it is almost impossible to maintain consistent flow rates, it is normally acceptable for general areas including wards. This implies that ward pressure balances and ventilation rates within limits are not critical. There is no reason why this would not apply equally to 4 bed areas in my view.

The implication of SHTM 03-01 Appendix 1 is that general wards can be positively pressurised, and there is no reason why 4 bed areas would be treated different unless specifically provided for.

Should it be deemed that SHPN 04-01 applies to specific spaces, it refers to SHTM 2025 and, by implication, SHTM 03-01 for ventilation requirements. It also notes natural ventilation should be employed where appropriate and possible. It further notes air movement generally should be clean to dirty.

HBN 23, which is considered ‘Best practice Guidance’ in Scotland, follows terminology as SHPN 04-01, in that, it refers to SHTM 2025 and, by implication, SHTM 03-01 for ventilation requirements. It also notes natural ventilation should be employed where appropriate and possible. It further notes air movement generally should be clean to dirty.

SHFN 30 part A was previously referenced by the Board in communications, but is not by DRA. The requirements relating to ventilation in that guidance are unclear. However, the option to cohort patients with the same infection in multi bed rooms is mentioned, but goes on to state that the need for this should be considered at the design stage. Presumably if this was the intent, which is what DRA now imply, the Board should have made this known prior to Financial Close (FC).

The RDS and Environmental Matrix at FC stated the multi bed areas in question were to be positively pressurised, which aligned with the Reference Design Environmental Matrix. These documents were subject to review and approval. I would contend this is the normal way to consult with the Board on technical issues and that this was done. DRA are of the view that the Board challenged the design during the RDD process. However, in my view, it is to be noted that the comments made at the time of Financial Close on the Environmental Matrix related to “bedroom” ventilation and not the 4 bed areas now in question. I am reinforced in that regard because following that comment, MPX/Project Co responded to confirm that changes had been made to address single bedrooms. No feedback was returned at that time by the Board to say that MPX/Project Co had misunderstood the scope of the original comment.



## 2. INTRODUCTION

I was approached by Brodies LLP on behalf of MPX to review technical issues relating to the design and construction of the new Edinburgh Royal Hospital for Sick Children. I have experience designing to the various Scottish Health Technical Memoranda (SHTM), Scottish Health Planning Notes (SHPN) and other relevant standards which apply in this case.

I have been asked for my view on the following question:

*“ Whether is your (DSSR) opinion the ventilation design for certain 4-bed wards is in accordance with MPX’s contractual obligations ? “*

Since the instructions from Brodies LLP I have received a copy of a report by David Rollason of David Rollason Associates dated 1 November 2017. I have taken that document as a guide to what the Board now considered to be non-compliant and respond to it in this report.

This opinion has been written by Lindsay Wood BEng(Hons) CEng MCIBSE. I am a Chartered Engineer and an Associate within DSSR, a practice of consulting engineers offering specialist mechanical and electrical (M&E) engineering designs and advice. I have over 21 years’ experience of design of M&E services systems in hospitals and other buildings. My curriculum vitae is included in Appendix A.



### 3. LIMITATIONS OF THE REPORT

In the production of this report, a number of limitations apply relating to the available information that has been used to formulate a professional opinion on the compliance of the ventilation of the 4 bed areas. These limitations are detailed below:

- Detailed design drawings (layouts and schematics) and schedules of the ventilation installation have not provided or reviewed. In particular, we have not seen the drawings or schedules submitted for RDD purposes, and as such, cannot comment on their content.
- A Reference Design has been produced by the Board's Consultants – Hulley and Kirkwood, which was used to obtain bids for the Hospital project. Whilst we have not been provided with the full content of this reference design, we have been provided with a copy of the Reference Design Environmental Matrix Issue 3 (dated 19/09/12), and therefore our comments contained herein refer to this Environmental Matrix.



## 4. OUTLINE OF ISSUE

Reference is made to the report by David Rollason. That report concludes that MPX is in breach of its contractual obligations with regard to the design of certain 4-bed areas. The design by MPX positively pressures the areas and David Rollason/Board consider that balanced/negative pressure is required.

### 4.1. Reference Information

I have been given access to various pieces of reference material including contract documentation, design information and relevant contract correspondence. In addition, I have had access to the relevant healthcare standards when considering the issue.

For completeness, I have listed below the pieces of information that I have used in consideration of the technical issue in question.

#### 4.1.1. Contract Documentation

Schedule Part 6 Section 3 (Board Construction Requirements) Revision I (herein referenced BCR)

Schedule Part 6 Section 6 (Room Data Sheets), consisting of:

HLM-SZ-SL-RD-400-001 Rev 01 (dated 18/09/14) – Room Data Sheets (RDS)

WW-XX-XX-DC-001 Env Matrix (no revision) – Environmental Matrix.

It is understood that the RDS and Environmental Matrix listed above were prepared by Project Co, in the response to an Environmental Matrix was produced as part of the Reference Design.

Reference Design Environmental Matrix (Hulley and Kirkwood) – 3<sup>rd</sup> Issue (dated 19/09/12)

#### 4.1.2. RDD Information

WW-XX-XX-DC-001 Env Matrix Rev 05 – Environmental Matrix Status B with Board Comments dated 15/04/16

#### 4.1.3. Contract Correspondence

MPX-GC-017577: Ventilation 4 bedded wards (dated 12/05/17)

R.A.M.-GC-000273: Re: ventilation – 4 bedded wards (dated 16/05/17)

R.A.M.-GC-000277: Re: ventilation – 4 bedded wards (dated 23/05/17)

MM-GC-002926: re: Bedroom Ventilation (dated 05/06/17)

R.A.M-GC-000278: Fwd: Bedroom Ventilation (dated 15/06/17)

TUV SUD Design Note – Accommodation Design Criteria – Single rooms and Multi Bed Wards (dated 21/02/17)

TUV SUD Paper – General Ward – Ventilation Amendment Proposal to Achieve Room Balance (dated 11/05/17)



**4.1.4. Reference Documentation (Healthcare Standards)**

SHTM 03-01 Part A – Ventilation of Healthcare Premises Part A (Design and Validation)

SHPN 04-01 – Adult In-Patient facilities

HBN 23 – Hospital Accommodation for Children and Young People

SHFN 30 Part A – Manual – Information for Design teams, Construction teams, Estates & Facilities, and Infection Prevention & Control teams





## 5. TECHNICAL DISCUSSION

### 5.1. Contractual Requirements

The BCR states a number of salient requirements as follows:

2.5 – Hierarchy of Standards. This section defines the hierarchy to be followed where there are contradictory standards referenced.

In particular it notes that “Where contradictory standards / advice are apparent within the terms of the Board’s Construction Requirements and the appendices.....then (1) the most onerous Standard / advice shall take precedence and (2) the most recent standard / advice shall take precedence”. When the more onerous requirement is to be used the Board will have the right to decide what constitutes the more onerous requirement”.

It further notes “In certain instances NHS publications include a number of options or alternative solutions. Where the Board has defined their preference specifically, Project Co shall adopt these preferences as a mandatory requirement. Where no Board preference is stated, Project Co shall engage the Board in the design development process to seek and incorporate the Board’s preference within the facilities.

3.6.3 - Room Data Sheets. This section states that “Project Co shall provide Facilities that, as a minimum, meet all the requirements specified in the Room Data sheets included in Section 6 (Room Data Sheets) of the Schedule part 6 (Construction matters) of the Project Agreement. Room Data Sheets not included in Section 6 (Room Data Sheets) of the Schedule part 6 (Construction matters) of the Project Agreement shall be provided through RDD.

8 - Mechanical & Electrical Engineering Requirements. This section opens with the statement “Project Co shall provide the Works to comply with the Environmental Matrix”.

8.2 – Infection Control. States that “Mechanical and Electrical equipment selections and designs shall take cognisance of HAI-SCRIBE in its entirety”.

8.5.2 – States a thermal comfort criteria of maximum temperature 25 deg C for patient and staff areas not to be exceeded for more than 50 hours per annum.

8.5.3 – Air Quality. This section notes that “Project Co shall provide natural ventilation wherever possible, except where.....e) Clinical requirements, as detailed in the Room Data Sheets, do not allow in areas such as isolation rooms, where positive or negative pressure are required...”.

Within the BCR, there does not appear to be specific or explicit reference to pressure regimes within the multi-bed areas which are subject to this dispute, nor do there appear to be any statements relating to the definition of, and related design criteria for, multi-bed areas, which I would expect to see if the Board had explicit requirements for these spaces. In the absence of any specific guidance in the BCR or RDS, I understand that MPX/WW have stated their proposed pressure regimes in their FC Environmental Matrix and Room Data Sheets.



## 5.2. Reference Design Environmental Matrix

A Reference Design has been produced by the Board's Consultants – Hulley and Kirkwood, which was used to obtain bids for the Hospital project.

Whilst we have not been provided with the full content of this reference design, we have been provided with a copy of the Reference Design Environmental Matrix Issue 3 (dated 19/09/12).

Within this document, there is a page which identifies room types and provides a reference template for each room type, which is then utilised as the basis for the individual Environmental criteria for each individual room. The relevant aspects of this are included below:

Room Function	Ventilation				
	Type	Supply ac/hr	Extract ac/hr	Relative Pressure	Min Filtration
<b>Bedroom</b>	Central Supply Air	4	0	Positive	G4
<b>Multi-bed Wards</b>	Central Supply Air	4	0	Positive	G4

The Reference Design Environmental Matrix also includes a page of guidance notes which include the following statement:

*'This workbook is prepared for the Reference Design Stage as an easier reference tool to replace ADB RDS M&E Sheets for the Environmental Criteria elements as described on these sheets.'*

The Reference Design Environmental Matrix has been used as the basis of the Environmental Criteria utilised by MPX and their designers when bidding for the Project.

It is noted that the information above includes positive pressure to both the single bedroom, and the multi-bed wards, which is the room type which has been applied to the 4 bed areas within the Reference Design Environmental Matrix.

It is further noted that the supply air requirements contained within the Reference Design Environmental Matrix are lower than those contained within SHTM 03-01 Part A (described in more detail in section 5.3.1).



### 5.3. Healthcare Standards Requirements

#### 5.3.1. SHTM 03-01 Part A – Ventilation for Healthcare Premises – Design and Validation

This document is referenced by both SHFN 30 and SHPN 04-01 and so is significant in the discussion of ventilation configuration.

Reference is also made in some older SHPN / HBN documentation to SHTM 2025 (or HTM 2025 in the case of HBN). However, SHTM 2025 was superseded by SHTM 03-01 in Oct 2011, with the latest version available on the HFS website having been published in February 2014. Since SHTM 2025 (and HTM 2025) have been superseded, the design guidance which would be relevant to be applied would be SHTM 03-01.

In 2.3, SHTM 03-01 notes “As the motivating influences of natural ventilation are variable, it is almost impossible to maintain consistent flow rates and ensure that minimum ventilation rates will be achieved at all times this variability is normally acceptable for general areas including...general wards”.

Sections 2.6 to 2.9 discuss the use of Extract Ventilation systems, supply only ventilation, and supply and extract ventilation. None of these paragraphs reference single bed rooms, multi bed rooms or wards specifically, suggesting that a variety of solutions may be acceptable. Paragraph 2.8 Supply only ventilation does however reference Appendix 1 table A1 with respect to air change rates. An extract of table A1 is given below;

Table A1



It can be seen that General Wards can acceptably be provided with supply or natural ventilation, and that single rooms can be provided with supply, natural or extract ventilation. General wards have no pressure requirements, and single bed wards can be neutral or negatively pressurised. However given the statement in 2.3, should a specific pressure regime be critical in either of these room types, natural ventilation would not be an appropriate solution.

### **5.3.2. SHPN 04-01 – Adult in-patient facilities**

As this document relates specifically to Adult in-patient facilities, its relevance may be subject to debate. However, the following items are worthy of note;

- 1.5 Presumption of single rooms, unless clinical reason for multi bedded rooms
- 1.7 Appear to use the terms “multi-bed rooms” & “multi bed wards” as interchangeable terms. 1.8 also refers.
- 3.10 This section notes that “The alternative to a single bed room is a multi-bed room. These will only occur in.....new build projects where a need has been established”.
- 4.19 Ventilation design should be in accordance with SHTM 2025, which is to be replaced by SHTM 03-01
- 4.20 Air movement induced by mechanical ventilation should be clean to dirty.
- 4.77 Where appropriate and possible, natural ventilation should be employed.
- 4.79 Energy recovery should be employed when possible and particularly in ventilation systems

### **5.3.3. HBN 23 - Hospital Accommodation for Children and Young People**

HBN 23 is published for use in England, however, it is noted within the HFS publication list with a ‘*Status in NHS Scotland of ‘Best Practice Guidance’*” and as such is relevant to consider in relation to the discussions within this report. The following points are relevant to note;

- 3.136 notes number of bed areas and their configuration will depend on size of population and local knowledge of health needs
- 3.137 notes that 100% single rooms with en-suite offers maximum flexibility. For best practice 50% of rooms should be single.
- 3.138 Allocation of multiple bed areas is ultimately a local decision
- 3.138 Within HBN 23 there are various references to 4 bed wards (for example in the context of in-patient accommodation Para 3.138), as well as references to multi-bed rooms. As with SHPN04-01, these terms appear to be interchangeable through HBN 23, and without clear definition of each term
- 5.8 Where appropriate and possible, natural ventilation should be employed.
- 5.11 Where economically viable, energy recovery should be used on air conditioning and ventilation systems
- 5.53 Further reference to the use of natural ventilation
- 5.53 HBN 23 references HTM 2025 (since it is an English document), which by implication would mean that the relevant, current Scottish guidance would be SHTM03-01.



5.58 & 5.59 these infer that air movement induced by mechanical ventilation should be clean to dirty.

#### 5.3.4. SHFN 30 part A

This document was previously referenced in correspondence from the Board that I've been provided with but is not relied upon by David Rollason of DRA. I have considered the document and do not think it provides the answer one way or another but is in my view more supportive of MPX. Clause 5.4 notes that "Multi bed rooms can also be used to cohort patients with the same infection.....The possible need for this should be considered at the design stage". There is again no reference to pressurisation in this clause. In fact clause 5.2 may be more relevant on this context; "The key to effective isolation on general wards is the provision of sufficient en-suite single-bed rooms to prevent patients known to be a risk for spreading infections being cared for in open ward areas.....

Most patients requiring segregation /isolation on general wards can be isolated effectively in en-suite single rooms". The implication here is that isolation of infectious patient is best dealt with in single bed rooms. If a different approach is being taken, and multi bed rooms are now being considered for that purpose that should have been considered at design stage, i.e. prior to FC.

Clause 6.10 notes that "The same basic principle applies for all clinical areas whereby positive pressurisation is maintained by providing supply ventilation in cleanest areas cascading to dirty areas where negative pressure will be achieved". Where single and multi-bed rooms are classed as clinical areas, we would contend that this principle is achieved, with supply air to rooms providing positive pressure cascading to corridors (less clean) and en-suites (dirty).

Finally it is significant that between 6.11 and 6.12, SHFN 30 notes "See Scottish Health Technical Memorandum 03-01 Parts A and B for comprehensive guidance on the design, installation and operation management of ventilation systems in healthcare premises". It is clear that SHFN 30 sets very general principles only and that SHTM 03-01 should be referenced for detail.

#### 5.4. RDD Environmental Matrix

The RDS and Environmental Matrix submitted at Financial Close align with each other in stating the following:

- Single bedroom 4 ac/h supply ventilation providing balanced ventilation, noting that the reduction to 4 ac/h is to accommodate allowance for natural ventilation via openable window
- Multi bed wards 4 ac/h supply ventilation providing positive pressure ventilation, noting that the reduction to 4 ac/h is to accommodate allowance for natural ventilation via openable window

I understand that MPX and their designer WW, have assumed that the 4 bed areas are designed as multi-bed ward, and, in the absence of specific guidance, I would concur with this approach.

I note that the air changes within the WW Environmental Matrix are based on those noted in the Reference Design Environmental Matrix. Additionally, the guidance notes on this version of the Environmental Matrix also state that this is used to replace the ADB RDS M&E sheet for ease of reference.

There is additional notation (note 25) in the guidance section which highlights that the air change rates applied to single bedrooms relates to a mixed mode ventilation strategy which has been



applied for physiological benefits to the occupants of the space, and also for energy conservation purposes, which I would generally concur with.

My interpretation of the table contained within SHTM 03-01 Part A is that for single rooms, supply and/or natural and/or extract ventilation is appropriate. For general wards, supply and/or natural ventilation is appropriate. The implication here is that general wards will always be balanced or positively pressurised. Single bedrooms may be balanced or negatively pressurised.

The Board comment at FC states as follows:

*'detailed proposal awaited on bedroom ventilation to achieve balanced / negative pressure relative to corridor'*

In response to that MPX made alterations to the single bedroom arrangements. In the context of the requirement of SHTM 03-01, the details in the RDS and the later feedback returned on MPX's response, it is reasonable to assume that the Board comment was intended at that time to refer only to the single bed rooms in the Environmental Matrix and RDS. As above, changes were made by MPX to address the comments.



## 6. REVIEW OF THE DRA REPORT

I have reviewed the observations detailed in the DRA report dated 1 Nov 2017, and would comment as follows on the opinions offered:

Section 1 and 2 of the DRA report appear to be an introduction and summary of the design, therefore require no further comment.

Section 3 makes no mention of the Reference Design Environmental Matrix. It consequently takes no account that the Board's design was to pressurise the 4-bed areas in question.

Section 3 makes multiple reference to ADB sheets, but does not make any reference to the guidance notes within the Reference Design Environmental Matrix or later Environmental Matrix that state these documents are to be used in lieu of the ADB content for ease of reference. The reference to the PCP's needs to be read with that in mind, that the ADB sheets were being superseded by the engineering matrices.

Section 3 also makes reference to the comment returned by the Board on the Environmental Matrix but no explanation is provided about why that comment would have been taken as referring to the 4-bed areas. As I have set out, changes were made to the single bedrooms in response to the feedback received.

The DRA report does not appear to make reference to natural ventilation as a part of the design solution for these spaces. I believe this to be significant in the issue, and as such should be acknowledged. Whilst I have not been party to the full Reference Design content, I would expect (given experience on similar projects) that the Reference Design information is likely to have had a natural ventilation design strategy embedded within it. Also, the healthcare guidance in various locations (eg HBN 23 para 5.8; SHPN para 4.77; SHTM 03-01 Para 2.3) state that 'natural ventilation of rooms should be used wherever appropriate' or equivalent wording.

Similarly, the DRA report does not appear to make reference to HBN 23, which I believe is relevant guidance to consider in the context of this facility.



## 7. CONCLUSION

The parties have taken a different approach to whether the design should reflect that required for a single bedroom or a ward. There is nothing specific in the BCR's to assist with interpretation as to whether the area is a ward or bedroom.

In the absence of explicit requirements on the design criteria for 4 bed areas, I would concur with the approach taken by MPX in applying general ward design criteria from table A1 – recommended Air Change Rates from SHTM 03-01 Part A to the spaces designated as 4 bed areas, and indeed this has been outlined within the Financial Close documentation presented by ProjectCo.

David Rollason has placed some reliance on the ADB sheets, however, within both the Reference Design information, and MPX information, the Environmental Matrix explicitly states that it is being used for ease of reference to replace the ADB M&E sheets for environmental criteria. If there is conflict between the ADB sheets and RDS/Environmental Matrix then for ventilation requirements I would expect MPX to follow what is in the engineering documents. I note that the BCR's at Section 8 "Mechanical & Electrical Engineering Requirements" provides that "Project Co shall provide the Works to comply with the Environmental Matrix".

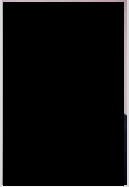
I do not consider that the NHS Requirements or Good Industry Practice leads to a different view in contrast to what is said by David Rollason. The NHS Requirements do not provide definitive guidance and in fact suggest that cohort of infection patients is best dealt with in single bed rooms.

In my experience the fact that the design of 4 bed areas, as it stands, provides a positive pressure to the corridor may be considered beneficial to some patient groups.





## 8. APPENDIX A - CURRICULUM VITAE : LINDSAY WOOD

	<b>Name</b>	Lindsay Wood
	<b>Current Position</b>	Associate
<b>Education and Qualifications</b>		
BEng (Hons), CEng		
<b>Professional Memberships</b>		
Chartered Engineer		
Chartered Institution of Building Services Engineers (MCIBSE) Member		
Low Carbon Energy Assessor (LCEA Scotland)		
<b>DSSR Career Summary</b>		
1996 - Present	Project Engineer to	Associate

### Overview

Lindsay is an Associate with DSSR. She has a mechanical background and has acted as the Lead Mechanical Engineer and Project Co-ordinator in a variety of projects within various sectors and has recently been the project co-ordinator on large scale education and healthcare projects. Lindsay has over 21 years experience in Building Services with DSSR and a Chartered Engineer for 10 Years.

Having developed expertise in the design of low energy educational buildings using IES Modelling as a tool to deliver optimum low energy design solutions, Lindsay will ensure that this experience is utilised for this project to ensure that the results influence the building design positively.

### Relevant Experience

#### Bristol & Southmead Hospital

Project Co-ordinator on the redevelopment of existing hospital site with new buildings for Bristol and Southmead Hospital PPP 100,000m<sup>2</sup> of acute medical facilities.

#### NAHSW, Enniskillen

Mechanical Associate on the 63,000m<sup>2</sup> New Acute Hospital in Enniskillen, Northern Ireland. DSSR was responsible for the complete design of mechanical and electrical services throughout the hospital. The building uses passive environmental design to satisfy requirements for natural ventilation, access to daylight, sunlight and thermal comfort. With the use of low carbon and renewable energy systems complete with sophisticated Building Energy Management systems, the highly-efficient design makes the most of every unit of energy consumed.

#### Forth Valley Royal Hospital, Larbert

Project Co-ordinator responsible for delivery of mechanical design packages for new £260m Forth Valley Royal Hospital new build PPP project, including responsibility for co-located M&E design team. Part of this development included a dedicated Learning Centre incorporating 150 seat Lecture Theatre, Teaching / Seminar spaces and simulation Theatre & Ward Facilities.

#### Acorn Health Centre, Huntingdon

Project Co-ordinator and Senior Mechanical Engineer on new 5,000m<sup>2</sup> health facility in Huntingdon, comprising consulting space for health professionals, along with support offices and associated community facilities, including seminar / conference spaces.

#### Beatson Cancer Care Centre, Glasgow : £45m

Project Co-ordinator on the £45m Beatson Cancer Care Centre new build at Gartnavel Hospital, Glasgow with full occupancy achieved in 2007.

#### Mid Argyll Community Hospital, Lochgilphead

Project Co-ordinator on the Mid Argyll Community hospital project including Maternity, Geriatric & Dementia Care Facilities.

#### Sapley Sq, Huntingdon

Project Co-ordinator and Senior Mechanical Engineer on replacement shop units and community facility adjacent to main Acorn Health Facility.



## 9. APPENDIX B - CURRICULUM VITAE : BILL CHALMERS

	<p><b>Name: Bill Chalmers</b></p> <p><b>Current Position: Partner</b></p>
<p><b>Education and Qualifications</b> BEng (Hons), CEng</p>	
<p><b>Professional Memberships</b> Chartered Engineer Member of the Chartered Institution of Building Services Engineers (MCIBSE) Member of the Institute of Corrosion</p>	
<p><b>Career Summary</b> 1980 - Present Trainee to Equity Partner</p>	

### Overview

Bill was initially employed by DSSR in 1980 as an Apprentice Mechanical Engineer, progressing through the Firm to become an Equity Partner in 2007.

His experience in the property and construction industry ranges through all sectors. Bill has a wealth of experience in managing design and reporting teams on fast track projects.

Bill's key skills and experience are setting up resources and leading teams, formulating and agreeing project deliverables, responsibility for commercial agreements and undertakings and monitoring of DSSR service provision against agreed parameters, including schedule.

Bill is responsible for the Peer Review, QA and for DSSR Performance and Delivery.

Bill has also served as an External Assessor for the Building Services Degree Course at Glasgow Caledonian University.

### Relevant Experience

#### Enniskillen Hospital, Ireland

Overseeing of Project on the 63,000m<sup>2</sup> New Acute Hospital in Enniskillen, Northern Ireland. DSSR was responsible for the complete design of mechanical and electrical services throughout the hospital.

#### Bristol and Southmead Hospital

Monitoring of DSSR service provision on key elements of the redevelopment of existing hospital site with new buildings for Bristol and Southmead Hospital PPP 100,000 m<sup>2</sup> of acute medical facilities.

#### Forth Valley Royal Hospital, Larbert, Stirling

Partner responsible for delivery of M&E Services on the new £260m Forth Valley Acute Hospital new build PPP project. Part of this development included a dedicated Learning Centre incorporating 150 seat Lecture Theatre, Teaching / Seminar spaces and simulation Theatre & Ward Facilities.

#### Beatson Phase 2 Development – the West of Scotland Cancer Care Unit

Management of Team on £45m New Build at Gartnavel Hospital, full occupancy achieved in June 2007.

#### New Glasgow Victoria and Stobhill Hospitals

Management of Team on £140m new build Ambulatory Care and Diagnostics Facility on 2 sites, plus 60 bed inpatient wards at Victoria Hospital.

#### Ravenscraig Phase 2

Partner responsible for the Ravenscraig Phase 2 Masterplan study with specific role of developing an energy strategy to support the proposed Phase 2 development of up to 1.5 million sq ft of mix use development including residential, retail, commercial and hotels etc.

#### Aggreko

Partner responsible for the new 50,000ft<sup>2</sup> state-of-the-art generator assembly facility for Aggreko Ltd. DSSR provided a full mechanical and electrical design service including modelling analysis for generator test bay environmental control and management of major P.U. diversion enabling works.

#### News International

Partner in charge of the major development for News International comprising detail design of services and key process interfaces for new press halls in Liverpool and London. These projects were valued at over £500 million and required extensive process design as well as considerable HVAC and Power design.

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IHS Lothian Limited  
Wallace Weir  
c/o Christine Trusedale  
Maclay Murray & Spens LLP  
c/o DENTONS LLP  
15 Lauriston Place  
Edinburgh  
EH3 9EP

Date: 13 March 2018  
Our Ref : BC/IHSL  
Enquiries to: Brian Currie  
Extension: [REDACTED]  
Direct Line: [REDACTED]  
E-mail: [REDACTED]

Dear Sirs,

**Re-Provision of RHSC and DCN at Little France  
Ventilation to four bedded rooms**

*Terms used in this letter have the meanings given to them in the Project Agreement between the Board and Project Co dated 12<sup>th</sup> and 13<sup>th</sup> February 2015 (the "Project Agreement")*

We refer to our letter dated 24 January 2018 and your response dated 10 February 2018 together with our discussions at the without prejudice workshops on 20 and 21 February.

We note that notwithstanding the Independent Tester's email dated 23 January 2018 you have still not confirmed that you intend to revise the ventilation system to the four bedded rooms to meet the Board's Construction Requirements. Indeed, we are dismayed to note that Project Co have not set out their position in relation to the ventilation system to the four bedded rooms at all.

In our letter to Project Co dated 3 November (enclosing a report from David Rollason & Associates) and our letter to the Independent Tester dated 29 November 2017 the Board set out the detailed reasons why the ventilation to the 20 four bedded rooms requires to be balanced or negative. That position is reinforced by the Opinion we have received from Senior Counsel which has been provided to you on a without prejudice basis.

We note the terms of Multiplex's letters dated 19 December 2017 (enclosing a report prepared by DSSR dated 6 December 2017) and 6 February 2018 and the Opinion Multiplex have obtained from Senior Counsel. However nothing in any of that documentation alters the Board's position. Indeed, in our view, the reasons given for disputing the Board's interpretation are based upon a misconstruction / inaccurate representation of the Board's position.

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EDINBURGH  
EH16 4TJ

We do not intend to rehearse the position again here and would refer you to our previous correspondence. In short, the Board's position is:-

1. The PA requires compliance with, inter alia, the BCRs, PCPs and Good Industry Practice (clauses 5 and 12). The BCRs, PCPs and Good Industry Practice individually and collectively all require the pressure regime to the four bedded rooms to be balanced or negative relative to the adjoining space to ensure that the clinical needs of the hospital and, in particular, infection control, are properly managed;
2. Good Industry Practice requires the pressure regime to the four bedded rooms to be balanced or negative relative to the adjoining space for the reasons set out in Mr Rollason's report. It is necessary to ensure infection control. The importance of infection control is also highlighted in the PCPs and BCRs (see for example paragraph 5.2 of the PCPs and paragraph 8.2, 8.5.3, 8.7.8 of the BCRs) and in the relevant SHTM (SHTM 03-01) which incorporates by reference the ADB Sheets;
3. The BCRs require the pressure regime to the four bedded rooms to be balanced or negative relative to the adjoining space. This is what the Environmental Matrix provides for. The FC Environmental Matrix and all subsequent versions, including Rev 5, clearly stated:-

*"Detailed proposals awaited on bedroom ventilation to achieve balanced / negative pressure relative to corridor."*

There is no qualification to the reference to "bedroom" limiting it to single bedrooms. It applied to all bedrooms, including four bedded rooms. Furthermore, while section 8 of the BCRs opens with the words "Project Co shall provide the Works to comply with the Environmental Matrix", paragraph 8.1 proceeds to specify certain "Minimum Engineering Standards", including SHTM 03-01 to which we have referred above. The content of the Environmental Matrix cannot be regarded as prescriptive. That general observation dovetails with a specific requirement in paragraph 8.5.3 of the BCRs which highlights Project Co's obligation to minimize the spread of infection. The opening part of paragraph 2 of the BCRs reinforces this conclusion. It tells us that the design strategy has to respond to the needs and aspirations of the NHS (among others) and that clinical needs will determine the nature and design of facilities in some areas. Further, it requires that the design develop, improve and exceed current best practice. That provides the rationale for the stipulation in paragraph 3.6.3 of the BCRs that the Room Data Sheets (of which the Environmental Matrix forms part) provide minimum requirements. Moreover, it links to paragraph 5.2 of the PCPs that deals specifically with infection prevention and control and requires compliance with SHTM 03-01, among other standards.

4. The PCPs require the pressure regime to the four bedded rooms to be balanced or negative relative to the adjoining space because they require compliance with (i) infection control principles (see paragraph 5.2 of the PCPs); (ii) the Environmental

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Matrix (see IHSL XX-XX-DC-4.9\_04 paragraph 1); and (iii) the ABD Sheets (see IHSL XX-XX-DC-4.23\_03).

For the avoidance of doubt, the foregoing is not intended to be exhaustive, but it clearly demonstrates that there are a significant number of obligations incumbent upon Project Co which require the pressure regime to the four bedded rooms to be balanced / negative relative to the adjacent space.

This is in stark contrast to the position proffered by and / or on behalf of Project Co which seeks to rely upon the room data sheets and / or Revision 5 of the Environmental Matrix, which is clearly qualified by the reference to "*bedroom ventilation*" referred to above. In any event, all that the Environmental Matrix Rev 5 provides for is that the pressure regime should be "*positive to en suite.*" It does not provide any commentary on the pressure regime relative to the adjacent corridor which, for the reasons set out above, requires to be balanced or negative.

As noted above, whilst it is clear that Multiplex dispute the Board's position in relation to the ventilation regime for the relevant four bedded rooms, Project Co have not set out their position to us. **Please confirm your position by return.**

In the event that we do not hear from you with confirmation of your position by **Monday 19 March 2018** we shall assume that you share Multiplex's view and confirm that we shall raise Court proceedings against Project Co seeking an interim order requiring the performance of your obligations under the Project Agreement pursuant to section 47(2) of the Court of Session Act 1988. Specifically, we shall seek an order ordaining you to design the ventilation to the 20 relevant four bedded rooms such that it achieves a balanced / negative pressure regime relative to the adjacent corridor. A copy of the draft Summons will be provided to you in due course.

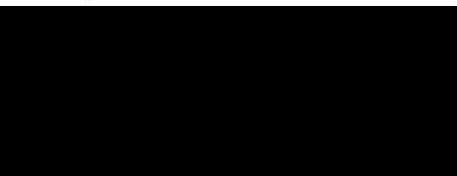
Lest there be any doubt about it, the Board has received a robust opinion from Senior Counsel about their prospects of success in obtaining an interim order before the Court. The Board clearly has a prima facie case as demonstrated in this letter. The balance of convenience weighs strongly in favour of the Board in light of, amongst other things, the clinical imperative to have the ventilation regime balanced or negative to minimize the spread of infection. The Board's view is supported by the Independent Tester whom has indicated not only that balanced or negative pressure is required but also that a Certificate of Practical Completion will not be issued in accordance with the provisions of clause 17 of the Project Agreement until these works have been carried out. The Board has no liability to make any payments to Project Co in respect of the Services until the Actual Completion Date (which, as you know, is determined with reference to the issue of the Certificate of Practical Completion). Accordingly, Project Co is obliged, as a matter of urgency, to proceed to carry out these works and to fund them pending determination of the ventilation dispute pursuant to the dispute resolution procedures in the Project Agreement.

We shall be exceptionally disappointed if the Board requires to take the step of raising Court proceedings, airing these matters in a public forum, to enforce our contractual rights

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pursuant to the Project Agreement. However, for the reasons set out in this letter we shall not hesitate to do so in the absence of a timeous positive response from you.

We look forward to hearing from you urgently with confirmation of your position. Meantime we continue to reserve our whole rights, remedies and pleas.



**Jim Crombie**  
**Deputy Chief Executive**  
For and on behalf of Lothian Health Board

cc.  
Finance Director – NHSL  
Director of Capital Planning – NHSL

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IHS Lothian Limited  
Wallace Weir  
c/o Christine Trusedale  
Maclay Murray Spens  
c/o Dentons  
15 Lauriston Place  
Edinburgh  
EH3 9EP

Date: 21 March 2018  
Our Ref : JC/IHSL  
Enquiries to: Jim Crombie  
Extension: [REDACTED]  
Direct Line: [REDACTED]  
E-mail: [REDACTED]

Dear Sirs,

**Re-Provision of RHSC and DCN at Little France  
Ventilation to four bedded rooms**

*Terms used in this letter have the meanings given to them in the Project Agreement between the Board and Project Co dated 12<sup>th</sup> and 13<sup>th</sup> February 2015 (the "Project Agreement")*

We refer to your letter dated 19 March 2018 enclosing a letter from Multiplex dated 19 March 2018 and your letter dated 20 March proposing a without prejudice meeting.

This letter is a response to each of those letters and is sent to you on a without prejudice basis. A separate open letter is being issued to Multiplex's solicitors this afternoon given that you have asked us to liaise directly with them in connection with the Court proceedings.

We have to say that we are dismayed by the tone and content of the recent correspondence from you and Multiplex. We agree that good progress was achieved at the meetings on 20 and 21 February in relation to a number of issues. We also agree that it is in the best interests of the project and all relevant stakeholders to reach a negotiated resolution of the ventilation and all other construction-related issues that have arisen if at all possible. For the avoidance of doubt, we remain committed to ascertaining whether an extra judicial resolution can be achieved.

However, as has been made clear to you repeatedly the ventilation to multi bed rooms is of critical clinical importance to us. No acceptable solution has been forthcoming from you to date in connection with this issue. Indeed, as you are well aware, following receipt of the Independent Tester's email dated 23 January 2018 we wrote to you asking you to confirm that you would undertake the requisite ventilation works. Your response dated 10 February 2018 enclosed a copy of a letter from Multiplex dated 6 February 2018 and stated that you were considering that. Following the workshops on 20 and 21 February,

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we wrote again to you on 13 March asking you to confirm your position. Your letter dated 19 March 2018 does so for the first time. We are disappointed to note that it is your position that you agree with Multiplex.

A significant part of Multiplex's reasoning appears to be that we have not properly explained why infection control would require each of the multi bed rooms to have balanced / negative pressure. We disagree. We would refer you to, amongst other things, MM-GC-002408 dated 11 January 2017 and the subsequent discussions at the meeting on 23 January 2017. These discussions and correspondence dovetail with the relevant extracts from the BCRs, SHTM 03-01 and SHFN 30 (see paragraph 5.4 in particular regarding cohorting patients with the same infection).

However, so that there can be no doubt about our position, please find enclosed a copy of the draft Summons and supporting Affidavits which we have prepared in contemplation of the proposed Court action. In our view Mr Ellis' Supplementary Opinion has not considered the clinical case for the pressure regime that we seek. That clinical case is summarised in the Summons and spoken to in the enclosed Affidavits.

In terms of the balance of convenience, the position is summarised in the draft Summons. We would also note in that regard that Project Co has no immediate financial interest in prompt completion because, we assume, it is currently being kept whole by Multiplex. It is therefore not incentivized to resolve this issue immediately. That is unacceptable from our perspective.

We cannot allow this issue to remain unresolved. The hospital is already over 8 months late. A further delay pending the outcome of the dispute pursuant to the dispute resolution procedures in schedule part 20 of the Project Agreement is unacceptable. We have therefore obtained the necessary approvals pursuant to our governance procedures to sanction the action outlined in our letter dated 13 March. Nonetheless, we understand that you are in the process of liaising with Multiplex regarding a substantive proposal. If you and / or Multiplex have a substantive proposal to make to seek to resolve this matter then we would of course be willing and available to discuss that with you at the earliest opportunity.

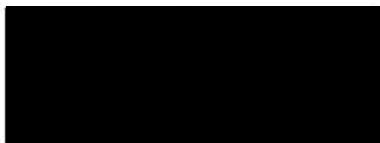
To that end, we confirm that we have instructed our solicitors to delay lodging the Summons with the Court together with the application for an interim order until 10 am on Thursday 22 March. In the absence of a constructive and substantive response from you by then we anticipate instructing our solicitors to lodge the Summons with the Court on Thursday.

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PROUD HISTORIES | NEW CHAPTERS



This letter is issued without prejudice to our rights, remedies and pleas and may not be referred to or founded upon by you.



**James Crombie**  
Deputy Chief Executive  
For and on behalf of Lothian Health Board

cc.  
Finance Director – NHSL  
Director of Capital Planning – NHSL

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EDINBURGH  
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## Message

**From:** Matthew Templeton [REDACTED]  
**Sent:** 22/03/2018 17:54:49  
**To:** j.crombie [REDACTED]; Susan.Goldsmith [REDACTED]  
**CC:** Tony Rose [REDACTED]; Andy Clapp [REDACTED]; John McDonagh [REDACTED]; Mark Bradshaw [REDACTED] (MacCap) [REDACTED]; Richard Osborne (MacCap) [REDACTED]; Wallace Weir [REDACTED]  
**Subject:** RHSC/DCN: IHSL Settlement Proposal  
**Attachments:** 180322.MT.SG. Settlement Proposal.pdf; Multiplex Letter dated 22 March 2018.pdf; 180321\_RHSC\_MPX\_RPT\_EXTERNAL\_Mediation Current Action Report - Rev 11.pdf; DRAFT 4 Bedded Ventilation options 180319.pdf; RHSC liability scenarios 19 3 18 rev 5 (2).pdf; PCo Change Register 150318.xlsx

External Communication

Dear James & Susan,

**Without Prejudice**

Firstly thank you for accommodating the additional time IHSL required to prepare this settlement proposal with Multiplex, and for considering a settlement proposal as an alternative.

Please find attached a letter from IHSL, together with an enclosed proposal from Multiplex. The Multiplex Proposal/Letter contains the following four attachments:

1. Mediation Tracker Report;
2. 4 Bedded Ventilation Options;
3. RHSC Liability Scenarios; and
4. PCo Change Register.

We acknowledge the attached proposal requires development through input from all parties, and we hope NHS Lothian will choose to progress this proposal.

Kind Regards

Matt

**Matt Templeton**

HCP

[REDACTED] | [www.hcp.co.uk](http://www.hcp.co.uk)

IHS Lothian Limited  
C/O Christine Truesdale  
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15 Lauriston Place  
Edinburgh  
EH3 9EP



22<sup>nd</sup> March 2018

REF: 180308.MT.SG Settlement Proposal

James Crombie  
Deputy Chief Executive  
&  
Susan Goldsmith  
Finance Director  
NHS Lothian Health Board  
Waverly Gate  
2-4 Waterloo Place  
Edinburgh  
EH1 3EG

**By Email and Post**

Dear James & Susan,

**Re-Provision of RHSC & DCN at Little France, Edinburgh.**

**Settlement Proposal**

**WITHOUT PREJUDICE**

In our letter dated Tuesday 21 March 2018, we requested that NHS Lothian (the "Board") did not begin any Court proceedings prior to IHS Lothian Ltd ("IHSL") and Multiplex providing an update to a commercial settlement. We remain convinced that this is still the most appropriate approach to successfully deliver the facility and an updated proposal is enclosed within this letter. In addition, we believe it is important to re-emphasise that in order for a settlement approach to progress successfully in practise and for the contract to be successfully delivered over the next 25 years, all parties need to work together as a partnership, from site level up. The need for change in this regard was clearly evident during the mediation sessions and given the mixed progress in this regard since the mediation process, we remain convinced that the successful delivery of the facility is not simply down to a commercial or contractual agreement being reached.

It remains our view that any Court proceedings will be vigorously defended by Multiplex, resulting in a long drawn out and expensive process, which depending upon the determination may not provide the Board with the facilities they require. IHSL consider that a settlement agreement can deliver a facility to the Board's technical requirements, at the earliest opportunity and at the most efficient cost to the project. Opposite a legal dispute, a settlement agreement presents the opportunity to focus the parties' efforts on clarifying technical requirements and agreeing a pragmatic solution, programming and facilitating our respective completion activities to achieve the earliest 'patient go live date'; and ensuring we retain as much money within the project to support the required works. You will also be very aware that in addition to these aspects, proceeding to court at this stage will

IHS Lothian Limited is incorporated and registered as a private limited company in Scotland with company number SC493676. Registered office is located at 15 Lauriston Place, Edinburgh, Scotland, EH3 9EP.

also lay out the challenges being faced into a public forum that could cause reputational damage to all parties, as well as the project itself.

In order to progress the items outlined in this letter, IHSL request an urgent meeting – given the deadlines set-out in the Multiplex’s proposal- with members of the NHSL Board to review and consider the attached settlement agreement draft proposal from Multiplex, as an alternative to the current Board position. We recognise that a commercial agreement that underpins these proposals will also need to be agreed as part of these discussions and IHSL recognise that they, along with Multiplex and the Board need to contribute.

With regards to how a settlement agreement might look, it needs to be understood that in order for this to deliver the intended outcome all parties need to work together. Multiplex have already agreed to complete the Without Prejudice Works at their own considerable expense, however we also believe that further works that are currently disputed works, or post Practical Completion Works can benefit from starting as soon as possible to achieve the earliest patient ‘go-live’ date. Included in these works are the post completion NHS Works, the four bedded room ventilation and the MRI quench pipes. The attached proposal from Multiplex explains how the Without Prejudice Works and post completion NHS Works can be completed simultaneously, in tandem with resolving the four bedded ventilation. Please note that there are items where final agreement as to what is required has not been reached, and these will need to be agreed before a final programme can be produced.

One of the key items that needs to be addressed is the technical requirements of the four bedded ventilation to the satisfaction of the Board. The attached paper outlines three ventilation options, each with a capital cost and a timeline to completion. We ask that the Board considers these options. The attached timeline is based on Option 1. It is recognised that were a different solution to be agreed (either in relation to Option 2 and 3) then the overall programme and costs will change to reflect the work required for each of those options.

At the mediation sessions in Edinburgh a number of items were agreed and actions have continued to be progressed. We note that some of these items appear to have stalled. The attached ‘Mediation Progress Report’ dated 21<sup>st</sup> March 2018 provides the current position. At our meeting with lenders on the 16<sup>th</sup> March 2018, the Board advised their frustration with respect to progress achieved on the Without Prejudice Works, highlighting the Single Bedroom Ventilation Change and Cable Calculations as examples. The Multiplex Proposal provides a narrative and timeline with respect to these two items, and refutes the Board’s allegation Multiplex are not delivering upon their commitments. The actual events surrounding the agreement of the ‘Single Bed Ventilation Change’ unfortunately does not convey the joint endeavour, ‘speedy RDD’ process or collaborative working we had collectively hoped for.

The quench pipe is an item that was not included in the mediation sessions, but now appears on the list as it is an item on the Board’s critical path, where a more optimal solution involving Multiplex facilitation is considered beneficial to the project. The quench pipes are an NHSL responsibility, to be delivered under a separate turnkey contract. We understand that early in the construction programme Multiplex made an offer to “help” install the quench pipe alongside the installation of other mechanical services, but this offer was not adopted by NHSL possibly because the MRI equipment had not been selected/procured (and hence technical parameters were unknown). At this stage of the construction programme installation of such equipment infrastructure is not possible without causing significant disruption, abortive work and delay to completion, which would be for the account of the Board. An alternative to the Board’s turnkey contractor undertaking all of the associated works related to the quench pipe installation would be for Multiplex to facilitate and



coordinate these works, to ensure the works are delivered effectively, and minimise costs and programme delays to the Board.

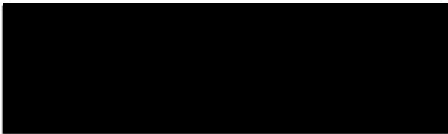
The overall advantage of a settlement agreement should not just be quantified in terms of price and time, but also the overall product. The opportunity to have Multiplex facilitate and coordinate MRI Quench pipe works would have the benefit of removing the risk of Multiplex's warranties being voided. It would also clear the path for Multiplex to carry out Board changes that are currently scheduled to be undertaken post completion. Without agreement, Multiplex could not be contractually compelled to carry out changes post completion, meaning other contractors would need to be engaged. If other NHS Sub-contractors are brought into to do certain works, warranties could be invalidated and responsibility for defects to affected areas of the building may become an unnecessary area of dispute between the Board and IHS.

We understand that in order to make a settlement work, there will have to be compromises on both parties, but we believe that it is the most sensible option for all parties involved.

IHS directors are available for a meeting week commencing the 26 March 2018, and we look forward to your response.

As you will appreciate this letter is 'without prejudice' and privileged, and may not be referred to in Court or other formal forum.

Yours faithfully



Wallace Weir  
Project Co Representative  
**For and behalf of IHS Lothian Limited**

**Enclosures:**

Multiplex Letter dated 22 March 2018, together with four attachments.

**BY EMAIL AND RECORDED DELIVERY**

**IHS Lothian**  
Waverley Gate  
2-4 Waterloo Place  
Edinburgh  
EH1 3EG  
F.A.O Andrew Clapp

22 March 2018

Dear Andrew,

**Re: Royal Hospital for Sick Children, Edinburgh**

Dear Sirs,

On the 13<sup>th</sup> March we sent an email to IHSL, on a without prejudice basis, outlining a proposal to enable the ventilation works, together with various other Board works, to be undertaken on an expedited basis in parallel with the completion of the base building works. We note that this email was passed on to the Board later that same day.

The purpose of this letter is to update and clarify the content of our proposal and provide our commentary on the status of the list of derogation items reviewed by the parties at the mediation. We draw your attention to the deadlines by which key decisions need to be made in order to allow such a proposal to be implemented and prevent further disruption to the project.

***The Multiplex Proposal***

As we previously identified, over and above the base build works, there are a number of other works that need to be undertaken to allow a realistic first patient date for the new facility to be determined. The significant matters that we are aware of are noted below.

1. Completion of items alleged to be non-compliances by NHS and agreed by Multiplex to be addressed on a without prejudice basis during the mediation ("the Without Prejudice Works").
2. NHS Post completion works (some carried out by IHSL/Multiplex)
  - a. ATD Installations
  - b. Fire Strategy Amendments
  - c. Car Park barriers
  - d. MRI Quench pipes
  - e. Landscaping works outside the site boundary.
  - f. Various Board changes being carried out by others e.g. patient absconding system etc.



("the NHS Works).

3. 4 bedroom ventilation changes ("the Ventilation Works").

We have re-examined our previous estimate that the completion of the NHS Works and the Ventilation Works, if commenced after IHSL/Multiplex has completed the Without Prejudice Works, could not occur until January 2019. This estimate assumed that the completion of the works associated with the Quench pipes would take approximately 30 weeks. We do not believe that this time period is unrealistic. However, for the purposes of this exercise, we have adopted the Board's own estimate of 20 weeks to complete the quench pipe, which has been extracted from the Turnkey Contractors Installation Programme, the content of which has been shared with MPX during the MRI collaboration meetings. On this basis, the NHS Works and the Ventilation Works could be completed by late October 2018 if they are commenced upon completion of the Without Prejudice Works.

The Unitary Charge payable by the Board during the period from the 5<sup>th</sup> June to the 23<sup>rd</sup> October 2018 will be approximately £6.00M.

As previously discussed and advised, the risk to the NHS could, however, be significantly reduced if all of the works noted above were carried out in tandem and overlapped with the completion of the base building works.

The exact durations associated with the NHS Works will be dependent upon the finalization with the NHS of the exact scope of this work. Likewise, the scope of the Ventilation Works still requires clarification since the parties have previously been working on the basis of the "hybrid solution" (Option 1 on the attached Ventilation paper), which involves pressurization changes to 14 rooms, which contrasts with the recent statements from the Board to the effect that they require changes to all 20 rooms.

Set out in this proposal and the accompanying attachments are various 4 Bed ventilation options to consider, each of which have different implications in respect of completion dates and costs.

In all of these scenarios, an Instruction issued by the Board prior to 03/04/2018 would allow the Ventilation Works (and NHS Works) to be completed approximately 2-3 months earlier than if these works are commenced following Multiplex's completion of the base building works and the Without Prejudice works.

The consequence of this is significant. Not only does it allow the facility to be open significantly earlier, but it allows for all of this work to be facilitated and coordinated under Multiplex's supervision and while it remains Principal Contractor, minimizes the need for the destruction of completed works, avoids the risk of warranties being voided and continues to afford the Board protection under the Project Agreement.

Our discussions with the Board's senior management both during and following the Mediation have been productive and positive. We strongly believe that such dialogue must be maintained to ensure that the new facility is completed and in use as soon as possible.

***Status of the list of derogations***

We understand that the Board is frustrated that Multiplex has not delivered on certain of the commitments that we made at the mediation in relation to the timetable for closing out

the derogation items. We do not accept this version of events and want to take this opportunity to provide you with our perspective.

At the mediation, it was roundly acknowledged that the project has been adversely impacted by the apparent inability of the respective project teams to reach agreements on technical issues. There has been a distinct lack of pragmatism and a willingness to work through issues on a collaborative basis. This is a collective failure. In order to address this, the parties agreed at the mediation that it is necessary to recalibrate the dynamic on site to ensure that the project can be completed without further delay and it was agreed that we would seek to adopt a process of "speedy RDD". Unfortunately, we don't believe that the NHSL team and its advisers on site have embraced this approach.

The best example of this is item 13 on the mediation list – the change to the single bed ventilation. It was agreed at the mediation that the technical teams would agree the wording of a Contractors Change Proposal to allow the matter to be closed out. On the second day of the mediation, 21<sup>st</sup> February, Ken Hall from Multiplex, sent draft wording to Ronnie Henderson and the rest of the Board's advisory team seeking their agreement. Having received no response, he followed up again with a second email on the 28<sup>th</sup> February. However, it was not until the 14<sup>th</sup> March that NHSL finally wrote to IHSL confirming that, despite what was discussed at the mediation, the draft Change was not acceptable as drafted and raising a series of further queries. The Board letter states "*The Board would like to confirm that participation in this collaborative exercise with MPX and IHSL is not an indication or confirmation that the Board intends to accept a Project Co Change*". The parties are now no closer to achieving a resolution to this issue than they were before the mediation and it is hard to avoid the impression that nothing at all has changed in terms of the dynamic on site.

We also understand that the Board believes that Multiplex has failed to deliver on its promises regarding the provision of the cable calculations required in connection with item 10 on the list. The relevant chronology is as follows:

- On 21<sup>st</sup> February, Multiplex issued an email to NHSL setting out a proposal in relating to the format and approach to analyzing the cable calculations.
- On the same day, the Services Engineer, Wallace Whittle, was instructed to assemble a pack of the relevant calculations.
- Meetings between the parties were held on 22-23 February to review the proposal that Multiplex had sent the preceding day.
- On 23 February, NHSL sent an email to IHSL noting that the proposed format was unacceptable.
- On 26 February, Multiplex instructed Wallace Whittle to stop what they were doing and adopt NHSL's preferred format.
- A meeting was then held on 1<sup>st</sup> March, during which Multiplex confirmed that Wallace Whittle was now working in accordance with the altered requirements and their senior management had been informed about the urgency of the exercise. Multiplex noted that Wallace Whittle's progress was being slowed slightly by reason of the fact that they were

first having to finalise the changes to the fire rated cabling in order to be able to ensure that the pack of cable calculations were up to date before they were issued.

- A further workshop with NHSL was held on 8<sup>th</sup> March 2018. It was noted that Wallace Whittle were now targeting the following week for the release of the cable calculations, having now completed the UPS fire rated cabling.
- A workshop was held with NHSL on 15<sup>th</sup> March 2018. An update on the status of the calculations was requested by NHSL and it was noted that they needed to be issued by 16<sup>th</sup> March.
- On 19<sup>th</sup> March, checks carried out by Multiplex revealed errors in the calculations received from Wallace Whittle. Multiplex informed Wallace Whittle that these calculations were rejected and needed to be resubmitted by 23<sup>rd</sup> March.
- On 21<sup>st</sup> March Multiplex advised NHSL by email that the calculations were being re-submitted by Wallace Whittle to correct errors that Multiplex had identified.

As should be apparent from this chronology, Multiplex has worked diligently and transparently to assemble the calculations and provide them to NHSL. Whilst the process has taken slightly longer than we would have liked, it is undoubtedly right that care needs to be taken to make sure that the calculations are correct, rather than rushing them across without a proper review. As may be seen, Multiplex is working with the Board on an open and transparent basis to try to resolve the issue as quickly as possible and should not be criticized for the work that it has done.

For the sake of clarity we set out our understanding of the status of each item in the attached tracker document which updates the document that was exchanged between the parties at the Mediation and has been reviewed between us on a weekly basis since then. The most recent version of the Mediation Progress Report (updated as at 21 March 2018) is attached herein.

We would ask again that the Board fully commits to the philosophy of 'speedy RDD' and the behaviours that need to underpin it. For collaboration to work successfully all parties need to buy into the process. You have our undertaking that Multiplex is fully committed to this approach.

### ***The MRI quench pipe***

We are disappointed to learn that the Board believes that Multiplex has somehow acted improperly in connection with the quench pipe – whether because it has concealed the issue or its significance, or it failed to properly advise the Board about the implications of the quench pipe, or failed to properly design the building to enable the pipe to be retrofitted post completion of Multiplex's works. It underlines how poor the relationship is between the parties that such an insinuation could be made. Not only is this suggestion plainly and demonstrably false, but quite the opposite is true. Right from the outset Multiplex has, at every opportunity, sought to help the Board to resolve an issue that Multiplex bears no responsibility for and could justifiably wash its hands of. The history of the communications between the parties bears this out.

The first discussions between the parties on this issue occurred in late 2015 when Multiplex made an offer to NHSL to install these works upon receipt of an instruction. At a meeting on 16<sup>th</sup> December 2015 the Board confirmed that it did not intend to issue a Change instruction in respect of this work. The minutes from the meeting record that "DP [Darren Pike] concerned about the impact upon installation and timing depending on procurement". At a meeting on 24<sup>th</sup> February 2016 it was noted that pipe routes and spacing had been developed on the basis of a worst case assumption regarding pipe size, and that the pipes would need to be fitted later. Technical discussions continued to take place throughout 2016 in relation to the sizing of the pipes, and coordination of route runs and discharge points. On the back of this work, the quench pipe was modelled in the BIM model issued to the NHSL on 15<sup>th</sup> April 2016 and again on 4<sup>th</sup> August 2016. In September and October 2016, Multiplex proposed an instruction to allow it to design and install brackets within the building frame to facilitate the external pipe runs. Ultimately, however, the Board elected not to issue this instruction and instead issued Multiplex an instruction in April 2017 (Change 105 ) to cover its abortive design costs. Even now Multiplex continues to liaise with NHSL's turnkey contractor to develop their proposals for undertaking the work.

Multiplex has been perfectly clear on this issue for years. It is a significant, complex piece of work that would have been vastly easier to undertake whilst the earlier construction works were underway and there was far greater flexibility to manoeuvre and incorporate the pipework into the building. For NHSL to now accuse Multiplex of using this issue to gain a tactical advantage is, frankly, out of order and unfair.

### **Conclusion**

We are only too aware that the disagreements that have taken place between the parties over the last 12 months have taken a heavy toll on relationships and made it difficult for the parties to separate fact from fiction, and legal argument from commercial common sense. However, we believe that there is a brief window of opportunity to put these arguments to one side and adopt an approach that minimises costs and risks for the project as a whole and allows the hospital to be opened as early as possible.

The proposal that we made previously and have clarified in this letter can be summarised as follows:

- The hospital can be open and operational in early September instead of late October 2018
- All work can be undertaken as part of a co-ordinated and managed process, thereby preserving warranties and ensuring that health and safety risks are managed.
- Approximately cost neutral to the NHSL in terms of its financial exposure
- MPX will complete the WPW's at no cost to the NHS
- Avoidance of protracted, expensive and public litigation which could result in the completed facility sitting unused for more than 12 months and result in costs (legal and finance costs) in the tens of millions of pounds for the losing party.

The Parties will, however, need to act quickly if they are to be able to implement this approach. We believe that an achievable timetable is as follows:

- By 3 April 2018 - NHSL to confirm to MPX its requirements for the ventilation of the 4 bedded spaces in accordance with one of the 3 options listed on the attached

- By 4 June 2018 - the Parties to use their best endeavours to conclude all matters shown as open on the PCo Change Status Report as attached dated 15/03/2018
- Agreement and confirmation of the Single Bedroom Ventilation Change

We trust that the above now fully clarifies Multiplex's position and would welcome dialogue with all of the key stakeholders to seek to find a way forward along the lines proposed.



WITHOUT PREJUDICE

## Message

**From:** Andy Clapp [REDACTED]  
**Sent:** 29/03/2018 07:50:10  
**To:** Callum Tuckett [REDACTED] Ben Keenan [REDACTED] Darren Pike [REDACTED]; John McDonagh [REDACTED] Tony Rose [REDACTED]; Richard Osborne (MacCap) [REDACTED] Matthew Templeton [REDACTED]  
**Subject:** IHSL/NHSL meeting note

External Communication

Dear All

Please find below a brief overview of the meeting between IHSL and NHSL. If there are any queries please let us know

Following the submission of the Multiplex Proposal dated 22<sup>nd</sup> March 18, representatives from IHSL met yesterday with NHSL at their offices. Jim Crombie, Susan Goldsmith and Ian Graham attended from NHSL, and Tony, Andy and Matt from IHSL.

The premise of the meeting was to ensure NHSL had properly understood the proposal; and whether there were any clarification questions we could answer. The meeting was around understanding and setting out next steps should the principles of the proposal be acceptable; and not step 1 of a negotiation. This turned out to be the case.

- Jim Crombie opened the meeting by thanking Susan and Tony for their facilitation and dialogue to get the parties to this point. Jim then advised that NHSL had taken the court action off the table (for now), and NHSL considered there was enough in the MPX Proposal to warrant a full discussion and development. Andy reciprocated by advising that MPX were stalling the FOI, which was well received. This set the tone, for what was a very positive meeting.
- The group discussed at length that behaviours of all parties at times was less than constructive, and agreed that for any 'deal' to work and the project to be successful, the trust and relationship between the parties and key individuals had to change and improve. A firm commitment to this was seen as essential to a successful resolution, which included recognition that a "facility completion" collaborative approach to programme delivery for the remaining works is required. Visible commitment and reinforcement of this at a senior level across Multiplex, NHS and IHSL would also be needed.
- JC advised that NHSL were very keen on fixing an occupation date for first patients, and that the last realistic date this could happen in 2018, was 31<sup>st</sup> October (i.e. prior to winter pressures). JC advised that if this date was missed, the move would be postponed until late February 2019 which would attract interest from external parties. JC advised that a patient go-live date on the 31<sup>st</sup> October 18, would still represent a successful outcome for the project. Recognising that with the indicative 30 week programme for ventilation Option 2 this was just possible, the parties agreed that a 'Joint Final Occupation Programme' would be developed. The programme would include MPX construction items (including 4 bed vent works) and NHSL Post Completion Works, including staff familiarisation and transfer of equipment and supplies into the new hospital. The parties acknowledged that sharing the new hospital for c. 5 months prior to the patient go-live date would present multiple challenges, however this was the best available plan to deliver the hospital NHSL require, at the earliest date for 1<sup>st</sup> patients and in the most cost effective way to the project.
- In order to pull together a draft plan we discussed the items that we believed are on the critical path – being the ventilation and quench pipe. NHSL expressed concerns around the quench pipe and IHSL explained that had earlier decisions been reached in the parameters of the quench pipe this would not be so much of an issue and it is only because it is coming into an almost completed building that it is causing more issues.

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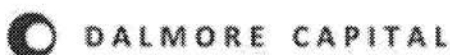
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- NHSL advised that the Option 1 in the 4 Bed Ventilation proposal was not acceptable, and would not be considered. Susan raised concern that the construction costs for Options 2 & 3 were somehow inflated to set-off MPX losses in other areas. IHSL responded by advising that these were indicative figures as currently there is no design in place or supply-chain pricing; and secondly, the costs would be developed and substantiated in an open and transparent manner. Later in the discussion, NHSL agreed to progress on the basis of ventilation Option 2 in the MPX Paper (balanced/-VE, 4 ac/hr to 14 rooms). NHSL are cognisant that programme weeks relate to financing costs (LDs); and chose Option 2 primarily due to the reduced financing and capital costs in comparison with Option 3.
- SG and IG raised other queries with respect to MPX demonstrating 25% spare services capacity, in particular that this is evenly distributed throughout the facilities. They are also seeking better design engagement between NHSL and MPX with respect to closing out derogation items and other o/s technical issues. IG also made comments about gas suppression being considered in the HV solution (we were not aware that this had been agreed, but know from previous conversations with MPX that this is an option)
- We discussed the commercial structure resting behind the deal in principle terms. NHSL accepted that they would need to put cash into the deal, however also sought reassurance IHSL would also contribute, as well as MPX. We discussed the mechanic where NHSL would pay a 'rent' for the facilities during the period where they occupy the new hospital, alongside MPX, prior to practical completion to undertake NHS Works. The rent being set at the same level as the financing costs. We discussed the rent figure as demonstrated and explained that was based on ventilation option 1. NHSL requested that the Ventilation Option 2 scenario be worked up in more detail such that they fully understood that it delivered the clinical requirements and also the commercials and the ask. *(PMN: IHSL has since worked up a draft of this, which we will issue shortly for MPX input).*
- It was confirmed that funding of the capital cost for ventilation could be met through two options. (1) that all parties agree an apportionment of cost upfront or (2) a working capital fund is established, and a DRP is initiated to establish which party should bear liability of cost.
- SG advised that NHSL had been considering a number of options to meet the financing costs, and may consider providing a loan to the project to fund capital and financing costs associated with 4 bed ventilation, which could then be re-paid overtime from the NPD surpluses. This needs to be explored further to establish the impact to project parties and how it might be implemented compared to alternative options.

In general, NHSL seem committed to a proposal to arrive at a settlement, fix a patient occupation date and work more collaboratively going forward.

In terms of next steps, IHSL advised that we would brief MPX, develop the commercials around Ventilation Option 2 within a joint programme, and re-convene on a call including MPX. The indicative time of the call was 3pm on Thursday 29<sup>th</sup> March.

With regards to the ventilation option two NHSL require clarity over programme and costs. It is appreciated that certainty over costs comes with a more detailed design, so in order to progress there must be an element of open book around costs. I have asked that Darren pulls together a more detailed plan, because although we have stated 30 weeks, it would be good to see what that means, as I now understand there is some time for commissioning in this programme. It is also important that we understand what other issues are on (or will soon come on to) the critical path.



**Andy Clapp** | Director  
 35 Melville Street, Edinburgh, EH3 7JF.  
 DDI: [REDACTED]  
 Mob: [REDACTED]

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Message

**From:** Darren Pike [REDACTED]  
**on behalf of** Darren Pike [REDACTED]  
**Sent:** 29/03/2018 12:01:12  
**To:** andy.clapp [REDACTED]  
**Subject:** FW: RHSC + DCN - Little France - Collaborative Framework - Programme to Completion

Andy

As discussed.

**Darren Pike**  
Project Director

## MULTIPLEX

**Multiplex Construction Europe Ltd**  
RHSC & DCN Project Office  
Little France Crescent,  
Edinburgh,  
EH16 4TJ, United Kingdom  
**M** [REDACTED]  
**E** [REDACTED]  
**W** [www.multiplex.global](http://www.multiplex.global)



---

**From:** Currie, Brian [REDACTED]  
**Sent:** 29 March 2018 10:19  
**To:** Darren Pike  
**Cc:** Mackenzie, Janice; Sansbury, Jackie; Henderson, Ronnie; 'Greer, Graeme'  
**Subject:** RHSC + DCN - Little France - Collaborative Framework - Programme to Completion

Darren

Catch up at 2pm this afternoon but in advance we have prepared our thoughts on a collaborative framework going forward (see attached).

This has been approved by Principals within the Board. Suggest it is shared within MPX to inform the telecon which I understand is happening this afternoon?

Regards

Brian

Brian Currie  
Project Director - NHS Lothian  
RHSC + DCN Site Office  
Little France Crescent  
Edinburgh  
EH16 4TJ

**T:** [REDACTED]  
**M:** [REDACTED]  
**E:** [REDACTED]

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## Collaborative Framework

**1 To jointly develop and agree a final programme to "actual completion" incorporating all MPX activities and NHSL activities as appropriate and practicable to satisfy compliance with their contractual obligations and eventual sign off by the IT and ensure an early as possible Hospital "Live" date.**

**These works will incorporate agreed balanced/negative ventilation specification works to the multi bedded rooms (scope being 14 rooms at 4 ac/hr)**

**2 MPX and NHSL dedicated project teams will adequately resourced and focussed which must undertake to:**

**a work in an open, transparent manner sharing all agendas, constraints, drivers, risks and opportunities**

**b ensure speedy resolution of all issues**

**c attend regular weekly meetings (to be agreed) and impromptu workshops as necessary**

**d foster a collective spirit of collaboration and cooperation for mutual benefit with the priority objective of moving the kids and DCN as soon as possible to a fully completed facility**

**3 There will be no change to completion criteria and UC will be payable on completion**

**4 The programme once agreed will inform the basis of any "settlement agreement" which will be developed in parallel.**

**5 Each organisation should explicitly detail team that will take programme forward from this point to completion**

## Message

**From:** Darren Pike [REDACTED]  
**on behalf of** Darren Pike [REDACTED]  
**Sent:** 29/03/2018 16:01:13  
**To:** Andy Clapp [REDACTED] CROMBIE, James (NHS Lothian) [REDACTED] Goldsmith, Susan [REDACTED] iain.graham [REDACTED] Callum Tuckett [REDACTED] Ben Keenan [REDACTED]; Tony Rose [REDACTED]; John McDonagh [REDACTED] Richard Osborne (MacCap) [REDACTED]; Matthew Templeton [REDACTED]  
**Subject:** RE: NHSL/MPX/IHSL Catch-up

Jim, Susan and Ian

Action for me from the call earlier to circulate and confirm the following:.

Our understanding is that 14 number 4 bed wards are to have 4 air changes per hour at a negative or balanced pressure and this will satisfy NHSL requirements for these spaces with regard ventilation. The timeline on this is crucial and our designers will need to start work on Tuesday the 3<sup>rd</sup> to keep to the programme. We would like confirmation and instruction to commence design on this basis ASAP.

Other issues that may drift onto the critical path if not dealt with swiftly are;

- Fire alarm zone A, (board change)
- Patient entertainment (board change)
- landscaping works (direct contract)
- MRI's – in their entirety from now to an operable MRI unit, this would include quench pipe works. (Board works)
- Cable Calculations (MPX issue)
- HV final scope (Joint issue)
- 6 air changes single beds (Admin required)
- Neutropenic ventilation (Admin required)

I estimate we need to have defined and agreed scope instructed or change agreed where necessary, on each of these by the end of April. All of the above require joint and collaborative input.

This list covers items currently known to have potential to disrupt the programme, however I am sure others will come to the fore as we develop the joint full works completion programme.

Look forward to engaging in discussions and concluding the technical aspects and programme collaboratively over the next few weeks.

Regards

Darren

**Darren Pike**  
Project Director

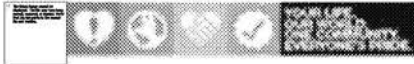


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IHS00000479

Edinburgh,  
EH16 4TJ, United Kingdom  
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E [REDACTED]  
W [www.multiplex.global](http://www.multiplex.global)



-----Original Appointment-----

**From:** Andy Clapp [REDACTED]  
**Sent:** 28 March 2018 18:43  
**To:** Andy Clapp; CROMBIE, James (NHS Lothian); Goldsmith, Susan [REDACTED] (uk); iain.graham [REDACTED]; Callum Tuckett; Ben Keenan; Darren Pike; Tony Rose; John McDonagh; Richard Osborne (MacCap); Matthew Templeton  
**Subject:** NHSL/MPX/IHSL Catch-up  
**When:** 29 March 2018 15:00-16:00 (UTC+00:00) Dublin, Edinburgh, Lisbon, London.  
**Where:** Call details below

Dear All

Following on from the meeting between NHSL and IHSL, it was thought sensible to have a call to include all parties to discuss the next steps.

In order to be able to take matters forward it is recognised that the teams will have to work in a collaborative fashion to get the hospital ready asap and in order to do that we need to understand which items are on the critical path. We have already discussed with NHSL the ventilation options and I have asked MPX to pull together a more detailed description of option 2 so we can all understand what that might look like.

We also need to understand if MPX believe any other items are on the critical path

This meeting is designed as a call to discuss how best to take the project forward, especially as we are entering a holiday period

Call details

Mobile [REDACTED]  
 Tel [REDACTED]  
 PIN [REDACTED]

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## Message

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**From:** Matthew Templeton [REDACTED]  
**on behalf of** Matthew Templeton [REDACTED]  
**Sent:** 19/04/2018 13:07:21  
**To:** Andy Clapp [REDACTED]  
**CC:** Wallace Weir [REDACTED]  
**Subject:** RHSC: SA Draft HoTs  
**Attachments:** RHSC\_Tripartitie SA HoTs\_DRAFT.docx

Andy,

Please find attached my first pass at a combined draft Hots and explanation document (given the confusion at the last NHSL meeting). Issuing this now in draft form, as promised, to check this is heading along the right lines, although appreciate it needs further development in terms of content, structure and the technical & costs schedules which will carry the real detail. Clearly lots of gaps as deal structure not fully developed, therefore the intention is we would share early draft with MPX and NHSL, and jointly populate so we have agreed HoTs within 2 weeks.

Perhaps we can chat in 30 minutes or so, and agree how the document can be developed and moved forward.

Regards

Matt

Matt Templeton

HCP

[REDACTED] | [www.hcp.co.uk](http://www.hcp.co.uk)

## 1.0 Introduction

This document sets out draft head of terms of an anticipated tripartite settlement agreement between NHS Lothian, IHS Lothian Ltd and Multiplex Construction Europe Ltd (together the 'Parties'), in relation to the re-provision of RHSC and DCN at Little France (the "Project"). The Parties have agreed to engage in without prejudice discussions, and hence these draft heads of terms ("HoTs") are not binding or a legally enforceable contract.

Any agreement between the Parties will be subject to Lender consent.

*(DN: Initial thoughts are a tripartite agreement; however, this will be subject to legal review and the final structure of the deal. At present it is not envisaged Bouygues FM requires to be a party to this agreement).*

## 2.0 Background & Objectives

The construction of the new RHSC and DCN Project has suffered numerous events which has resulted in a significant delay to the completion and occupation of the new Hospital. In addition, disputes and claims have arisen between the Parties in relation to the Project. As an alternative to being drawn into lengthy and costly legal proceedings, the Parties have agreed to engage in without prejudice discussions to resolve the disputed items and jointly occupy the hospital prior to Practical Completion whilst these disputed works are being completed (in tandem with NHSL commissioning and mobilisation). These draft HoTs attempt to capture the basis upon which these without prejudice discussions will proceed.

The overarching objectives are threefold:

- A. To deliver a hospital which meets, on day 1, the patient & carer, staff, and clinical and operational requirements of NHS Lothian;
- B. Achieve a patient go-live date at the earliest opportunity, and fix a date all Parties can plan for and work to; and
- C. Complete the Project in the most efficient way, and avoid unnecessary expenditure which does not benefit the new hospital.

The Parties acknowledge that for the Project to be successful, the Parties need to work in partnership.

## 3.0 Settlement Agreement Works

The Settlement Agreement Works (SA Works) will fix an agreed scope for completion of hospital resolving the historical technical disputes between the Parties, by a fixed date for a fixed price.

### 3.1 Multiplex responsibilities

In addition to the base build works as set-out in the Project Agreement/Construction Contract, Multiplex (MPX) will be responsible for the following works, together referred to as the "MPX Works":

#### 3.1.1 Without Prejudice Works



MPX will complete items alleged to be non-compliances by NHS, referred to as the Without Prejudice Works. If the Parties progress with the Settlement Agreement, MPX will be obligated to deliver these works, as detailed in Schedule []. The cost of the works will be for MPX's account, however for the avoidance of doubt, this does not include the financing costs (i.e. associated liquidated damages during the period of works).

### 3.1.2 4 Bed Ventilation Works

NHS Lothian (NHSL) have agreed that 14 (fourteen) of the 4 Bed areas within the facilities require ventilation works to provide a balanced/negative pressure regime to the corridor, where each 4 Bed area will be provided with 4 air changes per hour.

MPX will develop a design to meet this requirement and undertake the works. The technical design solution will require the utilisation of a proportion of the 25% spare capacity provided as part of the base build works. Exact proportion to be advised following design completion.

The cost of the ventilation works is set out in Section []; and the allocation and responsibility for the cost and associated financing costs of these works are detailed in Section [].

### 3.1.3 Facilitation & enabling of Quench Pipe

MPX agree to facilitate and enable the installation of the MRI Quench pipes. Installation and commissioning of the MRI Quench Pipes remains the responsibility of NHSL. MPX will liaise with NHSL's contractor, Modus, to coordinate the works and will, where required, remove ceilings/building fabric and M&E services to enable installation of the quench pipes, and will reinstate following installation of the quench pipe by Modus.

The MPX facilitation and enabling works costs are detailed in Section []; and the allocation of costs and associated financing costs are detailed in Section [].

### 3.1.4 NHS Post Completion Works

MPX will be responsible for the following works defined as NHS Post Completion Works:

- AAAA
- BBBB
- CCCC

## 3.2 NHS Lothian responsibilities

To be completed. – together referred to as "NHSL Works"

## 3.3 IHS Lothian responsibilities

To be completed – together referred to as "IHSL Works"

## 4.0 Programme

The parties have agreed that they will develop a Joint Occupation Programme, which will result in Practical Completion being achieved by the 31<sup>st</sup> October 2018, with the patient go-live date following immediately after (at the discretion of NHSL). Essentially the parties will jointly occupy the new hospital prior to Practical Completion, whilst the Settlement Agreement Works are completed. Effectively the NHSL Pre-and Post Completion Works are now being completed prior to handover of the new hospital, this enables lengthy programme activities such as 4 Bed Ventilation Works and Quench Pipe installation to be progressed in tandem with NHSL's Post Completion activities such as medical equipment installation, clinical clean, staff training & familiarisation, establishment of medical IT network, stocking consumables, etc..

The agreement is drafted on the following key dates and timescales:

	Key Programme Activities/Dates	Target Completion Dates (indicative)
1	Completion of Base Build Works	19 April 2018
2	Commencement of design & installation of 4 Bed Ventilation Works	19 April 2018
3	Finalisation & Sign-off of all design issues on 'Project Technical Completion Schedule'	31 May 2018
4	Latest commencement date of Quench Pipe installation	1 June 2018
5	Completion of Without Prejudice Works	4 June 2018
6	NHSL occupation date of hospital	[23 July 2018]
7	Completion of Quench Pipe (20 week Period)	[NHSL to advise]
8	Completion of 4 Bed Ventilation Works	[24 October 2018]
9	Practical Completion Date	31 October 2018
10	Patient Go Live Date	[NHSL to advise]

All dates are indicative at this time, and will be confirmed upon development and issue of the Joint Occupation Programme.

The Joint Occupation Programme will also detail when areas of the new hospital are released to NHSL, and make provision for access and installation of key pieces of medical equipment such as MRI, etc.

*This Section requires significant development and the input of the MPX Planner and Project Director, together with a better understanding of the NHSL commissioning and mobilisation activities/programme.*

## 5.0 Key Interfaces

### 5.1 Design Finalisation & Sign-off

Key to achievement of the programme is early design finalisation and sign-off. Parties to agree a speedy RDD process to finalise all items on the Project Technical Completion Schedule by 31 May 2018.

This includes the Parties agreement and sign-off of Project Co Changes.

## 5.2 Quench Pipe Installation

Parties to agree a demarcation matrix defining the respective obligations on each of the Parties with respect to installation and commissioning of the MRI Quench Pipes. In principle MPX will provide facilitation and enabling activities to allow the installation of the pipes by NHSL

NHSL will remain responsible for installation and commissioning of the quench pipes through their contractor Modus, including all temporary works and craneage associated with the installation, including the scaffolding to the XXX Courtyard.

Having MPX involved ensures work can be undertaken as part of a co-ordinated and managed process, thereby preserving warranties and ensuring health and safety risks are managed.

## 5.3 NHS Lothian Pre-Completion Activities

NHSL to list salient Pre-Completion activities and include in Schedule []

## 5.4 NHS Lothian Post-Completion Activities

NHSL to list salient Post Completion activities and include in Schedule []

## 5.5 Hospital Pre-PC 'Joint Occupation & Access Protocol'

Parties to agree a 'Joint Occupation & Access Protocol' which will help manage and coordinate the respective activities of the Parties, between July and October 2018.

## 6.0 Technical Issues & Agreements

The Project Technical Completion Schedule will record the agreed scope and technical solution for the disputed items. The disputed items included in this schedule will be included as part of the updated Board Construction Requirements/Project Co Proposals, and hence will form part of the completed Works/Facilities. This will also include the 4 Bed Ventilation Works.

The quench pipe will not form part of the Boards Construction Requirements, Project Co Proposals or part of the Project Works.

## 7.0 Financial & Commercial

The financial and commercial structure of the settlement agreement is essentially to agree two cost considerations:

1. The capital cost of completing the disputed items;  
and

2. The financing costs (i.e. debt service prior to commencement of Unitary Charge) of:
  - a. extending the programme to complete the disputed items; and
  - b. NHSL's rental payments to occupy the hospital to undertake Post Completion activities. (Under base case, NHSL would have incurred this cost through payment of Unitary Charge.)

and are allocated as follows:

- **Disputed Items** = capital and financing costs; and
- **NHSL rental payments** = financing costs.

## 7.1 Disputed items – Capital & Financing Costs

The cost of delivering the disputed items and continued on-site presence to facilitate the installation of the quench pipe incurs the following costs:

Activity	Type	Cost
4 Bed Ventilation Works	Capital	[£4.66M] t.b.c
MPX Quench Pipe Facilitation	Capital	£0.5M
Payment of debt service (LDs)*	Financing	£2.267
MPX extended on-site cost	Capital	[£4.2M] t.b.c
<b>Total Disputed Item Costs</b>		<b>£11.627M</b>

\* The calculation of the financing costs is detailed in Schedule []; however, is essentially 55 days of liquidated damages which are set at £41,219/day. This covers the period from 19<sup>th</sup> April 2018 (completion date of base works) to the 3 June 2018 when NHSL would require occupation of the hospital to install the quench pipe.

The 4 Bed Ventilation costs are subject to design development and engagement with supply-chain, however will be fixed by MPX at date of Settlement Agreement. The build-up of the costs will be shared with NHSL in an open and transparent manner. From the date of the Settlement Agreement, MPX will hold cost and delivery/programme risk for the 4 Bed Ventilation Works.

The MPX extended on-site costs are subject to review, to ensure no inadvertent double counting exists. Again, final figures will be presented to NHSL in an open and transparent manner.

The total costs associated with the Disputed Items is currently estimated to be £11.627M. This cost is to be funded as set out in Section 7.3 & 7.4.

## 7.2 NHSL Rental Payments

In addition to the £11.627M required to resolve the disputed items, the financing costs incurred whilst NHSL occupy the hospital prior to Practical Completion to undertake their commissioning & mobilisation activities, requires to be funded.

Under base-case, NHSL would have been paying Unitary Charge for the 14 weeks of NHSL commissioning and mobilisation activities. However, due to the quench pipe

installation requiring 20 weeks, the 14-week period is extended to 20 weeks. The NHSL activities being undertaken during this 20-week period is detailed in Schedules [] & [].

The period upon which NHSL require occupation of the new hospital, based on the revised completion dates, to enable quench pipe installation and commissioning and mobilisation is from the 4<sup>th</sup> June 2018 to the 31<sup>st</sup> October 2018 (the NHS Rental Period”). The NHS Rental Period, based on assumed timescales, is 140 days (20 weeks).

The cost of the NHS Rental Payments is calculated using the Contractor daily liquidated damages sum for late delivery, to enable Project Co to cover debt service costs (which have been due and payable since the planned Completion Date of 3<sup>rd</sup> July 2017).

The Contractor daily liquidated damages sum is £41,219/day.

**The anticipated NHS Rental Payment is 140 days x £41,219 = £5,770,660.**

Following the issue of a certificate of Practical Completion by the Independent Certifier, the Unitary Charge will be payable as the full provisions of the Project Agreement, Schedule Part 14 become effective.

### 7.3 Source of funds

7.3.1 The financial consideration for the Settlement Agreement is the sum of the disputed items and the NHS Rental Payments:

Costs	Totals
Disputed Items	£11,627,045
NHS Rental Payments	£5,770,660
<b>Total</b>	<b>£17,397,705</b>

7.3.2 The Disputed Items will be funded as follows:

7.3.2.1 All costs incurred up to and including £10M, will be funded by NHSL through a loan to the Project (refer to Section 8.0);

7.3.2.2 All costs greater than £10M and less than £11.5M will be funded by IHSL through NPD Surpluses;

7.3.2.3 All costs greater than £11.5M will be funded by MPX.

7.3.3 The NHS Rental Payments will be funded by NHSL, supported by revenue grants from the Scottish Government i.e. following the same funding stream as Unitary Charge payments.

### 7.4 Payment Terms

- 7.4.1 The process and arrangements of payments between the Parties is subject to the finalised legal structure and a tax and accounting review.
- 7.4.2 The table below identifies the recipient, and criteria for payment of the Disputed Items. Refer to 7.3.2 for source of funds.

Disputed Item Cost	Sum	Recipient	Terms
4 Bed Ventilation Works	£4,660,000	MPX	As works completed & certified by Funder's TA
Quench Pipe Facilitation	£500,000	MPX	As works completed & certified by Funder's TA
Financing Costs	£2,267,045	IHSL	Monthly, in advance
MPX Extended on-site Costs	£4,200,000	MPX	Monthly, in arrears

- 7.4.3 The NHS Rental Payment terms to be agreed and will be subject to legal and tax review, together with commercial agreement between the Parties. The NHS Rental Payments would be payable monthly, in advance. Where payments are made by NHSL and received by IHSL, MPX would be relieved of Liquidated Damages for sums received. Where NHS Rental Payments are not received from NHSL by IHSL, MPX will remain liable for Liquidated Damages for relevant period.

## 7.5 Commercial Matters

- 7.5.1 To be developed.

## 8.0 Repayment of NHS Lothian Project Loan

- 8.1 The first £10M of the Disputed Items will be funded from an NHSL loan to the Project, which will be repaid through NPD Surpluses over the term of the Project.
- 8.2 The loan will have required to be deposited into the IHSL Account within [5] Business Days of execution of the Settlement Agreement.
- 8.3 No Term Sheet has been developed for the NHS Loan, however the following principles have been discussed:
- A substantial proportion (>50%) of the loan principle is repaid over the next [23] Years;
  - A Minimum repayment of [£250k] will be made each Year;
  - An interest rate will apply, rate to be agreed; and
  - Remainder of loan to be repaid following repayment of senior debt, in Year [25] of the Project.

## 9.0 Completion Criteria

- 9.1 The Completion Criteria to be achieved to enable the issue of a certificate of Practical Completion by the Independent Certifier will remain as per the Project Agreement, however upon execution of the Settlement Agreement will include the following:
- i. 4 Bed Ventilation Works;

- ii. Without Prejudice Works (Schedule []);
- iii. Works contained within the 'Project Technical Completion Schedule' (Schedule []); and
- iv. The NHSL Instructed Variations as listed in Schedule [].

together the MPX Completion Works.

- 9.2 NHSL Instructed 'Other' Works such as 'Hospital Square' and 'Bedside Environment' will not form part of the Completion Criteria required for issue of a certificate of Practical Completion. The parties to agree a mechanism to ensure these works remain a focus of the parties and where possible are completed in advance of the 31<sup>st</sup> October 2018.

## 10.0 NHSL Instructions for 'Other' Works

- 10.1 NHSL to advise of all works they require or wish to instruct, to be completed in the period up to the 31<sup>st</sup> October 2018, such as Hospital Square and Bed-side environment. Place-holder – section to be developed following discussion with NHSL/MPX

## 11.0 Consequences of Programme Delay

- 11.1 Where MPX fail to complete the works set-out in Section 9.1 above (the MPX Completion Works) by the 31<sup>st</sup> October 2018, NHS Rental Payments will cease to be liable. In this scenario until the date where these activities are complete and a certificate of Practical Completion is issued by the Independent Certifier, MPX will be solely liable for Contractor liquidated damages.
- 11.2 The "Joint Occupation & access Protocol" will require the Parties to work in good faith and not unreasonably interfere or obstruct the other party in the completion of their works. Where an NHSL party interferes, or causes delay to the MPX Completion Works, this will be subject to a Compensation Event.

## 12.0 Amendments to Project Agreement & Project Documents

*Section to be developed and will require legal input.*

19<sup>th</sup> April 2018.

To: j.crombie ;  
Susan.Goldsmith ; Callum Tuckett 128  
; Ben  
Cc: Tony Rose ; Andy  
Clapp ; Richard Osborne (MacCap)  
Mark.Bradshaw ; Wallace Weir ; Pryor,  
; Graham, Iain ; Darren Pike  
From: Matthew Templeton  
Sent: Fri 20/04/2018 10:49:12 AM (UTC)  
Subject: RHSC/DCN: Draft principles of Settlement Agreement  
[RHSC\\_Tripartite\\_SA\\_HoTs\\_DRAFT\\_V2.docx](#)  
[RHSC\\_Tripartite\\_SA\\_HoTs\\_DRAFT\\_V2.pdf](#)

Dear Jim, Susan, Calum & Ben,

**Without Prejudice**

Further to our technical and commercial meeting on the 12<sup>th</sup> April 2018, IHSL has sought to draft heads of terms of an anticipated tripartite Settlement Agreement between NHSL, Multiplex and IHSL. The draft heads of terms set-out IHSL's view of the proposal, and we are jointly issuing to NHSL and Multiplex for your respective thoughts.

The attached is a starter for ten, and attempts to frame our discussions and provide a basis upon which an agreement can develop. We have not sought legal input or review at this time, nor have we consulted with lenders (to which their consent will be required).

We understand NHSL has also given consideration to a principles paper, and upon issue we can consolidate, together with comments from Multiplex.

Regards

Matt  
**Matt Templeton**

HCP  
| [www.hcp.co.uk](#)



## 1.0 Introduction

This document sets out draft head of terms of an anticipated tripartite settlement agreement between NHS Lothian, IHS Lothian Ltd and Multiplex Construction Europe Ltd (together the 'Parties'), in relation to the re-provision of RHSC and DCN at Little France (the "Project"). The Parties have agreed to engage in without prejudice discussions, and hence these draft heads of terms ("HoTs") are not binding or a legally enforceable contract.

Any agreement between the Parties will be subject to Lender consent.

*(DN: Initial thoughts are a tripartite agreement; however, this will be subject to legal review and the final structure of the deal. At present it is not envisaged Bouygues FM requires to be a party to this agreement).*

## 2.0 Background & Objectives

The construction of the new RHSC and DCN Project has suffered numerous events which have resulted in a significant delay to the completion and occupation of the new Hospital. In addition, disputes and claims have arisen between the Parties in relation to the Project. As an alternative to being drawn into lengthy and costly legal proceedings, the Parties have agreed to engage in without prejudice discussions to resolve the disputed items and jointly occupy the hospital prior to Practical Completion whilst these disputed works are being completed, in tandem with NHSL commissioning and mobilisation. These draft HoTs attempt to capture the basis upon which these without prejudice discussions will proceed.

The overarching objectives are threefold:

- A. To deliver a hospital which meets, on day 1, the patient & carer, staff, and clinical and operational requirements of NHS Lothian;
- B. Achieve a patient go-live date at the earliest opportunity, and fix a date all Parties can plan for and work to; and
- C. Complete the Project in the most efficient way, and avoid unnecessary expenditure which is of no benefit to the Parties.

The Parties acknowledge that for the Project to be successful, the Parties need to behave and operate in a collaborative partnership, throughout the life of the contract.

## 3.0 Settlement Agreement Works

The Settlement Agreement Works (SA Works) will define an agreed scope for completion of the hospital (resolving the historical technical disputes between the Parties), by a fixed date for a fixed price.

### 3.1 Multiplex responsibilities

In addition to the base build works as set-out in the Project Agreement/Construction Contract, Multiplex (MPX) will be responsible for the following works, together referred to as the "MPX Works":

### 3.1.1 Without Prejudice Works

MPX will complete the items agreed at the Sheraton workshop, referred to as the Without Prejudice Works. If the Parties progress with the Settlement Agreement, MPX will be obligated to deliver these works, as detailed in Schedule [1]. The cost of the works will be for MPX's account, however for the avoidance of doubt, this does not include the financing costs (i.e. associated liquidated damages during the period of these works).

### 3.1.2 4 Bed Ventilation Works

NHS Lothian (NHSL) have agreed that 14 (fourteen) of the 4 Bed areas within the facilities require ventilation works to provide a balanced/negative pressure regime to the corridor, where each 4 Bed area will be provided with 4 air changes per hour.

MPX will develop a design to meet this requirement and undertake the works. The technical design solution will require the utilisation of a proportion of the 25% spare capacity provided as part of the base build works. Exact proportion to be advised following design completion.

The cost of the ventilation works is set out in Section [1]; and the allocation and responsibility for the cost and associated financing costs of these works are detailed in Section [1].

### 3.1.3 Facilitation & enabling of Quench Pipe

MPX agree to facilitate and enable the installation of the MRI Quench pipes. Installation and commissioning of the MRI Quench Pipes remains the responsibility of NHSL. MPX will liaise with NHSL's contractor, Modus, to coordinate the works and will, where required, remove ceilings/building fabric and M&E services to enable installation of the quench pipes, and will reinstate following installation of the quench pipe by Modus.

The MPX facilitation and enabling works costs are detailed in Section [1]; and the allocation of costs and associated financing costs are detailed in Section [1].

### 3.1.4 Other Post WP Works

## 3.2 NHS Lothian responsibilities

**To be completed.** – together referred to as “NHSL Works”

## 3.3 IHS Lothian responsibilities

**To be completed** – together referred to as “IHSL Works”.

#### 4.0 Programme

The parties have agreed that they will develop a Joint Occupation Programme, which will result in Practical Completion being achieved by the 31<sup>st</sup> October 2018, with the patient go-live date following immediately after (at the discretion of NHSL). Essentially the parties will jointly occupy the new hospital prior to Practical Completion, whilst the SA Works are completed. Effectively the NHSL commissioning and mobilisation works are now being completed prior to handover of the new hospital, this enables lengthy programme activities such as 4 Bed Ventilation Works and quench pipe installation to be progressed in tandem with NHSL's Completion Activities (Schedule 1) such as medical equipment installation, clinical clean, staff training & familiarisation, establishment of medical IT network, stocking consumables, etc..

The HoTs are drafted in consideration of the following key dates and timescales:

	Key Programme Activities/Dates	Target Completion Dates (indicative)
1	Commencement of design & installation of 4 Bed Ventilation Works	Subject to instruction
2	Finalisation & Sign-off of all design issues on 'Project Technical Completion Schedule'	[31 May 2018]
3	Latest commencement date of Quench Pipe installation	[1 June 2018]
4	Completion of Without Prejudice Works	[4 June 2018]
5	NHSL occupation date of hospital	[1 <sup>st</sup> August 2018]
6	Completion of Quench Pipe (20 week Period)	[NHSL to advise]
7	Completion of 4 Bed Ventilation Works	[24 October 2018]
8	Practical Completion Date	31 October 2018
9	Patient Go Live Date	[NHSL to advise]

***All dates are indicative at this time, and will be confirmed upon development and issue of the Joint Occupation Programme.***

The Joint Occupation Programme will also detail when areas of the new hospital are released to NHSL, and make provision for access and installation of key pieces of medical equipment such as MRI, etc.

***This Section requires significant development and the input of the MPX Planner and Project Director, together with a better understanding of the NHSL commissioning and mobilisation activities/programme.***

#### 5.0 Key Interfaces

### 5.1 Design Finalisation & Sign-off

Key to achievement of the programme is early design finalisation and sign-off. Parties to agree a speedy RDD process to finalise all items on the Project Technical Completion Schedule by 31 May 2018.

This includes the Parties agreement and sign-off of Project Co Changes.

### 5.2 Quench Pipe Installation

Parties to agree a demarcation matrix defining the respective obligations on each of the Parties with respect to installation and commissioning of the MRI Quench Pipes. In principle MPX will provide facilitation and enabling activities to allow the installation of the pipes by NHSL

NHSL will remain responsible for installation and commissioning of the quench pipes through their contractor Modus, including all temporary works (including external scaffolding to courtyard, protection works, etc) and craneage associated with the installation.

Having MPX involved ensures work can be undertaken as part of a co-ordinated and managed process, thereby preserving warranties and ensuring health and safety risks are managed.

### 5.3 NHS Lothian Completion Activities

NHSL to list their salient completion activities and include in Schedule II

### 5.4 Hospital pre-Practical Completion 'Joint Occupation & Access Protocol'

Parties to agree a 'Joint Occupation & Access Protocol' which will help manage and coordinate the respective activities of the Parties, between [August] and October 2018. The Protocol will refer to the Joint Occupation Programme, and identify specific arrangements for key activities, such as major medical equipment installations, handover of areas from MPX to NHSL, and temporary arrangements during specific commissioning activities.

An important aspect of the protocol will be the 'rules & processes' to ensure neither party obstructs or causes delay to the other, and hence regular site meetings to take place to ensure all activities are coordinated and managed.

## 6.0 Technical Issues & Agreements

The Project Technical Completion Schedule will record the agreed scope and technical solution for the disputed items. The disputed items included in this schedule will be included as part of the updated Board Construction Requirements/Project Co Proposals, and hence will form part of the completed Works/Facilities. This will also include the 4 Bed Ventilation Works.

The quench pipe will not form part of the Boards Construction Requirements, Project Co Proposals or form part of the Project Works.

## 7.0 Financial & Commercial

The financial and commercial structure of the settlement agreement is essentially to agree two cost considerations:

1. The capital cost of completing the disputed items;  
and
2. The financing costs (i.e. debt service prior to commencement of Unitary Charge) of:
  - a. extending the programme to complete the disputed items; and
  - b. NHSL's rental payments to occupy the hospital to undertake Post Completion activities. (Under base case, NHSL would have incurred this cost through payment of Unitary Charge.)

and are allocated as follows:

- **Disputed Items** = capital and financing costs; and
- **NHSL Rental Payments** = financing costs.

### 7.1 Disputed items – Capital & Financing Costs

7.1.1 The cost of delivering the disputed items and continued on-site presence to facilitate the installation of the quench pipe incurs the following costs:

Activity	Type	Cost
4 Bed Ventilation Works	Capital	[£4.66M] t.b.c
MPX Quench Pipe Facilitation	Capital	£0.5M
Financing Costs (Payment of debt service – refer to 7.1.2)	Financing	£2.267
MPX extended on-site cost	Capital	[£4.2M] t.b.c
<b>Total Disputed Item Costs</b>		<b>£11.627M</b>

7.1.2 The calculation of the financing costs is detailed in Schedule []; however, is essentially 55 days of Contractor liquidated damages which are set at £41,219/day. This covers the period from 19<sup>th</sup> April 2018 to the 3 June 2018 when NHSL would require occupation of the hospital to install the quench pipe.

7.1.3 The MPX Quench pipe facilitation cost covers the cost of MPX removing completed M&E services and building fabric to enable the installation of the

quench pipe. These are an extra cost, to be covered as part of the Settlement Agreement, otherwise these works would be required to be completed by NHSL/Modus. In MPX completing these works the original warranties are preserved and the works can be coordinated.

- 7.1.4 The 4 Bed Ventilation costs are subject to design development and engagement with supply-chain, however will be fixed by MPX at date of Settlement Agreement. The build-up of the costs will be shared with NHSL in an open and transparent manner. From the date of the Settlement Agreement, MPX will hold cost and delivery/programme risk for the 4 Bed Ventilation Works.
- 7.1.5 The MPX extended on-site costs are subject to review, to ensure no inadvertent double counting exists. Again, final figures will be presented to NHSL in an open and transparent manner.
- 7.1.6 The total costs associated with the Disputed Items is currently estimated to be [£11.627M]. This cost is to be funded as set out in Section 7.3 & 7.4.

## 7.2 NHSL Rental Payments

In addition to the [£11.627M] required to resolve the disputed items, the financing costs incurred whilst NHSL occupy the hospital prior to Practical Completion to undertake their commissioning & mobilisation activities, requires to be funded.

Under base-case, NHSL would have been paying Unitary Charge for the 14 weeks of NHSL commissioning and mobilisation activities. However, due to the quench pipe installation requiring 20 weeks, the 14-week period is extended to 20 weeks. The NHSL activities being undertaken during this 20-week period is detailed in Schedule 11.

The period upon which NHSL require occupation of the new hospital, based on the revised completion dates, to enable quench pipe installation and commissioning and mobilisation is from the 4<sup>th</sup> June 2018 to the 31<sup>st</sup> October 2018 (the NHS Rental Period). The NHS Rental Period, based on assumed timescales, is 140 days (20 weeks).

The cost of the NHS Rental Payments is calculated using the Contractor daily liquidated damages sum for late delivery, to enable Project Co to cover debt service costs (which have been due and payable since the planned Completion Date of 3<sup>rd</sup> July 2017).

The Contractor daily liquidated damages sum is £41,219/day. {Unitary Charge equivalent daily payment for 2018/2019 being c. £43,181/day}

**The anticipated NHS Rental Payment is 140 days x £41,219 = £5,770,660.**

*(Following the issue of a certificate of Practical Completion by the Independent Certifier, the Unitary Charge will be payable as the full provisions of the Project Agreement, Schedule Part 14 become effective.)*

### 7.3 Source of funds

7.3.1 The financial consideration for the Settlement Agreement is the sum of the Disputed Items and the NHS Rental Payments:

Costs	Totals
Disputed Items	£11,627,045
NHS Rental Payments	£5,770,660
<b>Total</b>	<b>£17,397,705</b>

7.3.2 The Disputed Items will be funded as follows:

7.3.2.1 All costs incurred up to and including £10M, will be funded by NHSL;

7.3.2.2 All costs greater than £10M and less than £11.5M will be funded by IHSL through NPD Surpluses;

7.3.2.3 All costs greater than £11.5M will be funded by MPX.

7.3.3 The NHS Rental Payments will be funded by NHSL, supported by revenue grants from the Scottish Government i.e. following the same funding stream as Unitary Charge payments.

### 7.4 Payment Terms

7.4.1 The process and arrangements of payments between the Parties is subject to the finalised legal structure and a tax and accounting review.

7.4.2 The table below identifies the recipient, and criteria for payment of the Disputed Items. Refer to 7.3.2 for source of funds.

Disputed Item Cost	Sum	Recipient	Terms
4 Bed Ventilation Works	[£4,660,000]	MPX	As works completed & certified by Funder's TA
Quench Pipe Facilitation	£500,000	MPX	As works completed & certified by IHSL.
Financing Costs (debit service)	£2,267,045	IHSL	Monthly, in advance. £228,553/week pro rata
MPX Extended on-site Costs	[£4,200,000]	MPX	Monthly, in arrears. Paid as per On-site cost profile.

7.4.3 The NHS Rental Payment terms to be agreed and will be subject to legal and tax review, together with commercial agreement between the Parties. The NHS Rental Payments would be payable monthly, in advance. Where

payments are made by NHSL and received by IHSL, MPX would be relieved of Liquidated Damages for sums received. Where NHS Rental Payments are not received by IHSL from NHSL, MPX will remain liable for Liquidated Damages for the relevant period.

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- 7.5.1 The Project Agreement Longstop under Clause 40.1.2 would be extended from 18 months, to 27 months, based on a current Completion Date of [9<sup>th</sup> July 2017]. The corresponding construction longstop periods in the Funding docs would be extended to 24 months (from 15 months); and in the Construction Contract to 21 months (from 12 months).
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- 7.5.5 Insurance – *IHSL to discuss with Project Co insurers any extension to the Construction Insurances.*
- 7.5.6 There will be no Payment Mechanism during the period of joint occupation. The Payment Mechanism will commence following the issue of the certificate of Practical Completion and the commencement of Services.

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- 8.1 The Completion Criteria to be achieved to enable the issue of a certificate of Practical Completion by the Independent Certifier will remain as per the Project Agreement, however upon execution of the Settlement Agreement will include the following:
  - i. 4 Bed Ventilation Works (Schedule [1]);
  - ii. Without Prejudice Works (Schedule [1]); and
  - iii. Works contained within the 'Project Technical Completion Schedule' (Schedule [1]).

together the MPX Completion Works.



- 8.2 NHSL Instructed ‘Other’ Works such as ‘Hospital Square’ and ‘ATD Installations’ will not form part of the Completion Criteria required for issue of a certificate of Practical Completion. The Parties are to agree a mechanism to ensure these Other works remain a focus of the parties and, where possible, are completed in advance of the patient go-live date.

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- 9.1 NHSL ‘Board Changes’ whether at an enquiry or instructed status rest outside of any Settlement Agreement, and remain under the confines of the Project Agreement. Existing arrangements for these Board Changes remain, and are unaffected by any future settlement agreement.
- 9.2 The Parties acknowledge that NHSL wish for certain Other works to be completed for the opening of the new hospital. These Other works include:
- Hospital Square
  - ATD Installations
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MPX and IHSL will work with NHSL to assist in these works being completed by the patient go-live date. Confirmation on scope and technical requirements to be provided by NHSL as soon as possible. Place-holder – section to be developed following discussion with NHSL/MPX

- 9.3 [ ]

## 10.0 Consequences of Programme Delay

- 10.1 Where MPX fail to complete the works set-out in Section 9.1 above (the MPX Completion Works) by the 31<sup>st</sup> October 2018, NHS Rental Payments will cease to be liable. In this scenario until the date where these activities are complete and a certificate of Practical Completion is issued by the Independent Certifier, MPX will be solely liable for Contractor liquidated damages.
- 10.2 The “Joint Occupation & access Protocol” will require the Parties to work in good faith and not unreasonably interfere or obstruct the other party in the completion of their works. Where an NHSL party interferes, or causes delay to the MPX Completion Works, this will be subject to a Compensation Event under the Project Agreement.

## 11.0 Amendments to Project Agreement & Project Documents

*Section to be developed and will require legal input.*

20<sup>th</sup> April 2018.

## 1.0 Introduction

This document sets out draft head of terms of an anticipated tripartite settlement agreement between NHS Lothian, IHS Lothian Ltd and Multiplex Construction Europe Ltd (together the 'Parties'), in relation to the re-provision of RHSC and DCN at Little France (the "Project"). The Parties have agreed to engage in without prejudice discussions, and hence these draft heads of terms ("HoTs") are not binding or a legally enforceable contract.

Any agreement between the Parties will be subject to Lender consent.

*(DN: Initial thoughts are a tripartite agreement; however, this will be subject to legal review and the final structure of the deal. At present it is not envisaged Bouygues FM requires to be a party to this agreement).*

## 2.0 Background & Objectives

The construction of the new RHSC and DCN Project has suffered numerous events which have resulted in a significant delay to the completion and occupation of the new Hospital. In addition, disputes and claims have arisen between the Parties in relation to the Project. As an alternative to being drawn into lengthy and costly legal proceedings, the Parties have agreed to engage in without prejudice discussions to resolve the disputed items and jointly occupy the hospital prior to Practical Completion whilst these disputed works are being completed, in tandem with NHSL commissioning and mobilisation. These draft HoTs attempt to capture the basis upon which these without prejudice discussions will proceed.

The overarching objectives are threefold:

- A. To deliver a hospital which meets, on day 1, the patient & carer, staff, and clinical and operational requirements of NHS Lothian;
- B. Achieve a patient go-live date at the earliest opportunity, and fix a date all Parties can plan for and work to; and
- C. Complete the Project in the most efficient way, and avoid unnecessary expenditure which is of no benefit to the Parties.

The Parties acknowledge that for the Project to be successful, the Parties need to behave and operate in a collaborative partnership, throughout the life of the contract.

## 3.0 Settlement Agreement Works

The Settlement Agreement Works (SA Works) will define an agreed scope for completion of the hospital (resolving the historical technical disputes between the Parties), by a fixed date for a fixed price.

### 3.1 Multiplex responsibilities

In addition to the base build works as set-out in the Project Agreement/Construction Contract, Multiplex (MPX) will be responsible for the following works, together referred to as the "MPX Works":

### 3.1.1 Without Prejudice Works

MPX will complete the items agreed at the Sheraton workshop, referred to as the Without Prejudice Works. If the Parties progress with the Settlement Agreement, MPX will be obligated to deliver these works, as detailed in Schedule [1]. The cost of the works will be for MPX's account, however for the avoidance of doubt, this does not include the financing costs (i.e. associated liquidated damages during the period of these works).

### 3.1.2 4 Bed Ventilation Works

NHS Lothian (NHSL) have agreed that 14 (fourteen) of the 4 Bed areas within the facilities require ventilation works to provide a balanced/negative pressure regime to the corridor, where each 4 Bed area will be provided with 4 air changes per hour.

MPX will develop a design to meet this requirement and undertake the works. The technical design solution will require the utilisation of a proportion of the 25% spare capacity provided as part of the base build works. Exact proportion to be advised following design completion.

The cost of the ventilation works is set out in Section [1]; and the allocation and responsibility for the cost and associated financing costs of these works are detailed in Section [1].

### 3.1.3 Facilitation & enabling of Quench Pipe

MPX agree to facilitate and enable the installation of the MRI Quench pipes. Installation and commissioning of the MRI Quench Pipes remains the responsibility of NHSL. MPX will liaise with NHSL's contractor, Modus, to coordinate the works and will, where required, remove ceilings/building fabric and M&E services to enable installation of the quench pipes, and will reinstate following installation of the quench pipe by Modus.

The MPX facilitation and enabling works costs are detailed in Section [1]; and the allocation of costs and associated financing costs are detailed in Section [1].

### 3.1.4 Other Post WP Works

## 3.2 NHS Lothian responsibilities

**To be completed.** – together referred to as "NHSL Works"

## 3.3 IHS Lothian responsibilities

**To be completed** – together referred to as "IHS Works".

#### 4.0 Programme

The parties have agreed that they will develop a Joint Occupation Programme, which will result in Practical Completion being achieved by the 31<sup>st</sup> October 2018, with the patient go-live date following immediately after (at the discretion of NHSL). Essentially the parties will jointly occupy the new hospital prior to Practical Completion, whilst the SA Works are completed. Effectively the NHSL commissioning and mobilisation works are now being completed prior to handover of the new hospital, this enables lengthy programme activities such as 4 Bed Ventilation Works and quench pipe installation to be progressed in tandem with NHSL's Completion Activities (Schedule [1]) such as medical equipment installation, clinical clean, staff training & familiarisation, establishment of medical IT network, stocking consumables, etc..

The HoTs are drafted in consideration of the following key dates and timescales:

Key Programme Activities/Dates		Target Completion Dates (indicative)
1	Commencement of design & installation of 4 Bed Ventilation Works	Subject to instruction
2	Finalisation & Sign-off of all design issues on 'Project Technical Completion Schedule'	[31 May 2018]
3	Latest commencement date of Quench Pipe installation	[1 June 2018]
4	Completion of Without Prejudice Works	[4 June 2018]
5	NHSL occupation date of hospital	[1 <sup>st</sup> August 2018]
6	Completion of Quench Pipe (20 week Period)	[NHSL to advise]
7	Completion of 4 Bed Ventilation Works	[24 October 2018]
8	Practical Completion Date	31 October 2018
9	Patient Go Live Date	[NHSL to advise]

***All dates are indicative at this time, and will be confirmed upon development and issue of the Joint Occupation Programme.***

The Joint Occupation Programme will also detail when areas of the new hospital are released to NHSL, and make provision for access and installation of key pieces of medical equipment such as MRI, etc.

***This Section requires significant development and the input of the MPX Planner and Project Director, together with a better understanding of the NHSL commissioning and mobilisation activities/programme.***

#### 5.0 Key Interfaces

##### 5.1 Design Finalisation & Sign-off

Key to achievement of the programme is early design finalisation and sign-off. Parties to agree a speedy RDD process to finalise all items on the Project Technical Completion Schedule by 31 May 2018.

This includes the Parties agreement and sign-off of Project Co Changes.

## 5.2 Quench Pipe Installation

Parties to agree a demarcation matrix defining the respective obligations on each of the Parties with respect to installation and commissioning of the MRI Quench Pipes. In principle MPX will provide facilitation and enabling activities to allow the installation of the pipes by NHSL

NHSL will remain responsible for installation and commissioning of the quench pipes through their contractor Modus, including all temporary works (including external scaffolding to courtyard, protection works, etc) and craneage associated with the installation.

Having MPX involved ensures work can be undertaken as part of a co-ordinated and managed process, thereby preserving warranties and ensuring health and safety risks are managed.

## 5.3 NHS Lothian Completion Activities

NHSL to list their salient completion activities and include in Schedule 11

## 5.4 Hospital pre-Practical Completion 'Joint Occupation & Access Protocol'

Parties to agree a 'Joint Occupation & Access Protocol' which will help manage and coordinate the respective activities of the Parties, between [August] and October 2018. The Protocol will refer to the Joint Occupation Programme, and identify specific arrangements for key activities, such as major medical equipment installations, handover of areas from MPX to NHSL, and temporary arrangements during specific commissioning activities.

An important aspect of the protocol will be the 'rules & processes' to ensure neither party obstructs or causes delay to the other, and hence regular site meetings to take place to ensure all activities are coordinated and managed.

## 6.0 Technical Issues & Agreements

The Project Technical Completion Schedule will record the agreed scope and technical solution for the disputed items. The disputed items included in this schedule will be included as part of the updated Board Construction Requirements/Project Co Proposals, and hence will form part of the completed Works/Facilities. This will also include the 4 Bed Ventilation Works.

The quench pipe will not form part of the Boards Construction Requirements, Project Co Proposals or form part of the Project Works.

## 7.0 Financial &amp; Commercial

The financial and commercial structure of the settlement agreement is essentially to agree two cost considerations:

1. The capital cost of completing the disputed items;  
and
2. The financing costs (i.e. debt service prior to commencement of Unitary Charge) of:
  - a. extending the programme to complete the disputed items; and
  - b. NHSL's rental payments to occupy the hospital to undertake Post Completion activities. (Under base case, NHSL would have incurred this cost through payment of Unitary Charge.)

and are allocated as follows:

- Disputed Items** = capital and financing costs; and
- NHSL Rental Payments** = financing costs.

## 7.1 Disputed items – Capital &amp; Financing Costs

- 7.1.1 The cost of delivering the disputed items and continued on-site presence to facilitate the installation of the quench pipe incurs the following costs:

Activity	Type	Cost
4 Bed Ventilation Works	Capital	[£4.66M] t.b.c
MPX Quench Pipe Facilitation	Capital	£0.5M
Financing Costs (Payment of debt service – refer to 7.1.2)	Financing	£2.267
MPX extended on-site cost	Capital	[£4.2M] t.b.c
<b>Total Disputed Item Costs</b>		<b>£11.627M</b>

- 7.1.2 The calculation of the financing costs is detailed in Schedule []; however, is essentially 55 days of Contractor liquidated damages which are set at £41,219/day. This covers the period from 19<sup>th</sup> April 2018 to the 3 June 2018 when NHSL would require occupation of the hospital to install the quench pipe.
- 7.1.3 The MPX Quench pipe facilitation cost covers the cost of MPX removing completed M&E services and building fabric to enable the installation of the quench pipe. These are an extra cost, to be covered as part of the Settlement Agreement, otherwise these works would be required to be completed by NHSL/Modus. In MPX completing these works the original warranties are preserved and the works can be coordinated.
- 7.1.4 The 4 Bed Ventilation costs are subject to design development and engagement with supply-chain, however will be fixed by MPX at date of Settlement Agreement. The build-up of the costs will be shared with NHSL in an open and transparent manner. From the date of the Settlement Agreement, MPX will hold cost and delivery/programme risk for the 4 Bed Ventilation Works.

- 7.1.5 The MPX extended on-site costs are subject to review, to ensure no inadvertent double counting exists. Again, final figures will be presented to NHSL in an open and transparent manner.
- 7.1.6 The total costs associated with the Disputed Items is currently estimated to be [£11.627M]. This cost is to be funded as set out in Section 7.3 & 7.4.

## 7.2 NHSL Rental Payments

In addition to the [£11.627M] required to resolve the disputed items, the financing costs incurred whilst NHSL occupy the hospital prior to Practical Completion to undertake their commissioning & mobilisation activities, requires to be funded.

Under base-case, NHSL would have been paying Unitary Charge for the 14 weeks of NHSL commissioning and mobilisation activities. However, due to the quench pipe installation requiring 20 weeks, the 14-week period is extended to 20 weeks. The NHSL activities being undertaken during this 20-week period is detailed in Schedule 11.

The period upon which NHSL require occupation of the new hospital, based on the revised completion dates, to enable quench pipe installation and commissioning and mobilisation is from the 4<sup>th</sup> June 2018 to the 31<sup>st</sup> October 2018 (the NHS Rental Period”). The NHS Rental Period, based on assumed timescales, is 140 days (20 weeks).

The cost of the NHS Rental Payments is calculated using the Contractor daily liquidated damages sum for late delivery, to enable Project Co to cover debt service costs (which have been due and payable since the planned Completion Date of 3<sup>rd</sup> July 2017).

The Contractor daily liquidated damages sum is £41,219/day. {Unitary Charge equivalent daily payment for 2018/2019 being c. £43,181/day}

**The anticipated NHS Rental Payment is 140 days x £41,219 = £5,770,660.**

*(Following the issue of a certificate of Practical Completion by the Independent Certifier, the Unitary Charge will be payable as the full provisions of the Project Agreement, Schedule Part 14 become effective.)*

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together the MPX Completion Works.

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*Section to be developed and will require legal input.*

20<sup>th</sup> April 2018.

Message

**From:** Matthew Templeton [REDACTED]  
on behalf of Matthew Templeton [REDACTED]  
**Sent:** 30/04/2018 12:38:14  
**To:** j.crombie [REDACTED]; Susan.Goldsmith [REDACTED]; Callum Tuckett [REDACTED]  
[REDACTED]; Ben Keenan [REDACTED]  
**CC:** Tony Rose [REDACTED]; Andy Clapp [REDACTED]  
[REDACTED]; Richard Osborne (MacCap) [REDACTED]  
[REDACTED]; Mark.Bradshaw [REDACTED]; Wallace Weir [REDACTED]; Pryor,  
Michael [REDACTED]; Graham, Iain [REDACTED]; Darren Pike  
[REDACTED]  
**Subject:** RE: RHSC/DCN: Draft principles of Settlement Agreement  
**Attachments:** RHSC\_Tripartite SA HoTs\_Draft\_V3 30 APR 18.DOCX; RHSC\_Tripartite SA HoTs\_Draft\_V3 30 APR 18.pdf

Dear Jim, Susan, Callum and Ben,

**Without Prejudice**

In advance of our meeting on Wednesday afternoon, please find attached an update of the draft Settlement Agreement heads of terms for your consideration.

In addition to a general development and update, IHSL has considered the information and comments received from NHSL and Multiplex, and attempted to address the matters raised by each Party. There remains matters which require further discussion and agreement between the Parties.

Please review and we can discuss in detail when we meet.

We will shortly be issuing a draft Programme, prepared by Multiplex.

Kind Regards

Matt

**Matt Templeton**

HCP

[REDACTED] | [www.hcp.co.uk](http://www.hcp.co.uk)

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**From:** Matthew Templeton  
**Sent:** 20 April 2018 11:49  
**To:** 'j.crombie [REDACTED]'; 'Susan.Goldsmith [REDACTED]';  
[REDACTED]; Callum Tuckett [REDACTED];  
[REDACTED]; Ben Keenan [REDACTED]  
**Cc:** Tony Rose [REDACTED]; Andy Clapp [REDACTED];  
[REDACTED]; Richard Osborne (MacCap) [REDACTED];  
[REDACTED]; 'Mark.Bradshaw [REDACTED]';  
[REDACTED]; Wallace Weir [REDACTED]; Pryor, Michael [REDACTED];  
[REDACTED]; Graham, Iain [REDACTED]; Darren Pike [REDACTED]  
[REDACTED]  
**Subject:** RHSC/DCN: Draft principles of Settlement Agreement

Dear Jim, Susan, Calum & Ben,

A47316415

IHS0000829

**Without Prejudice**

Further to our technical and commercial meeting on the 12<sup>th</sup> April 2018, IHSL has sought to draft heads of terms of an anticipated tripartite Settlement Agreement between NHSL, Multiplex and IHSL. The draft heads of terms set-out IHSL's view of the proposal, and we are jointly issuing to NHSL and Multiplex for your respective thoughts.

The attached is a starter for ten, and attempts to frame our discussions and provide a basis upon which an agreement can develop. We have not sought legal input or review at this time, nor have we consulted with lenders (to which their consent will be required).

We understand NHSL has also given consideration to a principles paper, and upon issue we can consolidate, together with comments from Multiplex.

Regards

Matt  
Matt Templeton

HCP  
|  | [www.hcp.co.uk](http://www.hcp.co.uk)

The HCP Group includes HCP Holdings Limited (registered number: 03209169), HCP Management Services Limited (registered number: 03819468) and HCP Social Infrastructure (UK) Limited (registered number: 02658304), all of whom are registered in England & Wales. The registered office for these companies is 8 White Oak Square, Swanley, Kent BR8 7AG.

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In addition to the base build works as set-out in the Project Agreement/Construction Contract, Multiplex (MPX) will be responsible for the following works, together referred to as the "MPX Works":

#### 3.1.1 Without Prejudice Works

MPX will complete items alleged to be non-compliances by NHS, referred to as the Without Prejudice Works. If the Parties progress with the Settlement Agreement, MPX will be obligated to deliver these works, as detailed in Schedule []. The cost of the works will be for MPX's account, however for the avoidance of doubt, this does not include the financing costs (i.e. associated liquidated damages during the period of works).

### 3.1.2 4 Bed Ventilation Works

NHS Lothian (NHSL) have agreed that 14 (fourteen) of the 4 Bed areas within the facilities require ventilation works to provide a balanced/negative pressure regime to the corridor, where each 4 Bed area will be provided with 4 air changes per hour.

MPX will develop a design to meet this requirement and undertake the works. The technical design solution will require the utilisation of a proportion of the 25% spare capacity provided as part of the base build works. Exact proportion to be advised following design completion.

The cost of the ventilation works is set out in Section []; and the allocation and responsibility for the cost and associated financing costs of these works are detailed in Section [].

### 3.1.3 Facilitation & enabling of Quench Pipe

MPX agree to facilitate and enable the installation of the MRI Quench pipes. Installation and commissioning of the MRI Quench Pipes remains the responsibility of NHSL. MPX will liaise with NHSL's contractor, Modus, to coordinate the works and will, where required, remove ceilings/building fabric and M&E services to enable installation of the quench pipes, and will reinstate following installation of the quench pipe by Modus.

The MPX facilitation and enabling works costs are detailed in Section []; and the allocation of costs and associated financing costs are detailed in Section [].

### 3.1.4 NHS Post Completion Works

MPX will be responsible for the following works defined as NHS Post Completion Works:

- AAAA
- BBBB
- CCCC

## 3.2 NHS Lothian responsibilities

To be completed. – together referred to as "NHSL Works"

## 3.3 IHS Lothian responsibilities

To be completed – together referred to as "IHS Works"

## 4.0 Programme

The parties have agreed that they will develop a Joint Occupation Programme, which will result in Practical Completion being achieved by the 31<sup>st</sup> October 2018, with the patient go-live date following immediately after (at the discretion of NHSL). Essentially the parties will jointly occupy the new hospital prior to Practical Completion, whilst the Settlement Agreement Works are completed. Effectively the NHSL Pre-and Post Completion Works are now being completed prior to handover of the new hospital, this enables lengthy programme activities such as 4 Bed Ventilation Works and Quench Pipe installation to be progressed in tandem with NHSL's Post Completion activities such as medical equipment installation, clinical clean, staff training & familiarisation, establishment of medical IT network, stocking consumables, etc..

The agreement is drafted on the following key dates and timescales:

	Key Programme Activities/Dates	Target Completion Dates (indicative)
1	Completion of Base Build Works	19 April 2018
2	Commencement of design & installation of 4 Bed Ventilation Works	19 April 2018
3	Finalisation & Sign-off of all design issues on 'Project Technical Completion Schedule'	31 May 2018
4	Latest commencement date of Quench Pipe installation	1 June 2018
5	Completion of Without Prejudice Works	4 June 2018
6	NHSL occupation date of hospital	[23 July 2018]
7	Completion of Quench Pipe (20 week Period)	[NHSL to advise]
8	Completion of 4 Bed Ventilation Works	[24 October 2018]
9	Practical Completion Date	31 October 2018
10	Patient Go Live Date	[NHSL to advise]

All dates are indicative at this time, and will be confirmed upon development and issue of the Joint Occupation Programme.

The Joint Occupation Programme will also detail when areas of the new hospital are released to NHSL, and make provision for access and installation of key pieces of medical equipment such as MRI, etc.

*This Section requires significant development and the input of the MPX Planner and Project Director, together with a better understanding of the NHSL commissioning and mobilisation activities/programme.*

## 5.0 Key Interfaces

### 5.1 Design Finalisation & Sign-off

Key to achievement of the programme is early design finalisation and sign-off. Parties to agree a speedy RDD process to finalise all items on the Project Technical Completion Schedule by 31 May 2018.

This includes the Parties agreement and sign-off of Project Co Changes.

## 5.2 Quench Pipe Installation

Parties to agree a demarcation matrix defining the respective obligations on each of the Parties with respect to installation and commissioning of the MRI Quench Pipes. In principle MPX will provide facilitation and enabling activities to allow the installation of the pipes by NHSL

NHSL will remain responsible for installation and commissioning of the quench pipes through their contractor Modus, including all temporary works and craneage associated with the installation, including the scaffolding to the XXX Courtyard.

Having MPX involved ensures work can be undertaken as part of a co-ordinated and managed process, thereby preserving warranties and ensuring health and safety risks are managed.

## 5.3 NHS Lothian Pre-Completion Activities

NHSL to list salient Pre-Completion activities and include in Schedule []

## 5.4 NHS Lothian Post-Completion Activities

NHSL to list salient Post Completion activities and include in Schedule []

## 5.5 Hospital Pre-PC 'Joint Occupation & Access Protocol'

Parties to agree a 'Joint Occupation & Access Protocol' which will help manage and coordinate the respective activities of the Parties, between July and October 2018.

## 6.0 Technical Issues & Agreements

The Project Technical Completion Schedule will record the agreed scope and technical solution for the disputed items. The disputed items included in this schedule will be included as part of the updated Board Construction Requirements/Project Co Proposals, and hence will form part of the completed Works/Facilities. This will also include the 4 Bed Ventilation Works.

The quench pipe will not form part of the Boards Construction Requirements, Project Co Proposals or part of the Project Works.

## 7.0 Financial & Commercial

The financial and commercial structure of the settlement agreement is essentially to agree two cost considerations:

1. The capital cost of completing the disputed items;  
and



2. The financing costs (i.e. debt service prior to commencement of Unitary Charge) of:
  - a. extending the programme to complete the disputed items; and
  - b. NHSL's rental payments to occupy the hospital to undertake Post Completion activities. (Under base case, NHSL would have incurred this cost through payment of Unitary Charge.)

and are allocated as follows:

- **Disputed Items** = capital and financing costs; and
- **NHSL rental payments** = financing costs.

## 7.1 Disputed items – Capital & Financing Costs

The cost of delivering the disputed items and continued on-site presence to facilitate the installation of the quench pipe incurs the following costs:

Activity	Type	Cost
4 Bed Ventilation Works	Capital	[£4.66M] t.b.c
MPX Quench Pipe Facilitation	Capital	£0.5M
Payment of debt service (LDs)*	Financing	£2.267
MPX extended on-site cost	Capital	[£4.2M] t.b.c
<b>Total Disputed Item Costs</b>		<b>£11.627M</b>

\* The calculation of the financing costs is detailed in Schedule []; however, is essentially 55 days of liquidated damages which are set at £41,219/day. This covers the period from 19<sup>th</sup> April 2018 (completion date of base works) to the 3 June 2018 when NHSL would require occupation of the hospital to install the quench pipe.

The 4 Bed Ventilation costs are subject to design development and engagement with supply-chain, however will be fixed by MPX at date of Settlement Agreement. The build-up of the costs will be shared with NHSL in an open and transparent manner. From the date of the Settlement Agreement, MPX will hold cost and delivery/programme risk for the 4 Bed Ventilation Works.

The MPX extended on-site costs are subject to review, to ensure no inadvertent double counting exists. Again, final figures will be presented to NHSL in an open and transparent manner.

The total costs associated with the Disputed Items is currently estimated to be £11.627M. This cost is to be funded as set out in Section 7.3 & 7.4.

## 7.2 NHSL Rental Payments

In addition to the £11.627M required to resolve the disputed items, the financing costs incurred whilst NHSL occupy the hospital prior to Practical Completion to undertake their commissioning & mobilisation activities, requires to be funded.

Under base-case, NHSL would have been paying Unitary Charge for the 14 weeks of NHSL commissioning and mobilisation activities. However, due to the quench pipe

installation requiring 20 weeks, the 14-week period is extended to 20 weeks. The NHSL activities being undertaken during this 20-week period is detailed in Schedules [] & [].

The period upon which NHSL require occupation of the new hospital, based on the revised completion dates, to enable quench pipe installation and commissioning and mobilisation is from the 4<sup>th</sup> June 2018 to the 31<sup>st</sup> October 2018 (the NHS Rental Period”). The NHS Rental Period, based on assumed timescales, is 140 days (20 weeks).

The cost of the NHS Rental Payments is calculated using the Contractor daily liquidated damages sum for late delivery, to enable Project Co to cover debt service costs (which have been due and payable since the planned Completion Date of 3<sup>rd</sup> July 2017).

The Contractor daily liquidated damages sum is £41,219/day.

**The anticipated NHS Rental Payment is 140 days x £41,219 = £5,770,660.**

Following the issue of a certificate of Practical Completion by the Independent Certifier, the Unitary Charge will be payable as the full provisions of the Project Agreement, Schedule Part 14 become effective.

### 7.3 Source of funds

7.3.1 The financial consideration for the Settlement Agreement is the sum of the disputed items and the NHS Rental Payments:

Costs	Totals
Disputed Items	£11,627,045
NHS Rental Payments	£5,770,660
<b>Total</b>	<b>£17,397,705</b>

7.3.2 The Disputed Items will be funded as follows:

7.3.2.1 All costs incurred up to and including £10M, will be funded by NHSL through a loan to the Project (refer to Section 8.0);

7.3.2.2 All costs greater than £10M and less than £11.5M will be funded by IHSL through NPD Surpluses;

7.3.2.3 All costs greater than £11.5M will be funded by MPX.

7.3.3 The NHS Rental Payments will be funded by NHSL, supported by revenue grants from the Scottish Government i.e. following the same funding stream as Unitary Charge payments.

### 7.4 Payment Terms

- 7.4.1 The process and arrangements of payments between the Parties is subject to the finalised legal structure and a tax and accounting review.
- 7.4.2 The table below identifies the recipient, and criteria for payment of the Disputed Items. Refer to 7.3.2 for source of funds.

Disputed Item Cost	Sum	Recipient	Terms
4 Bed Ventilation Works	£4,660,000	MPX	As works completed & certified by Funder's TA
Quench Pipe Facilitation	£500,000	MPX	As works completed & certified by Funder's TA
Financing Costs	£2,267,045	IHSL	Monthly, in advance
MPX Extended on-site Costs	£4,200,000	MPX	Monthly, in arrears

- 7.4.3 The NHS Rental Payment terms to be agreed and will be subject to legal and tax review, together with commercial agreement between the Parties. The NHS Rental Payments would be payable monthly, in advance. Where payments are made by NHSL and received by IHSL, MPX would be relieved of Liquidated Damages for sums received. Where NHS Rental Payments are not received from NHSL by IHSL, MPX will remain liable for Liquidated Damages for relevant period.

## 7.5 Commercial Matters

- 7.5.1 To be developed.

## 8.0 Repayment of NHS Lothian Project Loan

- 8.1 The first £10M of the Disputed Items will be funded from an NHSL loan to the Project, which will be repaid through NPD Surpluses over the term of the Project.
- 8.2 The loan will have required to be deposited into the IHSL Account within [5] Business Days of execution of the Settlement Agreement.
- 8.3 No Term Sheet has been developed for the NHS Loan, however the following principles have been discussed:
- A substantial proportion (>50%) of the loan principle is repaid over the next [23] Years;
  - A Minimum repayment of [£250k] will be made each Year;
  - An interest rate will apply, rate to be agreed; and
  - Remainder of loan to be repaid following repayment of senior debt, in Year [25] of the Project.

## 9.0 Completion Criteria

- 9.1 The Completion Criteria to be achieved to enable the issue of a certificate of Practical Completion by the Independent Certifier will remain as per the Project Agreement, however upon execution of the Settlement Agreement will include the following:
- i. 4 Bed Ventilation Works;

- ii. Without Prejudice Works (Schedule []);
- iii. Works contained within the 'Project Technical Completion Schedule' (Schedule []); and
- iv. The NHSL Instructed Variations as listed in Schedule [].

together the MPX Completion Works.

- 9.2 NHSL Instructed 'Other' Works such as 'Hospital Square' and 'Bedside Environment' will not form part of the Completion Criteria required for issue of a certificate of Practical Completion. The parties to agree a mechanism to ensure these works remain a focus of the parties and where possible are completed in advance of the 31<sup>st</sup> October 2018.

## 10.0 NHSL Instructions for 'Other' Works

- 10.1 NHSL to advise of all works they require or wish to instruct, to be completed in the period up to the 31<sup>st</sup> October 2018, such as Hospital Square and Bed-side environment. Place-holder – section to be developed following discussion with NHSL/MPX

## 11.0 Consequences of Programme Delay

- 11.1 Where MPX fail to complete the works set-out in Section 9.1 above (the MPX Completion Works) by the 31<sup>st</sup> October 2018, NHS Rental Payments will cease to be liable. In this scenario until the date where these activities are complete and a certificate of Practical Completion is issued by the Independent Certifier, MPX will be solely liable for Contractor liquidated damages.
- 11.2 The "Joint Occupation & access Protocol" will require the Parties to work in good faith and not unreasonably interfere or obstruct the other party in the completion of their works. Where an NHSL party interferes, or causes delay to the MPX Completion Works, this will be subject to a Compensation Event.

## 12.0 Amendments to Project Agreement & Project Documents

*Section to be developed and will require legal input.*

19<sup>th</sup> April 2018.

## Message

**From:** Matthew Templeton [REDACTED]  
**Sent:** 21/05/2018 10:26:41  
**To:** Crombie, Jim [REDACTED]; Goldsmith, Susan [REDACTED]; Callum Tuckett [REDACTED]; Ben Keenan [REDACTED]  
**CC:** Graham, Iain [REDACTED]; Pryor, Michael [REDACTED]; Andy Clapp [REDACTED]; Tony Rose [REDACTED]; Richard Osborne (MacCap) [REDACTED]  
**Subject:** RHSC & DCN: Settlement Agreement 1st Draft  
**Attachments:** RHSC PA Settlement Agreement 21 05 18.doc

Dear Jim, Susan, Callum and Ben,

Please find attached the first draft of the proposed settlement agreement between NHSL and IHSL. A very similar back to back agreement will be developed between IHSL and Multiplex.

We look forward to reviewing and discussing this with you tomorrow.

Regards

Matt

**Matt Templeton**

HCP

[REDACTED] | [www.hcp.co.uk](http://www.hcp.co.uk)

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(1) LOTHIAN HEALTH BOARD

(2) IHS LOTHIAN LIMITED

**SETTLEMENT AGREEMENT  
RELATING TO THE PROJECT AGREEMENT FOR THE PROVISION  
OF RHSC AND DCN AT LITTLE FRANCE**

**Note: This is a preliminary draft Settlement Agreement which is subject to review by Multiplex, the lenders and the Board. Provisions such as the definitions of "Dispute" and "Released Claims" require review and amendment once the technical schedules have been drafted.**

**The payment and costs provisions will be subject to further review once the heads of terms of the loan agreement are agreed and the Loan Agreement is drafted.**



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THIS AGREEMENT is made the

2018

**BETWEEN:**

- (1) **LOTHIAN HEALTH BOARD**, a health board constituted in Scotland under the National Health Service (Constitution of Health Boards) (Scotland) Order 1974 (S.I. 1974/267) as amended by the National Health Service (Constitution of Health Boards) (Scotland) Amendment Order 2003 (S.S.I. 2003/217) pursuant to Section 2 of the National Health Service (Scotland) Act 1990 and having its principal address at Waverley Gate, 2-4 Waterloo Place, Edinburgh, EH1 3EG (hereinafter referred to as the "**Board**"); and
- (2) **IHS LOTHIAN LIMITED** (registered under number SC493676) whose registered office is 15 Lauriston Place, Edinburgh, EH3 9EP ("**Project Co**").

**WHEREAS**

- A. An agreement was entered into between the Board and Project Co dated 12<sup>th</sup> and 13<sup>th</sup> February 2015 setting out the terms and conditions of a project for the design, build, finance and maintenance of a project to re-provide services from the Royal Hospital for Sick Children, Child and Adolescent Mental Health Department and the Department of Clinical Neurosciences in a single building adjoining the Royal Infirmary of Edinburgh at Little France (the "**Project Agreement**").
- B. The Parties are in dispute in respect of the late completion of the Works and the responsibility for the following:
- (i) [the ventilation of all the [4-bed] wards; **[Note: all the wards, not just the fourteen wards where additional works will be carried out, need to be referred to so that there can be no future claim that the others are not correctly ventilated]**
- (ii) the "without prejudice works" items set out in Part [ ] of the Schedule;
- (iii) the facilitation and enabling of a quench pipe to be installed by the Board prior to the installation by the Board of a MRI scanner; **[Note: the quench pipe will not be part of the Completion Criteria]**
- (iv) the 81 items set out in Part [ ] of the Schedule in respect of which the scope or technical solution requires further clarification and/ or development;]
- ("the **Dispute**").

**[Note: the above definition will be developed once the technical schedules are in circulation. It is noted that there may be some overlap between the without prejudice works and the 81 items works.]**

**THE PARTIES AGREE AS FOLLOWS:-**

**1. DEFINITIONS**

1.1 All words and expressions defined in the Project Agreement shall have the same meanings in this Agreement (unless stated otherwise) and the provisions of Clause 1 (*Definitions and Interpretation*), Clause 56 (*Dispute Resolution Procedure*), Clause 59 (*Mitigation*), Clause 64 (*Notices*), Clause 65 (*No Waiver*), Clause 66 (*No Agency*), Clause 72 (*Further Assurance*) and Clause 74 (*Governing Law and Jurisdiction*) of the Project Agreement shall apply to this Agreement *mutatis mutandis* as they apply to the Project Agreement. For the avoidance of doubt references to the Board includes its successors and permitted assignees.

1.2 In this Agreement the following words and expressions shall have the following meanings:

**"Access Payment"** has the meaning given in Clause 4.2;



<b>"Agreement"</b>	means this Agreement between the parties including the Schedule;
<b>"Due Dates"</b>	has the meaning given in Clause 5.1;
<b>"Instalments"</b>	has the meaning given in Clause 5.1;
<b>"Joint Completion Programme"</b>	means the joint completion programme set out in Part [ ] of the Schedule;
<b>"Released Claims"</b>	<p>[any actions, claims, liabilities, rights, demands and set-offs, whether in this jurisdiction or any other, whether or not presently known to the Parties or to the law including but not limited to claims arising from rights acquired from third parties, and whether in law or equity, that it, its parent, subsidiaries, assigns, transferees, representatives, principals, agents, contractors, officers and directors or any of them ever had, may have or hereafter can, shall or may have against the other Party or any other of its present and former parent, subsidiaries, assigns, transferees, representatives, principals, agents, contractors, officers or directors arising out of or connected with:</p> <ul style="list-style-type: none"> <li>(a) the Dispute;</li> <li>(b) the underlying facts relating to the Dispute;</li> <li>(c) any act, omission, breach, default, negligence or failure to comply with the Project Agreement in relation to the Dispute; and</li> <li>(d) any liability for, or rights or claims against Project Co in relation to Warning Notices or Deductions relating to the Dispute;]</li> </ul> <p><b>[Note: this definition will be developed once the technical schedules are in circulation and the "Dispute" is better defined.]</b></p>
<b>"Schedule"</b>	means the schedule (in [ ] parts) annexed to this Agreement;
<b>"Settlement Loan"</b>	has the meaning given in Clause 4.1.1.

### 1.3 Headings

The Clause and paragraph headings and the table of contents used in this Agreement are inserted for ease of reference only and shall not affect its construction.

### 1.4 Schedule

The Schedule is incorporated into and forms part of this Agreement and any references herein to this Agreement includes a reference to the Schedule.

### 1.5 Project Agreement

This Agreement is supplemental to the Project Agreement. Save where expressly stated to the contrary herein, where words and expressions appear in capitalised terms in this Agreement, such words and expressions shall have the same meaning as is given to such words and expressions under the Project Agreement. In the event of any inconsistency existing between the provisions of this Agreement and any provision of the Project Agreement, the provision of this Agreement shall (in such case) prevail.

## 2. CONDITIONS PRECEDENT

2.1 The coming into force of this Agreement is subject to and in all respects conditional upon satisfaction or waiver of the following conditions:

2.1.1 A certified copy of the resolution of the Board approving the amendments to the Project Agreement and authorising a named person to execute this Agreement and documents to be delivered by it pursuant thereto;

2.1.2 A certificate of the relevant officer of the Board setting out the names and specimen signatures of the person or persons named in the resolution of the Board referred to in Clause 2.1.1 above.

2.1.3 Extracts of the minutes of the meeting of the board of directors (certified as true and accurate by the company secretary, director or authorised signatory) of Project Co at which resolutions were passed approving the amendments to the Project Agreement.

2.1.4 A certificate of the company secretary, director or authorised signatory of Project Co setting out the names and specimen signatures of the person or persons named in the relevant certified extract.

2.1.5 [Necessary consents under the Funding Documents including the consent of the Intercreditor Agent under the Common Terms Agreement.]

2.1.6 [Any necessary shareholder consents from Project Co.]

2.1.7 [Any relevant amendment agreements to be made available to the Board by Project Co.]

2.1.8 [Any necessary consent from the Scottish Government in respect of the Settlement Loan.]

2.2 Until this Agreement is unconditional then neither party shall have any liability to the other pursuant to this Agreement.

2.3 Each party shall deliver to the other, a letter confirming that the conditions set out in Clause 2.1 of this Agreement (as relevant to the party giving the letter) have been satisfied.

## 3. COMMENCEMENT AND DURATION

This Agreement and the rights and obligations of the parties, shall commence on the date of execution of this Agreement and, without prejudice to Clause 47.6 (*Continuing Obligations*) of the Project Agreement, shall terminate automatically on the expiry of the Project Term.

## 4. SETTLEMENT AND RELEASE

4.1 The costs of the [four bed ventilation works, quench pipe facilitation, on-site costs and senior debt funding in the period from 19 April 2018 to 13 June 2018] will be paid as follows:

4.1.1 the Board shall pay a [£10,000,000] loan to Project Co in instalments without deduction or set off in accordance with the loan agreement to be entered into by the Board and Project Co on or around the date of this Agreement (the "**Settlement Loan**"); and

4.1.2 as between the Board and Project Co, Project Co shall be responsible for the remainder of the costs. As between Project Co and the Contractor, Project Co shall be responsible for [£1,500,000] of such costs and the Contractor shall be responsible for costs in excess of [£11,500,000]. **[Note: the finance documents will need to be reviewed and any necessary consents/ waivers sought to enable a withdrawal from current surplus to happen.]**

- 4.2 In respect of senior debt funding by Project Co in the period from 14 June 2018 to 31 October 2018, the Board shall pay to Project Co in cleared funds and without deduction or set off the sum of [£5,7770,660] (the "**Access Payments**") in instalments in accordance with Clause 5 (Payment).

**[Note: position in respect of VAT to be agreed. The access payment will reimburse liquidated damages to Multiplex, and liquidated damages do not incur VAT.]**

**Under the Construction Contract, liquidated damages will continue to be paid, and these will be reimbursed by Project Co until 31 October 2018 upon receipt from the Board of the monthly instalment of the Access Payment. Such reimbursement will be carved out of the liquidated damages cap. Post 31 October 2018 (unless a Compensation Event is claimed), the Access Payments shall cease and liquidated damages will continue without reimbursement. The equivalent project relief provisions in the Construction Contract will continue to apply.**

**It will be a condition of entry into the Construction Contract Settlement Agreement that the outstanding liquidated damages are paid.**

**Parties to consider what other costs the payments in Clauses 4.1 and 4.2 are inclusive or exclusive of.]**

- 4.3 As between the Board and Project Co, Project Co shall be responsible for the costs of the [without prejudice works].
- 4.4 This Agreement is in full and final settlement and full satisfaction of and each Party hereby releases and forever discharges all Released Claims.
- 4.5 For the avoidance of doubt, Released Claims shall not include:
- 4.5.1 [any claim arising out of the Parties' rights and obligations under this Agreement;
- 4.5.2 any future claim arising from any act, omission, breach, default, negligence or failure to comply with the Project Agreement (as amended) that is not known about or declared as at the date of this Agreement; or
- 4.5.3 any claim arising out of the Parties' rights and obligations under the Board Changes and Project Co Changes which are expressly stated in Part [ ] of the Schedule as not being covered by the Settlement Agreement.]

**[Note: parties to consider anything else which should be carved out of the scope of the Settlement Agreement, and whether there are any other known failures/ disputes which are not included in the Settlement Agreement.]**

- 4.6 This Agreement and its terms and provisions are made and agreed without any admission by the Parties of liability, obligation or fact of any nature or kind whatsoever.

## 5. PAYMENT

- 5.1 The Access Payments is to be paid by way of bank transfer to Project Co's bank account number [ ] sort code [ ] by way of [X] instalments (the "**Instalments**") in the sum of [ ] falling due on [list dates] (the "**Due Dates**").
- 5.2 If the Board fails to pay any of the Instalments by the Due Dates or any of the instalments of the Settlement Loan by the due dates set out in the Settlement Loan (a "**Failed Instalment**"), Project Co shall notify the Board in writing that there has been a Failed Instalment as soon as reasonable practicable after it becomes aware that a Failed Instalment has occurred. Unless the Board pays that Failed Instalment within 7 days of the date of the notice, the Access Payments and the Settlement Loan shall become payable by the Board in full within 28 days of [specify when] less any Instalments or instalments of the Settlement Loan already received (the "**Unpaid Balance**"). The Board shall pay interest on the Unpaid Balance at the rate of [ ]% above Bank of England

base rate which applies from time to time calculated on a day to day basis from the date the Unpaid Balance became due to the date of actual payment of the Unpaid Balance.

- 5.3 The Parties will each bear their own costs in relation to the Dispute and the negotiation, execution and implementation of this Agreement, save in relation to Failed Instalments in which event the Board will reimburse the reasonable legal costs incurred by Project Co in recovering the payment.

## 6. AGREEMENT NOT TO SUE

- 6.1 Each Party agrees, on behalf of itself and on behalf of its parent, subsidiaries, assigns, transferees, representatives, principals, agents, contractors, officers or directors, not to sue, commence, voluntarily aid in any way, prosecute or cause to be commenced or prosecuted against the other Party or its parent, subsidiaries, assigns, transferees, representatives, principals, agents, contractors, officers or directors, any action, suit or other proceedings concerning the Released Claims, in this jurisdiction or any other.

- 6.2 Any Party in default of the agreement in Clause 6.1 above will fully indemnify the other Party against all losses, liability (including without limitation liability in damages, liability to make a contribution, liability to indemnify and liability to pay any sum or incur any expense), costs and expenses of whatever nature sustained by them by reason of such default.

- 6.3 For the avoidance of doubt, the provisions of this Clause 6 shall not affect the Parties' rights to enforce the terms of this Agreement.

## 7. AMENDMENTS TO PROJECT AGREEMENT

- 7.1 The Parties agree that in order to give effect to this Agreement, the provisions of the Project Agreement shall be supplemented and amended as set out in Part [ ] of the Schedule with effect from the date of this Agreement. The Parties agree that all such supplements and amendments shall be deemed to have been agreed in accordance with the Project Agreement, and that the entry into of this Agreement shall not constitute a breach by either Party of the Project Agreement.

- 7.2 The Parties agree that the design of the works set out in Parts [ ] of the Schedule shall be deemed to have been submitted and reviewed in accordance with Clause 12 of the Project Agreement (The Design Construction and Commissioning Process) and that the Board shall be deemed to have confirmed that Project Co is entitled to proceed with construction. Any such design shall be deemed to be an Approved RDD Item. Notwithstanding Clause 12 of the Project Agreement (The Design Construction and Commissioning Process), such design shall not need to be submitted to the Board for review under Schedule Part 8 (Review Procedure) of the Project Agreement.

- 7.3 The Board shall not be entitled to make a finding pursuant to Clause 12.7 of the Project Agreement (Rectification of Project Co's Proposals) that Project Co's Proposals do not fulfil the Board's Construction Requirements to the extent that Project Co's Proposals have been amended or supplemented pursuant to this Agreement.

- 7.4 [The Parties agree that the Joint Completion Programme :

7.4.1 shall be deemed to be the revised Programme for the purposes of the Project Agreement;

7.4.2 shall be deemed to meet the requirements of, and have been agreed in accordance with, Clause 14 of the Project Agreement (Programme and Dates for Completion);

7.4.3 notwithstanding Clause 14 of the Project Agreement (Programme and Dates for Completion), does not need to be submitted to the Board for review under Schedule Part 8 (Review Procedure) of the Project Agreement; and

7.4.4 shall be deemed to be sufficient notification by Project Co to the Independent Tester and the Board's Representative of the completion of the Works pursuant to Clause 17.5 of the Project Agreement, and no such further notice shall be required.]

- 7.5 [The Parties agree that the Joint Completion Programme:
- 7.5.1 shall be deemed to be the revised Final Commissioning Programme for the purposes of the Project Agreement;
  - 7.5.2 shall be deemed to meet the requirements of, and have been agreed in accordance with, Clause 17 of the Project Agreement (Programme and Dates for Completion); and
  - 7.5.3 notwithstanding Clause 17 of the Project Agreement (Programme and Dates for Completion), does not need to be submitted to the Board for review under Schedule Part 8 (Review Procedure) of the Project Agreement.]

**[Note: provisions above to be reviewed once a draft joint completion programme is in circulation.]**

- 7.6 Save as amended and supplemented in accordance with this Agreement, the Project Agreement shall continue in full force and effect.

## 8. AMENDMENTS TO OTHER PROJECT DOCUMENTS

- 8.1 The Board acknowledges and consents (for all purposes of the Project Agreement) to Project Co entering into supplemental agreements for the Construction Contract and Service Contract in connection with this Agreement and confirms that Project Co entering into such supplemental agreements shall not constitute a breach of Project Co's obligations under the Project Agreement. Project Co shall provide the Board with copies of such supplemental agreements prior to signature. The Board confirms that, notwithstanding the provisions of Clause 4.1 of the Project Agreement, such supplemental agreements do not need to be submitted to the Board for review under Schedule Part 8 (Review Procedure) of the Project Agreement.
- 8.2 The Board acknowledges and consents (for all purposes of the Project Agreement) to Project Co entering into supplemental agreements for the Funding Agreements in connection with this Agreement and confirms that Project Co entering into such supplemental agreements shall not constitute a breach of Project Co's obligations under the Project Agreement. Project Co shall provide the Board with copies of such supplemental agreements prior to signature. The Board confirms that, notwithstanding the provisions of Clause 4.6 of the Project Agreement, such supplemental agreements do not need to be submitted to the Board for review not less than ten Business Days before signature.

**[Note: consider whether amendments are required to any of the other Project Documents (e.g. the Articles of Association or Independent Tester Contract).]**

- 8.3 The Parties shall [comply with the]/ [use reasonable endeavours to agree an] occupation and access protocol [set out in Part [ ] of the Schedule] (the "**Joint Occupation and Access Protocol**") to coordinate their activities pursuant to this Agreement and the Project Agreement throughout the remainder of the Works period.

**[Note: parties to confirm if the protocol will be inserted into the Supplemental Agreement.]**

- 8.4 During any period of joint occupation of the Facilities, the Board shall not prevent or impede Project Co or any Project Co Party carrying out the Works. Where such prevention or impediment occurs, Project Co shall be entitled to claim a Compensation Event, and the calculation of the relevant compensation shall include (without limitation) the debt service costs payable by Project Co during such period of prevention or impediment.
- 8.5 During any period of joint occupation of the Facilities, Project Co and Project Co Parties shall not prevent or impede the Board carrying out the [Board's Commissioning]/ [Board's Post Completion Commissioning]. Where Project Co or a Project Co Party prevents the Board from carrying out key elements of the [Board's Commissioning]/ [Board's Post Completion Commissioning] on the dates specified in [ ], Project Co shall indemnify the Board against all Direct Losses sustained by the Board as a result of such prevention. For the avoidance of doubt, payments by the Board of the Settlement Loan and Access Payments will continue during any such period of prevention.

8.6 The Delay Event and Compensation Event provisions in the Project Agreement apply to the works set out in this Agreement.

## 9. **JOINT STEERING GROUP**

9.1 The Parties shall establish a joint steering group to provide executive management and guidance over the key deliverables of the completion of the Works and the commissioning of the Facilities. The members of the joint steering group will meet every two to three weeks to review progress against the programmes set out in this Agreement and assist in resolving any matters which have become an issue or blockage in achieving the deliverables.

9.2 The initial members of the joint steering group shall be:

9.2.1 the Board: Jim Crombie and Susan Goldsmith;

9.2.2 Project Co: Andy Clapp and Tony Rose; and

9.2.3 the Contractor: Callum Tuckett and Ben Keenan.

## 10. **CONTRACTS (THIRD PARTY RIGHTS) (SCOTLAND) ACT 2017**

This Agreement does not create any rights in favour of third parties under the Contracts (Third Party Rights) (Scotland) Act 2017 to enforce or otherwise invoke any provision of this Agreement.

## 11. **VARIATION**

Any variation of this Agreement shall be in writing and signed by or on behalf of each Party.

## 12. **NON-REPETITION OF CLAIMS**

Each Party withdraws all allegations and claims made by it in the Dispute or otherwise in any way related to the subject matter thereof against the other Party and undertakes not to repeat, or authorise the publication or repetition, of the same or any similar allegations or claims.

## 13. **CONFIDENTIALITY**

13.1 The fact, existence and terms of this Agreement and the negotiations which led to it are to remain confidential between the Parties, save that they may be disclosed:

13.1.1 by any Party with the prior consent of the other Party;

13.1.2 by each Party to its respective professional advisers or auditors, to the extent necessary to enable them to perform their functions properly, provided that each Party shall remain responsible for any further disclosure of such information by such professional advisers or auditors;

13.1.3 to the Senior Funders and their lawyers, agents and other advisers on terms which preserve confidentiality;

13.1.4 when necessary to enable or facilitate the enforcement of this Agreement; and

13.1.5 when required by compulsion of law, but only to the extent compelled by law.

13.2 The provisions of this Clause 13 shall not apply to any information which at the time of its disclosure is already generally available to the public other than by reason of a breach of the terms of this Agreement.

**[Note: parties to consider whether the confidentiality provision should expressly extend to freedom of information requests.]**

**14. WARRANTIES AND INDEMNITIES**

- 14.1 The Parties warrant and represent to each other that they have not sold, transferred, assigned or otherwise disposed of their interests in the Released Claims.
- 14.2 The Parties represent and warrant to each other that they have the capacity, power and authority to enter into and perform this Agreement and that they have authorised each of the individuals named below to sign this Agreement on behalf of the Party set against each name and that this Agreement gives rise to legal, valid and enforceable obligations on each Party.
- 14.3 The Parties hereby indemnify and hold each other harmless in respect of any breach of the above warranties.

**15. ENTIRE AGREEMENT**

- 15.1 Except where expressly provided otherwise in this Agreement, this Agreement constitutes the entire agreement between the parties in connection with its subject matter and supersedes all prior representations, communications, negotiations and understandings concerning the subject matter of this Agreement.
- 15.2 Each of the parties acknowledges that:
- 15.2.1 it does not enter into this Agreement on the basis of and does not rely, and has not relied, upon any statement or representation (whether negligent or innocent) or warranty or other provision (in any case whether oral, written, express or implied) made or agreed to by any person (whether a party to this Agreement or not) except those expressly repeated or referred to in this Agreement and the only remedy or remedies available in respect of any misrepresentation or untrue statement made to it shall be any remedy available under this Agreement; and
- 15.2.2 this Clause shall not apply to any statement, representation or warranty made fraudulently, or to any provision of this Agreement which was induced by fraud, for which the remedies available shall be all those available under the law governing this Agreement.

**16. MISTAKE**

This Agreement is intended to resolve finally the rights and liabilities of the Parties in connection with the Dispute and the underlying facts relating to the Dispute, and neither Party shall seek to reopen the Agreement on the grounds that it in the future becomes aware of any mistake in law (including any such mistake arising as a result of a subsequent change of law) or mistake of fact relating to this Agreement or upon which this Agreement was entered into.

**17. COUNTERPARTS AND DELIVERY**

- 17.1 This Agreement may be executed in any number of counterparts and by each of the parties on separate counterparts.
- 17.2 Where executed in counterparts:
- 17.2.1 this Agreement shall not take effect until both of the counterparts have been delivered; and
- 17.2.2 delivery will take place when the date of delivery is agreed between the parties after execution of this Agreement as evidenced by the date inserted on page [1] of this Agreement.
- 17.3 Where not executed in counterparts, this Agreement shall become effective on the date agreed between the parties as evidenced by the date inserted on page [1] of this Agreement.

18. **ASSIGNATION**

Neither party may assign or deal with the benefit of this Agreement unless it is at the same time arranging or dealing with the benefit of the Project Agreement in accordance with its terms.

19. **DISPUTES**

The parties agree that the provision of Clause 56.1 (*Dispute Resolution Procedure*) of the Project Agreement shall apply in respect of this Agreement.

**IN WITNESS WHEREOF** these presents typewritten on this and the preceding [●] pages together with the Schedule in [ ] Parts are executed by the parties hereto as follows:

**SIGNED** for and on behalf of

LOTHIAN HEALTH BOARD

at [●]

on [●]

by

..... Authorised Signatory

..... Full Name

before this witness

.....

..... Full Name

..... Address

**SIGNED** for and on behalf of

IHS LOTHIAN LIMITED acting

under a power of attorney

at [●]

on [●]

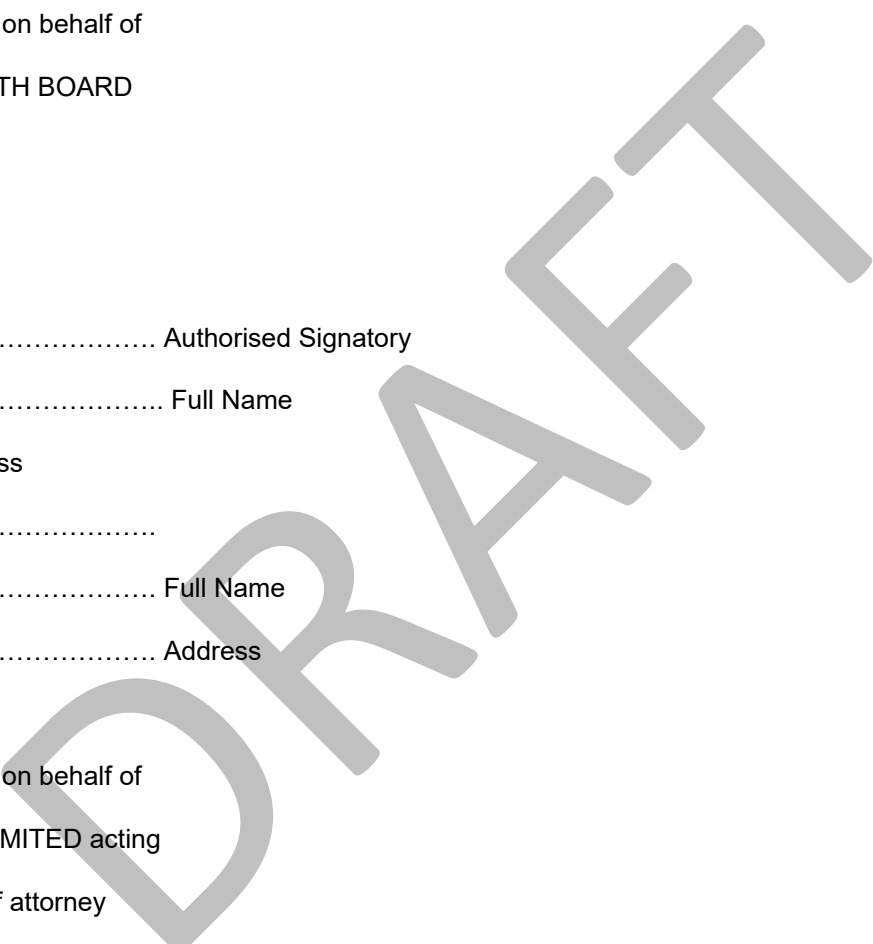
by

..... Attorney

..... Full Name

..... Attorney

..... Full Name





**PART 1 FOUR BED VENTILATION WORKS**

**[Note: the following will be covered here:**

- 1. a description of the works which MPX will undertake;**
- 2. the provisions of the Project Agreement which need to be removed/ replaced/ amended including those in Schedule Part 6 (Construction Matters), Schedule Part 10 (Outline Commissioning Programme), including Appendix B Completion Criteria, Schedule Part 11 (Equipment) or Schedule Part 12 (Service Requirements);**
- 3. compliance with the Joint Completion Programme.]**

DRAFT

**PART 2 WITHOUT PREJUDICE WORKS**

**[Note: the following will be covered here:**

- 1. a description of the works which MPX will undertake;**
- 2. the provisions of the Project Agreement which need to be removed/ replaced/ amended including those in Schedule Part 6 (Construction Matters), Schedule Part 10 (Outline Commissioning Programme), including Appendix B Completion Criteria), Schedule Part 11 (Equipment) or Schedule Part 12 (Service Requirements);**
- 3. compliance with the Joint Completion Programme.]**

DRAFT

**PART 3 QUENCH PIPE WORKS**

**[Note: the following will be covered here:**

- 1. a description of the works which MPX will undertake;**
- 2. the provisions of the Project Agreement which need to be removed/ replaced/ amended including those in Schedule Part 6 (Construction Matters), Schedule Part 10 (Outline Commissioning Programme), including Appendix B Completion Criteria), Schedule Part 11 (Equipment) or Schedule Part 12 (Service Requirements);**
- 3. compliance with the Joint Completion Programme.]**

DRAFT

#### **PART 4 TECHNICAL COMPLETION WORKS**

**[Note: the following will be covered here:**

- 1. a description of the works which MPX will undertake;**
- 2. the provisions of the Project Agreement which need to be removed/ replaced/ amended including those in Schedule Part 6 (Construction Matters), Schedule Part 10 (Outline Commissioning Programme), including Appendix B Completion Criteria), Schedule Part 11 (Equipment) or Schedule Part 12 (Service Requirements);**
- 3. compliance with the Joint Completion Programme.]**

DRAFT

**PART 5 OTHER PROJECT AGREEMENT AMENDMENTS**

**[Note: any other amendments (e.g. in respect of the Services or Project insurances) to be inserted here.]**

The following amendments shall be made to the Project Agreement:

1. Clause 18 (Post Completion Commissioning) shall be amended as follows:
  - 1.1 [REDACTED]
2. Clause 40.1.2 (Long Stop) shall be replaced with the following:

"Project Co failing to achieve the Actual Completion Date within a period of twenty four (24) months after the Completion Date;"

DRAFT

**PART 6 JOINT COMPLETION PROGRAMME**

**[Note: it is understood that the Parties are working on a joint completion programme which should effectively take the place of the Programme and Final Commissioning Programme.]**

DRAFT

**PART 7 BOARD AND PROJECT CO CHANGES**

**[Note: this Part will list all current Board Changes and Project Co Changes, and clarify whether or not they are covered by the Settlement Agreement.]**

DRAFT

PART 8 JOINT OCCUPATION AND ACCESS PROTOCOL

DRAFT



## Message

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**From:** Matthew Templeton [REDACTED]  
[REDACTED]  
**Sent:** 25/05/2018 15:49:29  
**To:** Wallace Weir [REDACTED]; David Martin  
[REDACTED]; Andy Clapp  
[REDACTED]  
**Subject:** FW: RHSC + DCN - Little France - Draft Tech Schedule  
**Attachments:** RHSC DCN Tech Schedule at 25 May 2018 WIP.pdf

FYI.

Sent from my Windows 10 phone

---

**From:** Currie, Brian  
**Sent:** 25 May 2018 15:07  
**To:** Matthew Templeton  
**Cc:** 'Darren Pike'; 'Greer, Graeme'  
**Subject:** RHSC + DCN - Little France - Draft Tech Schedule  
**Importance:** High

Matt

As just discussed, please find attached our wip half of the technical schedule. The RAG tracker is the current status of information available, as we see it.

A combined MPX/NHSL version will be developed next week and forwarded to you.

Regards

Brian

Brian Currie  
Project Director - NHS Lothian  
RHSC + DCN Site Office  
Little France Crescent  
Edinburgh  
EH16 4TJ

T: [REDACTED]  
M: [REDACTED]  
E: [REDACTED]

PROUD HISTORIES | NEW CHAPTERS

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RHSC + DCN

Settlement Agreement Schedule  
25-May-18

Board to provide file reference  
Project Co to provide file reference.

Relative to the level of information available for each Item.

Category A	Status A or B RDD
Category B	Design intent agreed and RDD / Board Change of Project Co change being produced.
Category C	Solution still to be agreed, hence information not available.

MPX producing the orange headings				Board producing the blue headings						
Item	Title	Description	Latest Agreed Action or CLOSE OUT Statement	File Reference	Rev	Title	Status	Residual Comment	Category - NOTE category relative to information available, and not status of issue.	
1	Lighting in fire fighting stairwells	The lighting within the 7 fire fighting shafts / stairwells and associated lobby has been installed with single circuit from the local lighting distribution boards that are not supplied by the fire rated cables.  The Board believes all fire fighting stairwells should be supported by a primary and secondary fire rated power supplies from dedicated distribution boards and automatic changeover for dual fire rated supplies.		File Reference pending outcome of Building Control discussions.					B	
2	Non Fire Rated IPS / UPS cabling	For compliance with BS 7671 and Guidance Note 7, and also BS 8519 circuits associated with essential life-support services should be either fire-rated or fire-protected. The implication of this is, in the event of a fire, power may be lost to essential life safety medical equipment in critical areas.  Project Co's has installed non fire rated cables to IPS boards serving critical areas.		WW-SZ-B1-PL-531-101 WW-SZ-B1-PL-531-102 WW-SZ-B1-PL-531-103 WW-SZ-B1-PL-531-104 WW-SZ-B1-PL-531-105 WW-SZ-B1-PL-531-106 WW-SZ-B1-PL-531-107 WW-SZ-B1-PL-531-108 WW-SZ-B1-PL-531-109 WW-SZ-B1-PL-531-112 WW-SZ-B1-PL-531-114 WW-XX-DC-XXX-010 WW-XX-SC-539-001	1 1 1 1 1 1 1 1 1 1 1 3 G	UPS 1 Cable Route UPS 2 Cable Route UPS 3 Cable Route UPS 4 Cable Route UPS 5 Cable Route UPS 6 Cable Route UPS 7 Cable Route UPS 8 Cable Route Helipad Cable Route UPS 12 Cable Route UPS 14 Cable Route IPS / UPS Cable Alternative UPS System Schematic	A (13/04/2018) B (13/04/2018) B (13/04/2018) A (13/04/2018) B (13/04/2018) B (13/04/2018) A (13/04/2018) B (13/04/2018) A (13/04/2018) B (13/04/2018) A (13/04/2018) B (13/04/2018) B (13/04/2018) A (13/04/2018)	Revised drawings issued on 23 May 2018, however for information only.  Contract drawings are as per 13 April 18 with Board comments.	A	
3	No earth bonding in certain required areas.	No equipotential bonding has been installed 144 Group 1&2 rooms. Equipotential bonding is required to prevent electric shock to patients, staff and visitors.  A sample room has been offered by Project Co to the Board for witnessing indicating installation of equipotential bonding boxes. The Board understands this will now be installed in all 144 Group 1&2 rooms.		WW-SZ-SL-SH-500-011		F	Room by Room Risk Profile	B (04/05/18)	(MM-GC-004000) The Board reviewed the Room by Room Risk Profile and as per conversation at yesterday's M&E meeting. Project Co please check the grouping and categorisation as per BS 7671 Table 9.1 of Guidance Note 7, which may require supplementary bonding.	C
4	Bedroom ventilation pressure regime and air change rate in rooms for neutropenic patients	Neutropenic Patients - As per SHTM and Clinical Specs, the rooms for neutropenic patients should be designed as isolation rooms (+10 positive pressure). However, there are 10 single rooms which Project Co have designed to balanced pressure.		Project Co Change 50 (Awaiting)					B	
5	25% spare capacity	The 25% spare capacity should be provided by Project Co in terms of main and sub main distribution containment, UPS boards, AHU, physical space in voids and ceilings, risers.  Its apparent from site visits, the spare capacity has not been provided.		MPX-GC-026751 - Spare Capacity Statement_A - NHSL.pdf		A	Spare Capacity Statement - NHSL response	N/A - not yet been submitted through RDD.	MPX-GC-026751 - Spare Capacity Statement_A - NHSL.pdf is the latest version on Aconex however the Board commented further as per NHSL-GC-003075.	B
6	HV distribution	In relation to system resilience, the Board believes Project Co's design for HV Distribution is non-compliant with the Board's Construction Requirements (BCR's), Project Co Proposal's (PCP's) and SHTM Guidance for the following elements; 1. Resilience of the HV main intake switch room, 2. HV cable distribution, 3. HV / LV substations.  The Board believes the design currently creates single points of failure at the HV side of the electrical distribution network.  The main current concern from the Board relates to the cable configuration.		WW-XX-SC-530-001 WW-XX-SC-530-101 WW-XX-SC-530-102 WW-XX-SC-530-103 WW-XX-SC-530-104 WW-XX-SC-530-105 WW-XX-SC-530-106 WW-XX-SC-530-107 WW-XX-SC-530-108 RHSC Gas Supression	1 1 1 1 1 1 1 1 1 1	HV Distribution Schematic Multiplex Alternative NER Schematic Multiplex Alternative HV Room Configuration Multiplex Alternative HV Ring Configuration Multiplex Alternative HV Ring Configuration Protection System Schematic Multiplex Alternative HV Ring Configuration Protection System Blocking Diagram MV Cable Routing As Installed G59 Connections Generator System Performance Specification for Fixed Fire Suppression Systems	B (11/05/18) A (11/05/18) A (11/05/18) B (11/05/18) B (11/05/18) B (11/05/18) A (11/05/18) A (11/05/18) B (11/05/18) B (11/05/18) A(15/05/18)	01/05/18 - MPX has issued HV Information pack through RDD (MPX-TRANSMIT-010770). NHSL have reviewed and responded on 11th with minor comments. Commented drawings should be included in Settlement Agreement. (Category A)  The Gas suppression was not issued for RDD hence no formal copy received. (Category B)	B	

Item	Title	Description	Latest Agreed Action or CLOSE OUT Statement	File Reference	Rev	Title	Status	Residual Comment	Category - NOTE category relative to information available, and not status of issue.
7	4 bed ventilation	In relation to ventilation pressure regimes, the Board believes Project Co's design for ventilation is non-compliant with the Board's Construction Requirements (BCRs), Project Co Proposal's (PCPs), SHTM Guidance and RDD FC comments.  In addition, the Board believe the intake air change rate and the extract air change rate are non-compliant.  From a clinical perspective, the principal concern to the Board in continuing with Project Co's proposed pressure regime design means there is an unacceptable risk of the spread of bacterial airborne infections into corridors and surrounding patient rooms (positive to the corridor)  The Board requires the pressure regime to be balanced or negative to the corridor.		WW-Z3-03-PL-524-001  WW-Z4-00-PL-524-001  WW-Z4-00-PL-524-002  WW-Z4-01-PL-524-001  WW-Z4-03-PL-524-001  WW-Z4-03-PL-524-002  WW-SZ-XX-DC-XXX-010	G  K  L  J  G  G  06	Zone Z3 Level 03 Ventilation Distribution Sheet 1 of 2  Zone Z4 Level 00 Ventilation Distribution Sheet 1 of 2  Zone Z4 Level 00 Ventilation Distribution Sheet 2 of 2  Zone Z4 Level 01 Ventilation Distribution Sheet 1 of 2  Zone Z4 Level 03 Ventilation Distribution Sheet 1 of 2  Zone Z4 Level 03 Ventilation Distribution Sheet 2 of 2  General Ward - Ventilation Amendments Proposal	B (03/05/18)  B (03/05/18)  B (03/05/18)  B (03/05/18)  B (03/05/18)  B (03/05/18)  ????????	MPX-MM-000503 - Pack of mark up drawings and schedule.  Please refer to MPX-TRANSMIT-010775 - G1547 RDD Review Ventilation Distribution        The rev 6 of the schedule identifying the 14 rooms re-issued through RDD on 22 May as per MPX-TRANSMIT-010826. This report references more up to date drawings than listed to the left. Clarity required on which revision should be included.	B
8	Bedhead trunking earth bonding points	All bedhead trunking installed in Group 2 Medical Locations is provided with only 2 supplementary equipotential bonding points. This is not in compliance with GN7, which requires minimum 4 for medical IT sockets (IPS sockets).		WW-SZ-SL-SH-500-011  WW-Z3-00-PL-531-001  WW-Z3-00-PL-531-002  WW-Z3-01-PL-531-001  WW-Z3-01-PL-531-002  WW-Z4-00-PL-531-002  WW-Z4-01-PL-531-001  WW-Z4-01-PL-531-002  WW-Z4-03-PL-531-002	F  M  M  J  P  O  K  K  I	Room by Room Risk Profile  Zone Z3 Level 00 Small Power Layout Sheet 1 of 2  Zone Z3 Level 00 Small Power Layout Sheet 2 of 2  Zone Z3 Level 01 Small Power Layout Sheet 1 of 2  Zone Z3 Level 01 Small Power Layout Sheet 2 of 2  Zone Z4 Level 00 Small Power Layout Sheet 2 of 2  Zone Z4 Level 01 Small Power Layout Sheet 1 of 2  Zone Z4 Level 01 Small Power Layout Sheet 2 of 2  Zone Z4 Level 03 Small Power Layout Sheet 2 of 2	B (04/05/18)  B (13/04/17)  B (13/04/17)  A (13/04/17)  B (13/04/17)  B (13/04/17)  A (13/04/17)  A (13/04/17)  A (13/04/17)	(MM-GC-004000) The Board reviewed the Room by Room Risk Profile and as per conversation at M&E meeting, Project Co are required to check the grouping and categorisation as per BS 7671 Table 9.1 of Guidance Note 7, which may require supplementary bonding.  Further correspondence received from PCo that Boards comments will not be implemented unless Board Change is issued.  Linked to Item 3 relating to the room by room risk profile document.	C
9	Lack of non IPS sockets in theatres	All sockets outlets within these departments except for Cleaners outlets and a limited number of "raw power" sockets in some areas, are Medical Equipment blue sockets. No provision has been made for equipment that should be plugged into an RCB protected outlet whilst in the patient zone.  Also, no x ray sockets (dedicated socket).		WW-Z3-00-PL-531-001  WW-Z3-00-PL-531-002  WW-Z3-01-PL-531-001  WW-Z3-01-PL-531-002  WW-Z4-00-PL-531-002  WW-Z4-01-PL-531-001  WW-Z4-01-PL-531-002  WW-Z4-03-PL-531-002	M  M  J  P  O  K  K  I	Zone Z3 Level 00 Small Power Layout Sheet 1 of 2  Zone Z3 Level 00 Small Power Layout Sheet 2 of 2  Zone Z3 Level 01 Small Power Layout Sheet 1 of 2  Zone Z3 Level 01 Small Power Layout Sheet 2 of 2  Zone Z4 Level 00 Small Power Layout Sheet 2 of 2  Zone Z4 Level 01 Small Power Layout Sheet 1 of 2  Zone Z4 Level 01 Small Power Layout Sheet 2 of 2  Zone Z4 Level 03 Small Power Layout Sheet 2 of 2	B (13/04/17)  B (13/04/17)  A (13/04/17)  B (13/04/17)  B (13/04/17)  A (13/04/17)  A (13/04/17)  A (13/04/17)		A
10	Drainage above IPS rooms / above IPS panels	PCo have installed drainage above exclusion zones, electrical equipment and other high risk locations except above MRI rooms where this has been completely removed.		Drawings still to be issued.				Design meeting took place on Wednesday 25th April. Drawings were discussed and agreement reached. In general where the drainage cannot be re-routed, HDPE pipework shall be provided with any joints and rodding eyes taken outside the exclusion zone. Awaiting revised drawings.	B
11	Cable discrimination and cable calculations (electrical issue)	Project Co has not submitted cable calculations through RDD for Board's review. This is required as per 4.23.2 (Mechanical & Electrical Specification) Project Co Proposal. The Concern is that the selection, grouping, rating and fault levels of cables is inappropriate and non-compliant with BS 7671.  As evidenced on site, there are several instances of cables being double and triple banked, as well as being grouped tightly together.						Actions • WW to provide accurate design loads for checking • WW to run temperature calculations using correction factor and correct application of formula • WW/MPX to adjust device settings and carry out discrimination study where required • WW/MPX/NHSL/Motts to review any instances where adjustments do not achieve discrimination • NHSL to assess and catalogue residual risks	C
12	Lack of tamper proof flush fitted sockets in CAMHS	Sockets not installed as per small power layout drawings. i.e. flush fitted tamper proof sockets.		Board Change 137 - CAMHS Anit-Lig M&E and Fixtures.pdf	N/A	RHSC+DCN 137 - CAMHS Anit-Lig M&E and Fixtures	To be processed by MPX	Please refer to MM-C-INS-000264	B
13	Single Bedroom Ventilation air changes	Air change rates proposed by Project Co for single bedrooms are not in compliance with SHTM 03-01 and Board's comments. 4ac/h supply provided to the bedrooms instead of the required 6ac/h. The ensuite extract rate proposed in excess of 10ac/h where requirements of SHTM 03-01 is 3ac/h.		Project Co Change 051 - Single Bed Ventilation to be submitted.	N/A				B
14	Smoke clearance in fire fighting stairwells	As per the Non Domestic Technical Handbook and project specific Fire Strategy, all fire fighting stairwells shall be provided with appropriate ventilation for heat and smoke control. Currently only a percentage of stairwells appear to have openings for high level ventilator. No details of electrical connections including fire rated cables for fire fighting plant as per BS 8519.		WSP-SZ-XX-DC-572-500	12	PCP Submission 4.12 Fire Strategy	B (17/01/18)	NHS to witness demonstration on site.	B
15	Access hatches	Proliferation of Access hatches have been installed within theatre suites which is non-compliant with BCR clause 8.14 Service Routes and "Good Industry Practice".		Board to input file reference.					B
16	Reductions to ceiling heights	In addition to the Project Co Change 016 (Basement Ceiling Heights), further Height reduction in basement areas/service yard appear to have been reduced 2100 without the agreement of the Board.		Project Co Change 059, 060	N/A			PCo changes being reviewed by the Board	B
17	Duct Cleaning	Duct cleaning - SHTM states all ducts must be cleaned unless they have been protected. MPX not proposing to clean all ducts as believe they have sufficiently protected the ducts following installation. IT advised MPX will have to do a check to confirm ducts aren't dirty		Email - RE: Duct Cleaning - System Scope List (01/05/18)	N/A	Duct Cleaning - System Scope List		Email chain outlining current scope of duct cleaning agreed by MPX and the Board. To be issued through Aconex for file reference.	A
18	Number of lift stops	Number of lift stops - BCR 8.8.11 - "RHSC Lifts should not stop at DCN floors, and DCN lifts should not stop at RHSC floors". Board in agreement with the Project Co change, however change required to clarify.		Project Co Change 041 - Bed lift core 3				IHSL are currently redrafting.	B

Item	Title	Description	Latest Agreed Action or CLOSE OUT Statement	File Reference	Rev	Title	Status	Residual Comment	Category - NOTE category relative to information available, and not status of issue.
19	Helipad fire fighting system (Water Pressure)	Helipad fire fighting system does not comply with the guidance of HBN 15-03 Hospital Helipads clause 5.22. There does not appear to be a pressurised main supply, nor is there a system of inert gas to pressurise the system.		Board to input file reference for CAAI certification.				Water pressure not referenced in the CAAI certification.	A
20	Vegetation around air intakes in Neuroscience Courtyard	Landscape design around intake vents in Neuroscience Courtyard is potential non-compliant with SHTM 03-01 which states:  Air Intake 1.42 An uncontaminated air supply to the system is essential. In order to achieve this, the air intake will be positioned so that air discharged from extract systems or other dubious sources cannot be drawn in. Exhaust fumes from vehicles can present particular problems. The area surrounding the intake will need to be kept clean and free of vegetation and waste material in order to reduce the possibility of biohazards or fire. The intake itself will be protected by a louvre and mesh screen to prevent rainwater, vermin and insects etc from entering the system.		MM-GC-003873					A
21	"Do not use" labels removed from Medical Gas Outlets before commissioning.	Medical gas outlet "Do Not Use" labels removed before commissioning, non compliance with SHTM02-01.		The Board cannot find any correspondence, however believe the issue is closed.					A
22	Isolation Room supply ventilation relative to low building.	Isolation room ventilation is non-compliant for a 'low' building. There should be a separate supply and a contractors change will be needed.		The Board have not been copied into MPX / IT correspondence. Awaiting Project Co Change?					B
23	Drainage joints in slabs	Drainage outlets - Drainage joints have been installed in the slab between floors with no access for maintenance or repair. This means there is no manufacturer warranty for the drainage connection.		The Board have not been copied into MPX / IT correspondence. Awaiting Project Co Change?					B
24	Fire Collar installation	Fire collars for drainage are not directly connected to the slab+C19		The Board have not been copied into MPX / IT correspondence. Awaiting Project Co Change?					B
25	Level and position of smoke detectors	Smoke detectors mounted at low levels above the ceiling i.e. not installed at the heights specified for void detectors		The Board have not been copied into BYES / MPX correspondence.					B
26	Ventilation in IPS	ventilation in IPS - PCo have shown 3ac/h extract ventilation in the EM but not all - Potential heat gain issue.		WW-XX-XX-DC-XXX-001	11	Environmental Matrix	B (17/11/17)		A
27	Hot and Cold water supply pipe configuration	Hot and cold water supply pipes are crossed behind the sink in some rooms and in some instances the cold pipe is above the hot water pipe or touching the pipe meaning the will be heat transferred to the cold water supply. Not best practice and non compliance with SHTM 04-01		Email exchange between RH and CG				Email chain to be issued through Aconex for file reference.	B
28	Windows/Partition in 1-B1-055	The GA and C sheet illustrates a 3 panel window however, in construction one panel appears to be 'false' with a partition behind it. From the inside it appears to be only 2 windows.		The Board to provide file reference.					A
29	Mounting heights for clinical lights	The heights clinical lights have been mounted at cause and obstruction		MM-RTRFI-000315	N/A	N/A	N/A		A
30	Lightning Protection	Potentially deviated form design agreed with Consort		The Board to provide Schedule Part 31 file reference to be provided.					A
31	Gas supply to bedhead trunking	Supply has not been installed on site as per Board comments during RDD process.		The Board to provide file reference.					A
32	Concealed ceiling grids	Ceiling Grids are not concealed and not constructed in line with RDD drawings		Project Co Change 033				Awaiting Project Co Change for review	B
33	Soft Landscaping planting specification	Planting on site not as per planting schedule. i.e. clematis appears to be climbing but should be bush/ground variety		The Board to provide file reference.				Join inspection with all parties to close out issues.	A
34	Wrong terminators fitted in warning lights	Warning Lights: - Terminal strip connector in theatres to be removed and correct terminations provided, all warning light boxes. - light box deformed where glanded		The Board to provide file reference.					A
35	No evidence of IPS circuit bonding conductors	No evidence of IPS circuit bonding conductors at the IPS cabinets. The Main Bonding conductor between the IPS & the ERB is present.		Email - RHSC & DCN IPS Circuits				Email chain to be issued through Aconex for file reference.	A
36	Fire resistance of radiology door frame	Radiology: Door frame packed out in door opening, not in accordance within manufacturer's limits to maintain fire resistance of doorset.		Awaiting response to NHSL-GC-003069				Communication exchange between NHS Fire Officer (Jim Gardner) and MPX (Hugh Gallagher) ongoing	C
37	UPS output switchboard with incorrect poles	UPS output Switchboard 2 Switchboard is supposedly a Form 4 type 6 board. Schneider state that to achieve Form 4 type 2 or 6 that the incoming devices should be 4 poles. The incoming devices are three poles with unswitched neutral.		The Board cannot find any correspondence, however believe the issue is closed.	N/A	N/A	N/A		A
38	Corridor service door handles	Corridor service doors - installed pull handles are not acceptable as advised by the board 30/01/17 (MM-GC-002483) during room review (corners of handles at childrens head height)		The Board cannot find any correspondence, however believe the issue is closed.	N/A	N/A	N/A		A
39	Outstanding Status C RDD	Numerous outstanding RDD		Ongoing	N/A	N/A	N/A	RDD process to close out all outstanding C&D ongoing	C
40	Remaining Permanent Infrastructure outside the red line boundary (CCTV etc)	Still waiting for legal agreement for infrastructure outside the site boundary.		Awaiting legal agreement					B
41	Seasonal Commissioning	Potential for some seasonal commissioning tests to be complete post hand over.		Awaiting Project Co Change					B
42	Environmental Matrix	EM reflects M&E issues currently considered non compliant		WW-XX-XX-DC-XXX-001	11	Environmental Matrix	B (17/11/17)		A
43	Routing of services. Corridor layouts against any non compliance with standards to be tabled.	services are currently running through clinical areas that were not included within the original Project Co derogation.		Awaiting Project Co Change					B
44	Nurse call in WC	There is evidence from the site (room C1.1-070) that nurse call pull cords have been installed in some visitor's WCs. However no nurse call should be installed in visitor's WCs.		Board Change 142					B
45	Unidentified Circuits	Electrical circuits are not identified or labelled at terminal rail inside trunking. Consequently, there is no way to identify which cables enter and leave the circuit terminal strips.		The Board cannot find any correspondence, however believe the issue is closed.	N/A	N/A	N/A		A
46	Fire alarm cable bands	Cable bands for fire alarms are plastic rather than metal. Metal ties are required by BS and are proposed by Project Co M&E specifications (4.23.3 of Section 4 of Schedule Part 6).		Board to provide RFI file reference.	N/A	N/A	N/A	Site inspection required to confirm	B
47	IPS units earthbar termination 1-B1-044 - IPS Room			The Board cannot find any correspondence, however believe the issue is closed.	N/A	N/A	N/A		A
48	IPS sockets supplying non medical equipment	IPS socket found on site providing power for the television, scale of the issue still to be determined.		The Board cannot find any correspondence, however believe the issue is closed.	N/A	N/A	N/A		A

Item	Title	Description	Latest Agreed Action or CLOSE OUT Statement	File Reference	Rev	Title	Status	Residual Comment	Category - NOTE category relative to information available, and not status of issue.
49	Interleaved circuits	As per SHTM 06-01 and note 7 on design drawings, all sockets including pendants supplies, for Cat 3, 4 and 5 should be interleaved. However, the evidence from site suggests this has not been installed.		WW-SZ-SL-SH-500-011 WW-Z3-00-PL-531-001 WW-Z3-00-PL-531-002 WW-Z3-01-PL-531-001 WW-Z3-01-PL-531-002 WW-Z4-00-PL-531-002 WW-Z4-01-PL-531-001 WW-Z4-01-PL-531-002 WW-Z4-03-PL-531-002	F M M J P O K K I	Room by Room Risk Profile Zone Z3 Level 00 Small Power Layout Sheet 1 of 2 Zone Z3 Level 00 Small Power Layout Sheet 2 of 2 Zone Z3 Level 01 Small Power Layout Sheet 1 of 2 Zone Z3 Level 01 Small Power Layout Sheet 2 of 2 Zone Z4 Level 00 Small Power Layout Sheet 2 of 2 Zone Z4 Level 01 Small Power Layout Sheet 1 of 2 Zone Z4 Level 01 Small Power Layout Sheet 2 of 2 Zone Z4 Level 03 Small Power Layout Sheet 2 of 2	B (04/05/18) B (13/04/17) B (13/04/17) A (13/04/17) B (13/04/17) B (13/04/17) A (13/04/17) A (13/04/17) A (13/04/17)	MPX to update small power layout drawings to as-fitted.	A
50	Access and Maintenance Strategy	Access and Maintenance Strategy - lack of clear access and maintenance strategy submitted to date. The document is currently being updated by Project Co		HLM-XX-XX-DC-450-001	10	Access and Maintenance Strategies	C (03/11/17)	Awaiting revised Access and Maintenance Strategy document	C
51	Lux levels in clean utilities	Lux levels in clean utilities rooms. Currently LG2 150 lux however due to the layout of the room / cupboards, this may not be sufficient for the functionality of the space.		WW-XX-XX-DC-XXX-001	11	Environmental Matrix	B (17/11/17)	Subject to witnessing with Whitecroft on site	B
52	Fire stopping	Fire stopping has been carried out however subsequent installation may have breached fire stopping.			N/A	N/A	N/A		A
53	Egg crate Grilles in clinical areas	Egg box grid is not suitable for cleaning. A technical submittal was issued and signed off by the Board, however a sample of the grid was not issued through the review procedure, hence the Board did not have a chance to view the type of product before it was installed.		MPX-GC-025802	N/A	Extract Grilles to Theatres and Recovery	N/A	MPX to rectify on site and inspection by NHS required to confirm	A
54	Curtain track and ceiling Hoist clashes	Hoists and curtain tracks clash and will need to be reviewed on a room by room basis.			N/A	N/A	N/A		A
55	Wrong room configurations	G-Q1-074 not constructed in line with C-Sheet (wrong sequence for data points and socket outlets)			N/A	N/A	N/A		A
56	Helipad Ramp Lights	Helipad ramp now includes lighting however HBN 15-03 recommends that the luminaire should be lower than 25 cm and pointing down toward ramp. Calculations have not been submitted for lighting levels to ascertain if this complies with relevant standards.			N/A	N/A	N/A		A
57	Reduced access to electrical panels	Electrical panels are placed in reduced access areas. The Board understand this should have been designed in conjunction SHTM 00 - Best Practice for Healthcare Engineering - Chapter 9 Engineering services. (4-PLANT-001 - Central AHU Plant Room 01, 3-CORE-008A - Switch cupboard)			N/A	N/A	N/A	BYES to confirm all issues rectified	B
58	Lighting in Service yard	Lighting levels within service yard were initially designed at an average of 23 lux levels (i.e. the level required for a car park as per SLL Lighting Guide). This has now been corrected to 50 lux average however the uniformity is not in accordance with the requirements.		WW-EW-XX-DC-716-001	7	External Lighting Calculations	C (13/03/18)	Awaiting confirmation that Boards comments are implemented on site	B
59	Lighting in B-COR-014	L14 luminaries are missing in the corridor.		Project Co Change 014	N/A	LTHW Pipework Route	N/A		B
60	3-T2-018: QP - Riser door missing	Riser wall should have a door to access pipework			N/A	N/A	N/A		A
61	Provision of 360o CCTV Coverage	As illustrated in external CCTV drawing (ME-EW-XX-PL-571-001 Rev D) there are gaps within CCTV coverage on approach to the NW elevation of the Facility. Non Compliant with BCR Clause 7.6 (n) (Hard Landscaping).		ME-EW-XX-PL-571-001	E	Site Plan. External CCTV Layout	B (23/05/18)		A
62	Hazard classification and fire stopping in MRI suits	MRI Suits currently not operationally functional as hazard classification of the MRI equipment room prevents installation of waveguides between equipment and examination rooms which can not be fire stopped.		HLM-SZ-00-PL-572-002	C	Ground Floor Fire Strategy General Arrangement	N/A	Although no comments made on the drawing, agreement with Project Co/MPX that the all MRI equipment rooms will be declassified and drawings updated	B
63	Entrance to Service Yard for Large Vehicles	As witnessed at the trial on 17th Feb 2018, due to the location of the barrier, large vehicles extend into the blue light route (by Approximately 3ft) when waiting for access through the barrier.							B
64	Quench Pipe Route	Project Co have not left a clear route for the quench pipes to run.		WW-SZ-SL-DC-500-001	16	Magnetic Resonance Imaging & Computing Tomography Ventilation, Cooling and Quench Requirements	N/A	Responsibility Matrix being agreed before the actual installation takes place.	B
65	CAMHS/PICU Glazing/DCN Acute	Project Co have not effectively designed glazing in PICU and CAMHS and DCN Acute to allow for adequate patient privacy from public spaces. As per Clinical Output Specifications and BCR Clauses 2.2/3.2.1/3.5.2/3.5.4/3.5.6/5.12/5.16.2						Being rectified on site by MPX	B
66	Design Note 5 - void detection	Project Co deleted design note 5 which described the process for risk assessing the omission of void detection. If no design note 5 reinstated then we assume void detection will be provided throughout.		WSP-SZ-XX-DC-572-500	12	PCP Submission 4.12 Fire Strategy	N/A	Although no comments made on the strategy, it was agreed with Project Co/MPX that design note 5 has to be added back in and document re-submitted	B
67	Ventilation extract for Sump and basement sump issues	The basement sump / basement corridor is not provided with any ventilation. Any maintenance of the sump will require the cover to be open and odours will be present in the corridor outside main kitchen. H&S risk.		MPX-GC-026492	N/A	Sump Pump	N/A		C
68	Security for CAMHS courtyards	The height of fencing currently not sufficient to prevent access to the CAMHS courtyards		MPX-GC-026511	N/A	N/A	N/A		A
69	Service Yard Gate	The location of the induction loops for automatic gates / barriers will have to ensure there is safe and unobstructed egress from service yard.		MPX-GC-026520	N/A	N/A	N/A		A
70	ED Drugs store ventilation	Current ventilation provision for drugs store is not in line with Clinical Specific Requirements for the space and therefore is not compliant.		Board Change Notice 138 - ED Dispensary Drug Store	1	Board Change Notice 138 ED Dispensary Drug Store	N/A	MPX to process	A
71	Movement Joint outstanding action	Following principals meeting, MPX were going to provide proposals for 3-C1.4-078 & G-Q1-048. However no proposals received to date.		Project Co Change 27	N/A	N/A	N/A	Awaiting Project Co Change for review	B
72	Heating pumps pressure	Issue with heating pumps pressure to distribute hot water around the Facility. Pumps may not be sized correctly.			N/A	N/A	N/A	Subject to commissioning results	A
73	Fridge Spaces	Spaces for Fridges mid unit are too small for the equipment							A
74	incline in L2	The floor appears to be inclined in L2 department.			N/A	N/A	N/A		A
75	Row of work benches too close together - D6 first floor	Location of desks in therapies adjusted due to the location of power pole. This created the space between two row of desks of around 1100cm which is not sufficient.		HLM-Z2-01-AS-400-041	B	STAFF OFFICE 1-D6-002	For Construction		A
76	Pot wash ceiling	Incorrect ceiling installed. Should be the same as the "high spec" ceiling in restaurant The ceiling tiles might be sufficient however the ceiling grid is non compliant.						Confirm the room/area and refer to rectified ceiling plan drawing	A
77	Group 2 socket outlets	As per GN7, all group 2 socket outlets should be provided with metal plates. This however has not been provided by Project Co. Principle for plastic plates agreed in principle however Project Co Change is required.		Project Co Change				Awaiting Project Co Change	B
78	Penetrations for services	Desks fitted at touchdown bases have no penetrations for cabling that will need to be connected to sockets under the desks.						Rectified on site	A
79	Pendants	No evident fibre cabling provided and no cut out to terminate cables.						AV Jones, on behalf of MPX will be rectifying this on site	A
80	Handheld devices	As per Delivery Area (Sub Section E) specification the handheld devices shall be provided by Project Co.						Mercury to respond to NHSL emails.	C
81	Intake rooms located in separate parts of the building	Project Co's HV distribution is non compliant with BS 5819 section 6 Power supplies which states that the two intake rooms should be located in two separate parts of the building.						Refer to item 6	

Item	Title	Description	Latest Agreed Action or CLOSE OUT Statement	File Reference	Rev	Title	Status	Residual Comment	Category - NOTE category relative to information available, and not status of issue.
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Relative to the level of information available for each item.

Category A	Status A or B RDD
Category B	Design intent agreed and RDD / Board Change of Project Co change being produced.
Category C	Solution still to be agreed

Message

**From:** Goldsmith, Susan [REDACTED]  
**on behalf of** Goldsmith, Susan [REDACTED]  
**Sent:** 12/06/2018 15:42:27  
**To:** Andy Clapp [REDACTED]; Tony.Rose [REDACTED]; 'Matthew Templeton'  
[REDACTED]  
**CC:** Crombie, Jim [REDACTED]; Graham, Iain [REDACTED]; Pryor,  
Michael [REDACTED]  
**Subject:** Settlement Agreement  
**Sensitivity:** Company Confidential

Dear Andy, Tony and Matt

Over the last few days, we have had the opportunity to reflect on progress towards finalisation of the Settlement Agreement and on the content of the draft you provided to us late last week. It is clear to us that there is a disconnect between progress of development of the commercial aspects of what we are aiming to achieve and the technical aspects. I feel that this poses a significant barrier to progress that I would very much wish to overcome. Please be assured that the Board is fully committed to the resolution of outstanding issues via such an Agreement rather than via DRP or Court action, and we continue to have as a key objective the delivery of the facility by the end of October. Accordingly, I have set out below what we now consider to be the Board's firm position on the Agreement and schedules that I hope makes entirely clear the basis on which we can agree the document and so move quickly to completion of the building. I believe that the position we have set out will unify the content of the Agreement and its schedules and provide a way forward that cleaves to the PA processes we are already committed to and which protect the positions of both parties.

- 1. NHSL Business Case:** As I explained at our meeting on 31<sup>st</sup> May, NHSL requires to objectively justify the funds to be injected into Project Co and is required to present a business case to Scottish Government that supports the proposed solution that clearly mitigates the procurement, audit and State Aid risks present. This business case will seek to demonstrate that reaching a commercial settlement offers superior value for money than the potential risk adjusted cost to the Board of DRP or Court action. The information Tony has provided is very helpful in this respect. However, alongside this, I specifically mentioned at this meeting that NHSL needed more granularity about the funds to be injected and that it was very important for NHSL to see what we are getting for our money. IHSI undertook to prepare a transparent break-down of the £10 million "Settlement Sum" to provide NHSL with much needed visibility of this amount, given the fact that when the £10 million figure was first presented to us, it was on the basis that the values were in draft form and that action would be taken to minimise the figure and eliminate, for example, any double counting. However, these critical details are still awaited;
- 2. Full and Final Settlement:** I fully appreciate and recognise the desire to reach a full and final resolution of all known issues. However, the difficulty which is perceived is that this is a live site and the issues are fluid - there will almost certainly be further changes required before the building is completed. I believe that the current approach set out in the Settlement Agreement is somewhat artificial and (no doubt unintentionally) cuts across the existing risk profile in the Project Agreement.

Having discussed matters with the NHSL technical team, we have identified a way forward on the technical issues which would represent significant progress and allow us to reach speedy agreement on how to address the items that would appear in the Schedule. To reflect this approach in the Agreement will require a move away from the current drafting in relation to the "Disputed Items", "Dispute", "Released Claims" etc. and a move towards drafting more reflective of the PA structure, i.e. the current 81 issues are more akin to "Works in Progress" than "Disputed Items" given that a solution for each of the issues is now broadly agreed and it is recognised that both parties have further actions to implement to ultimately resolve the issues in line with the

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agreed solution. Therefore, the approach we wish to follow is that all of the "work in progress" issues are categorised as being either a Board Change, Project Co Change, Approved RDD or IT Approval per Completion Certificate. The existing Project Agreement provisions (including the existing rights, obligations and remedies) would, therefore, be retained. However, the Agreement would require parties to undertake positive obligations with a view to seeking a resolution of all outstanding issues in the manner which has been discussed in the various without prejudice meetings (so, for example, the Board would undertake to issue all Project Co Changes, approve RDD items as agreed etc. and IHSL would agree to undertake such additional works as are required to meet the BCRs as they may be amended to reflect the parties' agreement). This avoids any change to the risk profile under the Project Agreement and therefore protects both parties, and would remove the need for the drafting around Disputed Items, Dispute and Released Claims, which would not be acceptable to the Board in the current form in any case. To be clear, it is not proposed that this process would alter the Settlement Sum which is the subject of the separate issues I have outlined in item 1 above and item 3 below.

- 3. **Milestone Payments:** I had understood that we agreed on 31<sup>st</sup> May that the £10 million Settlement Sum would be pegged to construction and other milestones that provide an audit trail that would evidence what the Board is getting for its money. This has not been reflected and allocates payments to headings that are meaningless from the Board's point of view, not least the reference to Senior Debt repayment;
- 4. **Longstop Date:** I was very clear at the meeting on 31<sup>st</sup> May that the Longstop Date was a major concession for NHSL and extending the Longstop Date was not agreed.

I understand that we are due to meet on Thursday and look forward to discussing matters with you at that time, but thought that a clear statement of the Board's position in advance of that would be helpful in moving towards finalisation of the Agreement.

Kind regards

Susan

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For more information visit: <http://www.nhslthian.scot.nhs.uk/values>

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Message

**From:** Currie, Brian [REDACTED]  
**Sent:** 22/06/2018 12:55:10  
**To:** Wallace Weir [REDACTED]  
**CC:** Andy Clapp [REDACTED]; 'Matthew Templeton' [REDACTED]; Richard Osborne (MacCap) [REDACTED]; Tony Rose [REDACTED]; [REDACTED]; [REDACTED]; Crombie, Jim [REDACTED]; Goldsmith, Susan [REDACTED]; Graham, Iain [REDACTED]; Pryor, Michael [REDACTED]  
**Subject:** RHSC + DCN - Little France - Settlement Agreement - Technical Schedule  
**Attachments:** Settlement Agreement Technical Schedule Rev 01\_Issued to IHSL 22 June 18.pdf; NHSL letter to IHSL 220618\_Tech Schedule.pdf

**Importance:** High

Wallace

Please find attached Technical Schedule and accompanying letter.

Hard copy has been posted to you today.

Regards

Brian

Brian Currie  
 Project Director - NHS Lothian  
 RHSC + DCN Site Office  
 Little France Crescent  
 Edinburgh  
 EH16 4TJ

T: [REDACTED]  
 M: [REDACTED]  
 E: [REDACTED]



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**IHS Lothian Limited**  
**Wallace Weir**  
c/o Christine Trusedale  
**Maclay Murray & Spens LLP**  
c/o DENTONS LLP  
15 Lauriston Place  
Edinburgh  
EH3 9EP

Date: 22 June 2018  
Our Ref : BC/IHSL  
Enquiries to: Brian Currie  
Extension: [REDACTED]  
Direct Line: [REDACTED]  
E-mail: [REDACTED]

Dear Sirs,

**SETTLEMENT AGREEMENT AND SUPPLEMENTAL AGREEMENT  
RELATING TO THE PROJECT AGREEMENT FOR THE PROVISION  
OF RHSC AND DCN AT LITTLE FRANCE – TECHNICAL SCHEDULE**

**WITHOUT PREJUDICE**

Further to our letter of 21 June, 2018, we enclose the Technical Schedule referred to in that correspondence.

As previously advised, this schedule sets out what the "Agreed Resolution" for each Dispute item is as well as describing the technical solution for each Dispute item. Further obligations incumbent upon Project Co and the Board to achieve the technical solution are also stated.

Please note that this letter is issued entirely without prejudice to our whole rights, remedies and pleas and may not be referred to or founded upon by you without our express consent.

Yours faithfully

[REDACTED]  
**Brian Currie**  
Board's Representative  
For and on behalf of Lothian Health Board

cc.  
Dep. Chief Exec – NHSL  
Finance Director – NHSL  
Director of Capital Planning – NHSL

RHSC + DCN Project Office  
Little France Crescent  
EDINBURGH  
EH16 4TJ

RHSC + DCN

Schedule Part 01 - Technical Schedule to the Settlement Agreement

WITHOUT PREJUDICE

22 June 18 - Rev 01

Item	Dispute	Agreed Resolution			
		Description of Agreed Resolution	Project Co Obligations	Board Obligations	Changes to Project Agreement
1	<p><b>Lighting in fire fighting stairwells</b></p> <p>The lighting within the 7 fire fighting shafts / stairwells and associated lobby has been installed with single circuit from the local lighting distribution boards that are not supplied by the fire rated cables.</p> <p>The Board believes all fire fighting stairwells should be supported by a primary and secondary fire rated power supplies from dedicated distribution boards and automatic changeover for dual fire rated supplies.</p>	<p>The Board approve the proposal for the lighting in the stairwell provided Project Co procure:-</p> <p>(a) approval from the Building Control Officer and Scottish Fire and Rescue; and</p> <p>(b) any compliance requirements from the Independent Tester</p>	<p>Procure approval of Building Control Office, Scottish Fire and Rescue and IT.</p> <p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
2	<p><b>Non Fire rates IPS / UPS cabling</b></p> <p>For compliance with BS 7671 and Guidance Note 7, and also BS 8519 circuits associated with essential life-support services should be either fire-rated or fire-protected. The implication of this is, in the event of a fire, power may be lost to essential life safety medical equipment in critical areas.</p> <p>Project Co has installed non fire rated cables to IPS boards serving critical areas.</p>	<p>The design data noted below for this item has been given status A / B through the Review Procedure.</p> <p>Following a collaborative review of the design, Project Co made changes to 11 Number sub mains cables from UPS switchboard to UPS distribution boards changing these to fire rated. Remaining UPS submains cables left unaltered. All as noted within Aconex chain of correspondence MPX-Transmit-010735.</p> <p>WW-SZ-B1-PL-531-101 Rev 1 UPS 1 Cable Route RDD Status A (13/4/18)</p> <p>WW-SZ-B1-PL-531-102 Rev 1 UPS 2 Cable Route RDD Status B (13/4/18)</p> <p>WW-SZ-B1-PL-531-103 Rev 1 UPS 3 Cable Route RDD Status B (13/4/18)</p> <p>WW-SZ-B1-PL-531-104 Rev 1 UPS 4 Cable Route RDD Status A (13/4/18)</p> <p>WW-SZ-B1-PL-531-105 Rev 1 UPS 5 Cable Route RDD Status B (13/4/18)</p> <p>WW-SZ-B1-PL-531-106 Rev 1 UPS 6 Cable Route RDD Status B (13/4/18)</p> <p>WW-SZ-B1-PL-531-107 Rev 1 UPS 7 Cable Route RDD Status A (13/4/18)</p> <p>WW-SZ-B1-PL-531-108 Rev 1 UPS 8 Cable Route RDD Status A (13/4/18)</p> <p>WW-SZ-B1-PL-531-109 Rev 1 Helipad Cable Route RDD Status A (13/4/18)</p> <p>WW-SZ-B1-PL-531-112 Rev 1 UPS 12 Cable Route RDD Status B (13/4/18)</p> <p>WW-SZ-B1-PL-531-114 Rev 1 UPS 14 Cable Route RDD Status A (13/4/18)</p> <p>WW-XX-XX-DC-XXX-010 Rev 3 IPS / UPS Cable Alternative RDD Status B (13/4/18)</p> <p>WW-XX-XX-SC-539-001 Rev G UPS System Schematic RDD Status A (13/4/18)</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>

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3	<p><b>No earth bonding in certain required areas</b></p> <p>No equipotential bonding has been installed in 144 Group 1&amp;2 rooms. Equipotential bonding is required to prevent electric shock to patients, staff and visitors.</p> <p>A sample room has been offered by Project Co to the Board for witnessing indicating installation of equipotential bonding boxes. The Board understands this will now be installed in all 144 Group 1&amp;2 rooms.</p>	<p>Through the Review Procedure the Room by Room Risk Profile has been given status B, and the correct grouping and categorisation has been applied to the original 144 rooms mentioned in the description.</p> <p>Through the Review Procedure, the Board / Project Co agree a further 36 rooms are to be modified to Group 1 Category 2, and 1 No Group 1 Category 3 in relation to providing equipotential bonding.</p> <p>This is all as noted within WWHIT-Transmit-001046. MPX-TRANSMIT-010801 contains room by room risk profile document at rev F and</p> <p>WW-SZ-SL-SH-500-011 Rev F Room by Room Risk Profile RDD Status B (4/5/18)</p> <p>[Board to include latest drafting and relevant information]</p>	<p>Ensure rooms are correctly categorised and grouped per SHTM 06-01 and BS 7671 Table 9.1 of Guidance Note 7</p> <p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>																																																				
4	<p><b>Bedroom ventilation pressure regime and air change rate in rooms for neutropenic patients</b></p> <p>Neutropenic Patients - As per SHTM and Clinical Specs, the rooms for neutropenic patients should be designed as isolation rooms (+10 positive pressure). However, there are 10 single rooms which Project Co have designed to balanced pressure.</p>	<p>This agreed technical solution has been documented in the following Project Co Change which is now deemed an Approved RDD item subject to and in accordance with the terms of this Agreement</p> <p><b>Detail of Change</b></p> <p><u>Financial Close Position</u></p> <p>At Financial Close, Project Co proposed the following design and construction solution for single bed rooms within the Haematology and Oncology Department (C1.4)</p> <table border="1"> <thead> <tr> <th>Room Type &amp; Department</th> <th>FM Room Code</th> <th>Pressure (Pascals) Differential to Corridor</th> <th>Air Change / Hour</th> </tr> </thead> <tbody> <tr> <td></td> <td>3-C1.4-059</td> <td>0 (balanced)</td> <td>4</td> </tr> <tr> <td></td> <td>3-C1.4-057</td> <td>0 (balanced)</td> <td>4</td> </tr> <tr> <td></td> <td>3-C1.4-055</td> <td>0 (balanced)</td> <td>4</td> </tr> <tr> <td>Single Bed Rooms</td> <td>3-C1.4-046</td> <td>0 (balanced)</td> <td>4</td> </tr> <tr> <td></td> <td>3-C1.4-032</td> <td>0 (balanced)</td> <td>4</td> </tr> <tr> <td>Haematology and Oncology</td> <td>3-C1.4-018</td> <td>0 (balanced)</td> <td>4</td> </tr> <tr> <td></td> <td>3-C1.4-016</td> <td>0 (balanced)</td> <td>4</td> </tr> <tr> <td></td> <td>3-C1.4-013</td> <td>0 (balanced)</td> <td>4</td> </tr> <tr> <td></td> <td>3-C1.4-010</td> <td>0 (balanced)</td> <td>4</td> </tr> </tbody> </table> <p>Furthermore, the following single rooms were added as part of Board Change Notice (RHSC DCN 032 &amp; 035) for the expansion of the Haematology and Oncology Department following the removal of the Biochemistry Department (U1).</p> <table border="1"> <tbody> <tr> <td></td> <td>3-C1.4-074</td> <td>0 (balanced)</td> <td></td> </tr> <tr> <td>Single Bed Rooms</td> <td>3-C1.4-076</td> <td>0 (balanced)</td> <td></td> </tr> <tr> <td></td> <td>3-C1.4-078</td> <td>0 (balanced)</td> <td></td> </tr> </tbody> </table> <p><u>Proposed Project Co Change</u></p> <p>Project Co are not proposing to alter the design, however, are aware that this design solution is non-compliant with Schedule Part 6, Sub Section C, Clause 2.1 (Approach to Design) and Clause 8 (Mechanical &amp; Electrical Engineering Requirements) of and Sub Section D, C1.4 Haematology &amp; Oncology Inpatients &amp; Day Care Clinical Output Based Specification and SHTM 03-01 (Ventilation for healthcare premises Part A – Design and validation) Table A1 (Appendix 1: Recommended air change rates).</p> <p><b>Reasons</b></p> <p>Project Co's Financial Close design assigned balanced pressure to the neutropenic single bedrooms. The conclusion of design workshops held throughout the Construction Phase</p>	Room Type & Department	FM Room Code	Pressure (Pascals) Differential to Corridor	Air Change / Hour		3-C1.4-059	0 (balanced)	4		3-C1.4-057	0 (balanced)	4		3-C1.4-055	0 (balanced)	4	Single Bed Rooms	3-C1.4-046	0 (balanced)	4		3-C1.4-032	0 (balanced)	4	Haematology and Oncology	3-C1.4-018	0 (balanced)	4		3-C1.4-016	0 (balanced)	4		3-C1.4-013	0 (balanced)	4		3-C1.4-010	0 (balanced)	4		3-C1.4-074	0 (balanced)		Single Bed Rooms	3-C1.4-076	0 (balanced)			3-C1.4-078	0 (balanced)		<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm presumably the "Implications" section of the draft project Co Change sets out the proposed changes to the PA?</p>
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		<p>confirmed that, although not providing a compliant solution, a balanced pressure regime could be managed operationally.</p> <p><b>Implications</b></p> <p>Project Co require relief from the following:</p> <ul style="list-style-type: none"> <li>∞ Section 2.1 (Approach to Design) of Sub-Section C (General Requirements) of Section 3 (Boards Construction Requirements) of Schedule Part 6(Construction Matters), which states: <i>Project Co shall take cognisance of all the architectural and building services implications of the requirements described in the Board's Construction Requirements in this Schedule Part 6 Section 3 Sub-Section D (Specific Clinical Requirements) and Sub-Section E (Specific Non-Clinical Requirements).</i></li> <li>∞ Section 8 (Mechanical &amp; Electrical Engineering Requirements) of Sub-Section C (General Requirements) of Section 3 (Board's Construction Requirements) of Schedule Part 6 (Construction Matters), which states: <i>Project Co shall take cognisance of all the building services implications of the requirements described in Section D (Specific Clinical Requirements) and Sub-Section E (Specific Non-Clinical Requirements) of Sub-section C of the Board's Construction Requirements.</i></li> <li>∞ Section 1.1.1 (Scope of the Service) of C1.4 (Haematology &amp; Oncology Inpatients &amp; Day Care Clinical Output Based Specification) of Sub-Section D (Specific Clinical Requirements), which states: <i>The paediatric Haematology and Oncology Unit, (Inpatient and Day Care services), is to provide a 24 /7 service for the care of all patients with cancer or blood dyscrasia (a pathologic condition in which any of the constituents of the blood are abnormal in structure, function, or quality, as in leukaemia or haemophilia). Patients and families will attend for assessment, investigations, treatment, ongoing care planning, and palliative and end of life care.</i></li> </ul> <p><i>The type of services provided include:</i></p> <ul style="list-style-type: none"> <li>• Chemotherapy</li> <li>• High dose therapy with autologous bone marrow or peripheral blood stem cell transplant</li> <li>• Psycho-social support and counselling for patients and families.</li> <li>• Management of children with febrile neutropenia</li> <li>• Management of any complications relating to cytotoxic therapy including chemotherapy and radiotherapy</li> <li>• Administration of immunotherapy</li> <li>• Blood transfusion</li> <li>• Immunoglobulin infusion</li> <li>• Management of chicken pox (primary infection and contact)/shingles in haem/onc patients</li> <li>• Management of haemophilia patients</li> <li>• Management of patients with sickle cell disease/crisis.</li> <li>• Palliative care</li> </ul>			



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		<p>∞ Table A1 (Appendix 1: Recommended air-change rates) of Scottish Health Technical Memorandum (SHTM) 03-01, Ventilation for healthcare premises Part A – Design and validation, as follows:</p> <table border="1"> <thead> <tr> <th>Application</th> <th>Ventilation</th> <th>ach/hour</th> <th>Pressure (Pa)</th> <th>Supply Filter</th> <th>Noise (dB)</th> <th>Temp (°C)</th> <th>Comments for further information see Section 6.</th> </tr> </thead> <tbody> <tr> <td>General ward</td> <td>S / N</td> <td>6</td> <td>-</td> <td>G4</td> <td>30</td> <td>18-28</td> <td></td> </tr> <tr> <td>Communal ward toilet</td> <td>E</td> <td>10</td> <td>-ve</td> <td>-</td> <td>40</td> <td>-</td> <td></td> </tr> <tr> <td>Single room</td> <td>S / E / N</td> <td>6</td> <td>0 or +ve</td> <td>G4</td> <td>30</td> <td>18-28</td> <td></td> </tr> <tr> <td>Single room WC</td> <td>E</td> <td>3</td> <td>-ve</td> <td>-</td> <td>40</td> <td>-</td> <td></td> </tr> <tr> <td>Clean utility</td> <td>S</td> <td>6</td> <td>+ve</td> <td>G4</td> <td>40</td> <td>18-28</td> <td></td> </tr> <tr> <td>Dirty utility</td> <td>E</td> <td>6</td> <td>-ve</td> <td>-</td> <td>40</td> <td>-</td> <td></td> </tr> <tr> <td>Ward isolation room</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>See SHPN 4; Supplement 1</td> </tr> <tr> <td>Infectious disease iso room</td> <td>E</td> <td>10</td> <td>-S</td> <td>G4</td> <td>30</td> <td>18-28</td> <td>Extract filtration may be required</td> </tr> <tr> <td>Neutropenic patient ward</td> <td>S</td> <td>10</td> <td>+10</td> <td>H12</td> <td>30</td> <td>18-28</td> <td></td> </tr> </tbody> </table> <p>Due to the current design, the Board is required to prepare specific standard operating procedure for management of infection and patients within this department.</p>	Application	Ventilation	ach/hour	Pressure (Pa)	Supply Filter	Noise (dB)	Temp (°C)	Comments for further information see Section 6.	General ward	S / N	6	-	G4	30	18-28		Communal ward toilet	E	10	-ve	-	40	-		Single room	S / E / N	6	0 or +ve	G4	30	18-28		Single room WC	E	3	-ve	-	40	-		Clean utility	S	6	+ve	G4	40	18-28		Dirty utility	E	6	-ve	-	40	-		Ward isolation room	-	-	-	-	-	-	See SHPN 4; Supplement 1	Infectious disease iso room	E	10	-S	G4	30	18-28	Extract filtration may be required	Neutropenic patient ward	S	10	+10	H12	30	18-28				
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5	<p><b>25% spare capacity</b></p> <p>The 25% spare capacity should be provided by Project Co in terms of main and sub main distribution containment, UPS boards, AHU, physical space in voids and ceilings, risers.</p> <p>Its apparent from site visits, the spare capacity has not been provided.</p>	<p>The spare capacity has been identified within a Spare Capacity Statement, the contents of which have been reviewed and commented informally per Spare Capacity Statement_A - NHSL.pdf and MGPS Spare Capacity Statement.pdf</p> <p>All as recorded within MPX-GC-026751, NHSL-GC-003075 and MPX-GC-027180.</p> <p>[Medical Gas report has been received 19 June 18 and the Board are reviewing].</p>	<p>Produce revised report to address Board comments</p> <p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>																																																																																

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6	<p><b>HV distribution</b></p> <p>In relation to system resilience, the Board believes Project Co's design for HV Distribution is non-compliant with the Board's Construction Requirements (BCR's), Project Co Proposal's (PCP's) and SHTM Guidance for the following elements;</p> <ol style="list-style-type: none"> <li>1. Resilience of the HV main intake switch room,</li> <li>2. HV cable distribution,</li> <li>3. HV / LV substations.</li> </ol> <p>The Board believes the design currently creates single points of failure at the HV side of the electrical distribution network.</p> <p>The main current concern from the Board relates to the cable configuration.</p>	<p>The design data noted below for this item has been given status A / B through the Review Procedure, with the exception of Gas Suppression where more detailed information is to be submitted through the Review Procedure.</p> <p>Changes to the switchpanels were made within the energy centre to capture the generator panel as part of the ring. Fire protection has been applied to the fire hazard rooms.</p> <p>Drawings and schedules were updated and submitted for RDD.</p> <p>Gas suppression has been agreed to be provided within SS2A and SS2B, and through a Board Change provided within SS1A and SS1B.</p> <p>All as noted within MPX-Transmit-010823 and MPX-GC-027179 and in the following drawings:-</p> <p>WW-XX-XX-SC-530-001 Rev 1 HV Distribution Schematic RDD Status B (11/5/18)</p> <p>WW-XX-XX-SC-530-101 Rev 1 Multiplex Alternative NER Schematic RDD Status A (11/5/18)</p> <p>WW-XX-XX-SC-530-102 Rev 1 Multiplex Alternative HV Room Configuration RDD Status A (11/5/18)</p> <p>WW-XX-XX-SC-530-103 Rev 1 Multiplex Alternative HV Ring Configuration RDD Status B (11/5/18)</p> <p>WW-XX-XX-SC-530-104 Rev 1 Multiplex Alternative HV Ring Configuration Protection System Schematic RDD Status A (11/5/18)</p> <p>WW-XX-XX-SC-530-105 Rev 1 Multiplex Alternative HV Ring Configuration Protection System Blocking Diagram RDD Status A (11/5/18)</p> <p>WW-XX-XX-SC-530-106 Rev 1 MV Cable Routing As Installed RDD Status B (11/5/18)</p> <p>WW-XX-XX-SC-530-107 Rev 1 G59 Connections RDD Status B (11/5/18)</p> <p>WW-XX-XX-SC-530-108 Rev 1 Generator System RDD Status A (15/5/18)</p> <p>WW-SZ-SL-SH-531-204 Rev 1 RHSC &amp; DCN Gas Suppression Basement Substations (not issued for RDD)</p>	<p>Updated design data to be submitted.</p> <p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Approve design via Review Procedure provided it meets Agreed Resolution.</p> <p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>

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7	<p><b>4 bed ventilation</b></p> <p>In relation to ventilation pressure regimes, the Board believes Project Co's design for ventilation is non-compliant with the Board's Construction Requirements (BCRs), Project Co Proposal's (PCPs), SHTM Guidance and RDD FC comments.</p> <p>In addition, the Board believe the intake air change rate and the extract air change rate are non-compliant.</p> <p>From a clinical perspective, the principal concern to the Board in continuing with Project Co's proposed pressure regime design means there is an unacceptable risk of the spread of bacterial airborne infections into corridors and surrounding patient rooms (positive to the corridor)</p> <p>The Board requires the pressure regime to be balanced or negative to the corridor.</p>	<p>The design data noted below for this item has been given status B through the Review Procedure.</p> <p>The solution submitted through the Review Procedure is for 14 No 4 bed rooms will be balanced or negative to the corridor at 4 ac/hr.</p> <p>All as noted within Aconex MM-GC-003999, MPX-TRANSMIT-010829, MPX-TRANSMIT-010807 &amp; MPX-TRANSMIT-010869.</p> <p>All as noted on drawings:-</p> <p>WW-Z3-03-PL-524-001 Rev G Zone Z3 Level 03 Ventilation Distribution Sheet 1 of 2 RDD Status B (3/5/18)</p> <p>WW-Z4-00-PL-524-001 Rev K Zone Z4 Level 00 Ventilation Distribution Sheet 1 of 2 RDD Status B (3/5/18)</p> <p>WW-Z4-00-PL-524-002 Rev L Zone Z4 Level 00 Ventilation Distribution Sheet 2 of 2 RDD Status B (3/5/18)</p> <p>WW-Z4-01-PL-524-001 Rev J Zone Z4 Level 01 Ventilation Distribution Sheet 1 of 2 RDD Status B (3/5/18)</p> <p>WW-Z4-03-PL-524-001 Rev G Zone Z4 Level 03 Ventilation Distribution Sheet 1 of 2 RDD Status B (3/5/18)</p> <p>WW-Z4-03-PL-524-002 Rev G Zone Z4 Level 03 Ventilation Distribution Sheet 2 of 2 RDD Status B (3/5/18)</p> <p>WW-SZ-XX-DC-XXX-010 Rev 06 General Ward - Ventilation Amendments Proposal RDD Status B (31/5/18)</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>

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8	<p><b>Bedhead trunking earth bonding points</b></p> <p>All bedhead trunking installed in Group 2 Medical Locations is provided with only 2 supplementary equipotential bonding points. This is not in compliance with GN7, which requires minimum 4 for IPS sockets.</p>	<p>The design data noted below for this item has been given status A / B through the Review Procedure.</p> <p>The solution provides a minimum 4 supplementary earthing points for medical IT sockets.</p> <p>All as noted within MPX-TRANSMIT-010733 &amp; MPX-TRANSMIT-010714</p> <p>All as per drawings:-</p> <p>WW-SZ-SL-SH-500-011 Rev F Room by Room Risk Profile RDD Status B (4/5/18)</p> <p>WW-Z3-00-PL-531-001 Rev M Zone Z3 Level 00 Small Power Layout Sheet 1 of 2 RDD Status B (13/4/18)</p> <p>WW-Z3-00-PL-531-002 Rev M Zone Z3 Level 00 Small Power Layout Sheet 2 of 2 RDD Status B (13/4/18)</p> <p>WW-Z3-01-PL-531-001 Rev J Zone Z3 Level 01 Small Power Layout Sheet 1 of 2 RDD Status A (13/4/18)</p> <p>WW-Z3-01-PL-531-002 Rev P Zone Z3 Level 01 Small Power Layout Sheet 2 of 2 RDD Status B (13/4/18)</p> <p>WW-Z4-00-PL-531-002 Rev O Zone Z4 Level 00 Small Power Layout Sheet 2 of 2 RDD Status B (13/4/18)</p> <p>WW-Z4-01-PL-531-001 Rev K Zone Z4 Level 01 Small Power Layout Sheet 1 of 2 RDD Status A (13/4/18)</p> <p>WW-Z4-01-PL-531-002 Rev K Zone Z4 Level 01 Small Power Layout Sheet 2 of 2 RDD Status A (13/4/18)</p> <p>WW-Z4-03-PL-531-002 Rev I Zone Z4 Level 03 Small Power Layout Sheet 2 of 2 RDD Status A (13/4/18)</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>

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9	<p><b>Lack of non IPS sockets in theatres</b></p> <p>All sockets outlets within these departments except for Cleaners outlets and a limited number of "raw power" sockets in some areas, are Medical Equipment blue sockets. No provision has been made for equipment that should be plugged into an RCB protected outlet whilst in the patient zone.</p> <p>Also, no x ray sockets (dedicated socket).</p>	<p>The design data noted below for this item has been given status A / B through the Review Procedure.</p> <p>Provision has been made for equipment requiring to be plugged into RCB protected circuits.</p> <p>All as recorded within MPX-TRANSMIT-010733, MPX-TRANSMIT-010714 &amp; MPX-GC-026898.</p> <p>All as per drawings:-</p> <p>WW-Z3-00-PL-531-001 Rev M Zone Z3 Level 00 Small Power Layout Sheet 1 of 2 RDD Status B (13/4/18)</p> <p>WW-Z3-00-PL-531-002 Rev M Zone Z3 Level 00 Small Power Layout Sheet 2 of 2 RDD Status B (13/4/18)</p> <p>WW-Z3-01-PL-531-001 Rev J Zone Z3 Level 01 Small Power Layout Sheet 1 of 2 RDD Status A (13/4/18)</p> <p>WW-Z3-01-PL-531-002 Rev P Zone Z3 Level 01 Small Power Layout Sheet 2 of 2 RDD Status B (13/4/18)</p> <p>WW-Z4-00-PL-531-002 Rev O Zone Z4 Level 00 Small Power Layout Sheet 2 of 2 RDD Status B (13/4/18)</p> <p>WW-Z4-01-PL-531-001 Rev K Zone Z4 Level 01 Small Power Layout Sheet 1 of 2 RDD Status A (13/4/18)</p> <p>WW-Z4-01-PL-531-002 Rev K Zone Z4 Level 01 Small Power Layout Sheet 2 of 2 RDD Status A (13/4/18)</p> <p>WW-Z4-03-PL-531-002 Rev I Zone Z4 Level 03 Small Power Layout Sheet 2 of 2 RDD Status A (13/4/18)</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
10	<p><b>Drainage above IPS rooms / above IPS panels</b></p> <p>Project Co have installed drainage above exclusion zones, electrical equipment and other high risk locations except above MRI rooms where this has been completely removed.</p>	<p>The following rooms where Project Co have installed drainage and water services above IPS rooms / IPS panel / electrical distribution services have been identified,</p> <p>Basement</p> <p>1 - Node room B-T1-001 Drainage will change to HDPE within the room and extend for at least a metre outwith either wall.</p> <p>2 - Node room B-T1-002 HDPE drainage will be fusion welded and will extend into the office up until the first joint.</p> <p>3 - Switch cupboard B-53-030 will be installed in HDPE as shown on c.</p> <p>4 - UPS Drainage will be routed once the walls are opened up where we have recesses to suit the best requirements. Drip trays will be installed under any drainage within the UPS room as noted on Drainage Changes.pdf.</p> <p>Ground floor</p> <p>5 - Drainage re-routed from UPS room in basement to ground floor and connecting into CWST tank room stack.</p> <p>6 - Drainage pipework already running through switch cupboard G-F1-095 will be changed to HDPE</p> <p>7 - Drainage pipework with no joints in IPS room G-Q1-002 can stay if joints are not directly next to wall either side of the cupboard ( corridor and Nappy change )</p> <p>Level 1</p> <p>8 - Drainage to change to HDPE in IPS room 1-B1-044 with the tundish moving into cylinder store and boxed in with access hatch.</p> <p>9 - Drainage to change to HDPE in Switch cupboard 1- L1-107 only needs to extend 1 mtr into the disposal hold room and not as shown on the Drainage Changes.pdf.</p> <p>Level 3</p> <p>10 - Vent pipe in switch cupboard 3-k2-083 (with no electrical equipment ) can stay while drainage pipe will re-route as Drainage Changes.pdf.</p> <p>The above solutions are noted on MPX-GC-026626 and Drainage Changes.pdf, and are</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>

Item	Dispute	Agreed Resolution			
		Description of Agreed Resolution	Project Co Obligations	Board Obligations	Changes to Project Agreement
		deemed RDD status B.  The Board have only provided the above examples of this issue, and not undertaken a full survey of the Facilities.			
11	<b>Cable discrimination and cable calculations (electrical issue)</b>  Project Co has not submitted cable calculations through RDD for Board's review. This is required as per 4.23.2 (Mechanical & Electrical Specification) Project Co Proposal. The Board's concern is that the selection, grouping, rating and fault levels of cables is inappropriate and non-compliant with BS 7671.  As evidenced on Site, there are several instances of cables being double and triple banked, as well as being grouped tightly together.	Revised cable calculations were issued to the Board 19 June 18.  The Board met Project Co (MPX) on 21 June 18 with Project Co to undertake the following;  1. Project Co to confirm that all loads used in the calculations accurately reflect the latest equipment loads and design loads. The Board queried the consistent 40A used for all distribution board loads and some machines e.g. circuit 4/15 Angiographic Procedures 1-P1-058. 2. Project Co to provide cable calculations with breakers adjusted to limit the cable temperature to under 70DegC. Discrimination to be resolved following that exercise. 3. Any identified remaining cable issues to be fully analysed and discussed to agreed resolution	TBC	TBC	TBC
12	<b>Lack of tamper proof flush fitted sockets in CAMHS</b>  Sockets not installed as per small power layout drawings. i.e. flush fitted tamper proof sockets.	Metal faceplates replaced with plastic faceplates to the agreement of the Board.  All as noted within NHSL-BCP-137 CAMHS Sockets & WW-PL-00-24-531-001 and Board Change 137 - CAMHS Anit-Lig M&E and Fixtures.pdf.	Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.	Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item	Project Co to confirm presumably the "Implications" section of the draft project Co Change sets out the proposed changes to the PA?
13	<b>Single Bedroom Ventilation air changes</b>  Air change rates proposed by Project Co for single bedrooms are not in compliance with SHTM 03-01 and Board's comments. 4ac/h supply provided to the bedrooms instead of the required 6ac/h. The ensuite extract rate proposed in excess of 10ac/h where requirements of SHTM 03-01 is 3ac/h.	[Board to include latest drafting and relevant information]  This agreed technical solution has been documented in the following Project Co Change which is now deemed an Approved RDD Item subject to and in accordance with the terms of this Agreement  <b>Detail of the Change</b>  Project Co are proposing to deviate from SHTM 03-01 (Ventilation for healthcare premises Part A – Design and validation) Table A1 (Appendix 1: Recommended air change rates), column 3, "ac/Hour" by:  1. Decreasing the mechanical air change ventilation rate within single bedrooms from 6 air changes per hour (6 ac/hr) to 4 air changes per hour (4 ac/hr); and 2. Increase the mechanical air change ventilation rate within single bedroom WCs from 3 air changes per hour (3 ac/hr) to 10 air changes per hour (10 ac/hr).  <b>Reasons</b>  The design philosophy for ventilation within single bedrooms (and ensuites) is for a mixed mode operation where natural ventilation is encouraged, which is believed to provide both physiological and environmental benefit by allowing users partial control of their environment, and reducing the loading on the mechanical ventilation system respectively. The strategy results in zero pressure differential regime within the room where supply and extract is balanced.  Additionally, the mechanical extract ventilation air change rate has been increased within the single bedrooms ensuite from 3 air changes per hour (3 ac/hr) to 10 air changes per hour (10 ac/hr) (minimum) to provide a fresh environment for patients. This ensuite extract provides a balanced air change rate to the bedroom.  The design intent and figures noted above are reflected within the environmental matrix previously submitted through RDD.	Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.	Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item	Project Co to confirm presumably the "Implications" section of the draft project Co Change sets out the proposed changes to the PA?

Item	Dispute	Agreed Resolution			
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		<p><b>Implications</b></p> <p>Reduced energy consumption by providing reduced mechanical ventilation rates within each single bedroom.</p> <p>Providing the ensuite within a minimum 10 ac/hr ensures the extract performance duty has sufficient capability for both the wc and shower extracting, and ultimately provides the balanced ventilation rate required between the bedroom and the ensuite..</p>			
14	<p><b>Smoke clearance in fire fighting stairwells</b></p> <p>As per the Non Domestic Technical Handbook and project specific Fire Strategy, all fire fighting stairwells shall be provided with appropriate ventilation for heat and smoke control. Currently only a percentage of stairwells appear to have openings for high level ventilator. No details of electrical connections including fire rated cables for fire fighting plant as per BS 8519.</p>	<p>This item shall be resolved through witnessing and testing of the system, and through compliance with the BCR's / PCP's / Completion Criteria.</p> <p>Through discussion clarity was brought to the design noting remote activation and minimum free area opening.</p> <p>All as noted within MPX-GC-026280, MM-GC-003950 and MPX-GC-026538.</p>	<p>Procure IT Sign off</p> <p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
15	<p><b>Access hatches</b></p> <p>Proliferation of Access hatches have been installed within theatre suites which is non-compliant with BCR clause 8.14 Service Routes and "Good Industry Practice".</p>	<p>The design intent for this item includes the elimination of hatches in theatres, however as noted within MPX-GC-027183, this has not been achieved and a significant reduction has been achieved, as noted in Board Status B comments on Deemed RDD xxxxxxxx</p> <p>[Board to provide file reference]</p>	<p>Updated versions of the following Reflected ceiling to be included in the As Built.</p> <p>HLM-Z3-01-PL-332-410;411;412;413</p> <p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
16	<p><b>Reductions to ceiling heights</b></p> <p>In addition to the Project Co Change 016 (Basement Ceiling Heights), further Height reduction in basement areas/service yard appear to have been reduced 2100 without the agreement of the Board.</p>	<p>Project Co to set out proposed resolution for Board approval</p> <p>[Board to provide file reference for status B RDD comments]</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
17	<p><b>Duct Cleaning</b></p> <p>Duct cleaning - SHTM states all ducts must be cleaned unless they have been protected. MPX not proposing to clean all ducts as believe they have sufficiently protected the ducts following installation. IT advised MPX will have to do a check to confirm ducts aren't dirty</p>	<p>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.</p> <p>The extent of ductwork requiring to be cleaned has been captured within the following document;</p> <p>Duct Cleaning – Aconex MM-GC-004106, MPX-GC-027187.</p> <p>[Board to check the file reference]</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
18	<p><b>Number of lift stops</b></p> <p>Number of lift stops – Original BCR 8.8.11 - "RHSC Lifts should not stop at DCN floors, and DCN lifts should not stop at RHSC floors".</p> <p>Board in agreement with the Project Co change, however change required to clarify.</p>	<p>Board to provide file reference for status B RDD comments</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
19	<p><b>Helipad fire fighting system (Water Pressure)</b></p> <p>Helipad fire fighting system does not comply with the guidance of HBN 15-03 Hospital Helipads clause 5.22. There does not appear to be a pressurised main supply, nor is there a system of inert gas to pressurise the system.</p>	<p>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.</p> <p>The Board / Project Co note the CAAI has signed off the design as installed. Certificate has been circulated as MPX-GC-027315.</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>

Item	Dispute	Agreed Resolution			
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20	<p><b>Vegetation around air intakes in Neuroscience and Staff Courtyards</b></p> <p>Landscape design around intake vents in Neuroscience Courtyard is potential non-compliant with SHTM 03-01 which states:</p> <p>Air Intake 1.42 An uncontaminated air supply to the system is essential. In order to achieve this, the air intake will be positioned so that air discharged from extract systems or other dubious sources cannot be drawn in. Exhaust fumes from vehicles can present particular problems. The area surrounding the intake will need to be kept clean and free of vegetation and waste material in order to reduce the possibility of biohazards or fire. The intake itself will be protected by a louvre and mesh screen to prevent rainwater, vermin and insects etc from entering the system.</p>	<p>The Board / Project Co agree the design data noted adjacent for this item has been given status A / B through the Review Procedure.</p> <p>Further to the confusion surrounding Project Co Change 053 the Board confirm that the following design measures proposed by Project Co to limit planting in the area surrounding the intake vents satisfies SHTM 03-01A Clause 1.42 in so far as it allows the area surrounding the vents to be clean and free of vegetation and waste material in order to reduce the possibility of biohazards or fire and the Change can therefore be withdrawn.</p> <p>Neuroscience Courtyard Project Co are proposing to replace the planting around the air intake vents with artificial grass with the exception of one area which has been planted with sedum as per the Boards request.</p> <p>Staff Courtyard Project Co are proposing to incorporate a 600mm 'no plant zone' to the perimeter of the air intake vents."</p> <p>All as noted within Drawing HLM-Z0-03-PL-700-002 Rev E Drawing HLM-Z0-00-PL-700-026 Rev E, Aconex MM-GC-003873.</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
21	<p><b>"Do not use" labels removed from Medical Gas Outlets before commissioning.</b></p> <p>Medical gas outlet "Do Not Use" labels removed before commissioning, non compliance with SHTM02-01.</p>	<p>The Board / Project Co agree this item is closed.</p> <p>Through discussion it was agreed the Medical gas outlet "Do Not Use" labels are in place prior to commissioning thus ensuring compliance with SHTM 02-01.</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
22	<p><b>Isolation Room supply ventilation relative to low building.</b></p> <p>Isolation room ventilation is non-compliant for a 'low' building. There should be a separate supply and a contractors change will be needed.</p>	<p>A separate isolation room ventilation report has been prepared to identify and clarify the system design.</p> <p>[Board to provide the file reference]</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
23	<p><b>Drainage joints in slabs</b></p> <p>Drainage outlets - Drainage joints have been installed in the slab between floors with no access for maintenance or repair. This means there is no manufacturer warranty for the drainage connection.</p>	<p>This item shall be resolved through demonstration of compliance with the BCR's / PCP's / Completion Criteria.</p> <p>Through discussion and site review with the Independent Tester, John Edwards (Arcadis) agreement reached on compliance and sign off.</p> <p>MPX-RFI-002569 refers.</p> <p>[Board to check file reference]</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
24	<p><b>Fire Collar installation</b></p> <p>Fire collars for drainage are not directly connected to the slab+C19</p>	<p>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.</p> <p>Confirmation the installation is ongoing and compliance will be achieved prior to handover.</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>



Item	Dispute	Agreed Resolution											
		Description of Agreed Resolution	Project Co Obligations	Board Obligations	Changes to Project Agreement								
25	<p><b>Level and position of smoke detectors</b></p> <p>Smoke detectors mounted at low levels above the ceiling i.e. not installed at the heights specified for void detectors</p>	<p>Following discussion and site review The Independent Tester have closed this item on basis of compliance.</p> <p>Summary of agreement contained with MPX-GC-027316.</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>								
26	<p><b>Ventilation in IPS</b></p> <p>Ventilation in IPS - PCo have shown 3ac/h extract ventilation in the EM but not all rooms have been provided with extract vent in the room - Potential heat gain issue.</p>	<p>The Board / Project Co agree the design data noted adjacent for this item has been given status A / B through the Review Procedure.</p> <p>Rev 011 of the EM represents the agreed position of ventilation being provided within IPS rooms.</p> <p>As noted within MPX-TRANSMIT- 009971 for WW-XX-XX-DC-XXX-001 Rev 011 – status B (17/11/17).</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>								
27	<p><b>Hot and Cold water supply pipe configuration</b></p> <p>Hot and cold water supply pipes are crossed behind the sink in some rooms and in some instances the cold pipe is above the hot water pipe or touching the pipe meaning the will be heat transferred to the cold water supply. Not best practice and non compliance with SHTM 04-01</p>	<p>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.</p> <p>Through discussion and site review it was agreed the installation be modified to maintain pipework separation and distance as per valve body so the hot and cold water pipework doesn't touch or cross.</p> <p>The Board have not undertaken a full survey of the Facilities and only identified examples of the issue. Project Co have agreed to resolve all issues in the Facility relative to this item.</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>								
28	<p><b>Windows/Partition in 1-B1-055</b></p> <p>The GA and C sheet illustrates a 3 panel window however, in construction one panel appears to be 'false' with a partition behind it. From the inside it appears to be only 2 windows.</p>	<p>The Board await the re-submission of this item through the Review Procedure.</p> <p>The Board / Project Co agree no amendments to the construction were required, however the RDD would need to be re-submitted to reflect the alterations made during construction.</p>	<p>Updated design data to be submitted. Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>								
29	<p><b>Mounting heights for clinical lights</b></p> <p>Some clinical lights have been mounted in such a way as to cause obstruction</p>	<p>[The Board to provide file reference for deemed RDD].</p> <p>Through discussion and agreement, it was concluded to relocate the clinical lights to 2100mm.</p> <p>MM-RTRFI-000315 provides further background to the issue..</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>								
30	<p><b>Lightning Protection</b></p> <p>Potentially deviated form design agreed with Consort</p>	<p>The Board / Project Co agree the design data noted adjacent for this item has been given status A / B through the Review Procedure.</p> <p>As noted within MPX-TRANSMIT-008497.</p> <table border="1"> <thead> <tr> <th>File Reference</th> <th>Rev</th> <th>Title</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>ME-XX-XX-DC-579-002</td> <td>01</td> <td>Lightning Protection Interface between new RHSC &amp; existing RIE</td> <td>A</td> </tr> </tbody> </table>	File Reference	Rev	Title	Status	ME-XX-XX-DC-579-002	01	Lightning Protection Interface between new RHSC & existing RIE	A	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
File Reference	Rev	Title	Status										
ME-XX-XX-DC-579-002	01	Lightning Protection Interface between new RHSC & existing RIE	A										

		Agreed Resolution												
Item	Dispute	Description of Agreed Resolution		Project Co Obligations	Board Obligations	Changes to Project Agreement								
31	<p><b>Gas supply to bedhead trunking</b></p> <p>Supply has not been installed on site as per Board comments during RDD process.</p>	<p>The Board / Project Co agree the design data noted adjacent for this item has been given status A / B through the Review Procedure.</p> <table border="1"> <thead> <tr> <th>File Reference</th> <th>Rev</th> <th>Title</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>ME-XX-XX-DC-400-105</td> <td>B</td> <td>Bedhead Trunking Drawings</td> <td>A</td> </tr> </tbody> </table>		File Reference	Rev	Title	Status	ME-XX-XX-DC-400-105	B	Bedhead Trunking Drawings	A	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
File Reference	Rev	Title	Status											
ME-XX-XX-DC-400-105	B	Bedhead Trunking Drawings	A											
32	<p><b>Concealed ceiling grids</b></p> <p>Ceiling Grids are not concealed and not constructed in line with RDD drawings</p>	<p>[Board to include latest drafting and relevant information]</p> <p>This agreed technical solution has been documented in the following Project Co Change which is now deemed an Approved RDD Item subject to and in accordance with the terms of this Agreement</p> <p><b>Detail of the Proposed Change</b></p> <p>In the PCP's, HLM's ceiling layout (332 series) stated 'that for clinical and non-clinical areas, the ceilings were jointless or concealed grid/smooth imperforate finish'.</p> <p>Project Co wish to derogate from the requirements above for the following;                      a) Propose a standard ceiling grid that meets the requirements of HBN/SHTM's.</p> <p>This clarification covers the following areas:-</p> <ul style="list-style-type: none"> <li>Types A, B, C and F ceilings are standard tile with standard Trulok Prelude 24 grid.</li> <li>Type H ceilings are a sealed (nonferrous, clean room spec) to kitchen areas.</li> <li>Type L ceilings for Ensuite/bathroom/disposal holds/dirty utility areas ie high humidity areas.</li> </ul> <p>Standard ceiling tiles are proposed however with corrosion resistant Trulok prelude grids.</p> <p><b>Reasons</b></p> <p>The term 'jointless or concealed grid/smooth imperforate finish' was included in error in these drawings and should not have been described.</p> <p><b>Implications</b></p> <p>Already installed ceilings in some rooms may have to be taken down and replaced with the agreed spec mentioned above. Revised Ceiling.</p> <p>layouts and specifications to meet the new proposals are currently with the board as RDD.</p> <p>Variation to PCP proposals.</p>		<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm presumably the "Implications" section of the draft project Co Change sets out the proposed changes to the PA?</p>								
33	<p><b>Soft Landscaping planting specification</b></p> <p>Planting on site not as per planting schedule. i.e. clematis appears to be climbing but should be bush/ground variety.</p>	<p>The Board / Project Co agree the design data noted adjacent for this item has been given status A / B through the Review Procedure.</p> <p>Through discussion it was noted these plants were left with the canes in them so that the contractor could tend the bark mulch underneath before removing the canes. It was agreed the canes will be removed so that the plant can lay on the ground.</p> <table border="1"> <thead> <tr> <th>File Reference</th> <th>Rev</th> <th>Title</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>HLM-Z0-00-PL-712-013</td> <td>A</td> <td>Soft Landscape Details - Hospital Square Drift Planting</td> <td>A</td> </tr> </tbody> </table>		File Reference	Rev	Title	Status	HLM-Z0-00-PL-712-013	A	Soft Landscape Details - Hospital Square Drift Planting	A	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
File Reference	Rev	Title	Status											
HLM-Z0-00-PL-712-013	A	Soft Landscape Details - Hospital Square Drift Planting	A											

Item	Dispute	Agreed Resolution			
		Description of Agreed Resolution	Project Co Obligations	Board Obligations	Changes to Project Agreement
34	<b>Wrong terminators fitted in warning lights</b>  Warning Lights: - Terminal strip connector in theatres to be removed and correct terminations provided, all warning light boxes. - light box deformed where glanded	The Board / Project Co agree this item is closed.	Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.	Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item	Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.
35	<b>No evidence of IPS circuit bonding conductors</b>  No evidence of IPS circuit bonding conductors at the IPS cabinets. The Main Bonding conductor between the IPS & the ERB is present.	The Board / Project Co agree this item is closed.	Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.	Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item	Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.
36	<b>Fire resistance of radiology door frame</b>  Radiology: Door frame packed out in door opening, not in accordance within manufacturer's limits to maintain fire resistance of doorset.	This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.  As noted within MPX-GC-026747, MPX-GC-027156 and NHSL-GC-003201  Project Co to provide certification 60, 90, 120 mins for each door type / frame to the Boards Fire Officer.	Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.	Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item	Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.
37	<b>UPS output switchboard with incorrect poles</b>  UPS output Switchboard 2 Switchboard is supposedly a Form 4 type 6 board. Schneider state that to achieve Form 4 type 2 or 6 that the incoming devices should be 4 poles. The incoming devices are three poles with un switched neutral.	The Board / Project Co agree this item is closed.	Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.	Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item	Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.
38	<b>Corridor service door handles</b>  Corridor service doors - installed pull handles are not acceptable as advised by the Board 30/01/17 (MM-GC-002483) during room review (corners of handles at childrens head height)	The Board await the re-submission of this item through the Review Procedure.  [Project Co to provide suitable information for deemed RDD].	Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.	Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item	Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.
39	<b>Outstanding Status C RDD</b>  Numerous outstanding RDD  This item will not be included on the final list unless / until fully specified.	Not Used.	NA	NA	NA
40	<b>Remaining Permanent Infrastructure outside the red line boundary (CCTV etc)</b>  Still waiting for legal agreement for infrastructure outside the site boundary.	Project Co to provide information.	Project Co to issue the requisite technical information in order that the supplemental agreement can be advanced.	Board to agree to appropriate terms in the supplemental agreement once the requisite technical information has been received, reviewed and approved by Consort.	Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.
41	<b>Seasonal Commissioning</b>  Potential for some seasonal commissioning tests to be complete post hand over.	Project Co to set out proposed resolution for Board approval  A separate seasonal commissioning report has been prepared to identify and clarify the proposals.  As noted within MPX-GC-027293.	Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.	Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item	TBC
42	<b>Environmental Matrix</b>  EM reflects M&E issues currently considered non-compliant	Not used  This item is a duplicate of item 7.	NA	NA	NA

Item	Dispute	Agreed Resolution			
		Description of Agreed Resolution	Project Co Obligations	Board Obligations	Changes to Project Agreement
43	<p><b>Routing of services. Corridor layouts against any non compliance with standards to be tabled.</b></p> <p>Services are currently running through clinical areas that were not included within the original Project Co derogation.</p>	<p>Project Co to set out proposed resolution for Board approval</p> <p>The Board awaits evidence from Project Co where the access might be required for the services that pass through and access required one area serving another.</p> <p>As noted within MPX-GC-027217.</p>	<p>Project Co to set out proposed resolution for Board approval</p> <p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	TBC
44	<p><b>Nurse call in WC</b></p> <p>There is evidence from the site (room C1.1-070) that nurse call pull cords have been installed in some visitor's WCs. However no nurse call should be installed in visitor's WCs.</p>	<p>The Board / Project Co agree the design data noted adjacent for this item has been given status A / B through the Review Procedure; [Board to provide file ref]</p> <p>Project Co have agreed to uninstall nurse call as per the following Aconex; [Board to provide file ref]</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
45	<p><b>Unidentified Circuits</b></p> <p>Electrical circuits are not identified or labelled at terminal rail inside trunking. Consequently, there is no way to identify which cables enter and leave the circuit terminal strips.</p>	<p>The Board / Project Co agree this item is closed.</p> <p>Through discussion and site review it was agreed no further action required.</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
46	<p><b>Fire alarm cable bands</b></p> <p>Cable bands for fire alarms are plastic rather than metal. Metal ties are required by BS and are proposed by Project Co M&amp;E specifications (4.23.3 of Section 4 of Schedule Part 6).</p>	<p>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
47	<p><b>IPS units earthbar termination - 1-B1-044 – IPS Room</b></p>	<p>The Board / Project Co agree this item is closed.</p> <p>Through discussion and site review it was agreed no further action required.</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
48	<p><b>IPS sockets supplying non medical equipment</b></p> <p>IPS socket found on site providing power for the television, scale of the issue still to be determined.</p>	<p>The Board / Project Co agree this item is closed.</p> <p>Through discussion and site review it was agreed no further action required.</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>

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49	<p><b>Interleaved circuits</b></p> <p>As per SHTM 06-01 and note 7 on design drawings, all sockets including pendants supplies, for Cat 3, 4 and 5 should be interleaved. However, the evidence from site suggests this has not been installed.</p>	<p>The design data noted below for this item has been given status A / B through the Review Procedure.</p> <table border="1"> <thead> <tr> <th>File Reference</th> <th>Rev</th> <th>Title</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>WW-SZ-SL-SH-500-011</td> <td>F</td> <td>Room by Room Risk Profile</td> <td>B (04/05/18)</td> </tr> <tr> <td>WW-Z3-00-PL-531-001</td> <td>M</td> <td>Zone Z3 Level 00 Small Power Layout Sheet 1 of 2</td> <td>B (13/04/17)</td> </tr> <tr> <td>WW-Z3-00-PL-531-002</td> <td>M</td> <td>Zone Z3 Level 00 Small Power Layout Sheet 2 of 2</td> <td>B (13/04/17)</td> </tr> <tr> <td>WW-Z3-01-PL-531-001</td> <td>J</td> <td>Zone Z3 Level 01 Small Power Layout Sheet 1 of 2</td> <td>A (13/04/17)</td> </tr> <tr> <td>WW-Z3-01-PL-531-002</td> <td>P</td> <td>Zone Z3 Level 01 Small Power Layout Sheet 2 of 2</td> <td>B (13/04/17)</td> </tr> <tr> <td>WW-Z4-00-PL-531-002</td> <td>O</td> <td>Zone Z4 Level 00 Small Power Layout Sheet 2 of 2</td> <td>B (13/04/17)</td> </tr> <tr> <td>WW-Z4-01-PL-531-001</td> <td>K</td> <td>Zone Z4 Level 01 Small Power Layout Sheet 1 of 2</td> <td>A (13/04/17)</td> </tr> <tr> <td>WW-Z4-01-PL-531-002</td> <td>K</td> <td>Zone Z4 Level 01 Small Power Layout Sheet 2 of 2</td> <td>A (13/04/17)</td> </tr> <tr> <td>WW-Z4-03-PL-531-002</td> <td>I</td> <td>Zone Z4 Level 03 Small Power Layout Sheet 2 of 2</td> <td>A (13/04/17)</td> </tr> </tbody> </table>		File Reference	Rev	Title	Status	WW-SZ-SL-SH-500-011	F	Room by Room Risk Profile	B (04/05/18)	WW-Z3-00-PL-531-001	M	Zone Z3 Level 00 Small Power Layout Sheet 1 of 2	B (13/04/17)	WW-Z3-00-PL-531-002	M	Zone Z3 Level 00 Small Power Layout Sheet 2 of 2	B (13/04/17)	WW-Z3-01-PL-531-001	J	Zone Z3 Level 01 Small Power Layout Sheet 1 of 2	A (13/04/17)	WW-Z3-01-PL-531-002	P	Zone Z3 Level 01 Small Power Layout Sheet 2 of 2	B (13/04/17)	WW-Z4-00-PL-531-002	O	Zone Z4 Level 00 Small Power Layout Sheet 2 of 2	B (13/04/17)	WW-Z4-01-PL-531-001	K	Zone Z4 Level 01 Small Power Layout Sheet 1 of 2	A (13/04/17)	WW-Z4-01-PL-531-002	K	Zone Z4 Level 01 Small Power Layout Sheet 2 of 2	A (13/04/17)	WW-Z4-03-PL-531-002	I	Zone Z4 Level 03 Small Power Layout Sheet 2 of 2	A (13/04/17)	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
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50	<p><b>Access and Maintenance Strategy</b></p> <p>Access and Maintenance Strategy - lack of clear access and maintenance strategy submitted to date. The document is currently being updated by Project Co</p>	<p>[Project Co re-submitted this item on 20 June 2018. Board are reviewing the revised Access and Maintenance Strategy].</p> <table border="1"> <thead> <tr> <th>File Reference</th> <th>Rev</th> <th>Title</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>HLM-XX-XX-DC-450-001</td> <td>10</td> <td>Access and Maintenance Strategies</td> <td>C (03/11/17)</td> </tr> </tbody> </table>		File Reference	Rev	Title	Status	HLM-XX-XX-DC-450-001	10	Access and Maintenance Strategies	C (03/11/17)	<p>Updated design data to be submitted for approval.</p> <p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>																																
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HLM-XX-XX-DC-450-001	10	Access and Maintenance Strategies	C (03/11/17)																																											
51	<p><b>Lux levels in clean utilities</b></p> <p>Lux levels in clean utilities rooms. Currently LG2 150 lux however due to the layout of the room / cupboards, this may not be sufficient for the functionality of the space.</p>	<p>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.</p> <p>Process agreed to measure the lighting levels to meet the agreed EM lux levels recorded.</p> <p>MPX-TRANSMIT- 009971 for WW-XX-XX-DC-XXX-001 Rev 011 details the current lighting levels signed off which the design and installation will be measured against.</p>		<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>																																								
52	<p><b>Fire stopping</b></p> <p>Fire stopping has been carried out however subsequent installation may have breached fire stopping.</p>	<p>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.</p> <p>The process agreed is for Project Co to issue the FIRAS Certificate to show compliance.</p>		<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>																																								
53	<p><b>Egg crate Grilles in clinical areas</b></p> <p>Egg box grid is not suitable for cleaning. A technical submittal was issued and signed off by the Board, however a sample of the grid was not issued through the Review Procedure, hence the Board did not have a chance to view</p>	<p>The process agreed was for Project Co to procure Board preferred grills, for Board markup.</p> <p>As noted within MPX-GC-025802, this is deemed RDD.</p>		<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>																																								

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	the type of product before it was installed.												
54	<b>Curtain track and ceiling Hoist clashes</b>  Hoists and curtain tracks clash and will need to be reviewed on a room by room basis.	This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.  The process agreed was to review on a case by case basis on site and rectify as necessary.	Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.	Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item	Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.								
55	<b>Wrong room configurations</b>  G-Q1-074 not constructed in line with C-Sheet (wrong sequence for data points and socket outlets)	The design data noted below for this item has been given status A / B through the Review Procedure.  [Project Co confirmed this room will be installed to HLM C-Sheet for G-Q1-074].  [Board too check file reference]	Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.	Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item	Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.								
56	<b>Helipad Ramp Lights</b>  Helipad ramp now includes lighting however HBN 15-03 recommends that the luminaire should be lower than 25 cm and pointing down toward ramp. Calculations have not been submitted for lighting levels to ascertain if this complies with relevant standards.	The Board / Project Co agree this item is closed.  Through discussion and site review it was agreed no further action required relating to this item.	Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.	Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item	Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.								
57	<b>Reduced access to electrical panels</b>  Electrical panels are placed in reduced access areas. The Board understand this should have been designed in conjunction SHTM 00 – Best Practice for Healthcare Engineering – Chapter 9 Engineering services. (4-PLANT-001 – Central AHU Plant Room 01, 3-CORE-008A - Switch cupboard)	This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.  As noted within MPX-GC-027300	Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.	Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item	Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.								
58	<b>Lighting in Service yard</b>  Lighting levels within service yard were initially designed at an average of 23 lux levels (i.e. the level required for a car park as per SLL Lighting Guide). This has now been corrected to 50 lux average however the uniformity is not in accordance with the requirements.	The Board await the re-submission of updated WW-EW-XX-DC-716-001 through the Review Procedure.  A process was agreed to capture the Board concern on uniformity, update service yard with twin heads, and resubmit drawing for RDD.  As noted within MPX-GC-027119  <table border="1"> <thead> <tr> <th>File Reference</th> <th>Rev</th> <th>Title</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>WW-EW-XX-DC-716-001</td> <td>7</td> <td>External Lighting Calculations</td> <td>C (13/03/18)</td> </tr> </tbody> </table>	File Reference	Rev	Title	Status	WW-EW-XX-DC-716-001	7	External Lighting Calculations	C (13/03/18)	Updated design data to be submitted for approval.  Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.	Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item.	Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.
File Reference	Rev	Title	Status										
WW-EW-XX-DC-716-001	7	External Lighting Calculations	C (13/03/18)										
59	<b>Lighting in B-COR-014</b>  L14 luminaries are missing in the corridor.	This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.  Project Co confirm the minimum height of 2.4m will not be impacted by the to be installed luminaries.	Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.	Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item	Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.								
60	<b>3-T2-018: QP - Riser door missing</b>  Riser wall should have a door to access pipework	This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.  Project Co to rectify on site. Project Co confirm that suitable access has now been provided.	Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.	Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item	Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.								

Item	Dispute	Agreed Resolution											
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61	<p><b>Provision of 360o CCTV Coverage</b></p> <p>As illustrated in external CCTV drawing (ME-EW-XX-PL-571-001 Rev D) there are gaps within CCTV coverage on approach to the NW elevation of the Facility. Non Compliant with BCR Clause 7.6 (n) (Hard Landscaping).</p>	<p>The Board / Project Co agree the design data noted adjacent for this item has been given status B through the Review Procedure.</p> <p>Process agreed to capture concerns, update drawing and resubmit for RDD. As part agreed process is to demonstrate compliance on site when the system is commissioned.</p> <table border="1"> <thead> <tr> <th>File Reference</th> <th>Rev</th> <th>Title</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>ME-EW-XX-PL-571-001</td> <td>E</td> <td>Site Plan. External CCTV Layout</td> <td>B (23/05/18)</td> </tr> </tbody> </table>	File Reference	Rev	Title	Status	ME-EW-XX-PL-571-001	E	Site Plan. External CCTV Layout	B (23/05/18)	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
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ME-EW-XX-PL-571-001	E	Site Plan. External CCTV Layout	B (23/05/18)										
62	<p><b>Hazard classification and fire stopping in MRI suites</b></p> <p>MRI Suites currently not operationally functional as hazard classification of the MRI equipment room prevents installation of waveguides between equipment and examination rooms which can not be fire stopped.</p>	<p>The Board await the re-submission of updated HLM-S2-00-PL-572-002 through the Review Procedure.</p> <p>Through discussion it was confirmed that the Revised Fire Strategy drawings indicated the altered compartmentation lines. These provide the necessary FR ratings and allow the Board to install their protection as required.</p>	<p>Updated design data to be submitted for approval.</p> <p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>								
63	<p><b>Entrance to Service Yard for Large Vehicles</b></p> <p>As witnessed at the trial on 17th Feb 2018, due to the location of the barrier, large vehicles extend into the blue light route (by Approximately 3ft) when waiting for access through the barrier.</p>	<p>The Board await the re-submission of HLM-Z0-00-PL-711-003 through the Review Procedure.</p> <p>Through discussion it has been confirmed a revised service yard design drawing will be issued reflecting the outcome of onsite testing when complete.</p>	<p>Updated design data to be submitted for approval.</p> <p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>								
64	<p><b>Quench Pipe Route</b></p> <p>Project Co have not left a clear route for the quench pipes to run.</p>	<p>[Board to provide file reference for the original RDD submission.</p> <p>Results of survey to be included in the settlement agreement.]</p>	<p>Updated design data to be submitted for approval.</p> <p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>								
65	<p><b>CAMHS/PICU Glazing/DCN Acute</b></p> <p>Project Co have not effectively designed glazing in PICU and CAMHS and DCN Acute to allow for adequate patient privacy from public spaces. As per Clinical Output Specifications and BCR Clauses 2.2/3.2.1/3.5.2/3.5.4/3.5.6/5.12/5.16.2</p>	<p>The Board / Project Co agree to proceed based on the following:</p> <p>CAMHS : Mirrored or tinted glass, MPX to obtain samples                      PICU: hedge solution combined with glazing resolves                      DCN Acute care: full pane frit, MPX to obtain samples                      DCN Acute care Isolation Room: additional screens by Scotdoor as per theatre suites.                      MPX proceeding with samples on this basis.</p> <p>The Board await the submission of this item through the Review Procedure.</p>	<p>Updated design data to be submitted for approval.</p> <p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>								
66	<p><b>Design Note 5 - void detection</b></p> <p>Project Co deleted design note 5 which described the process for risk assessing the omission of void detection. If no design note 5 reinstated then we assume void detection will be provided throughout.</p>	<p>The Board await the re-submission of updated WSP-S2-XX-DC-572-500 through the Review Procedure.</p>	<p>Updated design data to be submitted for approval.</p> <p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>								

Item	Dispute	Agreed Resolution			
		Description of Agreed Resolution	Project Co Obligations	Board Obligations	Changes to Project Agreement
67	<p><b>Ventilation extract for Sump</b></p> <p>The basement sump / basement corridor is not provided with any ventilation. Any maintenance of the sump will require the cover to be open and odours will be present in the corridor outside main kitchen. H&amp;S risk.</p> <p>NOTE: there are other significant areas of concern relating to the basement sump design which are not the subject of this item</p>	<p>The Board await the submission of this item through the Review Procedure.</p> <p>Process agreed to submit a ventilation strategy proposal that allows for a temporarily enclosure around the chamber to be constructed, and odour/charcoal filter to resolve odours when the chamber is being maintained. Project Co also to include methodology for the opening of the sump.</p>	<p>Updated design data to be submitted for approval.</p> <p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
68	<p><b>Security for CAMHS courtyards</b></p> <p>The height of fencing currently not sufficient to prevent access to the CAHMS courtyards</p>	<p>The Board / Project Co agree to proceed based on the following;</p> <p>Project Co proceeding with install of 2.4m high fence to match existing install at service yard, to the length of the existing installation. Hedge to be replaced with (as close to ) 2.4m high hedge and including return up the back of the spine wall.</p> <p>The Board await the submission of this item through the Review Procedure.</p>	<p>Updated design data to be submitted for approval.</p> <p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
69	<p><b>Service Yard Gate</b></p> <p>The location of the induction loops for automatic gates / barriers will have to ensure there is safe and unobstructed egress from service yard.</p>	<p>The Board await the re-submission of this item through the Review Procedure.</p> <p>A process has been agreed to ensure safe and unobstructed egress. The service yard drawings will detail the automatic gates being procured. No barriers to be installed as Project Co advise this is not possible. This information will be recorded on:</p> <p>HLM-Z0-00-PL-711-003 Rev L (to be issued)</p>	<p>Updated design data to be submitted for approval.</p> <p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
70	<p><b>ED Drugs store ventilation</b></p> <p>Current ventilation provision for drugs store is not in line with Clinical Specific Requirements for the space and therefore is not compliant.</p>	<p>This item shall be resolved through the issue of a Board Change.</p> <p>NHSL-CCP-138 ED Drug Store Ventilation</p>	<p>Implement Board Change;</p> <p>Build in accordance with the approved design to meet PA requirements as revised per Agreed Resolution</p>	<p>Board Change approved</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
71	<p><b>Movement Joint outstanding action</b></p> <p>Following principals meeting, MPX were going to provide proposals for 3-C1.4-078 &amp; G-Q1-048. However no proposals received to date.</p>	<p>This item is still a work in progress and requires further discussion.</p> <p>Project Co to provide the following information;</p> <p>Full RDD submission          BYES confirmation that no issues          Details for the Hot Toilet to be provided</p> <p><b>Description of Change</b></p> <p>Item 6.6 of the Boards Construction Requirements Schedule part 6; Section 3, states:</p> <p>6.6 Movement Joints          Structural movement joints shall not be located through</p> <ol style="list-style-type: none"> <li>Theatre rooms;</li> <li>Treatment and surgery rooms;</li> <li>X-ray and imaging rooms;</li> <li>Pharmacy manufacturing rooms;</li> <li>Kitchens and food preparation areas;</li> <li>Any room with (now or in the future) with ceiling mounted tracking hoists or other similar lifting equipment; and</li> <li>Any other room requiring a sterile environment; and</li> <li>Any rooms where there is a risk of biological or other hazard, or risk of penetration by water, grease/oil, or other hazardous or detrimental substance.</li> </ol>	<p>TBC</p>	<p>TBC</p>	<p>TBC</p>



Item	Dispute	Agreed Resolution											
		Description of Agreed Resolution	Project Co Obligations	Board Obligations	Changes to Project Agreement								
		<p>Lateral stability bracing systems shall not obstruct or hinder clinical or non-clinical operations and shall not obscure the windows or doors.</p> <p>Multiplex wish to derogate from the requirements above for the following areas;                      a) Gamma Camera – G-Q1-044 (ceiling only)                      b) MRI room 2 – G-Q1-110 (ceiling only)                      c) Ward Kitchen – G-A2-041 (ceiling only)                      d) Utility room 1-1-P1-041                      e) Corridor – 1-L1-105                      f) Single bed – 1-L1-093                      g) Corridor – 1-COR-007                      h) Exit Bay – 1-P1-040</p> <p>The Board has commented on the Project Co Change and is awaiting an updated change for the Boards Consideration..</p>											
72	<p><b>Heating pumps pressure</b></p> <p>Issue with heating pumps pressure to distribute hot water around the Facility. Pumps may not be sized correctly.</p>	<p>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.</p> <p>A process has been agreed to capture the commissioning results and table these to confirm contract compliance.</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>								
73	<p><b>Fridge Spaces</b></p> <p>Spaces for fridges mid unit are too small for the equipment</p>	<p>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.</p> <p>The Board has agreed to reduce the sizes of some of the fridges, Project Co has agreed to provide adequate fridge space in line with NHSL requirements, as recorded on [Aconex xxxxxx]</p> <p>[Board to provide file reference]</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>								
74	<p><b>Incline in L2</b></p> <p>The floor appears to be inclined in L2 department.</p>	<p>The Board / Project Co agree this item is closed.</p> <p>Through discussion it was agreed no further action required.</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>								
75	<p><b>Row of work benches too close together - D6 first floor</b></p> <p>Location of desks in therapies adjusted due to the location of power pole. This created the space between two row of desks of around 1100cm which is not sufficient.</p>	<p>Project Co have since amended the location of work benches on site.</p> <p>The Board / Project Co agree this item is closed.</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>								
76	<p><b>Pot wash ceiling</b></p> <p>Incorrect ceiling installed. Should be the same as the "high spec" ceiling in restaurant The ceiling tiles might be sufficient however the ceiling grid is non compliant.</p>	<p>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.</p> <p>Through discussion and site review it was agreed to rectify this ceiling. Process agreed to capture this within the As built.</p> <table border="1"> <thead> <tr> <th>File Reference</th> <th>Rev</th> <th>Title</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>HLM-24-04-PL-332-403</td> <td>D</td> <td>Fourth Floor Reflected Ceiling Layout Sheet 04-403</td> <td>B</td> </tr> </tbody> </table>	File Reference	Rev	Title	Status	HLM-24-04-PL-332-403	D	Fourth Floor Reflected Ceiling Layout Sheet 04-403	B	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>
File Reference	Rev	Title	Status										
HLM-24-04-PL-332-403	D	Fourth Floor Reflected Ceiling Layout Sheet 04-403	B										
77	<p><b>Group 2 socket outlets</b></p> <p>As per GN7, all group 2 socket outlets should be provided with metal plates. This however has not been provided by Project Co. Principle for plastic plates agreed in principle however Project Co Change is required.</p>	<p>This item shall be resolved through a Project Co Change.</p> <p>Through discussion and site review it has been agreed plastic switchplates are acceptable.</p> <p>[Project Co Change info to be provided]</p> <p>[Project Co to provide information]</p>	<p>Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.</p>	<p>Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item</p>	<p>Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.</p>								

Item	Dispute	Agreed Resolution			
		Description of Agreed Resolution	Project Co Obligations	Board Obligations	Changes to Project Agreement
78	<b>Penetrations for services</b>  Desks fitted at touchdown bases have no penetrations for cabling that will need to be connected to sockets under the desks.	This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.  Through discussion and site review MPX have confirmed the desk penetrations have now been fitted. This will facilitate desk mounted IT equipment to below desk sockets.	Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.	Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item	Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.
79	<b>Pendants</b>  No evident fibre cabling provided and no cut out to terminate cables.	This item shall be resolved through a Project Co Change.  Through discussion and agreement NHSL to procure final patching leads direct form the NHSL preferred supplier (OUT 904).  MPX-CCP-046 OUT904 Connections refers.  Project Co to provide technical specification for the Board Specified Group 1 pendants through RDD.	Updated design data to be submitted for approval.  Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.	Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item	Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.
80	<b>Handheld devices</b>  As per Delivery Area (Sub Section E) specification the handheld devices shall be provided by Project Co.	The Board await the submission of this item through the Review Procedure.  Process agreed to review the NHSL list of items requiring hand held provision against the NHSL pager provider. Project Co (via MPX and Mercury) to confirm specialist(s) can provide compatibility for the provision to transmit via the NHSL paging system.  As noted within MPX-GC-027190	Updated design data to be submitted for approval.  Design, construct, test, commission and complete in accordance with the Agreed Resolution to meet the Completion Criteria and other terms of the Project Agreement as revised pursuant to this Agreement.	Subject to Project Co complying with Project Co Obligations, this is an Approved RDD Item	Project Co to confirm if any changes are required, and if so propose drafting for the Boards consideration.
81	<b>Intake rooms located in separate parts of the building</b>  Project Co's HV distribution is non compliant with BS 5819 section 6 Power supplies which states that the two intake rooms should be located in two separate parts of the building.	Not used  This item is a duplicate of item 6.	NA	NA	NA

RHSC + DCN

Schedule Part 01 - Technical Schedule to the Settlement Agreement

WITHOUT PREJUDICE

22 June 5 July 2018 - Rev 01

Item	Dispute	Description of Agreed Resolution
1	<p><b>Lighting in fire fighting stairwells</b></p> <p>The lighting within the 7 fire fighting shafts / stairwells and associated lobby has been installed with single circuit from the local lighting distribution boards that are not supplied by the fire rated cables.</p> <p>The Board believes all fire fighting stairwells should be supported by a primary and secondary fire rated power supplies from dedicated distribution boards and automatic changeover for dual fire rated supplies.</p> <p><del>Project Co's position is that the design and installation of the lighting within the fire fighting stairwells meets the requirements of the Project Agreement and was based on the package approved through the RDD process.</del></p>	<p><del>The Board approved the Project Co's proposal for the lighting in the fire fighting stairwell provided Project Co provides:-</del></p> <p><del>(a) Project Co have also received approval from approval to their proposal for the lighting in the fire fighting stairwell from the Building Control Officer and Scottish Fire and Rescue; and</del></p> <p><del>(b) any Project Co will address any compliance requirements from the Independent Tester</del></p> <p><del>Proposal and approval all as specified in MPX-GC-027173 Aconex chain of correspondence refers.</del></p> <p>The Board / Project Co agree this item is closed, and no further works are required on site.</p>
2	<p><b>Non Fire rates IPS / UPS cabling</b></p> <p>For compliance with BS 7671 and Guidance Note 7, and also BS 8519 circuits associated with essential life-support services should be either fire-rated or fire-protected. The implication of this is, in the event of a fire, power may be lost to essential life safety medical equipment in critical areas.</p> <p><del>The Board believes that Project Co has installed non fire rated</del></p>	<p>The design data noted below for this item has been given status A / B through the Review Procedure. <u>Status B</u> drawings have been returned to the Board for information.</p> <p>Following a collaborative review of the design, Project Co made changes to 11 Number sub mains cables from UPS switchboard to UPS distribution boards changing these to fire rated. Remaining UPS submains cables left unaltered. All as noted within Aconex chain of correspondence MPX-Transmit-010735.</p> <p>WW-SZ-B1-PL-531-101 Rev 1 UPS 1 Cable Route RDD Status A (13/4/18)</p>

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Item	Dispute	Description of Agreed Resolution
	<p>cables to IPS boards serving critical areas.</p> <p><u>Project Co's position is that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process.</u></p>	<p>WW-SZ-B1-PL-531-102 Rev 1 UPS 2 Cable Route RDD Status B (13/4/18)</p> <p>WW-SZ-B1-PL-531-103 Rev 1 UPS 3 Cable Route RDD Status B (13/4/18)</p> <p>WW-SZ-B1-PL-531-104 Rev 1 UPS 4 Cable Route RDD Status A (13/4/18)</p> <p>WW-SZ-B1-PL-531-105 Rev 1 UPS 5 Cable Route RDD Status B (13/4/18)</p> <p>WW-SZ-B1-PL-531-106 Rev 1 UPS 6 Cable Route RDD Status B (13/4/18)</p> <p>WW-SZ-B1-PL-531-107 Rev 1 UPS 7 Cable Route RDD Status A (13/4/18)</p> <p>WW-SZ-B1-PL-531-108 Rev 1 UPS 8 Cable Route RDD Status A (13/4/18)</p> <p>WW-SZ-B1-PL-531-109 Rev 1 Helipad Cable Route RDD Status A (13/4/18)</p> <p>WW-SZ-B1-PL-531-112 Rev 1 UPS 12 Cable Route RDD Status B (13/4/18)</p> <p>WW-SZ-B1-PL-531-114 Rev 1 UPS 14 Cable Route RDD Status A (13/4/18)</p> <p>WW-XX-XX-DC-XXX-010 Rev 3 IPS / UPS Cable Alternative RDD Status B (13/4/18)</p> <p>WW-XX-XX-SC-539-001 Rev G UPS System Schematic RDD Status A (13/4/18)</p> <p><u>The Board / Project Co agree this item is closed.</u></p>
3	<p><b>No earth bonding in certain required areas</b></p> <p><u>The Board's position is that no equipotential bonding has been installed in 144 Group 1&amp;2 rooms. Equipotential bonding is required to prevent electric shock to patients, staff and visitors.</u></p> <p><u>A sample room has been offered by Project Co to the Board for witnessing and installing equipotential bonding boxes. The Board understands this will now be installed in all 144 Group 1&amp;2 rooms.</u></p>	<p>Through the Review Procedure the Room by Room Risk Profile <u>produced by Project Co</u> has been given status B, and the correct grouping and categorisation has been applied to the original 144 rooms mentioned in the description.</p> <p>Through the Review Procedure, the Board / Project Co agree a further 36 rooms <u>will</u> be modified to Group 1 Category 2, and 1 No Group 1 Category 3 in relation to providing equipotential bonding.</p>

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Item	Dispute	Description of Agreed Resolution																																	
	<p><u>Project Co's position was that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process.</u></p>	<p><u>Details of the modifications to be undertaken are this is all as noted within WWHIT-Transmit-001046.</u></p> <p><u>Aconex MPX-TRANSMIT-010801 contains the Room by Room Risk Profile document at rev F and WW-SZ-SL-SH-500-011 Rev F Room by Room Risk Profile RDD Status B (4/5/18).</u></p> <p><u>The Board / Project Co agree this item is closed.</u></p>																																	
4	<p><b>Bedroom ventilation pressure regime and air change rate in rooms for neutropenic patients</b></p> <p><u>The Board's position is that Neutropenic Patients - As per SHTM and Clinical Specs, the rooms for neutropenic patients should be designed as isolation rooms (+10 positive pressure). However, there are 10 single rooms which Project Co have designed to balanced pressure.</u></p> <p><u>Project Co's position is that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process.</u></p>	<p><u>(Board to include latest drafting and relevant information)</u></p> <p><u>This agreed technical solution has been documented in the following Project Co Change which is now deemed an Approved RDD item subject to and in accordance with the terms of this Agreement.</u></p> <p><b>Detail of Change</b></p> <p><u>Financial Close Position</u></p> <p><u>At Financial Close, Project Co proposed the following design and construction solution for single bed rooms within the Haematology and Oncology Department has been approved through the RDD process. (4/4) Refer to Environmental Matrix ww-xx-xx-dc-sxz-001 rev 1.1 which records the agreed environmental criteria. Further details below:</u></p> <table border="1"> <thead> <tr> <th>Room Type &amp; Department</th> <th>FM Room Code</th> <th>Pressure (Pascals) Differential to Corridor</th> <th>Air Change / Hour</th> </tr> </thead> <tbody> <tr> <td rowspan="5">Single Bed Rooms</td> <td>3-C1.4-059</td> <td>0 (balanced)</td> <td>4</td> </tr> <tr> <td>3-C1.4-057</td> <td>0 (balanced)</td> <td>4</td> </tr> <tr> <td>3-C1.4-055</td> <td>0 (balanced)</td> <td>4</td> </tr> <tr> <td>3-C1.4-046</td> <td>0 (balanced)</td> <td>4</td> </tr> <tr> <td>3-C1.4-032</td> <td>0 (balanced)</td> <td>4</td> </tr> <tr> <td rowspan="4">Haematology and Oncology</td> <td>3-C1.4-018</td> <td>0 (balanced)</td> <td>4</td> </tr> <tr> <td>3-C1.4-016</td> <td>0 (balanced)</td> <td>4</td> </tr> <tr> <td>3-C1.4-013</td> <td>0 (balanced)</td> <td>4</td> </tr> <tr> <td>3-C1.4-010</td> <td>0 (balanced)</td> <td>4</td> </tr> </tbody> </table>	Room Type & Department	FM Room Code	Pressure (Pascals) Differential to Corridor	Air Change / Hour	Single Bed Rooms	3-C1.4-059	0 (balanced)	4	3-C1.4-057	0 (balanced)	4	3-C1.4-055	0 (balanced)	4	3-C1.4-046	0 (balanced)	4	3-C1.4-032	0 (balanced)	4	Haematology and Oncology	3-C1.4-018	0 (balanced)	4	3-C1.4-016	0 (balanced)	4	3-C1.4-013	0 (balanced)	4	3-C1.4-010	0 (balanced)	4
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Haematology and Oncology	3-C1.4-018	0 (balanced)	4																																
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	3-C1.4-013	0 (balanced)	4																																
	3-C1.4-010	0 (balanced)	4																																

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Item	Dispute	Description of Agreed Resolution									
		<p>Furthermore, the following single rooms were added as part of Board Change Notice (RHS/DCN/032.0-035) for the expansion of the Hematology and Oncology Department following the removal of the Biochemistry Department (111):</p> <table border="0"> <tr> <td style="padding-left: 40px;">Single Bed Rooms</td> <td style="padding-left: 20px;">3-C1.4-074</td> <td style="padding-left: 20px;">0 (balanced)</td> </tr> <tr> <td></td> <td style="padding-left: 20px;">3-C1.4-076</td> <td style="padding-left: 20px;">0 (balanced)</td> </tr> <tr> <td></td> <td style="padding-left: 20px;">3-C1.4-078</td> <td style="padding-left: 20px;">0 (balanced)</td> </tr> </table> <p><u>Proposed Project Co Change</u></p> <p>Project Co are not proposing The Board and Project Co have agreed following a collaborative review of the design that no alteration is to be made to the design by Project Co, however, be aware that this design solution is non-compliant with Schedule Part 6, Sub-Section C, Clause 2.3 (Approach to Design) and Clause 3 (Mechanical &amp; Electrical Engineering Requirements) of and Sub-Section D, C.1.4 Hematology &amp; Oncology (patient's 8 Day Care Clinical Output Based Specification and SHTM 03-01 (Ventilation for Healthcare premises Part A – Design and validation) Table A1 (Appendix 1, Recommended air change rates).</p> <p><u>Reasons</u></p> <p>Project Co's Financial Close design assigned balanced pressure to the neutropenic single bedrooms. The conclusion of design workshops held throughout the construction phase confirmed that, although not providing a complete solution, a balanced pressure regime <del>could</del> <b>will</b> be managed operationally and is acceptable on the basis that 5 isolation suites are provided in accordance with SHTM 03-01.</p> <p>The Board / Project Co agree this item is closed.</p> <p><u>Implications</u></p> <p>Project Co require relief from the following:</p> <ul style="list-style-type: none"> <li>• Section 2.3 (Approach to Design) of Sub-Section C (General Requirements) of Section 3 (Board's Construction Requirements) of Schedule Part 6 (Construction Matters), which states <i>Project Co shall take cognisance of all the architectural and building services implications of the requirements described in the Board's Construction Requirements in this Schedule Part 6, Section 3 Sub-Section D (Specific Clinical Requirements) and Sub-Section E (Specific Non-Clinical Requirements).</i></li> <li>• Section 3 (Mechanical &amp; Electrical Engineering Requirements) of Sub-Section C (General Requirements) of Section 3 (Board's Construction Requirements) of Schedule Part 6 (Construction Matters), which</li> </ul>	Single Bed Rooms	3-C1.4-074	0 (balanced)		3-C1.4-076	0 (balanced)		3-C1.4-078	0 (balanced)
Single Bed Rooms	3-C1.4-074	0 (balanced)									
	3-C1.4-076	0 (balanced)									
	3-C1.4-078	0 (balanced)									

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Item	Dispute	Description of Agreed Resolution
		<p>System</p> <p>Project Co shall take cognizance of all the building services implications of the requirements described in Section B (Specific Clinical Requirements) and Sub-Section B (Specific Non-Clinical Requirements) of Sub-section C of the Board's Construction Requirements.</p> <ul style="list-style-type: none"> <li>• Section 3.3.3 (Scope of the Service) of C.3.4 (Haematology &amp; Oncology Inpatient &amp; Day Care Clinical Output Based Specification) of Sub-Section D (Specific Clinical Requirements), which states: The paediatric Haematology and Oncology Unit (Inpatient and Day Care services) is to provide a 24/7 service for the care of all patients with cancer or blood dyscrasia (a pathologic condition in which any of the constituents of the blood are abnormal in structure, function, or quality, as in leukaemia or haemophilia). Patients and families will attend for assessment, investigations, treatment, ongoing care planning, and palliative and end-of-life care.</li> </ul> <p>The type of services provided include:</p> <ul style="list-style-type: none"> <li>• Chemotherapy</li> <li>• High dose therapy with autologous bone marrow or peripheral blood stem cell transplant</li> <li>• Psycho-social support and counselling for patients and families</li> <li>• Management of children with febrile neutropenia</li> <li>• Management of any complications relating to cytotoxic therapy including abiraterone and radiotherapy</li> <li>• Administration of immunotherapy</li> <li>• Blood transfusion</li> <li>• Immuno-globulin infusion</li> <li>• Management of chicken pox (primary infection and contact) shingles in haem/onc patients</li> <li>• Management of haemophilia patients</li> <li>• Management of patients with sickle cell disease/crisis</li> </ul>

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Item	Dispute	Description of Agreed Resolution																																																																																
		<p><i> palliative care</i></p> <ul style="list-style-type: none"> <li>Table A1 (Appendix 1: Recommended air change rates) of Scottish Health Technical Memorandum (SHTM) 07-01, Ventilation for healthcare premises Part A – Design and validation, as follows:</li> </ul> <table border="1"> <thead> <tr> <th>Apparatus</th> <th>Ventilation</th> <th>airflow</th> <th>Pressure (Pa)</th> <th>Supply filter</th> <th>ACH (per h)</th> <th>Temp (°C)</th> <th>Comments for further information and location of</th> </tr> </thead> <tbody> <tr> <td>General ward</td> <td>S / N</td> <td>6</td> <td>+</td> <td>G4</td> <td>30</td> <td>18-28</td> <td></td> </tr> <tr> <td>Communal ward toilet</td> <td>E</td> <td>10</td> <td>-ve</td> <td>-</td> <td>40</td> <td>-</td> <td></td> </tr> <tr> <td>Single room</td> <td>S / E / N</td> <td>6</td> <td>0 or -ve</td> <td>G4</td> <td>30</td> <td>18-28</td> <td></td> </tr> <tr> <td>Single room WC</td> <td>E</td> <td>3</td> <td>-ve</td> <td>-</td> <td>40</td> <td>-</td> <td></td> </tr> <tr> <td>Clean utility</td> <td>S</td> <td>6</td> <td>+ve</td> <td>G4</td> <td>40</td> <td>18-28</td> <td></td> </tr> <tr> <td>Dirty utility</td> <td>E</td> <td>6</td> <td>-ve</td> <td>-</td> <td>40</td> <td>-</td> <td></td> </tr> <tr> <td>Ward Isolation room</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td>See SHPN 4; Supplement 1</td> </tr> <tr> <td>Infectious disease Iso room</td> <td>E</td> <td>10</td> <td>-5</td> <td>G4</td> <td>30</td> <td>18-28</td> <td>Extract filtration may be required</td> </tr> <tr> <td>Neutropenic patient ward</td> <td>S</td> <td>10</td> <td>+10</td> <td>H12</td> <td>30</td> <td>18-28</td> <td></td> </tr> </tbody> </table> <p>Due to the current design, the Board is required to prepare specific standard operating procedures for management of infection and patients within this department.</p>	Apparatus	Ventilation	airflow	Pressure (Pa)	Supply filter	ACH (per h)	Temp (°C)	Comments for further information and location of	General ward	S / N	6	+	G4	30	18-28		Communal ward toilet	E	10	-ve	-	40	-		Single room	S / E / N	6	0 or -ve	G4	30	18-28		Single room WC	E	3	-ve	-	40	-		Clean utility	S	6	+ve	G4	40	18-28		Dirty utility	E	6	-ve	-	40	-		Ward Isolation room	-	-	-	-	-	-	See SHPN 4; Supplement 1	Infectious disease Iso room	E	10	-5	G4	30	18-28	Extract filtration may be required	Neutropenic patient ward	S	10	+10	H12	30	18-28	
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5	<p><b>25% spare capacity</b></p> <p>The Board's position is that 25% spare capacity should be provided by Project Co in terms of main and sub main distribution containment, UPS boards, AHU, physical space in voids and ceilings, risers.</p> <p>The Board are of the opinion that it is apparent from site visits that the spare capacity has not been provided.</p> <p>Project co's position in that the design and installation meets the requirements of the Project Agreement, was based on the package approved through the RDD process, and spare capacity had been allowed in compliance with the BCRs.</p>	<p>The Spare capacity has been identified within a Spare Capacity Statement, the contents of which have been reviewed by the Board and Project Co and commented informally upon per within the Spare Capacity Statement_A - NHSL.pdf and MGPS Spare Capacity Statement.pdf</p> <p><del>Medical Gas report has been received dated 19 June 18 and the Board are reviewing</del> 2018 was prepared by Project Co to respond to Board's comments. No adverse comments have been received on this Report.</p> <p>All as recorded within Access MPX-GC-026751, NHSL-GC-003075 and MPX-GC-027180.</p> <p>The Board / Project Co agree this item is closed.</p>																																																																																

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Item	Dispute	Description of Agreed Resolution
6	<p><b>HV distribution</b></p> <p>In relation to system resilience, the Board believes Project Co's design for HV Distribution is non-compliant with the Board's Construction Requirements (BCR's), Project Co Proposal's (PCP's) and SHTM Guidance for the following elements;</p> <ol style="list-style-type: none"> <li>1. Resilience of the HV main intake switch room,</li> <li>2. HV cable distribution,</li> <li>3. HV / LV substations.</li> </ol> <p>The Board believes the design currently creates single points of failure at the HV side of the electrical distribution network.</p> <p>The main current concern from the Board relates to the cable configuration.</p> <p><u>Project Co's position is that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process, which was based on the Board's reference design.</u></p>	<p>The design data noted below for this item has been given status A / B through the Review Procedure, with the exception of Gas Suppression where more detailed information is to be submitted <u>by Project Co</u> through the Review Procedure.</p> <p>Changes to the switch panels were made within the energy centre to capture the generator panel as part of the ring. Fire protection has been applied to the fire hazard rooms.</p> <p><u>Drawings and schedules were updated and submitted through the RDD process. Details of the notes pack of information contain the modifications to be carried out by Project Co specified in the documents noted below.</u></p> <p>Gas suppression has been agreed to be provided within SS2A and SS2B, and through a Board Change provided within SS1A and SS1B.</p> <p>All as noted within <u>Aconex</u> MPX-Transmit-010823 and MPX-GC-027179 and in the following drawings:-</p> <p>WW-XX-XX-SC-530-001 Rev 1 HV Distribution Schematic RDD Status B (11/5/18)</p> <p>WW-XX-XX-SC-530-102 Rev 1 Multiplex Alternative HV Room Configuration RDD Status A (11/5/18)</p> <p>WW-XX-XX-SC-530-103 Rev 1 Multiplex Alternative HV Ring Configuration RDD Status B (11/5/18)</p> <p>WW-XX-XX-SC-530-104 Rev 1 Multiplex Alternative HV Ring Configuration Protection System Schematic RDD Status A (11/5/18)</p> <p>WW-XX-XX-SC-530-105 Rev 1 Multiplex Alternative HV Ring Configuration Protection System Blocking Diagram RDD Status A (11/5/18)</p> <p>WW-XX-XX-SC-530-106 Rev 1 MV Cable Routing As Installed RDD Status B (11/5/18)</p> <p>WW-XX-XX-SC-530-107 Rev 1 G59 Connections RDD Status B (11/5/18)</p> <p>WW-XX-XX-SC-530-108 Rev 1 Generator System RDD Status A (15/5/18)</p> <p>WW-SZ-SL-SH-531-204 Rev 1 RHSC &amp; DCN Gas Suppression Basement Substations (not issued for RDD)</p> <p><u>The Board / Project Co agree this item is closed.</u></p>

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Item	Dispute	Description of Agreed Resolution
7	<p><b>4 bed ventilation</b></p> <p>In relation to ventilation pressure regimes, the Board believes Project Co's design for ventilation is non-compliant with the Board's Construction Requirements (BCRs), Project Co Proposal's (PCPs), SHTM Guidance and RDD FC comments.</p> <p>In addition, the Board believe the intake air change rate and the extract air change rate are non-compliant.</p> <p>From a clinical perspective, the principal concern to the Board in continuing with Project Co's proposed pressure regime design means there is an unacceptable risk of the spread of bacterial airborne infections into corridors and surrounding patient rooms (positive to the corridor)</p> <p>The Board requires the pressure regime to be balanced or negative to the corridor.</p> <p><u>Project co's position is that the design and installation meets the requirements of the Project Agreement, was based on the package approved through the RDD process which included the environmental matrix which had been discussed and was agreed pre FC. The environmental matrix was a direct copy of the reference design environmental matrix developed during the preferred bidder period. No adverse comments were received at FC.</u></p>	<p>The design data noted below for this item has been given status B through the Review Procedure. <u>Status B comments on drawings were returned for information.</u></p> <p>The resolution submitted by Project Co through the Review Procedure is for 14 No 4 bed rooms <del>will to be</del> balanced or negative to the corridor at 4 ac/hr. <u>The remaining 6 No 4 bed wards remain as per the environmental matrix WSY-XX-XX-DC-XXX-001 Rev 11 and rev 07 of the schedule WAF-SZ-XX-DC-XXX-010.</u></p> <p>All as noted within Aconex MM-GC-003999, MPX-TRANSMIT-010829, MPX-TRANSMIT-010807 &amp; MPX-TRANSMIT-010869.</p> <p>All as noted on drawings:-</p> <p>WW-Z3-03-PL-524-001 Rev G Zone Z3 Level 03 Ventilation Distribution Sheet 1 of 2 RDD Status B (3/5/18)</p> <p>WW-Z4-00-PL-524-001 Rev K Zone Z4 Level 00 Ventilation Distribution Sheet 1 of 2 RDD Status B (3/5/18)</p> <p>WW-Z4-00-PL-524-002 Rev L Zone Z4 Level 00 Ventilation Distribution Sheet 2 of 2 RDD Status B (3/5/18)</p> <p>WW-Z4-01-PL-524-001 Rev J Zone Z4 Level 01 Ventilation Distribution Sheet 1 of 2 RDD Status B (3/5/18)</p> <p>WW-Z4-03-PL-524-001 Rev G Zone Z4 Level 03 Ventilation Distribution Sheet 1 of 2 RDD Status B (3/5/18)</p> <p>WW-Z4-03-PL-524-002 Rev G Zone Z4 Level 03 Ventilation Distribution Sheet 2 of 2 RDD Status B (3/5/18)</p> <p>WW-SZ-XX-DC-XXX-010 Rev 07 General Ward - Ventilation Amendments Proposal RDD Status B (31/5/18)</p> <p><u>The Board / Project Co agree this item is closed</u></p>

Item	Dispute	Description of Agreed Resolution
8	<p><b>Bedhead trunking earth bonding points</b></p> <p><u>All The board's position is that all bedhead trunking installed in Group 2 Medical Locations is provided with only 2 supplementary equipotential bonding points. This is not in compliance with GN7, which requires minimum 4 for IPS sockets.</u></p> <p><u>Project Co's position is that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process</u></p>	<p>The design data noted below for this item has been given status A / B through the Review Procedure.</p> <p>The solution provides a minimum 4 supplementary earthing points for medical IT sockets.</p> <p>All as noted within MPX-TRANSMIT-010733 &amp; MPX-TRANSMIT-010714</p> <p>All as per drawings:-</p> <p>WW-SZ-SL-SH-500-011 Rev F Room by Room Risk Profile RDD Status B (4/5/18)</p> <p>WW-Z3-00-PL-531-001 Rev M Zone Z3 Level 00 Small Power Layout Sheet 1 of 2 RDD Status B (13/4/18)</p> <p>WW-Z3-00-PL-531-002 Rev M Zone Z3 Level 00 Small Power Layout Sheet 2 of 2 RDD Status B (13/4/18)</p> <p>WW-Z3-01-PL-531-001 Rev J Zone Z3 Level 01 Small Power Layout Sheet 1 of 2 RDD Status A (13/4/18)</p> <p>WW-Z3-01-PL-531-002 Rev P Zone Z3 Level 01 Small Power Layout Sheet 2 of 2 RDD Status B (13/4/18)</p> <p>WW-Z4-00-PL-531-002 Rev O Zone Z4 Level 00 Small Power Layout Sheet 2 of 2 RDD Status B (13/4/18)</p> <p>WW-Z4-01-PL-531-001 Rev K Zone Z4 Level 01 Small Power Layout Sheet 1 of 2 RDD Status A (13/4/18)</p> <p>WW-Z4-01-PL-531-002 Rev K Zone Z4 Level 01 Small Power Layout Sheet 2 of 2 RDD Status A (13/4/18)</p> <p>WW-Z4-03-PL-531-002 Rev I Zone Z4 Level 03 Small Power Layout Sheet 2 of 2 RDD Status A (13/4/18)</p> <p><u>The Board / Project Co agree this item is closed</u></p>

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Item	Dispute	Description of Agreed Resolution
9	<p><b>Lack of non IPS sockets in theatres</b></p> <p>The Board's position is that all sockets outlets within these departments except for Cleaners outlets and a limited number of "raw power" sockets in some areas, are Medical Equipment blue sockets. No provision has been made for equipment that should be plugged into an RCB protected outlet whilst in the patient zone.</p> <p>Also, no x ray sockets (dedicated socket).</p> <p>Project Co's position is the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process.</p>	<p>The design data noted below for this item has been given status A / B through the Review Procedure.</p> <p>Provision has been made for the equipment requiring to be plugged into RCB protected circuits.</p> <p>All as recorded within MPX-TRANSMIT-010733, MPX-TRANSMIT-010714 &amp; MPX-GC-026898.</p> <p>All as per drawings:-</p> <p>WW-Z3-00-PL-531-001 Rev M Zone Z3 Level 00 Small Power Layout Sheet 1 of 2 RDD Status B (13/4/18)</p> <p>WW-Z3-00-PL-531-002 Rev M Zone Z3 Level 00 Small Power Layout Sheet 2 of 2 RDD Status B (13/4/18)</p> <p>WW-Z3-01-PL-531-001 Rev J Zone Z3 Level 01 Small Power Layout Sheet 1 of 2 RDD Status A (13/4/18)</p> <p>WW-Z3-01-PL-531-002 Rev P Zone Z3 Level 01 Small Power Layout Sheet 2 of 2 RDD Status B (13/4/18)</p> <p>WW-Z4-00-PL-531-002 Rev O Zone Z4 Level 00 Small Power Layout Sheet 2 of 2 RDD Status B (13/4/18)</p> <p>WW-Z4-01-PL-531-001 Rev K Zone Z4 Level 01 Small Power Layout Sheet 1 of 2 RDD Status A (13/4/18)</p> <p>WW-Z4-01-PL-531-002 Rev K Zone Z4 Level 01 Small Power Layout Sheet 2 of 2 RDD Status A (13/4/18)</p> <p>WW-Z4-03-PL-531-002 Rev I Zone Z4 Level 03 Small Power Layout Sheet 2 of 2 RDD Status A (13/4/18)</p> <p>The Board / Project Co agree this item is closed</p>
10	<p><b>Drainage above IPS rooms / above IPS panels / Node Rooms</b></p> <p>It is the Board's position that Project Co have installed drainage above exclusion zones, electrical equipment and other high risk locations except above MRI rooms where this has been completely removed.</p>	<p>The following rooms where Project Co have installed drainage and water services above IPS rooms / IPS panel / electrical distribution services have been identified and proposed solution outlined:</p> <p><b>Basement</b></p> <p>1 - Node room B-T1-001 Drainage will change to HDPE within the room and extend for at least a metre outwith either wall.</p> <p>2 - Node room B-T1-002 HDPE drainage will be fusion welded and will extend into the office up until the first</p>

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Item	Dispute	Description of Agreed Resolution
	<p>Project Co's position is that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process.</p>	<p>joint.</p> <p>3 - Switch cupboard B-S3-030 will be installed in HDPE as shown <del>on or within agreed sketches within MPX-GC-026626.</del></p> <p>4 - UPS Drainage - will be routed once the walls are opened up where we have recesses to suit the best requirements. Drip trays will be installed under any drainage within the UPS room as noted on Drainage Changes.pdf.</p> <p><b>Ground floor</b></p> <p>5 - Drainage re-routed from UPS room in basement to ground floor and connecting into CWST tank room stack.</p> <p>6 - Drainage pipework already running through switch cupboard G-F1-095 will be changed to HDPE</p> <p>7 - Drainage pipework with no joints in IPS room G-Q1-002 can stay if joints are not directly next to wall either side of the cupboard ( corridor and Nappy change )</p> <p><b>Level 1</b></p> <p>8 - Drainage to change to HDPE in IPS room 1-B1-044 with the tundish moving into cylinder store and boxed in with access hatch.</p> <p>9 - Drainage to change to HDPE in Switch cupboard 1- L1-107 only needs to extend 1 mtr into the disposal hold room and not as shown on the Drainage Changes.pdf.</p> <p><b>Level 3</b></p> <p>10 - Vent pipe in switch cupboard 3-k2-083 (with no electrical equipment ) can stay while drainage pipe will re-route as Drainage Changes.pdf.</p> <p>The above solutions are noted <del>on within Aconex reference</del> MPX-GC-026626 and Drainage Changes.pdf, and are deemed RDD status B.</p> <p><del>The Board have only provided the above examples of this issue, and not undertaken a full survey of the Facilities. The Board / Project Co agree this item is closed</del></p>

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Item	Dispute	Description of Agreed Resolution
11	<p><b>Cable discrimination and cable calculations (electrical issue)</b></p> <p>Project Co has not submitted cable calculations through RDD for Board's review. This is required as per 4.23.2 (Mechanical &amp; Electrical Specification) Project Co Proposal. The Board's concern is that the selection, grouping, rating and fault levels of cables is inappropriate and non-compliant with BS 7671.</p> <p>As evidenced on Site, there are several instances of cables being double and triple banked, as well as being grouped tightly together.</p> <p><i>Project co's position is that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process. The RDD list of documents were agreed at FC and there is no requirement to submit cable calculations through the RDD process.</i></p>	<p>Revised cable calculations were issued to the Board 19 June 18.</p> <p>The Board / Project Co agree this item is closed subject to the 3 noted points raised on 21.06.18 and recorded below:-</p> <p>The Board met Project Co (APX) on 21 June 18 with Project Co to undertake the following:</p> <ol style="list-style-type: none"> <li>1. Project Co to confirm that all loads used in the installations accurately reflect the latest equipment loads and design loads. The Board queried the consistent 40A used for all distribution board loads and some machines e.g. circuit 4/15 Angiographic Procedures 1-P1-058. To resolve these concerns Project Co will confirm that all loads used in the calculations issued 19 June 2018 accurately reflect the latest equipment loads as noted within the Equipment Schedule and will clarify the assumptions noted associated with the design loads.</li> <li>2. Project Co will provide cable calculations with breakers adjusted to limit the cable temperature to under 70DegC. Discrimination to be resolved following that exercise.</li> <li>3. Any identified remaining cable issues to be fully analysed. Project Co to put forward proposals following review of the cable calculations and breaker settings issued 19 June 2018, should they fail to comply with BS7671, and discussed to agreed resolution.</li> </ol>
12	<p><b>Lack of tamper proof flush fitted sockets in CAMHS</b></p> <p><i>In the Board's opinion, sockets are not installed as per small power layout drawings. i.e. flush fitted tamper proof sockets.</i></p> <p><i>Project co's position is that the design and installation meets the requirements of the Project Agreement and was based on the tech sub package approved through the RDD approval process.</i></p>	<p>Metal faceplates have been replaced with plastic faceplates to the agreement of the Board.</p> <p>All as noted within NHSL-BCP-137 CAMHS Sockets &amp; WW-PL-00-24-531-001 and Board Change 137 - CAMHS Anti-Lig M&amp;E and Fixtures.pdf.</p> <p>The Board / Project Co agree this item is closed.</p>
13	<p><b>Single Bedroom Ventilation air changes</b></p> <p>Air change rates proposed by Project Co for single bedrooms are not in compliance with SHTM 03-01 and Board's comments. 4ac/h supply provided to the bedrooms instead of the required 6ac/h. The ensuite extract rate proposed in excess of 10ac/h where requirements of SHTM 03-01 is 3ac/h.</p> <p><i>Project co's position is that the design and installation meets the</i></p>	<p>The Board to include latest drafting/ Project Co agree this item is closed, and relevant information</p> <p>This the agreed technical solution approved through RDD has been documented in the following Project Co Change which is now deemed an Approved RDD Item subject to and in accordance with the terms of this Agreement is noted below.</p> <p><b>Detail of the Change</b></p>

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Item	Dispute	Description of Agreed Resolution
	<p>requirements of the Project Agreement and was based on the package approved through the RDD process which included the environmental matrix which had been discussed and agreed pre PC. The environmental matrix was a direct copy of the reference design environmental matrix developed during the preferred bidder period. Comments were received pre PC, and these were documented and the design amended to reflect the Board's comments.</p>	<p>Project Co are proposing to deviate address the dispute within from SHM03-01 (Ventilation for healthcare premises Part A - Design and validation) Table A1 (Appendix 1) Recommended air change rates, column 3, "ac/hour" by clarifying Project Co and the Board have agreed there is to be no change to the environmental matrix WVV-XX-XX-DC-XXX-001 Rev 11, and the air change rates for single bedrooms are to remain as designed and constructed namely:</p> <ol style="list-style-type: none"> <li>1. Decreasing the mechanical air change ventilation rate within single bedrooms from 6 air changes per hour (6 ac/hr) to <b>4 air changes per hour (4 ac/hr) within single bedrooms; and</b></li> <li>2. Increase the mechanical air change ventilation rate within single bedroom VCs from 3 air changes per hour (3 ac/hr) to <b>min 10 air changes per hour (10 ac/hr) within ensuite.</b></li> </ol> <p><b>Reasons</b></p> <p>The design philosophy for ventilation within single bedrooms (and ensuite) is for a mixed mode operation where natural ventilation is encouraged, which is believed to provide both physiological and environmental benefits allowing users partial control of their environment, and reducing the loading on the mechanical ventilation system respectively. The strategy results in a negative pressure differential regime within the room where supply and extract is balanced.</p> <p>Additionally, the mechanical extract ventilation air change rate has been increased within the single bedroom ensuite from 3 air changes per hour (3 ac/hr) to 10 air changes per hour (10 ac/hr) (minimum) to provide a fresh environment for patients. This ensuite extract provides a balanced air change rate to the bedroom.</p> <p>The design intent and figures noted above are reflected within the environmental matrix previously submitted through RDD, WVV-XX-XX-DC-XXX-001 Rev 11.</p> <p><b>Implications</b></p> <p>Reduced energy consumption by providing reduced mechanical ventilation rates within each single bedroom.</p> <p>Providing the ensuite with a minimum 10 ac/hr ensures the extract performance duty has sufficient capability for both the wet and shower extracting, and ultimately provides the balanced ventilation rate required between the bedroom and the ensuite.</p>
14	<p><b>Smoke clearance in fire fighting stairwells</b></p> <p>As per the Non Domestic Technical Handbook and project specific</p>	<p>This item shall be resolved through witnessing and testing of the system, and through compliance with the BCR's / PCP's / Completion Criteria.</p>

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Item	Dispute	Description of Agreed Resolution
	<p>Fire Strategy, all fire fighting stairwells shall be provided with appropriate ventilation for heat and smoke control. Currently only a percentage of stairwells appear to have openings for high level ventilator. No details of electrical connections including fire rated cables for fire fighting plant as per BS 8519 have been provided.</p>	<p>Through discussion clarity was brought to the design noting the remote activation and minimum free area opening is as noted in MDX-GC-026280.</p> <p>In line with clause 2.14.6 (and table 2.16) of the NDTM, each of the stairs are designed with a mix of ventilators achieving 1sqm ea. to the top of the stair (either smoke vents or windows). The strategy for each stair is noted below:</p> <ul style="list-style-type: none"> <li>• Stair 1 – Openable window to stair (1sqm window to top of stair) CHSL</li> <li>• Stair 2 – Openable window to stair (1sqm window to top of stair), mechanical ventilation to the bed evac lobby. Push buttons to topmost storey as per 2.14.6 CHSL</li> <li>• Stair 3- Openable (mechanical) roof vent to stair, mechanical ventilation to the bed evac lobby. Push buttons to topmost storey</li> <li>• Stair 4- Openable (mechanical) roof vent to stair. Push buttons to topmost storey as per 2.14.6</li> <li>• Stair 5 – Openable window to stair (window at each level, however topmost floor window to have local automated actuator allowing the window to open under actuation to achieve 1m2) Velfac</li> <li>• Stair 6 – Openable window to stair (window at each level, however topmost floor window to have local automated actuator allowing the window to open under actuation to achieve 1m2) Velfac</li> <li>• Stair 7- Openable (mechanical) vent to stair- exhausts via plant room area at L04. Push buttons to topmost storey as per 2.14.6</li> </ul> <p>In order to comply with section of 5.12 of the BCRs, all opening windows (including those to stairs 1, 2, 5 and 6) are lockable and fitted with restrictors.</p> <p>Each of the windows which perform as ventilators above, (both the velfac windows and the schuco aluminium windows to curtain wall screens).</p> <p>The CHSL Schuco Windows are provided with 'Custodian Handle Housings' with 'Custodian Keys' as per CHSL Technical Submittal no. 15 allowing the windows to the top of stairs 1 and 2 to open fully and achieve in excess of the min 1sqm requirement of the building regulations.</p> <p>The Velfac WT-Q22 windows to stairs 5 and 6 are provided with 'Espagnolette Handle with Lock' with 'Allen Key Lockable Restrictor'. The topmost window in each stair is to be fitted with localised actuation. This only allows opening by operatives as the locks and restrictors must be omitted. The actuators shall be activated locally by button control at 2m above floor level so as not easily accessible to public. This is</p>

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Item	Dispute	Description of Agreed Resolution
		<p>in accordance with NDTH 2.14.8.</p> <p>The fire service carry the tool required to operate the CMSI windows and the key shall also be stored in a secure location near the windows ie break glass.</p> <p>All as noted within Aconex MPX-GC-026280, MM-GC-003950 and MPX-GC-026528.</p> <p>The Board / Project Co agree this item is closed.</p>
15	<p><b>Access hatches</b></p> <p>It is the Board's position that a proliferation of Access hatches have been installed within theatre suites which is non-compliant with BCR clause 8.14 Service Routes and "Good Industry Practice".</p> <p>Project co's position is that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process</p>	<p>The design intent for this item includes the <del>elimination</del>reduction of hatches in theatres, however as noted within Aconex MPX-GC-027183, <del>this has not been achieved and a significant reduction has been achieved, as noted. This will be reflected in Board Status B comments on Deemed RDD xxxxxxxx</del>the as-built documentation.</p> <p><del>[Board to provide file reference]</del> The Board / Project Co agree this item is closed.</p>
16	<p><b>Reductions to ceiling heights</b></p> <p>In addition to the Project Co Change 016 (Basement Ceiling Heights), further Height reduction in basement areas/service yard appears to have been reduced by 2100 without the agreement of the Board.</p>	<p>The Board / Project Co to set out proposed resolution for Board approval agree this item is closed.</p> <p><del>[Board to provide file reference for status B RDD comments]</del></p> <p>The agreed position was reached and captured within the noted CCPs and is detailed below:-</p> <p><b>MPX-CCP-059 4COR007 Ceiling Height</b></p> <p><del>Detail of Change:</del>  <b>Financial Close Position</b>  Room Number 4-COR-007 was designed to have a ceiling at height 2700mm.  <del>Current Position</del>  Room Number 4-COR-007 was designed to have a ceiling at height 2700mm. It has been agreed to lower the is proposed to have a ceiling at height to 2600mm in two localised areas.  <del>Reason:</del>  The height of the ceiling requires to be lowered because there was limited amount of space to achieve proposed</p>

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Item	Dispute	Description of Agreed Resolution
		<p>ceiling height in two localized areas. implications: Two areas of reduced ceiling height, in compliance ceiling height to proceed: Attachments: Room Number G-A1-052 was designed to have a ceiling at height 3000mm and it is proposed to have a reduce that ceiling at height to 2950mm. The height of the ceiling requires to be lowered because there was an MEP service clash. Reference is made to the following documents which specify the changes agreed:  <ul style="list-style-type: none"> <li>* Financial Close Drawing - HLM-57-04-PI-322-407 rev E - MARKUP</li> <li>* MPX-CCP-060 G-A10-052 Ceiling Height</li> <li>* Email confirming acceptance from NHSJ - 29/03/18</li> <li>* Financial Close Drawing - HLM-74-00-PI-400-112 Rev 4</li> </ul> </p>
17	<p><b>Duct Cleaning</b></p> <p>The Board's position is that Duct-cleaning - SHTM states all ducts must be cleaned unless they have been protected. MPX not proposing to clean all ducts as believe they have sufficiently protected the ducts following installation. IT advised MPX will have to do a check to confirm ducts aren't dirty</p> <p>Project Co's position is that ducts were being protected and would be sampled at commissioning stage - any failing the test would then being cleaned.</p>	<p>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.</p> <p>The extent of ductwork requiring to be cleaned has been captured within the following document; Duct Cleaning - Aconex MM-GC-004106, MPX-GC-027187.</p> <p><del>Board to check the file reference</del> The Board / Project Co agree this item is closed.</p>
18	<p><b>Number of lift stops</b></p> <p>The FC submission, IHS-XX-KY-DC-4.15 Vertical Transportation stated that the bed lift in core 3 would serve 5 floors.</p> <p>This is contrary to the BCRs 8.8.11.e) which states: "All floors including plant levels shall be served".</p> <p>This was highlighted and noted in the Construction Contract "Schedule Part 6 Section 5 Part 4 RDD - Non-Approved Project Co's</p>	<p>Board to provide file reference for status 8 RDD comments Project Co and the Board agreed that Number of lift stops should be amended - Original BCR 8.8.11 should state: "RHSC Lifts should not stop at DCN floors, and DCN lifts should not stop at RHSC floors".</p> <p>Through discussion, this agreed wording was captured within Aconex MPX-CCP-041 Bed Lift, BCCI-TRANSMIT-004374260115-Schedule Part 6 Section 5 RDD pp107 Extract IHS-XX-KY-DC-4.15-Board Comments</p>

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Item	Dispute	Description of Agreed Resolution
	<p>Proposals Design Data comments", attached (200115 Schedule Part B Section 5 RDD pp107 Extract).</p> <p><del>Number of lift stops - Original ICR is 11. Resolution should not stop at DCN floors, and DCN lift should not stop at NHS floors.</del></p> <p><del>Board in agreement with the Project Co change, however change required to clarify.</del></p>	
19	<p><b>Helipad fire fighting system (Water Pressure)</b></p> <p>Helipad fire fighting system does not comply with the guidance of HBN 15-03 Hospital Helipads clause 5.22. There does not appear to be a pressurised main supply, nor is there a system of inert gas to pressurise the system.</p>	<p><del>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the QCR's / PCP's / Completion Criteria.</del></p> <p><del>The Board / Project Co note the CAI has signed off the design certified the helipad is fit for purpose as installed. Reference is made to letter received by MPX dated 07 March "It is with pleasure that we can issue this letter of completion with, subject to certain conditions outside of MultiSite's control being met before the helipad commences operations, confirm the rooftop helipad at RHSC &amp; DCN is regarded as fit for purpose."</del></p> <p><del>Certified Documentation has been circulated as Aconex MPX-GC-027315.</del></p> <p><del>The Board / Project Co agree this item is closed.</del></p>
20	<p><b>Vegetation around air intakes in Neuroscience and Staff Courtyards</b></p> <p><del>It is the Board's position that</del> Landscape design around intake vents in Neuroscience Courtyard is potential non-compliant with SHTM 03-01 which states:</p> <p><b>Air Intake</b> 1.42 An uncontaminated air supply to the system is essential. In order to achieve this, the air intake will be positioned so that air discharged from extract systems or other dubious sources cannot be drawn in. Exhaust fumes from vehicles can present particular problems. The area surrounding the intake will need to be kept clean and free of vegetation and waste material in order to reduce the possibility of biohazards or fire. The intake itself will be protected by a louvre and mesh screen to prevent rainwater, vermin and insects etc from entering the system.</p>	<p>The Board / Project Co agree the design data <del>noted above</del> for this item has been given status A / B through the Review Procedure.</p> <p><del>Further to the confusion surrounding Project Co Change 053 the Board confirm that the</del>The following design measures proposed by Project Co to limit planting in the area surrounding the intake vents satisfies SHTM 03-01A Clause 1.42 in so far as it allows the area surrounding the vents to be clean and free of vegetation and waste material in order to reduce the possibility of biohazards or fire <del>and the Change can therefore be withdrawn.</del></p> <p><b>Neuroscience Courtyard</b> Project Co <del>are proposing to replace</del> have replaced the planting around the air intake vents with artificial grass with the exception of one area which has been planted with sedum as per the Boards request.</p> <p><b>Staff Courtyard</b> Project Co <del>are proposing to have</del> incorporate a 600mm 'no plant zone' to the perimeter of the air intake vents."</p> <p>All as noted within Drawing HLM-Z0-03-PL-700-002 Rev E; Drawing HLM-Z0-00-PL-700-026 Rev E; and Aconex</p>

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Item	Dispute	Description of Agreed Resolution
		<p>MM-GC-003873.</p> <p><u>The Board / Project Co agree this item is closed.</u></p>
21	<p><b>"Do not use" labels removed from Medical Gas Outlets before commissioning.</b></p> <p><u>It is the Board's position that Medical gas outlet "Do Not Use" labels removed before commissioning, non compliance with SHTM02-01.</u></p> <p><u>Project co's position is that there was no non-compliance relating to this issue.</u></p>	<p>Through discussion it was agreed the Medical gas outlet "Do Not Use" labels are in place prior to commissioning thus ensuring compliance with SHTM 02-01.</p> <p><u>The Board / Project Co agree this item is closed.</u></p>
22	<p><b>Isolation Room supply ventilation relative to low building.</b></p> <p><u>It is the Board's position that Isolation room ventilation is non-compliant for a 'low' building. There should be a separate supply and a contractor's change will be needed.</u></p> <p><u>Project co's position is that the design and installation was based on isolation room ventilation report produced and tabled with the Board. This is compliant with the requirements of the Project Agreement.</u></p>	<p>A separate isolation room ventilation report has been prepared to identify and clarify the system design. <u>This is contained within Aconex MPX-CCP-062.</u></p> <p><del>[Board to provide the file reference]</del> <u>The Board / Project Co agree this item is closed.</u></p>
23	<p><b>Drainage joints in slabs</b></p> <p><u>Drainage outlets—It is the Board's position that Drainage joints have been installed in the slab between floors with no access for maintenance or repair. This means there is no manufacturer warranty for the drainage connection.</u></p> <p><u>Project co's position is that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RQI process.</u></p>	<p><del>This item shall be resolved through demonstration of compliance with the BCR's / PCP's / Completion Criteria.</del></p> <p>Through discussion and site review with the Independent Tester, John Edwards (Arcadis) agreement <u>has been reached on compliance and sign off. A further query was raised by the IT requesting confirmation that the drainage slab interface detail did not detrimentally affect the structural slab.</u></p> <p>Reference is made to Aconex <u>MPX-RFI-002569</u> and <u>RBP-GC-002537</u> confirmation to the IT.</p> <p><del>[Board to check file reference]</del> <u>The Board / Project Co agree this item is closed.</u></p>

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Item	Dispute	Description of Agreed Resolution
24	<p><b>Fire Collar installation</b></p> <p>Fire collars for drainage are not directly connected to the slab+C19</p> <p>Project co's position is that the installation was work in progress and would comply prior to handover.</p>	<p><del>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.</del></p> <p><del>The Board / Project Co agree this item is closed.</del></p> <p>Confirmation received from the Board that the installation is ongoing and Project Co will procure compliance with BCRs prior to handover.</p>
25	<p><b>Level and position of smoke detectors</b></p> <p>It is the Board's position that smoke detectors are mounted at low levels above the ceiling i.e. not installed at the heights specified for void detectors</p> <p>Project co's position is that the design and installation is in accordance with the requirements of the Project Agreement, was based on the package approved through the RDD process in compliance with the BCRs, and will be signed off by the installer as compliant.</p>	<p>Following discussion and site review The Independent Tester have closed this item on basis of compliance.</p> <p>Summary of agreement contained with <a href="#">Aconex MPX-GC-027316</a>.</p> <p>The Board / Project Co agree this item is closed.</p>
26	<p><b>Ventilation in IPS</b></p> <p>It is the Board's position that Ventilation in IPS. Project Co have shown 3ac/h extract ventilation in the EM but not all rooms have been provided with extract vent in the room - Potential heat gain issue.</p> <p>Project co's position is that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process.</p>	<p>The Board / Project Co agree the design data for this item has been given status A / B through the Review Procedure.</p> <p>Rev 011 of the EM represents the agreed position of ventilation being provided within IPS rooms.</p> <p>As noted within Reference is made to MPX-TRANSMIT- 009971 for WW-XX-XX-DC-XXX-001 Rev 011 – status B (17/11/17).</p> <p>The Board / Project Co agree this item is closed.</p>
27	<p><b>Hot and Cold water supply pipe configuration</b></p> <p>It is the Board's position that Hot and cold water supply pipes are crossed behind the sink in some rooms and in some instances the cold pipe is above the hot water pipe or touching the pipe meaning the will be heat transferred to the cold water supply. Not best practice and non compliance with SHTM 04-01</p> <p>Project co's position is that the design and installation meets the</p>	<p><del>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.</del></p> <p>Through discussion and site review it was agreed the Installation be modified to maintain pipework separation and distance as per valve body so the hot and cold water pipework doesn't touch or cross. <a href="#">Aconex MPX-GC-027580</a> specifies details of the changes made at site.</p> <p>The Board / Project Co agree this item is closed.</p>

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	<p>requirements of the Project Agreement and was based on the package approved through the RDD process.</p>	<p>The Board have not undertaken a full survey of the Facilities and only identified examples of the issue. Project Co have agreed to resolve all issues in the Facility relative to this item.</p>								
28	<p><b>Windows/Partition in 1-B1-055</b></p> <p>It is the Board's position that the GA and C sheet illustrates a 3 panel window however, in construction one panel appears to be 'false' with a partition behind it. From the inside it appears to be only 2 windows.</p> <p>Project Co's position is that the design and installation meets the requirements of the Project Agreement.</p>	<p>The Board <del>was</del> Agreement between the Board and Project Co was reached on this item at the re-submission of this item through the Project Technical Review Procedure.</p> <p>The Board / Project Co agree Meeting where it was agreed no amendments to the construction were further action was required, however the RDD would need to be re-submitted to reflect the alterations made during construction. (dated 31.01.18).</p> <p>As built documentation shall reflect this.</p> <p>The Board / Project Co agree this item is closed.</p>								
29	<p><b>Mounting heights for clinical lights</b></p> <p>It is the Board's position that some some clinical lights have been mounted in such a way as to cause obstruction.</p> <p>Project Co's position is that the data sheets provided via RDD should have caused the Board to pass comment during the review process, rather than wait until these had been constructed on site.</p>	<p><del>The Board to provide file reference for deemed RDD. / Project Co agree this item is closed.</del></p> <p>Through discussion and agreement between the Board and Project Co, it was <del>concluded</del> agreed to relocate the clinical lights to 2100mm.</p> <p>Reference is made to MM-RTRFI-000315 provides further background to the issue.</p>								
30	<p><b>Lightning Protection</b></p> <p>It is the Board's position that Project Co have <del>potentially deviated from</del> design agreed with Consort</p> <p>Project co's position is that the design and installation was based on the package approved through the RDD process. Project Co do not agree with the comments raised.</p>	<p>The Board / Project Co agree this item is closed.</p> <p>The Board / Project Co agree the design data <del>noted adjacent</del> for this item has been given status A / B through the Review Procedure.</p> <table border="1"> <thead> <tr> <th>File Reference</th> <th>Rev</th> <th>Title</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>ME-XX-XX-DC-579-002</td> <td>01</td> <td>[ HYPERLINK "https://uk1.aconex.co.uk/rsrc/20180523.1052/en_AU_DOC/document/view/index.html?ControlledD</td> <td>A</td> </tr> </tbody> </table>	File Reference	Rev	Title	Status	ME-XX-XX-DC-579-002	01	[ HYPERLINK "https://uk1.aconex.co.uk/rsrc/20180523.1052/en_AU_DOC/document/view/index.html?ControlledD	A
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Item	Dispute	Description of Agreed Resolution								
		As noted Reference is made to within Aconex MPX-TRANSMIT-008497.								
31	<p><b>Gas supply to bedhead trunking</b></p> <p>Supply has not been installed on site as per Board comments during RDD process.</p> <p><i>Project Co construction position was that the design and installation was based on the package approved through the RDD process</i></p>	<p>The Board / Project Co agree this item is closed.</p> <p>The Board / Project Co agree the design data noted adjacent for this item has been given status A / B through the Review Procedure.</p> <table border="1"> <thead> <tr> <th>File Reference</th> <th>Rev</th> <th>Title</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>ME-XX-XX-DC-400-105</td> <td>B</td> <td>Bedhead Trunking Drawings</td> <td>A</td> </tr> </tbody> </table>	File Reference	Rev	Title	Status	ME-XX-XX-DC-400-105	B	Bedhead Trunking Drawings	A
File Reference	Rev	Title	Status							
ME-XX-XX-DC-400-105	B	Bedhead Trunking Drawings	A							
32	<p><b>Concealed ceiling grids</b></p> <p>Ceiling Grids are not concealed and not constructed in line with RDD drawings</p>	<p><i>(Board to include latest drafting and relevant information)</i></p> <p>This agreed technical solution has been documented in the following Project Co Change 033 which is now deemed an Approved RDD Item subject to and in accordance with the terms of this Agreement</p> <p><i>Detail of Change:</i>  <i>Financial Close Position:</i>  MPX proposals for the ceiling layout (232 series drawings) proposed:  Type B ceilings (ie. modern to clinical &amp; clinical speciality), jointless or concealed grid/ smooth imperforate finish/ high humidity areas (ie suite/bathroom/disposal holds/dirty utility areas) were also proposed type B ceilings. This is demonstrated by example FC layout 36/M-22-60-D-324-60, attached.</p> <p><i>Proposed Changes:</i>  Type B ceilings to be standard tile with standard Trulok Preflute 24 grid.  Introduction of Type C ceilings for Ensuite/bathroom/disposal holds/dirty utility areas ie high humidity areas. Standard ceiling tiles with corrosion resistant Trulok preflute grids. These areas were specified as Type B ceilings at FC.</p> <p><i>Reason:</i>  The term 'jointless or concealed grid/smooth imperforate finish' was included in error in these drawings and should not have been described in this way.</p>								

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Item	Dispute	Description of Agreed Resolution
		<p><u>Implications:</u>                      The correct specification for the room type has been submitted for NDD and the NDD proceeded reference is made to 332 series drawings which reflect the correct proposed ceiling types. No relief from the Resident Agreement is required, however the intention is a variation to the Project Co proposals.</p> <p><u>Attachments:</u> Reference is also made to:                      FC Drawings                      Example drawing HLM-22-00-PL-332-001 Rev 02 – Ground floor layout ch 1.                      Current proposals:</p> <ul style="list-style-type: none"> <li>• Example drawing HLM-22-00-PL-332-401 Rev 0</li> <li>• HLM-SP-K40-D – Latest Ceiling Specification</li> <li>• Marked up ceiling keys, identifying the change.</li> </ul> <p><b>Detail of the Proposed Change</b></p> <p>In the MIPs, HLM's ceiling layout (332 series) stated that for clinical and non-clinical areas, the ceilings were jointless or concealed – grid/smooth imperforate finish.</p> <p>Project Co wish to derogate from the requirements above for the following:</p> <p>a) Propose a standard ceiling grid that meets the requirements of HBM/SHAW's.</p> <p>This classification covers the following areas:</p> <ul style="list-style-type: none"> <li>• Types A, B, C and D ceiling areas adjacent to the standard Trollet stretcher 21 grids.</li> <li>• Type H ceilings are selected for corridors, clean room space to kitchen areas.</li> <li>• Type L ceilings for entrance/exit rooms/dispensary/diagnostic/diagnostic areas on high between standard ceiling tiles are proposed however with corrosion resistant Trollet produce grids.</li> </ul> <p><b>Reasons</b></p> <p>The term 'jointless or concealed grid/smooth imperforate finish' was included in error in the drawings and should not have been described.</p> <p><b>Implications</b></p> <p>Already installed ceilings in some rooms may have to be taken down and replaced with the agreed spec</p>

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Item	Dispute	Description of Agreed Resolution								
		<p>mentioned above. Revised Colling.</p> <p>Revisions and specifications to meet the new proposal are currently with the board as AGC.</p> <p>Variation to M&amp;P proposal.</p>								
33	<p><b>Soft Landscaping planting specification</b></p> <p>It is the Board's opinion that planting on site was not as per planting schedule. i.e. Clematis appears to be climbing but should be bush/ground variety.</p> <p>Project Co's position is that this comment relates to unfinished works and is irrelevant.</p>	<p>The Board / Project Co agree the design data noted adjacent for this item has been given status A / B through the Review Medium.</p> <p>Through discussion it was noted that these plants were left with the canes in them so that the contractor could tend the bark mulch underneath before removing the canes. It was agreed that the canes will be removed so that the plant can lay on the ground.</p> <table border="1"> <thead> <tr> <th>File Reference</th> <th>Rev</th> <th>Title</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>HLM-ZC-00-PL-712-013</td> <td>A</td> <td>                     [ HYPERLINK                      "https://uk1.aconex.co.uk/rsrc/20180523.1052/en_AU_DOC/document/view/index.html?ControlledDocument_ID=1348828088446846794&amp;ControlledDocument_projectID=268438335&amp;VIEW_CD_RETURN_URL=/SearchControlledDoc?SESSION_SAVE_DOCUMENTNO=&amp;SESSION_SAVE_TITLE=&amp;SESSION_SAVE_REVISION=&amp;SESSION_SAVE_STATUS=0&amp;SESSION_SAVE_TYPE=0&amp;SESSION_SAVE_DISCIPLINE=&amp;SESSION_CREATION_DATE=null&amp;SESSION_REVISION_DATE=null&amp;SESSION_SAVE_REVIEW_DATE=null&amp;SESSION_SAVE_REVIEWED_DATE=null&amp;SESSION_SAVE_AUTHOR=&amp;SESSION_SAVE_FILETYPE=null&amp;SESSION_REFERENCE=null                 </td> <td>A</td> </tr> </tbody> </table>	File Reference	Rev	Title	Status	HLM-ZC-00-PL-712-013	A	[ HYPERLINK "https://uk1.aconex.co.uk/rsrc/20180523.1052/en_AU_DOC/document/view/index.html?ControlledDocument_ID=1348828088446846794&ControlledDocument_projectID=268438335&VIEW_CD_RETURN_URL=/SearchControlledDoc?SESSION_SAVE_DOCUMENTNO=&SESSION_SAVE_TITLE=&SESSION_SAVE_REVISION=&SESSION_SAVE_STATUS=0&SESSION_SAVE_TYPE=0&SESSION_SAVE_DISCIPLINE=&SESSION_CREATION_DATE=null&SESSION_REVISION_DATE=null&SESSION_SAVE_REVIEW_DATE=null&SESSION_SAVE_REVIEWED_DATE=null&SESSION_SAVE_AUTHOR=&SESSION_SAVE_FILETYPE=null&SESSION_REFERENCE=null	A
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34	<p><b>Wrong terminators fitted in warning lights</b></p> <p><i>It is the Board's opinion in relation to Warning Lights that:</i></p> <ul style="list-style-type: none"> <li>- Terminal strip connector in theatres to be removed and correct terminations provided, all warning light boxes.</li> <li>- light box deformed where glanded</li> </ul> <p><i>Project co's position is that the installation was still work in progress and will be compliant prior to handover.</i></p>	<p>The Board / Project Co agree this item is closed, and no further action required.</p>		
35	<p><b>No evidence of IPS circuit bonding conductors</b></p> <p><i>It is the Board's opinion that there is no evidence of IPS circuit bonding conductors at the IPS cabinets. The Main Bonding conductor between the IPS &amp; the ERB is present.</i></p> <p><i>Project co's position is that the installation is still a work in progress and will be compliant prior to handover.</i></p>	<p>The Board / Project Co agree this item is closed, and no further action required.</p>		
36	<p><b>Fire resistance of radiology door frame</b></p> <p>Radiology: Door frame packed out in door opening, not in accordance within manufacturer's limits to maintain fire resistance of doorset.</p>	<p><del>This</del>The Board / Project Co agree this item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / RCP's / Completion Criteria is closed.</p> <p>As noted within <u>Aconex</u> MPX-GC-026747, MPX-GC-027156 and NHSL-GC-003201, the door frame has been rectified.</p> <p>Project Co to provide certification GC-90-120 min for each door type / frame to the Board's Fire Officer.</p>		

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Item	Dispute	Description of Agreed Resolution
37	<p><b>UPS output switchboard with incorrect poles</b></p> <p>It is the Board's position that the UPS output Switchboard 2 Switchboard is supposedly a Form 4 type 6 board. Schneider state that to achieve Form 4 type 2 or 6 that the incoming devices should be 4 poles. The incoming devices are three poles with un switched neutral.</p> <p>Project co's position is that the design and installation is in accordance with the requirements of the Project Agreement and was based on the tech sub package approved through the approval process.</p>	<p>The Board / Project Co agree this item is closed, and no further action required.</p>
38	<p><b>Corridor service door handles</b></p> <p>It is the Board's position that the Corridor service doors installed include pull handles which are not acceptable as advised by the Board 30/01/17 (MM-GC-002483) during room review (corners of handles at children's head height)</p> <p>Project co's position is that the design and installation complies with the requirements of the Project Agreement and was based on the package approved through the RDD process.</p>	<p>The Board await the re-submission of/ Project Co agree this item through closed. Through discussion it was agreed that this item has been rectified on site. The agreed solution was to remove the Review Procedure.</p> <p>(Project Co to provide suitable information for deemed RDD), pull handles and replace them with standard flat escutcheon.</p>
39	<p><b>Outstanding Status C RDD</b></p> <p>Numerous outstanding RDD</p> <p>This item will not be included on the final list unless / until fully specified.</p>	<p>Not Used.</p> <p>The Board / Project Co agree this item is closed.</p> <p>RDD of status C documents will be closed in line with the requirements of the Project Agreement.</p>
40	<p><b>Remaining Permanent Infrastructure outside the red line boundary (CCTV etc)</b></p> <p>Still waiting for legal agreement for infrastructure outside the site boundary.</p>	<p>Project Co/HSL to provide information close this item.</p>

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Item	Dispute	Description of Agreed Resolution
41	<p><b>Seasonal Commissioning</b></p> <p>It is the Board position that there is potential for some seasonal commissioning tests to be completed post hand over.</p> <p>Project Co's position is that seasonal commissioning would always be required to be carried out post handover.</p>	<p>The Board / Project Co to set out proposed resolution for Board approval agree this item is closed.</p> <p>A separate seasonal commissioning report has been prepared to identify and clarify the impacts.</p> <p>As noted within MPX-06-027293 Contractor Change 049:</p> <p><b>Detail of Change</b></p> <p>The complete As-Built Energy Model cannot be provided prior to the Commissioning End Date and will be completed post hand over.</p> <p><b>Reasons:</b></p> <p>The building requires to be fully occupied and in use throughout a year in order to monitor the environmental conditions as noted in Schedule 6, Section 7 Item 4.5.2. Seasonal Commissioning activities that shall be carried out during this time are detailed in the attached document "Seasonal Commissioning Activities Rev 1".</p> <p><b>Implications:</b></p> <ul style="list-style-type: none"> <li>----- The complete As-Built (fully verified) Energy Model will be available 12 months post full occupation (NBS) to notify BSE of day 1 full completion with 6 weeks notice.</li> <li>----- MPX shall issue a "Draft As-Built Energy Model" at Actual Completion which shall capture all other elements of Schedule 6 Section 7 Thermal and Energy Efficiency Testing procedure.</li> <li>----- Relief required from Schedule 6, Section 2, Item 4.1.1. "Prior to the Commissioning End Date the Contractor shall submit an As-Built Energy Model for the Board's review on behalf of the Project Co."</li> </ul> <p><b>Attachments:</b></p> <p>Reference is made to 190505 Seasonal Commissioning Activities Rev 1</p>
42	<p><b>Environmental Matrix</b></p> <p>It is the Board's position that EM reflects M&amp;E issues currently considered non-compliant</p> <p>Project Co's position is that the design and installation meets the Project Agreement and was based on the environmental matrix approved through the RDO process</p>	<p>Not used</p> <p>This item is a duplicate of item 7 on 4 bed vent.</p>

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43	<p><b>Routing of services. Corridor layouts against any non compliance with standards to be tabled.</b></p> <p>It is the Board's position that Services are currently running through clinical areas that were not included within the original Project Co derogation.</p> <p>Project co's position is that the design and installation meets the Project Agreement was based on the package approved through the RDD process</p>	<p>Project Co to set out proposed resolution for Board approval</p> <p>The Project co will Board awaits evidence from Project Co proposed is to detail on the BIM model where the maintenance access might will be required for the for services that pass through and access required one area clinical spaces serving another the adjacent space.</p> <p>Reference is made to MPX-GC-027217.</p>
44	<p><b>Nurse call in WC</b></p> <p>It is the Board's position that There is evidence from the site (room C1.1-070) that nurse call pull cords have been installed in some visitor's WCs. However no nurse call should be installed in visitor's WCs.</p> <p>Project co's position is that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process</p>	<p>The Board / Project Co agree the design data noted adjacent for this item has been given status A / B through the Review Procedure is closed. {Board to provide file ref}</p> <p>Project Co have agreed to uninstall nurse call as per the following Annex: {Board to provide file ref}</p> <p>The process agreed was for NHSL to issue a Board Change. This has been received and Project co are progressing as noted within NHSL-BCP-0142.</p>
45	<p><b>Unidentified Circuits</b></p> <p>Electrical circuits are not identified or labelled at terminal rail inside trunking. Consequently, there is no way to identify which cables enter and leave the circuit terminal strips.</p>	<p>The Board / Project Co agree this item is closed.</p> <p>Through discussion and site review it was agreed no further action required.</p>
46	<p><b>Fire alarm cable bands</b></p> <p>It is the position that cable bands for fire alarms are plastic rather than metal. Metal ties are required by BS and are proposed by Project Co M&amp;E specifications (4.23.3 of Section 4 of Schedule Part 6).</p> <p>Project co's position is that the installation was still work in progress and would be compliant prior to handover.</p>	<p>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCR's / Completion Criteria.</p> <p>The Board / Project Co agree this item is closed.</p> <p>Project Co shall procure that installation is compliant to the applicable British Standards with the BCRs.</p>

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Item	Dispute	Description of Agreed Resolution
47	<p><b>IPS units earthbar termination - 1-B1-044 – IPS Room</b></p> <p><i>Project co's position is that the installation was still work in progress and would be compliant prior to handover.</i></p>	<p>The Board / Project Co agree this item is closed.</p> <p>Through discussion and site review it was agreed no further action required.</p>
48	<p><b>IPS sockets supplying non medical equipment</b></p> <p><i>It is the Board's position that IPS sockets have been found on site providing power for the television, scale of the issue still to be determined.</i></p> <p><i>Project co's position that the installation was still a work in progress and will be compliant prior to handover.</i></p>	<p>The Board / Project Co agree this item is closed.</p> <p>Through discussion and site review it was agreed no further action required.</p>

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49	<p><b>Interleaved circuits</b></p> <p>It is the Board's opinion. As per SHTM 06-01 and note 7 on design drawings, the all sockets including pendants supplies, for Cat 3, 4 and 5 should be interleaved. However, the evidence from site suggests this has not been installed.</p> <p>Project Co's position is that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the ROD process.</p>	<p>The Board / Project Co agree this item is closed.</p> <p>The design data noted below for this item has been given status A / B through the Review Procedure.</p> <table border="1"> <thead> <tr> <th>File Reference</th> <th>Rev</th> <th>Title</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>WW-SZ-SL-SH-500-011</td> <td>F</td> <td>Room by Room Risk Profile</td> <td>B (04/05/18)</td> </tr> <tr> <td>WW-Z3-00-PL-531-001</td> <td>M</td> <td>Zone Z3 Level 00 Small Power Layout Sheet 1 of 2</td> <td>B (13/04/17)</td> </tr> <tr> <td>WW-Z3-00-PL-531-002</td> <td>M</td> <td>Zone Z3 Level 00 Small Power Layout Sheet 2 of 2</td> <td>B (13/04/17)</td> </tr> <tr> <td>WW-Z3-01-PL-531-001</td> <td>J</td> <td>Zone Z3 Level 01 Small Power Layout Sheet 1 of 2</td> <td>A (13/04/17)</td> </tr> <tr> <td>WW-Z3-01-PL-531-002</td> <td>P</td> <td>Zone Z3 Level 01 Small Power Layout Sheet 2 of 2</td> <td>B (13/04/17)</td> </tr> <tr> <td>WW-Z4-00-PL-531-002</td> <td>O</td> <td>Zone Z4 Level 00 Small Power Layout Sheet 2 of 2</td> <td>B (13/04/17)</td> </tr> <tr> <td>WW-Z4-01-PL-531-001</td> <td>K</td> <td>Zone Z4 Level 01 Small Power Layout Sheet 1 of 2</td> <td>A (13/04/17)</td> </tr> <tr> <td>WW-Z4-01-PL-531-002</td> <td>K</td> <td>Zone Z4 Level 01 Small Power Layout Sheet 2 of 2</td> <td>A (13/04/17)</td> </tr> <tr> <td>WW-Z4-03-PL-531-002</td> <td>I</td> <td>Zone Z4 Level 03 Small Power Layout Sheet 2 of 2</td> <td>A (13/04/17)</td> </tr> </tbody> </table>				File Reference	Rev	Title	Status	WW-SZ-SL-SH-500-011	F	Room by Room Risk Profile	B (04/05/18)	WW-Z3-00-PL-531-001	M	Zone Z3 Level 00 Small Power Layout Sheet 1 of 2	B (13/04/17)	WW-Z3-00-PL-531-002	M	Zone Z3 Level 00 Small Power Layout Sheet 2 of 2	B (13/04/17)	WW-Z3-01-PL-531-001	J	Zone Z3 Level 01 Small Power Layout Sheet 1 of 2	A (13/04/17)	WW-Z3-01-PL-531-002	P	Zone Z3 Level 01 Small Power Layout Sheet 2 of 2	B (13/04/17)	WW-Z4-00-PL-531-002	O	Zone Z4 Level 00 Small Power Layout Sheet 2 of 2	B (13/04/17)	WW-Z4-01-PL-531-001	K	Zone Z4 Level 01 Small Power Layout Sheet 1 of 2	A (13/04/17)	WW-Z4-01-PL-531-002	K	Zone Z4 Level 01 Small Power Layout Sheet 2 of 2	A (13/04/17)	WW-Z4-03-PL-531-002	I	Zone Z4 Level 03 Small Power Layout Sheet 2 of 2	A (13/04/17)
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50	<p><b>Access and Maintenance Strategy</b></p> <p>Access and Maintenance Strategy - lack of clear access and maintenance strategy submitted to date. The document is currently being updated by Project Co</p>	<p><del>Project Co re-submitted this item on 20 June 2018 to capture all board comments. Agreed status B on revision 11 with exchange of emails agreeing how comments shall be addressed, see "MPX response to R451 comments on Rev 11 A+M Strategy".</del></p> <p>Board are reviewing the revised Access and Maintenance Strategy.</p> <table border="1"> <thead> <tr> <th>File Reference</th> <th>Rev</th> <th>Title</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>HLM-XX-XX-DC-450-001</td> <td>4011</td> <td>Access and Maintenance Strategies</td> <td>C-403/311/1718 05/07/18</td> </tr> </tbody> </table>	File Reference	Rev	Title	Status	HLM-XX-XX-DC-450-001	4011	Access and Maintenance Strategies	C-403/311/1718 05/07/18
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HLM-XX-XX-DC-450-001	4011	Access and Maintenance Strategies	C-403/311/1718 05/07/18							
51	<p><b>Lux levels in clean utilities</b></p> <p><del>It is the Board's position that Lux levels in clean utilities rooms may not be sufficient for functionality of the space. Currently LG2 150 lux however due to the layout of the room / cupboards, this may not be sufficient for the functionality of the space.</del></p> <p><del>Project Co's position is that the design and installation meets the requirements of the Project Agreement and was based on the environmental matrix approved through the RDD process.</del></p>	<p><del>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.</del></p> <p><del>The Board / Project Co agree this item is closed.</del></p> <p>A process has been agreed to measure the lighting levels to meet the agreed Environmental Matrix, lux levels recorded within WW-XX-XX-DC-XXX-001 Rev 11.</p> <p>Aconex MPX-TRANSMIT- 009971 for WW-XX-XX-DC-XXX-001 Rev 011 details the current lighting levels signed off which the design and installation will be measured against.</p>								
52	<p><b>Fire stopping</b></p> <p><del>It is the Board's position that the Fire stopping has been carried out however subsequent installation may have breached fire stopping.</del></p> <p><del>Project Co's position is that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process.</del></p>	<p><del>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.</del></p> <p><del>The Board / Project Co agree this item is closed.</del></p> <p>The process agreed is for Project Co to issue the FIRAS Certificate to show compliance.</p>								
53	<p><b>Egg crate Grilles in clinical areas</b></p> <p><del>It is the Board's position that the Egg box grid is not suitable for cleaning. A technical submittal was issued and signed off by the Board, however a sample of the grid was not issued through the Review Procedure, hence the Board did not have a chance to view</del></p>	<p><del>The Board / Project Co agree this item is closed.</del></p> <p>The process agreed was for Project Co to procure Board preferred grills, for Board marking.</p> <p>As noted within Aconex MPX-GC-025802, this is deemed RDD.</p>								

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	<p>the type of product before it was installed.</p> <p><i>Project Co's position is that the design and installation was based on the package approved through the RFD process - photos of the products were provided which the Board should have used to raise concerns at the appropriate time.</i></p>	
54	<p><b>Curtain track and ceiling Hoist clashes</b></p> <p>Hoists and curtain tracks clash and will need to be reviewed on a room by room basis.</p>	<p><del>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCR's / Completion Criteria.</del></p> <p><u>The Board / Project Co agree this item is closed.</u></p> <p><del>The process agreed was to review on a case by case basis and there has been a review of hoist and curtain tracks and Project Co have rectified and clashes identified on site and rectify as necessary. As-as built documentation will record any alterations.</del></p>
55	<p><b>Wrong room configurations</b></p> <p>G-Q1-074 not constructed in line with C-Sheet (wrong sequence for data points and socket outlets)</p>	<p><del>The design data noted below for Board / Project Co agree this item has been given status A / B through the Review Procedure is closed.</del></p> <p><u>Project Co confirmed this room will be installed to HLM C-Sheet for G-Q1-074.</u></p> <p><del>{Board to check file reference}</del></p>
56	<p><b>Helipad Ramp Lights</b></p> <p>Helipad ramp now includes lighting however HBN 15-03 recommends that the luminaire should be lower than 25 cm and pointing down toward ramp. Calculations have not been submitted for lighting levels to ascertain if this complies with relevant standards.</p>	<p>The Board / Project Co agree this item is closed.</p> <p>Through discussion and site review it was agreed no further action required relating to this item.</p>
57	<p><b>Reduced access to electrical panels</b></p> <p><del>It is the Board's position that Electrical panels <del>are</del> should be placed in reduced access areas. The Board understand this should have been designed in conjunction SHTM 00 – Best Practice for Healthcare Engineering – Chapter 9 Engineering services. (4-PLANT-001 – Central AHU Plant Room 01, 3-CORE-008A - Switch cupboard)</del></p> <p><i>Project Co's position is that the design and installation meets the</i></p>	<p><del>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCR's / Completion Criteria.</del></p> <p><u>The Board / Project Co agree this item is closed.</u></p> <p><del>As noted within Aconex MPX-GC-027300, MPX reviewed on site the 12 areas of concern with the IT, these were captured within the sketches contained within the Aconex, and then MPX confirmed to the IT this item was now closed.</del></p>

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	<p>requirements of the the Project Agreement and was based on the package approved through the RDD process</p>									
58	<p><b>Lighting in Service yard</b></p> <p>It is the Board's position that lighting levels within service yard were initially designed at an average of 23 lux levels (i.e. the level required for a car park as per SLL Lighting Guide). This has now been corrected to 50 lux average however the uniformity is not in accordance with the requirements.</p> <p>Project co's position was that the design and installation will comply with the Project Agreement, the BCRs, and design and calculations would be submitted through the RDD process</p>	<p>The Board await the re-submission of updated WW-EW-XX-DC-716-001 through the Review Procedure.</p> <p>The Board / Project Co agree this item is closed.</p> <p>A process was agreed to capture the Board concern on uniformity, update service yard with twin heads, and resubmit drawing for RDD, WW-EW-XX-DC-716-001 to NHSI. This action is now complete.</p> <p>As noted within Aconex MPX-GC-027119</p> <table border="1"> <thead> <tr> <th>Req Reference</th> <th>Qty</th> <th>Title</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>WW-EW-XX-DC-716-001</td> <td>2</td> <td>External Lighting Calculations</td> <td>C (1.3/0.3/1.8)</td> </tr> </tbody> </table>	Req Reference	Qty	Title	Status	WW-EW-XX-DC-716-001	2	External Lighting Calculations	C (1.3/0.3/1.8)
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59	<p><b>Lighting in B-COR-014</b></p> <p>It is the Board's position that L14 luminaires are missing in the corridor.</p> <p>Project co's position is that the design and installation meets the requirements of the Employer's Requirements and was based on the package approved through the RDD process</p>	<p>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.</p> <p>The Board / Project Co agree this item is closed.</p> <p>Project Co confirm lighting design has been amended to ensure the minimum height of 2.4m will not be impacted by the to-be luminaires installed luminaires. This will be reflected within the as built information. Project Co confirm no luminaires are missing within corridor B-COR-014.</p>								
60	<p><b>3-T2-018: QP - Riser door missing</b></p> <p>It is the Board's position that the riser wall should have a door to access pipework</p> <p>Project co's position is that the installation was still work in progress and would be compliant prior to handover.</p>	<p>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.</p> <p>The Board / Project Co to rectify on site. Project Co confirm that suitable access agree this item is closed.</p> <p>The door has now been provided.</p>								

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Item	Dispute	Description of Agreed Resolution								
61	<p><b>Provision of 360o CCTV Coverage</b></p> <p><i>It is the Board's position that as illustrated in external CCTV drawing (ME-EW-XX-PL-571-001 Rev D) there are gaps within CCTV coverage on approach to the NW elevation of the Facility. Non Compliant with BCR Clause 7.6 (n) (Hard Landscaping).</i></p>	<p>The Board / Project Co agree the design date noted adjacent for this item has been given status B through the Review Procedure is closed.</p> <p>Process agreed to capture concerns, update drawing and resubmit for RDD drawing ME-EW-XX-PL-571-001. This action is now complete. As part of the agreed process Project Co is to demonstrate compliance on site when the system is commissioned. Project Co confirm revision E of the aforementioned drawing was updated and issued for information.</p> <table border="1"> <thead> <tr> <th>File Reference</th> <th>Rev</th> <th>Title</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>ME-EW-XX-PL-571-001</td> <td>E</td> <td>Site Plan. External CCTV Layout</td> <td>B (23/05/18)</td> </tr> </tbody> </table>	File Reference	Rev	Title	Status	ME-EW-XX-PL-571-001	E	Site Plan. External CCTV Layout	B (23/05/18)
File Reference	Rev	Title	Status							
ME-EW-XX-PL-571-001	E	Site Plan. External CCTV Layout	B (23/05/18)							
62	<p><b>Hazard classification and fire stopping in MRI suites</b></p> <p><i>It is the Board's position that the MRI Suites are currently not operationally functional as hazard classification of the MRI equipment room prevents installation of waveguides between equipment and examination rooms which can not be fire stopped.</i></p> <p><i>Project Co's position is the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process.</i></p>	<p>The Board await the re-submission of updated HLM-SZ-00-PL-572-002 through the Review Procedure.</p> <p>The Board / Project Co agree this item is closed. Through discussion it was confirmed that the</p> <p>Revised Fire Strategy drawings indicated the altered compartmentation lines. These provide the necessary FR ratings and allow the Board to install their protection as required.</p> <p>Drawing extract indicates change made on Aconex mail MPX-GC-027481.</p>								
63	<p><b>Entrance to Service Yard for Large Vehicles</b></p> <p><i>As witnessed at the trial on 17th Feb 2018, due to the location of the barrier, large vehicles extend into the blue light route (by Approximately 3ft) when waiting for access through the barrier.</i></p>	<p>The Board await the re-submission of HLM-ZO-00-PL-711-003 through the Review Procedure.</p> <p>Through discussion it has been confirmed a the revised service yard design drawing will be issued HLM-ZO-00-PL-711-003 reflecting the outcome of onsite testing when complete. Bespoke swan neck access control pedestal will be designed by Project Co to alleviate the potential for vehicle overhang as much as possible on site.</p>								
64	<p><b>Quench Pipe Route</b></p> <p><i>Project Co have not left a clear route for the quench pipes to run.</i></p> <p><i>Project Co's position is that the route meets the requirements of the Project Agreement and was based around the design and installation package approved through the RDD process.</i></p>	<p>Board to provide file reference for the original RDD submission.</p> <p>Results of survey to be included in the settlement agreement.</p> <p>The Board / Project Co agree this item is closed.</p> <p>Close out position recorded within Aconex MPX-GC-027186 where the quench pipe work scope was appended to the Aconex along with the responsibility matrix for both parties.</p>								





Item	Dispute	Description of Agreed Resolution
67	<p><b>Ventilation extract for Sump</b></p> <p>It is the Board's position that the basement sump / basement corridor is not provided with any ventilation. Any maintenance of the sump will require the cover to be open and odours will be present in the corridor outside main kitchen. H&amp;S risk.</p> <p><i>NOTE: there are other significant areas of concern relating to the basement sump design which are not the subject of this item.</i></p> <p>Project Co's position is that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process.</p>	<p>The Board await the submission of this item through the Review Procedure.</p> <p>Process agreed Project Co to submit a ventilation strategy proposal that allows for a temporarily enclosure around the chamber to be constructed, and odour/charcoal filter to resolve odours when the chamber is being maintained. Project Co also to include methodology for the opening of the sump.</p> <p>Proposal was issued by Project Co to the Board 18.06.18 setting out maintenance proposals to remedy potential blockages, to address concerns relating to basement sump design.</p> <p>Meeting held 28 June 2018 with the Board. Comments under review. Project proposal to be updated and reissued via Access as per MPX - GC-XXXXXX.</p>
68	<p><b>Security for CAMHS courtyards</b></p> <p>The Board's position is that the height of fencing is currently not sufficient to prevent access to the CAMHS courtyards</p> <p>Project Co's position is that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process. The height of the fence was discussed extensively pre-FC and NHSL specifically did not want a major boundary between public and private areas.</p>	<p>The Board / Project Co agree to proceed based on the following;</p> <p>Project Co proceeding with install of 2.4m high fence to match existing install at service yard, to the length of the existing installation. Hedge to be replaced with (as close to ) 2.4m high hedge and including return up the back of the spine wall.</p> <p>The Board await the submission of this item through the Review Procedure.</p>
69	<p><b>Service Yard Gate</b></p> <p>The location of the induction loops for automatic gates / barriers will have to ensure there is safe and unobstructed egress from service yard.</p>	<p>The Board await the re-submission of this item through the Review Procedure.</p> <p>A process has been confirmed the following agreed to ensure safe and unobstructed egress. The operation of the patient</p> <p>Numerous discussions have now concluded regarding the operation of the service yard drawings will detail the automatic gates being proposed. No barriers to be installed as per NHSL have confirmed that Project Co advise this is not to be procured automated gates (both open on entry but with capability for only the exit side gate to open on exit if size of vehicle does not possible require it). Service yard drawings to be updated by Project Co to reflect this position.</p> <p>This information will be recorded on:</p> <p>HLM-Z0-00-PL-711-003 Rev L (to be issued)</p>

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Item	Dispute	Description of Agreed Resolution
70	<p><b>ED Drugs store ventilation</b></p> <p><u>It is the Board's position that current ventilation provision for drugs store is not in line with Clinical Specific Requirements for the space and therefore is not compliant.</u></p> <p><u>Project Co's position is - that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process</u></p>	<p><u>This item shall be resolved through the issue of a Board Change.</u>  <u>The Board / Project Co agree to proceed based on the following Board change:</u></p> <p>NHSL-CCP-138 ED Drug Store Ventilation</p>
71	<p><b>Movement Joint outstanding action</b></p> <p>Following principals meeting, MPX were going to provide proposals for 3-C1.4-078 &amp; G-Q1-048 to address <u>[WHAT ARE WE ADDRESSING?]</u>. However no proposals received to date.</p>	<p><u>This item is still a work in progress and requires further discussion.</u></p> <p>Project Co <u>have issued CCP027 Movement joints to provide capture the following information, agreed details and their locations throughout.</u>  <u>Full RDD submission</u>  <u>YES confirmation that no issues</u>  <u>Details for the Hot Toilet to be provided</u></p> <p><b>Description of Change</b></p> <p>Item 6.6 of the Boards Construction Requirements Schedule part 6; Section 3, states:</p> <p>6.6 Movement Joints            Structural movement joints shall not be located through</p> <ul style="list-style-type: none"> <li>a) Theatre rooms;</li> <li>b) Treatment and surgery rooms;</li> <li>c) X-ray and imaging rooms;</li> <li>d) Pharmacy manufacturing rooms;</li> <li>e) Kitchens and food preparation areas;</li> <li>f) Any room with (now or in the future) with ceiling mounted tracking hoists or other similar lifting equipment;</li> </ul>

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Item	Dispute	Description of Agreed Resolution								
74	<b>Incline in L2</b> The floor appears to be inclined in L2 department.	The Board / Project Co agree this item is closed. Through discussion it was agreed no further action required.								
75	<b>Row of work benches too close together - D6 first floor</b> It is the Board's position that the location of desks in therapies adjusted due to the location of power pole. This created the space between two row of desks of around 1100cm which is not sufficient.	Project Co have since amended on site the location of work benches at D6 first floor. The Board / Project Co agree this item is closed.								
76	<b>Pot wash ceiling</b> Incorrect ceiling installed. Should be the same as the "high spec" ceiling in restaurant The ceiling tiles might be sufficient however the ceiling grid in non compliant.	This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria. Through discussion and site review it was agreed by Project Co to rectify this ceiling. A process agreed to this remedial work is to be captured this within the As built documentation. <table border="1"> <thead> <tr> <th>File Reference</th> <th>Rev</th> <th>Title</th> <th>Status</th> </tr> </thead> <tbody> <tr> <td>WIM-24-01-01-332-403</td> <td>0</td> <td>Fourth Floor Refit items Ceiling Layout Sheet 04-403</td> <td>0</td> </tr> </tbody> </table>	File Reference	Rev	Title	Status	WIM-24-01-01-332-403	0	Fourth Floor Refit items Ceiling Layout Sheet 04-403	0
File Reference	Rev	Title	Status							
WIM-24-01-01-332-403	0	Fourth Floor Refit items Ceiling Layout Sheet 04-403	0							
77	<b>Group 2 socket outlets</b> It is the Board's position, as per GN7, all group 2 socket outlets should be provided with metal plates. This however has not been provided by Project Co. Principle for plastic plates agreed in principle however Project Co change is required. Project co's position is that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process	This item shall be resolved through The Board / Project Co Change agree this item is closed. Through discussion and site review it has been agreed that plastic switchplates are acceptable. {Project Co Change info to be provided} {Project Co to provide information} Aconex MPX-CCP-063 documents the agreed change.								

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Item	Dispute	Description of Agreed Resolution
78	<p><b>Penetrations for services</b></p> <p>It is the Board's position that desks fitted at touchdown bases have no penetrations for cabling that will need to be connected to sockets under the desks.</p> <p>Project Co's position is that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process.</p>	<p>This item shall be resolved through witnessing and testing of the system, to demonstrate compliance with the BCR's / PCP's / Completion Criteria.</p> <p>The Board / Project Co agree this item is closed.</p> <p>The desk penetrations have now been fitted. This will facilitate desk mounted IT equipment to below desk sockets.</p>
79	<p><b>Pendants</b></p> <p>It is the Board's position that there has been provided and there is no cut out to terminate cables.</p> <p>Project Co's position is that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process.</p>	<p>This item shall be resolved through The Board / Project Co Change agree this item is closed.</p> <p>Through discussion and agreement NHSL are to procure final patching leads direct from the NHSL preferred supplier (OUT 904).</p> <p>Aconex MPX-CCP-046 OUT904 Connections refer to document in this position.</p> <p>Project Co to provide technical specification for the Board Specified Group 1 pendants through RDD.</p>
80	<p><b>Handheld devices</b></p> <p>It is the Board's position that as per Delivery Area (Sub Section E) specification the handheld devices shall be provided by Project Co.</p> <p>Project Co's position is that there was a requirement for the systems to have compatibility with the hand held devices being procured by the Board.</p>	<p>The Board await the submission of / Project Co agree this item through the Review Procedure is closed.</p> <p>Process agreed Project Co to review the NHSL list of items requiring hand held provision against the NHSL pager provider. Project Co (via MPX and Mercury) to confirm confirmed at meeting 13.06.18 that specialist(s) can provide compatibility for the provision to transmit via the NHSL paging system based on a "page one" vendor. This excludes the car parking HUB where a specific APP is being provided as part of the car park barrier package.</p> <p>As noted within Aconex MPX-GC-027 10 390</p>
81	<p><b>Intake rooms located in separate parts of the building</b></p> <p>It is the Board's position that Project Co's HV distribution is non compliant with BS 5819 section 6 Power supplies which states that the two intake rooms should be located in two separate parts of the building.</p> <p>Project Co's position is that the design and installation meets the requirements of the Project Agreement and was based on the package approved through the RDD process.</p>	<p>Not used</p> <p>This item is a duplicate of item 6.</p>

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Wallace Weir  
IHS Lothian Limited  
C/O Pinsent Masons  
13 Queens Road  
Aberdeen  
AB15 4YL

Date: 19 December 2018  
Our Ref :  
Enquiries to:  
Extension:  
Direct Line:  
E-mail: [ HYPERLINK  
[REDACTED]  
]

Dear Sirs,

**Re-Provision of RHSC and DCN at Little France  
Notice of Delay, Delay Events and Compensation Events**

*Terms used in this letter have the meanings given to them in the Project Agreement between the Board and Project Co dated 12<sup>th</sup> and 13<sup>th</sup> February 2015 (the “Project Agreement”)*

Please find enclosed the following documentation which has been executed for and on behalf of the Board:

- Two copies of an Amendment Agreement relating to the Project Agreement for the re-provision of RHSC & DCN at Little France between the Board and Project Co in relation to a one month extension of the longstop date pursuant to Clause 40.1.2 (*Longstop*) of the Project Agreement (the “**Longstop Amendment Agreement**”); and
- Two copies of a “Final Commercial and Technical Proposal dated 13<sup>th</sup> December 2018” between the Board and Project Co which shall form the basis of agreeing a settlement agreement in respect of the Project in early 2019 (the “**Commercial and Technical Proposal**”).

Please note that the Longstop Amendment Agreement has only been entered into by the Board as a result of progress achieved between the Board and Project Co as outlined in the non-binding Commercial and Technical Proposal which has been executed by both the Board and Project Co. The Board understands and Project Co has confirmed that Project Co’s Funders and the Contractor have had sight of the Commercial and Technical Proposal and have raised no objection to Project Co signing the Commercial and Technical Proposal which documents the current position between the parties.

RHSC + DCN Project Office  
Little France Crescent  
EDINBURGH  
EH16 4TJ

For completeness, an executed version of the Commercial and Technical Proposal is set out at Appendix 1 of this letter.

Meantime we continue to reserve our whole rights, remedies and pleas.

Yours faithfully

**Susan Goldsmith**  
**Finance Director**  
**For and on behalf of Lothian Health Board**

cc.  
Finance Director – NHSL  
Director of Capital Planning – NHSL

RHSC + DCN Project Office  
Little France Crescent  
EDINBURGH  
EH16 4TJ

**Appendix 1**

**Commercial and Technical Proposal**

RHSC + DCN Project Office  
Little France Crescent  
EDINBURGH  
EH16 4TJ

Wallace Weir - Project Director  
IHS Lothian Limited  
RHSC & DCN Site Office  
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Date: 7 February 2019

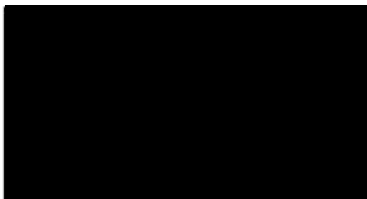
By email and post

Dear Wallace

**Subject: RHSC+DCN Readiness to Issue the Certificate of Practical Completion**


Further to our meeting with yourself and Matt yesterday regarding the status of the completion/compliance activities and documentation, and the provision of the final pieces of information yesterday, we can confirm that we are now in a position to progress our Certificates of both Practical Completion, and Commissioning Completion in line with the Project Agreement, as modified by the concluded PA Supplementary Agreement providing that the signed copy of the PA Supplementary Agreement provided in advance of the issue of the certificates does not differ materially from the draft copy we have currently received.

Yours sincerely



John Edwards  
Senior Consultant

Email: John.Edwards

Mobile: 

CC. Brian Currie – NHS Lothian



## Message

**From:** Davidson, Stuart X [REDACTED]  
**Sent:** 01/04/2019 15:57:20  
**To:** Wallace Weir [REDACTED]  
[REDACTED]  
**CC:** Currie, Brian [REDACTED]; Henderson, Ronnie [REDACTED]  
**Subject:** Bird Droppings Guidance  
**Attachments:** Bird Droppings Guidance V1.0.pdf; SVHSoc Briefing Document on Cryptococcus Feb 19.pdf

Wallace,

Following reports of patient infection linked to fungus from bird droppings, HFS was asked by Scottish Government Director General Health to produce guidance on steps to control the risk of fungal contamination of patient areas from bird droppings in plant rooms and ventilation systems. The attached guidance attempts to strike a risk based balanced approach to managing the bird dropping risks associated with the many ventilation systems we have in operation.

Understanding of the related issues is evolving and the guidance is likely to be updated as information emerges. It has not been created as part of NHS normal guidance series, partly to reflect that it has not been subject to the normal production processes and partly as it may be incorporated into pending revision of the ventilation guidance.

We would be grateful for feedback on the practicality and effectiveness of the guidance in a live healthcare environment and any comments or queries should be addressed by return.

I have also included a paper produced by the Specialised Ventilation for Healthcare Society which provides further information you may find useful for these Facilities.

Kind Regards

Stuart

--

Stuart Davidson  
Contracts Manager  
RHSC + DCN - Little France  
NHS Lothian

RHSC & DCN Project Office  
Little France Crescent  
Edinburgh  
EH16 4TJ

T: [REDACTED]  
M: [REDACTED]  
E: [REDACTED]

PROUD HISTORIES | NEW CHAPTERS

\*\*\*\*\*

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WORKING FOR A HEALTHIER FUTURE

**Services Report P2739**  
**Date of witnessing: 2<sup>nd</sup> - 9<sup>th</sup> July 2019**

## **Witnessing of theatre re-balancing and validation summary report**

### **Edinburgh Royal Infirmary – Hospital for Sick Children.**



**REPORT TO CLIENT**

**WITNESSING OF THEATRE RE-BALANCING AND SUMMARY OF VALIDATION WORK**

**ON BEHALF OF**

**Lothian NHS Board  
Waverley Gate  
2-4 Waterloo Place  
Edinburgh  
EH1 3EG**

**AT**

**EDINBURGH ROYAL INFIRMARY HOSPITAL FOR SICK CHILDREN**

**REPORT NUMBER: P2739**

**REPORT ISSUED: 15<sup>TH</sup> JULY 2019**

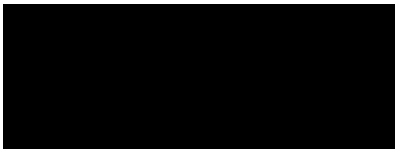
**VERSION: DRAFT REPORT**

Report prepared for: **Ronnie Henderson, Hard FM Commissioning Manager.**

Witnessing and validation carried out by: **IOM Consulting Ltd  
Brookside Business Park, Staffs, ST15 0RZ  
01785 333200  
www.iom-world.org**

Report prepared by:

Reviewed by:



.....  
Paul Jameson  
Ventilation Authorising Engineer  
IOM Consulting Ltd

.....  
Jerry Slann  
Divisional Director  
IOM Consulting Ltd.

**Edinburgh Royal Infirmary – Hospital for Sick Children**

## **Witnessing Report summary for NHS Lothian**

### **Introduction**

IOM were appointed by NHS Lothian Health Board to validate the critical ventilation systems at the new Sick Children’s Hospital at Edinburgh Royal Infirmary. We were provided with a list of critical areas and associated critical air handling units for the site.

The validation process involves undertaking a number of measurements and checks with the overall purpose of ensuring that the whole system operates correctly and meets the requirements of SHTM 03-01 or standard agreed as part of the design process.

Validation reports for each system are being prepared and will be sent to the Health Board.

### **Background**

The validation work commenced on site on the 17<sup>th</sup> June 2019 and it was anticipated it would take approximately 2 weeks. During the first week it became clear that significant amounts of work were still being undertaken to the M+E services on site and the first week was beset with delays to our work from plant interruptions and systems not controlling properly (e.g. temperature control in theatres which meant we were unable to achieve required test conditions). Our work therefore took longer than anticipated. During the course of the validation, it also became apparent that some systems were not performing to the correct standard.

There were shortcomings in many ‘critical’ areas including theatres, HDU areas, isolation rooms and the air handling units (AHU’s) serving those areas.

The shortcomings in the HDU areas were identified relatively early in our work but we were advised that there was a derogation in place to reduce the number of air changes required by the client. However, later it appears there was some confusion over the scope of the derogation and the shortcomings in the HDU areas were the subject of discussion between the Health Board and the PFI supply chain. We were made aware that some changes were to be made in the short term to bolster up the performance of HDU areas with a longer term solution being proposed involving an additional AHU and ductwork installations.

During the first week of our work we did an initial round of testing to isolation rooms. We were planning to test these facilities in ‘maintenance mode’ but the backup system was not fully operational so that final test could not be done at the time and still has not been possible as the backup system is not operational.

Any issues identified in normal mode were being addressed by Multiplex and we were confirming acceptable performance as we re-tested. The exception to this was the individual isolation rooms which were part of the AHU supply to the HDU areas. As large scale adjustments were being made to areas supplied on that AHU system to HDU areas it would have been likely to affect these individual isolation rooms. It was agreed that these rooms would be re-tested on completion of the balancing. Now that the short term system changes have been deferred, once the system settings are restored, it will be necessary to re-test these rooms.

Issues with operating theatres also began to emerge during the second week. There was an expectation/pressure to have these items corrected alongside our validation work.

**P2739 – Witnessing and validation works at the Sick Children’s Hospital at Edinburgh  
Royal Infirmary.**

We were formally requested to move into a phase of witnessing planned adjustments to theatre air systems to bring them up to the required standards. This involved IOM, H+V commissioning and Medical Air Technology MAT (where needed for UCV canopies) working alongside each other to make adjustments and agree the numerical values of any measurements taken; and to come to a consensus that the theatre performance was acceptable for them to be put into use.

### **Work method**

IOM and H+V commissioning re-measured the systems which had shortcomings. During this work it became apparent that for a number of theatres that the volume of the scrub had not been included in the calculation for air supply rates and as such the commissioning engineers had been commissioning to incorrect values. Each theatre was subject to a thorough re-measurement to establish an agreed spacial volume.

Both parties used their own calibrated instruments. All parties relied on H+V to take duct traverse readings and get the supply air volumes to the theatres to the correct level. Thereafter joint readings were taken to establish grille volume readings and pressure differentials around the suite.

There was a slightly different approach on taking balometer readings. IOM used back pressure compensation on their balometer as the equipment manufacturers state that more accurate readings are obtained in this mode. H+V were unable to alter their balometer to use that facility. IOM readings were higher than H+V's, so it was accepted that if satisfactory readings were obtained by H+V then the IOM readings would exceed theirs and also be satisfactory.

Where UCV canopy quadrants were out of balance, correct supply air volumes were set for the system prior to MAT being invited to test the canopies.

In theatres with UCV canopies all grille and differential pressure readings were taken in both modes.

### **Operating Theatres**

As stated earlier, the theatres on site were formally validated by IOM as part of the overall validation exercise. It became apparent as work progressed that there were some elements of their performance that were unsatisfactory and would need further work before theatre spaces were deemed suitable for use. The validation reports are in production, however, the Health Board were facing a tight deadline to be able to open the facility. The Health Board requested all parties to undertake a programme of testing, adjustment and measuring to come to a consensus that the theatre airflows and pressure cascades were satisfactory for safe use of the facility.

Detailed results for the theatres are attached in Appendix 1

Theatre 32 results are not included here as after re-balancing the required results were not achieved. It is proposed to re-test theatre 32 during week commencing 15<sup>th</sup> July and it may be possible to include results in the final version of this report.

### **Isolation Suites**

Positive pressure ventilated lobby (PPVL) isolation suites consist of 3 rooms, a lobby, bedroom and en suite. They can generally be used for source and protective isolation.

**P2739 – Witnessing and validation works at the Sick Children’s Hospital at Edinburgh  
Royal Infirmary.**

The PPVL isolation suites were initially validated during w/com 20<sup>th</sup> June 2019 and a summary was provided to the health Board w/com 1<sup>st</sup> July. Since that date, rooms which did not meet the requirements have been adjusted and re-tested. At the date of this report out of all PPVL isolation suites there was only one room (Room 3-C1.1-004) which was a borderline fail and still needed to be adjusted.

A summary of the results for the isolation rooms is listed below:

Room Designation	Facility type	Room No	Bedroom Ach rate	Lobby to corridor pressure (pa)	Comment
Single bed isolation room 1	PPVL	1-H2-021	13.0	13.0	requires 10 ac/hr supply and 10pa
Single bed isolation room 5	PPVL	3-C1.4-072	13.0	20.0	requires 10 ac/hr supply and 10pa
Single bed isolation room 1	PPVL	3-C1.4-052	12.6	12.0	requires 10 ac/hr supply and 10pa
Single bed isolation room 2	PPVL	3-C1.4-049	11.5	10.1	requires 10 ac/hr supply and 10pa
Single bed isolation room 3	PPVL	3-C1.4-043	12.4	12.3	requires 10 ac/hr supply and 10pa
Single bed isolation room 4	PPVL	3-C1.4-040	11.6	12.1	requires 10 ac/hr supply and 10pa
Single bed isolation room	PPVL	3-C1.3-008	13.3	12.0	requires 10 ac/hr supply and 10pa
Single bed isolation room	PPVL	3-C1.1-040	9.4	13.0	requires 10 ac/hr supply and 10pa
Single bed isolation room	PPVL	3-C1.1-036	11.5	11.4	requires 10 ac/hr supply and 10pa
Single bed isolation room	PPVL	3-C1.1-033	10.0	11.0	requires 10 ac/hr supply and 10pa
Single bed isolation room	PPVL	3-C1.1-004	10.8	11.0	requires 10 ac/hr supply and 10pa
Single bed isolation room 5	PPVL	1-L1-068	10.1	10.5	requires 10 ac/hr supply and 10pa
Single bed isolation room	PPVL	1-G-A2-072	10.3	10.5	requires 10 ac/hr supply and 10pa
Single bed isolation room 17	PPVL	2-L2-039	12.2	11.9	requires 10 ac/hr supply and 10pa
Single bed isolation room 16	PPVL	2-L2-135	10.3	14.4	requires 10 ac/hr supply and 10pa

### High Dependency areas.

Testing of the high dependency areas identified that the air change rates and pressure cascades did not meet the requirements. In early discussion with the Health Boards

**P2739 – Witnessing and validation works at the Sick Children’s Hospital at Edinburgh Royal Infirmary.**

Technical Advisors (Mott MacDonald) we were advised that there was derogation in place which reduced the requirements from 10 ac/hr to 4.

The test information was summarised in an initial briefing to the Health Board during w/com 2<sup>nd</sup> July.

It later transpired that there was some confusion on the detail of the derogation and the Construction supply chain and the Health Board began working on both an interim solution to improve the situation and a longer term permanent solution.

The final results for the high dependency areas were as follows.

Area/Room	Room No	Supply Ac/hr rate	Extract Ac/hr rate	Pressure Differential	Comment
HDU 4 bed bay	1-B1-009	3.4	1.3	8 pa	requires 10 ac/hr supply and 10 pa
HDU 4 bed bay	1-B1-031	3.1	1.3	0.5 and 3.2 pa(2 doors)	requires 10 ac/hr supply and 10 pa
HDU 4 bed bay	1-B1-063	3.2	1.9	+1.5 pa	requires 10 ac/hr supply and 10 pa
HDU single bed cubicle	1-B1-037	3.4	1.5	+ 6.3 pa	requires 10 ac/hr supply, design pressure tba
NNU 3 cot bay	1-B1-065	4.2	1.5	4.3pa to corridor	requires 10 ac/hr supply, design pressure tba
NNU single cot cubicle	1-B1-035	3.2	2.4	-2.3pa to NNU	requires 10 ac/hr supply, design pressure tba
Area/Room	Room No	Supply Ac/hr rate	Extract Ac/hr rate	Lobby to corridor pressure	Comment
Single bed isolation cubicle 10	1-B1-036	N/A	9.8	9.5	-ve pressure room. Requires 10 ac/hr supply, design pressure tba.
Single bed isolation cubicle 15	1-B1-026	N/A	9.3	8.0	-ve pressure room. Requires 10 ac/hr supply, design pressure tba.
Single bed isolation cubicle 19	1-B1-017	N/A	11.1	12.0	-ve pressure room. Requires 10 ac/hr supply, design pressure tba
Single bed isolation cubicle 20	1-B1-016	N/a	4.6	45.0	-ve pressure room. Requires 10 ac/hr supply, design pressure tba



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### Recovery areas

The recovery areas have been tested as part of the validation work. The SHTM requires 15 air changes supply and extract to these areas and the room pressure would be expected to be relatively neutral to adjacent areas. The results from our tests are shown below.

The test results show that many areas do not meet the requirements and in particular the extract rates for all areas are weak. The overall supply and extract systems should be re-balanced to achieve the required results.

Area/Room	Description	Room No	Supply Ac/hr rate	Extract Ac/hr rate	Pressure Differential
Recovery - DCN	Main area	1-P1-109	11.8	10.2	Recovery to corridor, +1 pa and - 1pa (2 doors)
Recovery - DCN	side room	1-P1-025	18.6	13.8	Room to recovery - 0 pa
Recovery - DCN	side room	1-P1-026	13.5	12.6	Room to recovery, +1pa
Recovery - Paeds	Main area	1-P1-029	18.6	13.8	Room to adjacent spaces, - 1.6pa and -1.2 pa (2 doors)
Recovery - Paeds	side room	1-P1-030	19.2	12.4	Room to recovery, +2pa
Recovery - Paeds	Side room	1-P1-031	12.4	14.4	Room to recovery, +2pa

### Other Issues

The thrust of the validation and witnessing work was to establish whether facilities were fit to use. During the course of the work, it has become apparent that there are other issues with the completed facility which do not meet the requirements of the SHTM or are defects which need to be attended to in due course.

Some initial findings were notified to the Health Board on 27<sup>th</sup> June. The validation and witnessing exercises have identified some additional items which may need to be addressed depending on the agreed design standard. We have been asked to identify any issues to be included on an issues log to allow all parties to decide who the responsible parties are and on how these should be resolved. The key additional items identified are listed in Appendix 2.

### Summary and conclusions

SHTM 03-01 Part A, section 8 describes Validation as ‘A process of proving that the system is fit for purpose and achieves the operating performance originally specified. It will normally be a condition of contract that “*The system will be acceptable to the client if*

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*at the time of validation it is considered fit for purpose and will only require routine maintenance in order to remain so for its projected life.”*

In the case of the critical ventilation systems at the Hospital for Sick Children at Edinburgh Royal infirmary, this is not currently the case.

In particular:

- Theatre 32 needs to be finally witnessed
- There is one PPVL isolation room that needs adjustment
- Isolation rooms supplied by the HDU AHU will need to be re-tested once improvement works are completed
- The isolation rooms need to be tested in ‘maintenance’ mode.
- The ventilation to the HDU areas needs to be altered to meet the required standard.
- There are a number of recovery areas where the supply rates are below requirements
- All recovery areas need the extract rates improving to meet requirements.

The Health Board should therefore insist on further remedial works being undertaken by the PFI supply chain.

Some of the remedial works could be very disruptive to operations so consideration should be given to having some of the work completed prior to occupation.

The Health Board should also consider employing a subject matter expert to ensure that remedial work takes place to a satisfactory standard and to ensure where necessary the Board has the necessary expertise to ensure the supply chain is held to account to meet the contractual responsibilities.

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**Appendix 1 – Theatre performance data.**

The following data was collected as part of the theatre performance improvement and witnessing work with H+V. The final results for Theatre 32 have not been established at this time.

**Theatre 30**

Remedial works to theatre 30 included:

- Balancing of the 4 grilles to the theatre
- Improvement of extract rate in the dirty utility to meet requirements
- Increasing the extract air in the anaesthetic room to achieve 15 ac/hr/hr.

A summary of the final results are shown below:

**Air volumes and air changes**

Room	Measured air volume (l/s)	Air changes	Meets requirements?
Theatre supply	1425	26.8	Y
Prep supply	105	11.4	Y
Anaesthetic supply	245	17.4	Y
Anaesthetic extract	261	18.5	Y
Dirty utility extract*	421*	40	Y
Theatre LL extract	377		No figure in SHTM
Scrub extract	103		No figure in SHTM
Open door protection	944	N/A	Yes – needs 750 l/s

\*Includes extract from a grille supplied by the adjacent theatre

**Pressure Differentials**

From	To	Measured pressure	Meets requirements **
Theatre	Corridor	24	Y
Theatre	Anaesthetic	13	Y
Theatre	Dirty utility	37	Y
Theatre	Prep	0	Y
Prep	Corridor	24	Y
Anaesthetic	Corridor	11	Y
Corridor	Dirty Utility	8	Y

\*\*The SHTM states (in Notes applicable to Table A2, Part A): ‘Nominal room pressures are given to facilitate setting up of pressure relief dampers, the calculation process, and the sizing of transfer devices. In practice, the resultant pressures are not critical, provided the desired airflow rates and movement are achieved’.

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### Theatre 31

Remedial works to theatre 31 on site undertaken by H+V commissioning and MAT as follows:

- Increasing AHU supply volumes to meet requirements in conventional mode
- Increasing the supply volume to the prep room to meet the requirements.

The results are set out below:

#### UCV Canopy

Test	Result	Comment
2m av. Velocity above 0.38m/s	Pass	
Quadrant balance not exceeding +/- 6%	Pass	
1m velocity – no cells below 0.2m/s	Pass	
Filter integrity/Particle count	Pass	
Entrainment	Pass	

#### Air volumes and air changes

Room	Measured air volume (l/s)	Air changes	Meets requirements?
Theatre supply (UCV)	1885	35.3	Y
Theatre supply (conv)	1865	35.0	Y
Prep supply (SPS)	103	11.4	Y
Anaesthetic supply	254	17.8	Y
Anaesthetic extract	237	16.6	Y
Dirty utility extract*	448*	42.9	Y
Theatre LL extract	382		No figure in SHTM
Scrub extract	103		No figure in SHTM
Open door protection	1380 – worst case (conv)	N/A	Y – needs 750 l/s

\*Includes extract air from a grille supplied by the adjacent theatre

#### Pressure Differentials

From	To	Measured pressure	Meets requirements **
Theatre	corridor	24	Y
Theatre	Anaesthetic	13	Y
Theatre	Dirty utility	31	Y
Theatre	Prep	0	Y
Prep	Corridor	25	Y
Anaesthetic	Corridor	11	Y
Corridor	Dirty Utility	6	Y

\*\*The SHTM states (in Notes applicable to Table A2, Part A): ‘Nominal room pressures are given to facilitate setting up of pressure relief dampers, the calculation process, and

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the sizing of transfer devices. In practice, the resultant pressures are not critical, provided the desired airflow rates and movement are achieved’.

### Theatre 33

Remedial works to theatre 33 on site undertaken by H+V commissioning and MAT as follows:

- Re balancing canopy to eliminate failing cells at 1m and out of balance quadrants.
- Increasing the extract volume to the dirty utility room to meet the requirement for 410 l/s. ac/hr/hr.
- Increasing the supply and extract volumes to the anaesthetic room to achieve 15 ac/hr/hr.
- Increasing the prep room supply volume to achieve 100l/s and 10 ac/hr/hr

The results are set out below:

#### UCV Canopy

Test	Result	Comment
2m av. Velocity above 0.38m/s	Pass	
Quadrant balance not exceeding +/- 6%	Pass	
1m velocity – no cells below 0.2m/s	Pass	
Filter integrity/Particle count	Pass	
Entrainment	Pass	

#### Air volumes and air changes

Room	Measured air volume (l/s)	Air changes	Meets requirements?
Theatre supply (UCV)	1376	25.9	Y
Theatre supply (conv)	1380	25.9	Y
Prep supply (SPS)	105	10.4	Y
Anaesthetic supply	230	16.5	Y
Anaesthetic extract	247	17.8	Y
Dirty utility extract*	452*	43.6	Y
Theatre LL extract	374		No figure in SHTM
Scrub extract	105		No figure in SHTM
Open door protection	897 – worst case (UCV mode)	N/A	Y – needs 750 l/s

\*Includes extract air from a grille supplied by the adjacent theatre

#### Pressure Differentials

From	To	Measured pressure	Meets requirements **
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Theatre	corridor	31	Y
Theatre	Anaesthetic	15	Y
Theatre	Dirty utility	24	Y
Theatre	Prep	0	Y
Prep	Corridor	31	Y
Anaesthetic	Corridor	14	Y
Corridor	Dirty Utility	6	Y

\*\*The SHTM states (in Notes applicable to Table A2, Part A): ‘Nominal room pressures are given to facilitate setting up of pressure relief dampers, the calculation process, and the sizing of transfer devices. In practice, the resultant pressures are not critical, provided the desired airflow rates and movement are achieved’.

### Theatre 34

Remedial works to theatre 34 on site undertaken by H+V commissioning as follows:

- Balancing of the theatre grilles to within 10%
- Resolving the lack of air in the theatre to provide open door protection
- The broken blade to a pressure stabiliser has been replaced.
- The anaesthetic room extract rate has been increased to meet requirements.

A summary of the results are shown below:

#### Air volumes and air changes

Room	Measured air volume (l/s)	Air changes	Meets requirements?
Theatre supply	1267	25.7	Y
Prep supply (SPS)	109	11.8	Y
Anaesthetic supply	248	17.7	Y
Anaesthetic extract	235	16.8	Y
Dirty utility extract*	463*	46.1	Y
Theatre LL extract	384		No figure in SHTM
Scrub extract	90		No figure in SHTM
Open door protection	793	N/A	Yes – needs 750 l/s

\*Includes extract from a grille supplied by the adjacent theatre

#### Pressure Differentials

From	To	Measured pressure	Meets requirements **
Theatre	Corridor	25	Y
Theatre	Anaesthetic	10	Y
Theatre	Dirty utility	40	Y
Theatre	Prep	0	Y
Prep	Corridor	27	Y
Anaesthetic	Corridor	14	Y
Corridor	Dirty Utility	23	Y

\*\*The SHTM states (in Notes applicable to Table A2, Part A): ‘Nominal room pressures are given to facilitate setting up of pressure relief dampers, the calculation process, and

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the sizing of transfer devices. In practice, the resultant pressures are not critical, provided the desired airflow rates and movement are achieved’.

### Theatre 35

Remedial works to theatre 35 on site undertaken by H+V commissioning as follows:

- Resolving the lack of air in the theatre to provide open door protection
- Increasing supply air volume to the prep room.
- The anaesthetic room extract rate has been increased to meet requirements.

The theatre grille readings to the theatre seem to be fluctuating over time and there were discrepancies in readings from the 2 different air capture hoods being used.

We have taken the worst case readings which meet requirements but it would be useful if the underlying reasons for pressure fluctuation in the supply AHU and to establishing whether a change in controls set up would help address this.

A summary of the results are shown below:

#### Air volumes and air changes

Room	Measured air volume (l/s)	Air changes	Meets requirements?
Theatre supply	1312	27.5	Y
Prep supply(SPS)	109	11.9	Y
Anaesthetic supply	225	16.0	Y
Anaesthetic extract	229	16.3	Y
Dirty utility extract*	573*	54.9	Y
Theatre LL extract	350		No figure in SHTM
Scrub extract	102		No figure in SHTM
Open door protection	860	N/A	Yes – needs 750 l/s

\*Includes extract from a grille supplied by the adjacent theatre

#### Pressure Differentials

From	To	Measured pressure	Meets requirements **
Theatre	Corridor	34	Y
Theatre	Anaesthetic	19	Y
Theatre	Dirty utility	35	Y
Prep	Corridor	31	Y
Prep	Theatre	0	Y
Anaesthetic	Corridor	13.5	Y
Corridor	Dirty Utility	10*	Y

\*Figure corrected from previous report

\*\*The SHTM states (in Notes applicable to Table A2, Part A): ‘Nominal room pressures are given to facilitate setting up of pressure relief dampers, the calculation

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process, and the sizing of transfer devices. In practice, the resultant pressures are not critical, provided the desired airflow rates and movement are achieved’.

### Theatre 36

Remedial works to theatre 36 on site undertaken by H+V commissioning as follows:

- Increasing AHU supply volumes to meet requirements
- Increasing the extract volume to the dirty utility room to meet the requirement for 410 l/s.

The results are set out below:

#### UCV Canopy

Test	Result	Comment
2m av. Velocity above 0.38m/s	Pass	
Quadrant balance not exceeding +/- 6%	Pass	
1m velocity – no cells below 0.2m/s	Pass	
Filter integrity/Particle count	Pass	
Entrainment	Pass	

#### Air volumes and air changes

Room	Measured air volume (l/s)	Air changes	Meets requirements?
Theatre supply (UCV)	1498	28.4	Y
Theatre supply (conv)	1331	25.2	Y
Prep supply (SPS)	106	12.0	Y
Anaesthetic supply	245	17.1	Y
Anaesthetic extract	235	16.4	Y
Dirty utility extract*	412*	45.4	Y
Theatre LL extract	411		No figure in SHTM
Scrub extract	95		No figure in SHTM
Open door protection	825 – worst case (conv)	N/A	Y – needs 750 l/s

\*Includes extract air from a grille supplied by the adjacent theatre

#### Pressure Differentials

From	To	Measured pressure	Meets requirements **
Theatre	corridor	33	Y
Theatre	Anaesthetic	20	Y



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Theatre	Dirty utility	42	Y
Theatre	Prep	0	Y
Prep	Corridor	28	Y
Anaesthetic	Corridor	12	Y
Corridor	Dirty Utility	8	Y

\*\*The SHTM states (in Notes applicable to Table A2, Part A): ‘Nominal room pressures are given to facilitate setting up of pressure relief dampers, the calculation process, and the sizing of transfer devices. In practice, the resultant pressures are not critical, provided the desired airflow rates and movement are achieved’.

### Theatre 37

Remedial works to theatre 37 on site undertaken by H+V commissioning and MAT as follows:

- Increasing AHU supply volumes to meet requirements
- Increasing the extract volume to the dirty utility room to meet the requirement for 410 l/s.
- Increasing the extract volume to the anaesthetic room to achieve 15 ac/hr/hr.
- Checking canopy balance which had one quadrant as a borderline pass at + 6%

The results are set out below:

### UCV Canopy

Test	Result	Comment
2m av. Velocity above 0.38m/s	Pass	
Quadrant balance not exceeding +/- 6%	Pass	
1m velocity – no cells below 0.2m/s	Pass	
Filter integrity/Particle count	Pass	
Entrainment	Pass	

### Air volumes and air changes

Room	Measured air volume (l/s)	Air changes	Meets requirements?
Theatre supply (UCV)	1483	27.7	Y
Theatre supply (conv)	1383	25.8	Y
Prep supply (SPS)	113	10.6	Y
Anaesthetic supply	277	19.6	Y
Anaesthetic extract	269	19.0	Y
Dirty utility extract*	504*	47.5	Y
Theatre LL extract	411		No figure in SHTM
Scrub extract	100		No figure in SHTM
Open door protection	872 – worst case (conv)	N/A	Y – needs 750 l/s

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\*Includes extract air from a grille supplied by the adjacent theatre

**Pressure Differentials**

From	To	Measured pressure	Meets requirements **
Theatre	corridor	22	Y
Theatre	Anaesthetic	9.5	Y
Theatre	Dirty utility	28	Y
Theatre	Prep	0	Y
Prep	Corridor	18	Y
Anaesthetic	Corridor	11	Y
Corridor	Dirty Utility	9	Y

\*\*The SHTM states (in Notes applicable to Table A2, Part A): ‘Nominal room pressures are given to facilitate setting up of pressure relief dampers, the calculation process, and the sizing of transfer devices. In practice, the resultant pressures are not critical, provided the desired airflow rates and movement are achieved’.

**Theatre 38**

Remedial works to theatre 38 on site undertaken by H+V commissioning as follows:

- Increasing AHU supply volumes to meet requirements
- Increasing the air volume to the prep room
- Increasing the extract volume to the dirty utility room to meet the requirement for 410 l/s.
- Increasing the extract volume to the anaesthetic room to achieve 15 ac/hr/hr.

The results are set out below:

**UCV Canopy**

Test	Result	Comment
2m av. Velocity above 0.38m/s	Pass	
Quadrant balance not exceeding +/- 6%	Pass	
1m velocity – no cells below 0.2m/s	Pass	
Filter integrity/Particle count	Pass	
Entrainment	Pass	

**Air volumes and air changes**

Room	Measured air volume (l/s)	Air changes	Meets requirements?
Theatre supply (UCV)	1526	27.3	Y
Theatre supply (conv)	1443	25.8	Y
Prep supply (SPS)	120	13.8	Y

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Anaesthetic supply	250	17.4	Y
Anaesthetic extract	251	17.4	Y
Dirty utility extract*	536*	50.5	Y
Theatre LL extract	441		No figure in SHTM
Scrub extract	122		No figure in SHTM
Open door protection	880 – worst case (conv)	N/A	Y – needs 750 l/s

\*Includes extract air from a grille supplied by the adjacent theatre

### Pressure Differentials

From	To	Measured pressure	Meets requirements **
Theatre	corridor	37	Y
Theatre	Anaesthetic	19	Y
Theatre	Dirty utility	50	Y
Theatre	Prep	0	Y
Prep	Corridor	38	Y
Anaesthetic	Corridor	15	Y
Corridor	Dirty Utility	10	Y

\*\*The SHTM states (in Notes applicable to Table A2, Part A): ‘Nominal room pressures are given to facilitate setting up of pressure relief dampers, the calculation process, and the sizing of transfer devices. In practice, the resultant pressures are not critical, provided the desired airflow rates and movement are achieved’.

### Theatre 39

Remedial works to theatre 39 on site undertaken by H+V commissioning and MAT as follows:

- Increasing AHU supply volumes to meet requirements
- Increasing the extract volume to the anaesthetic room to achieve 15 ac/hr/hr.
- Checking canopy balance which had one quadrant out of balance by 13%.

The results are set out below:

### UCV Canopy

Test	Result	Comment
2m av. Velocity above 0.38m/s	Pass	
Quadrant balance not exceeding +/- 6%	Pass	
1m velocity – no cells below 0.2m/s	Pass	
Filter integrity/Particle count	Pass	
Entrainment	Pass	

### Air volumes and air changes



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Room	Measured air volume (l/s)	Air changes	Meets requirements?
Theatre supply (UCV)	1546	28.7	Y
Theatre supply (conv)	1388	25.8	Y
Prep supply (SPS)	116	12.8	Y
Anaesthetic supply	244	17.4	Y
Anaesthetic extract	226	16.1	Y
Dirty utility extract*	436*	42.4	Y
Theatre LL extract	373		No figure in SHTM
Scrub extract	106		No figure in SHTM
Open door protection	909 – worst case (conv)	N/A	Y – needs 750 l/s

\*Includes extract air from a grille supplied by the adjacent theatre

### Pressure Differentials

From	To	Measured pressure	Meets requirements **
Theatre	corridor	36	Y
Theatre	Anaesthetic	22	Y
Theatre	Dirty utility	61	Y
Theatre	Prep	0	Y
Prep	Corridor	36	Y
Anaesthetic	Corridor	15	Y
Corridor	Dirty Utility	11	Y

\*\*The SHTM states (in Notes applicable to Table A2, Part A): ‘Nominal room pressures are given to facilitate setting up of pressure relief dampers, the calculation process, and the sizing of transfer devices. In practice, the resultant pressures are not critical, provided the desired airflow rates and movement are achieved’.

## **Appendix 2 - Other Issues**

Listed below are other issues identified as part of the validation and witnessing work. Further details of relevant SHTM/HBN references will be provided as part of the issues log. Items identified are:

- There is a very limited amount of extract in the theatre corridors. Corridors are not at 0 pascal’s absolute pressure and the excess air is holding fire doors open and in some cases reducing pressure differentials from theatres to corridors. The installation does not meet required 7 ac/hr/hr (SHTM03-01 part A appendix 2 Table A2)
- There is a large amount of cabling, plastic containment and electrical connectors inside the AHU. In some cases these electrical connectors are very close to filters and the moving parts of the thermal wheels. SHTM 03-01 part A para 1.41 states: ‘The equipment built into the ventilation system and its ductwork should be of a type that will neither cause nor sustain combustion’. This arrangement also gives rise to potential electrical faults to cause smoke within the airstream and makes the units difficult to clean effectively. In addition, use of soapy water in cleaning the AHU’s can impact on the electrical connections. Where this has happened on other sites the Trust insisted this was removed before the hospital went live due to fire and smoke risk within the AHUs (this was a new high profile NHS emergency hospital and detail of the site can be obtained from IOM).
- There is evidence of excess usage of flexible spiral ductwork in theatre ceilings. SHTM 03-01 part A paras 5.54 and 5.55 state that ‘flexible ductwork should never exceed 1m in length’ and ‘never be used in lieu of a bend’. In addition it should be constructed to meet fire precautions recommended in BS8313. There are several cases where the length of ducting exceeds 1m and is used as bends. Theatre 35 is an example where in one case an ‘s’ bend is formed of flexible ductwork to one of the 4 theatre grilles. The material did not appear to be of a fire rated quality.
- It is believed that the air supply volumes to the theatres were incorrectly calculated by the designers as they did not include the scrub bay volume into the volume calculation for the theatre. Although adjustments have been made to overcome this it has eroded the amount of spare plant capacity/motor speed variation available to overcome additional system pressure drops caused by blocked filters, which occurs with normal use as they get dirty
- The design of some of the supply ductwork to theatres is sub optimal. In some cases the 4 ducts to UCV canopies are off different ducts from the plant areas and the link in points for anaesthetic and prep rooms are not well located. This is likely to leave the UCV’s to be vulnerable to the quadrants going out of balance over time. It is an out of balance design.
- There is limited access for maintenance to some parts of the UHU’s. As they are regularly located side by side in pair’s one whole side of the unit is in accessible. The supply motor located adjacent to the control panel in each AHU looks extremely difficult to change in the event of a failure which could result in excessive down times to Theatres. This is exacerbated by theatres having to operate in pairs due to the dirty utility extract arrangements.

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- We have concerns about use of pressure control on the AHU outputs in systems with UCV’s. The use of pressure sensors downstream of the AHU and upstream of UCV canopy theatres has been shown at other hospitals to cause fluctuating or hunting airflows within the UCV canopy. The use of airflow sensors appears to enable a much more stable situation with far less fluctuation
- The extract grilles in scrub areas should have been located at low level to encourage a suitable clean air path and route for any aerosols created to be away from users and also reducing the risk of aerosol from becoming airborne around the theatre suite
- The air system design for dirty utility rooms was for one grille supply volume to ramp up supply when the adjacent theatre was not in use. This has not been achieved in the installation so both theatres must run when one is in use. This represents a complete waste in energy and means that 2 theatres will be unusable in the event of a failure or shutdown of plant.
- The UCV in Theatre 39 was operational and there was no alarm on the surgeon’s panel when the supply AHU was not running. Similarly in theatre 34 the surgeon’s panel indicated system healthy when the AHU was not running. The cause/effect and alarm indication of each theatre should be re-tested to confirm correct operation
- Supply grilles in anaesthetic rooms are relatively close to the low level extract which can short circuit the clear airflow pathway across the patient in that room.
- There is no user control or indicator panel in the Angio procedure room which allows users to control the plant or indicates whether the plant is operational.
- The noise levels in some rooms are higher than recommended by SHTM 03-01. Although the excess noise is limited, it would not be expected in a new development.
- Several isolation rooms on one AHU. HBN 04-01 supplement 1 (2013) Para 2.37 states that ideally each isolation suite should have its own supply and extract system. Several isolation rooms are supplied by certain air handling units. Although there is a maintenance mode on some rooms, the failure of one of the key AHU’s will result in a significant impact on the number of isolation rooms available. In addition, although not yet tested, it is understood that the maintenance mode arrangements were not designed to keep the room air changes and pressures to the full Health Building Note (HBN) requirements.
- We have concerns regarding the thermal wheels used on theatre systems. During the course of our work we have issues when they have been operating. For example it is considered that the high rotational speed will overcome the relatively small purge section and transfer extract air into the supply air path. It is recognised even by manufacturers that thermal wheels have inherent leakage of air between sections so it is unusual for them to be used in theatre systems. We believe the manufacturers should be asked to attend site and witness/confirm that the units are correctly installed and controls are properly set up.
- There are some volume control dampers (VCD’s) in theatres which are not accessible for adjustment. (e.g. Theatre 34 – the two grilles nearest to anaesthetic/prep wall). Proper access is needed to these for future adjustments.

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- There is insufficient access for cleaning to some parts of the system (e.g. inlets) and multiple access hatches are too small for cleaning/maintenance activities
- Some duct traverse test points are in poor locations (e.g theatre 30 close to a bend) and in some cases holes are not plugged/capped.
- There is a surplus drip tray in most AHU's (possibly where a humidifier was removed). The drip tray drain is not blanked off
- The filter pleat orientation incorrect on top row of final filters and there is some evidence of bypass on pre filters (e.g. Theatre 36).
- The theatre AHU inspection lights on theatre 32 do not operate when the unit is isolated. This would be the case when the unit was being maintained so need to be changed..
- Most glass traps on systems are dirty and most are connected the wrong way around with inadequate air gaps.
- Cooling coil drip tray area not easy to clean. Cooling coil baffles cannot be easily removed due to cable and trunking installation in the AHU.
- The scale of the graduations on the magnahelic gauges is too large to give accurate readings on the filter pressure drop. In addition, they are not marked to show clean and dirty pressure limits.
- Motorised dampers take a long time to open and close which impacts on the speed of auto-changeover. In addition, they do not appear to be spring return (motorised dampers should close in the event of the power failure).
- Auto change over arrangements need to be fully tested. Some MD's do not close on plant isolation and some units will not re-start after both motors have been isolated.
- There is a noisy quadrant fan in the canopy of theatre 38 so this has limited life.
- The plant does not seem to benefit from close control. Theatre 35 air volumes are erratic and give differing readings at different times. Several theatres do not achieve the close temperature control as would be expected from modern controls (eg theatres 34 and 35 had fluctuating temperatures which were mirrored by altering RH readings suggesting that temperature control is partially being met by use of cooling rather than closure of heating valves, i.e. heating and cooling batteries compensating for each other. It is essential that the underlying reasons for these fluctuations is understood and resolved by changes to controls.
- Plant labelling incorrect and shows incorrect areas served. Some direction arrows on ductwork are incorrect and branch ducts where they leave plant areas are not fully marked up to show areas served
- Some AHU motors are running at over 95% speed so there is limited scope for systems to overcome dirty filter pressure drop and maintain system performance.
- There were communication problems between the BMS and one AHU (serving theatre 33). This has probably been corrected but we witnessed regular

**P2739 – Witnessing and validation works at the Sick Children’s Hospital at Edinburgh Royal Infirmary.**

plant/AHU failures which could not be explained by construction or maintenance staff on site.

- We were unable to locate any duct traverse test points on the Angio and MRI AHU’s so could not fully confirm air supply volumes to the area.
- It is not clear if critical plant will operate in stand-alone mode in the event of issues with the BMS or communications systems.

DRAFT



Message

**From:** Wallace Weir [REDACTED]  
**Sent:** 03/07/2019 11:15:28  
**To:** Matthew Templeton [REDACTED]; Richard Osborne (MacCap)  
 [REDACTED]  
**CC:** Viv Cockburn [REDACTED]  
**Subject:** FW: RHCYP + DCN - Little France - Critical Care Ventilation  
**Attachments:** Air Change Options\_Critical Care\_02 June 2019.xlsx  
**Importance:** High

External Communication

Matt, Richard,

Further to our discussion please find attached instruction in respect short term plan for the critical care areas from Brian.

Kind regards

*Wallace*

**Wallace Weir**  
 Project Director  
 IHSL

**IHS Lothian Limited**  
 RHSC & DCN Site Office | Little France Crescent | Edinburgh | EH16 4TJ  
 [REDACTED] | [REDACTED] | [www.hcp.co.uk](http://www.hcp.co.uk)



**From:** Currie, Brian [REDACTED]  
**Sent:** 03 July 2019 10:00  
**To:** Wallace Weir [REDACTED]; 'Darren Pike' [REDACTED]  
**Cc:** Campbell, Jacquie [REDACTED]; Graham, Iain  
 [REDACTED]; Mitchell, Fiona (Director) [REDACTED]; Mackenzie,  
 Janice [REDACTED]; Henderson, Ronnie [REDACTED]  
**Subject:** RHCYP + DCN - Little France - Critical Care Ventilation  
**Importance:** High

Wallace / Darren

Following various joint meetings and workshops this week, I can confirm, on behalf of NHS Lothian, that you are requested to proceed with adjusting the installed ventilation system in Critical Care to achieve air change rates as per option A on the attached schedule. You are to provide as a minimum 7 air changes/hour in all single bedrooms (with the exception of room 1 B1 037) and 5 air changes/hour in all four bedded rooms (with the exception of room 1 B1 063).

A47316415

IHS00001507

You have intimated that you shall commence the necessary activities on Thursday, 4th July and you anticipate completion on Saturday, 6th July, 2019 at which stage the air change rates in the relevant critical care rooms shall achieve the air change rates as per Option A of the attached schedule. This instruction is subject to the terms of the Project Agreement and other than the above changes to air rates, all other current Project Agreement standards and requirements (including those for the ventilation system) apply to this instruction.

Please liaise with the project team's Commissioning Manager Ashley Hull and Project Clinical Director, Janice Mackenzie regarding access, coordination and area prioritisation.

Documentation formalising the position will follow in due course. Meantime the Board is proceeding to instruct that these works are urgently undertaken under reservation of its rights.

Many thanks

Regards

Brian

Brian Currie  
Project Director - NHS Lothian  
RHCYP + DCN  
4th Floor Management Suite  
Little France Crescent  
Edinburgh  
EH16 4TJ

T: [REDACTED]  
M: [REDACTED]  
E: [REDACTED]



\*\*\*\*\*

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Room No	Room Name	Area (m2)	Ceiling Ht (m)	Volume (m3)	Current Design					Option A 7 ACH within Single Beds *High Velocity at Grille - Potential Noise Issue above 6 ACH*					Option B 6 ACH within Multi-Beds					Option C 8 ACH within Single Beds *High Velocity at Grille - Potential Noise Issue above 6 ACH*					Room Name	
					Supply (l/s)	Supply (m3/hr)	Extract (l/s)	Extract (m3/hr)	ACH	ACH	Supply (l/s)	Supply (m3/hr)	Extract (l/s)	Extract (m3/hr)	ACH	Supply (l/s)	Supply (m3/hr)	Extract (l/s)	Extract (m3/hr)	ACH	Supply (l/s)	Supply (m3/hr)	Extract (l/s)	Extract (m3/hr)		
1-B1-009	Bay 1	115.5	2.7	311.9	348.0	1252.8	348.0	1252.8	4.0	5.0	433.1	1559.3	433.1	1559.3	6.0	519.8	1871.1	519.8	1871.1	4.0	346.5	1247.4	346.5	1247.4	Bay 1	
1-B1-019	Single Room 8	26.0	2.7	70.2	78.0	280.8	78.0	280.8	4.0	7.0	136.5	491.4	136.5	491.4	4.0	78.0	280.8	78.0	280.8	8.0	156.0	561.6	156.0	561.6	Single Room 8	
1-B1-020	Single Room 7	26.0	2.7	70.2	78.0	280.8	78.0	280.8	4.0	7.0	136.5	491.4	136.5	491.4	4.0	78.0	280.8	78.0	280.8	8.0	156.0	561.6	156.0	561.6	Single Room 7	
1-B1-021	Single Room 9	26.3	2.7	71.0	79.0	284.4	79.0	284.4	4.0	7.0	138.1	497.1	138.1	497.1	4.0	78.9	284.0	78.9	284.0	8.0	157.8	568.1	157.8	568.1	Single Room 9	
1-B1-031	Bay 2	110.8	2.7	299.2	332.0	1195.2	332.0	1195.2	4.0	5.0	415.5	1495.8	415.5	1495.8	6.0	498.6	1795.0	498.6	1795.0	4.0	332.4	1196.6	332.4	1196.6	Bay 2	
CLOSED 1-B1-037	Single Room 17	27.2	2.7	73.4	82.0	295.2	82.0	295.2	4.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	Single Room 17	
CLOSED 1-B1-063	Bay 3	102.8	2.7	277.6	312.0	1123.2	312.0	1123.2	4.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	Bay 3	
1-B1-065	Neonatal Bay 4	60.0	2.7	162.0	181.0	651.6	181.0	651.6	4.0	5.0	225.0	810.0	225.0	810.0	6.0	270.0	972.0	270.0	972.0	4.0	180.0	648.0	180.0	648.0	Neonatal Bay 4	
1-B1-075	Neonatal Cot 22	15.1	2.7	40.8	46.0	165.6	46.0	165.6	4.1	7.0	79.3	285.4	79.3	285.4	4.0	45.3	163.1	45.3	163.1	8.0	90.6	326.2	90.6	326.2	Neonatal Cot 22	
					1536	5529.6	1536	5529.6			1563.98	5630.31	1563.98	5630.31		1568.55	5646.78	1568.55	5646.78		1419.30	5109.48	1419.30	5109.48		
											-27.975	-100.71	-27.975	-100.71		-32.55	-117.18	-32.55	-117.18		116.70	420.12	116.70	420.12		
					394.0	1418.4																				
Single Bed																										
4 Bed																										

Message

**From:** Wallace Weir [REDACTED]  
**Sent:** 03/07/2019 17:18:24  
**To:** Currie, Brian [REDACTED]  
**CC:** Campbell, Jacquie [REDACTED]; Graham, Iain [REDACTED];  
Mitchell, Fiona (Director) [REDACTED]; Mackenzie, Janice  
[REDACTED]; Henderson, Ronnie [REDACTED];  
'Darren Pike' [REDACTED]  
**Subject:** RE: RHCYP + DCN - Little France - Critical Care Ventilation

Brian,

We confirm IHSL is fully supportive of the process to implement an interim and permanent solution to the ventilation challenges in critical care areas.

We have some concerns over the instruction and ask that you confirm the following:

- Please will the Board confirm it will cover the cost of implementing the interim solution?
- The Board is instructing an amendment to the air change rates in certain areas noted and ceasing to ventilate one 4 bedded room and one single bedroom, effectively taking these two rooms out of use. We would not expect to suffer availability deductions for these two rooms. In the circumstances we would expect to be relieved of our obligations in respect of standards and requirements in the relevant areas which could be affected by the adjustment of the air change rates or any consequence thereof and would not expect to suffer any deductions in this respect. We would not expect to suffer deductions for the duration of the management of both the interim and permanent solutions. This is consistent with the Settlement Agreement approach for post completion works.
- The calculations for the interim solution have been undertaken by the onsite MPX team and we qualify that we cannot guarantee the exact air change rates noted in Option A due to the limited time to review and limitations within the system, however we will endeavor to achieve as close as possible in the circumstances. We also cannot guarantee being complete by Saturday, although we will give our best endeavors and commence as soon as instructed to do so.
- We ask that a commitment is made by the Board to cover the cost of the design of the permanent solution.

Please re-issue your instruction taking into consideration our comments above. We suggest the instruction should be formalised through an exchange of letters. Once the amended instruction is received we will forward to Lenders and seek their consent to progress with the Interim Solution, and therefore request the amended instruction is issued by NHSL as soon as possible. For your information we have a call with Lenders at 9am tomorrow.

Kind regards

[REDACTED]  
**Wallace Weir**  
Project Director  
IHSL

**IHS Lothian Limited**  
RHSC & DCN Site Office | Little France Crescent | Edinburgh | EH16 4TJ  
[REDACTED] | [REDACTED] | [www.hcp.co.uk](http://www.hcp.co.uk)

A47316415

IHS00001365



**From:** Currie, Brian [REDACTED]  
**Sent:** 03 July 2019 10:00  
**To:** Wallace Weir [REDACTED]; 'Darren Pike' [REDACTED]  
**Cc:** Campbell, Jacquie [REDACTED]; Graham, Iain [REDACTED]; Mitchell, Fiona (Director) [REDACTED]; Mackenzie, Janice [REDACTED]; Henderson, Ronnie [REDACTED]  
**Subject:** RHCYP + DCN - Little France - Critical Care Ventilation  
**Importance:** High

Wallace / Darren

Following various joint meetings and workshops this week, I can confirm, on behalf of NHS Lothian, that you are requested to proceed with adjusting the installed ventilation system in Critical Care to achieve air change rates as per option A on the attached schedule. You are to provide as a minimum 7 air changes/hour in all single bedrooms (with the exception of room 1 B1 037) and 5 air changes/hour in all four bedded rooms (with the exception of room 1 B1 063).

You have intimated that you shall commence the necessary activities on Thursday, 4th July and you anticipate completion on Saturday, 6th July, 2019 at which stage the air change rates in the relevant critical care rooms shall achieve the air change rates as per Option A of the attached schedule. This instruction is subject to the terms of the Project Agreement and other than the above changes to air rates, all other current Project Agreement standards and requirements (including those for the ventilation system) apply to this instruction.

Please liaise with the project team's Commissioning Manager Ashley Hull and Project Clinical Director, Janice Mackenzie regarding access, coordination and area prioritisation.

Documentation formalising the position will follow in due course. Meantime the Board is proceeding to instruct that these works are urgently undertaken under reservation of its rights.

Many thanks

Regards

Brian

Brian Currie  
Project Director - NHS Lothian  
RHCYP + DCN  
4th Floor Management Suite  
Little France Crescent  
Edinburgh  
EH16 4TJ

T: [REDACTED]  
M: [REDACTED]  
E: [REDACTED]



\*\*\*\*\*

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## High Value Change Notice

<b>Project:</b>	RHCYP & DCN
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<b>1 – Issue of Change Notice to Project Co</b>	
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<b>Title:</b> Paediatric Critical Care Ventilation	
<b>Reference No:</b> 095	<b>Date:</b>
<b>Target Cost Capital:</b> £1.9m exc VAT	<b>Target Cost Revenue:</b> TBA

**High Value Change Requirements (Schedule Part 16, Section 4, Clause 2.1.3)**

In accordance with Schedule Part 16 (Change Protocol), Project Co. is required to design, manufacture, supply, construct, test, commission and complete, and thereafter throughout the Operational Term, provide Services to, maintain, repair, renew and replace, a ventilation system or systems which will deliver **10 air changes/hour at +10pa** as per SHTM 03-01, Appendix 1, Table A1 to the following rooms at the Facilities:

**1-B1-065 – Neo Natal 3 cot area** including 1-B1-022 – *Corridor*, 1-B1-069 – *Staff Base*, 1-B1- 066 – *Clean Utility* and 1- B1-071 – *Resus Bay* which are all open to 1-B1-065

**1-B1-075 – Single cot cubicle neo natal** including 1-B1-074 *en-suite*

**1-B1-063 – Open plan bay 4 bed**

**1-B1-037 – Single bed cubicle**

**1-B1-031 – Open plan bay 4 bed**

**1-B1-021 – Single bed cubicle**

**1-B1-020 – Single bed cubicle**

**1-B1-019 – Single bed cubicle**

**1-B1-009 – Open plan bay 4 bed**

(the “Ventilation Works and Services”).

All environmental requirements for all spaces in the Facilities served by or affected by the Ventilation Works and Services systems shall be met and maintained – including but not limited to, temperature and control, lighting levels, noise, and humidity. These should be consistent to the agreed parameters throughout the Facilities to meet the specific clinical and operational needs for each space in the Facilities.

The Ventilation Works and Services shall fully comply with SHTM 03-01 requirements which includes, without limitation, implementation of the Ventilation Works and Services so that the system installation, finishes and maintenance regime shall be in accordance with SHTM 03-01 requirements, together with the clinical and operational constraints identified below:

1. All Ventilation Works and Services shall be carried out and monitored after and with reference to a collaborative full Stage 3 HAI SCRIBE assessment being approved by the Board.
2. The fire strategy and systems agreed for the Facilities will be maintained throughout the Ventilation Works and Services and the Operational Term and such that the ventilation systems will integrate with the fire strategy and systems and all other building management systems comprised in the Facilities.
3. The location of the installation within the rooms, external areas, route across such spaces and the take out of any windows, etc, will enable the current operational functionality and safety policies and procedures to be maintained.
4. The design, layouts, finishes and other details etc for the Ventilation Works and Services, at all stages (including during the design development stages), will require to be agreed with the Board's Representative (and in turn the clinical service and related stakeholders and Project Co recognises that in order to achieve agreement from the Board's Representative's the Board's Representative will

HVCN





seek input from the Board and all appropriate stakeholders.

**Value for Money Assessment (Schedule Part 16, Section 4, Clause 2.1.4)**

The Board will, in consultation with Project Co, continue to review costs as the design develops and at other stages. In order for the Board to assess whether the High Value Change Stage 2 Submission offers it value for money the submission shall include as a minimum the following information:

- A detailed and fully quantified pricing schedule for the construction works
- A detailed breakdown of all Preliminaries and general cost items
- Construction issue drawings and specification
- Proposed, construction and commissioning/testing programme
- Construction phase method statement

**Date by which parties are required to meet to review the High Value Change Notice and agree the content for the High Value Change Proposal (Schedule Part 16, Section 4, Clause 2.3.1)**

05/09/19

To: IHS Lothian

We require the Change described above.  
Please advise when Project Co will submit a High Value Change Proposal for the above.

Signed on behalf of NHS Lothian: [REDACTED] .....

Name of Signatory (type or print): Brian Currie .....

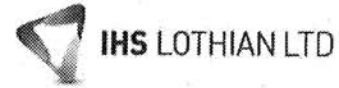
Date: 30/08/2019

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## High Value Change Notice

<b>Project:</b>	RHCYP & DCN																																
<b>1 – Issue of Change Notice to Project Co</b>																																	
<b>Title:</b>	Lochranza ward (Haematology/ Oncology) Ventilation																																
<b>Reference No:</b> 096	<b>Date:</b> 6 <sup>th</sup> September, 2019																																
<b>Target Cost Capital:</b>	£1.9m exc VAT	<b>Target Cost Revenue:</b>	TBA																														
<b>High Value Change Requirements (Schedule Part 16, Section 4, Clause 2.1.3)</b>																																	
<p>In accordance with Schedule Part 16 (Change Protocol), Project Co is required to design, manufacture, supply, construct, test, commission and complete, and thereafter throughout the Operational Term, provide Services to, maintain, repair, renew and replace, a ventilation system or systems which will deliver <b>10 air changes/hour at +10pa</b> as per SHTM 03-01, Appendix 1, Table A1 and fit Hepa filters (H12 grade) to the air inlets to the following rooms at the Facilities:</p>																																	
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">Room Number</th> <th style="width: 75%;">Room Type</th> </tr> </thead> <tbody> <tr><td>3-C1.4-059</td><td>Single Bedroom</td></tr> <tr><td>3-C1.4-057</td><td>Single Bedroom</td></tr> <tr><td>3-C1.4-055</td><td>Single Bedroom</td></tr> <tr><td>3-C1.4-046</td><td>Single Bedroom</td></tr> <tr><td>3-C1.4-032</td><td>Single Bedroom</td></tr> <tr><td>3-C1.4-018</td><td>Single Bedroom</td></tr> <tr><td>3-C1.4-016</td><td>Single Bedroom</td></tr> <tr><td>3-C1.4-013</td><td>Single Bedroom</td></tr> <tr><td>3-C1.4-010</td><td>Single Bedroom</td></tr> <tr><td>3-C1.4-074</td><td>Single Bedroom</td></tr> <tr><td>3-C1.4-076</td><td>Single Bedroom</td></tr> <tr><td>3-C1.4-078</td><td>Single Bedroom</td></tr> <tr><td>3-C1.4-084</td><td>Multi-Bed (3) Day Care</td></tr> <tr><td>3-C1.4-061</td><td>Multi-Bed (6) Day Care</td></tr> </tbody> </table>				Room Number	Room Type	3-C1.4-059	Single Bedroom	3-C1.4-057	Single Bedroom	3-C1.4-055	Single Bedroom	3-C1.4-046	Single Bedroom	3-C1.4-032	Single Bedroom	3-C1.4-018	Single Bedroom	3-C1.4-016	Single Bedroom	3-C1.4-013	Single Bedroom	3-C1.4-010	Single Bedroom	3-C1.4-074	Single Bedroom	3-C1.4-076	Single Bedroom	3-C1.4-078	Single Bedroom	3-C1.4-084	Multi-Bed (3) Day Care	3-C1.4-061	Multi-Bed (6) Day Care
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3-C1.4-061	Multi-Bed (6) Day Care																																
<p>(the "Ventilation Works and Services").</p> <p>In addition the design must provide means by which the windows cannot be opened whilst maintaining ventilation requirements.</p> <p>All environmental requirements for all spaces in the Facilities served by or affected by the Ventilation Works and Services systems shall be met and maintained – including but not limited to, temperature and control, lighting levels, noise, and humidity. These should be consistent to the agreed parameters throughout the Facilities to meet the specific clinical and operational needs for each space in the Facilities.</p> <p>The Ventilation Works and Services shall fully comply with SHTM 03-01 requirements which includes, without limitation, implementation of the Ventilation Works and Services so that the system installation, finishes and maintenance regime shall be in accordance with SHTM 03-01 requirements, together with the clinical and operational constraints identified below:</p> <ol style="list-style-type: none"> <li>1. All Ventilation Works and Services shall be carried out and monitored after and with reference to a collaborative full Stage 3 HAI SCRIBE assessment being approved by the Board.</li> <li>2. The fire strategy and systems agreed for the Facilities will be maintained throughout the Ventilation Works and Services and the Operational Term and such that the ventilation systems will integrate with the fire strategy and systems and all other building management systems comprised in the</li> </ol>																																	

HVCN



<p>Facilities.</p> <p>3. The location of the installation within the rooms, external areas, route across such spaces and the take out of any windows, etc, will enable the current operational functionality and safety policies and procedures to be maintained.</p> <p>4. The design, layouts, finishes and other details etc for the Ventilation Works and Services, at all stages (including during the design development stages), will require to be agreed with the Board's Representative (and in turn the clinical service and related stakeholders and Project Co recognises that in order to achieve agreement from the Board's Representative's the Board's Representative will seek input from the Board and all appropriate stakeholders.</p> <p>5. Design must provide resilience in compliance with SHTM 03-01 to ensure performance of ventilation to rooms during maintenance downtime.</p>	
<p><b>Value for Money Assessment (Schedule Part 16, Section 4, Clause 2.1.4)</b></p> <p>The Board will, in consultation with Project Co, continue to review costs as the design develops and at other stages. In order for the Board to assess whether the High Value Change Stage 2 Submission offers it value for money the submission shall include as a minimum the following information:</p> <ul style="list-style-type: none"> <li>• A detailed and fully quantified pricing schedule for the construction works</li> <li>• A detailed breakdown of all Preliminaries and general cost items</li> <li>• Construction issue drawings and specification</li> <li>• Proposed, construction and commissioning/testing programme</li> <li>• Construction phase method statement</li> </ul>	
<p><b>Date by which parties are required to meet to review the High Value Change Notice and agree the content for the High Value Change Proposal (Schedule Part 16, Section 4, Clause 2.3.1)</b></p>	<p>06/09/19</p>
<p>To: IHS Lothian</p> <p>We require the Change described above. Please advise when Project Co will submit a High Value Change Proposal for the above.</p> <p>Signed on behalf of NHS Lothian: <span style="background-color: black; color: black;">[REDACTED]</span> .....</p> <p>Name of Signatory (type or print): <u>BRIAN CURRIE</u> .....</p> <p>Date: <u>06/09/2019</u></p>	

HVCN



### High Value Change Notice

**2.1 – IHS Lothian Issue Change Notice to BYES**

**BYES** – In accordance with Schedule Part 16 of the Services Contract the Change as noted in Section 1 above is required.

**Date of Issue:** 9<sup>th</sup> September 2019

Signed on behalf of IHS Lothian: .....

Name of Signatory (type or print): .....

Date: ...9<sup>th</sup> September 2019.....

HVCN



IHS Lothian Limited  
13 Queen's Road  
Aberdeen  
United Kingdom  
AB15 4YL

**191113 IHSL.NHSL HVC 095 & 096 Response**

To: Brian Currie  
Board Representative  
**LOTHIAN HEALTH BOARD**  
Waverley Gate  
2-4 Waterloo Place  
Edinburgh  
EH1 3EG (the "Board")

From: **IHS LOTHIAN LIMITED** (company registered number SC493676) whose registered office is at  
13 Queen's Road  
Aberdeen  
AB15 4YL (the "Project Co")

13 November 2019

Dear Sirs

**Project Agreement dated 12 and 13 February 2015 between (1) the Board; and (2) Project Co (as amended, supplemented, varied, extended or restated from time to time) (the "Project Agreement")**  
**High Value Change 095 and 096 ("High Value Changes")**

Unless otherwise defined in this letter, words and expressions used in the Project Agreement shall bear the same meaning in this letter.

We refer to our letters dated 11th and 18th October 2019 in relation to the High Value Changes and to your letter dated 24th October 2019.

Following on from the productive discussions that have taken place to date and in particular the meeting on 11th November 2019, we agree with the Board's proposal that the High Value Changes should be aligned going forward.

In order to meet the challenging timetable set by the Scottish Government, it has been agreed that the most pragmatic way forward to progress the High Value Changes would be to agree the process and appropriate programme for the implementation of the High Value Changes notwithstanding the provisions of Section 4 of Schedule Part 16 of the Project Agreement.

In particular, notwithstanding the provisions of paragraph 3.1.1, 3.4, 4.1 and 8.4 of Section 4 of Schedule Part 16 of the Project Agreement it has been agreed between Project Co and the Board that in order to enable the development of the High Value Changes between Project Co and the Board that these requirements set out in these provisions will be waived by the Board and Project Co and Project Co will not be required to submit a High Value Change Proposal in accordance with paragraphs 3.1.1 that satisfies the requirements of paragraph 3.4 of Section 4 of Schedule Part 16 of the Project Agreement.

As discussed at the meeting between Project Co and the Board on the 11th November, our proposal to align the High Value Changes is as follows:

IHS Lothian Limited is incorporated and registered as a private limited company in Scotland with company number SC493676.  
Registered office is located at 13 Queen's Road, Aberdeen, United Kingdom, AB15 4YL.

1. Project Co will appoint Imtech Engineering Services Central Ltd to deliver the works required for the High Value Changes. As the Board will be aware, Imtech have excellent healthcare experience and are based in Grangemouth. Further details of their experience are set out in their proposal.
2. Imtech's project lead, David Keenan worked on the delivery of Forth Valley Hospital, Alder Hay Children's Hospital and Dumfries & Galloway Acute Hospital and is known to Project Co.
3. Imtech will appoint Hoare Lea as lead designer. Hoare Lea is a very respected M&E designer, with fire engineering expertise.
4. As the Board is aware, Imtech & Hoare Lea have already attended on Site and inspected relevant plant rooms and the affected clinical areas within the Facilities and understand project scope and the constraints. Imtech, Hoare Lea and George Street Asset Management together with the Project Co site team also attended a kick off meeting with the Board's project team on the 12th November 2019.
5. Project Co will appoint a new Project Manager to ensure works are planned and delivered in accordance with an agreed specification and programme.
6. Subject to the Board and Project Co entering into the Initial Engagement Agreement (see below), Project Co, Imtech and their design team can commence within the next week. Please find enclosed the Imtech proposal and indicative programme which we shared with you earlier this week, which sets out that completion including commissioning by end of August 2020 is achievable.
7. Bouygues will support Project Co in the delivery of these works through facilitation with all parties and will engage to deliver the associated FM services and lifecycle works once the works have been completed
8. An initial engagement agreement ("**Initial Engagement Agreement**") will be entered into between NHSL and Project Co to enable Project Co to instruct Imtech to immediately commence the survey and design work.
9. The draft Initial Engagement Agreement will be provided by Project Co to the Board for review by 14th November 2019. This will require to be entered into no later than 21 November 2019 to progress in line with the indicative programme.
10. The Initial Engagement Agreement will provide that as discussed and agreed that (i) the Board waives the £400,000 of historic Deductions accrued up to and including 30th September 2019 with the agreed sum to be paid to Project Co within 5 Business Days of entering into the Initial Engagement Agreement; (ii) the attached warranty indemnity will be provided by the Board; (iii) both Project Co and the Board will use all reasonable endeavours to agree a new protocol for the application of the payment mechanism going forward; and (iv) the carrying out of the survey and design work by Imtech shall be an Excusing Cause.
11. Appropriate confirmation as to the Board's vires to enter into the Initial Engagement Agreement will be provided.
12. The Board and Project Co will work collaboratively and in good faith to enter into a supplemental agreement before 10 January 2020 which will set out the agreed requirements for the High Value Changes ("**Supplemental Agreement**"). This will be based on Project Co and Imtech entering into a NEC design & build contract on a Cost Plus basis. The Supplemental Agreement will be drafted to procure that there is no change to the risk profile of either Project Co or the Project and appropriate protections will be agreed to facilitate this.
13. A Cost Plus style of contract has been proposed due to the challenging programme requirements, the nature of the proposed works, any value for money tests and an acceptable risk profile to Project Co and Imtech as all costs will be transparent and demonstrable to the Board with key metrics such as overhead and profit agreed in advance. Project Co/Imtech

propose that the existing framework rates used in other capital projects in Scotland shall be used as a reference point where applicable/appropriate.

- 14. As discussed and agreed, subject to the Board's right to issue a Warning Notice and/or any Event of Default which has been materially caused by or materially contributed to by a material breach of health and safety, the Board agree not to issue Warning Notices and to waive any rights to exercise any rights and/or remedies that may be available to them in relation to any Events of Default prior to the arrive of patients in to the Department of Clinical Neurology (anticipated to be in March 2020).
- 15. The Board will waive any subsisting termination rights as a condition precedent to entering into the Supplemental Agreement.

The Board acknowledges and agrees that it will not procure the further implementation of the High Value Changes without further recourse to ProjectCo and it waives any rights that may be available to the Board in accordance with paragraph 8.4 of Section 4 of Schedule Part 16 of the Project Agreement.

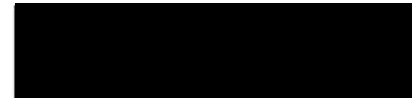
Please sign and return the enclosed copy of this letter to acknowledge your agreement to its terms.

Yours faithfully,

Subscribed for and on behalf of  
**IHS Lothian Limited** acting by

MATTHEW TEMPLETON

Full Name (Director)  
in the presence of:



Signature of Director

MANNAH BLECK

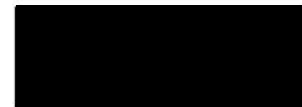
Full Name (Witness)

19A CAMPING STREET

EDINBURGH

EH3 8EG

Address



Signature of Witness

**ACKNOWLEDGEMENT AND CONSENT**

We accept and agree to the terms of this letter.

Subscribed for and on behalf of  
**Lothian Health Board**  
acting by

.....  
Full Name Authorised Signatory  
in the presence of:

.....  
Authorised Signatory

.....  
Full Name (Witness)  
.....  
.....  
.....

Address

.....  
Signature of Witness

Date:





From: Lothian Health Board/NHS Lothian a health board constituted in Scotland under the National Health Service (Constitution of Health Boards) (Scotland) Order 1974 (S.I. 1974/267) as amended by the National Health Service (Constitution of Health Boards) (Scotland) Act 1978 as amended by section 28 of the National Health Service and Community Care Act 1990 and having its principal address at Waverley Gate, 2-4 Waterloo Place, Edinburgh EH1 3EG ("the Board")

To: IHS Lothian Limited (No SC493676) whose registered office is at 13 Queen's Road, Aberdeen, AB15 4YL ("ProjectCo")

Date: 12 December 2019

**Project Agreement between the Board and ProjectCo dated 12th and 13th February 2015  
Initial Engagement Agreement in relation to Ventilation Works at the Facilities**

1. In this Initial Engagement Agreement, capitalised terms (including the headings) shall be defined as provided for below or otherwise shall have the meanings given to them in the Project Agreement, unless expressly stated otherwise and the singular shall include the plural and *vice versa* and the provisions of clause 1 of the Project Agreement apply *mutatis mutandis* to this Initial Engagement Agreement:

"Advance Design Works"	has the meaning stated in paragraph 3.1;
"CDM Regulations"	means the Construction (Design and Management) Regulations 2015 or any amendment or re-enactment thereof;
"Designs"	has the meaning stated in paragraph 8.1;
"Documents"	means the requirements and documents detailed in and/or appended to the Schedule, Part 1 and to the extent only that such requirements and documents relate to the Ventilation Works subject to any amendments or additions to them which may be issued by or agreed to by the Board's Representative in writing;
"First Application Date"	means the date designated as such in the Schedule, Part 2;
"Initial Engagement Agreement"	means this letter including the Schedule;
"Maximum Amount"	means the amount so designated in the Schedule, Part 2 or such other greater amount as may be agreed by the Board pursuant to paragraph 10, plus VAT on that amount (if any) due according to Law;
"Project Agreement"	means the Project Agreement between the Board and ProjectCo dated 12th and 13th February 2015 as amended by Supplemental Agreement No. 1;
"Schedule"	means the Schedule in six parts to this Initial Engagement Agreement;
"Subcontract"	means the construction contract based on the NEC4 Engineering and Construction Contract (including design)

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on a Target or Cost Reimbursable basis (to be confirmed) with such amendments as may be required, and such construction contract to be approved by the Board, to be entered into between ProjectCo and the Subcontractor for the carrying out of the Ventilation Works and any other works as may be agreed between the Parties;

**"Subcontract Initial Engagement Agreement"**

means an initial engagement agreement to be entered into between ProjectCo and the Subcontractor for the carrying out of the Advance Design Works, a copy of such initial engagement agreement to be provided to the Board within 15 Business Days of the date of this Initial Engagement Agreement;

**"Subcontractor"**

means Imtech Engineering Services Central Limited (No 00443522) whose registered office is at G&H House, Hooton Street, Carlton Road, Nottingham NG3 5GL;

**"Supplemental Agreement No.2"**

means the supplemental agreement which may be entered into between the Board and ProjectCo varying the terms of the Project Agreement in respect of the Ventilation Works and matters related thereto; and

**"Ventilation Works"**

means the design, construction, completion and commissioning of ventilation works to the paediatric critical care ventilation system and the haematology/oncology ventilation system pursuant to the Board's technical requirements detailed in change notice HVC 107; and as further described in any of the other Documents.

2. It is the Board's wish (but not an obligation) to appoint ProjectCo in respect of the Ventilation Works, but neither Party is yet in a position to enter into a contract to instruct the Ventilation Works (and any associated amendments required to the Services) by way of Supplemental Agreement No.2.

3.

3.1 The Board hereby authorises and requests ProjectCo and ProjectCo agrees and undertakes to proceed from the last date of signature of this Initial Engagement Agreement, regularly and diligently and using reasonable endeavours to proceed in accordance with the indicative programme attached in the Schedule Part 1 (as the same may be modified and amended by ProjectCo from time to time), with the Designs including such necessary works, surveys or investigations at the Facilities as may be required in order to prepare such detailed Designs in respect of the Ventilation Works in accordance with the Documents and the terms of this Initial Engagement Agreement ("**Advance Design Works**"). The Advance Design Works are intended form part of the Ventilation Works under Supplemental Agreement No. 2.

3.2 This Initial Engagement Agreement is supplementary to the Project Agreement and from the date of this Initial Engagement Agreement, the Project Agreement shall have effect as amended by this Initial Engagement Agreement. For the avoidance of doubt, except as amended by this Initial Engagement Agreement the Project Agreement shall continue to have full force and effect.

3.3 Without prejudice to the foregoing generality, Project Co shall at all times comply with its general obligations pursuant to Clause 22.1 and 22.2 of the Project Agreement to provide the Services (as the same may be amended or adjusted in accordance with this Initial Engagement Agreement) subject always to any rights

ProjectCo may have under the terms of this Initial Engagement Agreement to be indemnified or otherwise relieved under the terms of this Initial Engagement Letter.

- 3.4 The carrying out of the Advance Design Works in accordance with this Initial Engagement Agreement shall to the extent that they interfere adversely with or cause or contribute to a failure of, performance of the Project Operations by ProjectCo and/or cause or contribute to the occurrence of an Availability Failure and/or a Performance Failure be an Excusing Cause for the purposes of clause 51 of the Project Agreement.

**4. Payment for Advance Design**

- 4.1 In consideration for ProjectCo providing the Advance Design Works in accordance with and complying with its duties and obligations in this Initial Engagement Agreement, and subject to paragraph 6, the Board undertakes to pay ProjectCo all reasonably and properly incurred costs (including profit and overheads), charges and expenses, and which are vouched on an open book basis and properly documented, for all services, work, goods and materials properly provided by ProjectCo in carrying out the Advance Design Works pursuant to this Initial Engagement Agreement, up to the Maximum Amount. Such costs will comprise all reasonable and direct costs incurred by ProjectCo and the Subcontractor under the Subcontract Initial Engagement Agreement.

- 4.2 Payment under this Initial Engagement Agreement for the performance of the Advance Design Works shall be made against ProjectCo's application for payment to be submitted to the Board's Representative monthly, the first such application to be made no earlier than the First Application Date. Each application must be supported by sufficient detail to enable the Board's Representative to check that the amount applied for is in accordance with the terms of this Initial Engagement Agreement. Payment shall be due 5 Business Days after the date of receipt by the Board of ProjectCo's application, and the final date for payment shall be 10 Business Days thereafter. The Board shall not be entitled to deduct or to set-off any amount under the Project Agreement by way of Deductions against any monies due or to become due to ProjectCo under this Initial Engagement Agreement.

- 4.3 Without prejudice to the Board's obligations set out in this Paragraph 4 to make payment under this Initial Engagement Agreement:

4.3.1 neither ProjectCo or the Subcontractor shall have any claim against the Board; and

4.3.2 the Board shall have no claim against ProjectCo

in each case for breach of contract, loss of profit, loss of reputation by reason only of (i) the termination or expiry of this Initial Engagement Agreement and/or (ii) the parties not entering into Supplemental Agreement No.2.

- 4.4 The Board grants to ProjectCo and the Subcontractor a non-exclusive, licence to use such parts of the Facilities as indicated edged red in the plan attached at the Schedule, Part 4, for carrying out the Advance Design Works until the earlier of (a) this Initial Engagement Agreement terminating or expiring pursuant to paragraph 5, (b) the later of Supplemental Agreement No 2 being entered into by the Board and ProjectCo and the Subcontract being entered into by ProjectCo and the Subcontractor or (c) ProjectCo ceasing to provide the Advance Design Works pursuant to paragraph 10. Access to and from the office space shall be along designated access routes at the Facilities which are to be pre-agreed between the Board and ProjectCo.

- 4.5 In the event that the Board enters into Supplemental Agreement No.2 with ProjectCo:-
- 4.5.1 any payments made under this Initial Engagement Agreement in relation to the Advance Design Works shall be treated as payments on account pursuant to Supplemental Agreement No.2; and
  - 4.5.2 everything done by ProjectCo and/or on ProjectCo's behalf pursuant to this Initial Engagement Agreement in relation to the Advance Design Works shall be deemed to have been done pursuant to and shall be governed by Supplemental Agreement No.2 which shall apply retrospectively to the Advance Design Works; and
  - 4.5.3 Supplemental Agreement No.2 shall supersede this Initial Engagement Letter which shall cease to have effect.
- 4.6 The Board and ProjectCo shall use reasonable endeavours to enter into Supplemental Agreement No 2 by 31 January 2020. Should Supplemental Agreement No 2 not be entered into by 29 February 2020 as a result of a matter which the Board (acting reasonably) believes was caused or materially contributed to by ProjectCo, the Board may procure the implementation of the Ventilation Works without further recourse to ProjectCo save as otherwise provided in the Project Agreement, but the Board must ensure that the Ventilation Works are carried out in accordance with Good Industry Practice and to the standards that would have applied to Project Co if it had implemented the Ventilation Works without prejudice to any rights of Project Co (including any rights under Clause 51) under the Project Agreement in respect of the Board carrying out the Ventilation Works. Where the Board undertakes such procurement and if, in so doing, the Board
- 4.6.1 prevents ProjectCo from providing the Services; or
  - 4.6.2 otherwise causes a material adverse effect to the ability of ProjectCo to provide the Services,

such prevention shall be deemed to constitute an Excusing Cause for the purposes of Clause 51 of the Project Agreement

5. This Initial Engagement Agreement shall terminate on the earlier of:
- 5.1 the date the Board enters into Supplemental Agreement No.2 with ProjectCo; or
  - 5.2 29 February 2020, or such other date as the Board and ProjectCo shall agree, acting reasonably.
6. The Board's total liability under this Initial Engagement Agreement in relation to payment for the Advance Design Works shall not under any circumstances exceed the Maximum Amount.
7. Prior to commencing any Advance Design Works pursuant to this Initial Engagement Agreement, ProjectCo shall:
- 7.1 provide written evidence that the Subcontractor has taken out the insurances specified in, and shall comply with the requirements detailed in the Schedule, Part 3, and obtained the Board's written confirmation that the terms of such insurance are satisfactory; and
  - 7.2 provide evidence that the existing operational insurances taken out under the Project Agreement will cover the Advance Design Works; and

- 7.3 ensure that any necessary statutory consents necessary for carrying out the Advance Design Works have been obtained and are in effect.
8. ProjectCo undertakes and shall procure that the Subcontractor undertakes to:-
- 8.1 grant to the Board free of charge an irrevocable, royalty free, non-exclusive and transferable licence (carrying the right to grant sub-licences), and which licence will survive expiry or termination or deemed termination of this Initial Engagement Agreement and/or if ProjectCo ceases to provide any of the Advance Design Works, to use and reproduce all drawings, reports, documents, plans, software, formulae, calculation, materials and other data and Intellectual Property Rights (the "Designs") hitherto or hereafter prepared by and/or which are or become vested in ProjectCo, the Subcontractor or on ProjectCo's and/or the Subcontractor's behalf in connection with the Advance Design Works, for any purpose in connection with the Project including for carrying out the Board Services (and its operations relating to the performance of the Board Services), the Board duties and obligations under the Project Agreement and/or any statutory duties that the Board may have, and the design or construction of the Ventilation Works, the operation, maintenance or improvement of the Ventilation Works and/or the Facilities and/or the carrying out of operations the same as, or similar to, the Project Operations; and
- 8.2 supply copies of the Designs to the Board on request.
9. ProjectCo shall act as the only "Client" for the purposes of the CDM Regulations and shall perform all the functions in such capacities as required by the CDM Regulations and make any necessary elections under Regulation 8 of the CDM Regulations in relation to the Advance Design Works. ProjectCo shall further procure that under the Subcontract Initial Engagement Agreement, the Subcontractor shall be appointed as Principal Designer and Principal Contractor for the purposes of all construction work to be performed pursuant to this Initial Engagement Agreement and/or the Subcontract Initial Engagement Agreement, and ProjectCo shall use reasonable endeavours to procure that the Subcontractor performs and observes their functions and duties under and the requirements and prohibitions imposed upon them by the CDM Regulations and any related approved code of practice and/or industry guidance issued thereunder and all other statutory provisions pertaining to health and safety all as may be amended from time to time.
10. ProjectCo shall not be required to provide Advance Design Works exceeding in value the Maximum Amount, and if that limit is reached before the Board agrees in writing to increase it, ProjectCo shall be entitled to cease carrying out the Advance Design Works. ProjectCo shall use reasonable endeavours to give the Board not less than 5 days advance written notice of when ProjectCo anticipates that the Maximum Amount limit shall be reached to allow the Board time to consider whether or not to increase the Maximum Amount. If ProjectCo ceases to provide the Advance Design Works in accordance with this paragraph 10 then this Initial Engagement Agreement shall be deemed to have terminated in accordance with paragraph 5.2.
11. In the event that either:-
- 11.1 pursuant to paragraph 5.2, this Initial Engagement Agreement terminates or expires and the Board and ProjectCo have not entered into Supplemental Agreement No. 2; or
- 11.2 ProjectCo ceases to carry out the Advance Design Works pursuant to paragraph 10 because the Board has not agreed to increase the Maximum Amount,
- then paragraphs 11.3 and 11.4 shall apply.
- 11.3 ProjectCo shall deliver to the Board within 20 Business Days all Designs and a full set of any other records and information prepared as part of the Advance

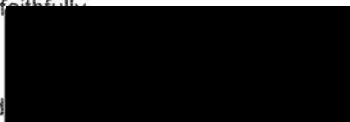
Design Works, including the health and safety file applicable to the Advance Design Works (if any) and all other information that is required to be collated under the CDM Regulations, created or in existence at the date when paragraph 11.1 or paragraph 11.2 applies; and

- 11.4 any areas including the office space at the Facilities and/or Site where Advance Design Works are being undertaken shall be vacated by the Subcontractor and ProjectCo in respect of any of the Advance Design Works as soon as reasonably practicable (but not longer than 14 days) and with as little disruption as practicable to the Project, removing all materials and leaving the Facilities and Site safe, clean and tidy and in a condition no worse than they were in prior to the commencement of the Advance Design Works.
12. **Indemnity and Supplemental Agreement No. 2 drafting**
- 12.1 The Board indemnifies ProjectCo in accordance with and subject to the terms of the Schedule, Part 5 of this Initial Engagement Agreement.
- 12.2 The Board and ProjectCo each agree that the Supplemental Agreement No.2, when entered into, shall contain the indemnity clause, and other drafting attached in the Schedule, Part 6 subject to any amendments required to the items in square brackets and yellow highlighting and any other amendments as may be agreed between the Parties.
13. Each of the Board and ProjectCo shall have the right to refer any dispute arising under this Initial Engagement Agreement to adjudication in accordance with Part 1 of the Schedule to The Scheme for Construction Contracts (Scotland) Regulations 1998 (Amendment) (Scotland) Regulations 2011.
14. The Parties agree that:
- 14.1 in the case of any conflict or inconsistency between the terms of this Initial Engagement Agreement and the terms of any of the Documents the terms of this Initial Engagement Agreement shall prevail;
- 14.2 in the case of any conflict or inconsistency between the Project Agreement and this Initial Engagement Agreement, then in relation to the Advance Design Works only, this Initial Engagement Agreement shall prevail;
- 14.3 ProjectCo's sole remedies in relation to the Advance Design Works shall be those contained in this Initial Engagement Agreement;
- 14.4 The Board shall be entitled to recover damages for breach of this Initial Engagement Agreement by ProjectCo and/or the Subcontractor provided that ProjectCo's total liability shall not under any circumstances exceed the lesser of:
- 14.4.1 an amount equivalent to the aggregate of (a) all amounts already paid by the Board to ProjectCo plus (b) any amount due to Project Co at the date of termination or expiry of this Initial Engagement Agreement and
- 14.4.2 the Maximum Amount;
- and the Maximum Amount shall not apply to any rights and/or claims (including any rights and/or claims to insurance proceeds) of the Board under the operational insurance referred to at paragraph 7.2.
15. Any notice issued in terms of this Initial Engagement Agreement shall be served and be deemed to have been duly served if in writing and served in accordance with the requirements in Clause 64 of the Project Agreement.

- 16. Save to the extent expressly provided in this Initial Engagement Agreement, it is expressly declared that no rights shall be conferred under and arising out of this Initial Engagement Agreement upon any person other than ProjectCo and the Board and without prejudice to the generality of the foregoing, there shall not be created by this Initial Engagement Agreement a *jus quaesitum tertio* nor are any rights in favour of any person whatsoever intended to be conferred pursuant to the Contract (Third Party Rights) (Scotland) Act 2017.
- 17. The Board and ProjectCo agree that nothing in this Initial Engagement Agreement shall be considered as setting any precedent for any other matters concerning or affecting the Project Agreement and/or the Facilities.
- 18. This Initial Engagement Agreement shall be governed by and construed in accordance with the laws of Scotland and the Scottish Courts shall have jurisdiction over any matters arising from it.
- 19. This Initial Engagement Agreement may be executed in any number of counterparts in accordance with the Legal Writings (Counterparts and Delivery) (Scotland) Act 2015 ("the 2015 Act"). No counterpart shall be effective until all counterparts have been executed and one part has been delivered to the Board's solicitors from all parties. The Board and ProjectCo agree that the Board's solicitors shall be the nominated person in terms of section 2(1) of the 2015 Act. Delivery by electronic transmission in a pdf format shall be permitted.

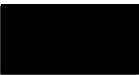
Yours faithfully

Signed

  
 Full Names J GOLDSMITH  
Anna Walker Witness  
NAVERLEY GATE, 2-4 WATERLOO PLACE, EDINBURGH Address of Witness  
 Date of Signing 16/12/19  
 Place of signing Edinburgh  
 for and on behalf of Lothian Health Board/NHS Lothian

For and on behalf of IHS Lothian Limited we acknowledge and accept the terms and conditions of this Initial Engagement Agreement

Signed ..... Director

MATTHEW TEMPLETON  
HANNAH BLECK Witness   
19A CANNING STREET EDINBURGH Address of Witness  
 Date of Signing 17/12/2019  
 Place of Signing EDINBURGH

This is the Schedule referred to in the foregoing Initial Engagement Agreement between Lothian Health Board and IHS Lothian Limited relative to the Advance Design Works dated 11 December 2019

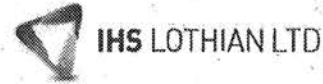
**THE SCHEDULE**

**PART 1**

**THE DOCUMENTS**

- HVC107; and
- Expenditure/Payment Schedule
- indicative programme for the Advance Design Works (document entitled "Short Term Design and Preparation Plan")





## High Value Change Notice

Project: RHDYP + DCN – Little France Edinburgh	
1 – Issue of Change Notice to Project Co	
Title: Paediatric Critical Care and Haematology / Oncology Ventilation	
Reference No: 0107	Date: 5 <sup>th</sup> December, 2019
Target Cost Capital: £4.6m	Target Cost Revenue: TBA
High Value Change Requirements (Schedule Part 16, Section 4, Clause 2.1,3)	
<p><b>Single bedrooms and Multi-bedrooms in Paediatric Critical Care</b></p> <p>In accordance with Schedule Part 16 (Change Protocol), Project Co is required to design, manufacture, supply, construct, test, commission and complete, and thereafter throughout the Operational Term, provide Services to, maintain, repair, renew and replace, a ventilation system or systems which will deliver <b>10 air changes/hour at +10pa</b> as per SHTM 03-01, Appendix 1, Table A1 to the following rooms at the Facilities:</p>	
<b>Room Number</b>	<b>Room Type</b>
1-B1-065	Neo Natal 3 cot area including 1-B1-022 – Corridor, 1-B1-069 – Staff Base, 1-B1-066 – Clean Utility and 1-B1-071 – Resus Bay which are all open to 1-B1-065. This area does not contain an en-suite.
1-B1-075	Single cot cubicle neo natal including 1-B1-074 en-suite.
1-B1-063	Open plan bay 4 bed This area does not contain an en-suite.
1-B1-037	Single bed cubicle This area does not contain an en-suite.
1-B1-031	Open plan bay 4 bed This area does not contain an en-suite.
1-B1-021	Single bed cubicle This area does not contain an en-suite.
1-B1-020	Single bed cubicle This area does not contain an en-suite.
1-B1-019	Single bed cubicle This area does not contain an en-suite.
1-B1-009	Open plan bay 4 bed This area does not contain an en-suite.
<p><b>Isolation Rooms in Paediatric Critical Care</b></p> <p>In accordance with Schedule Part 16 (Change Protocol), Project Co is required to design, manufacture, supply, construct, test, commission and complete, and thereafter throughout the Operational Term, provide Services to, maintain, repair, renew and replace, a ventilation system or systems for a positive pressure ventilated lobby PPVL Single Bedroom Isolation Suite with a lobby air supply terminal with a HEPA filter, as per SHTM 03-01, SHPN 04-01, Supplement 1: Isolation Facilities in Acute Settings (Version 1.0 September 2008) Table 1, to the following rooms at the Facilities.</p> <p>Project Co may utilise the supply and extract ventilation system description in SHPN 04-01, Supplement 1, Clause 4.5 for a dedicated ventilation system per Suite or SHPN 04-01, Supplement 1, Clause 4.8 for a common ventilation system to multiple Suites as the basis of their design. If Clause 4.8 is selected as the basis of design, a duplicate air handling / supply unit is considered necessary. A combination of both methods may be used provided Project Co, as far as is reasonably practical, reuse the existing ventilation installations. Regardless of option chosen, all aspects of the design and installation must be technically compliant with all relevant guidance.</p> <p>NHSL require to remove or significantly reduce the risk of losing all isolation rooms due to a single point of failure. Ideally each isolation room would benefit from its own supply and extract, however, NHSL appreciate this may not be possible or practical due to other constraints e.g. space. Therefore, Project Co are requested to provide their best practical solution to reduce the risk as low as possible but maintaining guidance criteria as per SHTM 03-01, SHPN 04-01, Supplement 1: Isolation Facilities in Acute Settings (Version 1.0 September 2008) Table 1.</p>	
<b>Room Number</b>	<b>Room Type</b>
1-B1-016	Isolation Bedroom This area does not contain an en-suite.
1-B1-017	Isolation Bedroom This area does not contain an en-suite.

HVCN 0107

1-B1-026	Isolation Bedroom This area does not contain an en-suite.
1-B1-036	Isolation Bedroom This area does not contain an en-suite.

**Single bedrooms and Multi-bedrooms in Haematology and Oncology**

In accordance with Schedule Part 16 (Change Protocol), Project Co is required to design, manufacture, supply, construct, test, commission and complete, and thereafter throughout the Operational Term, provide Services to, maintain, repair, renew and replace, a ventilation system or systems which will deliver 10 air changes/hour at +10pa as per SHTM 03-01, Appendix 1, Table A1 and fit Hepa filters (H12 grade) to the air inlets to the following rooms at the Facilities:

Room Number	Room Type
3-C1.4-059	Single Bedroom including 3-C1.4-060 en-suite
3-C1.4-057	Single Bedroom including 3-C1.4-058 en-suite
3-C1.4-055	Single Bedroom including 3-C1.4-056 en-suite
3-C1.4-046	Single Bedroom including 3-C1.4-047 en-suite
3-C1.4-032	Single Bedroom including 3-C1.4-033 en-suite
3-C1.4-018	Single Bedroom including 3-C1.4-019 en-suite
3-C1.4-016	Single Bedroom including 3-C1.4-017 en-suite
3-C1.4-013	Single Bedroom including 3-C1.4-014 en-suite
3-C1.4-010	Single Bedroom including 3-C1.4-009 en-suite
3-C1.4-074	Single Bedroom including 3-C1.4-075 en-suite
3-C1.4-076	Single Bedroom including 3-C1.4-077 en-suite
3-C1.4-078	Single Bedroom including 3-C1.4-079 en-suite
3-C1.4-084	Multi-Bed (3) Day Care including 3-C1.4-085 en-suite
3-C1.4-061	Multi-Bed (6) Day Care including 3-C1.4-062 en-suite

**Isolation Rooms in Haematology and Oncology**

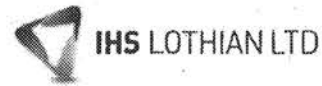
In accordance with Schedule Part 16 (Change Protocol), Project Co is required to design, manufacture, supply, construct, test, commission and complete, and thereafter throughout the Operational Term, provide Services to, maintain, repair, renew and replace, a ventilation system or systems for a positive pressure ventilated lobby PPVL Single Bedroom Isolation Suite with a lobby air supply terminal with a HEPA filter, as per SHTM 03-01, SHPN 04-01, Supplement 1: Isolation Facilities in Acute Settings (Version 1.0 September 2008) Table 1, to the following rooms at the Facilities.

Project Co may utilise the supply and extract ventilation system description in SHPN 04-01, Supplement 1, Clause 4.5 for a dedicated ventilation system per Suite or SHPN 04-01, Supplement 1, Clause 4.8 for a common ventilation system to multiple Suites as the basis of their design. If Clause 4.8 is selected as the basis of design, a duplicate air handling / supply unit is considered necessary. A combination of both methods may be used provided Project Co, as far as is reasonably practical, reuse the existing ventilation installations. Regardless of option chosen, all aspects of the design and installation must be technically compliant with all relevant guidance.

NHSL require to remove or significantly reduce the risk of losing all isolation rooms due to a single point of failure. Ideally each isolation room would benefit from its own supply and extract, however, NHSL appreciate this may not be possible or practical due to other constraints e.g. space. Therefore, Project Co are requested to provide their best practical solution to reduce the risk as low as possible but maintaining guidance criteria as per SHTM 03-01, SHPN 04-01, Supplement 1: Isolation Facilities in Acute Settings (Version 1.0 September 2008) Table 1.

Room Number	Room Type
3-C1.4-040	Isolation Bedroom including 3-C1.4-041 en-suite
3-C1.4-043	Isolation Bedroom including 3-C1.4-042 en-suite

HVCN 0107



3-C1.4-049	Isolation Bedroom including 3-C1.4-050 en-suite
3-C1.4-052	Isolation Bedroom including 3-C1.4-051 en-suite
3-C1.4-072	Isolation Bedroom including 3-C1.4-073 en-suite

(the "Ventilation Works and Services").

All environmental requirements for all spaces in the Facilities served by or affected by the Ventilation Works and Services systems shall be met and maintained – including but not limited to, ventilation, temperature and control, lighting levels, noise, and humidity. These should be consistent to the agreed parameters throughout the Facilities to meet the specific clinical and operational needs for each space in the Facilities.

The Ventilation Works and Services shall fully comply with SHTM 03-01 requirements which includes, without limitation, implementation of the Ventilation Works and Services so that the system installation, finishes and maintenance regime shall be in accordance with SHTM 03-01 requirements, together with the clinical and operational constraints identified below:

1. All Ventilation Works and Services shall be carried out and monitored after and with reference to a collaborative full Stage 3 HAI SCRIBE assessment being approved by the Board.
2. The fire strategy and systems agreed for the Facilities will be maintained throughout the Ventilation Works and Services and the Operational Term and such that the ventilation systems will integrate with the fire strategy and systems and all other building management systems comprised in the Facilities.
3. The location of the installation within the rooms, external areas, route across such spaces and the take out of any windows, etc, will enable the current operational functionality and safety policies and procedures to be maintained.
4. The design, layouts, finishes and other details etc for the Ventilation Works and Services, at all stages (including during the design development stages), will require to be agreed with the Board's Representative (and in turn the clinical service and related stakeholders and Project Co recognises that in order to achieve agreement from the Board's Representative's the Board's Representative will seek input from the Board and all appropriate stakeholders.
5. Design must provide resilience in compliance with SHTM 03-01 to ensure performance of ventilation to rooms during maintenance downtime.

The Board will, in consultation with Project Co, continue to review costs as the design develops and at other stages. In order for the Board to assess whether the High Value Change Stage 2 Submission offers it value for money the submission shall include as a minimum the following information:

- A detailed and fully quantified pricing schedule for the construction works
- A detailed breakdown of all Preliminaries and general cost items
- Construction issue drawings and specification
- Proposed, construction and commissioning/testing programme
- Construction phase method statement

Date by which parties are required to meet to review the High Value Change Notice and agree the content for the High Value Change Proposal (Schedule Part 16, Section 4, Clause 2.3.1)	13 <sup>th</sup> December, 2019
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To: IHS Lothian

We require the Change described above.  
Please advise when Project Co will submit a High Value Change Proposal for the above.

Signed on behalf of NHS Lothian: [REDACTED] .....

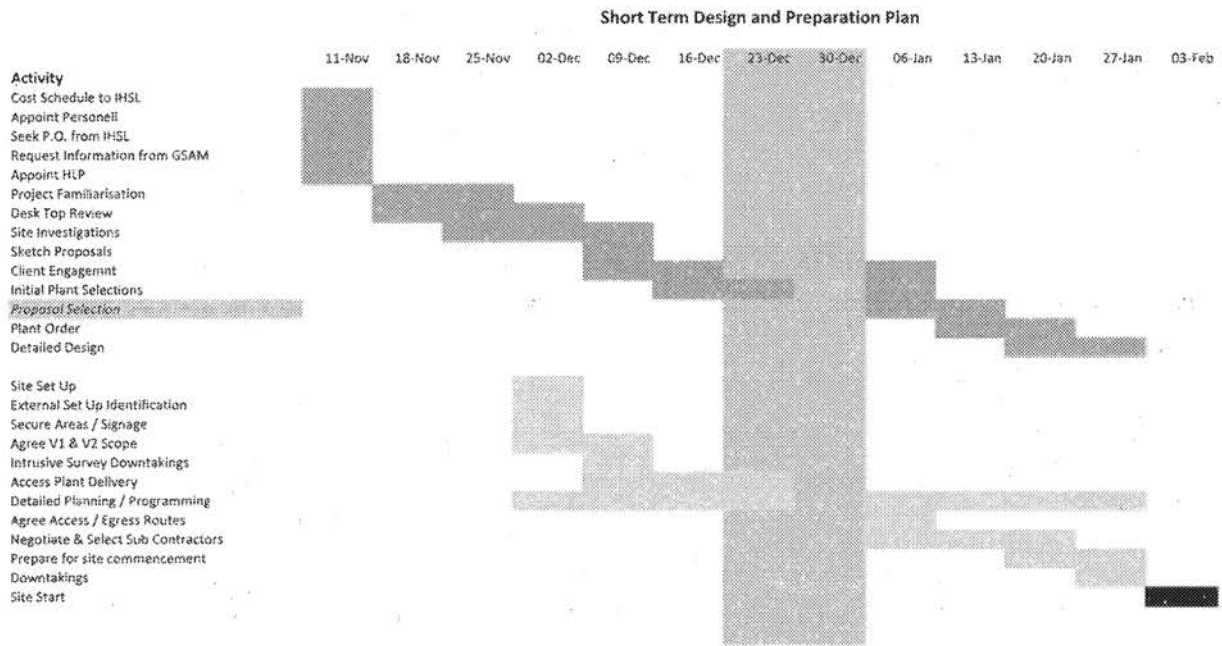
Name of Signatory (type or print): ..... Brian Currie – Board Rep – NHS Lothian.....

Date: 5<sup>th</sup> December, 2019 .....

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	Weekly Rate	16-Nov	25-Nov	02-Dec	09-Dec	16-Dec	23-Dec	30-Dec	06-Jan	13-Jan	20-Jan	27-Jan	Total weeks to end Jan	Total Estimate to end Jan
<b>Intech</b>														
David Keenan PD	£ 4,068.00	1	1	1	1	1			1	1	1	1	1.8	£ 7,312.40
Dom Gallagher - Client Lead	£ 2,676.00	1	5	5	5	5			5	5	5	5	8.6	£ 22,583.00
Darren Forbes - Construction Lead	£ 2,676.00	1	2	3	3	3			3	3	1	3	4.8	£ 12,604.80
Pat - Elec	£ 2,676.00	1	1	1	2	2			3	3	3	3	3.8	£ 9,928.80
Commercial Mgr - Cost Planning	£ 2,317.00	1	3	3	3	3			5	5	5	5	7	£ 16,119.00
Ruway Grove - Planner	£ 2,835.00	0	0	1	1	1			2	2	2	2	2.2	£ 6,137.00
Procurement Manager (Martin Coull)	£ 2,071.00	0	0	0	0	0			3	3	3	3	3.4	£ 6,970.40
Information Manager/Admin (TBA)	£ 1,078.00	0	0	0	0	0			0	0	0	0	0	£ -
Pre Construction Manager	£ 2,626.00	0	0	0	0	0			3	3	3	3	2.4	£ 6,302.40
Miscellaneous														£ 10,000.00
														£ 96,216.40
														Intech total estimate (Net)
<b>Hoare Lea (per separate submission)</b>														
														£ 156,023.00
														Hoare Lea total estimate (Net)
														£ 252,241.40
														£ 47,547.50
														18.65% HSP Framework O&M for backlog maintenance projects in
														Sub total - Intech and Hoare Lea Total (Gross)
														£ 299,788.90
<b>IHSI Management</b>														
Stephen Isely	£ 4,068.00	1	1	1	1	1			2	2	2	2	2.6	£ 10,576.00
Colin Mitchell	£ 2,790.00	1	2	3	3	3			3	3	3	3	4.8	£ 13,302.00
														£ 23,878.00
														Sub total IHSI Management
IHSI Advisers (Allowance only)														January: £5,000.00
IHSI Legal														£5,000.00
Lender Legal														£5,000.00
Lender Technical Adviser														£5,000.00
														£ 15,000.00
														£ 348,787.90





PART 2

PAYMENT PARTICULARS

Maximum Amount: £350,000

First Application Date: 20 December 2019

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**PART 3**  
**INSURANCE**

1. Employer's liability insurance as required by statute for any one accident.
2. Number not used.
3. Professional indemnity insurance for not less than £5,000,000 on an each and every claim basis to be in place from the date when the Advance Design Works are commenced and to be maintained for a period of 12 years from the earlier of (1) completion of the Advance Design Works or (2) termination or expiry of this Initial Engagement Agreement.

The Insurances in paragraphs 1 – 3 shall be in place at all times when any of the Advance Design Works are being undertaken or any part of the Project Facilities are being used or occupied in connection with the Advance Design Works.

Evidence of insurance cover for all of the insurances referred to being in place shall be provided prior to the commencement of the Advance Design Works and shall be provided to the Board whenever requested from time to time.

ProjectCo and the Board shall notify one another within five (5) Business Days of any circumstances which may give rise to a claim under the insurances referred to in this Schedule, Part 3.

ProjectCo shall or shall ensure that the Subcontractor where applicable, shall apply any proceeds of any policies of insurance:

1. in the case of third party legal liability or employer's liability insurance, in satisfaction of the claim, demand, proceeding or liability in respect of which such proceeds are payable; and
2. so as to ensure performance by ProjectCo of its obligations under this Initial Engagement Agreement and the Project Agreement including where necessary, the reinstatement, restoration or replacement of the Facilities or any part or parts thereof affected by the event giving rise to the insurance claim and consequent payment of proceeds.

ProjectCo shall, or shall ensure that the Subcontractor, carries out any works necessary to repair, reinstate or replace the Facilities (or any part or parts thereof) caused by any Advance Design Works at the Facilities. ProjectCo will ensure that such repair, reinstatement or replacement works will be carried out in accordance with the provisions of the Project Agreement and will be completed as soon as reasonably practicable having regard to the extent and nature of the damage caused by such occurrence. The requirement for any such repair, reinstatement or replacement works will not of itself be a reason for the Board and ProjectCo not entering into Supplemental Agreement No.2 where they have agreed to do so. In the event that repair, reinstatement or replacement works are commenced but not completed the Board and ProjectCo will nevertheless enter into a supplemental agreement where they have agreed to do so and ProjectCo shall ensure that such repair, reinstatement or replacement works is completed in accordance with this paragraph. No sums shall be payable by the Board to ProjectCo in respect of the cost of any works carried out under this paragraph, nor shall there be any increase in the Maximum Amount as a consequence of the same. ProjectCo shall indemnify the Board in accordance with and subject to the terms of the Project Agreement against claims for death or personal injury or damage to heritable or moveable property arising out of or in connection with or by reason of carrying out the work and activities authorised by this Initial Engagement Agreement.



PART 4

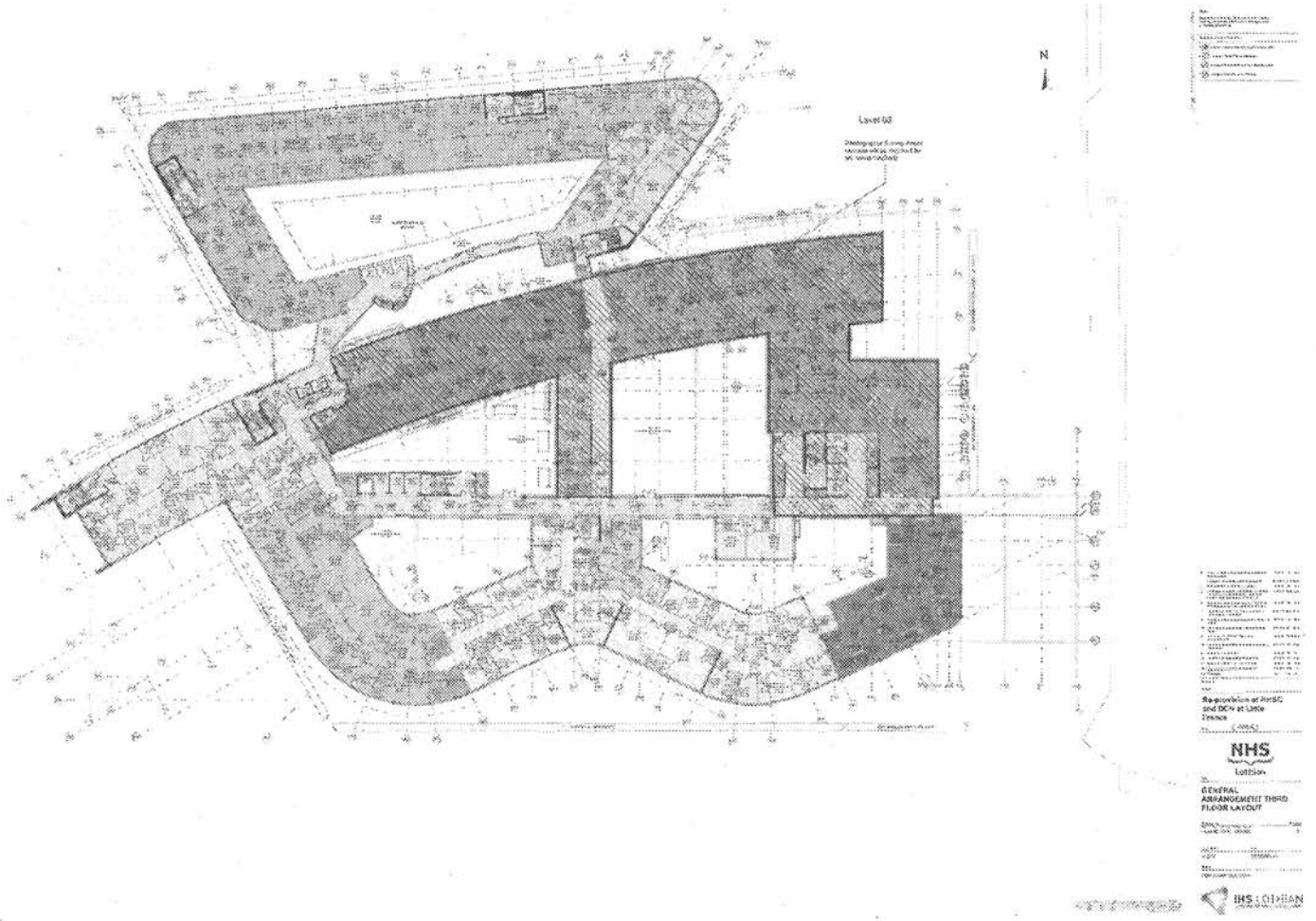
PLAN SHOWING ADVANCE DESIGN WORKS AREAS

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## PART 5

## Section A

**Initial Engagement Agreement Indemnity**

For the purposes of this Schedule, Part 5, in addition to the matters in paragraph 1 of the Initial Engagement Agreement, the following capitalised terms shall be defined as provided for below:-

**“Advance Design Works Commencement Date”** means the date the Subcontractor commences the Advance Design Works or any part thereof at the Facilities and/or the Site;

**“Advance Design Works Completion Date”** means the date of practical completion or completion or substantial completion) of the Advance Design Works;

**“Advance Design Works Defect”** means any defect or fault in the Advance Design Works (not being a Snagging matter) which occurs due to a failure by the Subcontractor to comply with its obligations under the Subcontract Initial Engagement Agreement;

**“Advance Design Works Indemnity Expiry Date”** means the date falling on the earlier to occur of (a) termination or expiry of this Initial Engagement Agreement in accordance with paragraph 5 of this Initial Engagement Agreement or (b) five (5) years after the Advance Design Works Completion Date save in relation to any claims notified in accordance with paragraph 1 of Section A of the Schedule, Part 5 before the Advance Design Works Indemnity Expiry Date but which claims remain undischarged at such date;

**“Advance Design Works Interface Claim”** means in respect of a claim made by Project Co acting in accordance with Good Industry Practice and not acting frivolously or vexatiously against the Contractor, the Service Provider or the Subcontractor, arising out of or in connection with:

- (a) the Works;
- (b) the Advance Design Works;
- (c) a Defect or Advance Design Works Defect; and/or
- (d) a Service Event,

where and to the extent the Works or the Services have been altered by the Advance Design Works where the Contractor, the Subcontractor or the Service Provider (as the case may be) disputes liability for such claim on the following basis:

- (i) in the case of the Contractor that the claim has been caused by performance by the Subcontractor of its obligations under the Subcontract Initial Engagement Agreement;
- (ii) in the case of the Subcontractor, that the claim has been caused by the performance by the Contractor of its obligations under the Construction Contract or that the claim has been caused by the performance by the Service Provider of its obligations under the Service Contract; and/or
- (iii) in the case of the Service Provider that the claim has been caused by the performance of the Subcontractor of its obligations under the Subcontract Initial Engagement Agreement;

**“Advance Design Works Interface Issue”** means any claim in respect of or arising out of or in connection with the Advance Design Works which is not a Subcontractor Excluded Liability and which is not recoverable under the Construction Contract or the Services Contract or the Subcontract Initial Engagement Agreement;

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**"Holding Company"** means, in relation to a company or corporation, any other company or corporation in respect of which that company or corporation is a Subsidiary;

**"Insolvent Contractor"** means any Subcontractor which is subject to any Subcontractor Insolvency;

**"Interim Indemnified Losses"** has the meaning given to it in paragraph 1.1.2 of Section A of the Schedule, Part 5;

**"Joint Decision Making"** has the meaning given to it in paragraph 2 of Section A of Schedule, Part 5;

**"Joint Steering Group"** has the meaning given to it in paragraph 7 of Section A of Schedule, Part 5;

**"Material Proceedings Step"** means any of the following in relation to any Advance Design Works Interface Claim:

- (a) commencing any Dispute Resolution Procedure either by way of Adjudication or Court proceedings;
- (b) commencing any appeal against any judgement, order or other decision of the Court or an adjudicator or commencing any defence of any appeal lodged by the opposing party;
- (c) commencing a proof before answer;
- (d) commencing the enforcement of any judgement, order or other decision of the Court or an adjudicator;
- (e) amending any claim to include or omit a head of claim or alter the legal basis of any claim;
- (f) making an admission in relation to any defence which adversely impacts on the prospects of successfully pursuing any claim; or
- (g) agreeing any sist.

**"Parent Company Guarantee"** means any agreement whereby the performance of any Subcontract Initial Engagement Agreement and / or obligations of any Subcontractor is guaranteed in whole or in part in favour of Project Co by any Holding Company of any Subcontractor;

**"Performance Bond"** means any agreement whereby the obligations of any Subcontractor are guaranteed in whole or in part in favour of Project Co by any bondsman;

**"Replacement Contractor"** means any contractor who is appointed to carry out and complete any Advance Design Works in substitution or replacement for any Insolvent Contractor;

**"Subcontractor Excluded Liability"** means any entitlement that Project Co would have had to make any claim or recover any Direct Losses under the Subcontract Initial Engagement Agreement were it not for the existence of a cap or exclusion or limitation of liability including a maximum aggregate cap on liability;

**"Subcontractor Insolvency"** means the occurrence of any of the following events in respect of the Subcontractor, namely:

- (a) any arrangement or composition with or for the benefit of creditors (including any voluntary arrangement as defined in the Insolvency Act 1986) being entered into by or in relation to the Subcontractor;
- (b) a receiver, administrator, administrative receiver or other encumbrancer taking possession of or being appointed over, or any distress, execution or other process being levied or enforced (and not being discharged within ten (10) Business Days) upon, the whole or any material part of the assets of the Subcontractor;
- (c) the Subcontractor ceasing to carry on business;

- (d) a petition being presented (and not being discharged within twenty (20) Business Days), or a resolution being passed or an order being made for the administration or the winding up, bankruptcy or dissolution of the Subcontractor; or
- (e) if the Subcontractor shall suffer any event analogous to the events set out in paragraphs (a)-(d) in any jurisdiction on which it is incorporated or resident;

“Subsidiary” means a subsidiary within the meaning of section 1159 of the Companies Act 2006;

## 1. Indemnity

1.1 The Board shall with effect from the Advance Design Works Commencement Date until the Advance Design Works Indemnity Expiry Date indemnify and keep Project Co indemnified at all times from and against:

1.1.1 all Direct Losses sustained by Project Co as a result of or in relation to:-

- (a) any unplanned interruption to (a) the utilities infrastructure at the Facilities and/or (b) the provision of the Project Operations at the Facilities, or the requirement for unplanned installation of any apparatus to provide connectivity to any utilities supply networks, as a result of the Advance Design Works or an Advance Design Works Defect;
- (b) Advance Design Works Interface Issue;
- (c) Subcontractor Excluded Liability;
- (d) Subcontractor Insolvency provided and to the extent only that Project Co complies with Section B of the Schedule, Part 5;

1.1.2 all Direct Losses (“Interim Indemnified Losses”) sustained by Project Co as a result of or in relation to any Advance Design Works Interface Claim.

1.2 Notwithstanding any other provisions of the Initial Engagement Agreement and/or the Project Agreement:-

1.2.1 Project Co shall not be entitled to recover or make a claim in pursuant to paragraph 1.1 of this Section A to the extent that:

- (a) Project Co has otherwise been compensated for the relevant Direct Losses pursuant to the Initial Engagement Agreement, the Project Agreement, the Construction Contract, the Service Contract, the Subcontract Initial Engagement Agreement or to any extent that the risk or circumstance to which the Direct Losses relate is insured against by any of the insurances which Project Co or the Board have to maintain pursuant to this Initial Engagement Agreement and/or the Project Agreement;
- (b) the Direct Losses have been caused or contributed to (whether by act, omission, breach, default or otherwise) by Project Co;

1.2.2 The indemnity in paragraph 1.1 of this Section A shall put Project Co in no better and no worse position than it would have been in had the circumstance giving rise to the claim under the indemnity not occurred; and

1.2.3 Project Co shall pursue any relevant claims under the Ancillary Documents and the Subcontract Initial Engagement Agreement and any relevant insurance policy promptly; and

- 1.2.4 Project Co shall mitigate any Direct Losses suffered by Project Co in relation to which the Board has indemnified Project Co under paragraph 1.1 of this Section A.
- 1.2.5 in connection with any claim under the indemnity in paragraph 1.1 of this Section A, Project Co shall give notice in writing to the Board as soon as practicable setting out:
- (a) the circumstances which give rise to the Direct Losses together with such supporting information as is reasonably requested by the Board's Representative;
  - (b) details of all amounts claimed in respect of the Direct Losses together with such supporting information including invoices as is reasonably requested by the Board's Representative;
  - (c) any consequential effects of the circumstances giving rise to the Direct Losses; and
  - (d) details of the measures which Project Co has adopted or intends to adopt to mitigate the Direct Losses in accordance with paragraph 1.2.4 of this Section A.
2. Where the indemnity in paragraph 1.1.2 of this Section A applies, in addition to the provisions in Paragraph 1 of this Section A, Project Co shall give notice in writing to the Board setting out details of any notice, demand, letter or other document concerning any Advance Design Works Interface Claim for which it appears that Project Co is, or may become, entitled to indemnification under paragraph 1.1.2 of this Section A as soon as practicable. In addition, Project Co shall:-
- 2.1 regularly keep the Board informed of the progress of any Advance Design Works Interface Claim and consult with the Board at all relevant stages of the Advance Design Works Interface Claim and provide the Board with copies of all documentation relevant to any Advance Design Works Interface Claim reasonably requested by the Board as soon as reasonably practicable;
  - 2.2 not bring the name of the Board into disrepute;
  - 2.3 not pay or settle an Advance Design Works Interface Claim without the prior consent of the Board, such consent not to be unreasonably withheld or delayed;
  - 2.4 notify the Board, where practicable sufficiently far in advance of and so as to enable the Board to jointly decide with Project Co, any Material Proceedings Step ("**Joint Decision Making**"). If Project Co and the Board do not agree on any Joint Decision Making matter then the Board and Project Co agree to refer such matter to the Joint Steering Group. If the Joint Steering Group does not agree the matter then the Board shall be entitled to take over the conduct of the claim;
  - 2.5 Where an Advance Design Works Interface Claim is agreed or determined to be the liability of a party other than Project Co, the provisions of Paragraph 4 of this Section A shall apply.
  - 2.6 Where an Advance Design Works Interface Claim is agreed or determined to be the liability of Project Co then subject to paragraph 1.2 of this Section A the Advance Design Works Interface Claim shall be deemed to be an Advance Design Works Interface Issue.
3. Project Co shall inform the Board in advance of its estimate of any Direct Losses which it anticipates it will incur from time to time that would be covered by the indemnity in paragraph 1.1 of this Section A, and shall issue the Board with an invoice in relation to said Direct Losses. The Board shall make payment of any such invoice within 7 days of receipt of the same.

4. Where the Board pays to Project Co an amount in respect of an indemnity under paragraph 1.1 of this Section A, and Project Co subsequently recovers from the Subcontractor, Construction Contractor or the Services Provider or the insurances a sum which is directly referable to the fact, matter, event or circumstances giving rise to the claim under the indemnity pursuant to Paragraph 1.1 of this Section A, Project Co shall as soon as practicable repay to the Board whichever is the lesser of:
- (a) an amount equal to the sum recovered less any costs and expenses reasonably and properly incurred by Project Co in recovering the same; and
  - (b) the amount paid to Project Co by the Board in respect of the relevant Direct Losses under paragraph 3 of this Section A.
5. With effect from the Advance Design Works Commencement Date the Board shall not apply, levy or deduct or issue to Project Co (as applicable) any Deduction, a notice in respect of a Service Event, a Warning Notice or Project Co Event of Default as a result of and to the extent caused by or materially contributed to by:
- 5.1 an Advance Design Works Interface Issue and a Subcontractor Excluded Liability;
  - 5.2 an Advance Design Works Interface Claim (save in respect of Deductions which are covered by paragraph 1.1.2 of this Section A);
  - 5.3 any unplanned interruption to (a) the utilities infrastructure at the Facilities and/ or (b) the provision of the Project Operations at the Facilities, or the requirement for unplanned installation of any apparatus to provide connectivity to any utilities supply networks which have failed, in each such case as a result of an Advance Design Works Defect;
  - 5.4 a Subcontractor Excluded Liability;
  - 5.5 a Subcontractor Insolvency
- where the restriction on the Board to apply, levy, deduct or issue any such Deduction or notice in respect of a Service Event, Warning Notice or Project Co Event of Default first arose as a result of a Service Event which occurred prior to the Additional Works Indemnity Expiry Date and irrespective as to whether such Service Event is still subsisting at or following the Additional Works Indemnity Expiry Date.
- 6.
- 6.1 In the event of any dispute between the Board and Project Co in connection with paragraphs 1 or 2 of this Section A either party may refer the matter to adjudication until otherwise agreed or determined by the Courts pursuant to Schedule Part 20 (Dispute Resolution Procedure) of the Project Agreement which shall apply mutatis mutandis to this Initial Engagement Agreement.
  - 6.2 Project Co may at any time ask that additional parties shall be joined in the adjudication. Joinder of additional parties shall be subject to the agreement of the Adjudicator and the existing and additional parties. An additional party shall have the same rights and obligations as the Parties, unless otherwise agreed by the adjudicator and the Parties. Such adjudication shall be carried out in accordance with the rules and procedures set out in Schedule Part 20 (Dispute Resolution Procedure) of the Project Agreement.



**7. Joint Steering Group**

- 7.1 Project Co and the Board shall establish a joint steering group to provide executive management and guidance over the key deliverables of the completion of the Advance Design Works and the commissioning of the Facilities until completion of the Advance Design Works. The members of the joint steering group will meet at least once per month (or more or less regularly as required) to review progress against the programme for the Advance Design Works included in Schedule, Part 1 and assist in resolving any matters which have become an issue or blockage in achieving the deliverables.
- 7.2 The initial members of the joint steering group shall be:
- 7.2.1 the Board: Jim Crombie and Susan Goldsmith; and
- 7.2.2 Project Co: Matthew Templeton and Viv Cockburn.
- 7.3 Roger Thompson of Project Co will chair the joint steering group and will also be a member. In the case of each of Project Co and the Board, no more than two members shall attend any meeting in addition to the chair. The Parties may remove their members and appoint replacements, by written notice delivered to the other Party at any time. A member on the joint steering group may appoint and remove an alternate (who may be another representative of the applicable Party, as applicable) by written notice to all other members.
- 7.4 The joint steering group may adopt such procedures and practices for the conduct of the activities of the joint steering group as they consider appropriate, from time to time, provided that:
- 7.4.1 only decisions that are made unanimously by all of the members present at meetings shall have any effect;
- 7.4.2 the quorum for a meeting of the joint steering committee shall be two members comprising one member from each of the Board and Project Co.
- 7.5 Accurate written minutes of all quorate meetings of the joint steering group, which are approved by all members attending the applicable meeting shall be taken and kept by the joint steering group chair, and copies circulated promptly to the Parties. A full set of accurate and agreed written minutes shall be kept by Project Co and shall be open to inspection by the Parties at any time, upon request.
- 7.6 Neither the Board nor Project Co shall rely on any act or omission of the joint steering group nor any members acting in that capacity, so as to give rise to any waiver or personal bar in respect of any right, benefit, or claim and/or obligation and/or liability of any Party.

## Part 5

## Section B

**1 Subcontractor Insolvency**

- 1.1 Project Co shall at any time from the Advance Design Works Commencement Date until and including the Advance Design Works Indemnity Expiry Date, notify the Board's Representative in writing immediately if Project Co becomes aware of any Subcontractor Insolvency.
- 1.2 Project Co shall at any time from the Advance Design Works Commencement Date until and including the Advance Design Works Indemnity Expiry Date notify the Board's Representative in writing immediately if Project Co terminates the employment of the Subcontractor under the Subcontract Initial Engagement Agreement by reason of Subcontractor Insolvency.
- 1.3 During the period from the Advance Design Works Commencement Date until and including the Advance Design Works Indemnity Expiry Date and where either paragraph 1.1 and/or paragraph 1.2 of this Section B applies, Project Co shall take reasonable measures to ensure that the Site, the site of the Advance Design Works and any site materials for use in the Advance Design Works are adequately protected, and that such site materials are retained on the site of the Advance Design Works.
- 1.4 Where paragraph 1.2 of this Section B applies and (as at the date of termination of the Insolvent Contractor's employment) the Advance Design Works Completion Date has not been achieved, the Board and Project Co shall meet no later than eight (8) Business Days from the date of termination of the Insolvent Contractor's employment, so that the Board may decide whether the Advance Design Works or incomplete part should be carried out and completed; and if there is a requirement for the Advance Design Works or incomplete part to be carried out and completed, Project Co shall properly operate the provisions of the Subcontract Initial Engagement Agreement on termination for Subcontractor Insolvency and paragraph 1.5 of this Section B shall apply; and if it is decided not to have the Advance Design Works or incomplete part carried out and completed, then Project Co shall properly operate the provisions of the Subcontract Initial Engagement Agreement on termination for Subcontractor Insolvency and Project Co shall procure that (a) any statement sent to the Insolvent Contractor pursuant to such termination provisions is copied to the Board's Representative and (b) there is prepared and sent to the Board's Representative a statement setting out on an open book basis:
- 1.4.1 the total value of the work properly executed at the earlier of either (1) the date of termination or (2) the date on which the Subcontractor Insolvency occurred, ascertained in accordance with the payment provisions in Paragraph 4 of the Initial Engagement Agreement as if the Insolvent Contractor's employment had not been terminated, together with any amounts due to Project Co under this Initial Engagement Agreement not included in such total; and
- 1.4.2 the aggregate amount of any costs and/or expenses properly incurred vouched and mitigated by the Board and/or any claim, costs, loss and/or damage caused to the Board (such costs, losses and/or damage to be properly substantiated and mitigated in accordance with clause 59 of the Project Agreement), whether arising as a result of the termination of the Insolvent Contractor's employment or otherwise;

and after taking into account amounts previously paid to Project Co under this Initial Engagement Agreement, if the amount stated under paragraph 1.4.2 of this Section B exceeds the amount stated under paragraph 1.4.1 of this Section B the difference shall be a debt payable by Project Co to the

Board or if the amount stated in paragraph 1.4.1 of this Section B is less than paragraph 1.4.2 of this Section B the difference shall be a debt payable by the Board to Project Co.

1.5 Where pursuant to paragraph 1.4 of this Section B the Board requires the Advance Design Works to be carried out and completed, Project Co shall:-

1.5.1 mitigate the effects of the Subcontractor Insolvency on the carrying out and completion of the Advance Design Works including the costs of and the time for completion of the Advance Design Works and the provisions of clause 49.3 and 49.4 of the Project Agreement shall apply *mutatis mutandis*; and

1.5.2 appoint as expeditiously as possible, and in any event not later than 2 months from the date of termination of the Insolvent Contractor's employment, a Replacement Contractor to commence the carrying out, within the said 2 month period, and to complete, the Advance Design Works, and to rectify any Advance Design Works Defects in the Advance Design Works, on reasonably similar terms and conditions as those in the Subcontract Initial Engagement Agreement with the Insolvent Contractor, subject to such reasonable adjustment to the completion date the Advance Design Works having regard to the programme for the Advance Design Works included in the Schedule, Part 1, and that part of the Defined Cost for those parts of the Advance Design Works which are incomplete at the date of termination of the Insolvent Contractor's employment as is reasonably required by the Replacement Contractor to carry out and complete the Advance Design Works as soon as reasonably practicable after appointment. In determining the terms and conditions of the Subcontract Initial Engagement Agreement with the Replacement Contractor the Board and Project Co shall as necessary and appropriate meet to agree such amendments as are reasonable and appropriate having regard to the Advance Design Works and accepted Good Industry Practice, for the replacement Subcontract Initial Engagement Agreement. The terms of this Initial Engagement Agreement shall apply *mutatis mutandis* in respect of any Replacement Contractor save where the parties acting reasonably, agree otherwise in writing.

1.5.3 The Board shall pay Project Co its reasonable and properly incurred and vouched costs of complying with paragraph 1.5.2 of this Section B except to the extent:-

- (a) such costs and/or other sums are recoverable from the Insolvent Contractor pursuant to the Subcontract Initial Engagement Agreement; and/or
- (b) such costs and/or any other sums are recoverable by Project Co pursuant to any Performance Bond and/or any Parent Company Guarantee for Advance Design Works; and
- (c) provided that Project Co has mitigated any costs in accordance with paragraph 1.5.1 of this Section B.

Project Co and the Board agree that in determining whether in relation to paragraph 1.5.3(a) of this Section B costs and/or other sums are recoverable and whether accordingly court or other legal proceedings should be commenced with a view to making recovery, the parties shall meet as necessary to agree what remedies (including court or other legal proceedings) Project Co may have against the Insolvent Contractor, what costs and/or other sums have already been recovered by Project Co and what costs and/or other sums have not been recovered, the steps already taken to make recovery and if steps have been taken, then details of the steps taken, and a fair and reasonable estimate by Project Co of the time and costs which Project Co reasonably estimates would be associated with any such court or other legal proceedings, so that the Board having regard to this information together with the

costs and/or other sums referred to in paragraph 1.5.3(a) of this Section B to the extent not already recovered by Project Co, are likely to be recoverable and/or whether the time and/or cost of court or other legal proceedings to make recovery is disproportionate to the time and/or costs involved in pursuing such court or other legal proceedings.

## PART 6

## Section A

**INDEMNITY AND OTHER DRAFTING TO BE INCLUDED IN SUPPLEMENTAL AGREEMENT NO. 2****Definitions to be included in Supplemental Agreement No. 2:**

**Additional Works** [to comprise the amendments required to the Facilities as specified in HVC 107 and to be further set out in a schedule to the SA];

**Additional Works Commencement Date** means the date the Additional Works Contractor commences the Additional Works or any part thereof at the Facilities and / or the Site;

**Additional Works Completion Date** means the date of practical completion or completion or substantial completion (as applicable, having regard to the appropriate term in the applicable Additional Works Contract) of the whole of the Additional Works;

**Additional Works Contract** [to be defined to refer to the NEC4/other forms of contract] between Project Co and each Additional Works Contractor for the Additional Works the terms of which have been reviewed and are approved in writing by the Board;

**Additional Works Contractor** means Imtech Engineering Services Central Limited (No 00443522) whose registered office is at G&H House, Hooton Street, Carlton Road, Nottingham NG3 5GL and any other contractor whose identity has been approved in writing by the Board, who is engaged by Project Co under any Additional Works Contract in relation to the carrying out of the Additional Works;

**Additional Works Contractor Excluded Liability** means any entitlement that Project Co would have had to make any claim or recover any Direct Losses under the Additional Works Contract were it not for the existence of a cap or exclusion or limitation of liability including a maximum aggregate cap on liability.

**Additional Works Contractor Insolvency** means the occurrence of any of the following events in respect of the Additional Works Contractor, namely:

- (a) any arrangement or composition with or for the benefit of creditors (including any voluntary arrangement as defined in the Insolvency Act 1986) being entered into by or in relation to the Additional Works Contractor;
- (b) a receiver, administrator, administrative receiver or other encumbrancer taking possession of or being appointed over, or any distress, execution or other process being levied or enforced (and not being discharged within ten (10) Business Days) upon, the whole or any material part of the assets of the Additional Works Contractor;
- (c) the Additional Works Contractor ceasing to carry on business;
- (d) a petition being presented (and not being discharged within twenty (20) Business Days), or a resolution being passed or an order being made for the administration or the winding up, bankruptcy or dissolution of the Additional Works Contractor; or
- (e) if the Additional Works Contractor shall suffer any event analogous to the events set out in paragraphs (a)-(d) in any jurisdiction on which it is incorporated or resident;

**Additional Works Defect** means any defect or fault in the Additional Works (not being a Snagging matter) which occurs due to a failure by the Additional Works Contractor to comply with its obligations under the applicable Additional Works Contract;

**Additional Works Indemnity Expiry Date** means the date falling five (5) years after the Additional Works Completion Date save in relation to any claims notified in accordance with paragraph 1 of Section A of the Schedule, Part 6 before the Additional Works Indemnity Expiry Date but which claims remain undischarged at such date;

**Additional Works Interface Claim** means in respect of a claim made by Project Co acting in accordance with Good Industry Practice and not acting frivolously or vexatiously against the Contractor, the Service Provider or any Additional Works Contractor, arising out of or in connection with:

- (a) the Works;
- (b) the Additional Works;
- (c) a Defect or Additional Works Defect; and /or
- (d) a Service Event,

where and to the extent the Works or the Services have been altered by the Additional Works; where the Contractor, the Additional Works Contractor or the Service Provider (as the case may be) disputes liability for such claim on the following basis:-

- (i) in the case of the Contractor that the claim has been caused by performance by the Additional Works Contractor of its obligations under the Additional Works Contract;
- (ii) in the case of the Additional Works Contractor, that the claim has been caused by the performance by the Contractor of its obligations under the Construction Contract or that the claim has been caused by the performance by the Service Provider of its obligations under the Service Contract; and/or
- (iii) in the case of the Service Provider that the claim has been caused by the performance of the Additional Works Contractor of its obligations under the Additional Works Contract;

**Additional Works Interface Issue** means any claim in respect of or arising out of or in connection with the Additional Works which is not an Additional Works Contractor Excluded Liability and which is not recoverable under the Construction Contract or the Services Contract or the Additional Works Contract;

**Holding Company** means, in relation to a company or corporation, any other company or corporation in respect of which that company or corporation is a Subsidiary;

**Insolvent Contractor** means any Additional Works Contractor which is subject to any Additional Works Contractor Insolvency;

**Interim Indemnified Losses** has the meaning given to it in paragraph 1.1.2 of Section A of the Schedule, Part 6;

**Joint Decision Making** has the meaning given to it in paragraph 2 of Section A of the Schedule, Part 6;

**Joint Steering Group** has the meaning given to it in paragraph 8 of Section A of the Schedule, Part 6;

**"Material Proceedings Step"** means any of the following in relation to any Additional Works Interface Claim:

- (a) commencing any Dispute Resolution Procedure either by way of Adjudication or Court proceedings;
- (b) commencing any appeal against any judgement, order or other decision of the Court or an adjudicator or commencing any defence of any appeal lodged by the opposing party;

- (c) commencing a proof before answer;
- (d) commencing the enforcement of any judgement, order or other decision of the Court or an adjudicator;
- (e) amending any claim to include or omit a head of claim or alter the legal basis of any claim;
- (f) making an admission in relation to any defence which adversely impacts on the prospects of successfully pursuing any claim; or
- (g) agreeing any sist.

**Parent Company Guarantee** means any agreement whereby the performance of any Additional Works Contract and / or obligations of any Additional Works Contractor is guaranteed in whole or in part in favour of Project Co by any Holding Company of any Additional Works Contractor;

**Performance Bond** means any agreement whereby the obligations of any Additional Works Contractor are guaranteed in whole or in part in favour of Project Co by any bondsman;

**Replacement Contractor** means any contractor who is appointed to carry out and complete any Additional Works in substitution or replacement for any Insolvent Contractor;

**Subsidiary** means a subsidiary within the meaning of section 1159 of the Companies Act 2006;

**Drafting to be included in Supplemental Agreement No. 2**

**1. Indemnity**

1.1 The Board shall with effect from the Additional Works Commencement Date until the Additional Works Indemnity Expiry Date indemnify and keep Project Co indemnified at all times from and against:

1.1.1 all Direct Losses sustained by Project Co as a result of or in relation to:-

- (a) any unplanned interruption to (a) the utilities infrastructure at the Facilities and/or (b) the provision of the Project Operations at the Facilities, or the requirement for unplanned installation of any apparatus to provide connectivity to any utilities supply networks, as a result of the Additional Works or an Additional Works Defect;
- (b) Additional Works Interface Issue;
- (c) Additional Works Contractor Excluded Liability;
- (d) Additional Works Contractor Insolvency provided and to the extent only that Project Co complies with the Section B of Schedule, Part 6.

1.1.2 all Direct Losses ("**Interim Indemnified Losses**") sustained by Project Co as a result of or in relation to any Additional Works Interface Claim.

1.2 Notwithstanding any other provisions of this Supplemental Agreement No.2 and/or the Project Agreement:-

1.2.1 Project Co shall not be entitled to recover or make a claim pursuant to paragraph 1.1 of this Section A to the extent that:

- (a) Project Co has otherwise been compensated for the relevant Direct Losses pursuant to the Initial Engagement Agreement, this Supplemental Agreement No 2, the Project Agreement, the Construction Contract, the Service Contract, any Additional Works Contract or to any extent that the risk or circumstance to which the Direct Losses relate is insured against by any of the insurances which

Project Co or the Board have to maintain pursuant to the Initial Engagement Agreement and/ or this Supplemental Agreement No 2 and/or the Project Agreement; and/or

- (b) the Direct Losses have been caused or contributed to (whether by act, omission, breach, default or otherwise) by Project Co.
- 1.2.2 The indemnity in paragraph 1.1 of this Section A shall put Project Co in no better and no worse position than it would have been in had the circumstance giving rise to the claim under the indemnity not occurred; and
  - 1.2.3 Project Co shall pursue any relevant claims under the Ancillary Documents, the Subcontract Initial Engagement Agreement and the Additional Works Contracts and any relevant insurance policy promptly; and
  - 1.2.4 Project Co shall mitigate any Direct Losses suffered by Project Co in relation to which the Board has indemnified Project Co under paragraph 1.1 of this Section A; and
  - 1.2.5 in connection with any claim under the indemnity in paragraph 1.1 of this Section A, Project Co shall give notice in writing to the Board as soon as practicable setting out:
    - (a) the circumstances which give rise to the Direct Losses together with such supporting information as is reasonably requested by the Board's Representative;
    - (b) details of all amounts claimed in respect of the Direct Losses together with such supporting information including invoices as is reasonably requested by the Board's Representative;
    - (c) any consequential effects of the circumstances giving rise to the Direct Losses; and
    - (d) details of the measures which Project Co has adopted or intends to adopt to mitigate the Direct Losses in accordance with paragraph 1.2.4 of this Section A.

## 2.

- 2.1 Where the indemnity in paragraph 1.1.2 of this Section A applies, in addition to the provisions in paragraph 1 of this Section A, Project Co shall give notice in writing to the Board setting out details of any notice, demand, letter or other document concerning any Additional Works Interface Claim for which it appears that Project Co is, or may become, entitled to indemnification under paragraph 1.1.2 of this Section A as soon as practicable. In addition, Project Co shall:
  - (a) regularly keep the Board informed of the progress of any Additional Works Interface Claim and consult with the Board at all relevant stages of the Additional Works Interface Claim and provide the Board with copies of all documentation relevant to any Additional Works Interface Claim reasonably requested by the Board as soon as reasonably practicable; and
  - (b) not bring the name of the Board into disrepute; and
  - (c) not pay or settle an Additional Works Interface Claim without the prior consent of the Board, such consent not to be unreasonably withheld or delayed; and
  - (d) notify the Board, where practicable sufficiently far in advance of and so as to enable the Board to jointly decide with Project Co, any Material Proceedings Step ("**Joint Decision Making**"). If Project Co and the Board do not agree on any Joint Decision Making matter then the Board and Project Co agree to refer such matter to the Joint Steering Group. If the Joint Steering Group does not



agree the matter then the Board shall be entitled to take over the conduct of the claim; and

- (e) Where an Additional Works Interface Claim is agreed or determined to be the liability of a party other than Project Co, the provisions of paragraph 4 of this Section A shall apply; and
  - (f) Where an Additional Works Interface Claim is agreed or determined to be the liability of Project Co then subject to paragraph 1.2 of this Section A the Additional Works Interface Claim shall be deemed to be an Additional Works Interface Issue.
3. Project Co shall inform the Board in advance of its estimate of any Direct Losses which it anticipates it will incur from time to time that would be covered by the indemnity in paragraph 1.1 of this Section A, and shall issue the Board with an invoice in relation to said Direct Losses. The Board shall make payment of any such invoice within 7 days of receipt of the same.
4. Where the Board pays to Project Co an amount in respect of an indemnity under paragraph 1.1 of this Section A and Project Co subsequently recovers from the Additional Works Contractor, Construction Contractor or the Services Provider or insurances a sum which is directly referable to the fact, matter, event or circumstances giving rise to the claim under the indemnity pursuant to paragraph 1.1 of this Section A, Project Co shall as soon as practicable repay to the Board whichever is the lesser of:
- (a) an amount equal to the sum recovered less any costs and expenses reasonably and properly incurred by Project Co in recovering the same; and
  - (b) the amount paid to Project Co by the Board in respect of the relevant Direct Losses under paragraph 3 of this Section A.
5. With effect from the Additional Works Commencement Date the Board shall not apply, levy or deduct or issue to Project Co (as applicable) any Deduction, a notice in respect of a Service Event, a Warning Notice or Project Co Event of Default as a result of and to the extent caused by or materially contributed to by:
- 5.1 an Additional Works Interface Issue and an Additional Works Contractor Excluded Liability;
  - 5.2 an Additional Works Interface Claim (save in respect of Deductions which are covered by paragraph 1.1.2 of this Section A);
  - 5.3 any unplanned interruption to (a) the utilities infrastructure at the Facilities and/ or (b) the provision of the Project Operations at the Facilities, or the requirement for unplanned installation of any apparatus to provide connectivity to any utilities supply networks which have failed, in each such case as a result of an Additional Works Defect;
  - 5.4 an Additional Works Contractor Excluded Liability; and
  - 5.5 an Additional Works Contractor Insolvency
- where the restriction on the Board to apply, levy, deduct or issue any such Deduction or notice in respect of a Service Event, Warning Notice or Project Co Event of Default first arose as a result of a Service Event which occurred prior to the Additional Works Indemnity Expiry Date and irrespective as to whether such Service Event is still subsisting at or following the Additional Works Indemnity Expiry Date.
- 6.
- 6.1 In the event of any dispute between the Board and Project Co in connection with paragraphs 1 or 2 of this Section A either party may refer the matter to adjudication until otherwise agreed or determined by the Courts pursuant to Schedule 20 (Dispute

Resolution Procedure) of the Project Agreement which shall apply mutatis mutandis to this Supplemental Agreement No. 2.

- 6.2 Project Co may at any time ask that additional parties shall be joined in the adjudication. Joinder of additional parties shall be subject to the agreement of the Adjudicator and the existing and additional parties. An additional party shall have the same rights and obligations as the Parties, unless otherwise agreed by the adjudicator and the Parties. Such adjudication shall be carried out in accordance with the rules and procedures set out in Schedule Part 20 (Dispute Resolution Procedure) of the Project Agreement.
- 6.3 This Supplemental Agreement No 2 is supplementary to the Project Agreement and from the date of this Supplemental Agreement No 2, the Project Agreement shall have effect as amended by this Supplemental Agreement No 2. For the avoidance of doubt, except as amended by this Supplemental Agreement No 2 the Project Agreement shall continue to have full force and effect.
- 6.4 Without prejudice to the foregoing generality, Project Co shall at all times comply with its general obligations pursuant to Clause 22.1 and 22.2 of the Project Agreement to provide the Services under this Supplemental Agreement No 2 (as the same may be amended or adjusted in accordance with this Supplemental Agreement No 2) without limiting Project Co's right to be indemnified under paragraph 1.1 of this Section A.

## 7. Rectification Of Defects

- 7.1 ProjectCo also confirms that the Supplemental Agreement will include drafting confirming the following:
- 7.1.1 where an Additional Works Defect or other Defect in the ventilation system or fire system which have been the subject of the Additional Works arises, Project Co will use reasonable endeavours to mobilise to rectify that Defect or Additional Works Defect in accordance with rectification times to be agreed, subject always to Project Co's entitlement to the indemnity pursuant to this Supplemental Agreement No. 2; and;
- 7.1.2 where a Permanent Repair is required (whether or not a temporary repair has been undertaken)
- (a) ProjectCo shall use reasonable endeavours to undertake the works by the Permanent Repair Deadline (agreed between the parties, acting reasonably) and where ProjectCo cannot complete the relevant Permanent Repair by such Permanent Repair Deadline, such Permanent Repair Deadline shall be deemed to be extended by such additional period as ProjectCo may, using reasonable endeavours, require to complete the Permanent Repair; and
- (b) in any circumstances where ProjectCo has not complied with 7.1.2(a) above and the Permanent Repair is not undertaken by the Permanent Repair Deadline then a Performance Failure or, as the case may be, an Availability Failure, will occur at that date and time and the provisions of paragraph 2 (Deductions for Performance Failures), paragraph 4 (Deductions for Availability Failures) and, if applicable, paragraph 5 (Repeated Failures) of Section 3 (Deductions from Monthly Service Payments) of Schedule Part 14 (Payment Mechanism) of the Project Agreement shall apply and the indemnity in respect of Deductions (without prejudice to the other Direct Losses which the Board shall remain obliged to indemnify Project Co pursuant to this Supplemental Agreement No. 2 ) shall cease to apply from the Permanent Repair Deadline until Rectification.

## 8. Joint Steering Group

- 8.1 Project Co and the Board shall establish a joint steering group to provide executive management and guidance over the key deliverables of the completion of the Additional Works and the commissioning of the Facilities until completion of the Additional Works. The members of the joint steering group will meet at least once per month (or more or less regularly as required) to review progress against the programme for the Additional Works and assist in resolving any matters which have become an issue or blockage in achieving the deliverables.
- 8.2 The initial members of the joint steering group shall be:
- 8.2.1 the Board: Jim Crombie and Susan Goldsmith; and
- 8.2.2 Project Co: Matthew Templeton and Viv Cockburn.
- 8.3 Roger Thompson of Project Co will chair the joint steering group and will also be a member. In the case of each of Project Co and the Board, no more than two members shall attend any meeting in addition to the chair. The Parties may remove their members and appoint replacements, by written notice delivered to the other Party at any time. A member on the joint steering group may appoint and remove an alternate (who may be another representative of the applicable Party, as applicable) by written notice to all other members.
- 8.4 The joint steering group may adopt such procedures and practices for the conduct of the activities of the joint steering group as they consider appropriate, from time to time, provided that:
- 8.4.1 only decisions that are made unanimously by all of the members present at meetings shall have any effect; and
- 8.4.2 the quorum for a meeting of the joint steering committee shall be two members comprising one member from each of the Board and Project Co.
- 8.5 Accurate written minutes of all quorate meetings of the joint steering group, which are approved by all members attending the applicable meeting shall be taken and kept by the joint steering group chair, and copies circulated promptly to the Parties. A full set of accurate and agreed written minutes shall be kept by Project Co and shall be open to inspection by the Parties at any time, upon request.
- 8.6 Neither the Board nor Project Co shall rely on any act or omission of the joint steering group nor any members acting in that capacity, so as to give rise to any waiver or personal bar in respect of any right, benefit, or claim and/or obligation and/or liability of any Party.

## Part 6

## Section B

**1 Additional Works Contractor Insolvency**

- 1.1 Project Co shall at any time from the Additional Works Commencement Date until and including the Additional Works Indemnity Expiry Date, notify the Board's Representative in writing immediately if Project Co becomes aware of any Additional Works Contractor Insolvency.
- 1.2 Project Co shall at any time from the Additional Works Commencement Date until and including the Additional Works Indemnity Expiry Date notify the Board's Representative in writing immediately if Project Co terminates the employment of the Additional Works Contractor under any Additional Works Contract by reason of Additional Works Contractor Insolvency.
- 1.3 During the period from the Additional Works Commencement Date until and including the Additional Works Indemnity Expiry Date and where either paragraph 1.1 of this Section B and/or paragraph 1.2 of this Section B applies, Project Co shall take reasonable measures to ensure that the Site, the site of the Additional Works and any site materials for use in the Additional Works are adequately protected, and that such site materials are retained on the site of the Additional Works.
- 1.4 Where paragraph 1.2 of this Section B applies and (as at the date of termination of the Insolvent Contractor's employment) the Additional Works Completion Date has not been achieved, the Board and Project Co shall meet no later than eight (8) Business Days from the date of termination of the Insolvent Contractor's employment, so that the Board may decide whether the Additional Works or incomplete part should be carried out and completed; and if there is a requirement for the Additional Works or incomplete part to be carried out and completed, Project Co shall properly operate the provisions of the Additional Works Contract on termination for Additional Works Contractor Insolvency and paragraph 1.5 of this Section B shall apply; and if it is decided not to have the Additional Works or incomplete part carried out and completed, then Project Co shall properly operate the provisions of the Additional Works Contract on termination for Additional Works Contractor Insolvency and Project Co shall procure that (a) any statement sent to the Insolvent Contractor pursuant to such termination provisions is copied to the Board's Representative and (b) there is prepared and sent to the Board's Representative a statement setting out on an open book basis:
- 1.4.1 the total value of the work properly executed at the earlier of either (1) the date of termination or (2) the date on which the Additional Works Contractor Insolvency occurred, ascertained in accordance with the payment provisions in Clause [TBC] of Supplemental Agreement No. 2 as if the Insolvent Contractor's employment had not been terminated, together with any amounts due to Project Co under this Supplemental Agreement No. 2 not included in such total; and
- 1.4.2 the aggregate amount of any costs and/or expenses properly incurred vouched and mitigated by the Board and/or any claim, costs, loss and/or damage caused to the Board (such costs, losses and/or damage to be properly substantiated and mitigated in accordance with clause 59 of the Project Agreement), whether arising as a result of the termination of the Insolvent Contractor's employment or otherwise;

and after taking into account amounts previously paid to Project Co under this Supplemental Agreement No.2, if the amount stated under paragraph 1.4.2 of this Section B exceeds the amount stated under paragraph 1.4.1 of this Section B the difference shall be a debt payable by Project Co to the Board or if the amount stated in paragraph 1.4.1 of this Section B is less than paragraph 1.4.2 of this Section B the difference shall be a debt payable by the Board to Project Co.

1.5 Where pursuant to paragraph 1.4 of this Section B the Board requires the Additional Works to be carried out and completed, Project Co shall:-

1.5.1 mitigate the effects of the Additional Works Contractor Insolvency on the carrying out and completion of the Additional Works including the costs of and the time for completion of the Additional Works and the provisions of clause 49.3 and 49.4 of the Project Agreement shall apply *mutatis mutandis*; and

1.5.2 appoint as expeditiously as possible, and in any event not later than 2 months from the date of termination of the Insolvent Contractor's employment, a Replacement Contractor to commence the carrying out, within the said 2 month period, and to complete, the Additional Works, and to rectify any Additional Works Defects in the Additional Works, on reasonably similar terms and conditions as those in the Additional Works Contract with the Insolvent Contractor, subject to such reasonable adjustment to the Completion Date for the Additional Works and that part of the Defined Cost for those parts of the Additional Works which are incomplete at the date of termination of the Insolvent Contractor's employment as is reasonably required by the Replacement Contractor to carry out and complete the Additional Works as soon as reasonably practicable after appointment. In determining the terms and conditions of the Additional Works Contract with the Replacement Contractor the Board and Project Co shall as necessary and appropriate meet to agree such amendments as are reasonable and appropriate having regard to the Additional Works and accepted Good Industry Practice, for the replacement Additional Works Contract. The terms of this Initial Engagement Agreement shall apply *mutatis mutandis* in respect of any Replacement Contractor save where the parties acting reasonably, agree otherwise in writing; and

1.5.3 The Board shall pay Project Co its reasonable and properly incurred and vouched costs of complying with paragraph 1.5.2 of this Section B except to the extent:-

- (a) such costs and/or other sums are recoverable from the Insolvent Contractor pursuant to the Additional Works Contract; and/or
- (b) such costs and/or any other sums are recoverable by Project Co pursuant to any Performance Bond and/or any Parent Company Guarantee for Additional Works; and
- (c) provided that Project Co has mitigated any costs in accordance with paragraph 1.5.1 of this Section B; and

Project Co and the Board agree that in determining whether in relation to paragraph 1.5.3(a) of this Section B costs and/or other sums are recoverable and whether accordingly court or other legal proceedings should be

commenced with a view to making recovery, the parties shall meet as necessary to agree what remedies (including court or other legal proceedings) Project Co may have against the Insolvent Contractor, what costs and/or other sums have already been recovered by Project Co and what costs and/or other sums have not been recovered, the steps already taken to make recovery and if steps have been taken, then details of the steps taken, and a fair and reasonable estimate by Project Co of the time and costs which Project Co reasonably estimates would be associated with any such court or other legal proceedings, so that the Board having regard to this information together with the costs and/or other sums referred to in paragraph 1.5.3(a) of this Section B to the extent not already recovered by Project Co, are likely to be recoverable and/or whether the time and/or cost of court or other legal proceedings to make recovery is disproportionate to the time and/or costs involved in pursuing such court or other legal proceedings.

**261119 Board Change Indemnity**

To: Susan Goldsmith  
**LOTHIAN HEALTH BOARD,**  
Waverley Gate,  
2-4 Waterloo Place,  
Edinburgh,  
EH1 3EG (the "**Board**").

From: **IHS LOTHIAN LIMITED** (company registered number SC493676) whose registered office is at  
13 Queen's Road,  
Aberdeen,  
AB15 4YL (the "**Project Co**").

26 November 2019

Dear Susan,

**Project Agreement dated 12 and 13 February 2015 between (1) the Board; and (2) Project Co (as amended, supplemented, varied, extended or restated from time to time) (the "Project Agreement")**  
**High Value Change 095A, 096A and 102 ("High Value Changes")**

We refer to your letter received 22 November and our subsequent discussion on 25 November 2019.

We welcome the positive and collaborative manner of the discussions and acknowledge the Board's programme aspirations and corporate governance requirements. Given that the scope of works has been widened as a result of the further High Value Change instructions, and as such is more complex and covers a much larger area of the hospital than was originally anticipated, we believe it is more appropriate to contain a wider, more general indemnity as set out in the attached word document. We would intend for this indemnity to apply to both the Letter of Engagement and the Supplemental Agreement. In the interests of assisting the understanding and acceptance of our indemnity, we set out in the bullets below our thought process and key aspects which have informed our requirements. This also takes cognisance of both your feedback yesterday and that your response encompassed High Value Changes 095A, 096A and 102:

- Given the timing and nature of the Additional Works, the preferred delivery strategy would have been to instruct Multiplex to undertake these, thereby preserving the warranties and contractual flow-down to the two appointed Sub-contractors. This option was not progressed and as a consequence we require 'non-standard' protection to ensure IHSL is in a 'no better no worse' position.
- A secondary option would have been to instruct Bouygues to undertake the Additional Works as a Change through the Services Agreement. However, given the expedited timetable, complexity of these works, together with the volume of other Changes (High and Low) currently being delivered / considered, we felt that Bouygues' focus should be on mobilisation activities, Helpdesk readiness and preparing for occupancy in Spring 2020.

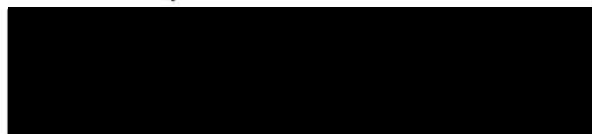
- With the endorsement of IHSL's proposal to self-deliver and appoint a third party (Imtech), NHSL accepts that the nature of the relationship with Imtech is via a standard construction industry form of contract. We previously agreed that given the nature and scale of the works, limited market interest and challenging programme aspirations, it would not be possible to impose 'PPP/NPD risks' on a third-party contractor. Consequently, we require NHSL to accept that Imtech's liabilities would be limited to standard NEC provisions and cannot, for instance, extend to the flow-down of Deductions from the Project Agreement.
- The overall strategy in response to the challenging timetable to complete the works and target the migration of the new hospital in Autumn 2020 and takes into account your feedback of 26 November.
- A key NHSL requirement is that Multiplex and Bouygues should be pursued to remedy works/services for which they are liable under their respective subcontracts. We recognise and agree with this position but at the same time feel that we cannot be expected to absorb the cost of pursuing such remedies given the likelihood that, in certain circumstances, the immediate defence will be that any alleged defect is a consequence of the Additional Works. In our meeting we discussed the option of enabling NHSL to pursue these rights under a 'name borrowing' arrangement but understand that the Board do not wish to progress this proposal. In response we have drafted the attached to place a positive obligation on IHSL to pursue recourse under its subcontracts but that NHSL will fund IHSL's costs in so doing.
- In an effort to limit the Board's risk, IHSL's position remains that the indemnity is required for a period of 5 years only. We would highlight that this was originally in the context of Bouygues delivering the limited ventilation works in Critical Care and Haematology Departments. We are now progressing a self-delivery proposal (including Enhanced Fire Works to several areas within hospital) - which places an additional level of risk on IHSL without any corresponding return - but we have maintained this position in the interests of seeking a swift agreement.
- The draft indemnity covers the following principles:
  - i. The indemnity will cover all costs, damages etc. arising as a result of the instruction to carry out the additional works, with the caveat that ProjectCo will be put under no better and no worse position than they would have been in had the Additional Works not been instructed;
  - ii. ProjectCo will be under an obligation to mitigate and pursue all contractual rights as necessary under the Construction Contract, Services Contract or the new contract with Imtech;
  - iii. Where a dispute arises with either of the subcontractors or Imtech,
    - a. ProjectCo will keep the Board regularly informed of the conduct of the dispute;
    - b. NHSL will fund all dispute costs and any rectification works costs required until liability is finally determined; and
    - c. If the liability sits solely with any of the subcontractors or Imtech, this will then be recovered by ProjectCo and the damages and costs incurred pursuing the litigation reimbursed to the Board; where liability is determined to not sit solely with either party but has arisen due to interface issues, this risk will sit with the Board.
  - iv. In addition, any deductions under the Project Agreement will be held in abeyance and will only be applied to the extent that liability is determined to sit with either Multiplex or Bouygues.



- Successful delivery of the programme demands a significant level of commitment, time and resource from multiple parties in the December – January period. This is not just limited to Imtech and Hoare Lea but also the IHSL, NHSL, George Street, wider sub-contractors which may be required for Change 102, and respective advisers. This will extend to engaging with Lenders and their advisers to enable us to obtain lender consent prior to signing of the Supplemental Agreement by end-January. As a consequence, we consider that early agreement of indemnity drafting is necessary now, rather than deliberating further into the New Year.

IHSL are fully committed to delivering the High Value Changes and supporting NHS Lothian in the migration of patients and staff into the new hospital at the earliest opportunity. We look forward to progressing these constructive discussions and formalising an agreement.

Yours faithfully,



on behalf of  
**IHS LOTHIAN LIMITED**

Encl.

Draft Indemnity

## Written Statement

**Brian Currie**

### Introduction

1. My name is Brian Currie. I am the currently employed as the Senior Programme Director for NHS Lothian. My role involves overseeing the three major projects that NHS Lothian currently have underway. Those projects are the new Edinburgh Cancer Centre at the Western General Hospital, the re-provision of the eye hospital, known as the Princess Alexandra Eye Pavilion and also the National Treatment Centre Lothian. They are all major projects with the latter two costing well in excess of £100 million each. I was appointed to oversee these projects on behalf of my line report, which is currently Susan Goldsmith as Director of Finance and also on behalf of the Senior Responsible Officer for those projects, which is currently Jim Crombie.
2. I was involved as the Project Director in the planning, design, and construction of the Royal Hospital for Children and Young People (RHCYP) and the Department of Clinical Neuroscience (DCN) (“the Project”) on behalf of NHS Lothian. My role in the project was Project Director. I have been asked to provide a written statement to the Scottish Hospitals Inquiry (SHI) in relation to my involvement in the Project from the commencement up to the start of the procurement exercise. I have been provided with a list of questions and a bundle of documents from the SHI. This statement seeks to answer the list of questions that are relevant to my role in the Project to the best of my recollection. Some of the events I’ve been asked about occurred fifteen or so years ago and, given the passage of time, I cannot recall all of the events and documents.

### Background

3. I graduated in 1978 with a degree in Architecture and was awarded a Diploma in Advanced Architectural Studies in 1980. I worked as an Architect in private practice for around 8 years before moving on to Project, Construction and Design Management roles in the construction industry across a broad spectrum of sectors. Immediately prior to the Project Director role in NHS Lothian, I was Regional Director for Scotland and NE

England for Lendlease Projects and was managing a variety of construction projects with a total construction value in excess of £450million. I have significant experience of delivering high value and complex construction projects including the RBS Edinburgh Property Strategy and RBS Gogarburn Campus.

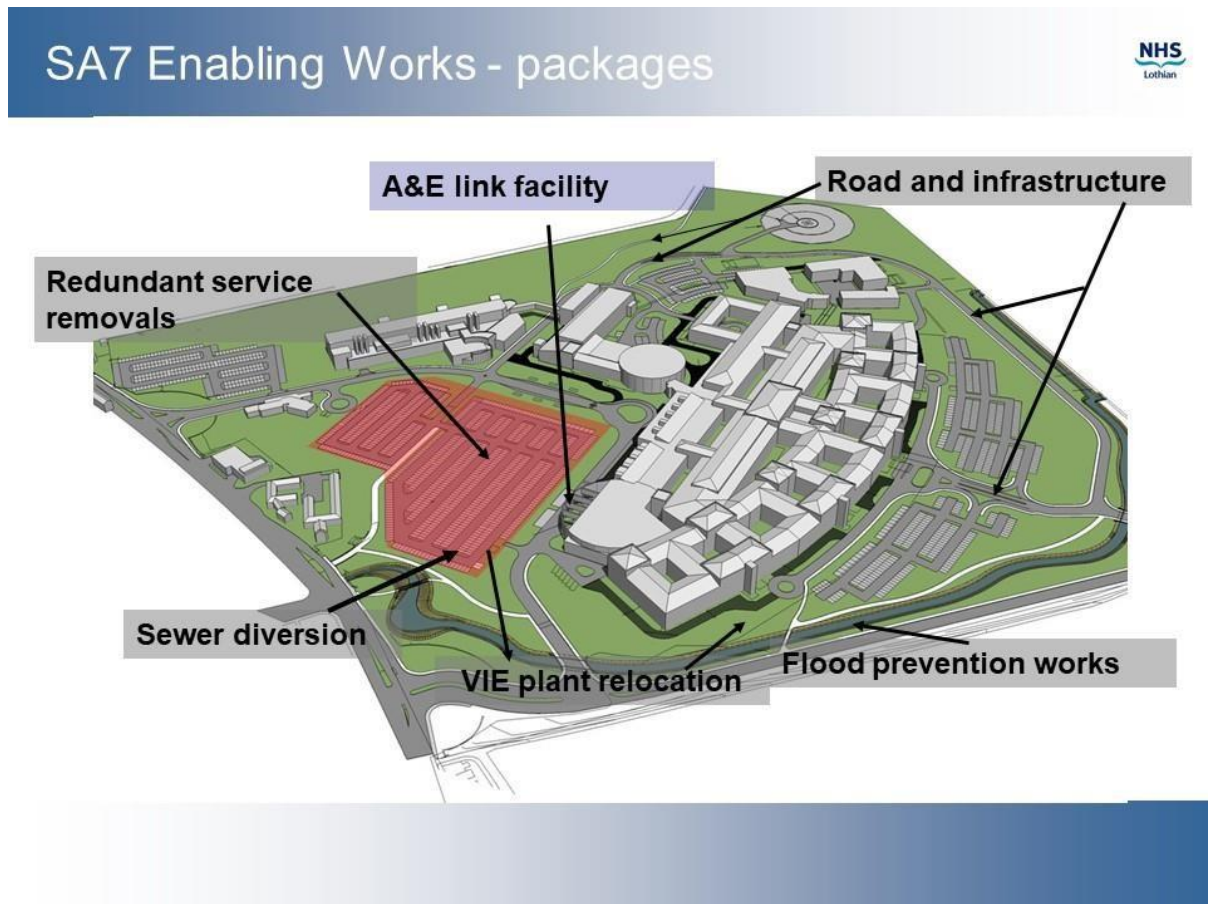
4. In my role as Project Director I was responsible for aspects of project delivery on behalf of NHS Lothian within the defined scope, quality and timescale of the Project. I led NHS Lothian Project Team of twelve managers across various disciplines. I was involved with the procurement and management of technical, legal and financial advisors. I liaised with a variety of internal and external stakeholders. I led the redirection of the Project from a capital funded procurement route utilising a national established procurement framework (Framework Scotland) and NEC 3 form contract to a revenue funded NPD (non-profit distributing) project from November 2010 onwards. I led the Project Team through the development of the reference design process utilising a full external design and management team. I led the Project Team on the NPD procurement processes through PQQ (pre-qualification questionnaire), Competitive Dialogue, Preferred Bidder and Financial Close stages. I then led on the construction and commissioning phase to complete a phased operational handover in March 2021.

#### The need for a new hospital

5. I have been asked why a new hospital was required. The business case for the re-provision of the RHSC (Royal Hospital for Sick Children) (Bundle 3; Volume 1; Document number 12; Page 272) had already been approved by the Scottish Government when I joined NHS Lothian in August 2009. My brief was to manage and develop the build of the new hospital. Although I was not involved in considering the need for a new hospital, it was generally known that the old RHSC was a tired and old building, as was DCN at the Western General. In addition, there was a desire on the part of NHS Lothian to have DCN built on the same site as the re-provision of the RHSC so that the Board could provide a major trauma centre for all of NHS Lothian and realise the benefits of co-locating a children's hospital with clinical neurosciences, maternity, emergency department and a university teaching hospital.

Site Constraints

6. There were significant site constraints which we had to work through. What added to the complexity of the site constraints was that Royal Infirmary Edinburgh (RIE) which is situated at Little France, Edinburgh, was an existing PFI (public finance initiative) site run by Consort Healthcare (“Consort”) and Balfour Beatty who were an equity holder in Consort. The introduction of an NPD project to an existing PFI campus presented challenges technically as well as legally and commercially. This was due to the fact that we would have two PFI operators on the same campus. The complications came from separating and clearly defining services, utilities and responsibility for those. We had to create a separation and try to make one autonomous from the other in the technical sense. In the operational sense, the challenges were in relation to things such as groundskeeping and snow clearing. The competing demands of two private operators on one campus was the principal reason for the challenges. The re-provision of RHSC and DCN was to be as autonomous as possible from RIE in the way it was funded and serviced to simplify legal and commercial considerations albeit there had to be physical and clinical connections between the buildings.



7. The diagram above shows an illustration of the enabling works that were carried out on both the site of the project and the immediate RIE Campus. I often thought of the “A&E link facility”, being the connection between the RHCYP/DCN and the RIE, as a “docking station”. As Consort were in control of the RIE, it was their building, so they undertook the works to create the docking station. That included demolitions and creating a new building as an extension to the existing RIE. Project Co (IHSL) could then plug into that, without directly interfering with Consort’s building.
8. As part of the A&E Link Facility, there are two link corridors between the RHCYP/DCN and RIE, one on the ground floor and one on the first floor. One of the corridors linked DCN patients directly through to critical care and theatres in RIE. This was needed because it was determined that it was not viable to have a critical care centre for DCN patients in the new facility and that the existing critical care in RIE should be expanded to accommodate DCN patients instead. Enlarging the area for critical care resulted in reconfiguration works for other areas/services within RIE, namely the relocation of renal. Other clinical enabling works also took place in relation to pharmacy and

reconfiguration of the Emergency Department following the creation of the “docking station”.

9. The VIE plant is for medical oxygen. The road and infrastructure relates to the rerouting of buses to the new bus hub. Flood prevention works were required because upgrading was needed since RIE’s design in the 1990s to match new flood risk requirements. There were other external works such as new flood defences (on and off site) and road infrastructure around RIE campus. A gas mains and twin trunk sewer also required diversion.
10. Below ground, we also had significant diversion works (redirection of water, drainage and other utilities from underneath the proposed footprint of the new facility in car park B).
11. The majority of the enabling works were agreed via a Supplemental Agreement (SA7) between the Board and Consort. As Project Director, I was involved in the negotiation of SA7 to the extent that the physical works necessary were appropriate to enable the eventual proposed development. Once SA7 was agreed, the enabling works were carried out by Balfour Beatty on behalf of Consort. SA7 covered the following works which were implemented by Consort via Trust Additional Works Orders (TAWOs):
  - TAWO 158 – Medical Oxygen Plant or VIE (Vacuum Insulated Evaporator)
  - TAWO 160 – Sewer Diversion
  - TAWO 57 – Road
  - TAWO 159 – A+E Link (*the Docking Station*)
  - TAWO 161 – Services Diversions - TAWO 156 – Flood Defences
12. The following were not included in SA7 but were also delivered by Consort via TAWOs:
  - TAWO 165 – RIE Critical Care and Renal - TAWO 180 – Pharmacy
13. As above, Consort and Balfour Beatty were undertaking the works but we had an interest in them as the ultimate client and paymaster so kept an eye on progress and were involved to the extent that a project manager from Capital Planning represented the Board at meetings and acted in a liaison role between the Board and Consort. Capital

Planning are responsible for placing project managers to projects. Iain Graham is responsible for this department, he will be able to speak in more detail about this.

#### Supplemental Agreement 6 (SA6)

14. Before the procurement process could commence, the Board had to enter in to negotiations with Consort to secure the land required by NHS Lothian for construction of the new RHCYP and DCN (on car park B). We needed to acquire a new car park for RIE (car park F) to swap for car park B. It was not straightforward because the plots for the new car park (car park F) were owned by Scottish Enterprise and a third party based in the USA, Alexandria Real Estate, had rights to the plots so the negotiations were difficult. The Director of Finance, Susan Goldsmith, led on these negotiations and she is better placed to speak to them than me.
  
15. We used car park E for our site offices from June 2017 in a co-located manner with IHSL and their supply chain following IHSL's and our move from the original co-located site establishment/ offices situated on the actual construction site of the new hospital. Then when the site offices were no longer required, car park E became a functional car park again.. As part of the planning consent, we were given 230-240 spaces. However, to build the hospital, we had to build on an existing car park (car park B). We therefore created Car Park F to the east of the new hospital. That was done as quickly as possible so that the site could be available to Project Co. By creating Car Park F we maintained the same level of car parking numbers at the Royal, even though we were building on the site. When we cleared out of Car Park E, that became the 200 or so spaces that was the net addition to the overall car parking once the hospital became live.

#### Switch to NPD model

16. I had no awareness of the change in funding until it was announced by the Scottish Government on 10 November 2010. As Project Director, I would not have expected to be consulted on this matter however I would have expected NHS Lothian to be consulted in some capacity. I do not know why the decision was made. I can only comment on what I read in the press at the time, which was that there was a tightening on the financial

budget following on from the 2007/2008 financial crisis and funds had to be raised by private finance initiatives such as the NPD model. Before this change in position we were well advanced in our negotiations with the principal supply chain partner, BAM Construction. We were pushing towards what's called the agreed target price. We were just about to make a planning application to the council, so the design was well developed. The announcement on the 10 November 2010 brought that to a halt.

17. I have been asked whether the change in funding and also the SA6 and SA7 negotiations had an impact on timescale and cost. It is difficult to separate these issues out. I have been referred to paragraph 3.1 of Finance and Performance Review Committee (F&PR) Minutes dated 9 August 2010 (Bundle 7; Document number 31; Page 685). In summary, issues around SA6 at that time (i.e. before the change in funding) were adding up to 4 months' delay and so the January 2011 start date for construction was no longer possible. The revised date for the hospital being fully operational was mid 2014 (rather than late 2013).
  
18. However, any delay to a start date did not play out because, between this F&PR Committee meeting in August 2009 and the original start date of January 2011, the Scottish Government announced the change to funding model and the addition of DCN, which caused delays to the start date independent of the SA6 (land transfer, access during construction, wayleaves for utilities, land provision for anew sub-station, oversail rights and right to connect to the RIE) and SA7 (Enabling Works) negotiations. As a by-product of the announcement, we had more time for SA6 and SA7 to be finalised. However, it is very difficult to say when we would have been in a position to commence construction had we proceeded with the capital funded project as planned. I think the SA6 and SA7 negotiations eventually took around two years, with SA6 completing in August 2012 and SA7 completing in December 2012. The enabling works took around 18 months, starting in the spring of 2013 and finishing in the autumn of 2014. So although the capital funding scheme would have endured a delay due to the protracted negotiations with Consort, the introduction of NPD definitely made those negotiations more difficult and, in my opinion, most likely longer.
  
19. The switch to NPD definitely increased costs and an increased workload for NHS Lothian. We had to prepare a revised business case, prepare for a new procurement



model and consider how best to utilise the design work already done. This involved liaising with internal and external stakeholders and independent advisors. We had numerous meetings with lawyers and technical advisors which were costly and time consuming.

20. I have been asked whether this was a particularly complex project from the outset. Healthcare projects are always complex, however, this Project was extremely difficult from the start, particularly due to: the site constraints; undertaking works on a site that was a live major acute hospital; dealing with various internal and external stakeholders; and the need to acquire land where a third party had rights. However, in my experience, all major and high value projects have significant complexities. What added an additional layer of complexity to this Project was the change in funding to NPD and the technical, legal and commercial challenges that came with trying to join an NPD project to an existing PFI site. In addition, the reintroduction of DCN added further complexity.
21. To clarify, the inclusion of DCN was welcome in that it met NHS Lothian's desire to build a major trauma site, but the lateness of that announcement and the change of funding model, particularly given how advanced we were with the re-provision of RHSC as a standalone project, brought with it further complexities and delays to timescales. It meant that we had to rewind again in terms of some of the design processes and look at the integration of DCN as a significant part of the build. The two areas that particularly took a lot of time were theatres and imaging facilities. We had to try and create services and support areas common to both RHSC and DCN serving these two clinical facilities and achieve economies of scale.

### The Reference Design

22. By the time the NPD funding route was announced by the Scottish Government in November 2010, the Board had already developed a detailed design for the re-provision of RHSC ready to be submitted as a detailed planning application. The Board had to consider (i) if/how to use the design team and/or the design work already undertaken by BAM (BAM were appointed the principal supply chain partner ("PSCP") to support the Capital Design project in around April 2009 and (ii) how to present the information to bidders in a new procurement process.

23. Following a review meeting including Scottish Futures Trust (SFT), Scottish Government Healthcare Directorate (SGHD) and MacRoberts LLP (NHS Lothian's legal advisors) on 23 December 2010, it was concluded that it would be beneficial to take a "reference design" to the market. This was not just a case of taking BAM's design and re-badging it as a reference design. We had to break down BAM's design into the component parts then retain and salvage the design principles already agreed through discussion and agreement with clinical teams. Essentially what we did was take the hard-won components and principles of the design such as patient pathways, clinical models and the relationship of spaces to one another and then utilise these as the design principles and building blocks for the NPD process and competitive dialogue.
24. It is important to understand that the reference design was nowhere near what the final design of the Project would be and was never intended to be. We were just providing the bidders with an architectural representation of one possible concept design but which critically illustrated the mandatory requirements imposed on the Board by Consort as a result of the SA6 negotiations. These requirements included constraints on us on a practical, technical, legal and commercial level. Our operational functionality requirements remained a design responsibility of the Board. We were always clear that the reference design was to be replaced with the Preferred Bidder's full design solution. We had an open day for bidders and this was explained to them then as part of the presentation (see Speakers' Notes provided). I have reviewed and included my Notes from the presentation at the open day for bidders and have copied the relevant sections as an Appendix to this statement. It is noted that:

*"Following the close of Competitive Dialogue, and the appointment of the Preferred Bidder, the Reference Design will be replaced with the Preferred Bidder's affordable and commercially acceptable design solution."*

25. I consider these Speakers' Notes demonstrate that NHS Lothian had a clear and articulated strategy and approach which we communicated to the bidders from the outset. We also laboured the point that the reference design was to be replaced by with the Preferred Bidder's design throughout the competitive dialogue process.

26. One of the key driving factors in adopting a reference design, which was set by everyone involved, was to salvage as much of the time, effort and cost that had already been incurred. It was the sensible thing to do. We did not want to throw out what had been hard-won clinical input, for example discussions around clinical models and pathways. To repeat the process would eat into precious clinical time for the clinicians and medics.
27. In summary, the benefits of a reference design were: (i) enhanced cost certainly at the outline business case (OBC)(Bundle 3; Volume 2; Document number 61); Page 672; (ii) fundamentals of the clinical design were complete to the extent that there would be very limited future engagement of scarce clinical resource; (iii) it would shorten the competitive dialogue phase; (iv) utilise available programme time in that it would run in parallel with Consort negotiations to minimise delay to the strategic programme; and (v) it would minimise abortive design cost and tendering risk for unsuccessful bidders.
28. The Project Team initially intended to complete the reference design within 12 months based on three rounds of consultation with clinical staff (Bundle 7; Document number 32; Page 687). The Project Board immediately sought to reduce this period to eight months with two rounds of clinical engagement. My recollection is that it was SFT (who sat on the Project Board) who were keen to shorten the the programme of activities in relation to the reference design production, competitive dialogue and between preferred bidder and financial close, rather than NHS Lothian.
29. SFT supported the reference design approach because they were keen to minimise prospective bidders tendering costs by reducing the length of tender process and interaction between them and clinicians (three bidders, as it transpired, each having lengthy design dialogue with clinicians). The Board was also conscious of the additional demand on clinicians' time this would bring. This is not to say that there wasn't clinical dialogue during competitive dialogue, just less than there would have been had there not been a reference design. This is because we didn't have to start from scratch. We had the principles in clinical terms sorted out through the reference design and, as such, we did not have to go through the same process with three different bidders during dialogue. This saved a huge amount of time.

30. We also had to take advice in relation to the procurement process and, in particular, how to present the reference design to bidders. This advice was sought from Davis Langdon, Mott Macdonald, SFT and Macroberts. As set out in section 6 of the project update to the Finance and Performance Review Committee in January 2011 (Bundle 3; Volume 2; Document number 34 i); Page 318), we explored a variety of procurement options with variations of the reference design approach with external advisors. This resulted in the Procurement Options Paper dated June 2011 (Bundle 3; Volume 2; Document number 47; Page 409) and a strategic programme prepared illustrating potential delivery timelines (Bundle 3; Volume 2; Document number 44; Page 395).
31. We instructed our advisors, Davis Langdon and Mott MacDonald Ltd (Motts), to prepare a report on the Approach to the Reference Design. The first version of this is dated January 2012, with various iterations until the version dated May 2012. (Bundle 3; Volume 2; Document number 68; Page 898) I authored a paper (the “Reference Design paper”) for the Project Steering Board Meeting on 11 May 2012 (Bundle 3; Volume 2; Document number 66; Page 892), which recommended that the Approach to the Reference Design report (being an earlier version dated March 2012) was used as the basis for accurately conveying NHS Lothian’s intentions to bidders in relation to mandatory and non-mandatory elements. The Approach to the Reference Design report by Motts outlines and recommends the approach which the Board ultimately adopted (see Project Board Action Minutes dated 11 May 2012 Bundle 3; Volume 2; Document number 67; Page 896).

#### Operational Functionality

32. The reference design needs to be understood in the context of operational functionality. I have been asked by the SHI to refer specifically to contractual provisions in the Project Agreement between NHS Lothian and IHSL (Project Co) dated 13 February 2015 and have consulted with NHS Lothian’s legal team in this regard. The following represents my understanding of the contractual position but I fully appreciate that there are other interpretations.
33. My understanding is that Project Co had to design and build the Project in line with the Board’s Construction Requirements (BCRs) (clause 12.1). The BCRs provided that Project Co had to comply with the requirements of SHTM and adopt them as mandatory

(clause 2.3 (v) generally and elsewhere). Where there was a contradiction in standards, the BCRs provide at clause 2.5 that the most onerous shall take precedence.

34. Overall responsibility for the design sat with Project Co (clause 12.3). Project Co had to develop and finalise the design and specification of the Works and the Board had to review the Reviewable Design Data (clause 12.6), insofar as it related to operational functionality.
35. The only element of design that was retained by the Board was operational functionality. Operational functionality is narrowly defined in the Project Agreement and, most importantly, did not encompass matters such as ventilation and pressure regimes within wards and rooms. In summary, it comprised the information as indicated in interdepartmental layouts (1:500); Departmental Layouts (1:200) and Room Layouts (1:50) for Key and Generic Rooms and departmental corridor layouts. We referred to Operational Functionality as opposed to Clinical Functionality because some of the mandatory areas of the Reference Design covered non-clinical functions such as Supplies, Storage, Distribution and Waste Management (Soft FM) and ICT Requirements).
36. Operational Functionality means the point of access to and within the development, buildings and departments; the adjacencies between different departments; the adjacencies between rooms within the departments; the quantity, description and areas of those rooms and spaces shown on the Schedule of Accommodation. It is about the geography of a room or department and the geography of equipment within such a room or department. It considers practical questions that the Board needs to consider in relation to room layouts to ensure that they were operationally functional. For example, could medical staff approach patients from both sides of a room? Could catering trolleys enter and exit a room? Operational functionality did not include consideration of design requirements such as ventilation and pressure regimes within wards and rooms.
37. That said, if NHS Lothian identified any errors beyond issues with operational functionality, it would bring those errors to Multiplex/IHSL's attention. I personally was acutely aware that I had obligations in respect of the health and safety of the occupants of the new facility, professionally as a Chartered Architect and a responsibility, as an

officer of the Board, to the Accountable Officer to enable him to fulfil his responsibilities. The Accountable Officer is the Chief Executive of NHS Lothian.

### Mandatory Elements

38. I have been asked to explain my understanding of the mandatory elements within the reference design. This comprises the information that defines Operational Functionality as already noted above, i.e. Interdepartmental Layouts (1:500); Departmental Layouts (1:200) and Room Layouts (1:50) for Key and Generic Rooms

39. There are also Compulsory Requirements:

- Planning in Principle as granted by The City of Edinburgh Council.
- Interface, access/egress and infrastructure provisions enshrined in (SA6 + SA 7) □  
Clinical, D+C and FM Output Specs.

40. To clarify, the Reference Design drawings are a diagram or graphical representation of these requirements. We were always clear that the Board's Construction Requirements would always take precedence over the Reference Design for matters which do not define Operational Functionality.

### Non-Mandatory Elements

41. I have been asked to provide a description of the non-mandatory elements of the reference design. The non-mandatory or indicative elements were information that had been developed to verify the feasibility of the reference design in terms of architecture and engineering (e.g. the Environmental Matrix (EM)) and information developed for issue to Bidders in regard to site and servicing information (e.g. the borehole logs). Bidders response to the non-mandatory and indicative elements, which they had to develop through their design, still had to be in compliance with mandatory guidance such as SHTM 03-01. The premise of the indicative elements was to allow bidders to introduce innovation in their response. Whilst bidders still had to comply with the mandatory guidance, it enabled the bidders to bring private sector innovation to the table. My impression and understanding was that this approach was strongly promoted by SFT.

42. I have been referred to paragraph 2.5.3 of the ITPD, which relates to Room Data Sheets (RDS)(Bundle 3; Volume 3; Document number 74; Page 200). RDS give a detailed description of the activities, personnel, planning relationships, space data, environmental performance, clinical risk category, finishes and equipment that will be required for each room or space in a project. Paragraph 2.5.3 of the ITPD states that RDS had not been prepared by the Board for the Project. It was for bidders to develop their own RDS to form part of their proposals. The Room Information at para 2.5.3 of the ITPD provided to inform the bidders' development of the RDS included the Environmental Matrix. It is my understanding that the only element of RDS which NHS Lothian retained any design responsibility for was in the context of operational functionality.
43. Paragraph 2.6 of the ITPD (Bundle 3; Volume 3; Document number 74; Page 200201)sets out the Indicative Elements of the Reference Design, and describes it as other information that has been generated both as a by-product of preparing the reference design and as a general Project requirement. One such indicative element in Section 2.6 is "building services engineering solutions". This was issued "for information only" to assist the bidders in understanding the intent of the reference design and they were advised to refer to the BCRs.
44. It has always been my understanding that the EM issued within the ITPD suite of documentation was one such indicative element and as such fell into the category of "disclosed data" in a similar way to the geotechnical reports or ground bore holes' surveys carried out previously by BAM in the capital funded scheme. I have been asked by the SHI for a definition of disclosed data. Disclosed Data is defined in the Project Agreement 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. Clause 7.2 of the Project Agreement provides that the Board gives no warranty in respect of the Disclosed Data and it should not be relied upon for accuracy.
45. It might assist the Inquiry if, at this stage, I provide some more detail on my understanding of the design function and relevance of the EM, which is a document I understand may be of particular interest to the Inquiry. I do so here because it may assist to place the EM in its contractual and design context. The EM is a table which sets out

the environmental design parameters for each space within the hospital. The sole purpose of an EM is taking the environmental criteria that exists in room data sheets and putting them in to an Excel spreadsheet. There could be hundreds or thousands of room data sheets so rather than designers having to go through every room data sheet it is all in the EM. It is a summary of environmental performance and environmental requirements. It is used whether the project's capital funded or private finance funding. The EM was generated by Hulley & Kirkwood (a sub consultant to BAM) during the initial design stages when the project was to be capital funded. After the change to NPD, Motts appointed Hulley & Kirkwood as a sub-consultant. and Hulley & Kirkwood produced a further version of the EM which was issued with the ITPD. It was considered that whilst this information was not warranted by the Board and should not be relied upon for accuracy (clause 7.2 of the Project Agreement), it may prove useful to engineers employed by the bidders in any initial design assessments and in informing further investigations and studies they may care to undertake.

46. To explain the relevance, the EM issued at ITPD stated 4 Ac/hr for the single-bed rooms and 4 Ac/hr for the multi-bed rooms in relation to critical care rooms. However, the EM was prefaced with guidance note 15 which prescribed a ventilation rate of 10 Ac/hr for critical care rooms. There was, therefore, a conflict in the EM. The EM was to be revised as necessary by the successful bidder (IHSL/Multiplex) as the design and construction developed. The EM was no different from other technical data that was given to the bidders to assist them. It was intended to give design teams an idea as to where they should be going. It's not guaranteed or warranted in any way (clause 7.2 of the Project Agreement) but it was to assist them and enable them to have a head start. The successful bidder was responsible for the final design and had to their own studies as well. Although an EM is not part of standard form contractual documentation, it was (and still is) a widely used procurement mechanism on NPD/PPP projects. It is still used because the theory is that it helps the engineers. They get one document with all the information, rather than sifting through hundreds or thousands of other documents. In my experience it is not unusual for clients to share previous prepared information pertaining to the site or parts of any earlier design exercises with those that will design and build the proposed facility.



47. I have been asked whether the adoption of the reference design approach was unusual given the number of mandatory elements. I would say that it probably was but we were working with an unusual set of circumstances. I advised the Project Steering Board in the Reference Design paper (para 3.3) that, because of the particular and unique issues surrounding the Project, greater input and a more mature reference design had been necessary than may have been the case in other Healthcare NPD projects because of, for example: the site constraints; the connections required to the existing RIE building; the site being part of an existing PFI/PPP site; and, the interface and access requirements with the existing RIE/PFI service provider. Due to these specific constraints that we were tied to, there was not the latitude for the bidders to digress from that. We had to communicate that to them clearly and succinctly, which we did at the open day for bidders and throughout the competitive dialogue process. This differs from other projects, where the term “exemplar design” is probably used, which is not as prescriptive as “reference design”. Reference design goes beyond exemplar design because of the specifics that we had to adhere to in this case.
48. Importantly, and as discussed above, I advised the Project Steering Board in the Reference Design paper (para 3.4) that following the close of Competitive Dialogue and the appointment of the Preferred Bidder, the reference design will be replaced with the Preferred Bidder’s full design solution(Bundle 3; Volume 2; Document number 66; Page 893) This was a fundamental point that we communicated to bidders.
49. I have been asked what the difference is between an Exemplar Design and a Reference Design. A reference design is more prescriptive. That was necessary in this Project due to the constraints imposed on the Board by Consort. The use of the reference design went beyond what is usually provided to bidders, known as an exemplar design. However, both a reference design and an exemplar design, whilst communicating mandatory and indicative requirements to a lesser or greater extent, manifest themselves visually as one possible architectural representation amongst many.
50. I have been asked whether the Scottish Ministers supported the reference design approach. I refer to paragraph 2.5 of the ITPD (Bundle 3; Volume 3; Document number 74; Page 198) prepared by Motts for use by NHS Lothian. It is stated there that the use

of reference design in NPD projects is being promoted by the SFT and Scottish Government.

51. I have been asked about the role, if any, of healthcare planners. I do not recall this issue specifically but note that at paragraph 4.2 of the Reference Design paper it is stated that *“Given the previous Healthcare planning input to the project from an external Healthcare Planner and NHSL’s extensive internal resource, the lack of an appointed advisor as Healthcare planner during procurement is deemed to be a minor and manageable risk”*. Nevertheless, I’m aware that Tribal, a healthcare planner, was employed during the development of the reference design to assist with bed modelling.
52. We also received advice from Ernst & Young in relation to the cost, time and risk elements of the procurement process and from MacRoberts LLP in relation to the legal aspects. Architectural and engineering input was provided by BMJ Architects / Nightingales, Hulley and Kirkwood and Arup to the reference design process as sub consultants of Motts.

### Design Assurance

53. I was not involved at the initial planning and design stages of the Project.
54. By the time I was appointed as Project Director in August 2009, the RHSC project had formally commenced as a capital funded project in April 2009 following the appointment of a Principal Supply Chain Partner (BAM Construction), Lead Adviser (Davis Langdon) and Cost Consultant (Thomson Gray). These organisations were procured by mini competition from a framework established by HFS in January, 2008 (Bundle 3; Volume 1; Document number 6; Page 154) A Q+A document issued by HFS in July 2008 outlines the preferred partnering approach to procurement of building contractors and professional services advocated by HFS (Bundle 3; Volume 1; Document number 11; Page 265).
55. A project overview document in October, 2009 (Bundle 3; Volume 1; Document number 14; Page 572) and clinical design structure diagram in August 2009 (Bundle 3; Volume 1; Document number 13; Page 571) describe the status of the project and extent of

clinical engagement in the design process respectively. The Board confirmed to Davis Langdon in November 2009 (Bundle 3; Volume 1; Document number 15; Page 575) that they and the PSCP were to continue to develop a design for a joint RHSC + DCN whilst also preparing a “shadow” design for a RHSC only facility.

56. A programme of briefing activities for 2010 (Bundle 3; Volume 1; Document number 17; Page 581) sets out the extent of engagement and range of topics discussed in conjunction with a note of the clinical representation (Bundle 3; Volume 1; Document number 18; Page 582) in these activities and meetings. Clinical input would not have referred to SHTM 03-01 and other parameters such as air changes per hour.
57. The NEC3 contract mandated by HFS defines a collaborative process between the parties to develop jointly and agree the “works information” for the final building contract. An unsigned version of a Stage 3 contract was prepared in June 2010 which illustrates this approach (Bundle 3; Volume 1; Document number 23; Page 860) In general terms and had the project continued along a capital funded / NEC3 route this collaborative process would have involved the PSCP responding to the Board’s initial “Employers Requirements” (Bundle 3; Volume 1; Document number 19; Page 583) with their “Contractor’s Proposals” which eventually, following continuous engagement with the Board and design development, result in the agreed “Works Information”. Unless specific derogations are agreed and documented in the “Works Information” all design responsibility for compliance with recognised and current healthcare requirements rests solely with the PSCP.
58. Two Gateway Reviews were undertaken. The first was in 2008 before I was appointed as Project Director (Bundle 3; Volume 1; Document number 9; Page 249) (Bundle 3; Volume 1; Document number 10; Page 263) and the second in 2010 (Bundle 3; Volume 1; Document number 20; Page 797) (Bundle 3; Volume 1; Document number 21; Page 813) This Scottish Government review process (Bundle 3; Volume 1; Document number 1; Page 4) applies to all organisations covered by the terms of the Scottish Public Finance Manual that have a budget of £5 million in value or over (anything which meets the definition of Mission Critical being automatically considered as High Risk).

59. Capital funding was withdrawn by Scottish Government in November 2010. The Board commissioned a report from Davis Langdon in December 2010 on the viability of combining the RHSC requirement with the DCN requirement (Bundle 3; Volume 2; Document number 30; Page 5)
60. Motts were appointed as Lead Consultant and Technical Adviser via the OGC Buying Solutions Framework in March 2011 to provide NPD procurement, Facilities Management and Design and Construction advice.
61. On 22 March 2011 the Scottish Government Health Directorates ('SGHD') sent a letter to all NHS Board Chief Executives regarding funding conditions for delivering projects through the NPD model, which made it clear that a project scope needed to be agreed with SGHD and SFT (Bundle 3; Volume 2; Document number 43(i); Page 377) It is my understanding that the process of independent project review and subsequent approval of the outline business case was how SFT agreed with the SGHD the scope of the construction of the Project, and the other acute health projects within the NPD programme.
62. On 21 June 2011, Scottish Government Health Directorate gave approval for an updated business case to be developed under Non-Profit Distribution (NPD) funding route in which the DCN project was to be incorporated alongside the RHSC (see letter from SGHD to NHS Lothian dated 21 June 2011) ( Bundle 7; Document number 7; Page 292).
63. Motts and Davis Langdon (sub consultant to Motts) prepared a "Procurement Strategy" paper in November 2012 which formed an appendix in the approved OBC (Bundle 3; Volume 2; Document number 71; Page 946)
64. Two Achieving Excellence Design Evaluation Toolkit (AEDET) Reviews were undertaken on 12 August 2011 and 8 March 2012 however I was not directly involved in the AEDET reviews. In order to avoid bias, the Project Team were detached from the process and it was Nightingales architects who led the reviews. My understanding of the process of these reviews is that it's a testing proposition from all user group angles. For example, is the entrance in a visible and obvious place? What are the distances from entrances and from car parking? What are the walking distances to bus stops? Then for example, from inside the building it tests if you can see a stair from the main entrance

or if people know how to get to other floors. It focuses on orientations throughout the building. It then goes in to more specific departmental detail. This is a UK wide accepted design evaluation process.

65. One aspect of design assurance was clinical engagement and in particular IPCT (infection prevention control team) engagement to assure the Board that the performance specifications had gone through a process of negotiation and agreement in relation to operational functionality. My understanding is that the Project Agreement and BCRs relied on SHTMs being mandatory and the fundamental basis of Project Co's ventilation design. Ultimately, our design assurance was that Project Co would deliver a final product in line with those requirements.
66. I have been asked whether an NHS Design Assessment process (NDAP) ever took place in respect of the Project. It did not because we had already secured business case approval. There was so much else happening in terms of the reviews and KSRs introduced by SFT. From memory it was never highlighted as an essential review process. I have been referred to an email chain between Susan Grant (Health Facilities Scotland) and Alan Morrison (Scottish Government) dated 5 July 2019 (Bundle 3; Volume 3; Document number 78; Page 1309) which discusses whether, if a new hospital was being designed and the ventilation system in critical care unit had a non-compliant number of air changes per hour, would NDAP pick that up, and the answer from Susan Grant is that *"As you know, NDAP is only a proportionate review... and we may or may not catch the many many details in each project"*.
67. I have been asked specifically about the role of HFS. I don't think the role of HFS changed significantly from when the process was capital funded to the NPD process in that they were the engineering and infection control specialists that we could have consulted as/when necessary. However, the gateway process performed by HFS was taken over by SFT after the switch to NPD, who then replaced it with their KSR process.
68. As detailed above, the EM is a table which sets out the environmental design parameters for each space within the hospital. There was undoubtedly a conflict in the EM regarding the number of air changes required in critical care. Whether or not an NDAP would have picked up that conflict is very difficult to say. They would have had to go through the

EM line by line. It is a 2350-line document each line representing a room with detailed information so the likelihood of them doing that is slim. It may be they would have reviewed the contract documents in the first instance and noted the mandatory requirement to comply with SHTM 03-01 and felt that provided sufficient assurance, but it's not for me to say. Susan Grant in her email seems to recognise that they may or may not have, given the many details in such projects.

69. I have been asked about the role of SFT in respect of design assurance. I cannot recall SFT providing advice to NHS Lothian as regards whether an NDAP assessment should take place or not. I cannot recall whether SFT provided any particular advice on what guidance should be followed for the OBC process as regards the NDAP process. Oversight and review was carried out by SFT by way of their KSR process. SFT also commissioned WS Atkins to undertake a design review of the Project which made various recommendations as laid out in SFT's Project Review of December 2011.
70. I have been referred to a letter from SFT to NHS Lothian (Jackie Sansbury, chief operating officer) dated 1 June 2011 (Bundle 3; Volume 2; Document number 46; Page 399) which sets out their role. In relation to Assurance and Approvals it sets out the SFT will review and provide support to the CIG (Capital Investment Group at Scottish Government) in consideration of both the OBC and full business case (FBC) for the Project and work with us in relation to the development of these documents.
71. It also sets out that they will introduce a Key Stage Review (KSR) process which negated the need for further Gateway reviews. There were 5 further KSRs completed and reported by SFT through the NPD procurement: (i) Approval of the Project pre OJEU stage (2012); (ii) Pre ITPD stage (March 2013); (iii) Pre-close of dialogue (December 2013); (iv) Pre-preferred bidder appointment (February 2014); and (v) Pre-financial close (February 2015).
72. SFT described themselves as our "critical friend". We formally reported to SFT via the KSRs which were managed by Donna Stevenson. Donna was the principle point of contact with SFT as far as the Project Team were concerned. We also had an SFT employee, Gordon Sheriff, embedded within the Project Team for a few days a week in

the Spring of 2011. Subsequently, when the Project became operational, Tony Rose from SFT became the public interest director sitting on the IHSL Main Board. Tony had also acted as the final signatory for SFT for all KSRs.

73. I have been asked about the role of the Scottish Ministers in design assurance. Their role was to approve the business case and they had to be satisfied with all aspects of it, which included elements of design. Mike Baxter was the contact at Scottish Government who we dealt with in relation to the business case process. I do recall one or two meetings with the national infrastructure group where they looked at the risks of NPD but I cannot recall particular discussions around design assurance.
74. I have been asked about the role of Motts in the design assurance process. Motts were appointed as our technical advisor and played a key role in design assurance. They prepared the Approach to Reference Design report which made recommendations the Board ultimately adopted. Motts were the prime author of the ITPD (invitation to participate in dialogue) (Bundle 3; Volume 3; Document number 72; Page 3) and prepared the suite of documents issued to bidders, which included the EM on the basis it was disclosable data. They prepared the performance specifications for NHS Lothian, including the references to SHTM 03-01 re ventilation guidance. They put the ITPD package together which offered significant design assurance to NHS Lothian.
75. I have been asked whether the design assurance processes in place throughout this Project were adequate. Whether a more robust design assurance process at the outset would have caught the error in the EM is very difficult to say. Ultimately, and irrespective of the error in the EM, Project Co (IHSL / Multiplex) had responsibility for the design. NHS Lothian were relying on Project Co (IHSL / Multiplex) operating the Project in accordance with the Project Agreement which included mandatory guidance SHTM 03-01 for ventilation requirements.

**STATEMENT OF TRUTH [to be signed by witness once statement is finalised]**

I, Brian Currie, confirm that:

- (i) The contents of this statement is the truth to the best of my knowledge and

recollection;

- (ii) I am willing for this statement to form part of the evidence before the Scottish Hospitals Inquiry.
- (iii) I am willing for this statement to be published on the Scottish Hospitals Inquiry website.

Signature:

Date:

## Appendix 1

Extract from Speaker's Notes for NHS Lothian's Presentation at the Open Day for Bidders

### **Brian Currie, Project Director**

The Project – Slides 27 – 49

Slide 27 – The Project

- Almost unique in the UK, as far as we know, where the intention is to develop a new NPD/PPP hospital within an existing PFI hospital and campus.
- Determined to normalise this situation and provide a site and Project and an opportunity which does not present challenges beyond what would be typically expected.
- Prior to going to market.
- Reached that point evidenced by our compliance with a rigorous governance process both internally and externally to the Board.

Presentation will highlight aspects of IM/PQQ documentation emphasising the importance of:

- Enabling and Interface Works
- Reference Design
- Sustainability + Community Benefits
- Operations (not of the medical kind!)



Presentation will expand on the programme, process and project management aspects of the project.

Slide 28 – Wider site

North to top

- Dalkeith Road – A7 leading to A68 and The Borders
- SE Wedge – one of last remaining development zones
- Residential – Niddrie + Craigmillar to North. Moredun to South
- Emerging Bio Quarter + further housing to East
- Little France Drive – cross connection
- The Tram
- Site nestling in valley of Niddrie Burn
- Craigmillar Castle prominent to North

Slides 29 & 30 – The site

- “normalisation” process - determined to create equal opportunity for all bidders to compete on a “level playing field”.
- proposition where no one bidder is either advantaged or disadvantaged has been achieved - by specifying that although there will be a physical link between the new facility and the RIE at ground and first floor levels, in all other respects the development will be delivered as a standalone new build facility.
- links, driven by necessity, will ensure clinical functionality and efficiencies, particularly between the emergency departments, theatres and critical care departments on site.
- minor operational links between the new facility and the RIE in respect of connecting services mainly in terms of infrastructure associated with ICT, pneumatic tube system and fire alarm systems.
- in all other respects the facility is fully autonomous with a dedicated energy centre, standby power generation and FM goods yard. Public utilities are also independent of the existing RIE PFI facility.

Slides 31-36 – Enabling Works

RIE Campus also needs enabled to accommodate the new facility. Consort Healthcare, on behalf of the Board, is undertaking certain ‘enabling’ works on the Little France site in preparation of the Project.

External enabling works relate to the following and are due to be substantially complete prior to financial close.

- Enhancement to Existing Flood Defences within and out with RIE  
Revision of Road Infrastructure and creation of new Bus Terminus
- Relocation of Medical Gas Plant (VIE – Vacuum Insulated Evaporator)
- Creation of Link Building to the current RIE and alterations to Existing Emergency Dept.
- Diversion of existing Trunk Sewer
- Disconnection and Removal of existing services in Car Park B.

#### Slide 37 – Clinical enabling

- Clinical enabling works within the RIE include changes in critical care, pharmacy and laboratory services and will be completed prior to the new facility opening.
- All required the completion of a Supplemental Agreement to modify the existing Project Agreement at the RIE with Consort Healthcare.
- This remains to be completed.

#### Slide 38 – Interface Works

- The new facility will interact with its neighbours both during and after construction
- The existing RIE was procured as a PFI contract (1<sup>st</sup> Generation) between the former Royal Infirmary of Edinburgh NHS Trust and Consort Healthcare (ERI) Ltd.
- The Project Agreement for the RIE was signed in August 1998 and covers a 25 year operational period until February 2028.
- The RIE was financed, designed and built by Consort Healthcare, and a range of soft and hard facilities management services are provided through the RIE Project Agreement.
- The site is leased from Scottish Ministers to Consort Healthcare for a term of 130 years, thus any site development requires Consort Healthcare approval together with appropriate changes to the RIE Project Agreement.
- The Board has concluded negotiations on a Supplemental Agreement (SA6) to the RIE Project Agreement which includes the land transfer of the site earmarked for the Project and also covers:
  - access during construction
  - wayleaves for utilities
  - land provision associated with a new sub station

- oversail rights
- right to connect to the RIE

The DBFM contract will reflect these provisions.

#### Slide 39 – Reference design

To clarify what we really mean by a Reference Design.

What were the attractions given the departure from previous PPP/PFI projects where an “exemplar” design was the norm?:

- assists with the OBC and accuracy of pre-procurement costing.
- provides greater certainty over the final design solution.
- assists significantly in defining a quality threshold.
- optimises the input required from stakeholders and in particular clinicians and clinical management teams.
- utilises programme time available as a result of essential parallel activities prior to commencement of procurement.
- reduces risk and bidding costs to bidders, we would contend.
- shortens the competitive dialogue phase.

#### Slide 40 – Ground Floor site plan

A glass half full (not half empty)

Half full part is the Mandatory and Compulsory requirements, the other, empty part, the Indicative or Non Prescriptive requirements which the bidders will require to fill.

#### Mandatory Requirements

Comprises the information that defines Operational Functionality\* and is indicated in:

- Interdepartmental Layouts (1:500)
- Departmental Layouts (1:200)
- Room Layouts (1:50) for Key and Generic Rooms

#### Compulsory Requirements

- Planning in Principle as granted by The City of Edinburgh Council.

- Interface, access/egress and infrastructure provisions enshrined in (SA6 + SA Enabling)
- Clinical, D+C and FM Output Specs.

The Reference Design drawings are a diagram or graphical representation of these requirements.

*\*We refer to Operational Functionality as opposed to Clinical Functionality since some of the mandatory areas of the Reference Design will cover non-clinical functions such as Supplies, Storage, Distribution and Waste Management (Soft FM) and ICT Requirements).*

*Operational Functionality means:*

- *The point of access to and within the development, buildings and departments.*
- *The adjacencies between different departments.*
- *The adjacencies between rooms within the departments.*
- *The quantity, description and areas of those rooms and spaces shown on the Schedule of Accommodation.*

Slide 41 – sections

The level of design development can be described as approximating to **RIBA Plan of Work Stage C +** (Concept Design) and covers 52% of all spaces at 1:50 scale including the key and generic rooms.

Bidders will be required to generate up to 10 other room types at 1:50 scale for final tender with the remainder being concluded before Financial Close.

Room Data Sheets

Standard format Room Data Sheets have not been prepared by the Board for the Project instead specific room requirements are detailed in a combination of the following documents:

- General Requirements
- Clinical Output Spec
- Environmental Matrix
- Schedule of Operational/Design Notes
- Equipment Schedule
- Schedule of Accommodation
- Operational Functionality elements of the Reference Design

Note: Bidders will be required to develop Room Data Sheets as part of their proposals. The full set of RDS will be completed from appointment of Preferred Bidder to Financial Close.

#### Schedule of Accommodation

The Schedule of Accommodation, based on the Reference Design drawn layouts, along with the Target or Model (Minimum) Schedule of Accommodation will be issued to Bidders.

This “Drawn” Schedule of Accommodation for Plant Rooms and Hard FM Rooms is indicative only and should certain other rooms vary in area terms from the Model Schedule this is acceptable on a specific room only basis.

#### Slide 42 – *Stacking Diagram*

#### Indicative Requirements

Bidders will be encouraged to propose innovative solutions in response to:

- Information that has been developed to verify the feasibility of the Reference Design in terms of architecture and engineering.
- Information developed for issue to Bidders in regard to site and servicing information.

Bidders must however refer to the Board’s Construction Requirements for the detailed requirements for all such indicative elements of the Reference Design for which they may ultimately carry the risk.

Note: The Board’s Construction Requirements will always take precedence over the Reference Design for matters which do not define Operational Functionality.

#### Innovation

Whilst there is an absolute requirement to maintain Operational Functionality, Bidders will have latitude and will be encouraged to develop innovative solutions for the external and internal architectural expression and site layout for the facility promoting their unique approach to an appropriate architectural language and ambition.

We would hope this would consider:

- expression and representation
- order
- conformity and contrast
- integrity and honesty
- detailing and materials etc.

whilst complying with mandatory and compulsory requirements.

This should apply equally to the:

- layout and disposition of facilities
- pattern of site planning
- scale of the pieces
- relationships with differing site boundaries

but again within the mandatory and compulsory design requirements.

As an example, features such as curved walls and the external landscaping forming part of the Reference Design are indicative only given that these have no influence on the Operational Functionality.

Other Indicative elements are:

- Circulation and Communication space (however minimum dimensions specified will be treated as mandatory).
- Structural engineering solutions.
- Building Services engineering solutions.
- Architectural Expression
- Hard FM solutions and space allocations.

Bidders will be encouraged to apply a unique design strategy founded on sound architectural principles whilst complying with the mandatory elements of the Reference Design and other Compulsory Requirements.

Following the close of Competitive Dialogue, and the appointment of the Preferred Bidder, the Reference Design will be replaced with the Preferred Bidder's affordable and commercially acceptable design solution.



## **NHS Lothian**

Project Steering Board Meeting  
11<sup>th</sup> May 2012

Susan Goldsmith, Director of Finance

### **RHSC + DCN – LITTLE FRANCE REFERENCE DESIGN**

#### **1 Purpose of the Report**

- 1.1 The purpose of this report is to recommend that the Project Steering Board confirms that the report “RHSC + DCN – Approach to Reference Design dated March 2012” (copy attached) is used as a basis for accurately conveying NHSL’s (the procuring body) intentions to bidders in relation to mandatory and non mandatory elements. This will allow conclusion of all associated ITPD documents.

Any member wishing additional information should contact the Executive Lead in advance of the meeting.

#### **2 Recommendations**

The Board is recommended to:

- 2.1 Approve the implementation of the following as described in Section 7 Conclusions of the report “RHSC + DCN – Approach to Reference Design dated March 2012”:
- 2.2 Mandatory Elements - comprising the information that defines Operational Functionality and as indicated in Interdepartmental Layouts (1:500), Departmental Layouts (1:200) and Room Layouts (1:50) for Key and Generic Rooms. As a consequence of the particular project and site issues, departmental corridor layouts are also mandated as a result.
- 2.3 Non Mandatory Elements - Information that has been developed to verify the feasibility of the Reference Design in terms of architecture and engineering and information developed for issue to Bidders in regard to site and servicing information.
- 2.4 Bidders will be prohibited from revisiting the Schedule of Accommodation and Operational Functionality during the procurement process given the significant investment in time and money made by NHSL in the production of the Reference Design.

- 2.5 Confirm that Variant Bids (of any nature) will be prohibited by bidders ensuring an optimum and competitive response from the market through recognition of a “level playing field” where no one potential bidder will be significantly advantaged over another.\* see comment on 4.2

### **3 Discussion of Key Issues**

- 3.1 The Reference Design has been concluded following the Project Steering Board’s approval in July 2011 of the strategy for it’s development given the benefits arising. These remain as previously reported:

- Enhanced cost certainty at OBC
- Clinical Design complete – very limited future engagement of scarce clinical resource
- Shortens Competitive Dialogue Phase
- Utilises available programme time – parallel with Consort Negotiations ie no overall delay to strategic programme
- Minimises abortive design cost for unsuccessful bidders

- 3.2 The report “RHSC + DCN – Approach to Reference Design dated March 2012” was discussed in detail with SFT on 26<sup>th</sup> April, 2012. SFT subsequently confirmed that the meeting was “useful”. NHSL have received no correspondence recommending adjustment to this report or its recommendations from SFT.

- 3.3 The Project Steering Board are reminded that because of the particular and unique issues surrounding the development of this facility on this site, greater input and a more mature Reference Design has been necessary than may be the case in other Healthcare NPD projects.

These issues include:

- The connections required to the existing RIE building – predetermined by the location of the existing A&E department and Critical Care.
- The restricted nature of the site bounded on all sides as it is by existing road and services infrastructure and key access/egress points.
- Height and massing restrictions imposed by the local planning authority.
- Flood protection measures and Public Transport Infrastructure requirements.
- The site being part of an existing PFI / PPP site.
- Interface and Access requirements with the existing RIE PFI service provider.

- 3.4 Following the close of Competitive Dialogue, and the appointment of the Preferred Bidder, the Reference Design will be replaced with the Preferred Bidder’s full design solution.

### **4 Key Risks**

- 4.1 Room Layouts have been developed for Key and Generic Rooms covering 54% of the rooms. This substantially reduces the exposure of the risk carried by NHSL in regard to areas specified being adequate to accommodate equipment required

albeit there is a minor residual risk for the rooms that remain to be drawn. However, these rooms are significantly less complex operationally.

4.2 Given the previous healthcare planning input to the project from an external Healthcare Planner and NHSL's extensive internal resource, the lack of an appointed adviser as Healthcare Planner during procurement is deemed to be a minor and manageable risk.

\* Potential variant options which may be proposed by bidders and must be resisted post short listing to ensure maintenance of a "level playing field" and strict compliance with procurement rules could be:

- Elimination of Basement
- Off site Energy Centre
- Off site FM / Goods / Waste Handling Yard
- Shared Facilities and Support Services
- Removal of Helipad
- Removal or shrinkage of Communication Spaces (The Hub)

## **5 Risk Register**

5.1 No significant new risks have been identified to those previously identified in the project risk register.

## **6 Impact on Health Inequalities**

6.1 The findings of the Equality Diversity Impact Assessment for the separate projects to move RHSC and DCN to Little France are to be revisited as a joint project in advance of the submission of the Full Business Case. The Project Steering Board will be appraised of findings and recommendations to address inequalities.

## **7 Impact on Inequalities**

7.1 The findings of the Impact Assessment for the separate projects to move RHSC and DCN to Little France are to be revisited as a joint project in advance of the submission of the Full Business Case. The Committee will be appraised of findings and recommendations to address inequalities.

## **8 Involving People**

8.1 NHSL Partnership have been engaged in developing these proposals for project personnel and facilities.

8.2 The communications and engagement plan for the project, developed in conjunction with the Scottish Health Council and NHSL Partnership details the plans for involving and informing staff, patients, the public and other stakeholders.

## **9 Resource Implications**

9.1 The resource implications for adviser support and NHSL staff during the procurement phase of the project have been advised previously.

Brian Currie  
Project Director – RHSC + DCN – Little France  
8<sup>th</sup> May 2012



### **List of Appendices**

Appendix 1: “RHSC + DCN – Approach to Reference Design” dated March 2012 by Mott MacDonald.

## RHSC and DCN – Little France – Competitive Dialogue Meeting 1 (Financial) Agenda – Bidder C- Action Notes

**Date:** 04<sup>th</sup> April 2013      **Time:** 10:30 – 14:45      **Location:** Islay Room, 56 Canaan Lane, Edinburgh

**Attendees:** Carol Potter (CP)      Financial Lead, NHS Lothian (NHSL)  
 Michael Pryor (MP)      Lead Financial Adviser, Ernst & Young (EY)  
 Lindsey Crawford (LC)      Senior Executive, Ernst & Young  
 Bidder Team

**Meeting Chair:** Carol Potter (CP)      Finance Lead, NHS Lothian  
**Action Notes:** Lindsey Crawford (LC)      Senior Executive, Ernst & Young

Meeting Start Time		Meeting Finish Time	
Confirm attendee attendance			

**Please record actions and agreements only.**

		Action to be completed by	Action to be when?

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## Competitive Dialogue Meeting 2 – Action Notes

**Date:** 2<sup>nd</sup> May 2013

**Time:** 09:00 – 17.00

**Location:** MacKinlay Room, 56 Canaan Lane, Edinburgh

**Attendees:**

Sorrel Cosens	Project Manager, NHS Lothian
Brian Currie	Project Director, NHS Lothian
Iain Graham	Commercial and Legal Lead, NHS Lothian
Janice MacKenzie	Clinical and Service User Lead, NHS Lothian
Carol Potter	Financial Lead, NHS Lothian
Jackie Sansbury	Operations and Commissioning Lead, NHS Lothian
Richard Cantlay	Lead Technical Adviser, Mott MacDonald
Kenny Falconer	Technical Adviser, Mott MacDonald
Maureen Brown	Project Manager, Mott MacDonald
Andrew Orr	Lead Legal Adviser, MacRoberts
Michael Pryor	Lead Financial Adviser, Ernst & Young
Gavin Hailes	Bid Director
Alistair Johnston	Technical & Construction Lead
Kieran Morgan	Architect
Glen Bowers	Cost Manager
Mike MacKay	FM Lead
Alan Travis	Sponsor/ Legal Commercial Support
Oliver Purches	Financial Advisor
Marcus Chapman	Legal & Financial Lead
Alisa Ritchie	Legal Advisor
Trevor Sturmy	Financial Advisor

**Meeting Chair:**

Brian Currie

Project Director, NHS Lothian

**Action Notes:**

Sorrel Cosens  
Maureen Brown

Project Manager, NHS Lothian  
Project Manager, Mott MacDonald

	Action noted and <i>post-meeting updates</i>	Action	Target Date
1.1	Mosaic advised that all personnel working throughout Operational stage need to have PVG disclosure completed. NHSL advised when works are occurring within the existing hospital personnel must have PVG checks or be accompanied.	Note	
1.2	Mosaic advised to develop their own staff policies for submission rather than reference constituent organisations. Mosaic propose to align policies with those of NHSL as far as possible.	Mosaic	Ongoing
1.3	NHSL to provide Mosaic contact details for neurosciences organisations.  <i>A wide range of voluntary organisations are associated with the DCN and clinical neurosciences. The Neurological Alliance of Scotland is an umbrella body of organisations and groups representing people living with or affected by a neurological condition. NHSL suggests that Mosaic looks at their website for a list of their members. No contact with the organisations would be expected at this stage of dialogue to progress this community benefit scheme.</i>	NHSL	CLOSED
1.4	Mosaic advised to include examples of integration of FM into the design in their submission.	Mosaic	Ongoing
1.5	Mosaic will provide contact details for their Communications Manager by email to <a href="mailto:RHSCandDCN@nhslothian.scot.nhs.uk">RHSCandDCN@nhslothian.scot.nhs.uk</a> .	Mosaic	09/05/13
	Post Meeting Note: Communications policy – Communications will be via the Laing O'Rourke Communications Team until after a preferred bidder is		

1.6	<p>announced. They will co-ordinate and manage all of the parties within the Mosaic consortium and provide a single point of contact with NHSL</p> <p>The contact person is Vikki Locke Email [REDACTED] Phone [REDACTED] Mobile [REDACTED]</p> <p>Mosaic to upload presentations / additional information provided at the meeting into the relevant folder in Conject.</p>	Mosaic	CLOSED
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## Competitive Dialogue Meeting 2 – Design & Construction Action Notes

**Date:** 2<sup>nd</sup> May 2013

**Time:** 9.50 – 3.30

**Location:** MacKinlay Room, 56 Canaan Lane, Edinburgh

**Attendees:**

Brian Currie	Project Director, NHSL
Janice MacKenzie	Clinical and Service User Lead, NHSL
Ian Graham	Capital Planning, NHSL
David Stillie	D&C Architectural Adviser, Mott MacDonald
Kenny Falconer	Technical Adviser, Mott MacDonald
Colin Macrae	M&E Technical Adviser, Mott MacDonald
Andy Orr	Legal Adviser, MacRoberts
Jackie Sansbury	Operations and Commissioning Lead, NHSL
Howard Royston	Acting Head of Estates, NHSL
Carol Thorburn	FM Adviser, Mott MacDonald
Jackie Sansbury	Operations and Commissioning Lead, NHSL
Carol Thorburn	FM Adviser, Mott MacDonald
Gavin Hailes	Bid Director
Alistair Johnston	Technical & Construction Lead
Keiran Morgan	Architect
Helen Wood	Architect
Glen Bowers	Cost Manager
Bill Chalmers	Building Services Engineer
Jamie Brewster	Architect
Peter McCusker	M&E Engineer
Mike Singleton	M&E Engineer
Mike Mackay	FM Lead
John Sweetin	FM Technical Lead

**Meeting Chair:** Brian Currie      Project Director, NHSL

**Action Notes:** David Stillie      D&C Architectural Adviser, Mott MacDonald

	Action noted and <i>post-meeting updates</i>	Action	Target Date
2.1	Confirmed land issues in relation to Planning	Note	
2.2	Confirmed no highways attendance at Planning Meeting	Note	
2.3	Confirmed AEDET review 18 <sup>th</sup> June 2013. Refer to clarification 30 for detail.	Note	
2.4	1:50 meetings confirmed between 1 <sup>st</sup> July and 9 <sup>th</sup> August. Refer to clarification 38 for detail.	Note	
2.5	RHSC/DCN entrance issues – confirmed linked entrances through common public space	Note	
2.6	Confirmed Bidders may contact CEC Building Control. Previous application under previous procurement route has probably lapsed	Note	
2.7	Confirmed separation of commercial traffic and pedestrians very important	Note	
2.8	Where the Operational Functionality is compromised by virtue of compliance with the Board's requirements as set out in paragraph 5.2.2 of ITPD volume 1 then Mosaic shall identify the specific areas affected and provide a supporting commentary. Any such changes will require discussion with and agreement by the Board. NHSL will issue a clarification to all Bidders.	Note	
	<i>NHSL are still reviewing our position on compliance (in respect of your informal submission 2 D&amp;C proposals) and will issue a bulletin in the week commencing 06/05/13.</i>		

2.9	Confirmed POD is dedicated Children's space	Note	
2.10	NHSL to review and comment on Mosaic's proposal for OPD design. <i>Please refer to Clarification 00052 on Operational Functionality.</i>	NHSL	CLOSED
2.11	Mosaic to review location of Spiritual Care	Mosaic	22/05/13
2.12	Mosaic to review location of Restaurant. Areas for NHSL staff to be segregated from other people to be considered.	Mosaic	22/05/13
2.13	Confirmed access to external areas/courtyards is seen as a benefit	Mosaic	22/05/13
2.14	Mosaic to review location of hot core	Mosaic	22/05/13
2.15	Mosaic to review courtyard in Theatres in terms of room relationships in Reference Design	Mosaic	22/05/13
2.16	Mosaic to demonstrate quality of aspect from DCN Acute in new north-eastern location	Mosaic	22/05/13
2.17	Mosaic to review proposed location of Child Life and Health	Note	
2.18	Mosaic confirmed Plastics Dressings Clinic still located in RHSC Therapies.	Mosaic	22/05/13
2.19	Mosaic to review location of Neurophysiology in terms of adjacency to lifts.	Mosaic	22/05/13
2.20	PIU needs to be located as Reference Design	Mosaic	22/05/13
2.21	Mosaic confirmed that the servicing strategy for expansion areas will be illustrated at a future Dialogue Meeting	Mosaic	22/05/13
2.22	Confirmed MDCU to be located adjacent to Medical Inpatients	Note	
2.23	Confirmed Paediatric neuro has co-located waiting in Reference Design	Note	
2.24	Access to courtyard for RHSC Neuro Inpatients desirable	Mosaic	22/05/13
2.25	Mosaic to review location of Clinical Education Suite	Note	
2.26	Classroom location confirmed as acceptable on fourth floor	Note	
2.27	NHSL to send Mosaic responses to equipment queries. <i>Uploaded onto Conject 02/05/13.</i>	NHSL	CLOSED
2.28	NHSL to confirm whether decorated concrete finish to internal walls would be viewed favourably	NHSL	15/05/13
2.29	NHSL confirmed there were no opportunities for retail space occupied by commercial organisations other than NHS Scotland or Charity outlets to be incorporated into the scheme as a result of the existing project agreement reached with Consort Healthcare.	Note	
2.30	Confirmed 25 degrees is max temperature requirement.	Note	
2.31	Mosaic to investigate control of frost coils to allow them to operate only when required	Mosaic	22/05/13
2.32	Mosaic confirmed roof mounted adiabatic coolers are being considered. NHSL to respond to Mosaic regarding this type of cooling.	Mosaic	22/05/13
2.33	Confirmed energy targets are based on gaining 6 credits under ENE01	Mosaic	22/05/13
2.34	Confirmed no humidification required in Theatres	Note	
2.35	Confirmed vapour injection systems not the preferred solution.	Note	
2.36	Mosaic discussed a second VIE to reduce reliance on cylinders. Note provision of a second VIE is dependent on available space.	Note	
2.37	Confirmed Nitrous Oxide system required	Note	

2.38	Confirmed surgical/medical and compressed air may be supplied from same system compressors.	Note	
2.39	Open protocol system for BMS acceptable if it does not interfere with NHSL systems	Note	
2.40	Sprinklers were discussed NHSL considered that compliance with the SHTM would be required and fire engineered solutions may be acceptable. Mosaic to develop proposals	Note	
2.41	Mosaic to consider HV resilience, a simpler robust approach was preferred by NHSL	Note	
2.42	Mosaic are proposing a reduction from 6AC/Hr to 4 AC/hr as set out in the reference design.	Note	
2.43	Mosaic are considering the use of a vapour injection system. NHSL are reluctant to accept this solution. Mosaic to provide evidence that a vapour injection system would be safe.	Mosaic	19/06/13
2.44	Mosaic is proposing regular grid of soil stacks to enable flexibility.	Note	10/05/13
2.45	Mosaic are considering rain and grey water harvesting. NHSL to confirm acceptable uses for such recycled water  <i>Our position derived from the SHTM is that we should not allow such systems because of the potential risk to health.</i>	NHSL	CLOSED
2.46	Mosaic discussed LV supply to PCs via an array of Photovoltaic panels. Note this requires the Board to use PCs operating from a DC power supply.	Mosaic	
2.47	NHSL confirmed good lighting required for staff and patients attending out of hours	Note	
2.48	NHSL confirmed PA system not required. Note Mosaic to raise question to clarify PA and Intercom requirements.	Mosaic	22/05/13
2.49	NHSL confirmed completion date in March allows decanting and occupation during spring/summer. Earlier handover would force unacceptable winter occupation.	Note	
2.50	NHSL confirmed delayed site start not acceptable.	Note	
2.51	Mosaic programme from PB to completion to be submitted for consideration at Dialogue Meeting No 4	Mosaic	19/06/13
2.52	NHSL confirmed oversailing issues will require to be cleared with Little France Working Group	Note	
2.53	Mosaic advised that they would like the Surveyor to be appointed to carry out site interface surveys in the pre-FC period.	Note	
2.54	NHSL confirmed that the use of Little France Drive and the A&E Blue Light route for construction access is only acceptable in the circumstances set out in the ITPD documents and recorded in the Construction Access Plan.	Note	
2.55	NHSL confirmed that the access proposal set out in the ITPD has not been tested with CEC Highways. This proposal was prepared by the Boards Transport Engineer and their understanding of the Council's likely view.	Note	
2.56	Mosaic to provide a high level indication of the costs / benefits of their options for construction access from Old Dalkeith Road utilising the petrol station site.	Mosaic	22/05/13
2.57	NHSL indicated that multiple interests in the former filling station was not likely to assist in providing a value for money option.	Note	
2.58		NHSL	22/05/13

2.59	Restrictions on use of Car Park E – No commercial vehicles or materials storage – Legal team to advise following review of NHSL agreement with Consort	Note	
2.60	Confirmed Mosaic may discuss further options for the substation and cable routes with Scottish Power	NHSL	Ongoing
2.61	NHSL confirmed that they would share the feasibility study of viable routes for PTS within RIE with all bidders within the next few weeks/ when available. <i>NHSL will update Bidders on progress with enabling and clinical enabling works at each dialogue meeting.</i> NHSL to confirm new location of RIE server room when known.	NHSL	Ongoing
2.62	<i>NHSL will update Bidders on progress with enabling and clinical enabling works at each dialogue meeting.</i>	Mosaic	22/05/13
2.63	Questions on equipment on 112 Key and Generic Rooms to be issued by Mosaic	NHSL	30/05/13
2.64	Mosaic recommended that the NHSL specified equipment be covered by provisional sums at this stage. This will ensure that the appropriate quality and specification is reflected in all bidders offers. NHSL to consider <b>Costs</b>	Note	
2.65	Mosaic cost plan is currently at £159m. NHSL confirmed the construction cost cap (based on current costs BCIS all-in TPI) is £151,532,700.	Mosaic	22/05/13
2.66	Mosaic cost plan will continue to be developed over the next month for update at dialogue meeting 3. Mosaic advised that the lifecycle sheet in technical cost proformas may be one year short; it differs from the financial proforma. NHSL to check and advise.	NHSL	CLOSED
2.67	<i>Please refer to Clarification 00053.</i> Mosaic hard FM costs currently higher than ITPD figure, but very much a work in progress and being developed. Next iteration for dialogue meeting 3.	Mosaic	22/05/13

## Competitive Dialogue Meeting 2 – Facilities Management Action Notes

**Date:** 2<sup>nd</sup> May 2013      **Time:** 11.00 – 16.00      **Location:** Minns Room, 56 Canaan Lane, Edinburgh

**Attendees:**

Jackie Sansbury	Operations and Commissioning Lead, NHSL
Howard Royston	Acting Head of Estates, NHSL
Carol Thorburn	FM Adviser, Mott MacDonald
Mike Mackay	FM Lead
John Sweetin	FM Technical Lead

**Meeting Chair:** Jackie Sansbury      Operations and Commissioning Lead, NHSL  
**Action Notes:** Carol Thorburn      FM Adviser, Mott MacDonald

Action noted and <i>post-meeting updates</i>		Action	Target Date
3.1	Mosaic to expand on the D3, D4, D5 and D6 first submissions to include a response to each section of each question. Advised to provide examples to evidence statements and to include additional information on integration of the systems, audit of the services and interfaces with NHSL.	Mosaic	22/05/13
3.2	Mosaic to issue a query regarding cleaning following building works .	Mosaic	22/05/13
3.3	Mosaic to issue a query regarding cleaning of areas out of reach.	Mosaic	22/05/13
3.4	Mosaic to provide NHSL with a separate cost for window cleaning and the window strategy to enable consideration of same	Mosaic	Ongoing
3.5	NHSL had reviewed the A la Carte catering proposal and would retain the existing solution possibly supplemented by an additional chef to respond to additional requirements.	Note	
3.6	NHSL agreed that use of WIFI by Project Co to provide FM services was acceptable. Reference to Scottish Wide Area Network (SWAN) was discussed	Note	
3.7	The telephone system will be a VOIP system and not a PABX system. NHSL to issue a clarification.	NHSL	20/05/13
3.8	NHSL welcomed the approach proposed by Mosaic set out in the Helpdesk paper	Note	

## Competitive Dialogue Meeting 2 – Financial Action Notes

**Date:** 2<sup>nd</sup> May 2013      **Time:** 10.00 – 16.00      **Location:** Islay Room, 56 Canaan Lane, Edinburgh

**Attendees:**

Carol Potter	Financial Lead, NHSL
Michael Pryor	Lead Financial Adviser, Ernst & Young
Lucy MacArthur	Executive, Ernst & Young
Howard Royston	Estates Lead, NHS Lothian (NHSL)
Carol Thorburn	Technical Advisor, Motts
Alan Travis	Sponsor / Legal Commercial Support
Oliver Purches	Financial Advisor, HSBC
Trevor Sturmy	Financial Advisor, HSBC
Mike Mackay	FM Lead
Pam Watters	FM Commercial Lead
Marcus Chapman	Legal and Commercial Lead

**Meeting Chair:** Carol Potter      Finance Lead, NHSL  
**Action Notes:** Lucy MacArthur      Executive, Ernst & Young

	Action noted and <i>post-meeting updates</i>	Action	Target Date
4.1	Mosaic will continue dialogue with funders on Scottish Independence as dialogue progresses	Mosaic	Ongoing
4.2	Mosaic will update NHSL on the following items at each dialogue session: <ul style="list-style-type: none"> <li>Update on the position of the market relative to the standard terms</li> <li>Update on the position of the market on the security package</li> </ul>	Mosaic	Ongoing
4.3	Mosaic will make a specific presentation on their detailed timetable to close at a later stage of competitive dialogue	Note	
4.4	Update on the technical and legal diligence advisors will be available by the next competitive dialogue stage	Mosaic	22/05/13
4.5	Clarification that likelihood is that certification only will be required from the due diligence advisors at the draft final tender stage. Mosaic would be grateful for clarification on this point	NHSL	Ongoing
4.6	Clarification that NHSL will provide the swap rate assumption, to include a buffer  <i>Please refer to Clarification 00050, issued 08/05/2013.</i>	NHSL	CLOSED
4.7	Confirmed that pass through costs are requested on the pro-formas but not required to be noted on the actual service charge	Note	
4.8	Pursue with SFT whether RPI or RPIX should be used	NHSL	10/05/13
4.9	To confirm the dates for the step up on the margins  <i>Bidders should assume the following in relation to margins: construction - 320 bps; operational date to January 2015 - 300 bps; January 2015 to January 2033 - 320 bps; January 2033 onwards 340 bps.</i>	NHSL	CLOSED
4.10	Provide Mosaic's short form term sheet, which will highlight their assumptions for NHSL review	Mosaic	22/05/13
4.11	Provide Mosaic with requests for any specific information NHSL would like to see on the Summary of the Model	NHSL	CLOSED

	<i>NHSL request a profile of the annual service payment over the 25 years showing 1) hard FM and 50% of life cycle and 2) the balance.</i>		
4.12	Mosaic to bring summary of Model to each Dialogue meeting	Mosaic	Ongoing
4.13	Conformed that no additional print macros within the model will be required out with the pro-formas previously requested	Note	
4.14	Confirmed that Appendix 2 to the payment mechanism is available on Conject currently(excel file titled 'Schedule part 14 Appendix A Functional Areas and GSUs')	Note	
4.15	Pursue with SFT via legal workstream possible amendment of PA to ensure consistency between payment mechanism schedule and payment provisions relating to negative invoice position  <i>Having reviewed this, the Board do not believe that there is any inconsistency between the payment mechanism and the payment provisions in the PA.</i>	NHSL	CLOSED
4.16	The inclusion of a bedding-in period would constitute a derogation from the SFT Standard and so would need to be discussed via legal workstream.	Note	
4.17	A paper on the calibration process of the Paymech will be shared with all bidders  <i>Please refer to Clarification 00048.</i>	NHSL	CLOSED
4.18	Further analysis will be carried out using the figures from Appendix 2 which will be included within dialogue 3	Mosaic	22/05/13

## Competitive Dialogue Meeting 2 – Legal Action Notes

**Date:** 2<sup>nd</sup> May 2013      **Time:** 10.00 – 12.30      **Location:** Miller Room, 56 Canaan Lane, Edinburgh

**Attendees:**                      Iain Graham                      Commercial and Legal Lead, NHSL  
    Andrew Orr                      Lead Legal Adviser, MacRoberts  
    Lynn Pentland                      Legal Adviser, MacRoberts

   Marcus Chapman                      Legal & Financial Lead  
    Ailsa Ritchie                      Legal Advisor

**Meeting Chair:**                      Iain Graham                      Commercial and Legal Lead, NHSL

**Action Notes:**                      Lynn Pentland                      Legal Adviser, MacRoberts

	Action noted and <i>post-meeting updates</i>	Action	Target Date
5.1	NHSL to respond in writing to in respect of Mosaic's NPD Project Agreement mark-up and commentary.  <i>Please refer to Dialogue Bulletin 00014.</i>	NHSL	CLOSED
5.2	NHSL to respond in writing in respect of Mosaic's draft heads of terms for both the Construction Contract and the Service Contract.	NHSL	15/05/13
5.3	NHSL to respond in writing in respect of Mosaic's draft heads of terms for the parent company guarantee.	NHSL	15/05/13
5.4	NHSL and insurance advisers require to discuss submissions. NHSL will consider how this works within the dialogue dates.  <i>Meeting with NHSL and Bidders insurance advisers arranged for 13/05/13. Please refer to Dialogue Period Bulletin 00011.</i>	NHSL	CLOSED
5.5	Mosaic to propose suitable dates for a property/interface meeting (to take place out with the Dialogue Meeting cycle if need be).  <i>NHSL stress that this is to be an information meeting and not an additional dialogue session. Mosaic will be asked to provide their attendees and agenda at least two days in advance of the meeting.</i>	Mosaic	10/05/13
5.6	NHSL to provide Mosaic with a programme of anticipated Key Enabling Works.  <i>NHSL will update Bidders on progress with enabling and clinical enabling works at each dialogue meeting.</i>	NHSL	Ongoing
5.7	NHSL to re-issue Site Plans 7,9,10 and 13	NHSL	Ongoing



## Competitive Dialogue Meeting 5 – Finance Action Notes

**Date:** 19th September 2013      **Time:** 11:00-12.15      **Location:** Minns Room

**Attendees:**

Iain Graham	Commercial and Legal Lead, NHSL
Michael Pryor	Lead Financial Adviser, Ernst & Young
Marcus Chapman	Mosaic - Legal and Commercial Lead
Alan Travis	Mosaic - Sponsor

**Meeting Chair:** Iain Graham      Commercial and Legal Lead, NHSL

**Action Notes:** Michael Pryor      Ernst & Young

		Lead	Time
5.1	NHSL to arrange call between Mosaic tax/finance team and SFT to discuss tax treatment of surpluses.	NHSL	27/09/13
5.2	NHSL to discuss possibility of omitting surpluses from Price Evaluation	NHSL	30/09/13
5.3	NHSL re reissue revised IFT instructions.	NHSL	30/09/13

BIDDER C

RHSC and DCN –  
Little France

## Competitive Dialogue Meeting 5A Agenda

**Date:** 26th September 2013    **Time:** 09:00 – 16:30    **Location:** MacKinlay Room

**Attendees:** Brian Currie    Project Director, NHSL  
Janice MacKenzie    Clinical and Service User Lead, NHSL  
Kamil Kolodziejczyk    Assistant Project Manager, Mott MacDonald  
David Stillie    D&C Architectural Advisor, Mott MacDonald

**Bidder Attendees:** Gavin Hailes    Mosaic  
Nick Durham    Mosaic

**Meeting Chair:** Janice MacKenzie    Clinical and Service User Lead, NHSL  
**Action Notes:** Kamil Kolodziejczyk    Assistant Project Manager, Mott MacDonald

Refreshments will be available from 8.30am. The meeting will start promptly at 9.00am.

		Lead	Time
1.0	<b>Introduction</b> <ul style="list-style-type: none"> <li>Purpose and agenda for meeting</li> </ul>	Janice MacKenzie	09.00
2.0	<b>Continuation of 1:200 Design</b>	Janice MacKenzie	10:00
3.0	<b>Wrap Up</b> <ul style="list-style-type: none"> <li>Reflection from Bid Team</li> </ul>	Bid Team	16.15
4.0	<b>CLOSE</b>		16:30

Lunch will be available from 12:30pm.

BIDDER C

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## Competitive Dialogue Meeting 6 Agenda

**Date:** 21<sup>st</sup> November 2013      **Time:** 09:00 – 17:00      **Location:** MacKinlay Room, 56 Canaan Lane, Edinburgh

### Attendees

**Board:**

Brian Currie	Project Director, NHS Lothian
Iain Graham	Commercial and Legal Lead, NHS Lothian
Janice MacKenzie	Clinical and Service User Lead, NHS Lothian
Jackie Sansbury	Operations and Commissioning Lead, NHS Lothian
Sorrel Cosens	Project Manager, NHS Lothian
Richard Cantlay	Lead Technical Adviser, Mott MacDonald
Graeme Greer	Technical Adviser, Mott MacDonald
Maureen Brown	Project Manager, Mott MacDonald
Andrew Orr	Lead Legal Adviser, MacRoberts
Michael Pryor	Lead Financial Adviser, Ernst & Young
Carol Thorburn	FM Technical Adviser, Mott MacDonald
Lynn Pentland	Legal Adviser, MacRoberts
Rod Shaw	Cost Adviser, Thomson & Gray

**Bidder:**

Gavin Hailes	Bid Lead
Marcus Chapman	Financial Lead
Alan Travis	Sponsor
Alistair Johnston	Technical Lead
Mike Mackay	FM Lead
John Sweetin	FM Manager
Glen Bowers	Cost Lead
Keiren Morgan	Architect
Natalie Duthie	Architect
Bill Chalmers	Building Services Lead
Ailsa Ritchie	Legal Advisor
Oliver Purchase	Financial Advisor

**Meeting Chair:** Brian Currie      Project Director, NHS Lothian  
**Action Notes:** Sorrel Cosens      Project Manager, NHS Lothian

		Lead	Time
1.	NHSL plan to close current queries and issue these actions by 25/11/13.	NHSL	CLOSED
2.	Mosaic has until 29/11/13 to submit any remaining queries before close of dialogue.	Mosaic	29/11/13
3.	NHSL plan to close dialogue on 06/12/13 with the issue of Invitation to Submit Final Tender (ISFT). Closing dialogue is dependent on SFT approval through a Key Stage Review.	Note	
4.	The electronically submitted final tender will take precedence over the hard copies.	Note	
5.	ISFT detail will confirm submission requirements, including: - physical model encompassing adjoining buildings (specification to follow); - four hard copies of the submission for each technical criteria; - one hard copy of the commercial submissions; - one hard copy each of AP1.1 design deliverables (specifics to be confirmed) and AP1.2 specifications	NHSL	06/12/13
6.	Mosaic indicated it would be helpful to receive the design deliverables as soon as possible in particular to allow bidders time to cut drawings from the BIM model that reflect the scales and paper sizes NHSL require.  <i>Refer to clarification 00175.</i>	NHSL	CLOSED
7.	No tracker / mark-up of changes to Draft Final Tender will be required.	Note	

BIDDER C

RHSC and DCN –  
Little France

8.	Conject folders will be established and available for Final Tender upload from the issue of the ISFT. The board will not accept hard copy submissions in advance of the day of the Final Tender submission deadline.	Note	
9.	Bidder to confirm if they wish to collect any of the Draft Final Tender hard copies. NHSL will retain one for records and destroy the rest.	Mosaic	CLOSED

	<b>Strategic and Management Approach</b>		
10.	Criteria B4 – Bidder to acknowledge Board goals. Bidder to consider cross-referencing for Final Tender	Note	
11.	Criteria B5 – the Bidder confirmed that Project Co staff at the SPV level will work to Laing O'Rourke policies, and that this does not just refer to the design and construction phase. Mosaic to consider proposals for pre-employment checks over the operational period; if outsourced then this will need to be to a company registered to carry out the screening required by the Board.	Note	
12.	The Bidder confirmed that they understood the Board's requirements for Strategic and Management Approach.	Note	

	<b>Approach to Design and Construction</b>		
13.	Criteria C1 – the Board clarified that the main RHSC and DCN doors would be closed out of hours, with access managed through a video-intercom system.	Note	
14.	Criteria C2 – the Bidder was advised to be explicit in arrangements for vehicles on site that need to reverse.	Note	
15.	Criteria C3 – the Bidder to clarify level of provision for interstitial blinds and anti-ligature fixtures.  Bidder confirmed they would provide text on cove skirting within their Final Tender.	Note	
16.	Criteria C4 – Bidder advised it is for them to strike what they think is the appropriate balance of cost versus quality in their final tender.	Note	
17.	Criteria C10 – outputs from energy model not tying up with cost model. Bidder confirmed that they had used the dynamic and thermal model for the costing in Draft Final Tender. NHSL confirmed the compliance model should be used for Final Tender utility costs.	Note	
18.	Criteria C10 – Bidder C included a biofuel option however did not provide this in the DFT submission Building Regulation Model. Bidder stated they have subsequently re-modelled with the liquid biofuel.  NHSL confirmed a derogation would be required if gas CHP is substituted for biofuel CHP.  Bidder to ensure FT building regulations model accurately reflects final submission CHP fuel choice.	Note	



BIDDER C

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19.	<p>Criteria C10 – NHSL confirmed the C10.2 submission should be “real life” dynamic and thermal energy model as per the requirements in Appendix F of the ITPD, and C10.1 should be based on the “Building Regulations” energy model.</p> <p>For the DFT Bidder used the C10.1 model as C10.2 and vice versa. It should be amended by the FT.</p> <p>FT submissions to make clear reference to differentiate between C10.1 and C10.2.</p> <p>Utility pass through cost should be derived from 10.1 “building regulations” model, and include kWh figures the model in addition to derived costs for transparency.</p> <p>“Real life” energy usage/costs fall under C10.2 i.e. 42 GJ etc.</p> <p>System efficiencies in bidder’s “building regulations” model to reflect accurately the design proposals. The efficiency of absorption chiller was unrealistically high/input incorrectly.</p> <p>In addition compliance software may not have capability to model systems combining absorption chiller and vapour compression chiller. Guidance available in Part L2A section 4.15. To be amended by FT.</p>	Note	
20.	Criteria C10 – No room level ventilation specified in building regulations model, to be amended for FT.	Note	
21.	Criteria C10 – h) template matrix provided by the Board to be populated by the Bidder and submitted for the FT.	Note	
22.	<i>Criteria C10 – Post meeting note: Room names – room names are detailed within thermal template matrix issued by the board.</i>	Note	
23.	Criteria C10 – For the final tender Bidder to provide all the information that are required within ITPD / ITSFT all xls files, matrix etc. Zip files not to be used.	Note	
24.	Criteria C10 – Bidder to include the statements that they are not proposing mixed mode for their Environmental Services and Energy Management Strategy.	Note	
25.	Criteria C12 – area compliance is now achieved.	Note	
26.	Criteria C13 – Bidder advised to provide key views and long-sections for this question, to replicate views used for Planning in Principle.	Note	
27.	<p>Criteria C15 – the Bidder confirmed that their proposals include CAT7 cabling at the cost of CAT6a, however they will specify CAT6a to meet the Board’s requirements. The Bidder will submit any proposal to enable CAT7, with costs, as an innovation.</p> <p>Active Equipment - Bidder to consider heat load implications. Bidder to consider the potential heat load from this group 3 equipment.</p>	Note	
28.	Criteria C21 – Bidder confirmed that they would comply with the Board’s Construction Requirements. Assumptions and clarifications should be in the response to C30.	Note	
29.	Criteria C24 – the access plans and construction zones have been updated, and the former filling station site will now be incorporated too.	Note	
30.	Criteria C27 – in addition to the Compliance and Feedback Report, HAI-SCRIBE is included at C2, Bidder advised to include here as well.	Note	
31.	Criteria C30 – Bidder advised to be specific where they refer to assumptions based on “area is as briefed by the Board”.	Note	
32.	Criteria C31 – the Bidder will provide graphics showing each phase.	Note	

BIDDER C

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33.	<p>Ap1.1 – the Board advised the Bidder to use titles for drawings and images as reference numbers were very hard to navigate.</p> <p>The Bidder confirmed that there would be Site Investigations and surveys to be carried out at Preferred Bidder stage.</p> <p>Signposting and cross-referencing the vibration monitoring / prevention proposals.</p>	Note	
34.	<p>AP1.2 – NHSL informed the Bidder of a correction to the Compliance and Feedback Report section on Specifications: this should read “equal and approved”, not “equal or approved”.</p>	Note	
35.	<p>NHSL confirmed that missives have been concluded for the former filling station site however the final contract is to be concluded. Project Co will be required to carry out work and hand back to the Board as retained estate. The scope of use of the ground is restricted. Board confirmed requirement for Project Co to consider this land in their proposals. Details to follow on confirmation of purchase.</p> <p><b>Post meeting note:</b> Settlement date has been confirmed as 27/11/13.</p> <p><i>Refer to Clarifications 00179 and 00180.</i></p>	NHSL	CLOSED
36.	<p>The Bidder confirmed that they understood the Board’s requirements for Approach to Design and Construction.</p>	Note	
37.	<p>NHSL indicated that the Bidders would be required to provide archaeological monitoring during construction rather than the Board undertaking archaeological surveys prior to financial close. NHSL to issue details of the specific agreement reached with CEC planners</p> <p><i>Refer to Clarification 00183.</i></p>	NHSL	CLOSED
38.	<p>Mosaic has worked with Scottish Power Energy Networks to develop an alternative power supply which would reduce interfaces with the existing RIE site and others. A copy of SPEN letter dated 19 November 2013 (copy attached) was handed to NHSL. NHSL indicated they would look to make the appropriate payment to secure the supply for the project.</p>	NHSL	06/12/13

	<b>Technical Costs</b>		
39.	<p>Criteria C29 – the Bidder confirmed that costs will be updated for Final Tender and they anticipate that only three items will remain uncosted.</p> <p>The Board confirmed that there was no requirement for replacement Planting in Lifecycle costs.</p>	Note	
40.	<p>Criteria D14 – Bidder advised that the cost proforma are required to be completed in full.</p>		

BIDDER C

RHSC and DCN –  
Little France

	<b>Approach to Facilities Management</b>																	
41.	The Bidder will keep the Board apprised of developments in the investigation into SERCO.	Mosaic	Ongoing															
42.	The Bidder confirmed no change to previously issued information on recent media attention in relation to SERCO and is stated in the PQQ.	Note																
43.	Criteria D4 – all as per DFT Compliance and Feedback Report.																	
44.	Criteria D8 – Bidder advised to address their own business continuity planning in this response. The Bidder confirmed that they had expanded on their submission.	Note																
45.	Criteria D12 – the Board confirmed requirements for grounds maintenance: hard surfaces, furniture, lighting, as well as roof surfaces (soft or hard) sit within Project Co maintenance contract. The Board will issue an amended service specification for clarity.	NHSL																
46.	Criteria D14 –all as per DFT Compliance and Feedback Report																	
47.	<p>Mosaic confirmed early in dialogue that they were comfortable with thresholds proposed; undertaking due diligence with Technical Advisers. The Bidder agrees that these are appropriate for poor performance the FM sub-contract.</p> <p>The Bidder propose to change termination threshold to Credit Agreement and Project Agreement, based on their understanding of the proposed payment mechanism figures:</p> <p>RHSC &amp; DCN MOSAIC – PROPOSED REVISED PAYMECH TRESHOLDS</p> <table border="1"> <thead> <tr> <th>DEFAULT</th> <th>CURRENT</th> <th>PROPOSED</th> </tr> </thead> <tbody> <tr> <td>40.1.8</td> <td>0.123%</td> <td>0.300%</td> </tr> <tr> <td>40.1.9</td> <td>4 / 12</td> <td>5 / 12</td> </tr> </tbody> </table> <p>WARNING NOTICES</p> <table border="1"> <tbody> <tr> <td>24.3.1</td> <td>0.123%</td> <td>0.300%</td> </tr> <tr> <td>24.3.2</td> <td>0.059%</td> <td>0.200%</td> </tr> </tbody> </table> <p>The following information is required from Mosaic to conclude dialogue on payment mechanism. On receipt of this information the Board will arrange a discussion between NHSL's and Mosaic's technical advisers.</p> <ol style="list-style-type: none"> <li>Written confirmation of how the bidder understands the minimum deductions work with appropriate references back to the schedule.</li> <li>How have they calculated the 700% gearing including what this realistically looks like in an operational context (not just a calculation on a spreadsheet) worked through the payment mechanism.</li> <li>A calculation showing the deduction value they believe is incurred for a single event leading to whole facility unavailability for a single session.</li> <li>How they have come to the 0.3% threshold figure, this should be in terms of operational context, and for any other adjusted threshold.</li> <li>What projects have been used as benchmarks and how they have factored in the reduced scope of the contract into these benchmarks such that they reflect the contract more accurately</li> </ol> <p><b>Post meeting note:</b> NHSL's and Mosaic's Technical Adviser discussed (22/11/13).</p> <p>The initial discussion indicated the 750% gearing suggested by Mosaic was a result of the interpretation of the application of the minimum availability deductions. Mosaic Technical Advisor had understood the definition meant per room per event per session, resulting in 750% gearing. NHSL technical advisor explained that this is not the intention of the paymech and that it is per event per session.</p>	DEFAULT	CURRENT	PROPOSED	40.1.8	0.123%	0.300%	40.1.9	4 / 12	5 / 12	24.3.1	0.123%	0.300%	24.3.2	0.059%	0.200%	Mosaic	CLOSED
DEFAULT	CURRENT	PROPOSED																
40.1.8	0.123%	0.300%																
40.1.9	4 / 12	5 / 12																
24.3.1	0.123%	0.300%																
24.3.2	0.059%	0.200%																

BIDDER C

RHSC and DCN –  
Little France

	NHSL Technical Adviser referred to the drafting in Clause 4.1 that is worded around <u>an</u> Unavailability event.  Mosaic Technical Adviser to confirm whether this drafting is acceptable and Mosaic to confirm any subsequent amendments to the Thresholds.		
48.	Change protocol catalogues - Schedule Part 16. NHSL confirmed that the board will evaluate submissions to generate any potential equalisation adjustment.  Bidders will be asked to provide rates to be applied to notional quantities and this will generate a figure to be incorporated into the price evaluation. Clarification to follow.  <i>Refer to Clarification 00177.</i>	NHSL	CLOSED
	<b>Finance</b>		
49.	Criteria F2 – as SFT wish to be closely involved in the Funding Competition as joint decision-makers with the Preferred Bidder; NHSL will revise the protocol for Bidders to review and strengthen their proposal as necessary.	NHSL	06/12/13
50.	Criteria F10 – NHSL to provide assumptions for the Bidders to submit rates figures at Final Tender.	NHSL	06/12/13
51.	NHSL will check the tax rate assumption and provide clarification on rates to be used for Final Tender.	NHSL	06/12/13
52.	Mosaic to submit their tax queries via Conject to request a call between EY tax and PWC to discuss modelling of SFT guidance.  <i>These questions have been received and are being discussed with SFT.</i>	Mosaic	CLOSED
53.	NHSL will review PF4 and release update in greater detail.	NHSL	06/12/13
54.	NHSL will produce an updated term sheet which will also include cashflow requirements, and definitions, for ADSCR and LLCR.	NHSL	06/12/13
	<b>Legal</b>		
55.	SFT change to Standard Form with regard to Energy will be communicated. Also related changes to service level specification.  <i>Refer to Clarification 00178.</i>	NHSL	CLOSED
56.	Bidder to provide marked-up Project Agreement.	Mosaic	CLOSED
57.	All legal communications to be carried out through Conject.	Note	



**NHS Lothian**

RHSC & DCN Project Steering Board  
29<sup>th</sup> November 2013

Brian Currie, Project Director

## **DESIGN DEVELOPMENT PREFERRED BIDDER TO FINANCIAL CLOSE**

### **1 Purpose of the Report**

- 1.1 The purpose of this report is to inform the Project Steering Board of the staffing resource that will be required for the Design Development process from appointment of preferred bidder to financial close and the proposals to support this process from the Clinical Management Teams whose services (RHSC, DCN, CAMHS, Theatres, Radiology, and Facilities Management) will be transferring.
- 1.2 In addition support from corporate departments e.g. Infection Control, Manual Handling, Medical Physics, Health & Safety & Fire will also be required.

Any member wishing additional information should contact Janice MacKenzie, Clinical Director, in advance of the meeting.

### **2 Recommendations**

The Project Steering Board is recommended to:

- 2.1 Note the activities to be carried out following appointment of preferred bidder to ensure the necessary design development is concluded prior to financial close.
- 2.2 Approve the proposals for user involvement in the design development and the resource requirements.

### **3 Discussion of Key Issues**

- 3.1 All bidders as part of their final tender must submit their proposed programme for design development for the period between preferred bidder and financial close. During this period design development can be split into three main phases:-
- Review of 1:200s developed through competitive dialogue process
  - Development and sign off of 1:50s for each room including the production of Room Data Sheets (RDS)
  - Development and sign off of technical design e.g. interior and external design, fire strategy, ICT etc
- 3.2 The preferred bidder will have a dedicated Design Manager leading the design team of architects who will work in conjunction with the Project Team Leads (Clinical Director & Project Manager) for design development. These individuals will manage the design programme which will include the consultation and engagement with users, monitoring of progress and sign off of the design.

## Programme

- 3.3 Currently each of the Bidders draft programmes are slightly different with the average length of time for design development being a four month period with three meetings being planned for 1:50s with a recognition that for some areas three meetings may not be required but for the more complex departments an additional one or two meetings may be required.
- 3.4 In addition to the 1:50s development there will also be a series of meetings to agree the technical design which will cover the following:-
- Interior Design including way finding, art
  - Exterior Design including façade, landscaping
  - Civil & Structural Engineering including fire, acoustics
  - Equipment

## Key & Generic Rooms

- 3.5 During the development of the Reference Design a number of key and generic rooms were developed at 1:50 and have been provided to the Bidders. These rooms will require to be reviewed again as part of the design development to take account of any changes in practice and to consider proposals put forward by the bidder's design team for improvements in layouts and/or equipment. We envisage that this will require up to two design meetings with users.
- 3.6 Refer to Appendix 1 & 2 for a list of the key & generic rooms already completed. Bidders are also proposing further rooms that could be included in these categories and given that room layouts that are standardised supports the patient safety agenda we are fully supportive of this proposal. This will also potentially reduce the amount of user time and number of meetings required.

## Resources to Support Design Development

- 3.7 Designated members of the Project Team will be the 'gatekeepers' of the process working in partnership with the Preferred Bidder's Design Team. Their role will be to:
- provide expertise
  - ensure consistency, standardisation across the whole building where applicable
  - chair meetings
  - provide support to service leads
  - ensure consultation and engagement takes account of all users e.g. clinical staff, patients and carers, health & safety, infection control, manual handling, eHealth etc
  - updating specifications and other documentation
  - interface with technical advisors
  - interface with Design Team
  - administrative support for arranging of meetings, distribution of papers etc
- 3.8 It is proposed that Janice Mackenzie, Clinical Director, will lead the Design Development with Fiona Halcrow, Project Manager given their role during

competitive dialogue in the development of the design. Other members of the Project Team will also have key roles within this process e.g.:-

- Brian Currie – Architecture & Engineering
- Dougie Coull/Neil McLennan – Equipment

Discussions regarding the replacement for James Steers are not concluded as yet, but his replacement will require to be involved in the design development process.

### User Involvement

- 3.9 User involvement in this intense process is essential to ensure that departments meet operational functionality requirements as well as the needs of patients and their carers. Building on past experience of design development as part of the reference design and also from other new build projects in order to ensure that we meet the necessary timescales it will be necessary to identify key leads as well as a small number of other staff to take this work forward. Patient/carer representation will be essential for part of the design development. In addition given the potential charitable contributions there will require to be charity representative/s at some of the design meetings e.g. Family Hotel, RHSC & DCN Entrances, Interior & Exterior Design.
- 3.10 To minimise the time commitment of a large number of users in attending meetings but also ensure effective engagement and consultation with a range of stakeholders the Project Team are proposing that nominated lead/s are identified for a department/s and depending on the anticipated time commitment required they are either given protected time or released on a part-time basis for a 4 month period with backfill provided which will allow these individuals to fulfil the required responsibilities. Table 1 outlines the Project Team's proposal, which will require to be discussed and agreed with individual CMTs.
- 3.11 The role and responsibilities for the nominated leads will be to:
- be the key link with the Project Re-provision Team
  - ensure that pre meeting material (design/drawings/equipment lists) are available for staff within the department to view and comment on
  - ensure views of all staff groups within the department are sought
  - collate feedback from departmental staff to bring to the design meeting
  - update departmental staff on progress
  - ensure any required actions are undertaken within the timescales set
  - work with the Re-provision Team where consensus within the sub task group members cannot be reached to agree way forward

Table 1 – Proposal for Lead/s and whether protected time or backfill is required

Area	Lead/s	Time per Week	Other Users to Consult with
RHSC Inpatient Pathway <ul style="list-style-type: none"> <li>• PARU</li> <li>• Medical Inpatients</li> <li>• Surgical Short Stay</li> <li>• Surgical Long Stay</li> <li>• Neurosciences</li> <li>• Oncology/Haematology</li> </ul>	Band 6/7 2 leads – Medical Surgical	3 days	Patients & Carers Speciality Reps Infection Control Pharmacy Manual Handling Domestic Material

<ul style="list-style-type: none"> <li>Adolescent Shared Space</li> <li>Classrooms</li> </ul>			Management Play Specialist  Education Dept
Emergency Department <ul style="list-style-type: none"> <li>PARU/Emergency/Radiology Shared Support</li> </ul>	Paul Leonard & Charge Nurse	Protected Time	Patients & Carers Infection Control Pharmacy Manual Handling Domestics Material Management Play Specialist
Critical Care	Julie Freeman & Laura Reilly/SCN	2 sessions Protected Time	Patients & Carers Infection Control Pharmacy Manual Handling Domestics Material Management Play Specialist Medical Physics
RHSC Ambulatory Care <ul style="list-style-type: none"> <li>General Outpatients</li> <li>PDC</li> <li>Child Protection Suite</li> <li>Cardiology &amp; Respiratory</li> <li>Audiology</li> <li>Dental</li> <li>Orthoptics</li> <li>Medical Day Care Unit</li> </ul>	OPD Charge Nurse  Paulene Emsley Lesley Ross David Fynn  Dawn Lamerton Liz Roebuck Alan Mulvihill Nursing Rep	1 day  Protected Time for others	Patients & Carers Infection Control Pharmacy Manual Handling Domestics Material Management Play Specialist Health Records
RHSC Therapies <ul style="list-style-type: none"> <li>Therapies Department</li> <li>Special Feeds Unit</li> </ul>	Nominated Lead	1 day	Patient & Carers OT Physiotherapy Dietician S&LT Infection Control Manual Handling Domestics
CAMHS	Gwyneth Bruce	1 day	Patient & Carers Specialist Reps Pharmacy Domestics Health & Safety
Specialist Biochemistry Paediatric Library	Nominated Lead	Protected Time	Specialist Reps Health & Safety
Social Work	Kenny Dickson	Protected Time	
RHSC Equipment Library	Nominated Lead	Protected Time	Medical Physics
On Call Suite	Nominated Lead	Protected Time	
Child Life & Health	Nominated Lead	Protected Time	Specialist Reps
RHSC Clinical Education	David Rowney	Protected Time	Specialist Reps
RHSC Clinical Research Facility	Kay Riding	Protected Time	Patients & Carers Infection Control Pharmacy

			Manual Handling Domestics Material Management Play Specialist
Theatres	RHSC Lead DCN Lead	1 day 1 day	Specialist Reps Infection Control Health & Safety Manual Handling Medical Physics Pharmacy Domestics
RHSC Surgical Day Case	Susan McKenzie	Protected Time	Patients & Carers Specialist Reps Pharmacy Infection Control Domestics Manual Handling
Radiology	Mike Conroy	1 day	Patients & Carers Specialist Reps Pharmacy Infection Control Domestics Manual Handling Health & Safety Medical Physics
Patient/Family Support <ul style="list-style-type: none"> <li>• Spiritual Care</li> <li>• Bereavement Suites</li> <li>• Family Hotel</li> <li>• Family Support</li> </ul>	Carrie Applegrath Carrie Applegrath TBC TBC	Protected Time	Patients & Carers Nursing Rep/s Infection Control SKFF Rep Radio Lollipop Rep Kindred Rep
RHSC & DCN Support Areas <ul style="list-style-type: none"> <li>• RHSC Ward Support</li> <li>• RHSC Med/Surg/Neuro/Neuro Shared Support</li> <li>• DCN Ward &amp; Health records Support</li> <li>• OPD/CAMHS/Therapies Shared Support</li> </ul>	Project Team & Lead Reps (those with dedicated time)		Catering Service Reps
RHSC Pod & Entrance	Project Team & Lead Reps (those with dedicated time)		Service Reps Patients & Carers
Neurophysiology <ul style="list-style-type: none"> <li>• RHSC</li> <li>• DCN</li> </ul>	Lead to be confirmed	Protected Time	Speciality Reps Patients & Carers Medical Physics
Clinical Management Suite	Lead to be confirmed	Protected Time	Service Reps
Health Records	Lead to be confirmed	Protected Time	
DCN Entrance	Project Team & Lead Reps (those with dedicated time)		Service Reps Patients & Carers
DCN Inpatient Wards <ul style="list-style-type: none"> <li>• DCN Acute Care</li> <li>• DCN Inpatients</li> <li>• PIU</li> </ul>	Band 6/7 Nursing Lead	2 days	Patients & Carers Speciality Reps Infection Control Pharmacy Manual Handling

			Domestics Material Management
DCN Outpatients	Lesley McKenzie	Protected Time	Patients & Carers Infection Control Pharmacy Manual Handling Domestics Material Management Health Records
DCN Therapies	Lead to be confirmed	Protected Time	Patient & Carers OT Physiotherapy Dietician S&LT Infection Control Manual Handling Domestics
Facilities Areas <ul style="list-style-type: none"> <li>• Bed &amp; Toy Store</li> <li>• Radio Lollipop Store</li> <li>• Domestic Services</li> <li>• Kitchen &amp; Restaurant</li>   <li>• Estates</li> <li>• Sterile Supplies Store</li> <li>• Helipad Support</li> <li>• Materials Management</li> <li>• Server Room &amp; Node Rooms</li> </ul>	<ul style="list-style-type: none"> <li>• Andy McPheely</li> <li>• TBC</li> <li>• Sharon Chapman</li> <li>• Gordon Lawrie/ Mark Shipton</li> <li>• Phil Christie</li>   <li>• Sharon Chapman</li>   <li>• Wayne Clemiston</li> </ul>	Protected Time	Play Specialist Infection Control Manual Handling H & S

N.B Protected Time – staff within work week have allocated time for design development.

Discussion will take place with Alex Joyce, Employee Director, as to Partnership involvement in design phase.

3.12 As part of the design development specialist advice will be required from a number of different disciplines/corporate departments:-

- Infection Control
- Pharmacy
- Manual Handling
- Medical Physics
- Health & Safety
- Fire Safety

Given the need for significant input from Infection Control in design development the most effective way to achieve this would be for a dedicated resource from the Infection Control Team to review drawings and feedback and discuss their comments with department leads and attend design meetings as required. We would envisage that they would need to be released for 1 day a week with backfill.

## 4 Key Risks

- 4.1 The full risk register is provided to the Project Steering Board, which identifies risks in relation to project team resources and user dissatisfaction that the new facility and/or service model do not meet with approval from users. User engagement in the design development is essential to ensure that we have a building that is fit for purpose and able to deliver the necessary service models.

Releasing of staff to assist in the design development process will cause the CMTs a challenge in many areas, but to partly mitigate this, it is proposed that designated leads will be released from their roles and backfill costs provided. If there is inadequate resource to support design development this could delay the overall programme.

## 5 Risk Register

- 5.1 The full risk register is provided to the Project Steering Board as a separate paper, where necessary, the highest risks will be escalated to NHSL Finance & Resource Committee for inclusion on the corporate risk register.

## 6 Involving People

- 6.1 As highlighted in this paper involvement of staff, patients and their carers as well as charity organisations is essential for successful design development

## 7 Resource Implications

- 7.1 Design development requires to be supported through the release of staff to support the process. Appendix 3 provides a breakdown of the costs for the release of staff identified in Table 1. The anticipated total cost is £47,500

Janice MacKenzie

Clinical Director

[Date of Version]

## List of Appendices

Appendix 1: List of Key Rooms

Appendix 2 : List of Generic Rooms

Appendix 3 : Breakdown of Staffing Resource

## APPENDIX 1

## Summary of Generic Rooms

Ref	Room	No
X-02	Single Bedroom Adult	65
X-02A	Single Bedroom Adult en-suite	67
X-20	Single Bedroom Children	56
X-20A	Single Bedroom Children en-suite	61
X-14	Isolation Single Bedroom Children with overnight stay	9
X-20A	Isolation Single Bedroom Children en suite	9
X-14A	Isolation Single Bedroom Children Lobby	10
X-04	Resuscitation Trolley Bay	21
X-09	Assisted Bathroom/WC	9
X-10	Office-Ward Management	13
X-12	Staff to Patient Interview Room	24
X-13	WC - Ambulant	77
X-18	WC - Accessible	68
X-16	Dirty Utility Ward	14
X-21	Multi Bedroom	11
X-21A	Multi Bedroom En-Suite	7
X-21B	WC - Accessible	9
X-33	Kitchen (Ward/Dept)	10
X-29	Treatment Room - Inpatient	6
X-35	Hoist Bay	15
X-22	Touchdown Base	35
X-36	Reception	9
X-17	DSR	40
X-25	Linen Bay (1 trolley)	25
X-25	Linen Bay (2 trolleys)	1
X-26	Parking Bay Mobile X-Ray	5
X-27	Disposal Hold	25
X-28	Pantry	5
X-38	Dictation/1:1/Phone Booth	34
X-39	4 Person Meeting Room	12
X-40	6 Person Meeting Room	5
		<b>757</b>



## APPENDIX 2

Summary of Key Rooms		
Dept	Room	No
A1	Treatment Room: Single Access	4
A1	Treatment Room: Dual Access (Mental Health)	1
A1	Treatment Room: Dual Access	9
A1	Triage Room	1
A1	General X-Ray Room	1
B1	Open Plan Bay (3 cots)	1
B1	Single Cubicle (cot)	1
B1	Single Bed Cubicle	4
B1	Low Acuity (4 beds)	1
B1	Open Plan Bay (4 beds)	2
B1	Single Isolation Cubicle	4
B1	Single Isolation Lobby	4
C1.7	EEG Recording Room	2
C4	Sleep Room	2
C4	Control Room	1
D1	Consult/Examination	15
D1	Treatment Room	3
D1	Consult/Multi-Disciplinary	2
D1	Plaster Suite	1
D2	Echocardiography Room	1
D2	Lung Function lab	1
D2	Exercise Tolerance Test	1
D3	C/E Orthoptic (6 metre room)	4
D4	Testing/Clinic Room	2
D4	Obs/Control Room	2
D4	ABR Room	1
D5	Surgery	3
D6	Rehab Room (OT)	2
D6	Standard Distraction Free Treatment Room	2
D7	Dressing Room (Burns)	2
D9	Patient Treatment Lounge	1
D9	Treatment Room	1
D9	Consult/Examination	1
F1	Single Bed Room (CAMHS)	10
F1	Single Bedroom (CAMHS Large)	2
F1	Single Bedroom En-Suite	12
F1	Therapy Room	1
F1	Dining Room (Inpatients & Day Prog)	1
F1	Group Room	3
F1	Therapeutic Kitchen	1
H2	Consult/Examination	1
L1	Patient Waiting	1
L1	Consult/Examination	4
L1	Receiving/Resuscitation Area	1
L2	Single Isolation Bedroom	2
L2	Single Isolation Bedroom Lobby	2
M1	Consult/Examination	16
M1	Treatment Room (with prep area)	1

M1	Consult/Multi-Disciplinary	2
M2	ADL Kitchen	1
M2	Multi-Purpose Rehabilitation Room	1
M2	Distraction Free Treatment Room	2
M3	Treatment Area	1
M4	EEG Recording Room	3
M4	EMG/Nerve Conduction Room	3
P1	Admissions Lounge (DCN)	1
P1	Changing Cubicle (DCN)	1
P1	Inpatient Holding Bays (Bed) (DCN)	2
P1	Anaesthetic Room	9
P1	Anaesthetic room: emergency operations (DCN)	1
P1	Operating Theatre	9
P1	Minor Procedures Room	1
P1	Preparation Room	10
P1	Intra Operative MRI Room	1
P1	Control Room - MRI	1
P1	Angiography Procedures Room	1
P1	Angiography Procedures Control room	1
P1	Post Anaes Recovery Bays (RHSC)	1
P1	Post Anaes Recovery Rooms (RHSC)	2
P1	SDCU Recovery Bays	1
P1	SDCU Recovery Rooms	2
P1	SDCU Discharge Lounge	1
P1	DCN Recovery Bays	1
P1	DCN Recovery Rooms	2
Q1	General X-Ray Room	2
Q1	MRI Room (RHSC)	1
Q1	CT Room (RHSC)	1
Q1	CT Room (DCN)	1
Q1	Injection Room (DCN MRI)	1
Q1	MRI Room (DCN)	2
Q1	Screening Room Fluoroscopy	1
Q1	Control Room MRI/CT (RHSC)	1
Q1	Control Room CT (DCN)	1
Q1	Control Room MRI (DCN)	1
Q1	Gamma Camera	2
Q1	Gamma Camera Control	1
Q1	Ultrasound RHSC	2
Q1	Doppler Ultrasound	1
Q1	Dental	1
S1	Preparation & Cooking Area	1
S1	Preparation & Cooking Area	1
	<b>TOTAL</b>	<b>223</b>

## APPENDIX 3

## Breakdown of Staffing Resource

Summary of Backfill  
Costs

Area	Lead/s	Time per Week	Backfill for 4 months			
			No of Posts	Staff Bank Band of Bankfill	No of days per week	Approximate Cost
RHSC Inpatient Wards	Band 6/7	3 days	2	5	3	£ 14,869
RHSC Ambulatory Care	OPD Charge Nurse	1 day	1	5	1	£ 2,478
RHSC Therapies	Nominated Lead	1 day	1	5	1	£ 2,478
CAMHS	Band 7	1 day	1	7	1	£ 3,678
Theatres	RHSC Lead	1 day	1	5	1	£ 2,478
Theatres	DCN Lead	1 day	1	5	1	£ 2,478
Radiology	Band 7	1 day	1	7	1	£ 3,678
DCN Wards/PIU	Band 6/7 Nursing Lead	2 days	1	5	2	£ 4,956
Infection Control	Band 6	1 day	1	6	1	£ 3,070
Critical Care	Consultant	2 PA	1	consultant	2	£ 7,337
<b>Total Approximate Backfill Costs</b>			<b>11</b>			<b>£ 47,500</b>

## Notes

Based on 2013-14 Rates at Mid Point plus 2. Includes Employers costs and additional Staff Bank fees  
Consultant based on PA sessions and not days

## SECTION 5

## REVIEWABLE DESIGN DATA

**Part 1: Endorsed RDD Item - Level A or Level B but subject to re-submission to the Board through Schedule Part 8 (Review Procedure)**

As set out below in this Part 1, certain Design Data has been endorsed by the Board as a Level A or Level B at Financial Close ("**Endorsed RDD Item**").

Project Co has provided and the Board has reviewed the information noted below as Endorsed RDD Items (subject to the following Board comments that shall be incorporated into each relevant drawing by Project Co and the drawings shall be re-submitted by Project Co to the Board through Schedule Part 8 (*Review Procedure*)).

If Project Co considers that the Board comments below on any Endorsed RDD Item amount to a Change, Project Co shall, before complying with the comments and resubmitting the Endorsed RDD, notify the Board of the same and, if it is agreed by the parties or determined pursuant to Schedule Part 20 (*Dispute Resolution Procedure*) that a Change would arise if the comments were complied with, the Board may, if it wishes, implement the Change and it shall be dealt with in accordance with Schedule Part 16 (*Change Protocol*).

In the event that such Endorsed RDD Items are developed further by Project Co under any design development, such Endorsed RDD Items shall be re-submitted by Project Co to the Board for approval under Schedule Part 8 (*Review Procedure*).

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-00-PL-220-001	06	GENERAL ARRANGEMENT GROUND FLOOR LAYOUT	Room No G-Q1-099/092/086 Re-name as "Shelled Space". Lift configuration FM-002/003 to be updated. ED ambulance canopy to be extended. Add Section lines and references.	B
HLM-SZ-01-PL-220-001	06	GENERAL ARRANGEMENT FIRST FLOOR LAYOUT	Room No 1-P1-097 Re-name as "Image Intensifier Bay". Room No 1-P1-064 – show access panel in external wall. Lift configuration FM-002/003 to be updated. Add Section lines and references.	B
HLM-SZ-02-PL-220-001	06	GENERAL ARRANGEMENT SECOND FLOOR LAYOUT	Lift configuration FM-002/003 to be updated. Add Section lines and references.	B
HLM-SZ-03-PL-220-001	06	GENERAL ARRANGEMENT THIRD FLOOR LAYOUT	Lift configuration FM-002/003 to be updated. Add Section lines and references.	B

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-04-PL-220-001	06	GENERAL ARRANGEMENT FOURTH FLOOR LAYOUT	Lift configuration FM-002/003 to be updated. Add Section lines and references.	B
HLM-SZ-06-PL-240-001	05	GENERAL ARRANGEMENT ROOF LAYOUT	No comment	A
HLM-SZ-B1-PL-220-001	07	GENERAL ARRANGEMENT BASEMENT LAYOUT	Lift configuration FM-002/003 to be updated. Add Section lines and references.	B
HLM-SZ-00-PL-400-400	03	GROUND FLOOR DEPARTMENT KEY PLAN	No comment	A
HLM-SZ-01-PL-400-400	02	FIRST FLOOR DEPARTMENT KEY PLAN	No comment	A
HLM-SZ-02-PL-400-400	02	SECOND FLOOR DEPARTMENT KEY PLAN	No comment	A
HLM-SZ-03-PL-400-400	02	THIRD FLOOR DEPARTMENT KEY PLAN	No comment	A
HLM-SZ-04-PL-400-400	02	FOURTH FLOOR DEPARTMENT KEY PLAN	No comment	A
HLM-SZ-B1-PL-400-400	02	BASEMENT DEPARTMENT KEY PLAN	No comment	A
HLM-SZ-SL-EL-251-001	07	GENERAL ARRANGEMENT NORTH ELEVATION	No comment	A
HLM-SZ-SL-EL-251-002	07	GENERAL ARRANGEMENT SOUTH ELEVATION	Remove "A+E" lettering from canopy.	B
HLM-SZ-SL-EL-251-003	09	GENERAL ARRANGEMENT EAST ELEVATION	No comment	A
HLM-SZ-SL-EL-251-004	09	GENERAL ARRANGEMENT WEST ELEVATION	No comment	A
HLM-SZ-SL-EL-251-005	04	GENERAL ARRANGEMENT ATRIUM ELEVATION	No comment	A
HLM-SZ-SL-EL-251-010	03	COURTYARDS A & B ELEVATIONS GENERAL ARRANGEMENT	No comment	A

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-SL-EL-251-011	05	COURTYARDS C & D ELEVATIONS GENERAL ARRANGEMENT	No comment	A
HLM-SZ-SL-EL-251-012	04	COURTYARDS E & F ELEVATIONS GENERAL ARRANGEMENT	No comment	A
HLM-SZ-SL-EL-251-013	02	COURTYARD G ELEVATIONS GENERAL ARRANGEMENT	No comment	A
HLM-SZ-SL-EL-251-102	05	GENERAL ARRANGEMENT SOUTH ELEVATION & ENERGY CENTRE	Remove "A+E lettering" from canopy. RIE ambulant canopy to be developed as part of RDD.	B
HLM-SZ-SL-SE-250-001	05	GENERAL ARRANGEMENT SECTION A-A	No comment	A
HLM-SZ-SL-SE-250-002	03	GENERAL ARRANGEMENT SECTION B-B	No Comment	A
HLM-SZ-SL-SE-250-003	07	GENERAL ARRANGEMENT SECTION C-C	No comment	A
HLM-SZ-SL-SE-250-004	07	GENERAL ARRANGEMENT SECTION D-D	No comment	A
HLM-SZ-SL-SE-250-005	03	GENERAL ARRANGEMENT SECTION E-E	No comment	A
HLM-Z5-SL-EL-251-001	06	ENERGY CENTRE ELEVATIONS & SECTIONS	No comment	A
HLM-SZ-00-PL-230-001	01	GROUND FLOOR INTERNAL BALUSTRADE SCOPE	No comment.	A
HLM-SZ-01-PL-230-001	01	FIRST FLOOR INTERNAL BALUSTRADE SCOPE	Board to confirm balustrade heights	B
HLM-SZ-02-PL-230-001	01	SECOND FLOOR INTERNAL BALUSTRADE SCOPE	Board to confirm balustrade heights.	B
HLM-SZ-03-PL-230-001	01	THIRD FLOOR INTERNAL BALUSTRADE SCOPE	Room 3-COR-008-balustrade type missing. Board to confirm balustrade heights.	B
HLM-SZ-04-PL-230-001	01	FOURTH FLOOR INTERNAL BALUSTRADE SCOPE	Complete details of all balustrade types. Board to confirm balustrade heights. IHSL to advise parapet type at Classrooms, Restaurant etc.	B

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-Z1-SL-SE-230-001	02	TYPICAL ATRIUM BRIDGE SECTIONS	Board to confirm balustrade heights	B
HLM-Z1-SL-SE-230-002	01	TYPICAL ATRIUM BRIDGE SECTIONS	Board to confirm balustrade heights	B
HLM-SZ-00-PL-240-001	04	GROUND FLOOR ROOF LAYOUT	No comment.	A
HLM-SZ-01-PL-240-001	05	FIRST FLOOR ROOF LAYOUT	No comment.	A
HLM-SZ-02-PL-240-001	05	SECOND FLOOR ROOF LAYOUT	Courtyards and Terrace noted incorrectly as accessible. 1no Courtyard will be accessible following discussion with the Board post FC. Board to confirm balustrade heights.	B
HLM-SZ-03-PL-240-001	06	THIRD FLOOR ROOF LAYOUT	Board to confirm balustrade heights.	B
HLM-SZ-04-PL-240-001	06	FOURTH FLOOR ROOF LAYOUT	No comment	A
HLM-Z4-00-AS-240-002	02	DCN AND MAIN ENTRANCE CANOPY LAYOUT	No comment	A
All acoustic drawings	All	All Acoustic Drawings – General Comment	Generally there is an inconsistent approach to office partitions – many though not all are not provided with a minimum acoustic performance. Although not clinical spaces, minimum performance criteria for office partitions are provided in SHTM-08-01. Latest drawings show improvements but still concern over a number of offices.	B
All acoustic drawings with multi-bed rooms	All	All acoustic drawings with multi-bed rooms	Partitions separating multi-bed rooms have been specified with Dntw 37dB in line with general hospital multi-bed rooms. Note that SHTM-08-01 has a higher performance requirement of 42dB DnTw for partitions separating “Children and older people (multi bed)” rooms. Clarity for maternity wards required.	B

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-Z2-00-PL-252-001	02	GROUND FLOOR INTERNAL WALL TYPES AND SETTING OUT SHEET 1	<p>While a 52dB DnTw wall is shown between the Workshop and Plaster Suite, the other partitions around the workshop are shown with no minimum performance which leaves the potential for noise break-out. It is assumed that if no minimum performance is shown, there would not be attention paid to acoustic sealing of junctions, penetrations etc leaving the potential for flanking noise</p> <p>Partition Specific comments:</p> <p>G-K1-017 Drop-in multi-purpose room and G-K1-016 Drop-in Lounge/Beverage Bay - 42 Dnt,w (47 Rw).</p> <p>G-K1-017 Drop-in multi-purpose room and G-K1-028 Corridor - Increase the acoustic performance rating of G-K1-017 to 42 Dnt,w (47 Rw).</p> <p>G-K1-017 Drop-in multi-purpose room and G-K1-030 Corridor - 37 Dnt,w (42 Rw).</p> <p>G-D1-021 Child Protection Room and G-COR-010 Atrium - 47 Dnt,w (52 Rw).</p>	B
HLM-SZ-01-PL-252-003	02	FIRST FLOOR INTERNAL WALL TYPES AND SETTING OUT SHEET 3	<p>Generally there is an inconsistent approach to office partitions – many though not all are not provided with a minimum acoustic performance. Although not clinical spaces, minimum performance criteria for office partitions are provided in SHTM-08-01.</p> <p>Latest revision shows improvements but still concern over a number of rooms.</p>	B



Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-Z2-02-PL-252-001	02	SECOND FLOOR INTERNAL WALL TYPES AND SETTING OUT SHEET 1	Generally there is an inconsistent approach to office partitions – many though not all are not provided with a minimum acoustic performance. Although not clinical spaces, minimum performance criteria for office partitions are provided in SHTM-08-01.  Latest revision shows improvements but still concern over a number of rooms.	B
HLM-SZ-02-PL-252-003	02	SECOND FLOOR INTERNAL WALL TYPES AND SETTING OUT SHEET 3	No comment.	A
HLM-SZ-03-PL-252-002	02	THIRD FLOOR INTERNAL WALL TYPES AND SETTING OUT SHEET 2	Partitions separating multi-bed rooms have been specified with Dntw 37dB in line with general hospital multi-bed rooms. Note that SHTM-08-01 has a higher performance requirement of 42dB DnTw for partitions separating “Children and older people (multi bed)” rooms  Partition Specific comments:  3-C1.1-011 4 Bed room and 3-C1.2-013 4 Bed Rooms - 42 Dnt,w (47 Rw)  3-C1.8-016/027 4 Bed Rooms and 3-C1.3-016 4 Bed Rooms - 42 Dnt,w (47 Rw)	B
HLM-SZ-04-PL-252-003	02	FOURTH FLOOR INTERNAL WALL TYPES AND SETTING OUT SHEET 3	No comments	A
HLM-SZ-B1-PL-252-002	02	BASEMENT INTERNAL WALL TYPES AND SETTING OUT SHEET 2	There is inconsistency in mark-up of the ancillary spaces – see above and specific comments below.  Latest revision shows improvements but still concern over a number of rooms.	B

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-Z5-SL-PL-252-001		ENERGY CENTRE INTERNAL WALL TYPES AND SETTING OUT	No comment	A
HLM-SZ-XX-DT-251-001	02	TYPICAL INTERFACE DETAILS - INSULATED RENDER	No comment	A
HLM-SZ-XX-DT-251-002	02	TYPICAL INTERFACE DETAILS - ZINC CLADDING	No comment	A
HLM-SZ-XX-DT-251-003	02	TYPICAL INTERFACE DETAILS - FACING BRICK	No comment	A
HLM-SZ-XX-DT-251-005	02	TYPICAL INTERFACE DETAILS - ACM RAINSCREEN CLADDING	No comment	A
HLM-SZ-XX-DT-251-006	03	TYPICAL INTERFACE DETAILS - REGLIT GLASS	No comment	A
HLM-SZ-XX-DT-251-007	03	TYPICAL INTERFACE DETAILS - CURTAIN WALLING	No comment	A
HLM-SZ-XX-DT-251-008	02	TYPICAL INTERFACE DETAILS - KINGSPAN CLADDING	No comment	A
HLM-SZ-XX-DT-251-010	02	TYPICAL INTERFACE DETAILS - PARAPET WALLS	Confirm insulated render finish sufficiently robust for inside face of accessible roof areas, i.e. at Classrooms, Restaurant etc.	B
HLM-SZ-XX-DT-251-011	02	TYPICAL INTERFACE DETAILS - LOUVRES	No comment	A
HLM-Z4-SL-EL-251-003	02	TYPICAL CLADDING - SOUTH WEST GABLE	No comment	A
HLM-Z4-SL-DT-251-001	02	TYPICAL INTERFACE DETAIL TO RIE LINK BUILDING	No comment in principle but subject to further development with Consort and submission as part of RDD.	B
HLM-Z1-SL-EL-251-001	02	MAIN ENTRANCE SCREEN AND LOBBY - WEST ELEVATION	No comment	A
HLM-Z1-SL-EL-251-002	02	DCN ENTRANCE SCREEN AND LOBBY - EAST ELEVATION	No comment	A
HLM-SZ-SL-SK-251-101	01	SOFT SPACE STRATEGY	No comment	A
HLM-SZ-SL-SK-251-102	02	PHYSICAL ADAPTABILITY	No comment	A
HLM-SZ-SL-DT-321-001	02	TYPICAL INTERNAL SCREEN TYPES	No comment	A

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-02-PL-322-001	02	SECOND FLOOR INTERNAL DOORS AND SCREENS	Room 02-M3-001 to be type 1d.	B
HLM-SZ-04-PL-322-001	02	FOURTH FLOOR INTERNAL DOORS AND SCREENS	Room No 04-C5-004 to be Type 2b 04-S9-005 to be Type 1a	B
HLM-SZ-B1-PL-322-001	02	BASEMENT INTERNAL DOORS AND SCREENS	Door in corridor B-COR-004 to 006 to have vision panels	B
HLM-SZ-00-PL-330-002	02	GROUND FLOOR EMOTIONAL MAPPING KEY	No comment.	A
HLM-SZ-01-PL-330-002	02	FIRST FLOOR EMOTIONAL MAPPING KEY	No comment.	A
HLM-SZ-02-PL-330-002	02	SECOND FLOOR EMOTIONAL MAPPING KEY	No comment.	A
HLM-SZ-03-PL-330-002	02	THIRD FLOOR EMOTIONAL MAPPING KEY	No comment.	A
HLM-SZ-04-PL-330-002	02	FOURTH FLOOR EMOTIONAL MAPPING KEY	No comment	A
HLM-SZ-SL-SK-330-001	02	EMOTIONAL MAPPING KEY - VIBRANT	No comment	A
HLM-SZ-SL-SK-330-002	02	EMOTIONAL MAPPING KEY - HOMEY	No comment	A
HLM-SZ-SL-SK-330-003	02	EMOTIONAL MAPPING KEY - RELAXING	No comment	A
HLM-SZ-SL-SK-330-004	02	EMOTIONAL MAPPING KEY - STANDARD	No comment.	A
HLM-SZ-XX-IM-330-101 (100)	02	INTERNAL PERSPECTIVES SHEET 1	No comment	A
HLM-SZ-XX-IM-330-102 (101)	02	INTERNAL PERSPECTIVES SHEET 2	No comment	A
HLM-SZ-XX-IM-330-103 (102)	02	INTERNAL PERSPECTIVES SHEET 3	No comment	A
HLM-SZ-XX-IM-330-104 (103)	02	INTERNAL PERSPECTIVES SHEET 4	No comment	A
<b>Ceilings</b>		<b>All Isolation Rooms &amp; Lobbies to be Type D1</b>		

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-Z2-02-PL-332-001	02	SECOND FLOOR CEILING LAYOUT SHEET 1	No comment	A
HLM-SZ-04-PL-332-003	02	FOURTH FLOOR CEILING LAYOUT SHEET 3	No comment	A
HLM-SZ-B1-PL-332-001	02	BASEMENT CEILING LAYOUT SHEET 1	Room No B1-S3-004 – Type D2	B
HLM-SZ-B1-PL-332-002	02	BASEMENT CEILING LAYOUT SHEET 2	No comment	A
HLM-SZ-SL-DT-332-001	01	TYPICAL CEILING DETAILS SHEET 1	No comment	A
HLM-SZ-00-PL-450-001	04	GROUND FLOOR FM MOVEMENT STRATEGY	With the exception of ongoing lift discussion – no comment	B
HLM-SZ-01-PL-450-001	04	FIRST FLOOR FM MOVEMENT STRATEGY	With the exception of ongoing lift discussion – no comment	B
HLM-SZ-02-PL-450-001	04	SECOND FLOOR FM MOVEMENT STRATEGY	With the exception of ongoing lift discussion – no comment	B
HLM-SZ-03-PL-450-001	04	THIRD FLOOR FM MOVEMENT STRATEGY	With the exception of ongoing lift discussion – no comment	B
HLM-SZ-04-PL-450-001	03	FOURTH FLOOR FM MOVEMENT STRATEGY	With exception of ongoing lift discussion – only issue is unnamed room at end of green flow at restaurant. Also unlikely food will come up in DCN core loft- more likely to be RHSC core.	B
HLM-SZ-B1-PL-450-001	03	BASEMENT FM MOVEMENT STRATEGY	With the exception of ongoing lift discussion – no comment	B
HLM-SZ-01-PL-450-002	05	FIRST FLOOR ACCESS & MAINTENANCE STRATEGY	Confirm large and small cherry picker can fit into FM Lift 005 and rooms identified as access routes to balconies.	B
HLM-SZ-02-PL-450-002	03	SECOND FLOOR ACCESS & MAINTENANCE STRATEGY	Confirm large and small cherry picker can fit into FM Lift 005 and rooms identified as access routes to balconies.	B
HLM-SZ-03-PL-450-002	03	THIRD FLOOR ACCESS & MAINTENANCE STRATEGY	Confirm large and small cherry picker can fit into FM Lift 005 and rooms identified as access routes to balconies.	B
HLM-SZ-04-PL-450-002	03	FOURTH FLOOR ACCESS & MAINTENANCE STRATEGY	Confirm large and small cherry picker can fit into FM Lift 005 and rooms identified as access routes to balconies.	B

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-B1-PL-450-002	02	BASEMENT ACCESS & MAINTENANCE STRATEGY	Confirm large and small cherry picker can fit into FM Lift 005 and rooms identified as access routes to balconies. Amend key to exclude CT/MRI Scanners.	B
HLM-SZ-00-PL-410-002	02	GROUND FLOOR SIGNAGE LAYOUT	No comment	A
HLM-SZ-01-PL-410-002	02	FIRST FLOOR SIGNAGE LAYOUT	No comment	A
HLM-SZ-02-PL-410-002	02	SECOND FLOOR SIGNAGE LAYOUT	No comment	A
HLM-SZ-03-PL-410-002	02	THIRD FLOOR SIGNAGE LAYOUT	No comment	A
HLM-SZ-04-PL-410-002	02	FOURTH FLOOR SIGNAGE LAYOUT	No comment	A
HLM-SZ-B1-PL-410-002	02	BASEMENT SIGNAGE LAYOUT	No comment	A
HLM-SZ-SL-EL-410-100	02	RHSC SIGNAGE TYPES	No comment	A
HLM-SZ-SL-EL-410-101	02	DCN SIGNAGE TYPES	No comment	A
HLM-SZ-SL-SK-401-004	01	TYPICAL STAFF BASE DESK DETAILS	Acrylic stone to be specified for staff base desks.	B
HLM-SZ-00-PL-450-003	02	GROUND FLOOR CLINICAL REQUIREMENTS AND INFECTION CONTROL	Highlight hand hygiene sinks in Isolation Room, Dental Suite.	B
HLM-SZ-01-PL-450-003	02	FIRST FLOOR CLINICAL REQUIREMENTS INFECTION CONTROL	Colour coding of basin corridor 1-P1-019 outside Pantry 1-P1-016. Infection Control to advice on basin in OPD (Audio/Optic).	B
HLM-SZ-02-PL-450-003	02	SECOND FLOOR CLINICAL REQUIREMENTS INFECTION CONTROL	No comment	A
HLM-SZ-03-PL-450-003	02	THIRD FLOOR CLINICAL REQUIREMENTS INFECTION CONTROL	Highlight clinical basin at entrance by Reception Room No 3-C1.2-036. Highlight hand hygiene sinks in Isolation Room 03-C1.3-008.	B
HLM-SZ-04-PL-450-003	02	FOURTH FLOOR CLINICAL REQUIREMENTS INFECTION CONTROL	No comment	A
HLM-SZ-B1-PL-450-003	02	BASEMENT CLINICAL REQUIREMENTS INFECTION CONTROL	No comment	A

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-00-PL-572-002	03	GROUND FLOOR FIRE STRATEGY GENERAL ARRANGEMENT	<p>Fire strategy drawings should be updated to included design changes as a result of changes to derogations requested prior to financial close these include:</p> <ul style="list-style-type: none"> <li>• Designation of refuge areas in escape stairs</li> <li>• Confirmation of provision of fire compartmentation as outlined in the fire strategy.</li> <li>• Confirmation of smoke control in the atrium</li> </ul>	B
HLM-SZ-01-PL-572-003	03	FIRST FLOOR FIRE STRATEGY GENERAL ARRANGEMENT	<p>Fire strategy drawings should be updated to included design changes as a result of changes to derogations requested prior to financial close these include:</p> <ul style="list-style-type: none"> <li>• Designation of refuge areas in escape stairs</li> <li>• Confirmation of provision of fire compartmentation as outlined in the fire strategy.</li> <li>• Confirmation of smoke control in the atrium</li> </ul>	B
HLM-SZ-02-PL-572-004	03	SECOND FLOOR FIRE STRATEGY GENERAL ARRANGEMENT	<p>Fire strategy drawings should be updated to included design changes as a result of changes to derogations requested prior to financial close these include:</p> <ul style="list-style-type: none"> <li>• Designation of refuge areas in escape stairs</li> <li>• Confirmation of provision of fire compartmentation as outlined in the fire strategy.</li> <li>• Confirmation of smoke control in the atrium</li> </ul>	B

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-03-PL-572-006	03	THIRD FLOOR FIRE STRATEGY GENERAL ARRANGEMENT	<p>Fire strategy drawings should be updated to included design changes as a result of changes to derogations requested prior to financial close these include:</p> <ul style="list-style-type: none"> <li>• Designation of refuge areas in escape stairs</li> <li>• Confirmation of provision of fire compartmentation as outlined in the fire strategy.</li> <li>• Confirmation of smoke control in the atrium</li> </ul>	B
HLM-SZ-04-PL-572-007	03	FOURTH FLOOR FIRE STRATEGY GENERAL ARRANGEMENT	<p>Fire strategy drawings should be updated to included design changes as a result of changes to derogations requested prior to financial close these include:</p> <ul style="list-style-type: none"> <li>• Designation of refuge areas in escape stairs</li> <li>• Confirmation of provision of fire compartmentation as outlined in the fire strategy.</li> </ul> <p>Confirmation of smoke control in the atrium</p>	B
HLM-SZ-B1-PL-572-001	03	BASEMENT FIRE STRATEGY GENERAL ARRANGEMENT	<p>Fire strategy drawings should be updated to included design changes as a result of changes to derogations requested prior to financial close these include:</p> <ul style="list-style-type: none"> <li>• Designation of refuge areas in escape stairs</li> <li>• Confirmation of provision of fire compartmentation as outlined in the fire strategy.</li> </ul> <p>Confirmation of smoke control in the atrium</p>	B

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-Z0-00-PL-572-001	03	PROPOSED SITE PLAN - FIRE ACCESS PLAN	<p>Fire strategy drawings should be updated to included design changes as a result of changes to derogations requested prior to financial close these include:</p> <ul style="list-style-type: none"> <li>• Designation of refuge areas in escape stairs</li> <li>• Confirmation of provision of fire compartmentation as outlined in the fire strategy.</li> </ul> <p>Confirmation of smoke control in the atrium</p>	B
HLM-Z2-00-PL-400-401	02	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-401	See comments on drawings	B
HLM-Z2-00-PL-400-403	04	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-403	See comments on drawings	B
HLM-Z2-00-PL-400-404	03	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-404	No comment	A
HLM-Z2-00-PL-400-405	03	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-405	See comments on drawings	B
HLM-Z2-00-PL-400-406	02	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-406	No comment	A
HLM-Z2-00-PL-400-421	03	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-421	No comment	A
HLM-Z2-01-PL-400-401	03	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-401	No comment	A
HLM-Z2-01-PL-400-402	02	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-402	No comment	A
HLM-Z2-01-PL-400-403	03	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-403	No comment	A
HLM-Z2-01-PL-400-405	03	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-405	See comments on drawings	B
HLM-Z2-01-PL-400-406	03	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-406	See comments on drawings	B



Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-Z2-01-PL-400-407	03	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-407	See comments on drawings	B
HLM-Z2-01-PL-400-408	02	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-408	See comments on drawings	B
HLM-Z2-02-PL-400-401	03	SECOND FLOOR EQUIPMENT LAYOUT SHEET 02-401	No comment	A
HLM-Z2-02-PL-400-402	03	SECOND FLOOR EQUIPMENT LAYOUT SHEET 02-402	No comment	A
HLM-Z2-02-PL-400-403	03	SECOND FLOOR EQUIPMENT LAYOUT SHEET 02-403	No comment	A
HLM-Z2-03-PL-400-401	03	THIRD FLOOR EQUIPMENT LAYOUT SHEET 03-401	No comment	A
HLM-Z2-03-PL-400-402	03	THIRD FLOOR EQUIPMENT LAYOUT SHEET 03-402	See comments on drawings	B
HLM-Z2-03-PL-400-403	03	THIRD FLOOR EQUIPMENT LAYOUT SHEET 03-403	No comment	A
HLM-Z2-03-PL-400-404	03	THIRD FLOOR EQUIPMENT LAYOUT SHEET 03-404	See comments on drawings	B
HLM-Z3-03-PL-400-405	03	THIRD FLOOR EQUIPMENT LAYOUT SHEET 03-405	No comment	A
HLM-Z3-00-AS-400-001		IT NODE ROOM G-T1- 003	No comment	A
HLM-Z3-00-PL-400-407	04	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-407	See comments on drawings	B
HLM-Z3-00-PL-400-408	04	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-408	See comments on drawings	B
HLM-Z3-00-PL-400-409	03	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-409	See comments on drawings	B
HLM-Z3-00-PL-400-419	03	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-419	No comment	A
HLM-Z3-01-PL-400-409	04	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-409	See comments on drawings	B

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-Z3-01-PL-400-410	04	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-410	See comments on drawings	B
HLM-Z3-01-PL-400-411	04	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-411	See comments on drawings	B
HLM-Z3-01-PL-400-412	04	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-412	See comments on drawings	B
HLM-Z3-01-PL-400-413	04	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-413	See comments on drawings	B
HLM-Z3-02-PL-400-404	03	SECOND FLOOR EQUIPMENT LAYOUT SHEET 02-404	No comment	A
HLM-Z3-02-PL-400-405	03	SECOND FLOOR EQUIPMENT LAYOUT SHEET 02-405	No comment	A
HLM-Z3-03-PL-400-407	03	THIRD FLOOR EQUIPMENT LAYOUT SHEET 03-407	See comments on drawings	B
HLM-Z3-03-PL-400-408	04	THIRD FLOOR EQUIPMENT LAYOUT SHEET 03-408	No comment	A
HLM-Z3-03-PL-400-409	03	THIRD FLOOR EQUIPMENT LAYOUT SHEET 03-409	See comments on drawings	B
HLM-Z3-03-PL-400-410	04	THIRD FLOOR EQUIPMENT LAYOUT SHEET 03-410	No comment	A
HLM-Z3-04-PL-400-401	02	FOURTH FLOOR EQUIPMENT LAYOUT SHEET 04-401	No comment	A
HLM-Z3-04-PL-400-402	06	FOURTH FLOOR EQUIPMENT LAYOUT SHEET 04-402	See comments on drawings	B
HLM-Z3-B1-PL-400-405	02	BASEMENT FLOOR EQUIPMENT LAYOUT SHEET B1-405	See comments on drawings	B
HLM-Z4-00-PL-400-410	03	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-410	No comment	A
HLM-Z4-00-PL-400-411	06	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-411	No comment	A
HLM-Z4-00-PL-400-412	04	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-412	See comments on drawings	B

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-Z4-00-PL-400-414	03	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-414	See comments on drawings	B
HLM-Z4-00-PL-400-415	02	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-415	No comment	A
HLM-Z4-00-PL-400-416	03	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-416	No comment	A
HLM-Z4-00-PL-400-417	03	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-417	See comments on drawings	B
HLM-Z4-00-PL-400-418	03	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-418	No comment	A
HLM-Z4-01-PL-400-414	03	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-414	No comment	A
HLM-Z4-01-PL-400-415	03	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-415	See comments on drawings	B
HLM-Z4-01-PL-400-416	03	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-416	No comment	A
HLM-Z4-01-PL-400-417	03	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-417	See comments on drawings	B
HLM-Z4-01-PL-400-418	03	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-418	See comments on drawings	B
HLM-Z4-01-PL-400-419	03	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-419	See comments on drawings	B
HLM-Z4-01-PL-400-420	02	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-420	No comment	A
HLM-Z4-02-PL-400-406	03	SECOND FLOOR EQUIPMENT LAYOUT SHEET 02-406	No comment	A
HLM-Z4-02-PL-400-407	03	SECOND FLOOR EQUIPMENT LAYOUT SHEET 02-407	See comments on drawings	B
HLM-Z4-02-PL-400-408	03	SECOND FLOOR EQUIPMENT LAYOUT SHEET 02-408	See comments on drawings	B
HLM-Z4-02-PL-400-409	03	SECOND FLOOR EQUIPMENT LAYOUT SHEET 02-409	No comment	A

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-Z4-02-PL-400-410	03	SECOND FLOOR EQUIPMENT LAYOUT SHEET 02-410	No comment	A
HLM-Z4-02-PL-400-412	01	SECOND FLOOR EQUIPMENT LAYOUT SHEET 02-412	No comment	A
HLM-Z4-02-PL-400-413	03	SECOND FLOOR EQUIPMENT LAYOUT SHEET 02-413	See comments on drawings	B
HLM-Z4-03-PL-400-411	03	THIRD FLOOR EQUIPMENT LAYOUT SHEET 03-411	See comments on drawings	B
HLM-Z4-03-PL-400-412	03	THIRD FLOOR EQUIPMENT LAYOUT SHEET 03-412	See comments on drawings	B
HLM-Z4-03-PL-400-413	03	THIRD FLOOR EQUIPMENT LAYOUT SHEET 03-413	See comments on drawings	B
HLM-Z4-03-PL-400-414	03	THIRD FLOOR EQUIPMENT LAYOUT SHEET 03-414	See comments on drawings	B
HLM-Z4-03-PL-400-415	03	THIRD FLOOR EQUIPMENT LAYOUT SHEET 03-415	See comments on drawings	B
HLM-Z4-03-PL-400-416	03	THIRD FLOOR EQUIPMENT LAYOUT SHEET 03-416	No comment	A
HLM-Z4-03-PL-400-417	03	THIRD FLOOR EQUIPMENT LAYOUT SHEET 03-417	See comments on drawings	B
HLM-Z4-03-PL-400-418	03	THIRD FLOOR EQUIPMENT LAYOUT SHEET 03-418	See comments on drawings	B
HLM-Z4-04-PL-400-403	05	FOURTH FLOOR EQUIPMENT LAYOUT SHEET 04-403	No comment	A
HLM-Z4-04-PL-400-404	03	FOURTH FLOOR EQUIPMENT LAYOUT SHEET 04-404	No comment	A
HLM-Z4-04-PL-400-405	02	FOURTH FLOOR EQUIPMENT LAYOUT SHEET 04-405	No comment	A
HLM-Z4-04-PL-400-406	04	FOURTH FLOOR EQUIPMENT LAYOUT SHEET 04-406	See comments on drawings	B
HLM-Z4-B1-PL-400-401	03	BASEMENT FLOOR EQUIPMENT LAYOUT SHEET B1-401	See comments on drawings	B

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-Z4-B1-PL-400-403	03	BASEMENT FLOOR EQUIPMENT LAYOUT SHEET B1-403	See comments on drawings	A
HLM-Z4-B1-PL-400-404	03	BASEMENT FLOOR EQUIPMENT LAYOUT SHEET B1-404	See comments on drawings	B
HLM-Z4-B1-PL-400-406	03	BASEMENT FLOOR EQUIPMENT LAYOUT SHEET B1-406	No comment	A
HLM-XX-XX-EL-400-001	01	TYPICAL EQUIPMENT MOUNTING HEIGHTS	The Board wishes the basin heights in Accessible toilets to be set in accordance with HBN 00-02	B
HLM-SZ-00-PL-700-003	03	Existing Siteplan	No comment	A
HLM-Z0-00-PL-700-010	03	Rendered Siteplan	No comment	A
HLM-Z0-00-PL-700-011	03	Rendered Plan - Hospital Square	No comment	A
HLM-Z0-00-PL-700-012	03	Rendered Plan - Entrance Plaza	No comment	A
HLM-Z0-00-PL-700-013	03	Rendered Plan - Emergency Dept & Service Yard	No comment beyond current review of canopy provision at ambulance and RIE ED Ambulant Entrance	B
HLM-Z0-00-PL-700-020	11	Landscape Siteplan	No comment	A
HLM-Z0-00-PL-700-021	03	Landscape GA - Hospital Square	No comment	A
HLM-Z0-00-PL-700-022	03	Landscape GA - Entrance Plaza	No comment	A
HLM-Z0-00-PL-700-023	07	Landscape GA - Emergency Dept & Service Yard	No comment	A
HLM-Z0-00-PL-711-001	03	Proposed Hard Landscape - Hospital Square	No comment	A
HLM-Z0-00-PL-711-002	03	Proposed Hard Landscape - Entrance Plaza	No comment	A
HLM-Z0-00-PL-711-003	04	Proposed Hard Landscape - Emergency Dept & Service Yard	No comment	A
HLM-Z0-00-PL-712-001	03	Proposed Soft Landscape - Hospital Square	No comment	A
HLM-Z0-00-PL-712-002	02	Proposed Soft Landscape - Entrance Plaza	No comment	A
HLM-Z0-00-PL-712-003	03	Proposed Soft Landscape - Emergency Dept & Service Yard	No comment	A
HLM-Z0-XX-SE-700-001	01	Landscape Sections - Hospital Square	No comment	A

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-Z0-XX-SE-700-002	01	Landscape Sections - Entrance Plaza	No comment	A
HLM-Z0-XX-SE-700-003	01	Landscape Sections - Emergency Dept & Service Yard	No comment	A
HLM-Z0-XX-SE-700-010		Detail Landscape Sections - Entrance Plaza Sheet 1 Of 7	No comment	A
HLM-Z0-XX-SE-700-011		Detail Landscape Sections - Entrance Plaza Sheet 2 Of 7	No comment	A
HLM-Z0-XX-SE-700-012		Detail Landscape Sections - Entrance Plaza Sheet 3 Of 7	No comment	A
HLM-Z0-XX-SE-700-013		Detail Landscape Sections - Entrance Plaza Sheet 4 Of 7	No comment	A
HLM-Z0-XX-SE-700-014		Detail Landscape Sections - Entrance Plaza Sheet 5 Of 7	No comment	A
HLM-Z0-XX-SE-700-015		Detail Landscape Sections - Entrance Plaza Sheet 6 Of 7	No comment	A
HLM-Z0-XX-SE-700-016		Detail Landscape Sections - Entrance Plaza Sheet 7 Of 7	No comment	A
HLM-Z0-XX-SE-700-020		Detail Landscape Sections - Set Down - Pick Up Zone Sheet 1 Of 2	No comment	A
HLM-Z0-XX-SE-700-021		Detail Landscape Sections - Set Down - Pick Up Zone Sheet 2 Of 2	No comment	A
HLM-Z0-XX-SE-700-030	02	Detail Landscape Sections - Hospital Square Sheet 1 Of 6	No comment	A
HLM-Z0-XX-SE-700-031	02	Detail Landscape Sections - Hospital Square Sheet 2 Of 6	No comment	A
HLM-Z0-XX-SE-700-032	02	Detail Landscape Sections - Hospital Square Sheet 3 Of 6	No comment	A
HLM-Z0-XX-SE-700-033	02	Detail Landscape Sections - Hospital Square Sheet 4 Of 6	No comment	A

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-Z0-XX-SE-700-034	02	Detail Landscape Sections - Hospital Square Sheet 5 Of 6	No comment	A
HLM-Z0-XX-SE-700-035	02	Detail Landscape Sections - Hospital Square Sheet 6 Of 6	No comment	A
HLM-Z0-XX-SE-700-040	02	Detail Landscape Sections - Emergency Department Sheet 1 Of 3	No comment	A
HLM-Z0-XX-SE-700-041	02	Detail Landscape Sections - Emergency Department Sheet 2 Of 3	No comment	A
HLM-Z0-XX-SE-700-042	02	Detail Landscape Sections - Emergency Department Sheet 3 Of 3	Section A-A - Is 12, the hedge	A
HLM-Z0-XX-SE-700-050	02	Detail Landscape Sections - Cycle Path Sheet 1 of 6	Sections 01 & 02 – Is 12, the hedge and post and wire fence?	A
HLM-Z0-XX-SE-700-051	02	Detail Landscape Sections - Cycle Path Sheet 2 of 6	Sections 03 & 04 – Is 12, the hedge and post and wire fence?	A
HLM-Z0-XX-SE-700-052	02	Detail Landscape Sections - Cycle Path Sheet 3 of 6	Sections 05 & 06 – Is 12, the hedge and post and wire fence?	A
HLM-Z0-XX-SE-700-053	02	Detail Landscape Sections - Cycle Path Sheet 4 of 6	Sections 07 & 08 – Is 12, the hedge and post and wire fence?	A
HLM-Z0-XX-SE-700-054	02	Detail Landscape Sections - Cycle Path Sheet 5 of 6	Section 09 – Is 12, the hedge and post and wire fence?	A
HLM-Z0-XX-SE-700-055	02	Detail Landscape Sections - Cycle Path Sheet 6 of 6	No comment	A
HLM-Z0-XX-SE-700-060	02	Detail Landscape Sections - Service Yard Sheet 1 of 6	No comment	A
HLM-Z0-XX-SE-700-061	02	Detail Landscape Sections - Service Yard Sheet 2 of 6	No comment	A
HLM-Z0-XX-SE-700-062	02	Detail Landscape Sections - Service Yard Sheet 3 of 6	No comment	A
HLM-Z0-XX-SE-700-063	02	Detail Landscape Sections - Service Yard Sheet 4 of 6	No comment	A
HLM-Z0-XX-SE-700-064	02	Detail Landscape Sections - Service Yard Sheet 5 of 6	No comment	A

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-Z0-XX-SE-700-065	02	Detail Landscape Sections - Service Yard Sheet 6 of 6	No comment	A
HLM-SZ-SL-DT-332-001	01	Typical Ceiling Details Sheet 1	No comment	A
CDS-Z1-B1-PL-430-105	05	Basement Kitchen Area GA	As it stands there is no door space between rooms B-S1-017 and B-S1-031 – this would need to be a double door – a sliding door but double would be acceptable. The door space between B-S1-013 and B-S1-017 is a single size door – this is not sufficient space to get the trolley from the returned trolley space into the clean trolley space.	B
CDS-Z1-B1-PL-430-106	06	Basement Kitchen Area Services Layout	As it stands there is no door space between rooms B-S1-017 and B-S1-031 – this would need to be a double door – a sliding door but double would be acceptable. The door space between B-S1-013 and B-S1-017 is a single size door – this is not sufficient space to get the trolley from the returned trolley space into the clean trolley space.	B
CDS-Z1-B1-PL-430-119	00	Basement Kitchen Area Kitchen Elevations	No comment	A
CDS-Z3-03-PL-430-016	07	Ward Kitchen 3-C1.3-034	No comment	A
CDS-Z3-03-PL-430-117	07	Ward Kitchen 3-C1.4-064	No comment	A
CDS-Z4-00-PL-430-109	07	Ward Kitchen G-A2-041	No comment	A
CDS-Z4-00-PL-430-110	08	Ward Kitchen G-F1-039	No comment	A
CDS-Z4-01-PL-430-111	07	Ward Kitchen 1-L1-054	No comment	A
CDS-Z4-02-PL-430-112	07	Ward Kitchen 2-L2-062	No comment	A
CDS-Z4-02-PL-430-113	08	Ward Kitchen 2-L2-078	No comment	A
CDS-Z4-03-PL-430-114	07	Ward Kitchen 3-C1.1-023	No comment	A
CDS-Z4-03-PL-430-115	07	Ward Kitchen 3-C1.2-034	No comment	A
CDS-Z4-03-PL-430-118	07	Ward Kitchen 3-C1.8-010	No comment	A
CDS-Z4-04-PL-430-101	03	Restaurant to 4th Floor	No comment	A



Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
CDS-Z4-04-PL-430-102	05	Restaurant to 4th Floor Services Layout	No comment	A
HLM – AA-00-PL-0005-091	FT	Drop in Centre Garden & OPD Play	No comment	A
HLM – BN-02-PL-0005-291	FT	Street Courtyard 1	No comment	A
HLM – BN-02-PL-0005-292	FT	Street Courtyard 2	No comment	A
HLM – BN-03-PL-0005-391	FT	Haematology/Oncology Terrace	No comment	A
HLM – BN-03-PL-0005-392	FT	Neuroscience Inpatient Terrace	No comment	A
HLM – BS-00-PL-0005-091	FT	Spiritual Courtyard	No comment	A
HLM – BS-00-PL-0005-092	FT	Staff Courtyard	No comment	A
HLM –BS-00-PL-0005-093	FT	PARU Courtyard	No comment	A
HLM – BS-00-PL-0005-094	FT	CAMHS Garden & Courtyards	No comment	A
HLM – BS-00-PL-0005-095	FT	Emergency Dept Covered Play	No comment	A
HLM – BS-00-PL-0005-096	FT	Emergency Department External Screened Garden	No comment	A
HLM – BS-01-PL-0005-191	FT	Courtyard Terrace	No comment	A
HLM – BS-01-PL-0005-192	FT	Emergency Dept Green Roof	No comment	A
HLM – BS-02-PL-0005-291	FT	Staff Terrace	No comment	A
HLM – BS-02-PL-0005-292	FT	DCN Balcony	No comment	A
HLM – BS-02-PL-0005-293	FT	Critical Care Green Roof	No comment	A
HLM – BS-03-PL-0005-391	03	MDCU Terrace	No comment	A
HLM – BS-03-PL-0005-392	03	Long Stay Surgical Terrace	No comment	A
HLM – BS-00-PL-0005-491	FT	Restaurant Terrace	No comment	A
HLM – BS-04-PL-0005-492	FT	Classroom Terrace	No comment	A
HLM – BS-04-PL-0005-493	FT	Seminar Terrace	No comment	A
HLM – BS-04-PL-0005-494	FT	Clinical Management Suite	No comment	A

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
WW-XX-XX-SC-523-001	2	CHILLED WATER PRIMARY SYSTEM SCHEMATIC	Schedule of plant and sizes to be developed in line with the design progression	B
WW-Z3-B1-PL-521-001	1	Zone Z3- Level B1 - Heating Plantrooms	Drawing shows a suitable level of information with relevant labelling and information, including sections and elevation drawings Schedule of plant and sizes to be developed in line with the design progression Pipework appears to block access to the cylinders and expansion vessels, however final arrangement and maintenance risk is Project Co's	B
WW-Z4-B1-PL-521-001	1	Zone Z4- Level B1 - Heating Plantrooms	Drawing shows a suitable level of information with relevant labelling and information, including sections and elevation drawings Schedule of plant and sizes to be developed in line with the design progression Pipework arrangement appears to block access to the front of cylinders and expansion vessels, however final arrangement and maintenance risk is Project Co's	B
WW-SZ-B1-PL-633-001	1	Level B1 - Cable Routing	To be developed in line with the design development. Cable schedules awaited	B
WW-SZ-00-PL-633-001	1	Level 00 - Cable Routing	To be developed in line with the design development. Cable schedules awaited	B
WW-SZ-01-PL-633-001	1	Level 01 - Cable Routing	To be developed in line with the design development. Cable schedules awaited	B
WW-SZ-02-PL-633-001	1	Level 02 - Cable Routing	To be developed in line with the design development. Cable schedules awaited	B
WW-SZ-03-PL-633-001	1	Level 03 - Cable Routing	To be developed in line with the	B

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			design development. Cable schedules awaited	
WW-SZ-04-PL-633-001	1	Level 04 - Cable Routing	To be developed in line with the design development. Cable schedules awaited	B
WW-SZ-05-PL-633-001	1	Roof Level - PV Layout	To be developed in line with the design development. Cable schedules awaited	B
ME-SZ-B1-PL-556-001	5	Basement Floor Plan - Location of IT Node Rooms	No comments	A
ME-SZ-00-PL-556-001	5	Ground Floor Plan - Location of IT Node Rooms	No comments	A
ME-SZ-01-PL-556-001	5	First Floor Plan - Location of IT Node Rooms	No comments	A
ME-SZ-02-PL-556-001	5	Second Floor Plan - Location of IT Node Rooms	No comments	A
ME-SZ-03-PL-556-001	5	Third Floor Plan - Location of IT Node Rooms	No comments	A
ME-SZ-04-PL-556-001	5	Fourth Floor Plan - Location of IT Node Rooms	No comments	A
ME-XX-XX-SC-556-001	2	ICT Structured Cabling System Schematic	No comments	A
ME-SZ-B1-PL-556-100	2	Basement Floor Plan. IT Hub Room Detail Layouts	No comments	A
ME-SZ-00-PL-556-100	2	Ground Floor Plan. IT Hub Room Detail Layouts	No comments	A
ME-SZ-01-PL-556-100	2	First Floor Plan. IT Hub Room Detail Layouts	No comments	A
ME-SZ-02-PL-556-100	2	Second Floor Plan. IT Hub Room Detail Layouts	No comments	A
ME-SZ-03-PL-556-100	2	Third Floor Plan. IT Hub Room Detail Layouts	No comments	A
ME-SZ-04-PL-556-100	2	Fourth Floor Plan. IT Hub Room Detail Layouts	No comments	A
WW-EW-XX-PL-750-001	1	Proposed site plan Gas, MWS & Fire Main services layout	No comments	A
WW-EW-XX-PL-755-001	2	Proposed New Scottish Power Sub-Station & High Voltage Cable Route	No comments	A
RBG-SZ-SL-PL-770-101	05	Surface Water Underground Attenuation Systems	Point 1 - What hardstanding area is discharging to this attenuation tank?	B
RBG-SZ-SL-PL-770-102	01	Underground Surface Water SUDS Treatment Systems	No comment, apart from those mentioned elsewhere relating to	A

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			surface water drainage / details.	
RBG-SZ-B1-DT-770-001	03	Basement Drainage Details Sheet 1	No Comment	A
RBG-SZ-00-DT-770-001	03	Drainage Details Sheet 1	<p>Point 1 - Discrepancy between note 10 and benching requirements on details. Please clarify.</p> <p>Point 2 - Discrepancy between benching width dimensions from manhole/steps. Please clarify. Sewers For Scotland states 500mm.</p> <p>Point 3 - Should be Figure 16.</p> <p>Point 4 - Discrepancy between benching width dimensions from manhole/ladder. Please clarify.</p> <p>Point 5 - Sewers For Scotland states max depth of Manhole Type C = 1.5m</p>	B
RBG-SZ-00-DT-770-002	03	Drainage Details Sheet 2	<p>Point 1 - Most of the Slot and Channel Drains are bedded directly on the Cellular Storage Crates. Detail required to show how this would work.</p> <p>Point 2 - Overall depth of connection shown is approximately 650mm. This is too deep for some of the pipes this is shown connecting into on drawing RBG-SZ-00-779-100-REV06 (see notes on this drawing).</p> <p>Point 3 - Tank is attenuation only and not an attenuation/infiltration tank.</p> <p>Point 4 - Yard Gully and Inlet Gully have same reference.</p>	B
RBG-SZ-00-DT-770-003	03	Drainage Details Sheet 3	<p>Point 1 - No levels for Service Yard Petrol Interceptor on GA drawing.</p> <p>Point 2 - Oil interceptor incoming pipe level is 500mm below ground level. Therefore this standard detail would not apply.</p> <p>Point 3 - Discrepancy between pipe diameters on this drawing (200mm dia) and foul water layout plan (225mm dia).</p> <p>Point 4 - Depth to invert of the Rainwater Down Pipe Connection appears to be lower than the connection into the cellular storage</p>	B

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			shown on Drg RBGSZ-00-DT-770-002-REV3 - Drainage Details Sheet 2	
RBG-SZ-00-DT-770-004	03	Drainage Details Sheet 4	<p>Point 2 - No Geotextile wrapping or other bedding and surround detail shown.</p> <p>This is a standard detail drawing and does not show the change in ground level or the correct depth for the attenuation tank.</p> <p>Point 3 - This should read 'and 0.9m in non vehicle areas' after 'less than 1.2. in vehicle areas' and before 'and for all road gully connections'</p> <p>Point 4 - This should be '900mm cover in non vehicle areas' and not '300mm in soft areas'.</p>	B
RBG-SZ-00-DT-770-010	01	Scottish Water Sewer Diversion - Drainage Details	Discrepancy between benching width dimensions from manhole/steps. Please clarify. Sewers For Scotland states 500mm.	B
RBG-SZ-00-PL-770-210	01	Scottish Water Sewer Diversion - Drainage Plan	Manhole invert levels differ from invert levels shown on drawings RBG-SZ-00-PL-770-200/201/202	B

**Part 2: Non-Approved RDD Items - Level C or Level D:**

Project Co shall submit and the Board shall review the following Reviewable Design Data not approved at Financial Close given that such Reviewable Design Data only received a Level C or Level D at Financial Close, with such Project Co submission addressing the following Board comments in relation to such Reviewable Design Data. These comments shall be incorporated into each relevant drawing by Project Co, and the drawings shall be submitted by Project Co to the Board through Schedule Part 8 (Review Procedure).

If Project Co considers that the Board comments below on any of the items listed in this Part 2 amount to a Change, Project Co shall, before complying with the comments and resubmitting the Endorsed RDD, notify the Board of the same and, if it is agreed by the parties or determined pursuant to Schedule Part 20 (*Dispute Resolution Procedure*) that a Change would arise if the comments were complied with, the Board may, if it wishes, implement the Change and it shall be dealt with in accordance with Schedule Part 16 (*Change Protocol*).

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-Z5-SL-PL-220-001	06	ENERGY CENTRE GENERAL ARRANGEMENT - ALL LEVELS	In relation to the Service Yard, Project Co has not provided to the Board a comparable level of Design Data to that submitted for other areas of the Facilities.  Consequently the Board's comments at this stage are not comprehensive and therefore the Board reserves the right to comment further when the detailed drawings are submitted by Project Co through the Review Procedure.	C
HLM-Z4-SL-DT-230-001	01	STAIR 1 PLANS AND SECTIONS	Gap between bottom rail of balustrade and stair tread needs to be reduced such that a 100mm sphere will not pass through. Second lower handrail required.	C
HLM-Z1-SL-DT-230-002	01	STAIR 2 PLANS AND SECTIONS	Gap between bottom rail of balustrade and stair tread needs to be reduced such that a 100mm sphere will not pass through. Second lower handrail required. Lift configuration FM-002/003 to be updated.	C
HLM-Z1-SL-DT-230-003	01	STAIR 3 PLANS AND SECTIONS	Gap between bottom rail of balustrade and stair tread needs to be reduced such that a 100mm sphere will not pass through. Second lower handrail required. Clouded areas under development to be completed	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-Z4-SL-DT-230-004	01	STAIR 4 PLANS AND SECTIONS	Escape only. Gap between bottom rail of balustrade and stair tread needs to be reduced such that a 100mm sphere will not pass through. Second lower handrail required.	C
HLM-Z2-SL-DT-230-005	01	STAIR 5 PLANS AND SECTIONS	Escape only. Gap between bottom rail of balustrade and stair tread needs to be reduced such that a 100mm sphere will not pass through. Second lower handrail required.	C
HLM-Z2-SL-DT-230-006	01	STAIR 6 PLANS AND SECTIONS	Escape only. Gap between bottom rail of balustrade and stair tread needs to be reduced such that a 100mm sphere will not pass through. Second lower handrail required.	C
HLM-Z2-SL-DT-230-007	01	STAIR 7 PLANS AND SECTIONS	Gap between bottom rail of balustrade and stair tread needs to be reduced such that a 100mm sphere will not pass through. Second lower handrail required.	C
HLM-Z1-SL-Dt-230-008	01	STAIR 8 PLANS AND SECTIONS	Confirm sound reduction measures to avoid "ringing" of steel stair structure. . Second lower handrail required.	C
HLM-SZ-SL-DT-230-001	01	TYPICAL BALUSTRADE DETAILS	Detail 5 – show skirting Balustrade height too low – increase to 1350mm	C
HLM-SZ-XX-DT-251-004	01	TYPICAL INTERFACE DETAILS - BALUSTRADE	Detail 5 – remove step at approx. 150mm above FRL Balustrade height too low – increase to 1350mm	C
HLM-SZ-SL-PL-240-001	04	UPPER ROOF LAYOUT	Project Co to provide space to form route for quench pipes through the Facilities to the termination point of the upper roof	C
HLM-Z4-00-AS-240-001	02	A+E CANOPY LAYOUT	Revision to canopy under consideration	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-00-PL-252-002	02	GROUND FLOOR INTERNAL WALL TYPES AND SETTING OUT SHEET 2	<p>Generally there is an inconsistent approach to office partitions – many though not all are not provided with a minimum acoustic performance. Although not clinical spaces, minimum performance criteria for office partitions are provided in SHTM-08-01</p> <p>No separating wall performances given for “Tipperlinn Rooms”</p> <p>MRI rooms – query use of single door with no lobby for these potentially very noisy spaces.</p> <p>Latest revision shows improvements but still concern over a number of rooms.</p> <p>Partition Specific comments:</p> <p>G-F1-028 EPSS Multi-Dis. Office (6P) and G-F1-030 Tipperlinn Multi-Dis. Office (7P) - No required performance under SHTM-08-01 as regarded as open plan offices, however recommend 37 Dnt,w (42 Rw).</p> <p>G-F1-030 Tipperlinn Multi-Dis. Office (7P) and G-F1-031 Tipperlinn Sitting Room - 47 Dnt,w (52 Rw).</p> <p>G-F1-031 Tipperlinn Sitting Room and G-F1-032 Tipperlinn Group Room - 47 Dnt,w (52 Rw).</p> <p>G-F1-032 Tipperlinn Group Room and G-F1-033 Art Room - 47 Dnt,w (52 Rw).</p>	C



Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-00-PL-252-002 (continued from previous page)	02	GROUND FLOOR INTERNAL WALL TYPES AND SETTING OUT SHEET 2	G-F1-031; G-F1-032; G-F1-033 Tipperlin Rooms and G-F1-029 Corridor - 37 Dnt,w (42 Rw).  G-F1-048 Group Room and G-F1-036 Dining - 47 Dnt,w (52 Rw).  G-F1-048 Group Room and G-F1-098 G-F1-098 - 47 Dnt,w (52 Rw).	C
HLM-SZ-00-PL-252-003	02	GROUND FLOOR INTERNAL WALL TYPES AND SETTING OUT SHEET 3	Generally there is an inconsistent approach to office partitions – many though not all are not provided with a minimum acoustic performance. Although not clinical spaces, minimum performance criteria for office partitions are provided in SHTM-08-01.  Latest revision shows improvements but still concern over a number of rooms.	C
HLM-Z2-01-PL-252-001	02	FIRST FLOOR INTERNAL WALL TYPES AND SETTING OUT SHEET 1	Generally there is an inconsistent approach to office partitions – many though not all are not provided with a minimum acoustic performance. Although not clinical spaces, minimum performance criteria for office partitions are provided in SHTM-08-01.  Latest revision shows improvements but still concern over a number of rooms.	C
HLM-SZ-01-PL-252-002	02	FIRST FLOOR INTERNAL WALL TYPES AND SETTING OUT SHEET 2	Those partitions separating offices from other spaces are generally marked up as 37dB DnTw walls where SHTM-08-01 recommendations for these partitions are generally 42db DnTw.  Latest revision shows improvements but still concern over a number of rooms.	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-02-PL-252-002	02	SECOND FLOOR INTERNAL WALL TYPES AND SETTING OUT SHEET 2	<p>Generally there is an inconsistent approach to office partitions – many though not all are not provided with a minimum acoustic performance. Although not clinical spaces, minimum performance criteria for office partitions are provided in SHTM-08-01.</p> <p>Latest revision shows improvements but still concern over a number of rooms.</p>	C
HLM-Z2-03-PL-252-001	02	THIRD FLOOR INTERNAL WALL TYPES AND SETTING OUT SHEET 1	<p>Generally there is an inconsistent approach to office partitions – many though not all are not provided with a minimum acoustic performance. Although not clinical spaces, minimum performance criteria for office partitions are provided in SHTM-08-01.</p> <p>Latest revision shows improvements but still concern over a number of rooms.</p> <p>Partition Specific comments:</p> <p>3-K2-053 Residents Play Room and Corridor - No required performance under SHTM-08-01, however recommend 37 Dnt,w (42 Rw) to limit noise break-out to family bedrooms opposite.</p> <p>3-K2-051 Residents Day Room and Corridor - No required performance under SHTM-08-01, however recommend 37 Dnt,w (42 Rw) to limit noise break-out to family bedrooms opposite.</p> <p>R-H3-004 Workshop / Tutorial Room 2 and 3-H3-007 WC - 42 Dnt,w (47 Rw)</p>	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-03-PL-252-003	02	THIRD FLOOR INTERNAL WALL TYPES AND SETTING OUT SHEET 3	<p>Partitions separating multi-bed rooms have been specified with Dntw 37dB in line with general hospital multi-bed rooms. Note that SHTM-08-01 has a higher performance requirement of 42dB DnTw for partitions separating “Children and older people (multi bed)” rooms</p> <p>Those partitions separating offices from other spaces are generally marked up as 37dB DnTw walls where SHTM-08-01 recommendations for these partitions are generally 42db DnTw</p> <p>Partition Specific Comments:</p> <p>3-C1.4-063 Play Room and 3-C1.4-020 Corridor - No required performance under SHTM-08-01, however recommend 37 Dnt,w (42 Rw) to limit noise break-out to nearby treatment rooms and bed room</p>	C
HLM-SZ-04-PL-252-002	02	FOURTH FLOOR INTERNAL WALL TYPES AND SETTING OUT SHEET 2	<p>Inconsistency in office partition specification.</p> <p>Query whether partition between Upper Primary Classroom and Secondary Classroom specified with sufficient acoustic performance as not consistent with guidance from Building Bulletin 93, Acoustic Design of Schools a Design Guide.</p> <p>Partition Specific Comments:</p> <p>4-R2-011 1:1 (assumed interview room) and 4-R2-003 Ass. Health Rec. Mgr (4P) - 37 Dnt,w (42 Rw).</p> <p>4-R2-011 1:1 (assumed interview room) and 4-R2-001 Corridor - 37 Dnt,w (42 Rw).</p>	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-B1-PL-252-001	02	BASEMENT INTERNAL WALL TYPES AND SETTING OUT SHEET 1	There is inconsistency in mark-up of the ancillary spaces – e.g. mailroom – storage given higher performing partition than office to office Kitchen to trolley park is given a high performing partition at 52dB Those partitions separating offices from other spaces are generally marked up as 37dB DnTw walls where SHTM-08-01 recommendations for these partitions are generally 42db DnTw. Latest revision shows improvements but still concern over a number of rooms.	C
HLM-SZ-XX-DT-251-009	03	TYPICAL INTERFACE DETAILS - COURTYARD EXTERNAL WALLS	Detail 3 – Door Threshold. Potential cold bridge at threshold. Note regarding Full Fill Cavity Insulation F30 150A incorrect	C
HLM-Z2-SL-EL-251-001	02	TYPICAL CLADDING - LITTLE BROTHER ENVELOPE	Clouded areas to be confirmed	C
HLM-Z4-SL-EL-251-001	03	TYPICAL CLADDING - BIG BROTHER ENVELOPE	Clouded areas to be confirmed	C
HLM-SZ-00-EL-251-001	02	TYPICAL CLADDING AND EXTENT - SPINE WALL	Details of pattern to be applied to wall panelling to be submitted for review	C
HLM-Z4-SL-EL-251-002	02	TYPICAL CLADDING CAMHS	Clouded areas to be confirmed	C
HLM-SZ-SL-SE-251-001	02	TYPICAL SECTIONS THROUGH EXTERNAL WALL SHEET 1	Transfer beams not shown in Sections 1 and 2. Half landing at GF does not touch wall. It would greatly assist the review process if room names were added.	C
HLM-SZ-SL-SE-251-002	02	TYPICAL SECTIONS THROUGH EXTERNAL WALL SHEET 2	Structural section at stepped slab yet to be resolved in Section 7. It would greatly assist the review process if room names were added.	C
HLM-SZ-SL-SE-251-003	02	TYPICAL SECTIONS THROUGH EXTERNAL WALL SHEET 3	Structural section at stepped slab yet to be resolved in Section 8. It would greatly assist the review process if room names were added.	C
HLM-SZ-SL-SE-251-004	02	TYPICAL SECTIONS THROUGH EXTERNAL WALL SHEET 4	Stepped slab resolved in Section 11? Board to advise required height of balustrade at balcony in Section 13. It would greatly assist the review process if room names were added.	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-SL-SE-251-005	02	TYPICAL SECTIONS THROUGH EXTERNAL WALL SHEET 5	Board to advise required height of balustrades in Section 15. The helipad structure should be show in Section 15. Is the section at the stepped slab at the Plant Rooms correct? It is much smaller than elsewhere. It would greatly assist the review process if room names were added.	C
HLM-SZ-SL-SE-251-006		TYPICAL SECTIONS THROUGH EXTERNAL WALL SHEET 6	Board to advise required height of balustrades. Structural section at stepped slab yet to be resolved. It would greatly assist the review process if room names were added.	C
HLM-SZ-SL-SE-251-007	01	TYPICAL SECTIONS THROUGH EXTERNAL WALL SHEET 7	Section 21s shown twice on the key plan and the CAMHS section appears to be incorrect or omitted. It would greatly assist the review process if room names were added.	C
HLM-SZ-SL-SE-251-008	01	TYPICAL SECTIONS THROUGH EXTERNAL WALL SHEET 8	Details of Basement structure and waterproofing to be confirmed. Is there a joint in the concrete roof structure at the Energy Centre end of the service corridor roof. It would greatly assist the review process if room names were added.	C
HLM-SZ-SL-SE-251-009	01	TYPICAL SECTIONS THROUGH EXTERNAL WALL SHEET 9	Details of Basement structure and waterproofing to be confirmed. Is there a joint in the concrete roof structure at the Energy Centre end of the service corridor roof. It would greatly assist the review process if room names were added.	C
HLM-SZ-SL-DT-322-001	02	TYPICAL INTERNAL DOOR TYPES	Concern that proposed vision panels may not provide an acceptable level of observation	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-00-PL-322-001	02	GROUND FLOOR INTERNAL DOORS AND SCREENS	CAMHS – square upper vision panels with vistamatic blinds confirmed for bedrooms – outward opening in emergency - all therapy and group rooms and G-F1-039 and 037 to have vision panels. Rooms No's G-F1- 048, 005, 007, 008, 009, 026, 022(h), 024(h), 020(h) and 004 to have vision panels. Square upper vision panels denoted (h). All side screens in CAMHS to have interstitial blinds. Room G-A1-069 external door to have vision panel. Room G-A1-035 both doors to be type 1b and 1d. Room G-A1-031 to be type 1d. Resus Rooms and Treatment Rooms with doors to have vision panels. Room G-A1-017 to be type 1b. Room G-A1-066 to be type 1d. On all floors Consult Exam Rooms to have vision panel with vistamatic blind. Doors and screen in shelled MRI to be as per other MRI accommodation. Room G-Q1-098 to be type 1d. Room G-Q1-108 to be type 1d. Inconsistent Control Room screen designation for CT Scanner Rooms.G-Q1-035 and 036 to be type 1d. Room G-Q1-034 to be type 1b. Rooms G-Q1-010 and 014 to be type 1d. Prep Room/Fluoroscopy confirm radiation protection. G-D1-008 to be type 1d. Vision panels in Department D2 to be confirmed. Rooms G-D5-004, 007, 008, 009 and 010 to be type 1d.	C
HLM-SZ-01-PL-322-001	02	FIRST FLOOR INTERNAL DOORS AND SCREENS	Room 01-H2-016 to be type 1d. Room 01-B1-043 to be type 1b. Room 01-B1-00 to be 1d Room 01-B1-007 to be 1d. Room 01-J1-003 to be type 1d into corridor. 01-L1-005 both doors to be type 1d. 01-L1-052 to be type 1b. On all floors 1 to 1 rooms to be type 1B. Room 01-P1-048 to be type 1a. Rooms 01-P1-025 & 026 to be type 1d. Room 01-P1-015 to be type 1b. Department D6 – all Rehab & Treatment Rooms to be type 1d. Room 01-D3-001 to be type 1b.	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-03-PL-322-001	02	THIRD FLOOR INTERNAL DOORS AND SCREENS	On all floors all Treatment Rooms and Clean Utility Rooms to be door type 1d. On all floors Ward Kitchens to have door type 1d. 03-C1.2-028 to be door type 1a. 03-C1.6-002 to be door 1b. Screen adjacent to door at room no 03-C1-052. Room 03-D9-016 to be type 1e. Room 03-U1-001 to be type 1d. Room 03-C1.3-025 to be type 1d. Room 03-C1.5-003 to be type 1d. Room 03-K2-039 to be type 1a. Room 03-H3-018 to be type 1B. 03-H3-019 to be type 1b.	C
HLM-SZ-00-PL-330-001	04	GROUND FLOOR INTERNAL FINISHES PLAN	All DSRs, Cleaners Rooms and Dirty Utilities to be F8/W2/S4. Emergency Department –Resus Rooms G-A1-028, 029 and Triage G-A1-035 walls should be W2. Room G-A1-066 should be F8/W1/S4. Confirm finishes in Room No's G-A1-014, 060, 040, 063,064 and 065, G-A2-036, 040, G-A3-002, 003 and 004, G-D1-024, G-Q1-036, G-N1-040.G-D2-013 and 001.  G-D5-007 walls should be W2. G-F1-022 and G-A1-015 cushioned sports flooring. Add finishes in all stairs	C
HLM-SZ-01-PL-330-001	04	FIRST FLOOR INTERNAL FINISHES PLAN	All DSRs, Cleaners Rooms and Dirty Utilities to be F8/W2/S4. All walls in Clinical Bed Spaces to be W2. 01-B1-023 add accent floor. Need to discuss S3 rather than S4 in Theatres Suites. 01-B1- 065 query colour change. Testing Rooms in D4 inconsistent – proprietary booths. 01-P1-048, 149, 161 and 162 finishes missing, Cushioned sports flooring to 01-D6-027, 028,029,030,035 048, 039, 046, 054, 053, 036, 032. Specialist hygienic white wall cladding to 01-D6-039 and 046. Add finishes in all stairs	C
HLM-SZ-02-PL-330-001	04	SECOND FLOOR INTERNAL FINISHES PLAN	All DSRs, Cleaners Rooms and Dirty Utilities to be F8/W2/S4. Cushioned sports flooring to 02-N2-008, 011, 012 and 023. Specialist hygienic white wall cladding to 02-N2-023. Carpet pattern to be discussed as part of RDD. Add finishes in all stairs	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-03-PL-330-001	04	THIRD FLOOR INTERNAL FINISHES PLAN	All DSRs, Cleaners Rooms and Dirty Utilities to be F8/W2/S4. Room no's 03-H3-001, 004, 005 and 010 to be F5. 03-U1-001, 002 and 003 to be W4. Add finishes in all stairs	C
HLM-SZ-04-PL-330-001	04	FOURTH FLOOR INTERNAL FINISHES PLAN	All DSRs, Cleaners Rooms and Dirty Utilities to be F8/W2/S4. Room no 04-R1-009 to be F5. 4-H1-013, 022, 024, 025, 028, 029, 030, 031, 032, 012 and 017 to be F4 Confirm finishes for 04-H1-026. Add finishes in all stairs	C
HLM-SZ-B1-PL-330-001	05	BASEMENT INTERNAL FINISHES PLAN	All DSRs, Cleaners Rooms and Dirty Utilities to be F8/W2/S4. B-S3-002 and 005, B-S12-001 and. B-S8-001 to be F12. WEEE/Furniture/White Goods Store to be F12. Add finishes in all stairs	C
HLM-SZ-00-PL-330-100		ANTI-LIGATURE PROPOSALS	As discussed at the meeting on 17/10/14, in addition to the areas in CAMHS and the Mental Health Exam Room in A1, the following rooms require to have anti-ligature fittings. G-A2-044, 1-L1-015, 2-L2-010, 2-L2-142 and 3-C1.1-058	C
HLM-Z2-00-PL-332-001	02	GROUND FLOOR CEILING LAYOUT SHEET 1	Room No G-D8-002, G-K1-010 015, 017 & 018 – Type C. G-D5-007 – Type B. G-G2-013 – Type A, G-D1-037, 041 – Type C. G-D1-010,020, 021 & 046 – Type B.	C
HLM-SZ-00-PL-332-002	02	GROUND FLOOR CEILING LAYOUT SHEET 2	Room No G-Q1-141 – Light Clinical Dry, CAMHS - plasterboard ceilings in all clinical areas. Inconsistencies in ceiling designation in Toilets.	C
HLM-SZ-00-PL-332-003	02	GROUND FLOOR CEILING LAYOUT SHEET 3	Room No G-M1-012, 027 and 042 – Type B as other Consult/Exam Rooms. G-M1-010, 029 and 036 should be type C. G-Q1-082 – Type C. G-A1-010 – Type B.	C
HLM-Z2-01-PL-332-001	02	FIRST FLOOR CEILING LAYOUT SHEET 1	Room Number 01-D4-004 –Type C. 01-D4-002, 003,005 & 007 - Specialist installation. 01-D3-001 – Type C. 01-D7-003 & 006 – Type B. 01-D7-005 – Type C. 01-D6 remaining five no Therapy Rooms to be Type B. 01-D1 – 015 & 016 – Type B.	C



Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-01-PL-332-002	02	FIRST FLOOR CEILING LAYOUT SHEET 2	Dept. B1 – all bed areas to be Type D1. 01-B1-045, 047, 048 049, 060,082,078 & 084 – Type C. 01-H2-007 – Type C. 01-H2-021-Type D1. 01-P1-162 – Type C. 01-P1-143,145,147,172 & 174 – Type C. 01-P1 024,025,026, 029,030 031 – Type B. 01-P1-089 – Type C	C
HLM-SZ-01-PL-332-003	02	FIRST FLOOR CEILING LAYOUT SHEET 3	Room No 01-P1-109 & 113 – Type B. 01-P1-100 & 102 Type D2 & D3. 01-P1-119 – Type C. 01-L1-031 – Type B. 01-L1-052,060 &061	C
HLM-SZ-02-PL-332-002	02	SECOND FLOOR CEILING LAYOUT SHEET 2	Room No 02-M4-004,005,007 & 013 – Type C. 02-L2-056, 057 – Type C	C
HLM-SZ-02-PL-332-003	02	SECOND FLOOR CEILING LAYOUT SHEET 3	02-S5-005 & 004 – Type D2 & D3. 02-L2-069, 075 & 076 – Type C. 02-N2-001 – Type F	C
HLM-Z2-03-PL-332-001	03	THIRD FLOOR CEILING LAYOUT SHEET 1	Room No 03-D2-003 006, 051,053 & 085 – Type C. 03-D2-042 & 078 – Type D2	C
HLM-SZ-03-PL-332-002	02	THIRD FLOOR CEILING LAYOUT SHEET 2	Room No 03-Z1-008 – Type F. 03-C1.8-037– Type C. 03-C1.2-028,043 – Type C. 03-C1.1-030 – Type C. 03-C1.5-003 –Type C. 03-C3-004 – Type C. 03-C1.7-003,004 & 005 – Type B. 03-C1.7-002 – Type C. 03-C1.3-018 & 020 –Type C	C
HLM-SZ-03-PL-332-003	02	THIRD FLOOR CEILING LAYOUT SHEET 3	Room No 03-C1.4-023, 024, 025,026,028,029 & 030 – Type C. 03-U1-007 & 010 – Type C.03-D9-007 & 015 – Type C. 03-C2-002 – Type A. 03-U1-001- Type D1	C
HLM-SZ-04-PL-332-002	02	FOURTH FLOOR CEILING LAYOUT SHEET 2	Room No 04-H1-026 – why is this by Specialist? 04-H1-016,018 & 027 – Type D1	C
HLM-SZ-00-PL-450-002	05	GROUND FLOOR ACCESS & MAINTENANCE STRATEGY	Confirm large and small cherry picker can fit into FM Lift 005 and rooms identified as access routes to balconies.	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-00-PL-410-001	02	GROUND FLOOR WALL PROTECTION LAYOUT	Some disposal holds missing full wall protection and full height door protection. GA2-082 and GK1- 029 missing full wall protection. Route for food and other trolleys to CAMHs dining room - no wall protection. No bed head locators shown in ground floor areas with bed. Is this deliberate? Why only half height door protection in Resus?	C
HLM-SZ-01-PL-410-001	02	FIRST FLOOR WALL PROTECTION LAYOUT	Some disposal holds missing full wall protection. IH2-001 and P1-099 missing full wall protection. Protection needed for linen delivery to changing rooms. Consider full height wall protections from into and out of recovery room back to wards. Corner protection missing in following areas: 01-D6 003, 01-H2-023, 01-H2-014, 01-T2-003, 01-P1-156, 01-P1-182, 01-P1-189, 01-P1-057, 01-H2-029, 01-L-085, 01-L1-080, 01-B1-101, 01-B1-070, 01-B1-034 (Linen Bay), Recover bay pillar, Staff bases	C
HLM-SZ-02-PL-410-001	02	SECOND FLOOR WALL PROTECTION LAYOUT	Corner protection missing in following areas: 02-L2-141,02-L2-043, 02-G2-002	C
HLM-SZ-03-PL-410-001	02	THIRD FLOOR WALL PROTECTION LAYOUT	Corner protection missing in following areas: 03 D9 016, 03 C1.1 023, 03 C1.8 028, 03-T2-001, 03-C1.3-002, 03-C1.3-023, 03-C4-007.	C
HLM-SZ-04-PL-410-001	02	FOURTH FLOOR WALL PROTECTION LAYOUT	Corner protection missing in : 04-S7-003, 04-R1-009	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-B1-PL-410-001	02	BASEMENT WALL PROTECTION LAYOUT	<p>Assume full height wall protection is from skirting to height of 2000mm</p> <p>Suggest some principles for these drawings:</p> <p>1) All FM routes should have half or full height wall protection.</p> <p>2) All rooms which linen, catering, waste, HSDU trolleys are used should have full height wall protection.</p> <p>3) All rooms which linen, catering, waste, HSDU trolleys are used should have full height door protection.</p> <p>Missing in clean and dirty trolley holds in main kitchen and supplies receipt bay.</p> <p>4) All corners in corridors where FM traffic is moving should have corner protection. Corner protection looks as if it is missing in some areas e.g. corner of bed store, corner of corridor from lift.</p> <p>5) All bedded areas should have some door protection.</p> <p>6) Wall protection (NBS –P20/170k) is needed in the following rooms within the kitchen area:</p> <ul style="list-style-type: none"> <li>○ B-S1-013</li> <li>○ B-S1-017</li> <li>○ B-S1-031</li> </ul> <p>7) The following doors need door protection – NBS P20/170L:</p> <ul style="list-style-type: none"> <li>○ B-S1 – 031</li> <li>○ B-S1 – 021</li> <li>○ B-S1 – 022</li> <li>○ B-S1 – 025</li> <li>○ B-S1 – 005</li> </ul>	C
HLM-SZ-00-SK-401-001	02	RHSC MAIN RECEPTION DESK DETAILS	Key reception desks at the entrances of the building will need to be secured, closed down out of office hours.	C
HLM-SZ-00-SK-401-002	02	RHSC POD RECEPTION DESK	Key reception desks at the entrances of the building will need to be secured, closed down out of office hours.	C
HLM-SZ-00-SK-401-003	02	DCN MAIN RECEPTION DESK DETAILS	Key reception desks at the entrances of the building will need to be secured, closed down out of office hours.	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-Z2-00-PL-400-402	04	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-402	See comments on drawings	C
HLM-Z2-00-PL-400-420	03	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-420	See comments on drawings	C
HLM-Z2-01-PL-400-404	03	FIRST FLOOR EQUIPMENT LAYOUT SHEET 01-404	See comments on drawings	C
HLM-Z3-03-PL-400-406	03	THIRD FLOOR EQUIPMENT LAYOUT SHEET 03-406	See comments on drawings	C
HLM-Z4-00-PL-400-413	03	GROUND FLOOR EQUIPMENT LAYOUT SHEET 00-413	See comments on drawings	C
HLM-Z4-02-PL-400-411	04	SECOND FLOOR EQUIPMENT LAYOUT SHEET 02-411	See comments on drawings	C
HLM-Z4-B1-PL-400-402	04	BASEMENT FLOOR EQUIPMENT LAYOUT SHEET B1-402	See comments on drawings	C
HLM-SZ-00-PL-400-422	01	Ground Floor Equipment Layout Sheet 00-422	CCTV and Access Control requirements to be incorporated. G-COR-007 to have 1no Resting Place required on window side looking into Spiritual Care Courtyard.	C
HLM-SZ-00-PL-400-423	01	Ground Floor Equipment Layout Sheet 00-423	CCTV and Access Control requirements to be incorporated.G-COR-008 – add 1no Resting Place at G-M1-038. Delete Resting Place in G-COR-011.	C
HLM-SZ-01-PL-400-421	01	First Floor Equipment Layout Sheet 01-421	CCTV and Access Control requirements to be incorporated.	C
HLM-SZ-01-PL-400-422	01	First Floor Equipment Layout Sheet 01-422	CCTV and Access Control requirements to be incorporated.01-COR-007 – move Resting Places to window side looking into courtyards. Omit Resting Place in 01-COR-011.	C
HLM-SZ-02-PL-400-414	01	Second Floor Equipment Layout Sheet 02-414	CCTV and Access Control requirements to be incorporated.02-COR-006– move Resting Place to window side looking into courtyard.	C
HLM-SZ-02-PL-400-415	01	Second Floor Equipment Layout Sheet 02-415	CCTV and Access Control requirements to be incorporated.02-COR-006 – move Resting Places to window side looking into courtyards.	C
HLM-SZ-03-PL-400-419	01	Third Floor Equipment Layout Sheet 03-419	CCTV and Access Control requirements to be incorporated.	C
HLM-SZ-03-PL-400-420	01	Third Floor Equipment Layout Sheet 03-420	CCTV and Access Control requirements to be incorporated.03-COR-006 Move Resting place to south side of corridor looking into courtyard	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
HLM-SZ-04-PL-400-407	01	Fourth Floor Equipment Layout Sheet 04-407	CCTV and Access Control requirements to be incorporated.03-COR-007 Move Resting place to south side of corridor looking into courtyard	C
WW-XX-XX-SC-511-001	1	NATURAL GAS SCHEMATIC	Each Boiler to be separately metered. Gas meters to be fitted with a bypass. Note 1 – Egg crate grilles to ventilated ceilings may be an infection control issue. To be reviewed for compliance with infection control and health facilities notes. Gas requirement to kitchen now removed.	C
WW-XX-XX-SC-513-001	1	OIL MAINS SCHEMATIC	Detail to be provided of day tank ancillaries e.g. vents, overflow, alarms etc. Oil metering strategy to account for oil returns to main tank	C
WW-XX-XX-SC-521-001	2	ENERGY CENTRE HEATING SCHEMATIC	Schedule of plant and sizes to be developed in line with the design progression	C
WW-XX-XX-SC-521-002	1	HEAT STATION 1 SCHEMATIC	Schedule of plant and sizes to be developed in line with the design progression DHW expansion vessel type not consistent with Domestic Water Schematic expansion vessel type. To be addressed	C
WW-XX-XX-SC-521-003	1	HEAT STATION 2 SCHEMATIC	Schedule of plant and sizes to be developed in line with the design progression DHW expansion vessel type not consistent with Domestic Water Schematic expansion vessel type. To be addressed	C
WW-XX-XX-SC-521-004	1	HEAT STATION 3 SCHEMATIC	Schedule of plant and sizes to be developed in line with the design progression DHW expansion vessel type not consistent with Domestic Water Schematic expansion vessel type. To be addressed	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
WW-XX-XX-SC-521-005	1	HEAT STATION 4 SCHEMATIC	Schedule of plant and sizes to be developed in line with the design progression DHW expansion vessel type not consistent with Domestic Water Schematic expansion vessel type. To be addressed	C
WW-SZ-B1-PL-500-001	1	Level B1 – Water Services Distribution	As ground floor general comment.	C
WW-SZ-00-PL-500-001	1	Level 00 - Water Services Distribution	General Comment – Drawing lacks detail. Further detailed drawings expected. Schedule of plant and sizes to be developed in line with the design progression Typical connection details expected Rooms requiring water not shown to have connections, IHSL to check and amend. Examples include:  G-A"-080 DSR expected to have water G-F1-037 Therapeutic kitchen expected to have water G-A1—058, 055, 044 WC and staff shower expected to have water	C
WW-SZ-01-PL-500-001	1	Level 01 - Water Services Distribution	As ground floor general comment	C
WW-SZ-02-PL-500-001	1	Level 02 - Water Services Distribution	As ground floor general comment	C
WW-SZ-03-PL-500-001	1	Level 03 - Water Services Distribution	As ground floor general comment	C
WW-SZ-04-PL-500-001	1	Level 04 - Water Services Distribution	As ground floor general comment	C
WW-SZ-04-PL-500-003	1	Level 04 – Water Tank Room	Proposal is generally clear. Schedule of plant and sizes to be developed in line with the design progression. A number of further issues need to be addressed: - Pipework details need to be made clear with either legend or additional notes. For example, it needs to be clear whether pipes are at high/low level, exposed/in voids - Additional notes required	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>where pipe break are shown ie where pipe continuation may be found</p> <ul style="list-style-type: none"> <li>- Lab water tank pipework needs to be shown</li> <li>- Clear access ways and maintenance space should be shown (ie pipework from pumps P3 and P4 to lab water tank appears to block access through plantroom, is pipework at high level?)</li> <li>- Multi-service co-ordination to be shown to confirm access / maintenance space is suitable</li> </ul> <p>Pipe sizes need to be reviewed. BCWS from basement is shown as 133mm dia on layout but 108mm dia on the schematic. Cold water feed sizes from filtered tank (76mm dia) do not tie up with schematic (shows 159mm dia)</p>	
WW-SZ-B1-PL-521-001	1	Level B1 - Heating Distribution	<p>General Comment – Drawing lacks detail. Further detailed drawings expected including all valving details.</p> <p>Schedule of plant and sizes to be developed in line with the design progression</p> <p>Specific drawing comments - Provide detail of Primary Heating Header Highlight heat stations IHSL to confirm the relevance of pipework colours</p>	C
WW-SZ-00-PL-521-001	1	Level 00 -Heating Distribution	See basement level general comments	C
WW-SZ-01-PL-521-001	1	Level 01 -Heating Distribution	See basement level general comments	C
WW-SZ-02-PL-521-001	1	Level 02 -Heating Distribution	See basement level general comments	C
WW-SZ-03-PL-521-001	1	Level 03 -Heating Distribution	See basement level general comments	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
WW-SZ-04-PL-521-001	1	Level 04 -Heating Distribution	See basement level general comments	C
WW-SZ-B1-PL-524-001	1	Level B1 - Ventilation Distribution	See ground floor level general comments Confirm dedicated ventilation for the UPS room is to a minimum of BS EN 5072-2 Not one duct size shown Room numbers are not shown on the XREF. Required, add. -	C
WW-SZ-00-PL-524-001	1	Level 00 -Ventilation Distribution	General Comments – Drawing significantly lacks detail in order to provide a suitable review. Drawing purely shows main duct run locations. No ancillaries (fire dampers, attenuators etc.) shown and no room detail provided (grille types, locations, connections). This is all required for each room or various typical details to be provided to Board's satisfaction Duct sizes only shown for very few locations – all duct sizes required, including risers etc. Could be done through schematics if easier Number of ducts and duct drops clash with partitions. Co-ordination required. Co-ordination with other services to be undertaken – sections of congested areas to be shown to ensure clear ceiling heights are maintained Notes need to be much clearer i.e. if ductwork is in a void,/exposed, whether a duct is rising or dropping Legend needs to be revised. Symbols shown aren't on the layout. Needs to detail what the significance of duct colours are i.e. blue extract, pink supply, green dirty. Full design to be in line with all PCPs, BCRs, manufacturer's guidance and SHTM requirements High extent of main duct runs shown above rooms north of gridline F01	C



Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			including through labs, staff rooms, consultation rooms, surgery rooms and open plan offices. All ducts above rooms to have acoustic treatment to maintain acoustic requirements	
WW-SZ-01-PL-524-001	1	Level 01 -Ventilation Distribution	See ground floor general comments	C
WW-SZ-02-PL-524-001	1	Level 02 -Ventilation Distribution	See ground floor general comments A number of rooms between grid lines E01 and E06 do not have ventilation supplies shown. Rooms to have mechanical ventilation	C
WW-SZ-03-PL-524-001	1	Level 03 -Ventilation Distribution	See ground floor general comments Drawing is clearly incomplete. All rooms to have mechanical ventilation	C
WW-SZ-04-PL-524-001	1	Level 04 -Ventilation Distribution	See ground floor general comments Room numbers are not shown on the XREF. Required, add. Drawing does have more detail than other floors between grid lines E01-E06.. More suitable level of detail ie ductwork sizes, FD's etc. shown but expect this level of detail everywhere across the drawings	C
WW-SZ-B1-PL-525-001	1	Level B1 - Cooling Distribution	General Comment – Drawing lacks detail. Further detailed drawings expected including all valving details. Schedule of plant and sizes to be developed in line with the design progression	C
WW-SZ-00-PL-525-001	1	Level 00 -Cooling Distribution	See basement level comments	C
WW-SZ-01-PL-525-001	1	Level 01 -Cooling Distribution	See basement level comments	C
WW-SZ-02-PL-525-001	1	Level 02 -Cooling Distribution	See basement level comments	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
WW-SZ-03-PL-525-001	1	Level 03 -Cooling Distribution	See basement level comments	C
WW-SZ-04-PL-525-001	1	Level 04 -Cooling Distribution	See basement level comments	C
WW-Z3-04-PL-523-001	1	Zone Z3 - Level 04 – Chilled Water Plant Area	<p>Drawing shows generally a suitable level of information with relevant labelling and information</p> <p>Schedule of plant and sizes to be developed in line with the design progression</p> <p>Medical air and vaccum plant layout to be provided</p> <p>Location and resilience of chillers still under review – to be to the Board’s satisfaction</p> <p>To scale chiller and external cooling units for MRI, server rooms and Board Equipment to be shown, including pipework arrangements</p>	C
WW-Z3-02-PL-524-001	1	Level 02 - Theatre Ventilation Plantroom	<p>Level of information is more suitable with labelled AHUs, louvres, drops etc.</p> <p>Schedule of plant and sizes to be developed in line with the design progression</p> <p>Drawing to show duct sizes such that co-ordination can be reviewed.</p> <p>Concern on access and maintenance, particularly as space appears full without attenuators and any heating/cooling/electrical services shown. Access and maintenance areas to be shown. 3D views/sections of the plant should be provided to show co-ordination and services co-ordination at highly serviced areas</p> <p>Multiple co-ordination issues to address. Examples:</p> <ul style="list-style-type: none"> <li>- Theatre 5 AHU shown to overlap with structural hole and also columns appear to limit plant access and for maintenance.</li> <li>- CTCcanL0, Theatre 3, Xray L0 and MRI Scanners L0 AHUs all</li> </ul>	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>shown to clash with columns)</p> <ul style="list-style-type: none"> <li>- Theatre 1 AHU also appears to be constrained by column.</li> </ul> <p>AHUs to be co-ordinated with structure and access</p>	
WW-Z2-04-PL-524-001	1	Zone Z2 - Level 04 - Ventilation Plantroom 1	<p>Drawing referencing required (AHUs, ductwork sizes, FAIs, drops etc.) Detail of services (attenuators etc.) also to be shown</p> <p>Drawing is too difficult to review without this information.</p>	C
WW-Z2-04-PL-524-002	1	Zone Z2 - Level 04 - Ventilation Plantroom 2	<p>Drawing referencing required (AHUs, ductwork sizes, FAIs, drops etc.) Detail of services (attenuators etc.) also to be shown</p> <p>Drawing is too difficult to review without this information.</p>	C
WW-Z3-04-PL-524-001	1	Zone Z3 - Level 04 - Ventilation Plantroom 3	Drawing to include detail and not make reference to a 'similar drawing'	C
ME-SZ-B1-PL-512-001	2	Basement Floor Plan – Medical Gases Layout	As ground floor comments	C
ME-SZ-00-PL-512-001	2	Ground Floor Plan - Medical Gases Layout	<p>Medical alarm panels do not appear correct. Agreement of locations and provision to be confirmed with the Board</p> <p>Appears to be an over provision of AVSUs, without associated area alarms. Proposals to be reviewed with the Board.</p> <p>Pipework sizes to be shown</p> <p>Valving arrangements to be shown</p>	C
ME-SZ-01-PL-512-001	2	First Floor Plan - Medical Gases Layout	As ground floor comments	C
ME-SZ-02-PL-512-001	2	Second Floor Plan - Medical Gases Layout	As ground floor comments	C
ME-SZ-03-PL-512-001	2	Third Floor Plan - Medical Gases Layout	As ground floor comments	C
ME-SZ-04-PL-512-001	2	Fourth Floor Plan - Medical Gases Layout	As ground floor comments	C
ME-XX-XX-DT-512-001	1	Fourth Floor Plan Medical Gases Sheet	<p>Plant details provided in pictorial form</p> <p>Schedule of plant and sizes to be developed in line with the design progression</p>	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			Drawing to reflect to scale drawings of Plant proposals	
ME-XX-XX-SC-512-001		Medical Gas \ Medical Oxygen Schematic	<b>NOT SUBMITTED</b>	
ME-XX-XX-SC-512-002		Medical Gas \ Nitrous Oxide Schematic	<b>NOT SUBMITTED</b>	
ME-XX-XX-SC-512-003		Medical Gas \ Medical Air Schematic	<b>NOT SUBMITTED</b>	
ME-XX-XX-SC-512-004		Medical Gas \ Surgical Air Schematic	<b>NOT SUBMITTED</b>	
ME-XX-XX-SC-512-005		Medical Gas \ Vacuum Schematic	<b>NOT SUBMITTED</b>	
ME-XX-XX-SC-512-006		Medical Gas \ Anaesthetic Gas Scavenging Schematic	<b>NOT SUBMITTED</b>	
ME-XX-XX-SC-512-007		Medical Gas \ Plant Alarm Schematic	<b>NOT SUBMITTED</b>	
ME-XX-XX-SC-512-008		Medical Gas \ Local distribution Alarm Panel Schematic	<b>NOT SUBMITTED</b>	
ME-SZ-B1-PL-569-001	2	Basement Floor Plan - Pneumatic Tube System Layout	Pipework size to be shown Section detail drawings to be provided to show co-ordination in highly serviced areas	C
ME-SZ-00-PL-569-001	2	Ground Floor Plan - Pneumatic Tube System Layout	Refer to basement level comments	C
ME-SZ-01-PL-569-001	2	First Floor Plan - Pneumatic Tube System Layout	Refer to basement level comments	C
ME-SZ-02-PL-569-001	2	Second Floor Plan - Pneumatic Tube System Layout	Refer to basement level comments	C
ME-SZ-03-PL-569-001	2	Third Floor Plan - Pneumatic Tube System Layout	Refer to basement level comments	C
ME-SZ-04-PL-569-001		Fourth Floor Plan - Pneumatic Tube System Layout	<b>NOT SUBMITTED</b>	
<del>ME-XX-XX-SC-569-001</del> ME-SZ-XX-SC-569-001	3	Pneumatic Tube System Schematic	Auxiliary power supplies, controls cabling and pipework sizing to be detailed	C
ME-SZ-B1-PL-575-001	2	Basement Floor Plan - Sprinkler Coverage	Detailed head, pipework and valving layouts to be provided in line with the detailed developed fire strategy	C
ME-SZ-00-PL-575-001	2	Ground Floor Plan - Sprinkler Coverage	Detailed head, pipework and valving layouts to be provided in line with	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			the detailed developed fire strategy	
ME-SZ-01-PL-575-001	2	First Floor Plan - Sprinkler Coverage	Detailed head, pipework and valving layouts to be provided in line with the detailed developed fire strategy	C
ME-SZ-02-PL-575-001	2	Second Floor Plan - Sprinkler Coverage	Detailed head, pipework and valving layouts to be provided in line with the detailed developed fire strategy	C
ME-SZ-03-PL-575-001	2	Third Floor Plan - Sprinkler Coverage	Detailed head, pipework and valving layouts to be provided in line with the detailed developed fire strategy	C
ME-SZ-04-PL-575-001	2	Fourth Floor Plan - Sprinkler Coverage	Detailed head, pipework and valving layouts to be provided in line with the detailed developed fire strategy	C
ME-XX-XX-SC-575-002		Sprinkler System Schematic	<b>NOT SUBMITTED</b>	
WW-XX-XX-SC-530-001	1	HV Distribution Schematic	To be developed. Cable sizing etc. to be provided	C
WW-XX-XX-SC-530-002	1	LV Distribution Sub-Station No.1 Schematic	To be developed. Cable sizing etc. to be provided	C
WW-XX-XX-SC-530-003	1	LV Distribution Sub-Station No.2 Schematic	To be developed. Cable sizing etc. to be provided	C
WW-XX-XX-SC-530-004	1	IPS System	To be developed. Cable sizing etc. to be provided	C
WW-XX-XX-SC-539-001	1	UPS System Schematic	To be developed. Cable sizing etc. to be provided	C
WW-XX-XX-SC-539-002	1	Earthing System Schematic	To be developed in line with developed design	C
WW-XX-XX-SC-540-001	1	Lighting Control Schematic	Drawing is generic. Drawing to be developed specific to the developed design. Timing operation to be agreed with the Board Night lighting detail to be provided	C
WW-XX-XX-SC-542-001	1	Emergency Lighting Schematic	Drawing is generic. Drawing to be developed specific to the developed design.	C
WW-XX-XX-SC-559-002	1	Induction loop system details & typical electrical mounting heights	No legend or ADB codes for items. IHSL to confirm where panel heaters	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			are being used Cleaners sockets to be illustrated. Reference to PA in induction loop schematic – there is no PA, revise No indication of special height items i.e. press to exit at high level to prevent use by small children.	
WW-Z3-B1-PL-530-001	1	Zone Z3 – Level B1 – Electrical Plantrooms	Confirmation required that HV Transformers can be readily removed and replaced.	C
WW-Z4-B1-PL-530-001	1	Zone Z4 – Level B1 – Electrical Plantrooms	Confirmation required that HV Transformers can be readily removed and replaced.	C
WW-SZ-B1-PL-533-001	1	Level B1 - Power Plant & Containment Routes	Co-ordinated sections with mechanical services required	C
WW-SZ-00-PL-533-001	1	Level 00 - Power Plant & Containment Routes	Co-ordinated sections with mechanical services required	C
WW-SZ-01-PL-533-001	1	Level 01 - Power Plant & Containment Routes	Co-ordinated sections with mechanical services required	C
WW-SZ-02-PL-533-001	1	Level 02 - Power Plant & Containment Routes	Co-ordinated sections with mechanical services required	C
WW-SZ-03-PL-533-001	1	Level 03 - Power Plant & Containment Routes	Co-ordinated sections with mechanical services required	C
WW-SZ-04-PL-533-001	1	Level 04 - Power Plant & Containment Routes	Co-ordinated sections with mechanical services required	C
ME-SZ-B1-PL-538-001	3	Basement Floor Plan - Layout of Nurse Call Panels	IHSL to confirm if this drawing is required. Cannot locate any information on the drawing relating to Nurse Call.	C
ME-SZ-00-PL-538-001	3	Ground Floor Plan - Layout of Nurse Call Panels	Drawing lacks level of detailed required. Expect Nurse Call Panels to be generally located at Staff Bases – at present they are mainly located at reception areas and waiting areas. IHSL to confirm if architectural backgrounds require updating to identify staff base locations. No indicative Nurse Call Design indicated to illustrate typical extent of coverage, line of sight, follow me	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			lights etc. Detail to be added	
ME-SZ-01-PL-538-001	3	First Floor Plan - Layout of Nurse Call Panels	<p>Drawing lacks level of detailed required.</p> <p>Expect Nurse Call Panels to be generally located at Staff Bases – at present they are mainly located at reception areas and waiting areas. IHSL to confirm if architectural backgrounds require updating to identify staff base locations.</p> <p>No indicative Nurse Call Design indicated to illustrate typical extent of coverage, line of sight, follow me lights etc. Detail to be added</p>	C
ME-SZ-02-PL-538-001	3	Second Floor Plan - Layout of Nurse Call Panels	<p>Drawing lacks level of detailed required.</p> <p>Expect Nurse Call Panels to be generally located at Staff Bases – at present they are mainly located at reception areas and waiting areas. IHSL to confirm if architectural backgrounds require updating to identify staff base locations.</p> <p>No indicative Nurse Call Design indicated to illustrate typical extent of coverage, line of sight, follow me lights etc. Detail to be added</p> <p>Also either very few panels located on this level or panels have been obscured by backgrounds e.g. 2-L2-045 TD Base etc? IHSL to confirm and address</p>	C
ME-SZ-03-PL-538-001	2	Third Floor Plan - Layout of Nurse Call Panels	<p>Drawing lacks level of detailed required.</p> <p>Expect Nurse Call Panels to be generally located at Staff Bases – at present they are mainly located at reception areas and waiting areas. IHSL to confirm if architectural backgrounds require updating to identify staff base locations.</p> <p>No indicative Nurse Call Design indicated to illustrate typical extent of coverage, line of sight, follow me lights etc. Detail to be added</p> <p>Also either very few panels located on this level or panels have been obscured by backgrounds? IHSL to</p>	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			confirm and address	
ME-SZ-04-PL-538-001	3	Fourth Floor Plan - Layout of Nurse Call Panels	No Nurse Call panels indicated on this level. IHSL to confirm and address.	C
ME-XX-XX-SC-538-001		Nurse Call System Schematic	NOT SUBMITTED	
ME-EW-XX-PL-571-001	2	Site Plan. External CCTV Layout	Please provide coverage cones to indicate extent of coverage. Camera references, cabling ducting etc. to be detailed	C
ME-SZ-B1-PL-571-001	4	Basement Floor Plan – CCTV & Door Access	Drawing to be updated to reflect comments made during UGM held 18/08/2014' Please provide coverage cones to indicate extent of coverage. Identify camera types e.g. fixed, PTZ. Coverage to include all circulation stairs. Show detail of card reader, press to exit and break glass to show protected area. Make it clear what is a Video Door Entry system, symbol is very similar with what appear to be structural elements of the drawing. Video door entry to show location of receiving station	C
ME-SZ-00-PL-571-001	4	Ground Floor Plan - CCTV & door Access	Drawing to be updated to reflect comments made during UGM held 18/08/2014' Please provide coverage cones to indicate extent of coverage. Identify camera types e.g. fixed, PTZ. Coverage to include all circulation stairs. Show detail of card reader, press to exit and break glass to show protected area. Video door entry to show location of receiving station Fit door and Access Control (AC) to stair 2 to basement	C
ME-SZ-01-PL-571-001	4	First Floor Plan - CCTV & door Access	Drawing to be updated to reflect comments made during UGM held 18/08/2014'	C



Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>Please provide coverage cones to indicate extent of coverage. Identify camera types e.g. fixed, PTZ.</p> <p>Coverage to include all circulation stairs and lift lobbies. Show detail of card reader, press to exit and break glass to show protected area.</p> <p>Video door entry to show location of receiving station</p> <p>Address inconsistency with access control on some disposal hold</p> <p>No access control to Plastics dressing clinic and beyond shown – this is not deemed correct. IHSL to address.</p> <p>FM lifts 4 &amp; 5 to have AC</p> <p>PICU HDU to be a secure area.</p> <p>AC to MRI suite already within protected zone, to be agreed with the Board</p>	
ME-SZ-02-PL-571-001	4	Second Floor Plan - CCTV & door Access	<p>Drawing to be updated to reflect comment s made during UGM held 18/08/2014'</p> <p>Please provide coverage cones to indicate extent of coverage. Identify camera typs e.g. fixed, PTZ</p> <p>Coverage to include all circulation stairs and lift lobbies. Show detail of card reader, press to exit and break glass to show protected area.</p> <p>Video door entry to show location of receiving station</p>	C
ME-SZ-03-PL-571-001	4	Third Floor Plan - CCTV & door Access	<p>Drawing to be updated to reflect comment s made during UGM held 18/08/2014'</p> <p>Please provide coverage cones to indicate extent of coverage. Identify camera types e.g. fixed, PTZ.</p> <p>Coverage to include all circulation stairs and lift lobbies. Show detail of card reader, press to exit and break glass to show protected area.</p> <p>Video door entry to show location of receiving station</p>	C
ME-SZ-04-PL-571-001	4	Fourth Floor Plan - CCTV & door Access	<p>Drawing to be updated to reflect comment s made during UGM held 18/08/2014'</p>	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>Please provide coverage cones to indicate extent of coverage. Identify camera types e.g. fixed, PTZ.</p> <p>Coverage to include all circulation stairs and lift lobbies. Show detail of card reader, press to exit and break glass to show protected area.</p> <p>Video door entry to show location of receiving station</p>	
ME-XX-XX-SC-571-001	2	Intruder Access Control and CCTV Schematic	Drawing is too generic and requires more detail e.g. cable types etc.	C
ME-Z2-00-PL-541-401	2	Ground Floor Plan. Social Work Department. Lighting Layout.	<p>Luminaire schedule to be submitted to review light fittings for suitability.</p> <p>No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown.</p> <p>Sample calculations to be submitted to demonstrate normal and emergency lighting levels.</p> <p>Note that the proposal indicates 50% of light fittings are emergency – IHSL to confirm this is correct</p>	C
ME-Z2-00-PL-541-402	2	Ground Floor Plan. Paediatric Dentistry Department. Lighting Layout.	<p>Luminaire schedule to be submitted to review light fittings for suitability.</p> <p>No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown.</p> <p>Sample calculations to be submitted to demonstrate normal and emergency lighting levels.</p> <p>Note that the proposal indicates 1 in 6 of the light fittings are emergency – IHSL to confirm this is correct.</p>	C
ME-Z2-00-PL-541-403	2	Ground Floor Plan. Family Support Services DepartemntLighting Layout.	<p>Luminaire schedule to be submitted to review light fittings for suitability.</p> <p>No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown.</p> <p>Sample calculations to be submitted to demonstrate normal and emergency lighting levels.</p> <p>Note that the proposal indicates that offices that are 30% larger than other smaller offices still have the</p>	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			same number of light fittings – what is the impact on achieving energy targets and lighting levels? IHSL to review and address.	
ME-Z2-00-PL-541-404	2	Ground Floor Plan. Cardiology & Respiratory Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability.  No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z2-00-PL-541-405	2	Ground Floor Plan. Main Outpatients Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels. Light fittings do not appear to align to a grid pattern – are they mounted in plasterboard? IHSL to confirm and address	C
ME-Z2-00-PL-541-420	2	Ground Floor Plan. RHSC Entrance Lighting Layout	Entrance lighting not designed. Area to be designed and submitted	C
ME-Z3-00-PL-541-407	2	Ground Floor Plan. Radiology Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels. MRI Room to be fully detailed. IHSL to confirm there is adequate emergency lighting provision in Xray. IHSL to confirm Provision of 'Room in Use' lights	C
ME-Z4-00-PL-541-411	2	Ground Floor Plan. Emergency department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	
ME-Z4-00-PL-541-413	2	Ground Floor Plan. Paediatric Acute Receiving Unit Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z4-00-PL-541-418	2	Ground Floor Plan. Child & Adolescent Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z2-01-PL-541-401	2	First Floor Plan. Audiology Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels. Requirement for 'Room in Use' lights?	C
ME-Z2-01-PL-541-402	2	First Floor Plan. Orthoptics Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z2-01-PL-541-404	2	First Floor Plan. RHSC Therapies Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	
ME-Z2-01-PL-541-406	2	First Floor Plan. RHSC Therapies Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels. Will track for hoist clash with light fitting? Review location of emergency light in Rehab Room.	C
ME-Z3-01-PL-541-409	2	First Floor Plan. Operating Theatres Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z3-01-PL-541-410	2	First Floor Plan. Operating Theatres Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z3-01-PL-541-413	2	First Floor Plan. Operating Theatres Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z4-01-PL-541-415	2	First Floor Plan. DCN Acute Care Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching /	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	
ME-Z4-01-PL-541-417	2	First Floor Plan. PICU & HDU's Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z4-01-PL-541-418	2	First Floor Plan. PICU & HDU's Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z2-02-PL-541-403	2	Second Floor Plan. Clinical / Management Suite. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z4-02-PL-541-406	2	Second Floor Plan. DCN Inpatients Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z4-02-PL-541-410	2	Second Floor Plan. Programmed Investigations Unit Department. Lighting layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown.	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	
ME-Z4-02-PL-541-411	2	Second Floor Plan. DCN Therapies Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z4-02-PL-541-413	2	Second Floor Plan. Neurophysiology Department. Lighting Layout	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z2-03-PL-541-404	2	Third Floor Plan. Clinical Education Suite Department. Lighting Layout	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z3-03-PL-541-405	2	Third Floor Plan. Paediatric Neurophysiology Department. Lighting Layout	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z3-03-PL-541-406	2	Third Floor Plan. Neuroscience Outpatients Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			emergency lighting levels.	
ME-Z3-03-PL-541-409	2	Third Floor Plan. Haem / Onc Inpatients & Daycase Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z3-03-PL-541-410	2	Third Floor Plan. Specialist Paediatric Biochemistry Lab Department. Lighting layout.	No luminaire schedule submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z4-03-PL-541-412	2	Third Floor Plan. Medical Day Care unit. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z4-03-PL-541-417	2	Third Floor Plan. Surgical Long Stay Inpatients. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
ME-Z4-04-PL-541-404	2	Fourth Floor Plan. Clinical / Management Suite Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C



Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
ME-Z4-04-PL-541-406	2	Third Floor Plan. Child Life & Health Department. Lighting Layout.	Luminaire schedule to be submitted to review light fittings for suitability. No circuiting or control information to review level of local switching / automatic control. Circuiting and control information to be shown. Sample calculations to be submitted to demonstrate normal and emergency lighting levels.	C
<del>ME-SZ-B1-PL-572-002</del> ME-SZ-B1-PL-572-001	3	Basement Floor Plan - Layout of Fire Alarm Panels	Fire compartments and fire zones to be identified. The Fire Alarm Design is required to indicate extent and type of detector coverage (e.g. smoke, heat, beam, vesda etc.), interfacing to devices e.g. door hold opens etc. extent of ceiling void coverage etc.	C
<del>ME-SZ-00-PL-572-002</del> ME-SZ-00-PL-572-001	3	Ground Floor Plan - Layout of Fire Alarm Panels	Fire compartments and fire zones to be identified. Fire Alarm Design required to indicate extent and type of detector coverage (e.g. smoke, heat, beam, vesda etc.), interfacing to devices e.g. door hold opens etc. extent of ceiling void coverage etc.	C
<del>ME-SZ-01-PL-572-002</del> ME-SZ-01-PL-572-001	3	First Floor Plan - Layout of Fire Alarm Panels	Fire compartments and fire zones to be identified. The Fire Alarm Design is required to indicate extent and type of detector coverage (e.g. smoke, heat, beam, vesda etc.), interfacing to devices e.g. door hold opens etc. extent of ceiling void coverage etc.	C
<del>ME-SZ-02-PL-572-002</del> ME-SZ-02-PL-572-001	3	Second Floor Plan - Layout of Fire Alarm Panels	Fire compartments and fire zones to be identified. The Fire Alarm Design is required to indicate extent and type of detector coverage (e.g. smoke, heat, beam, vesda etc.), interfacing to devices e.g. door hold opens etc. extent of ceiling void coverage etc.	C
<del>ME-SZ-03-PL-572-002</del> ME-SZ-03-PL-572-001	3	Third Floor Plan - Layout of Fire Alarm Panels	Fire compartments and fire zones to be identified. The Fire Alarm Design is required to indicate extent and type of detector coverage (e.g. smoke, heat, beam, vesda etc.), interfacing to devices e.g. door hold opens etc. extent of ceiling void	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			coverage etc.	
ME-SZ-04-PL-572-002 ME-SZ-04-PL-572-001	3	Fourth Floor Plan - Layout of Fire Alarm Panels	Fire compartments and fire zones to be identified. The Fire Alarm Design is required to indicate extent and type of detector coverage (e.g. smoke, heat, beam, vesda etc.), interfacing to devices e.g. door hold opens etc. extent of ceiling void coverage etc.	C
ME-XX-XX-SC-572-001	2	Fire Alarm Schematic	Identify location of RIE Fire Alarm Control Panel. Add legend to drawing giving a description of the devices and how they operate. Confirm if inputs and outputs on the same I/O device or only one way communication on each leg	C
ME-XX-XX-SC-572-002	2	Fire Alarm Interface Schematic	Note 3 may not comply with BS5839 for a phased evacuation system – IHSL to review and confirm/address. Any interfaces to Smoke Extract Panels of Fire Dampers to be shown. Schematic is generic and a legend required to be provided for symbols. Please explain what the numbers are beside each panel and how they relate to the drawings. Local / Repeater panels to be indicated on schematic.	C
WW-SZ-B1-PL-581-001	1	Level B1 – Drainage Strategy	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z2-00-PL-581-001	1	Zone Z2 – Level 00 – Drainage Strategy	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z3-00-PL-581-001	1	Zone Z3 – Level 00 – Drainage Strategy Sheet 1 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z3-00-PL-581-002	1	Zone Z3 – Level 00 – Drainage Strategy Sheet 2 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z4-00-PL-581-001	1	Zone Z4 – Level 00 – Drainage Strategy - Sheet 1 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
WW-Z4-00-PL-581-002	1	Zone Z4 – Level 00 – Drainage Strategy - Sheet 2 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z5-00-PL-581-001	1	Zone Z5 (Energy Centre) – Level 00 – Drainage Strategy	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z2-01-PL-581-001	1	Zone Z2 – Level 01 – Drainage Strategy	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z3-01-PL-581-001	1	Zone Z3 – Level 01 – Drainage Strategy Sheet 1 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z3-01-PL-581-002	1	Zone Z3 – Level 01 – Drainage Strategy Sheet 2 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z4-01-PL-581-001	1	Zone Z4 – Level 01 – Drainage Strategy - Sheet 1 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z4-01-PL-581-002	1	Zone Z4 – Level 01 – Drainage Strategy - Sheet 2 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z5-01-PL-581-001	1	Zone Z5 (Energy Centre) – Level 01 – Drainage Strategy	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z2-02-PL-581-001	1	Zone Z2 – Level 02 – Drainage Strategy	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z3-02-PL-581-001	1	Zone Z3 – Level 02 – Drainage Strategy Sheet 1 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z3-02-PL-581-002	1	Zone Z3 – Level 02 – Drainage Strategy Sheet 2 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z4-02-PL-581-001	1	Zone Z4 – Level 02 – Drainage Strategy - Sheet 1 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z4-02-PL-581-002	1	Zone Z4 – Level 02 – Drainage Strategy - Sheet 2 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
WW-Z5-02-PL-581-001	1	Zone Z5 (Energy Centre) – Level 02 – Drainage Strategy	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z2-03-PL-581-001	1	Zone Z2 – Level 03 – Drainage Strategy	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z4-03-PL-581-001	1	Zone Z3 – Level 03 – Drainage Strategy Sheet 1 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z4-03-PL-581-002	1	Zone Z3 – Level 03 – Drainage Strategy Sheet 2 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z3-03-PL-581-001	1	Zone Z4 – Level 03 – Drainage Strategy - Sheet 1 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z3-03-PL-581-002	1	Zone Z4 – Level 03 – Drainage Strategy - Sheet 2 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z2-04-PL-581-001	1	Zone Z2 – Level 04 – Drainage Strategy	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z3-04-PL-581-001	1	Zone Z3 – Level 04 – Drainage Strategy - Sheet 1 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z3-04-PL-581-002	1	Zone Z3 – Level 04 – Drainage Strategy - Sheet 2 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z4-04-PL-581-001	1	Zone Z4 – Level 04 – Drainage Strategy- Sheet 1 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z4-04-PL-581-002	1	Zone Z4 – Level 04 – Drainage Strategy- Sheet 2 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z2-05-PL-581-001	1	Zone Z2 – Level 05 (Roof) – Drainage Strategy	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z3-05-PL-581-001	1	Zone Z3 – Level 05 (Roof) – Drainage Strategy - Sheet 1 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
WW-Z3-05-PL-581-002	1	Zone Z3 – Level 05 (Roof) – Drainage Strategy - Sheet 2 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z4-05-PL-581-001	1	Zone Z4 – Level 05 (Roof) – Drainage Strategy- Sheet 1 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-Z4-05-PL-581-002	1	Zone Z4 – Level 05 (Roof) – Drainage Strategy- Sheet 2 of 2	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-XX-XX-SC-500-001	1	Domestic Water Services Schematic	Energy centre connection should not be branched off wards and departments – IHSL to address. Steam plant connection shown – none in the project. IHSL to revise  Helipad fire fighting systems connected to metered domestic water system – this does not appear correct – IHSL to review	C
WW-XX-XX-SC-500-002	1	Landscape/Plants/Window Cleaning Water Concept Schematic	Internal IV required to MDCU terrace  Water meter shown on the outlet rather than inlet, IHSL to revise	C
WW-Z2-XX-SC-572-001	1	Dry riser zone 2 system schematic & details	No detail of dry riser outlet box	C
WW-SZ-XX-SC-572-001	1	Dry riser zone 3 and zone 4 system schematic & details	IHSL to confirm fill time for stair 01 & 02 system is acceptable to Fire & Rescue Services  Ground floor plan old version, refer stair 01 location – IHSL to update XREF and address any required changes  No detail of dry riser outlet box	C
WW-SZ-B1-PL-572-001	1	Level B1 - Dry Riser Layout	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-SZ-00-PL-572-001	1	Level 00 - Dry Riser Layout	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-SZ-01-PL-572-001	1	Level 01 - Dry Riser Layout	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-SZ-02-PL-572-001	1	Level 02 - Dry Riser Layout	Co-ordination of highly serviced areas (section drawings) to be developed	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			developed	
WW-SZ-03-PL-572-001	1	Level 03 - Dry Riser Layout	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-SZ-04-PL-572-001	1	Level 04 - Dry Riser Layout	Co-ordination of highly serviced areas (section drawings) to be developed	C
WW-SZ-SL-500-001 WW-SZ-SL-DT-500-001	1	Touch Down Base; MEP Services	<p>General comment –</p> <p>The drawings do not provide the level of detail expected. Please show loaded plans for co-ordination. Drawing to include type of elements i.e. type of grilles, lights, switches, fire alarms etc. as well as detailing services distribution in the room i.e. pipework and containment runs and how services will be concealed (boxing, IPS, in voids etc.)</p> <p>A number of other issues identified. Non-exhaustive items to be addressed include –</p> <p>Legend to be completed</p> <p>IHSL to confirm what an affray alarm is and confirm required</p> <p>2 symbols for radiant panel - address</p>	C
WW-SZ-SL-500-002 WW-SZ-SL-DT-500-002	1	Adult Single Bedroom with Ensuite; MEP Services	<p>See Touch Down Base general comments.</p> <p>A number of other issues identified. Non-exhaustive items to be addressed include –</p> <p>Disabled refuge alarm in en-suite is not correct</p> <p>Radiant panel in en-suite not on environmental matrix.</p> <p>Bedroom radiant panel seems very large.</p> <p>Nurse call to be shown.</p> <p>Light switch shown as 1 way – not correct.</p> <p>Lightswitch shown for en-suite, environmental matrix shows this as presence detection</p> <p>Two different symbols for dual data</p>	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			point.	
<del>WW-SZ-SL-500-003</del> WW-SZ-SL-DT-500-003	1	Paediatric Single Bedroom with Ensuite MEP Services	<p>See Touch Down Base general comments.</p> <p>A number of other issues identified. Non-exhaustive items to be addressed include –</p> <p>Disabled refuge alarm in en-suite is not correct.</p> <p>Radiant panel in en-suite not on environmental matrix.</p> <p>Bedroom radiant panel seems very large.</p> <p>Nurse call to be shown Light switch shown as 1 way – not correct.</p> <p>Lightswitch shown for en-suite, environmental matrix shows this as presence detection.</p> <p>Two different symbols for dual data point.</p> <p>Confirm location of TV point is correct</p> <p>IRR in en-suite not on legend.</p> <p>Items "A" not on legend</p>	C
<del>WW-SZ-SL-500-004</del> WW-SZ-SL-DT-500-004	1	Paediatric Four Bedded room; MEP Services	<p>See Touch Down Base general comments.</p> <p>A number of other issues identified. Non-exhaustive items to be addressed include –</p> <p>Disabled refuge alarm in en-suite is not correct.</p> <p>Radiant panel in en-suite not on environmental matrix.</p> <p>Nurse call to be shown.</p> <p>Light switch shown as 1 way.</p> <p>Lightswitch shown for en-suite, environmental matrix shows this as presence detection.</p> <p>Two different symbols for dual data point.</p> <p>Items "A" outside doors not on legend</p>	C
<del>WW-SZ-SL-500-005</del> WW-SZ-SL-DT-500-005	1	Clean Utility Out Patient Department MEP Services	<p>See Touch Down Base general comments.</p>	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>A number of other issues identified. Non-exhaustive items to be addressed include –</p> <p>Light switch shown, environmental matrix states presence detection. . Confirm which is correct to Board agreement.</p>	
<del>WW-SZ-SL-500-006</del> WW-SZ-SL-DT-500-006	1	Clean Utility In-patients MEP Services	<p>See Touch Down Base general comments.</p> <p>A number of other issues identified. Non-exhaustive items to be addressed include –</p> <p>Light switch shown, environmental matrix states presence detection. Confirm which is correct to Board agreement.</p>	C
<del>WW-SZ-SL-500-007</del> WW-SZ-SL-DT-500-007	1	Typical Staff Base MEP Services	<p>See Touch Down Base general comments.</p> <p>A number of other issues identified. Non-exhaustive items to be addressed include –</p> <p>IRR to be added to legend</p> <p>IHSL to confirm if voice outlet is a single data point in Cat 6A.</p>	C
<del>WW-SZ-SL-500-008</del> WW-SZ-SL-DT-500-008	1	Typical Reception MEP Services	<p>See Touch Down Base general comments.</p> <p>A number of other issues identified. Non-exhaustive items to be addressed include –</p> <p>PIL to be added to legend</p> <p>Environmental matrix does not have extract at reception,</p> <p>Environmental matrix has radiant panel at reception, IHSL to confirm and revise proposals.</p>	C
<del>WW-SZ-SL-500-009</del> WW-SZ-SL-DT-500-009	1	Typical Dirty Utility MEP Services	<p>See Touch Down Base general comments.</p> <p>A number of other issues identified. Non-exhaustive items to be addressed include –</p> <p>Environmental matrix does not have</p>	C



Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			radiant panel in dirty utility. IHSL to confirm and revise proposals.	
<del>WW-SZ-SL-500-010</del> WW-SZ-SL-DT-500-010	1	Typical Operating Theatre MEP Services	See Touch Down Base general comments.  A number of other issues identified. Non-exhaustive items to be addressed include – Surgeons panel to be shown Access to scrub area should not have door. Operating light and pendants to be indicated. IPS sockets need symbol	C
<del>WW-SZ-SL-500-014</del> WW-SZ-SL-DT-500-011	1	Typical MRI/X-Ray Room MEP Services	See Touch Down Base general comments.  A number of other issues identified. Non-exhaustive items to be addressed include – Chilled water cassette in centre of room will be directly over the medical equipment, this is not acceptable – IHSL to review IHSL to confirm Pushbutton is an EPO	C
<del>WW-SZ-SL-500-012</del> WW-SZ-SL-DT-500-012	1	Typical Treatment Room MEP Services	See Touch Down Base general comments.  A number of other issues identified. Non-exhaustive items to be addressed include – Staff call system to be shown. Cleaners socket to be shown. Environmental Matrix does not have extract in treatment rooms. IHSL to confirm and revise proposals. Examination light to be shown	C
WW-EW-XX-PL-716-001	1	External Lighting Layout	Appears there will be light pollution from uplighters. IHSL to confirm that light pollution will not occur Feeder pillar to be defined Schematic details and circuit references to be provided	C
WW-EC-00-PL-500-001	1	Energy Centre – Ground		C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
		Floor Plan	<p><u>Noted complete drawing to be re-worked to accommodate the revised flue proposal and add the CHP Buffer Vessel</u></p> <p>Otherwise, generally, the drawing shows a reasonable level of information with relevant labelling and information, including sections</p> <p>Schedule of plant and sizes to be developed in line with the design progression</p> <p>HV cable routes to be fully identified to demonstrate segregation to avoid single points of failure.</p> <p>Equipment/Plant access and egress to be reviewed particularly at HV switchrooms.</p> <p>What level of risk is there of an explosion at the VIE plant which could damage the main HV Switchgear taking out the whole hospital electrical supply? IHSL to address</p>	
WW-EC-01-PL-500-001	1	Energy Centre – Mezzanine Floor Plan	<p>Schedule of plant and sizes to be developed in line with the design progression</p> <p>Equipment access and egress to be reviewed particularly at UPS and Batteries area (cat ladder provision only does not appear suitable, what about plant replacement etc.).</p> <p>Number of issues to be reviewed and addressed to the Board's satisfaction –</p> <ul style="list-style-type: none"> <li>- Does battery ventilation comply with BS EN 50272-2?</li> <li>- Have the weights of the batteries and UPS been considered?</li> <li>- Will water and drainage be provided?</li> <li>- If so drains will run through HV Switchrooms?</li> </ul>	C
WW-SZ-B1-PL-591-001	1	Energy Centre Link & Basement Plant Layout Mezzanine Floor Plan	HV cable route 2 does not align with drawing WW-EC-00-PL-500-001	C
<del>WW-SZ-XX-DT-600-001</del> WW-SZ-SL-DT-600-001	1	1:50 Typical Sections Sheet 1 of 2	Too generic.	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			No legend Not all services shown e.g. drainage/PTS and PTS diverter boxes Pipework zone above electrical services – this is not good practice. IHSL to review	
<del>WW-SZ-XX-DT-600-002</del> WW-SZ-SL-DT-600-002	1	1:50 Typical Sections Sheet 2 of 2	Too generic. No legend Not all services shown e.g. drainage/PTS and PTS diverter boxes Pipework zone above electrical services – this is not good practice. IHSL to review	C
WW-SZ-B1-533-002	1	Level B1 Power Metering Drawings	Drawings are too generic and do not provide enough detail	C
WW-SZ-00-533-002	1	Level 00 Power Metering Drawing	Drawings are too generic and do not provide enough detail Paediatric Dentistry and Social work appear to be combined. IHSL to show how circulation spaces are treated	C
WW-SZ-01-533-002	1	Level 01 Power Metering Drawing	Drawings are too generic and do not provide enough detail Some minor departments have been merged	C
WW-SZ-02-533-002	1	Level 02 Power Metering Drawing	Drawings are too generic and do not provide enough detail Some minor departments have been merged	C
WW-SZ-03-533-002	1	Level 03 Power Metering Drawing	Drawings are too generic and do not provide enough detail	C
WW-SZ-04-533-002	1	Level 04 Power Metering Drawing	Drawings are too generic and do not provide enough detail	C
WW-SZ-B1-500-002	1	Level B1 Water Metering Drawing	Drawings are too generic and do not provide enough detail	C
WW-SZ-00-500-002	1	Level 00 Water Metering Drawing	DHW meter can only be on CWS supply to heat station calorifiers. Metering is not in line with the BCRs which states - “Project Co shall allow sub-metering of electricity, heating and domestic	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			water usage for each individual department / unit". IHSL to amend drawing to suit	
WW-SZ-01-500-002	1	Level 01 Water Metering Drawing	DHW meter can only be on CWS supply to heat station calorifiers. Metering is not in line with the BCRs which states - "Project Co shall allow sub-metering of electricity, heating and domestic water usage for each individual department / unit". IHSL to amend drawing to suit	C
WW-SZ-02-500-002	2	Level 02 Water Metering Drawing	DHW meter can only be on CWS supply to heat station calorifiers. Metering is not in line with the BCRs which states - "Project Co shall allow sub-metering of electricity, heating and domestic water usage for each individual department / unit". IHSL to amend drawing to suit	C
WW-SZ-03-500-002	1	Level 03 Water Metering Drawing	DHW meter can only be on CWS supply to heat station calorifiers. Metering is not in line with the BCRs which states - "Project Co shall allow sub-metering of electricity, heating and domestic water usage for each individual department / unit". IHSL to amend drawing to suit	C
WW-SZ-04-500-002	1	Level 04 Water Metering Drawing	DHW meter can only be on CWS supply to heat station calorifiers. Metering is not in line with the BCRs which states - "Project Co shall allow sub-metering of electricity, heating and domestic water usage for each individual department / unit". IHSL to amend drawing to suit	C
WW-SZ-B1-521-002	1	Level B1 Heating Metering	Metering is not in line with the BCRs	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
		Drawing	which states – “Project Co shall allow sub-metering of electricity, heating and domestic water usage for each individual department / unit”. IHSL to amend drawing to suit	
WW-SZ-00-521-002	1	Level 00 Heating Metering Drawing	Metering is not in line with the BCRs which states – “Project Co shall allow sub-metering of electricity, heating and domestic water usage for each individual department / unit”. IHSL to amend drawing to suit	C
WW-SZ-01-521-002	1	Level 01 Heating Metering Drawing	Metering is not in line with the BCRs which states – “Project Co shall allow sub-metering of electricity, heating and domestic water usage for each individual department / unit”. IHSL to amend drawing to suit	C
WW-SZ-02-521-002	1	Level 02 Heating Metering Drawing	Metering is not in line with the BCRs which states – “Project Co shall allow sub-metering of electricity, heating and domestic water usage for each individual department / unit”. IHSL to amend drawing to suit	C
WW-SZ-03-521-002	1	Level 03 Heating Metering Drawing	Metering is not in line with the BCRs which states – “Project Co shall allow sub-metering of electricity, heating and domestic water usage for each individual department / unit”. IHSL to amend drawing to suit	C
WW-SZ-04-521-002	1	Level 04 Heating Metering Drawing	Metering is not in line with the BCRs which states – “Project Co shall allow sub-metering of electricity, heating and domestic water usage for each individual department / unit”.	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			IHSL to amend drawing to suit	
ME-XX-B1-PL-700-001	3	Basement Floor Plan. Existing Building RIE Connections	Drawing to be clear where cables will run in the building i.e. void or high level	C
ME-XX-00-PL-700-001	3	Ground Floor Plan. Existing Building.RIE Connections	PTS pipework size to be shown Section detail drawings to be provided to show co-ordination in highly serviced areas Further notes/a legend to be provided to confirm meaning of services (ie what are the shaded green boxes adjacent to stairs) Confirmation of new access hatch requirement in existing RIE required	C
ME-XX-01-PL-700-001	2	First Floor Plan. Existing Building.RIE Connections	PTS pipework size to be shown Section detail drawings to be provided to show co-ordination in highly serviced areas Further notes/a legend to be provided to confirm meaning of services (ie what are the shaded green boxes adjacent to stairs)	C
ME-XX-02-PL-700-001	2	Second Floor Plan. Existing Building.RIE Connections	All PTS pipework size to be shown Section detail drawings to be provided to show co-ordination in highly serviced areas XREF to be made all one colour, difficult to review with multiple colours on the XREF. Drawing to be clear what clouds mean? Are these from the XREF and as such should be removed?	C
ME-XX-03-PL-700-001	2	Third Floor Plan. Existing Building.RIE Connections	All PTS pipework size to be shown	C
RBG-SZ-B1-PL-200-001	01	Basement Loading Plan	Comments related to structural aspects 1. Insufficient information provided to adequately review the proposed surcharge loading.	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			2. Remove note subject to confirming specific clinical equipment loads.	
RBG-SZ-00-PL-200-001	01	Ground Floor Loading Plan	Comments related to structural aspects 1. Insufficient information provided to adequately review the proposed surcharge loading.  2. Remove note subject to confirming specific clinical equipment loads.	C
RBG-SZ-01-PL-200-001	01	First Floor Loading Plan	Comments related to structural aspects 1. Remove note subject to confirming specific clinical equipment loads.	C
RBG-SZ-02-PL-200-001	01	Second Floor Loading Plan	Comments related to structural aspects 1. Remove note subject to confirming specific clinical equipment loads.	C
RBG-SZ-03-PL-200-001	01	Third Floor Loading Plan	Comments related to structural aspects 1. Remove note subject to confirming specific clinical equipment loads.	C
RBG-SZ-04-PL-200-001	01	Fourth Floor Loading Plan	Comments related to structural aspects 1. Remove note subject to confirming specific clinical equipment loads.	C
RBG-SZ-05-PL-200-001	01	Fifth Floor Loading Plan	Comments related to structural aspects 1. Remove note subject to confirming specific clinical equipment loads.  2. Insufficient information provided to adequately review the proposed helicopter loading.	C
RBG-SZ-SL-PL-210-101	02	Pile Layout GA	1. We appreciate that this drawing is not a final design. However, our	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>comments are valid at this stage. Schedule of pile numbers with noted currently proposed pile diameters and pile cut off levels has not been provided.</p> <p>2. We appreciate that this drawing is not a final design. However, our comments are valid at this stage. Piles in some pile group appear to be closely spaced (relevant piles references were highlighted-referenced as per comments numbers 4 to 41, 43 to 58, 60 to 110, 112 to 114, 116 to 127, 129 to 149, 151 to 160, 162, 164 to 189, 191 to 204 shown on the appended drawing "RBG-SZ-SL-PL-210-101-Comments-Geotechnical"). We understand that pile group analysis will be undertaken at the detailed design stage in order to take into account the pile group effects. We will require to see evidence of pile group analysis.</p> <p>3. We appreciate that this drawing is not a final design. However, our comments are valid at this stage. We note that use of large diameter piles is proposed where single piles are used under columns. Single pile per column is a non-redundant configuration to account for quality and performance issues. Therefore, quality control and assurance during construction and pile testing to verify pile performance will be of great importance. Currently the pile testing proposals are unknown.</p> <p>42. No pile reference is provided.</p> <p>59. No pile reference is provided.</p> <p>111. We appreciate that this drawing is not a final design. However, our comments are valid at this stage. We note that the pile P436 appears to be located closely to the pile wall. We assume that construction</p>	



Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>tolerances will be maintained on site in order to avoid pile clashing. We also assume that the influence from the pile load onto the pile wall will be assessed in order to ensure that it will not have an adverse effect onto the performance of the pile wall, and in reverse.</p> <p>115. It is noted in the Piling Specification that the pile design is to be undertaken in accordance with Eurocode 7. However, the pile loads are not set out in permanent and variable load components, as per Eurocode requirements.</p> <p>128. Orientation of specified load is not clear.</p> <p>150. 1180mm pile diameter is a non-commonly used pile diameter for bored cast in-situ piles.</p> <p>161. Loads for pile group design should be provided. Piling Specification indicates that the piling contractor will be responsible for all aspects of pile design. We assume that this includes design of pile configurations below the proposed buildings and their interaction with the adjacent buildings.</p> <p>163. The table should also contain details of lateral and tension pile loads.</p> <p>190. No legend provided for this symbol. This should be added to the drawing.</p> <p>206. Shallower than 2.0m depth ground water levels were recorded during water monitoring, as reported in the factual ground investigation reports.</p> <p>207. Pile symbol not explained on the drawing legend.</p>	

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>208. Pile references are not shown. These should be added to the drawing.</p> <p>209. Smaller than 3.0m Glacial Till thicknesses were recorded on site.</p> <p>210. Shallower rockheads than the ones presented on the typical ground profile were recorded on site.</p> <p>211. Siltstone rock was also recorded on site.</p> <p>212. It is unclear if this ground model represents the best or the worst ground conditions on site. We note that ground conditions are variable.</p> <p>213. It is understood that a contiguous pile wall is proposed. This type of wall is generally used to retain firm/stiff cohesive soils. The soils on site include granular deposits, soft clays and peat. This causes some concern in terms of suitability of the proposed wall type due to loss of material between the piles due to the ground conditions on site.</p>	
RBG-SZ-B1-PL-260-101	03	Basement GA Plan	<p>Comments related to structural aspects</p> <ol style="list-style-type: none"> <li>1. Remove note subject to confirmation that vibration analysis has been carried out on the design of slabs and beams. We require this information to be final.</li> <li>2. Calcrete waterproof concrete specified elsewhere to be specified here also.</li> <li>3. Review dimensions of dowels and amend accordingly.</li> <li>4. Provision of gas protection to CS2 is noted and welcomed, however, the detail provided contradicts the</li> </ol>	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>PCP and CGL letter. No mention of radon protection provided as per the PCP and CGL letter.</p> <p>5. It is understood that contiguous pile wall is proposed. This type of wall is generally used to retain firm/stiff cohesive soils. The soils on site include granular deposits, soft clays and peat. This causes some concern in terms of suitability of the proposed wall type due to loss of material between the piles due to the ground conditions on site..</p> <p>6. It is unclear if the space between the concrete wall and pile wall will be backfilled. Details of backfill material were not provided.</p> <p>7. Drawings showing section information to be provided in addition.</p>	
RBG-SZ-00-PL-260-101	03	Ground Floor GA Plan Sheet 1	<p>Comments related to structural aspects</p> <p>1. Remove note subject to confirmation that vibration analysis has been carried out on the design of slabs and beams. We require this information to be final.</p> <p>2. Drawings showing section information to be provided in addition.</p> <p>3. The wall corner is not supported by a pile. We would normally expect wall corners to be directly supported by piles.</p> <p>4. Pile Located away from the corner of the wall. We would normally expect piles to support wall corners.</p> <p>5. Provision of gas protection to CS2 is noted and welcomed, however, the detail provided contradicts the PCP and CGL letter. No mention of radon protection provided as per the PCP and CGL letter.</p>	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>6. It is understood that contiguous pile wall is proposed. This type of wall is generally used to retain firm/stiff cohesive soils. The soils on site include granular deposits, soft clays and peat. This causes some concern in terms of suitability of the proposed wall type due to loss of material between the piles due to the ground conditions on site.</p> <p>5. End of the wall not supported by a pile. We would normally expect a pile to be located under the end of the wall.</p>	
RBG-SZ-00-PL-260-102	03	Ground Floor GA Plan Sheet 2	<p>Comments related to structural aspects</p> <p>1. Insufficient information to ascertain the detail and intent.</p> <p>2. Drawings showing section information to be provided in addition.</p> <p>3. Information on waterproofing, gas protection and dewatering is not included.</p> <p>4. It is unclear what foundation solution is to be adopted for the retaining wall. We would expect the retaining wall to be piled, taking into account the ground conditions on site.</p>	C
RBG-SZ-01-PL-260-101	03	First Floor GA Plan	<p>1. Comments related to structural aspects Insufficient information to ascertain the detail and intent</p> <p>2. Remove note subject to confirmation that vibration analysis has been carried out on the design of slabs and beams. We require this information to be final.</p> <p>Drawings showing section information to be provided in addition.</p>	C
RBG-SZ-02-PL-260-101	03	Second Floor GA Plan	Comments related to structural	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>aspects</p> <ol style="list-style-type: none"> <li>1. Remove note subject to confirmation that vibration analysis has been carried out on the design of slabs and beams. We require this information to be final.</li> <li>3. Drawings showing section information to be provided in addition.</li> </ol>	
RBG-SZ-03-PL-260-101	03	Third Floor GA Plan	<p>Comments related to structural aspects</p> <ol style="list-style-type: none"> <li>1. Remove note subject to confirmation that vibration analysis has been carried out on the design of slabs and beams. We require this information to be final.</li> <li>2. Insufficient information to ascertain the detail and intent.</li> <li>2. Drawings showing section information to be provided in addition.</li> </ol>	C
RBG-SZ-04-PL-260-101	02	Fourth Floor GA Plan	<p>Comments related to structural aspects</p> <ol style="list-style-type: none"> <li>1. Remove note subject to confirmation that vibration analysis has been carried out on the design of slabs and beams. We require this information to be final.</li> <li>2. Drawings showing section information to be provided in addition.</li> </ol>	C
RBG-SZ-05-PL-260-101	02	Fifth Floor GA Plan	<p>Comments related to structural aspects</p> <ol style="list-style-type: none"> <li>1. Remove note subject to confirmation that vibration analysis has been carried out on the design of slabs and beams. We require this information to be final.</li> <li>2. Insufficient information to ascertain the detail and intent.</li> <li>3. Drawings showing section</li> </ol>	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			information to be provided in addition. Structural steelwork plan, details and sections to be provided. If an additional drawing is required then this is to be added to the list of drawings.	
RBG-SZ-SL-SE-260-001	01	Substructure Sections and Details Sheet 1	1. Provision of gas protection to CS2 is noted and welcomed, however, the detail provided contradicts the PCP and CGL letter. No mention of radon protection provided as per the PCP and CGL letter.  2. Deeper pile cap is proposed for 1200mm diameter pile than for the 1000mm diameter pile. This appear illogical between one single pile cap and another.  3. Pile diameter inconsistent with the diameters referenced on the Pile Layout GA Plan (RBG-S2-SL-PL-210-101).	C
RBG-SZ-SL-SE-260-002	01	Substructure Sections and Details Sheet 2	1. Provision of gas protection to CS2 is noted and welcomed, however, the detail provided contradicts the PCP and CGL letter. No mention of radon protection provided as per the PCP and CGL letter.	C
RBG-SZ-SL-SE-260-010	01	Superstructure Sections and Details Sheet 1	Comments related to structural aspects 1. Insufficient information to adequately review details. 2. As the Board is unable to determine from the drawing submitted the extent and location of proposed transfer beams, beams will only be allowed at the absolute discretion of the Board  Full extent and detail of proposed gas membrane to be provided. If an additional drawing is to be provided to cover this then drawing number to be added to PCP list.	C
RBG-XX-XX-PL-XXX-000		Cover Sheet		
RBG-SZ-00-PL-711-001	03	Pavement Plan Sheet 1	Points 1 & 3 - What happens to this section of car park that is outwith the	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>site boundary? Do finishes match with proposed permeable paving?</p> <ol style="list-style-type: none"> <li>1. Reference should be made to Note 7 and table below, relevant to CBR testing.</li> <li>2. Reference should be made to Note 7 and table below, relevant to CBR testing.</li> <li>3. Assumed CBR values are not provided for other details.</li> <li>4. Frequency of CBR testing was not specified.</li> <li>5. It is not clear to which detail this table refers. No table number was provided.</li> <li>6. Founding conditions below the kerb are not clearly defined.</li> <li>7. Founding conditions below the kerb are not clearly defined.</li> <li>8. Founding conditions below the kerb are not defined.</li> <li>9. Dimensions and legend for this detail are incomplete. Material thickness and type below the foundation are not clearly specified.</li> <li>10. Founding conditions below the kerb are not defined.</li> <li>11. It is unclear what this line represents.</li> <li>12. Founding conditions below the kerb are not defined.</li> <li>13. Material types and thicknesses below the kerb are not clearly specified.</li> </ol>	

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
RBG-SZ-00-PL-711-002		Pavement Plan Sheet 2	Not received	
RBG-SZ-00-PL-711-003		Pavement Plan Sheet 3	Not received	
RBG-SZ-00-DT-711-001	03	Pavement Details Sheet 1	Points 1 & 2 - Should be note 7 Point 3 - General note - No kerbing layout supplied. Point 4 - General note - no levels layout supplied	C
RBG-SZ-00-DT-714-010	02	Early Works - Road Works Details	Point 1 – Are 'bus boarder' type kerbs required?  1. No comments on ground CBR values assumed in the design were provided.  2. No details of sub-base design were provided.  3. No details of sub-base design were provided	C
RBG-SZ-00-PL-714-001	03	Early Works - Bus Layby Road Works Plan	Point 1 - Should typical 'bus boarder' type kerbs be used at bus access/egress points	C
RBG-SZ-00-PL-770-100	06	Surface Water Underground Drainage Plan Sheet 1	Point 1 - Secondary Surface Water Pipe runs under corner of the building. This needs to be adjusted on the drawing. Point 2 - Where does this slot drain (SD) connect to? Point 3 - Drawing reference incorrect. Think it should be RBG-SZ-00-DT-770-001 TO 004 Point 4 - Note not clear. what is meant by 'flat lateral connections to be 135 "Y" junction'. Point 5 - This note conflicts with the Standard Detail Drawing RBG-SZ-00-DT-770-001 REV03 -Typical Manhole Detail Type A & B. Point 6 - Location of proposed Oil/Water Separator. See Foul system drawing for detail. Point 7 - Direction arrows shown on the Legend for the Proposed & Secondary Surface Water sewer is not shown on the drawing. Point 8 - Figure B15 reference is incorrect this is not the backdrop	C



Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>detail in Sewers for Scotland 2nd Ed. Reference should be Figure 16.</p> <p>Point 9 - Location of possible pipe clash between Surface Water and Foul drainage.</p> <p>Point 10 - Is Drawing reference correct?</p> <p>Point 11 - Slot drains through the permeable paving. This would appear to by-pass the SUDs treatment provided by the paving. Also this would be bedded directly on the create storage units. How does this work? (This note applies to all slot drains (SD) and Channel drains (CD) across the site.)</p> <p>Point 12 - The Legend does not identify the different type of proposed manhole and inspection chambers that are shown on the drawing. The legend should be updated to show this.</p> <p>Point 13 - Secondary Surface Water Channel Drain (CD-0) will be bedded directly on the create storage units. Some detail required to show how this will work. (This note applies to all channel drains (CD-0) across the site based in cellular storage areas.)</p> <p>Point 14 - This 'G' does not seem attached to any gully.</p> <p>Point 15 - Where does this slot drain (SD) connect to?</p> <p>Point 16 - Depth of Attenuation System PP1 is 0.45 and PP2 is 0.4 in drawing RBG-SZ-SL-PL-770-101-REV05. Should this read 0.4m to 0.45m deep.</p> <p>Point 17 - Tree Shown in a Parking Space. Should this be here?</p> <p>Point 18 - No gradient or depth given for this pipe. (This note also applies to a number of pipes across the site).</p>	

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>In this case if the ground level at upstream end of pipe is 52.00m AOD (from planning drawing) and Invert level at SWMH-09 is 51.50m AOD (from schedule) then this does not work.</p> <p>Point 19 - Note confirms that the design is not yet complete.</p> <p>Point 20 - Unknown chamber type. These chambers are not identified in the drawing schedule and are not in the Details Drawings.</p> <p>Need to be added to key and a detail provided.</p> <p>Point 21 - On Drg RBG-SZ-SL-PL-770-101-REV05 the Attenuation Tank (AT1) is identified as holding 1260m<sup>3</sup> of runoff from hardstanding areas. It is not clear from the drawings how this gets into AT1. The only connection to AT1 is from SWMH-07 and this would appear to be from the roof drainage.</p> <p>The area surrounding AT1 is also described as 'Soft Landscaping' on Drg RBG-SZ-SL-PL-770-102-REV01 and therefore may not need storage. Stored flow from AT1 does not appear to be subject to SUDs treatment.</p> <p>Point 22 - ACO Channel could not connect into this pipe at this depth using the connection detail shown on RBG-SZ-00-DT-770-002-REV03.</p> <p>Point 23 - No gradient/depth or diameter for this long pipe run to manhole only 0.58m deep.</p> <p>Nearest ground level show on planning drawing is 52.00m AOD and invert level at SWMH-02 is 51.20m AOD.</p> <p>From detail drawing RBG-SZ-00-DT-770-002-REV03 gully connections are 150mm diameter if at 1:150 gradient and 40m (approx) this doesn't work.</p> <p>Point 24 - No SUDs treatment for</p>	

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>this area.</p> <p>Point 25 - Secondary Surface water pipe connect to the the surface water system. Does this need deleting?</p> <p>Point 26 - There are clashes in this area between the Surface Water pipes and the Secondary Surface Water pipes and ACO channels.</p> <p>Point 27 - Depth from ground level to underside of cellular storage crate is 0.53m (0.4m media and 0.13m road make up).</p> <p>The depth below ground of the Surface Water pipe is 0.58m (from Schedule).</p> <p>Therefore the top of the surface water pipe clashes with the underside of the crate storage.</p> <p>Point 28 - Some Type D manholes have multiple pipes coming into them (SWMH 02) while only 675x675 manhole.</p> <p>Point 29 - Schedule Incomplete: There are no co-ordinates shown for any of the manholes.</p> <p>Point 30 - There is very shallow cover to a number of these pipe runs. Some of which are approximately 355mm just before crossing under buildings.</p> <p>Point 31 - Yard gullies (G) in the permeable pavement. Flow to gullies will bypass the SUDs treatment from the permeable paving.</p> <p>Point 32 - Petrol/Oil interceptor for service yard missing in schedule. (Petrol/Oil interceptor for Heli-pad has been included in foul schedule).</p> <p>Point 33 - The Secondary Storage system clashes with the underside of the crate storage at manhole SWMH03.</p> <p>Point 34 - Existing manholes (MHs) ST09 &amp; SW03 type are listed 'AS EXISTING'. Can new connections be fitted in with the existing connections or are new Manholes required? If these chambers are to house hydrobrakes</p>	

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>they will need to be replaced accordingly with a suitable MH design.</p> <p>Point 35 - Is this a Hydrobrake Chamber?</p> <p>Point 36 - This area has been clouded but there is no explanation why it has on the drawing.</p> <p>Point 37 - Drainage runs under the corner of the building.</p> <p>Point 38 - Is this a Hydrobrake Chamber?</p> <p>Point 39 - No gradient or depth or diameter given for this pipe that runs under the building. This is need to check the cover to the pipe is sufficient.</p> <p>Point 40 - Is this Ground Level correct? It is substantially higher than the surrounding ground levels.</p> <p>Point 41 - This chamber is a hydrobrake MH. As shown in Detail RBG-SZ-00-DT-770-004 - Attenuation Tank</p> <p>Point 42 - No invert levels shown for Petrol/oil interceptor. (See note on Schedule)</p> <p>Point 43 - Is this a Hydrobrake Chamber?</p> <p>Point 44 - Only two two gullies for all service area.</p> <p>From the detail drawings RBG-SZ-00-DT-770-002-REV03 these are also only Yard Gullies (G) and not Road Gullies (GR).</p> <p>Dependant on kerbing details and ground profile these gullies easily be bypassed by surface water flows from this area.</p> <p>It is not clear from the drawing how this areas subject to SUDs treatment.</p>	
RBG-SZ-00-PL-770-101		Surface Water Underground Drainage Plan Sheet 2	Not received	
RBG-SZ-00-PL-770-102		Surface Water Underground Drainage Plan Sheet 3	Not received	
RBG-SZ-00-PL-770-200	04	Foul Water ground Floor Drainage Plan Sheet 1	Point 1 - No Eastings/Northings	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>provided.</p> <p>Point 2 - CSMH-02 - CSMH-05 - Invert levels on this drawing differ from invert levels on drawing RGB-SZ-00-PL-770-202. Please clarify.</p> <p>Point 3 - Conflict between benching note here and details on drawing RGB-SZ-00-DT-770-001. Please clarify.</p> <p>Point 4 - CHMH-05 - 150mm diameter pipe from proposed development discharges into the diverted 375mm diameter County Sewer. Pipes of different diameters entering manholes should be installed with soffits at the same , as per Sewers For Scotland.</p> <p>Point 5 - CHMH-03 - 150mm diameter pipe from proposed development discharges into the diverted 375mm diameter County Sewer. Pipes of different diameters entering manholes should be installed with soffits at the same , as per Sewers For Scotland. Also the angle of incoming 150mm pipe to the Country Sewer is less than 90 degrees.</p> <p>Point 6 - PI-HELLI and FWMH-HP located within surface water storage area.</p> <p>Point 7 - Substantiation required as to why main foul pipes in these areas are 100mm diameter, whereas 150mm diameter pipes are used elsewhere.</p> <p>Point 8 - General note - Manholes at beginning of pipe runs generally have minimal cover. Will there be sufficient fall from invert where pop-ups begin (with 100mm clearance from underside of slab to top of pipe, as per details drawing) to manhole/branch into main line. Examples (but not limited to) at MH03, MH22, MH28, MH29 and long length of pipe running into PI-HELLI.</p> <p>Point 9 - Heli-pad drainage does not</p>	

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>appear to comply with latest guidelines, specifically Health Building Note 15-3 : Hospital Helipads, in particular Chapter 5, clause 5.8.</p> <p>Plastic pipes should not be used in case of burning fuel entering the pipe system. In the event of fire, valves to be provided to divert water, fuel and foam into an oil/water separator (separator shown on drawing).</p> <p>Point 10 - FWMH-39 - 1200mm diameter manhole rings stipulated. Has this been sized appropriately to accommodate 2 No. 225mm diameter and a 150mm diameter incoming pipes, and a 225mm diameter outgoing pipe?</p> <p>Point 11 - Conflict between pipe diameters on details drawing RBG-SZ-00-DT-770-003 (200mm vs 225mm diameter). Clarification required.</p> <p>Point 12 - FWMH-HP - Manhole schedule states 510mm from ground level to pipe invert level. However petrol interceptor detail on drawing RBG-SZ-00-DT-770-003 shows at least 1025mm to incoming/outgoing pipe soffit.</p>	
RBG-SZ-00-PL-770-201	04	Foul Water ground Floor Drainage Plan Sheet 2	<p>Point 1 - CSMH-02 - CSMH-05 - Invert levels on this drawing differ from invert levels on drawing RBG-SZ-00-PL-770-202. Please clarify.</p> <p>Point 2 - Rising main from basement - where does it discharge to? Is there a break pressure chamber to dissipate the flow?</p> <p>Point 3 - Foul rising main pumped directly into manhole within building. Is a break pressure chamber required? Have all other avenues been explored?</p> <p>Point 4 - Conflict between benching note here and details on drawing RGB-SZ-00-DT-770-001. Please clarify.</p> <p>Point 5 - Should be Figure 16</p>	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			<p>Point 6 - Is all foul drainage shown for this building?</p> <p>Point 7 - General note - Manholes at beginning of pipe runs generally have minimal cover. Will there be sufficient fall from invert level where pop-ups begin (with 100mm clearance from underside of slab to top of pipe, as per details drawing) to manhole/branch into main line. Examples (but not limited to) at MH40</p>	
RBG-SZ-00-PL-770-202	04	Foul Water ground Floor Drainage Plan Sheet 3	<p>Point 1 - CSMH-02 - CSMH-05 - Invert levels on this drawing differ from invert levels on drawing RBG-SZ-00-PL-770-202. Please clarify.</p> <p>Point 2 - Conflict between benching note here and details on drawing RBG-SZ-00-DT-770-001. Please clarify.</p> <p>Point 3 - Should be Figure 16</p> <p>Point 4 - General note - Manholes at beginning of pipe runs generally have minimal cover. Will there be sufficient fall from invert level where pop-ups begin (with 100mm clearance from underside of slab to top of pipe, as per details drawing) to manhole/branch into main line. Examples (but not limited to) at MH01.</p>	C
RBG-SZ-B1-PL-770-200		Basement Foul Water Drainage Plan Sheet 1	<p>Point 1 - Conflict between benching note here and details on drawing RBG-SZ-00-DT-770-001</p> <p>Point 2 - General note - Cover to top of pipe at manholes is minimal, especially with a 450mm thick floor slab. Will there be sufficient fall from invert level where pop-ups begin (with 100mm clearance from underside of slab to top of pipe, as per details drawing) to manhole/branch into main line.</p> <p>Point 3 - General note - No manhole type references.</p> <p>Point 4 - Where does rising main discharge? Not clear on Ground Floor Plan.</p>	C

Drawing Reference	Rev	Drawing Title	Comment	Drawing Status
			Point 5 - General note - No details have been supplied for basement slab surface water drainage and high water table, in particular ground water management to mitigate hydrostatic pressure.	



**Part 3: Reviewable Design Data:**

Project Co shall submit and the Board shall review the following Reviewable Design Data not provided to the Board nor approved by the Board at Financial Close.

This Part 3 of Section 5 (*Reviewable Design Data*) of Schedule Part 6 (*Construction Matters*) sets out the details of the specific design information, materials, samples and required approvals (as more specifically set out in the table below) ("**Reviewable Design Data**") to be reviewed by the Board in accordance with Schedule Part 8 (*Review Procedure*) before such Reviewable Design Data is incorporated into the Facilities and/or the Site by Project Co.

If Project Co subsequently revises or amends its Project Co's Proposals in relation to the Room Data Sheets and/or Reviewable Design Data, then such revisions or amendments shall require to be issued to the Board for review under Schedule Part 8 (*Review Procedure*).

Any items referenced in the Section 3 (Board's Construction Requirements) and Section 4 (Project Co's Proposals) of Schedule Part 6 (Construction Matters) relating to Schedule Part 8 (Review Procedure), to comments such as "*shall be reviewed as Reviewable Design Data*" or "*to be agreed with the Board*", shall be deemed as Reviewable Design Data to be submitted through Schedule Part 8 (Review Procedure).

Following the date of this Agreement:

- Project Co shall submit a programme of issue dates for Reviewable Design Data set out in this Part 3;
- Project Co shall ensure that such programme shall show the items of Reviewable Design Data forecast to be submitted to the Board within the next 3 months;
- Project Co shall revise and reissue the programme on a monthly basis so as to maintain a rolling 3 month look ahead from each date of issue

Project Co recognises this aspect of the Reviewable Design Data process is still to be agreed and further acknowledges the practicalities for the Board co-ordinating and undertaking the reviews of Reviewable Design Data. Project Co shall ensure that no changes to the first month of each revised 3 month programme shall be made without the prior approval of the Board, and the Board shall approve or reject any Project Co proposal for such a change within 5 Business Days of receipt of the Project Co proposal, failing which the Board shall be deemed to have approved the change.

Project Co shall take reasonable endeavours to sequence the release of information in a manner so as to mitigate the volume of parallel reviews required to be undertaken by the Board pursuant to the Review Procedure.

Ref	Sample	Drawing	Other	Description	Project Co to submit by:	Board to review by:
A				<b>GENERAL INFORMATION</b>		
A1			*	Room Data Sheets (including upper load limits for heavy equipment).		
A2		*		Entrance areas		
A3		*		1:100 detailed landscape plans for all areas including courtyards showing levels, surface finishes, planting details, kerbs, paths and lighting for works both within red		

Ref	Sample	Drawing	Other	Description	Project Co to submit by:	Board to review by:
				line boundary and out with including any visual screening, security details and maintenance access. To include extent, type and location of all external equipment.		
A4		*		1:100 general arrangement floor plans, and sections		
A5	*	*		1:50 details of building envelope in conjunction with 1:50 sections through all external systems/ components particularly at interfaces, changes in plane and junctions. (Note – full size mock ups of key envelope areas to be provided on site.) Also same info for basement and sub structure.		
A6		*		1:50 Loaded room & corridor layouts to include all building services outlets and equipment, showing reflected ceiling plans, internal wall elevations and floor plans.		
A7	*	*	*	1:100 Interior Design & Wayfinding layouts supported by 3D coloured visualisations and materials sample boards sufficient to illustrate in detail the interior design and wayfinding proposals for all areas of the Facilities, including details of where artwork is to be incorporated.		
A8		*		1:200 fire strategy plans – showing all fire compartments, sub compartments, Fire brigade access routes, hazard rooms, fire doors, fire escape doors and routes, call points, detectors, fire extinguishers, emergency lighting, fire dampers, fire hydrant locations, dry riser inlet and outlet points, smoke extract locations and compliance with Firecode.		
A9		*		1:100 elevations and details of window glazing and opening lights types and locations		
A10	*	*		1:50 glazing details, 1:50 sections and full size mock ups of glazing systems to be provide on site.		

Ref	Sample	Drawing	Other	Description	Project Co to submit by:	Board to review by:
A11		*	*	1:100 roof plan with details of rooflights and other roof terminations. Comprehensive specification and details of all proposed roofing systems to be provided.		
A12		*		1:100 sections and 1:50 sections		
A13		*		Loading floor plans and elevations including details of strong routes. Upper load limits for heavy equipment as per Room Data Sheets. Maximum allowable structural deflections, differential settlement, vibration and specific tolerances of areas. (structural)		
A14			*	Detailed specifications for all mechanical and electrical components		
A15			*	List of proposed manufacturers, products, materials and equipment proposed.		
A16		*		Entrance canopy and covered walkway plans and details		
A17		*		Main entrance details		
A18	*			Facing bricks		
A19	*			Facing blocks		
A2-0	*			Cladding - all types		
A21	*		*	Window types		
A22	*		*	Roofing materials		
A23	*		*	Internal wall, column and ceiling linings including details of screening to rooms containing radiology or emitting ionising radiations, field protection around MRI installations and screening to rooms containing EEG or evoked potential recordings equipment.		
A24	*	*	*	Bespoke joinery		
A25			*	External doors		
A26	*		*	Door signage - NHS standard		
A27		*	*	Balustrade		
A28			*	Plaster/render		
A29	*			General floor finishes		
A30	*		*	Painting and decorating		
A31	*		*	Sanitary fittings including schedule		
A32			*	Drainage materials		
A33	*			All light fittings		
A34	*			In patient radiator/valve		

Ref	Sample	Drawing	Other	Description	Project Co to submit by:	Board to review by:
A35	*		*	Typical bed head assembly with patient call, etc.		
A36	*			Typical switches/sockets		
A37	*		*	Typical smoke detector etc		
A38	*		*	Vent, grill & diffuser		
A39		*		Location of all structural movement joints.		
A40		*		Road, car park and footpath design, materials and layout including fire fighting appliance access, Details of pedestrian crossings, road and car park markings.		
<b>A41</b>	*	*	*	Works of art being included in the project including details of associated artists and samples of work.		
<b>A42</b>		*	*	Drawings and report indicating the adaptability strategy incorporated in the proposals.		
<b>A43</b>		*	*	Drawings and report on the demolition methodology being proposed.		
<b>A44</b>		*	*	Full details of helipad and associated procedures.		
<b>A45</b>		*	*	Details for the control of infection		
<b>B</b>				<b>SPECIFIC PROPOSALS</b>		
B1	*	*	*	Nurse call/communication system including Panic Alarm		
B2	*	*	*	Security installations (inc sample of CCTV cameras)		
<b>C</b>				<b>ELEMENTAL INFORMATION</b>		
C1	*	*	*	Internal doors and screens		
C2	*	*	*	Ironmongery schedule, samples and lock suiting including details of card access system		
C3	*		*	Finishes schedule		
C4	*		*	Schedule and details of furniture and fittings		
<b>D</b>				<b>FLOOR FINISHES</b>		
D1	*			Sheet finishes & skirtings		
D2	*			Carpets		
D3	*			Ceramic tiling		
D4	*			Dirt arresting floor coverings/ mats		
D5	*			Resin flooring & skirtings		

Ref	Sample	Drawing	Other	Description	Project Co to submit by:	Board to review by:
<b>E</b>				<b>CEILING FINISHES</b>		
E1	*			Suspended – grid and tile types		
E2			*	Plasterboard		
E3	*			All other ceiling types		
		*		Access Hatches		
<b>F</b>				<b>WALL FINISHES</b>		
F1	*			Decorations		
F2	*			Ceramic tiling		
F3	*			Vinyl Sheet		
F4	*	*		Wall/corner protection		
<b>G</b>				<b>FIXTURES &amp; FITTING</b>		
G1	*		*	Taps – all types		
G2	*	*	*	Touchdown bases		
G3	*	*	*	Reception counters		
G4	*		*	Office workstations		
G5	*		*	External/Internal signage		
G6	*		*	Light switches and sockets		
G7	*			Luminaires		
G8	*		*	Work benches/work surfaces		
G9	*	*	*	Bed head arrangement and patient call		
G10	*		*	Cubicle curtain track		
G11	*		*	Blinds		
G12	*	*	*	Equipment tagging		
G13	*	*		Anti ligature fixtures & fittings		
<b>H</b>				<b>ENGINEERING SERVICES</b>		
The following for mechanical and electrical engineering Reviewable Design Data shall be provided. This will encompass the design, size, location and interface with existing, phasing and temporary provision in schematic format with respect to the following;						
H1		*	*	Boiler/primary heating distribution		
H2		*	*	Hot and cold domestic water storage and distribution		
H3		*	*	hv and lv electrical distribution		
H4		*	*	Standby generators		
H5		*	*	Fire alarms and detection system		
H6		*	*	Nurse call system		
H7		*	*	CCTV/security system		
H8		*	*	Air handling systems		
H9		*	*	Lifts/transportation samples and visualisations of typical lift required.		
H10		*	*	Controls / BMS including details of graphic representations and associated tutorial software..		

Ref	Sample	Drawing	Other	Description	Project Co to submit by:	Board to review by:
H11		*	*	Voice & Data		
H12		*	*	Pneumatic tube system		
1:200 Primary distribution for all areas indicating main distribution routes and plant locations with respect to the following:						
I1		*		LPHW heating		
I2		*		Domestic water services		
I3		*		Ventilation		
I4		*		Lighting and power		
I5		*		Fire alarms		
I7		*		Voice & data		
I8		*		Nurse call		
I9	*	*		Patient tagging		
I10		*		Pneumatic tube system		
1:50 Detail layouts for all areas for the following						
J1		*		Plant rooms and supporting schematics		
J2		*		Heating		
J3		*		Domestic water services		
J4		*		Ventilation		
J5		*		Lighting & power		
J6		*		Fire alarms		
J7		*		Voice and data		
J8		*		Nurse call		
J9		*		Security/CCTV		
J10		*		Personal alarms		
J11		*		Sprinklers		
J12		*		Lightning protection		
J13		*		Pneumatic tube system		
J14		*		Infrared systems and induction loops		
J15		*		Proposed voids above ceilings and safe points of access.		
J16		*		Door access system		
1:500 external services drawing indicating all new works and site modifications, routes of all new and diverted services relating to the following:						
K1		*		Natural gas		
K2		*		Electrical supplies		
K3		*		Water supplies		
K4		*		Street lighting car park lighting		
K5		*		Foul and surface water drainage		
K6		*		Fire alarms		
Such supporting calculations, schedules and information, as requested by the Board to support items above.						

Ref	Sample	Drawing	Other	Description	Project Co to submit by:	Board to review by:
Elevational information related to fully loaded plans for complex areas						
L1		*		Voice & data communication		
<b>M</b>						
<b>ENGINEERING SERVICES</b>						
The following for civil and structural engineering Reviewable Design Data shall be provided. This will encompass the design, size, location and interface with existing, phasing and temporary provision in document and drawing formats with respect to the following;						
M1			*	Piling Specification		
M2			*	Concrete Specification		
M3			*	Steelwork Specification		
M4			*	Civil Specification		
M5			*	Civil Specification – Scottish Water		
M6			*	Bulk Earthworks Specification		
1:200 Plan Drawings showing loading information						
N1		*		Basement Loading Plan		
N2		*		Ground Floor Loading Plan		
N3		*		First Floor Loading Plan		
N4		*		Second Floor Loading Plan		
N5		*		Third Floor Loading Plan		
N7		*		Fourth Floor Loading Plan		
N8		*		Fifth Floor Loading Plan		
1:200 Structural Drawings						
O1		*		Pile Layout GA		
O2		*		Basement GA Plan		
O3		*		Ground Floor GA Plan Sheet 1		
O4		*		Ground Floor GA Plan Sheet 2		
O5		*		First Floor GA Plan		
O6		*		Second Floor GA Plan		
O7		*		Third Floor GA Plan		
O8		*		Fourth Floor GA Plan		
O9		*		Fifth Floor GA Plan		
1:200 Civil Drawings						
P1		*		Foul Water ground Floor Drainage Plan Sheet 1		
P2		*		Foul Water ground Floor Drainage Plan Sheet 2		
P3		*		Foul Water ground Floor Drainage Plan Sheet 3		
P4		*		Basement Foul Water Drainage Plan Sheet 1		
P5		*		Scottish Water Sewer Diversion - Drainage Plan		
1:250 Civil Drawings						

Ref	Sample	Drawing	Other	Description	Project Co to submit by:	Board to review by:
Q1		*		Surface Water Underground Attenuation Systems	1:250	
1:500 Civil Drawings						
R1		*		Surface Water Underground Drainage Plan Sheet 1		
R2		*		Surface Water Underground Drainage Plan Sheet 2		
R3		*		Surface Water Underground Drainage Plan Sheet 3		
R4		*		Pavement Plan Sheet 1		
R5		*		Pavement Plan Sheet 2		
R6		*		Pavement Plan Sheet 3		
R7		*		Underground Surface Water SUDS Treatment Systems		
Civil Drawings with no scale						
S1		*		Early Works - Bus Layby Road Works Plan		
Civil Drawing Details with various scale (1:10, 1:20, 1:50)						
T1		*		Substructure Sections and Details Sheet 1		
T2		*		Substructure Sections and Details Sheet 2		
T3		*		Superstructure Sections and Details Sheet 1		
T4		*		Pavement Details Sheet 1		
T5		*		Early Works - Road Works Details		
T6		*		Basement Drainage Details Sheet 1		
T7		*		Drainage Details Sheet 1		
T8		*		Drainage Details Sheet 2		
T9		*		Drainage Details Sheet 3		
T10		*		Drainage Details Sheet 4		
T11		*		Scottish Water Sewer Diversion - Drainage Details		
Other Civil and Structural Engineering Comments						
U1			*	Design Note 18		
U2		*		Dewatering Sub Contractor Drawings		
U3			*	Project Co GIR		
U4		*	*	Vibration limitations on structural slabs		
U5		*		Structural Steel work and reinforced concrete Elevation and Section		



Ref	Sample	Drawing	Other	Description	Project Co to submit by:	Board to review by:
				drawings sufficient to identify (in conjunction with the slab drawings) the structural detail.		

**Part 4: Non-Approved Project Co's Proposals Design Data comments:**

Project Co shall submit and the Board shall review the following Board comments in respect of relevant Project Co's Proposals (which shall be deemed to be Reviewable Design Data) not approved at Financial Close given that such Reviewable Design Data only received a Level C or Level D at Financial Close, with such Project Co submission addressing the following Board comments in relation to such Reviewable Design Data.

These Board comments shall be incorporated into each relevant item of Design Data (which shall primarily relate to drawings accompanying the relevant Project Co's Proposals) by Project Co and the drawings shall be submitted by Project Co to the Board through Schedule Part 8 (*Review Procedure*).

If Project Co considers that the Board comments below on any of the items listed in this Part 4 amount to a Change, Project Co shall, before complying with the comments and resubmitting the Endorsed RDD, notify the Board of the same and, if it is agreed by the parties or determined pursuant to Schedule Part 20 (*Dispute Resolution Procedure*) that a Change would arise if the comments were complied with, the Board may, if it wishes, implement the Change and it shall be dealt with in accordance with Schedule Part 16 (*Change Protocol*).

Reference	Title	Board Comments
Project Co Proposal Section 4.3	Construction Methodology	<p>Project Co shall provide Room Mock-ups in accordance with Paragraph 5.5 of the Board's Construction Requirements. The mock-ups are to be fully completed and ready for review and inspection within 6 months of Financial Close.</p> <p>The mock-ups will be constructed in locations to be agreed with the Board, failing which the mock-ups may be constructed as discrete units within the site boundary. If Project Co is unable to construct the mock-ups within the site boundary, they may be constructed, with the agreement of the Board, outwith the site boundary but no more than 5 miles from the RIE Campus.</p> <p>Project Co shall ensure that the proposed remediation measures at the Petrol Station will be sufficient for safe habitation and use of the site for temporary office accommodation.</p> <p>Project Co shall provide a schedule of deliveries and other construction traffic on a weekly basis to the Board so that conflicts with other campus movements are avoided.</p>

<p>Project Co Proposal Section 4.4</p>	<p>Architectural and Landscaping</p>	<p>Anti Ligature:</p> <p>HLM-SZ-00-PL-330-100 03 ANTI-LIGATURE PROPOSALS, in addition to the areas in CAMHS and the Mental Health Exam Room in A1, Project Co shall ensure the following rooms have anti-ligature fittings. G-A2-044, 1-L1-015, 2-L2-010, 2-L2-142 and 3-C1.1-058.</p> <p>Project Co shall ensure the following rooms have plasterboard ceilings – G-F1-022, G-F1-023, G-F1-026, G-F1-027, G-F1-47 and G-F1-048.</p> <p>Proximity Parking:</p> <p>HLM-Z0-00-PL-700-021 03 Landscape GA - Hospital Square. DCN proximity parking layout subject to confirmation in relation to adjacent current and known future RIE MRI scanners. Text adjacent to alternative ED Entrance incorrectly located. Drawing subject to further development with Users and submission as part of RDD.</p> <p>The above comment supersedes the comment on Part 1 of Section 5 RDD of Schedule Part 6 - Construction Matters.</p>
<p>Project Co Proposal Section 4.5</p>	<p>Interior Design and Wayfinding</p>	<p>Project Co shall acknowledge that the integration of the Group 3 furniture and equipment into the interior design is fundamental to the quality of the final interior ambiance of the Facilities and therefore, Project Co shall assist the Board with the selection and co-ordination of that Group 3 furniture and equipment.</p> <p>Project Co shall acknowledge that the facility for patients to personalise their rooms is an important part of the therapeutic process and expects that within the interior design proposals, Project Co shall integrate a dedicated and suitably finished space for children to display their own artwork within their rooms.</p>
<p>Project Co Proposal Section 4.8</p>	<p>Civil and Structural Engineering</p>	<p>Geotechnical and Geoenvironmental Reports :</p> <p>Project Co shall not rely on the Arup/BAM report as referenced in the CGL letters.</p> <p>In accordance with the BCR's, Project Co shall submit to the Board an IHSL GDR and GIR report.</p> <p>Project Co to consider that Ground water at levels above 50m OD were recorded during ground water monitoring as recorded in the factual ground investigation reports.</p> <p>Project Co shall submit the pile testing proposals and the piling contractor testing requirements.</p>

		<p>Pending the issue of the GDR and GIR, the Board reserves the right to comment on the item's raised within these reports including but not limited to ground Gas Protection and Waterproofing measures and the use of contiguous pile wall.</p> <p>Project Co to confirm the basement waterproofing details comply with the BCRs.</p> <p>The Board notes a conflict between the drawings and PCPs with regards to the gas protection. Further discussion required on the provision of gas protection through the RDD process.</p>
Project Co Proposal Section 4.9	Mechanical and Electrical Engineering	<p>Retail Units:</p> <p>Project Co shall provide the retail units with the base build system L1 fire detection.</p> <p>Lothian and Borders police to be replaced with Police Scotland.</p>
Project Co Proposal Section 4.9	Sustainability & Energy Model	Final design model to be submitted through Review Procedure following the finalisation of the Plant selection and system arrangement.
Project Co Proposal Section 4.11	BREEAM	<ul style="list-style-type: none"> <li>• Man 1</li> </ul> <p>- Section 7 (Thermal and Energy Efficiency and Testing Procedure) of Schedule Part 6 (Construction Matters) requires a thermographic survey and seasonal commissioning to be undertaken.</p> <p>Project Co shall undertake a thermographic survey and seasonal commissioning and monitoring.</p> <ul style="list-style-type: none"> <li>• Man 4</li> </ul> <p>- Post Occupation Evaluation (POE) is under investigation, further discussion is required relating to the nature of this investigation.</p> <ul style="list-style-type: none"> <li>• Ene 2</li> </ul> <p>Project Co shall review the strikethrough of item 2, as there is a requirement in the BCR's to sub meter departments e.g. catering and building function areas, retail units.</p> <p>Further discussion required on why Item 2 is not currently targeted.</p> <ul style="list-style-type: none"> <li>• Ene 4</li> </ul> <p>Item 2.12 of section 4.9 M&amp;E PCP states Project Co shall provide "free cooling".</p>

		<p>Further discussion is required on where free cooling is utilised, even if Project Co cannot meet the full BREEAM coverage</p> <ul style="list-style-type: none"> <li>• Ene 5</li> </ul> <p>- This BREEAM scope is for “commercial/industrial sized refrigeration and storage systems”, Project Co responsibility.</p> <p>Further discussions required on whether the new storage can meet the BREEAM standard.</p> <ul style="list-style-type: none"> <li>• LE5</li> </ul> <p>Further discussion required on why item 5 is not achievable.</p>
Project Co Proposal Section 4.12	Fire Strategy	<p>Project Co shall submit to the Board the items identified in the derogations as requiring further development.</p> <p>Project Co shall also submit through the RDD process, including but not limited to;</p> <ul style="list-style-type: none"> <li>• Means of escape,</li> <li>• Means of Warning,</li> <li>• Fire Spread and Control, and</li> <li>• fire brigade access.</li> </ul>
Project Co Proposal Section 4.13	Acoustic Strategy	<p>2.1.2 Internal Doors ACC005/9 Project Co to delete comment box</p> <p>Project Co to clarify derogation reference. 2.9 (and 4.6.1)</p> <p>ACC0021: Project Co to confirm that absorption will be provided to achieve STI 0.6-0.75 in waiting reception areas with speaking distances greater than 1m.</p> <p>ACC0002/14: Project Co to confirm that with the windows closed the ventilation requirements and acoustic performance shall be achieved.</p> <p>EFTE roof-airborne noise break in: Project Co shall control plant noise at source to avoid excessive break-in through ETFE roof.</p> <p>Energy Centre Façade: Project Co shall confirm that the 50dBA limit will be achieved.</p>

4.14	ICT Strategy	<p>Project Co shall confirm the extent of the blown fibre solution.</p> <p>Information Technology (IT) Equipment and Distribution Systems Point 7 – Project Co shall use the title 'node' rooms.</p>
4.15	Vertical Transportation	<p>Section 3.0 - 4th para - Project Co shall provide FM lifts to serve all floors including Basement.</p> <p>Project Co to review drafting of text in conjunction with tables:</p> <ul style="list-style-type: none"> <li>-Section 4.0 - L4 and L5 Lift types should be 'type 2' lifts with a paragraph ref of 5.4.2. Still down as Type 1.</li> <li>-Section 5.0 - section 5.4.2 - text to read - (Lifts L6, L7, L12, L13 &amp; L14). Number of stops should read 6. States 5.</li> <li>- Section 5.0 - section 5.4.3 - text to read (Lifts L4, L5 &amp; L11). Only refers to L11.</li> <li>- Section 5.0 - section 5.4.4 - delete text ref to L4 &amp; L5. Not deleted</li> </ul> <p>Section 6.0 - penultimate para - '2 x 1000kgs' - this statement is not in accordance with the lift capacities detailed in table in section 4.0 Main Characteristics summary , Project Co to review calculations.</p> <p>Project Co shall procure that the two service yard FM lifts are supplied from separate electrical circuits to maintain services.</p> <p>Project Co has stated 223 in-patient beds, this should state 233.</p>
Project Co Proposal Section 4.16	Commissioning	<p>Section 12 – Retained Estate Hand back Infrastructure</p> <p>The following statement within the PCP is incorrect in the context of this section “Project Co shall comply with the requirements contained in Schedule Part 18 Handback Procedure”. Project Co shall provide details on the commissioning and handover of the Retained Estate Hand back Infrastructure.</p>

		<p>Project Co shall discuss with the Board the interaction of the Independent Tester with reference to the Completion Criteria.</p> <p>Project Co shall incorporate the following comments in the Outline Commissioning Programme, located within Appendix C of Schedule Part 10:</p> <ul style="list-style-type: none"> <li>• Line 6 – should read 6 months prior to PC</li> <li>• Line 7 – Project Co shall give notice to IT and Board</li> <li>• Line 29 – 10 days after</li> <li>• Line 30 – include drawings and 10 days post PC</li> <li>• Line 33 – Project Co shall rectify snagging – timescale incorrect – 10 days not 4 weeks</li> <li>• Line 44 – orientation of staff will take longer than 2 weeks</li> <li>• Line 48-51- not sure what this refers to – we plan to move the services in phases not yet agreed.</li> <li>• Line 40- needs to happen earlier – some in pre-completion phase and rest immediately after PC</li> <li>• Line 38 – very specific and doesn't cover all- make more general</li> <li>• Line 47 - will be happening from handover to first patient starts</li> <li>• Line 18 – agreed we would get earlier notice as delivery of group 2a needs to be in line with closure of areas of the building.</li> <li>• Line 22 - Date for NHS Early access – 3 months before PC and 6 months before first patient.</li> <li>• Line 23 will happen as late in the period prior to first patient but may spill back into early access time.</li> <li>• Very light on FM Services commissioning</li> <li>• Missing information from Outline Commissioning Programme as follows:</li> <li>• Lines for close down of different parts of building – this is important for procurement and installation of group 2B and IT - Dates for access to Board for installation of</li> </ul>
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		<p>IT in sufficient time to procure and install in agreed phases to match close down of different sections of building</p> <ul style="list-style-type: none"> <li>• Line to cover project Co commissioning and staff training on Board Specified Group 1 equipment</li> <li>• Start of Help desk needs identified and needs to be running on completion</li> <li>• Line to cover 20-30 days notice to IT and Board re works complete and completion test date</li> <li>• Line to cover date for Project Co to give notice to Board of date Board entitled to commence pre-completion commissioning- may be the same as early access</li> <li>• Line for IT to issue certificate of practical completion.</li> </ul>
Project Co Proposal Section 4.17	Access Control Strategy	Further discussion with the Board required to confirm access barrier control locations.
Project Co Proposal Section 4.18	Security Strategy	<p>1.3 Staff Safety</p> <p>Project Co shall provide portable staff attack alarms in line with the BCR's, this requirement shall be discussed further through the Review Procedure.</p> <p>Project Co shall provide the facility to lock departments and public toilets when closed or not in use.</p> <p>Project Co shall provide details as to how reception desks are secured when not attended.</p>
Project Co Proposal Section 4.21	Equipment Strategy	<p>The Board notes that the Equipment Schedule Version 7 used at Financial Close and included within Schedule Part 11 Equipment does not reflect the corrections and updates previously shared with Project Co on drawings or via Aconex and further development is required.</p> <p>Specific equipment responsibilities in areas with specialist fit out will require to be developed further as part of RDD to ensure clarity of roles and responsibilities between Project Co and the Board.</p>
Project Co Proposal Section 4.23	Specifications	<p>MECHANICAL &amp; ELECTRICAL SPECIFICATION</p> <ul style="list-style-type: none"> <li>• Specifications are generic NBS specifications and do not identify if each specification is to be used on this project or for which service it is intended to provide e.g. DHW services pipework should include specification for stainless steel pipework and all associated specifications, pumps, valves, insulation etc.</li> </ul>



		<ul style="list-style-type: none"> <li>• These specifications should be reviewed and only relevant specifications submitted, detailing intended service provision. Example:</li> <li>- Specification 320 - Bulk wholesome quality sectional water storage tanks and break tanks will be located within the basement of the hospital building.</li> <li>- Section 4.9 Mechanical &amp; Electrical Engineering Main raw water, filtered clean water and category 5 storage tanks are located within the fourth floor water tank plant room.</li> <li>• There are 752 pages in the M&amp;E specifications which are generic and include the anomalies as above.</li> <li>• All items that are stated as “Submit proposals” shall be submitted by Project Co through the Review Procedure.</li> <li>• Where options are included these need to be refined to actual proposals.</li> </ul>
		<p>CIVIL &amp; STRUCTURAL SPECIFICATION</p> <p>Project Co shall take account the following comments in ongoing discussions with the Board:</p> <ol style="list-style-type: none"> <li>1. Preliminaries and General Conditions have not been provided for review in conjunction with the Piling Specification.</li> <li>2. “Piling Works Document” and “Performance Specification for Construction Noise and Vibration” have not been provided for review.</li> <li>3. Geotechnical Interpretative reports by BAM Construction Ltd. are referenced in the specification. Project Co does not have reliance on these documents and any reference should be removed.</li> <li>4. Drawing reference (RBG-MZ-B1-PL-210-001) noted in sections 280A and 281 does not match the reference of the Pile Layout Drawing (with noted pile loads) provided for review (RBG-SZ-SL-PL-210-101 rev 02). Drawing RBG-MZ-B1-PL-210-001 was not provided.</li> <li>5. It is stated that the piling guarantee is to be 12 years, which is less the design life of the proposed buildings, Project Co to comply with the BCR’s.</li> <li>6. Reference is made to Contract Documents, but these have not been provided for review</li> </ol>

		<p>7. Table B1.2, as referenced in clause 210A does not contain relevant information for review of piling works proposals.</p> <p>The following information is not contained in the Piling Specification.</p> <p>a. Pile Cut Off levels have not been provided</p> <p>b. Proposed pile commencing surface (indicating lengths of pile head trimming) has not been provided</p> <p>RBG-SZ-XX-SP-260-001 Rev 03 Concrete Specification Specification to be resubmitted on the basis that comments have been made on the structural drawings.</p> <p>RBG-SZ-XX-SP-260-002 Rev 01 Steelwork Specification Comments related to structural aspects Specification to be resubmitted on the basis that no steelwork drawings have been made available for review.</p> <p>RBG-SZ-XX-SP-700-001 Rev 03 Civil Specification Comments on geotechnical aspects of the Civil Specification: Q20 – Granular Sub-base to roads/pavings</p> <p>1. Clause 120 – ‘Checking of Subgrade’ refers to Arup GIR for soil conditions, plasticity parameters, design CBRs, Groundwater conditions – Project Co does not have reliance on these documents.</p> <p>2. Clause 140 – Soft spots &amp; voids – no details of action have been provided, i.e. removal and replacement with suitable compacted granular fill</p> <p>3. Clause 210 – Recycled aggregate is permitted – There is no details provided of any other proposed materials source (i.e. quarry or brownfield site source).</p> <p>4. No section confirming materials testing of Type 1 was provided – as per Series 800, cl. 801. Also there are no details of testing frequency.</p> <p>6. Performance testing requirements of sub-base (and sub-grade) have not been provided. Also there are no details of testing frequency i.e. CBR test spacing of sub-grades</p>
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		<p>CIVILS COMMENTS - ALL SECTION R12</p> <p>Clause 110 – No mention of brick manholes.  Clause 135 – All package pump items noted as TBC.  Clause 667 – Bedding – does not comply with the BCR’s.  Clause 667 – Surround – does not comply with the BCR’s  Clause 753 – Step rungs have not been designed in accordance with the BCR’s or Sewers For Scotland standard detail drawing.  Clause 757 – Benching does not comply with the BCR’s</p> <p>RBG-SZ-XX-SP-700-002  Rev 02  Bulk Earthworks Specification / Status C</p> <p>1. General Comment - The scope of proposed earthworks is unclear and difficult to understand based on the information made available.</p> <p>2. General Comment - No earthworks drawings have been provided to support the proposed bulk earthworks specification and scope of works (ie. cut/fill balance, topsoil storage/landscape mounds, final contour plans)</p> <p>3. Section 2.1.1 of the Specification provides a list of documentation to be read in conjunction with the specification of which various sources:</p> <p>a. have not been made available for review (i.e. site topographic survey),</p> <p>b. IHSL do not have reliance on these documents (i.e. BAM/ARUP Geotechnical Interpretative Report) – these documents appear to form the basis of the anticipated ground conditions onsite and subsequent earthworks design.</p> <p>c. All reference to BAM / Arup should be removed. Have been superseded (i.e. CARD Geotechnics Geotechnical Interpretative Report)</p> <p>4. The Scope of Earthworks appears inconsistent as Section 1.2 Scope of Works only references 6N (Structural Fill) fill operations whilst general filling (including starter layers), capping, type 1 filling (sub-base?) and landscaping operations are detailed in sections 2.4.16 to 2.4.20. Further clarification of the full scope of earthworks is required.</p> <p>5. Section 2.3 Disposal of Materials suggests any site-won material not suitable for 6N/6P ‘Hard Fill’ shall be disposed offsite. This statement does not appear to align with other filling operations mentioned later in the document (see above point) and requires further clarification.</p>
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	<p>6. Anticipated cut and fill quantities within the development have not been provided and it is therefore difficult to determine magnitude of potential offsite disposal.</p> <p>7. No material classification has been provided for suitable/permissible general and landscape fill materials. Given the presence of geologically variable and potentially unsuitable materials at the site; clarification of acceptable/unacceptable soil for re-use as fill shall be submitted for the Boards review. The Board would expect this the correspond with the contents of Appendix A.</p> <p>8. Compaction requirements (ie. 95% Maximum dry Density) have not been provided for the Type 1 and Capping 6F1/6F2 materials.</p> <p>9. It is unclear what is meant by '150KPA TBC'. No information has been provided to determine the basis of this value.</p> <p>10. As stated above, we are not aware that shallow foundations will be adopted on site and requires clarification.</p> <p>11. No information has been provided to comment on location and adequacy of 'H' testing locations.</p> <p>12. It is unclear what is meant by 'zone' testing</p> <p>13. It is unclear whether formation level refers to cut/excavated level or finished earthworks/foundation level.</p> <p>14. No details have been provided to confirm performance testing (including density testing) of engineered earthworks layers and final/finished earthworks level.</p> <p>15. Appendix A is unclear and requires following clarifications:</p> <p>a. Table includes reference to geotextiles however it is unclear within the document where this forms part of the works.</p> <p>b. Frequency of testing does not distinguish between imported and site won fill materials.</p> <p>c. Many testing requirements are referenced back to clause 2.4.25 for bearing capacity testing below shallow foundation areas suggesting these may only be applicable within these zones which remain unclear. Project Co to undertake materials and performance testing to apply throughout the earthworks operations</p> <p>d. Specification for Highway Works Table 6/1 &amp; 6/2 extracts do not include for all materials contained within the Testing</p>
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		Requirements Table
Project Co Proposal Section 4.28	Health and Safety	<p>Project Co shall reinstate the commitment that haul roads shall be surfaced in asphalt to minimise the effects of dust generation from traffic.</p> <p>The responsibilities of Project Co's Construction Director shall be stated in line with those given for other appointments.</p> <p>References to the University of Edinburgh Research Centre should simply be University of Edinburgh.</p>
Environmental Matrix		<p>Project Co shall update the Environmental Matrix to reflect the following Board comments</p> <ul style="list-style-type: none"> <li>• The Environmental Matrix shall be updated by Project Co to reflect all the rooms and room types in the proposed Facility, this should be based on an updated Schedule of Accommodation that has been commented on separately by the Board. This also needs to reflect the names and room numbers in the GSU table.</li> <li>• Include the requirements contained in the Clinical Output Specification including but not limited to the requirement that theatre temperatures are to be able to be raised to 31°C for certain operations</li> <li>• Measures shall be assessed, modelled and implemented to demonstrate that the internal air temperature of the following room types to reduce the temperature control from 28°C to 25°C; <ul style="list-style-type: none"> <li>○ Treatment Rooms;</li> <li>○ Consulting Rooms;</li> <li>○ Laboratory;</li> <li>○ Physiotherapy Studio;</li> <li>○ Recovery.</li> </ul> <p>These room shall not exceed the maximum acceptable level of 25°C for more than 50 hours per annum</p> </li> <li>• Detailed proposal awaited on bedroom ventilation to achieve balanced/negative pressure relative to corridor.</li> <li>• Colour rendering all stated as 80 where certain areas should be 90.</li> <li>• There also need to have a consistent approach e.g. guidance notes and ED body view room stated as 28 -8, bereavement suite body view room stated as 25 -8.</li> <li>• Further discussion is required on the minimum</li> </ul>

		temperate requirement for the Body View Room.
Schedule of Accommodation		Project Co shall update the Schedule of Accommodation to reflect all of the individual elements of the proposed Facilities in accordance with Good Industry Practice.

MJB/LOT/7/57

**CONTRACT**  
**between**  
**LOTHIAN HEALTH BOARD**  
**and**  
**MOTT MACDONALD LIMITED**

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relative to the provision of project management / technical advisory and design team services for the proposed NPD project for the Royal Hospital for Sick Children / Department of Clinical Neurosciences at the Royal Infirmary of Edinburgh

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**macROBERTS**

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**SPECIAL TERMS**

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- 2-9            CLIENT'S Property
- 2-10          Dispute Resolution

**THIS CONTRACT** is made

**BETWEEN**

- (1) **LOTHIAN HEALTH BOARD**, also known as NHS Lothian, having its principal address at Waverley Gate, 2-4 Waterloo Place, Edinburgh EH1 3EG (the "CLIENT"); and
- (2) **MOTT MacDONALD LIMITED**, a company incorporated under the Companies Acts (Company Number 01243967) whose registered address is at Mott MacDonald House, 8-10 Sydenham Road, Croydon, Surrey CR0 2EE (the "**SERVICE PROVIDER**").

**BACKGROUND**

- (A) The Lords Commissioners of Her Majesty's Treasury as represented by OGCbuying.solutions being a separate Trading Fund of Her Majesty's Treasury without separate legal personality ("the Authority") selected service providers including the SERVICE PROVIDER, to provide Project Management and Design Team Services;
- (B) The SERVICE PROVIDER undertook to provide the same on the terms set out in a framework agreement number RM457/I signed on 20 October and 2<sup>nd</sup> November 2009 (the Framework Agreement);
- (C) The Authority established a set of framework agreements, including the Framework Agreement, in consultation with and for the benefit of public sector bodies. The Authority has overall responsibility for management of those framework agreements;
- (D) The Authority and the SERVICE PROVIDER agree that public sector bodies within the UK may enter into Contracts under the Framework Agreement;
- (E) The CLIENT is granted rights by the Authority in accordance with the Contracts (Rights of Third Parties) Act 1999 to enter into a Contract under the Framework Agreement pursuant to an Order served by the CLIENT on the SERVICE PROVIDER;
- (F) The CLIENT served an Order for services on the SERVICE PROVIDER on 22nd March 2011, a copy of which is annexed hereto; and
- (G) The SERVICE PROVIDER confirmed its agreement to the terms of the Order and its acceptance of the Order and hereby duly executes this Contract.

**IT IS AGREED AS FOLLOWS:**

**DEFINITIONS, DOCUMENTS AND REPRESENTATIVES**

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**1. Definitions and Interpretation**

1.1 As used in this Contract:

- 1.1.1. the terms and expressions set out in Schedule 2-1 shall have the meanings set out therein;
- 1.1.2. the masculine includes the feminine and the neuter;
- 1.1.3. the singular includes the plural and vice versa; and
- 1.1.4. the words "include", "includes" and "including" are to be construed as if they were immediately followed by the words "without limitation".
- 1.2. A reference to any statute, enactment, order, regulations or other similar instrument shall be construed as a reference to the statute, enactment, order, regulation or

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- instrument as amended by any subsequent statute, enactment, order, regulation or instrument or as contained in any subsequent re-enactment thereof.
- 1.3. A reference to any document other than as specified in Clause 1.2 shall be construed as a reference to the document as at the date of execution of this Contract.
  - 1.4. Headings are included in this Contract for ease of reference only and shall not affect the interpretation or construction of this Contract.
  - 1.5. References to "Clauses" and "Schedules" are, unless otherwise provided, references to the Clauses of and Schedules to this Contract.
  - 1.6. Terms or expressions contained in this Contract which are capitalised but which do not have an interpretation in Schedule 2-1 shall be interpreted in accordance with the common interpretation within the market for project management and design team services where appropriate. Otherwise they shall be interpreted in accordance with the dictionary meaning.
  - 1.7. To the extent that this Contract is expressed to confer rights or benefits on a party who is not a party to this Contract, that party shall subject to and by virtue of the Scots law doctrine of *jus quaesitum tertio* be entitled to enforce those rights as if it was a party to this Contract. For the avoidance of doubt the consent of any person other than the CLIENT (or the SERVICE PROVIDER, as the case may be) is not required to vary or terminate this Contract.
  - 1.8. Except as provided in Clause 1.7 a person who is not a party to this Contract shall have no rights by virtue of the Scots law doctrine of *jus quaesitum tertio* to enforce any term of this Contract. This Clause 1.8 does not affect any right or remedy of any person that exists or is available otherwise than pursuant to that doctrine.
  - 1.9. This Contract shall be governed by and construed in accordance with the law of Scotland.
  - 1.10. Where under this Contract an act is required to be done within a specified period of days after or from a specified date, the period shall begin immediately after that date. Where the period would include a day which is a Public Holiday that day shall be excluded.

**2. Inconsistency and Entire Agreement**

- 2.1. The documents forming this Contract shall be read and taken together. However, in the event and to the extent only of any conflict or inconsistency in the provisions of the Clauses of this Contract and the provisions of the Schedules, the following order of precedence shall prevail:
  - 2.1.1. the Special Terms
  - 2.1.2. the Conditions of Contract and Schedule 2-1 and the details set out in the Order
  - 2.1.3. Schedule 2-2 (CLIENT'S Requirements)
  - 2.1.4. Schedule 2-3 (The Ordered Services and Fee Schedule)
  - 2.1.5. other Schedules
- 2.2. This Contract constitutes the entire agreement and understanding between the parties in relation to the Contract and supersedes all prior representations, arrangements, understandings, agreements, statements, representations or warranties (whether written or oral) relating to the Ordered Services.
- 2.3. Each party irrevocably and unconditionally waives any rights it may have to claim damages and/or to rescind the Contract for any misrepresentation or for breach of

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any warranty not contained in the Contract unless such misrepresentation or warranty was made fraudulently.

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**3. Responsibility for documents**

- 3.1 The SERVICE PROVIDER shall ensure that all documents which are prepared and submitted by the SERVICE PROVIDER, its Sub-Contractors, staff and agents including any feasibility study, design or reports, drawings and any other documents supplied in connection therewith but excluding drafts of such documents, shall have been prepared to the Contract Standard. It is hereby acknowledged and agreed that the CLIENT shall be entitled to rely on all documents submitted by the SERVICE PROVIDER, its Sub-Contractors, staff and agents for the use of such documents in connection with the Project to which they relate.
- 3.2 The CLIENT may examine and/or comment on schedules, calculations, surveys, reports, specifications, drawings or other documents and/or information which are in the possession of the SERVICE PROVIDER and which concern this Contract at any time, but any such examination or comment (or the absence of any such examination or comment) by the CLIENT will not relieve the SERVICE PROVIDER of any responsibility for the Ordered Services to be provided under this Contract. If the SERVICE PROVIDER finds any ambiguity in or conflict between any document forming part of this Contract, or in any drawings, information or documents issued by the CLIENT in connection with this Contract, then the SERVICE PROVIDER shall notify the CLIENT forthwith, who shall issue such instructions as the CLIENT considers appropriate.
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**4. CLIENT'S Representative**

The CLIENT'S Representative shall act on behalf of the CLIENT in issuing instructions to the SERVICE PROVIDER and for receiving reports, requests or statements or in dealing with any other matter concerning the Contract.

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**5. Persons dealing with this Contract**

The SERVICE PROVIDER shall appoint a partner or director of the SERVICE PROVIDER, firm or company, who shall be the Contract Manager and shall be duly authorised to receive instructions and shall be the point of contact between the CLIENT and the SERVICE PROVIDER throughout the course of this Contract and, subject to reasonable notice, will, on behalf of the SERVICE PROVIDER, attend all meetings with the CLIENT regarding matters relevant to this Contract and will approve and sign all reports submitted to the CLIENT by the SERVICE PROVIDER. No change in this named individual shall be made by the SERVICE PROVIDER without receiving the prior written approval of the CLIENT.

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**6. SERVICE PROVIDER'S staff**

- 6.1 The SERVICE PROVIDER shall employ appropriately qualified, competent, suitable and experienced staff for the proper provision of the Ordered Services to the Contract Standard.
- 6.2 The SERVICE PROVIDER shall use reasonable endeavours to maintain continuity of the SERVICE PROVIDER'S staff.
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- 6.3 The names, experience and professional qualifications of those members of the SERVICE PROVIDER'S staff who will be involved in providing the Ordered Services shall be notified to and approved by the CLIENT prior to such persons commencing their duties. Such notification shall indicate the services they are to perform. No change to those members of the SERVICE PROVIDER'S staff shall be made without receiving the prior approval of the CLIENT. The CLIENT may (but not unreasonably or vexatiously) require the SERVICE PROVIDER to cease to use the services of any member of the SERVICE PROVIDER'S staff for the provision of the Ordered Services. Subject to the approval of the CLIENT, the SERVICE PROVIDER shall replace such persons as the need arises and at the SERVICE PROVIDER'S own expense.
- 6.4 Where the SERVICE PROVIDER is responsible for the appointment of site inspection staff, then the SERVICE PROVIDER shall take full responsibility for the supervision of such staff, for the scope of their duties, payment for their services and for the sufficiency of their performance.

**7. Environmental Requirements**

- 7.1 The SERVICE PROVIDER shall comply in all material respects with all applicable environmental laws and regulations in force from time to time in relation to the Ordered Services. Without prejudice to the generality of the foregoing, the SERVICE PROVIDER shall promptly provide all such information regarding the environmental impact of the Ordered Services as may reasonably be requested by the CLIENT.
- 7.2 The SERVICE PROVIDER shall meet all reasonable requests by the CLIENT for information evidencing compliance with the provision of this Clause 7 by the SERVICE PROVIDER.

**GENERAL OBLIGATIONS**

**8. Ordered Services**

The SERVICE PROVIDER shall perform and carry out the Ordered Services from the Service Commencement Date and shall at all times perform the Ordered Services to the Contract Standard.

**9. Professional responsibility**

- 9.1 The SERVICE PROVIDER shall perform the Ordered Services to the following standards (the Contract Standard) which means the performance of the Ordered Services:-
- 9.1.1 using all reasonable skill care and diligence as would a competent and appropriately qualified consultant or other appropriate professional carrying out services of a similar specification, nature, scope, size and complexity as the Ordered Services;
- 9.1.2 in accordance with all relevant provisions of the Contract;
- 9.1.3 in accordance with the SERVICE PROVIDER'S Programme, as applicable;
- 9.1.4 in accordance with all Statutory Requirements;
- 9.1.5 Not Used

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- 9.1.6 in accordance with the reasonable instructions of the CLIENT'S Representative;
- 9.1.7 in accordance with the SERVICE PROVIDER'S Method Statement; and
- 9.1.8 in coordination and liaison with any other contractor or consultant appointed by the CLIENT.

**Duty of Care – Design**

- 9.2 In so far as the SERVICE PROVIDER is responsible for design, the SERVICE PROVIDER:
  - 9.2.1 warrants and undertakes that it will use all due skill, care and diligence in the design of the Project that would reasonably be expected of a competent professional designer experienced in carrying out design activities of a similar nature, scope and complexity to those comprised in the Project; and
  - 9.2.2 shall be responsible for and liable for the design of the Project.
- 9.3 The SERVICE PROVIDER warrants in relation to the performance of the Ordered Services that all materials, goods and substances used or specified in the course of carrying out the Ordered Services shall be suitable for the purposes included or to be reasonably inferred from the Contract and shall be selected in accordance with the publication "Good Practice in the Selection of Construction Materials" (1997: Ove Arup and Partners, or any update current at the time this Contract is entered into).

**10. Duration**

The Contract shall commence on the Service Commencement Date and shall remain in full force and effect for the Contract Period unless the Contract is terminated sooner in accordance with these Conditions or in accordance with Common Law or statute.

**11. Responsibility for work by others**

- 11.1 Where the SERVICE PROVIDER is required to incorporate work provided by others, the SERVICE PROVIDER'S responsibility in respect of such work shall be limited to the review thereof to the extent required to ensure the satisfactory performance of the Ordered Services.
- 11.2 Notwithstanding Clause 11.1, if the SERVICE PROVIDER shall find any discrepancy in or divergence between any documents and/or information, which shall include work provided by others, the SERVICE PROVIDER shall immediately give to the CLIENT written notice specifying the discrepancy or divergence.
- 11.3 The SERVICE PROVIDER shall inform the CLIENT'S Representative upon it becoming apparent to him
  - 11.3.1 that there is any inconsistency or incompatibility between any of the CLIENT'S requirements;
  - 11.3.2 if there is any need to vary the CLIENT'S requirements or the Specification; the SERVICE PROVIDER shall obtain any instruction to so vary in writing from the CLIENT'S Representative.

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**12. Co-ordination of SERVICE PROVIDER'S Ordered Services**

12.1 The SERVICE PROVIDER shall:

12.1.1 take account of the role of any other contractors who may be appointed by the CLIENT; and

12.1.2 co-ordinate and integrate the Ordered Services with the services provided by other contractors to the extent necessary to ensure the satisfactory completion of the Ordered Services; and,

12.1.3 where Schedule 2-2 specifies that the SERVICE PROVIDER is appointed as Lead Design Consultant, be responsible for the co-ordination and integration of the services being provided by the other contractors; and

12.1.4 as necessary, regularly liaise with and consult with all other contractors appointed by the CLIENT; and

12.1.5 keep the relevant contractors fully informed of all matters related to the Ordered Services which are relevant to the services being provided by those relevant contractors.

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**13. SERVICE PROVIDER'S obligation to ensure**

13.1 Where in this Contract the SERVICE PROVIDER is under an obligation to ensure that events occur which are under the direct control of others and, due to others, the SERVICE PROVIDER is unable to comply with that obligation, then the SERVICE PROVIDER will be liable to the CLIENT only in the event that the SERVICE PROVIDER has failed to use reasonable endeavours to ensure the occurrence of the event.

13.2 The SERVICE PROVIDER does not warrant the work of others, save that nothing in this Clause 13 shall affect the SERVICE PROVIDER'S responsibility for Sub-Contractors as stated in Clause 50 (Sub-Contractors). Notwithstanding this, the SERVICE PROVIDER will be required to inform the CLIENT in writing of the action taken to resolve the matter and recommend to the CLIENT a further course of action to ensure the occurrence of the event.

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**14. Compliance with Statutory Requirements**

14.1 In providing any Ordered Services or in fulfilling any obligation under the terms of this Contract, the SERVICE PROVIDER shall ensure compliance with all Statutory Requirements including without limitation the Health and Safety at Work Act 1974, the Freedom of Information (Scotland) Act 2002, and the Construction (Design and Management) Regulations 2007 (as applicable). The CLIENT shall pay any statutory charges in respect of necessary applications for planning permission and/or building regulation approval.

14.2 The SERVICE PROVIDER shall bear the cost of ensuring that the Ordered Services shall comply with all Statutory Requirements and any amendments thereto except where any such amendment could not reasonably have been foreseen by the SERVICE PROVIDER at the date hereof.

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- 14.3 Where such reasonably unforeseeable amendments are necessary, the CLIENT and the SERVICE PROVIDER shall use all reasonable endeavours to agree upon reasonable adjustments to the Fee Schedule as may be necessary to compensate the SERVICE PROVIDER for such additional costs as are both reasonably and necessarily incurred by the SERVICE PROVIDER in accommodating such amendments.

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**15. Freedom of Information**

- 15.1 The SERVICE PROVIDER acknowledges that the CLIENT is subject to the requirements of the Code of Practice on Government Information, FOIA and the Environmental Information Regulations and shall assist and cooperate with the CLIENT to enable the CLIENT to comply with its Information disclosure obligations.
- 15.2 The SERVICE PROVIDER shall, and shall procure that its Sub-Contractors shall:
- 15.2.1 transfer to the CLIENT all Requests for Information that it receives as soon as practicable and in any event within two (2) Working Days of receiving a Request for Information;
  - 15.2.2 provide the CLIENT with a copy of all Information in its possession, or power in the form that the CLIENT requires within five (5) Working Days (or such other period as the CLIENT may specify) of the CLIENT'S request; and
  - 15.2.3 provide all necessary assistance as reasonably requested by the CLIENT to enable the CLIENT to respond to the Request for Information within the time for compliance set out in the FOIA or the Environmental Information Regulations.
- 15.3 The CLIENT shall be responsible for determining in its absolute discretion whether any Information is exempt from disclosure in accordance with the provisions of the Code of Practice on Government Information, FOIA or the Environmental Information Regulations.
- 15.4 In no event shall the SERVICE PROVIDER respond directly to a Request for Information unless expressly authorised to do so by the CLIENT.
- 15.5 The SERVICE PROVIDER acknowledges that the CLIENT may, acting in accordance with the Scottish Ministers' Code of Practice on the Discharge of Functions by Scottish Public Authorities under the Freedom of Information (Scotland) Act 2002 and the Environmental Information (Scotland) Regulations 2004 December 2010 SG/2010/257, be obliged to disclose Information without consulting or obtaining consent from the SERVICE PROVIDER, or despite having taken the SERVICE PROVIDER'S views into account.
- 15.6 The SERVICE PROVIDER shall ensure that all Information is retained for disclosure and shall permit the CLIENT to inspect such records as requested from time to time.

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**16. Indemnity and Insurance**

- 16.1 The SERVICE PROVIDER shall be responsible for, and shall release and indemnify the CLIENT against all liability for damages, losses, liabilities, claims, actions, costs, expenses (including the cost of legal or professional services, legal costs being on an indemnity basis), proceedings, demands and charges (collectively "Losses") whether arising under statute, contract or at common law arising from:

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- 16.1.1 death or personal injury;
- 16.1.2 loss of or damage to the CLIENT's property;
- 16.1.3 third party actions, claims and/or demands brought against the CLIENT or any of its officers, employees, agents or contractors;

in each case which may arise out of, or in consequence of the default, negligence or other tortious or delictual act or omission or breach of contract of the SERVICE PROVIDER or any of its officers, employees, agents or sub-contractors, save to the extent that any such Losses are caused by the negligence or wilful misconduct of the CLIENT or any of its officers, employees, agents or contractors or by the breach by the CLIENT of its obligations under this Contract".

- 16.2 The SERVICE PROVIDER shall by such existing or new policies as he sees fit effect and maintain from the time he commences work on any Site or any part of a Site or from the time he commences the Ordered Services (if earlier) to the expiration of the term, employer's liability insurance in respect of persons in his employment, appropriate to the nature of the Ordered Services. Such insurance shall comply with the Employer's Liability (Compulsory Insurance) Act 1969 (or, if the Ordered Services are performed in Northern Ireland) Order 1972 and any subordinate legislation made thereunder, and shall be for the minimum amount of £10,000,000 (or such other minimum amount as may be stated in the Order) for any one occurrence or series of occurrences arising out of one event.
- 16.3 The Service Provide shall by such existing or new policies as he sees fit effect and maintain for the same period public liability insurance against legal liability for death or personal injury to any persons and loss or damage to property arising from or in connection with the Ordered Services, which is not covered by employer's liability insurance referred to in Clause 16(2), for the minimum amount stated in the Order, such public liability insurance to include a provision for indemnity to the CLIENT in respect of the SERVICE PROVIDER'S liability under Clause 16(1) provided that the insurance which the SERVICE PROVIDER is required to effect and maintain under this paragraph need not cover loss or damage caused by any Accepted Risk.
- 16.4 The CLIENT shall have the right to receive, on request, a copy of insurances required to be effected or maintained by the SERVICE PROVIDER under this Clause. The SERVICE PROVIDER shall within 21 Days of the Service Commencement Date, and also within 21 Days of any subsequent renewal or expiry date of relevant insurances, send to the CLIENT a certificate from his insurer or broker attesting that insurance has been effected in accordance with the Contract.
- 16.5 All insurances required to be effected or maintained by the insuring party under this Clause shall be with reputable insurers, to whom the other party has no reasonable objection, lawfully carrying on such insurance business in the United Kingdom, and upon customary and usual terms prevailing for the time being in the insurance market. The said terms and conditions shall not include any term or condition to the effect that any insured must discharge any liability before being entitled to recover from the insurers, or any other term or condition which might adversely affect the rights of any person to recover from the insurers pursuant to the Third Parties (Rights Against Insurers) Act 1930 or the Third Parties (Rights Against Insurers) Act (Northern Ireland) 1930 as amended by the Insolvency (Northern Ireland) Order 1989 and/or pursuant to the Third Parties (Rights Against Insurers) Act 2010.
- 16.6 All insurances required to be effected or maintained under Clause 16.3 shall be in the joint names of the CLIENT, and such other person as the CLIENT may reasonably require (including, without limitation, the CLIENT'S Consultants), the SERVICE PROVIDER and all Sub-Contractors provided that, where the terms of the relevant insurance policy are such that the SERVICE PROVIDER is unable to effect insurance

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jointly, the SERVICE PROVIDER shall ensure that the policy includes an "Indemnity to Principal" provision in standard insurance industry terms.

- 16.7 If, without the approval of the CLIENT, the SERVICE PROVIDER fails to effect and maintain insurance he is required to effect and maintain under this Clause as described, or obtains a different policy of insurance, or fails to provide a copy of insurances or certificates in accordance with this Clause the CLIENT may, but is not required to, effect and maintain appropriate insurance cover and deduct the cost of doing so from any payment due to the SERVICE PROVIDER under the Contract, or recover such sum from the SERVICE PROVIDER as a debt.
- 16.8 For the avoidance of doubt, it is agreed that nothing in this Clause shall relieve the SERVICE PROVIDER from any of his obligations and liabilities under the Contract.

**Professional Indemnity Insurance**

- 16.9 Unless stated in the Order or agreed otherwise, the SERVICE PROVIDER shall maintain professional indemnity insurance upon customary and usual terms and conditions prevailing for the time being in the insurance market, and with reputable insurers lawfully carrying on such insurance business in the United Kingdom (on the basis and in an amount not less than that required by the Order), provided always, that such insurance is available at commercially reasonable rates. The said terms and conditions shall not include any term or condition to the effect that the SERVICE PROVIDER must discharge any liability before being entitled to recover from the insurers, or any other term or condition which might adversely affect the rights of any person to recover from the insurers pursuant to the Third Parties (Rights Against Insurers) Act 1930 or the Third Parties (Rights Against Insurers) Act (Northern Ireland) 1930 as amended by the Insolvency (Northern Ireland) Order 1989 and/or pursuant to the Third Parties (Rights Against Insurers) Act 2010. The SERVICE PROVIDER shall not, without the prior approval in writing of the CLIENT, settle or compromise with the insurers any claim which the SERVICE PROVIDER may have against the insurers and which relates to a claim by the CLIENT against the SERVICE PROVIDER, or by any act or omission lose or prejudice the SERVICE PROVIDER'S right to make or proceed with such a claim against the insurers.
- 16.10 The SERVICE PROVIDER shall immediately inform the CLIENT if such insurance ceases to be available at rates that the SERVICE PROVIDER considers to be commercially reasonable. Any increased or additional premium required by insurers by reason of the SERVICE PROVIDER'S own claims record or other acts, omissions, matters or things particular to the SERVICE PROVIDER'S shall be deemed to be within commercially reasonable rates.
- 16.11 The SERVICE PROVIDER shall fully co-operate with any measures reasonably required by the CLIENT including (without limitation) completing any proposals for insurance and associated documents, maintaining such insurance at rates above commercially reasonable rates if the CLIENT undertakes in writing to reimburse the SERVICE PROVIDER in respect of the net cost of such insurance to the SERVICE PROVIDER above commercially reasonable rates or, if the CLIENT effects such insurance at rates at or above commercially reasonable rates, reimbursing the CLIENT in respect of what the net cost of such insurance to the CLIENT would have been at commercially reasonable rates.
- 16.12 As and when reasonably required to do so by the CLIENT, the SERVICE PROVIDER shall produce for inspection documentary evidence in the form of a broker's certificate confirming that his professional indemnity insurance is being maintained.
- 16.13 The above obligation in respect of professional indemnity insurance shall continue notwithstanding determination of the SERVICE PROVIDER'S employment under the Contract for any reason whatsoever, including (without limitation) breach by the CLIENT.

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**17. Access to property**

- 17.1 If, in the course of undertaking the Ordered Services, the SERVICE PROVIDER is required to enter any establishment, the SERVICE PROVIDER shall comply with the requirements of the CLIENT, and the occupier's rules and regulations regarding admission and shall only visit the establishment at times suitable to the CLIENT or the occupier.
- 17.2 The SERVICE PROVIDER shall comply with any changes to those requirements, rules or regulations, notified to him as a CLIENT'S instruction for a change in the Ordered Services of the SERVICE PROVIDER in accordance with Clause 43 (Payment for changed Ordered Services and variations) during the provision of the Ordered Services.
- 17.3 The names and addresses of all the SERVICE PROVIDER'S or Sub-Contractors' staff to be employed in connection with this Contract and requiring access to property shall be submitted to the CLIENT or the occupier concerned to enable the necessary clearances to be obtained.
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**18. Equal Opportunities & Race Relations**

The SERVICE PROVIDER shall comply with all applicable Equalities Legislation in its performance of the Contract and shall take all reasonable steps to ensure that all servants, employees, agents and sub-contractors of the SERVICE PROVIDER engaged in the provision of the Ordered Services do not unlawfully discriminate within the meaning and scope of the Equalities Legislation. This Clause 18 shall be without prejudice to the SERVICE PROVIDER'S general obligation to comply with Statutory Requirements.

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**19. Change in SERVICE PROVIDER'S business**

The SERVICE PROVIDER shall inform the CLIENT in writing of any contemplated change of legal status or reorganisation or restructuring of the SERVICE PROVIDER'S business or practice not less than one month prior to such event taking place. In the event of such a change, unless the CLIENT otherwise agrees in writing, the SERVICE PROVIDER and its constituent members shall have the same liability as if no such change of legal status or reorganisation or restructuring of the SERVICE PROVIDER'S business or practice had taken place.

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**20. Conflicts of Interest**

- 20.1 The SERVICE PROVIDER shall disclose to the CLIENT'S Representative any actual or potential conflict of interest arising from the SERVICE PROVIDER'S provision of the Ordered Services as soon as is reasonably practical after becoming aware that such actual or potential conflict exists.
- 20.2 Should the parties be unable to either remove the conflict of interest and/or to alleviate its effect the CLIENT shall have the right to terminate this Contract in accordance with Clause 46.
- 20.3 The SERVICE PROVIDER shall immediately notify the CLIENT'S Representative of any circumstances giving rise to or potentially giving rise to conflicts of interest relating to the SERVICE PROVIDER (including without limitation its reputation and
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standing) and/or the CLIENT of which it is aware or anticipates may justify the CLIENT taking action to protect its interests.

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**21. Copyright**

- 21.1 The copyright and all other Intellectual Property Rights in all designs, drawings, specifications, photographs, plans, surveys, reports, and all other documents and/or information (Drawings), prepared by or on behalf of the SERVICE PROVIDER in relation to the Contract, and the work executed from them, shall be the property of and vested in the CLIENT, which reserves the right to reproduce such Drawings, or to execute, or to have executed, work or services in accordance therewith as may be required by the CLIENT.
- 21.2 In the event that the SERVICE PROVIDER does not own the copyright or any Intellectual Property Right in any Drawing the SERVICE PROVIDER shall use all reasonable endeavours to procure the right to grant such rights to the CLIENT to use any such copyright or Intellectual Property Rights from any third party owner of the copyright or Intellectual Property Rights. In the event the SERVICE PROVIDER is unable to procure the right to grant to the CLIENT in accordance with the foregoing it shall procure that the third party grants a direct licence to the CLIENT on industry acceptable terms.
- 21.3 The SERVICE PROVIDER waives any moral right to be identified as author of the Drawings in accordance with section 77, Copyright Designs and Patents Acts 1988 and any right not to have the Drawings subjected to derogatory treatment in accordance with section 8 of that Act as against the CLIENT or any licensee or assignee of the CLIENT.
- 21.4 In the event that any act unauthorised by the CLIENT infringes a moral right of the SERVICE PROVIDER in relation to the Drawings the SERVICE PROVIDER hereby undertakes, if the CLIENT so requests, to institute proceedings for infringement of those moral rights and the CLIENT shall bear the cost of such proceedings.
- 21.5 The SERVICE PROVIDER warrants to the CLIENT that he has not granted and shall not (unless authorised by the CLIENT) grant any rights to any third party to use or otherwise exploit the Drawings.
- 21.6 The SERVICE PROVIDER warrants that the use of the Drawings for the purposes of this Contract will not infringe the rights of any third party.
- 21.7 For no additional fee the SERVICE PROVIDER shall supply copies of the Drawings to the CLIENT; and to the CLIENT'S other consultants as necessary to enable them to discharge their respective functions in relation to this Contract or related works.
- 21.8 After the termination or conclusion of the SERVICE PROVIDER'S employment hereunder, the SERVICE PROVIDER shall supply the CLIENT with copies and/or computer discs of such of the Drawings as the CLIENT may from time to time request, and the CLIENT shall pay the SERVICE PROVIDER'S reasonable costs for producing such copies or discs.
- 21.9 Priced documents may be used by the CLIENT for the purposes of indexing and analysis without prior approval by the SERVICE PROVIDER, and the SERVICE PROVIDER shall ensure that a similar clause is inserted in all documents to be priced by contractors, or other contractors or sub-contractors.

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**22. SERVICE PROVIDER'S records**

- 22.1 The SERVICE PROVIDER and any Sub-Contractor shall retain full and proper records of all documents and/or information relating to this Contract including but not limited to any data or notes whether held on paper, electronically or by any other means for a period of 12 (twelve) years (or, if longer, for the period during which the SERVICE PROVIDER is required to maintain insurance pursuant to Clause 16 (Insurance)) following completion of this Contract, and the CLIENT shall at any time have the right to audit any accounts and examine any documents and/or information so retained by the SERVICE PROVIDER.
- 22.2 The SERVICE PROVIDER, and any Sub-Contractor appointed by the SERVICE PROVIDER, shall maintain detailed records of time spent on the Ordered Services performed on a time basis and shall, when requested, make those records available to the CLIENT.
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**SECURITY****23. Official secrets and confidentiality****Official Secrets**

- 23.1 The SERVICE PROVIDER shall take all reasonable steps to ensure that all persons employed by the SERVICE PROVIDER or Sub-Contractors in connection with the Ordered Services and this Contract are aware of the Official Secrets Act 1989 and, where appropriate, with the provisions of the Atomic Energy Act 1946 and that these Acts apply to them during the execution of this Contract and after the expiry or termination of this Contract.

**Confidentiality**

- 23.2 The SERVICE PROVIDER shall ensure that neither he nor his employees without the written consent of the CLIENT'S Representative make use of, for their own purposes, or disclose to any other person, other than in accordance with the provision of the Ordered Services (except as may be required by law), all or any documents or information provided to the SERVICE PROVIDER by the CLIENT or the CLIENT'S Representative pursuant to this Contract, or which shall come into the possession or knowledge of the SERVICE PROVIDER or any of his employees by virtue of this Contract. All of the above information will be confidential to the CLIENT, and the SERVICE PROVIDER and his employees will be bound by this Clause during the period of this Contract and at all times thereafter.
- 23.3 The SERVICE PROVIDER will indemnify and keep indemnified the CLIENT against all actions, demands, proceedings, damages, costs, charges and expenses whatsoever in respect of any breach by the SERVICE PROVIDER of this Clause. Such indemnity will be without prejudice to any other rights the CLIENT may have.
- 23.4 The SERVICE PROVIDER shall maintain as confidential at all times and shall not divulge by any means of communication (whether oral, written, digital or by some other means) all information supplied by the CLIENT or produced for the CLIENT by the SERVICE PROVIDER in accordance with the Contract.
- 23.5 The SERVICE PROVIDER shall not without the consent of the CLIENT publish, discuss or issue alone or in conjunction with any other person any articles, press releases, or other information relating to the provision of the Ordered Services.
- 23.6 The provisions of this Clause shall survive the expiry of this Contract indefinitely.
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**24 Corrupt Gifts and Payment of Commission**

24.1 The SERVICE PROVIDER shall not:

24.1.1 offer to give or agree to give any person in Her Majesty's Service any gift or consideration of any kind as an inducement or reward for doing, forbearing to do, or for having done or forborne to do any act in relation to the obtaining or execution of this Contract or any other contract for Her Majesty's Service or for showing favour or disfavour to any person in relation to this or any other contract for Her Majesty's Services;

24.1.2 enter into this Contract or any other contract with Her Majesty's Service in connection with which commission has been paid or agreed to be paid by him or on his behalf, or to his knowledge, unless before this Contract is made particulars of any such commission and of the terms and conditions of any agreement for the payment thereof have been disclosed in writing to the CLIENT.

24.2 Any breach of Clause 24.1.1 by the SERVICE PROVIDER or by anyone employed by him or acting on his behalf (whether with or without the knowledge of the SERVICE PROVIDER) or the commission of any offence by the SERVICE PROVIDER or by anyone employed by him or acting on his behalf under the Prevention of Corruption Acts 1889 to 1916 and/or the Bribery Act 2010, in relation to this Contract or any other contract with Her Majesty's Service shall entitle the CLIENT to terminate this Contract and recover from the SERVICE PROVIDER the amount of any loss resulting from such termination and/or to recover from the SERVICE PROVIDER the amount or value of any such gift, consideration or commission.

24.3 Any dispute, difference or question arising in respect of the interpretation of this Clause 24, the right of the CLIENT to terminate this Contract or the amount or value of any such gift, consideration or commission shall be decided by the CLIENT whose decision shall be final and conclusive enable them to discharge their respective functions in relation to this Contract.

**CONTROLS AND PROGRAMMING**

**25. Budget Requirements**

The SERVICE PROVIDER shall have due regard in the performance of the Ordered Services to the CLIENT'S budget requirements for the Project. The SERVICE PROVIDER shall take no action which may result in that limit being exceeded without first obtaining the CLIENT'S written approval for that expenditure. Further if the SERVICE PROVIDER becomes aware of any circumstances which may cause those budget requirements to be exceeded, the SERVICE PROVIDER shall inform the CLIENT without delay.

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**26. Disputes between contractors**

If any difference arises between the contractor and any other consultant or contractor of the CLIENT, the SERVICE PROVIDER shall use its best endeavours to achieve a reconciliation. If the reconciliation is not achieved and is not likely to be achieved then before such difference becomes detrimental to the Project the SERVICE PROVIDER shall refer the matter or difference to the CLIENT for instructions.

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**27. Project variations**

In the event that there is any proposed variation to the Project the SERVICE PROVIDER shall inform the CLIENT and provide details of the estimated cost and time effect of the proposed variation. No variation shall be introduced without obtaining the prior written consent of the CLIENT unless failure to give immediate authority for the variation could result in danger to life or where substantial additional expenditure could be avoided by taking such immediate action. In those circumstances, the SERVICE PROVIDER shall inform the CLIENT in writing immediately following the issue of the variation together with reasons for such urgency.

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**28. SERVICE PROVIDER not to commit the CLIENT**

The SERVICE PROVIDER shall ensure that either in correspondence or by any other means, the SERVICE PROVIDER shall not commit the CLIENT to any cost or to any action whilst dealing with others on behalf of the CLIENT unless the CLIENT'S prior written approval to such commitment has been obtained.

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**29. SERVICE PROVIDER'S Programme**

- 29.1 Unless agreed otherwise the SERVICE PROVIDER shall, within 21 (twenty-one) Days of the Service Commencement Date, prepare and submit to the CLIENT for approval a SERVICE PROVIDER'S Programme which shall include -
- 29.1.1 the order and timing of the operations the SERVICE PROVIDER plans to do in order to provide the Ordered Services in accordance with Clause 10 (Professional responsibility);
  - 29.1.2 the dates when the SERVICE PROVIDER plans to complete work needed to allow the CLIENT and all others involved to do their work; and
  - 29.1.3 the dates when information is required by the SERVICE PROVIDER from the CLIENT and all others involved.
- 29.2 The SERVICE PROVIDER shall ensure that the SERVICE PROVIDER'S Programme is fully coordinated with that of the CLIENT and all others involved.
- 29.3 The CLIENT may, at any time, instruct the SERVICE PROVIDER to change the SERVICE PROVIDER'S Programme for any reason.
- 29.4 Any approval referred to in Clause 29(1) shall not be construed as the CLIENT'S acceptance of the sufficiency or adequacy of the SERVICE PROVIDER'S Programme.
- 29.5 The CLIENT reserves the right to change any of the dates in the Programme from time to time by providing written notice of such changes to the SERVICE PROVIDER. If the SERVICE PROVIDER objects to any changes it shall promptly notify the CLIENT of its reasonable objections to such changes.
- 29.6 If at any time the SERVICE PROVIDER is delayed or becomes aware of any circumstance which may prevent him from meeting programme requirements he shall forthwith inform the CLIENT and propose any measures which may be practicable to recover the delay or to avoid or reduce the anticipated delay.
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- 29.7 The SERVICE PROVIDER shall comply at his own cost with all reasonable instructions of the CLIENT given for the purpose of achieving budget or programme requirements or minimising or recovering any cost overrun or delay.

**30. Presentations**

When, in providing the Ordered Services, the SERVICE PROVIDER is required to report to the CLIENT giving recommendations, the SERVICE PROVIDER shall without additional charge and when specifically instructed to do so by the CLIENT, make a formal presentation to the CLIENT of matters relevant to those recommendations.

**31. Tender Documents and Contracts**

- 31.1 The SERVICE PROVIDER shall obtain the prior written instructions of the CLIENT regarding the CLIENT'S procedures for obtaining tenders, the forms of contract to be used or any specification requirements or other matters relevant to the type of work to be dealt with by the SERVICE PROVIDER. The SERVICE PROVIDER shall also have due regard to all Statutory Requirements when conducting a procurement exercise.
- 31.2 In the event that the SERVICE PROVIDER is to produce tender documents it shall prepare all tender documents carefully and professionally, submitting them to the CLIENT and any other advisers of the CLIENT as directed by the CLIENT prior to dispatch.

**NOTICES, INSTRUCTIONS, ADDITIONAL SERVICES AND PAYMENTS**

**32. Notices**

- 32.1 All communications between the CLIENT and the SERVICE PROVIDER required by or authorised under the Contract including any instruction, consent, approval or authorisation shall be made in a form that can be read, copied and recorded. Communications shall take effect when received in such a form at the address of the recipient stated in Schedule 2-4, or an address subsequently notified to the other party. Communications that are not made in such a form shall be of no effect unless and until confirmed by the sender or recipient in a form that can be read, copied and recorded. All notices shall be in writing and shall be deemed duly given or made:
- 32.1.1 2 (two) working days after being sent by prepaid special delivery post or;
- 32.1.2 when delivered by hand, and a signature acknowledging its receipt has been obtained or;
- 32.1.3 when received in the case of a facsimile provided the relevant answer back is obtained.
- 32.2 In each case the notice must:-
- 32.2.1 refer to the Contract;
- 32.2.2 be marked for the attention of the appropriate officer, person or department as notified to the other party in writing.

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- 32.3 The notices shall be sent to the addresses of each party to the Contract specified at the beginning of the Contract or to such addresses as each party shall notify the other in writing within 5 (five) working days of any change in its address for service.
- 32.4 Any notice served on a non Working Day or after Working Hours shall be deemed to be served on the following Working Day.
- 32.5 For the avoidance of doubt, electronic mail shall constitute a valid form of communication for the purpose of the Contract except in relation to any notice of termination (which should be sent by prepaid special delivery post or delivered by hand in accordance with Clauses 32.1.1 and/or 32.1.2).
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**33. CLIENT'S instructions**

The SERVICE PROVIDER shall comply with all instructions issued by the CLIENT in connection with this Contract, including the modification of, or alteration to, the Ordered Services or alteration to the scope or content of the Project. All instructions shall be in writing, except where the CLIENT considers that there is an emergency, in which case instructions may be given verbally. Verbal instructions shall be immediately effective in accordance with their terms, but shall be confirmed in writing by the CLIENT to the SERVICE PROVIDER within 4 (four) Working Days.

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**34. Change to Ordered Services**

The CLIENT may, at any time, instruct a change in the Ordered Services. Where the CLIENT requires a change in the Ordered Services, the SERVICE PROVIDER shall provide the CLIENT with an estimate of the additional or reduced fees which shall be calculated in accordance with Clause 43 (Payment for changed Ordered Services and variations).

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**35. Fees**

- 35.1 Unless otherwise set out in the Order the SERVICE PROVIDER shall be entitled to submit invoices each month in respect of Ordered Services properly performed during the preceding month. The SERVICE PROVIDER shall ensure:
- 35.1.1 the fee reflects the Ordered Services properly performed in the preceding month; and
  - 35.1.2 the fee is calculated in accordance with the fees and/or percentage quoted against each stage, or proportion thereof as relevant, by the SERVICE PROVIDER in the Fee Schedule; and
  - 35.1.3 the invoice includes evidence of the relationship to the stage payments included in the Fee Schedule;
  - 35.1.4 the invoices states whether the invoice is interim or final in relation to that stage; and
  - 35.1.5 the invoice is accompanied by an updated Fee Schedule.
- 35.2 Prior to the submission of the SERVICE PROVIDER'S first invoice, the SERVICE PROVIDER shall submit to the CLIENT an estimate of the amount of fees likely to be claimed on a month by month basis covering the whole of the Ordered Services to be performed under this Contract up to a stated estimated completion date for the Ordered Services. Subsequently, an updated estimate shall accompany each further invoice submitted in accordance with Clause 35.1, irrespective of the basis of the fee.
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The SERVICE PROVIDER shall also submit such further information which the CLIENT may reasonably require in order to substantiate the amount claimed.

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**36. Payment**

- 36.1 The CLIENT shall pay the SERVICE PROVIDER for Ordered Services satisfactorily performed, such sum or sums to be calculated in accordance with this Contract.
- 36.2 Fee invoices shall be submitted in accordance with Clause 36 (1) above and the fee shall become due and final 30 days after receipt of a valid invoice by the CLIENT.
- 36.3 Not later than five days after the date on which a payment becomes due, or would have become due if the SERVICE PROVIDER had carried out his obligations under the contract, and no set-off or abatement was permitted by reference to any sum claimed to be due under one or more other contracts, the CLIENT shall give notice specifying the amount (if any) of the payment made or proposed to be made, and the basis on which that amount was calculated.
- 36.4 If the amount of any fees or disbursements becoming due hereunder is wrongfully withheld after the relevant final date for payment, such amount shall bear simple interest at the rate of 2% over Bank of England base rate for the time being, from the final date for payment to and including the date on which such amount is paid or discharged. The parties agree that this clause constitutes a substantial remedy for the purposes of the Late Payments of Commercial Debts Act 1998.
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**37. Notice of Intention to withhold**

Not later than the date on which payment becomes due the CLIENT may give written notice to the SERVICE PROVIDER which shall specify any amount proposed to be withheld and/or deducted from the invoice, the ground or grounds for such withholding and/or deduction and the amount of the withholding and/or deduction attributable to each ground.

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**38. Right to suspend for non-payment**

- 38.1 Without prejudice to any other right or remedy of the SERVICE PROVIDER, where a sum due under the Contract is not paid in full by the final date for payment as required by this Contract, and no effective notice to withhold payment has been given under Clause 37 (Withholding payment), and such failure continues for 7 days after the SERVICE PROVIDER has given to the CLIENT written notice of its intentions to suspend the performance of his obligations under the Contract and the ground or grounds on which it is intended to suspend performance, the SERVICE PROVIDER may then suspend such performance until payment in full occurs.
- 38.2 Any period during which performance is suspended in pursuance of the right conferred by this Clause shall be disregarded in computing, for the purposes of any contractual time limit, the time taken by the party exercising the right or by a third party to complete any work directly or indirectly affected by the exercise of the right. Where the contractual time limit is set by reference to a date rather than a period, the date shall be adjusted accordingly.
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**39. Payment following termination and consequences of termination**

39.1 In the event of the SERVICE PROVIDER'S employment being terminated in accordance with Clause 45 or in the event of the Contract being terminated in accordance with Clause 46, the SERVICE PROVIDER shall only be entitled to fair and reasonable fees for partial Ordered Services satisfactorily performed together with any fair and reasonable expenses incurred in the provision of the Ordered Services; save that

39.1.1 the total amount payable to the SERVICE PROVIDER under the terms of this Clause shall in no event exceed the amount which would have been payable to the SERVICE PROVIDER had he completed either the whole or, if applicable, a part of the SERVICE PROVIDER'S Ordered Services under the terms of this Contract; and

39.1.2 no expenses shall be reimbursed where the termination occurred as a consequence of any breach by the SERVICE PROVIDER of the Contract, or the grounds set out in Clause 46.2.1 – 46.2.5.

For the avoidance of doubt, in the event of termination under Clause 45 or Clause 46, the SERVICE PROVIDER shall have no entitlement to be paid or make any claim in respect of any loss of profit, loss of revenue or loss of contracts or otherwise.

39.2 Following termination of the Ordered Services in accordance with this Contract, the SERVICE PROVIDER shall deliver to the CLIENT all correspondence, reports, drawings, documents or other records used by the SERVICE PROVIDER in connection with the Ordered Services and the CLIENT may make full use of such correspondence, reports, drawings, documents or other records without further obligation to the SERVICE PROVIDER and in accordance with Clause 21 (Copyright).

39.3 In the event of the Contract being determined as a consequence of any breach by the SERVICE PROVIDER of the Contract, or upon the grounds set out in Clauses 46.2.1 – 46.2.5, then the CLIENT will be entitled to engage another contractor to complete those Ordered Services which otherwise would have been performed by the SERVICE PROVIDER under the terms of this Contract and to recover from the SERVICE PROVIDER any losses or additional costs and expenses which are attributable to such determination and/or the engagement of another contractor. In the event of determination of the Contract for any reason, the SERVICE PROVIDER shall co-operate in the transfer of the Ordered Services in accordance with the CLIENT'S instructions.

**40. Recovery of sums due**

40.1 The CLIENT shall be permitted to deduct and withhold from any sum due to the SERVICE PROVIDER under this Contract any sum of money due from the SERVICE PROVIDER under either:

40.1.1 this contract; or

40.1.2 any other agreement between the SERVICE PROVIDER and the CLIENT;

40.1.3 any other agreement between the SERVICE PROVIDER and OGCBuying.solutions; or

40.1.4 any other department, office or agency of the Crown,

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provided that the terms of such other agreement provide for sums of money due from the SERVICE PROVIDER under that agreement to be recovered by way of a deduction from sums of money due to the SERVICE PROVIDER under this Contract (albeit that this Contract may not be referenced specifically under that agreement).

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**41. Payment of Sub-Contractors**

Where work in connection with this Contract has been undertaken by the SERVICE PROVIDER'S Sub-Contractors, then the SERVICE PROVIDER shall pay the Sub-Contractors for those Ordered Services satisfactorily performed within 30 (thirty) Days of the SERVICE PROVIDER'S receipt of a valid invoice for those Ordered Services.

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**42. VAT**

- 42.1 All sums payable by or to the CLIENT or the SERVICE PROVIDER are exclusive of Value Added Tax ("VAT"). Where VAT is chargeable on such sums, the payer shall pay, upon production of a valid VAT invoice by the payee, such VAT in addition to such sums.
- 42.2 The SERVICE PROVIDER shall pay to the CLIENT within 7 days of the same being demanded by the CLIENT any VAT or amount in respect of VAT incurred by the CLIENT but which it is unable to recover from HM Customs & Excise which the CLIENT incurs as a result of the SERVICE PROVIDER'S failure to carry out its obligations under this Contract and the CLIENT employing another person to fulfil the same obligations. Where the CLIENT would have been unable to recover VAT if the SERVICE PROVIDER had fulfilled its obligations under this Contract then this clause shall only apply in respect of such additional amounts of or in respect of VAT which the CLIENT is unable to recover.
- 42.3 Where a party is liable to reimburse or indemnify the other party for costs incurred by that other party, the amount to be paid shall not include any VAT charged on such costs, save where the payee is unable to recover such VAT from HM Customs & Excise as input tax.
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**43. Payment for changed Ordered Services and variations**

- 43.1 Where the CLIENT has specifically instructed a change in the Ordered Services of the SERVICE PROVIDER, then the rates and prices included in this Contract may be used for the calculation of fees in respect of those changed services or, alternatively, and at the CLIENT'S sole discretion, a lump sum may be agreed between the CLIENT and the SERVICE PROVIDER. Provided always that where the Variation was as the result of the SERVICE PROVIDER'S default, the SERVICE PROVIDER shall not be entitled to any additional remuneration.
- 43.2 Where the CLIENT gives written authority to introduce variations then, to the extent that the SERVICE PROVIDER can show that the variations have involved additional expense in providing drawings, documents and/or information for which reimbursement would not be received by the payment of other fees paid by the CLIENT, then the reasonable cost of the additional drawings, documents and/or information which the SERVICE PROVIDER is required to provide will be reimbursed to the SERVICE PROVIDER by the CLIENT.
- 43.3 The reimbursement of any fees and/or costs claimed by the SERVICE PROVIDER under the terms of this Clause shall be subject to the SERVICE PROVIDER providing
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such substantiation of the SERVICE PROVIDER'S claim as the CLIENT may reasonably require on a full "open book" basis.

**44. Additional work by Sub-Contractors**

Where the CLIENT has authorised additional Ordered Services to be undertaken and either the whole or part of those additional Ordered Services are undertaken by Sub-Contractors appointed by the SERVICE PROVIDER in accordance with Clause 49 (Sub-Contractors) then the reimbursement of the SERVICE PROVIDER will include for the additional work undertaken by Sub-Contractors in the same way as if the whole of the additional Ordered Services had been undertaken by the SERVICE PROVIDER'S own staff.

**PARTICULAR POWERS AND REMEDIES**

**45. Suspension of SERVICE PROVIDER'S Ordered Services**

By giving a minimum of seven (7) Days' notice to the SERVICE PROVIDER, the CLIENT may suspend the whole or part of the Ordered Services to be performed under the terms of this Contract. Where the whole of the Ordered Services have been suspended and the SERVICE PROVIDER has not been given instructions to resume the suspended Ordered Services within 6 (six) months from the date of such suspension, then the SERVICE PROVIDER may by notice to the CLIENT request an instruction that the suspended Ordered Services shall be resumed and, if no such instruction is received from the CLIENT within 30 (thirty) Days of such notice, the SERVICE PROVIDER shall have the right to treat the SERVICE PROVIDER'S employment under this Contract as terminated upon the expiry of the 30 (thirty) Days.

**46. Determination by the CLIENT**

**Voluntary Determination by CLIENT.**

46.1 The CLIENT shall be entitled at its absolute discretion to terminate the Contract at any time and for any reason by giving fourteen (14) Days' notice in writing to the SERVICE PROVIDER.

**Determination as a result of Termination Events.**

46.2 The CLIENT may at any time by notice in writing terminate this Contract as from the date of service of such notice, or a later date specified in such notice, if any of the Termination Events specified below occur. The Termination Events are:

46.2.1 if the SERVICE PROVIDER:

- 46.2.1.1 commits an act of fraud or bankruptcy; or
- 46.2.1.2 has been convicted of a criminal offence relating to the conduct of its business or profession; or
- 46.2.1.3 has committed an act of grave misconduct in the course of its business or profession; or
- 46.2.1.4 has failed to comply with any obligations relating to the payment of any taxes or social security contributions; or
- 46.2.1.5 has made any serious misrepresentations in the tendering process for any project or matter in which the public sector has or had a significant participation; or

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- 46.2.1.6 has failed to obtain any necessary licences or obtain or maintain membership of any relevant body; or
- 46.2.1.7 demerges into two or more firms, merges with another firm, incorporates or otherwise changes its legal form or there is a change of control as defined by section 416 of the Income and Corporation taxes Act 1988 (any such case being a "Change of Control") and, in any such Change of Control, there are reasonable grounds for the CLIENT to withhold its consent relating to the financial standing of the new entity through which it is proposed that the Ordered Services will be delivered or there are security concerns arising from the provision of the Ordered Services by the new entity.; or
- 46.2.2 the CLIENT has reasonable grounds to object to the SERVICE PROVIDER arising from security concerns in respect of the SERVICE PROVIDER; or
- 46.2.3 the SERVICE PROVIDER, being an individual, or where the SERVICE PROVIDER is a firm, any partner or partners in that firm who together are able to exercise direct or indirect control, shall at any time become bankrupt or shall have a receiving order or administration order made against him or shall make any composition or arrangement with or for the benefit of his creditors, or shall make any conveyance or assignment for the benefit of his creditors, or shall purport so to do, or appears unable to pay or to have no reasonable prospect of being able to pay a debt within the meaning of Section 268 of the Insolvency Act 1986, or he shall become apparently insolvent within the meaning of the Bankruptcy (Scotland) Act 1985 as amended by the Bankruptcy (Scotland) Act 1993, or any application shall be made under any bankruptcy or insolvency act for the time being in force for sequestration of his estate, or a trust deed shall be granted by him on behalf of his creditors, or any similar event occurs under the law of any other jurisdiction; or
- 46.2.4 the SERVICE PROVIDER, being a company, passes a resolution, or the Court makes an order that the SERVICE PROVIDER or its Parent Company be wound up otherwise than for the purpose of a bona fide reconstruction or amalgamation, or a receiver, manager or administrator on behalf of a creditor is appointed in respect of the business or any part thereof of the SERVICE PROVIDER or the Parent Company (or an application for the appointment of an administrator is made or notice to appoint an administrator is given in relation to the SERVICE PROVIDER or the Parent Company), or a moratorium comes into force pursuant to Schedule A1 of the Insolvency Act 1986, or circumstances arise which entitle the Court or a creditor to appoint a receiver, manager or administrator or which entitle the Court otherwise than for the purpose of a bona fide reconstruction or amalgamation to make a winding-up order, or the SERVICE PROVIDER or its Parent Company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 (except where the claim is made under Section 123(1)(a) and is for an amount of less than ten thousand pounds (£10,000)) or any similar event occurs under the law of any other jurisdiction; or
- 46.2.5 where the SERVICE PROVIDER is an unincorporated joint venture and any of the events referred to in Clause 46.2.3 or 46.2.4 occur in relation to any member of such unincorporated joint venture who is a signatory to this Framework Agreement.

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- 46.3 Without prejudice to the provisions of Clause 46.2, the CLIENT may at any time by notice in writing terminate this Contract forthwith if the SERVICE PROVIDER is in material Default of any obligation under this Contract and:
- 46.3.1 the material Default is capable of remedy and the SERVICE PROVIDER shall have failed to remedy the material Default within thirty (30) Days of written notice to the SERVICE PROVIDER specifying the material Default and requiring its remedy; or
- 46.3.2 the material Default is not capable of remedy.
- 46.4 The SERVICE PROVIDER shall promptly notify the CLIENT in writing on each occasion of the occurrence of any Change of Control specified in Clause 46.2.1.7. The CLIENT shall only be permitted to exercise its rights pursuant to Clause 46.2.1.7 for six (6) Months after service of a notice by the SERVICE PROVIDER pursuant to this Clause relative to each such Change of Control and shall not be permitted to exercise such rights where the CLIENT has agreed in advance in writing to the particular change and such change takes place as proposed.
- 46.5 For the purposes of Clause 46.2.1.7, the following shall be disregarded:
- 46.5.1 any change in beneficial or legal ownership of any shares that are listed on a stock exchange resulting in the relevant shareholding being less than or equal to five per cent (5%) of the total issued share capital; and
- 46.5.2 any transfer of shares or of any interest in shares by a person to its affiliate where such transfer forms part of a bona fide reorganisation or restructuring.
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**47. Dispute Resolution**

Any dispute arising in relation to any aspect of this Contract shall be resolved in accordance with the dispute procedure set out in Schedule 2-10.

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**ASSIGNMENT, SUB-CONTRACTORS, AND PARENT COMPANY GUARANTEE**

**48. Assignment**

- 48.1 The SERVICE PROVIDER shall not, without the consent in writing of the CLIENT, sub-contract, sub-let, assign or transfer the Contract, or any part, share or interest under it. No sum of money to become payable under the Contract shall be payable to any person other than the SERVICE PROVIDER without the CLIENT'S written consent.
- 48.2 Subject to the provisions of Clause 48.5, the CLIENT shall be entitled to:
- 48.2.1 Assign or otherwise dispose of its rights and obligations under this Contract or any part thereof to any Contracting Authority; or
- 48.2.2 Assign or otherwise dispose of its rights and obligations under this Contract to any other body (including any private sector body) which substantially performs any of the functions that previously had been performed by the CLIENT;
- provided that where such assignment or other disposal increases the burden of the SERVICE PROVIDER'S obligations pursuant to this Contract, the SERVICE PROVIDER shall be entitled to such charges as may be agreed between the CLIENT and the SERVICE PROVIDER to compensate for such additional burdens.
- 48.3 Subject to the provisions of Clause 48.5 the CLIENT shall be entitled, without the need to obtain the SERVICE PROVIDER'S consent to seek to
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- 48.3.1 novate this Contract or any part thereof to any Contracting Authority; or
- 48.3.2 novate its rights and obligations under this Contract to any other body (including any private sector body) which substantially performs any of the functions that previously had been performed by the CLIENT;
- upon such terms as the CLIENT shall propose provided that where such novation increases the burden of the SERVICE PROVIDER'S obligations pursuant to this Contract, the SERVICE PROVIDER shall be entitled to such charges as may be agreed between the CLIENT and the SERVICE PROVIDER to compensate for such additional burdens.
- 48.4 Subject to the provisions of Clause 48.5, any change in the legal status of the CLIENT such that it ceases to be a Contracting Authority shall not affect the validity of this Contract. In such circumstances, this Contract shall bind and inure to the benefit of any successor body to the CLIENT.
- 48.5 If this Contract is novated to a body which is not a Contracting Authority pursuant to Clause 48.3.1 or if a successor body which is not a Contracting Authority becomes the CLIENT pursuant to Clause 48.4 (in the remainder of this Clause 48 both such bodies are referred to as the "transferee"):
- 48.5.1 the transferee shall only be able to assign, novate or otherwise dispose of its rights and obligations under this Contract or any part thereof with the previous consent in writing of the SERVICE PROVIDER; and
- 48.5.2 The following Clauses shall be varied from the date of the novation or the date of the change of status (as appropriate) as set out below as if this Contract had been amended by the CLIENT and the SERVICE PROVIDER in accordance with Clause 34:
- 48.5.2.1 in Clause 24.1.1, the first reference to "in Her Majesty's Service" shall be replaced with "employed by the CLIENT or acting on its behalf" and the second and third references to "Her Majesty's Service" shall be replaced with "the CLIENT"; and
- 48.5.2.2 in Clause 24.1.2 the words "with Her Majesty's Service" shall be replaced with "with the CLIENT or any person acting on its behalf"; and
- 48.5.2.3 in clause 24.2 the words "Her Majesty's Service" shall be replaces with "the CLIENT"; and
- 48.5.2.4 Clause 40 shall be deleted.

**49. Approval of Sub-Contractors**

- 49.1 The SERVICE PROVIDER may:
- 49.1.1 upon prior written notice to the CLIENT employ any of the Approved Sub-contractors; and/or
- 49.1.2 upon prior written approval of the CLIENT, which approval shall be at the discretion of the CLIENT, employ any contractors who are not Approved Sub-Contractors.

For the purposes of this Contract the Approved Sub-Contractors and the contractors approved in accordance with 49.1.2 shall be termed Sub-Contractors and shall be listed in Schedule 2-5 together with details of the obligations and responsibilities of each Sub Contractor in respect of the provision of the Ordered Services. Other sub contractors shall not be used to fulfil such obligations and responsibilities without the prior written approval of the CLIENT.

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- 49.2 Within 7 (seven) Days of the Service Commencement Date and the CLIENT'S provisional acceptance of the list of proposed Sub-Contractors, the SERVICE PROVIDER must submit for the approval of the CLIENT, a Certificate of Professional Indemnity Insurance (if the relevant Sub-Contractor is required to have Professional Indemnity Insurance) and a Certificate of Employer's and Public Liability Insurance, all duly completed on behalf of each of the proposed Sub-Contractors.
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**50. Sub-Contractors**

The SERVICE PROVIDER shall be fully responsible for the Ordered Services undertaken by Sub-Contractors whom the SERVICE PROVIDER shall himself appoint and the SERVICE PROVIDER shall have the same responsibility for the Ordered Services undertaken by such Sub-Contractors as if such Ordered Services had been undertaken directly by the SERVICE PROVIDER. The SERVICE PROVIDER shall further be responsible for entering into any agreements with Sub-Contractors as considered necessary and any fees or expenses claimable by those Sub-Contractors and any costs incurred by the SERVICE PROVIDER in employing those Sub-Contractors and in accepting the additional responsibilities thereby shall be deemed to be included in the SERVICE PROVIDER'S Proposals.

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**51. Sub-Contractor warranties**

In so far as it is required by the CLIENT it shall be a condition of the CLIENT'S approval of a Sub-Contractor that the SERVICE PROVIDER and the Sub-Contractor shall enter into a direct CLIENT/Sub-Contractor Agreement (Warranty) in the form specified by the CLIENT, or such other form as the CLIENT may agree; and that the ultimate holding company (if any) of the relevant Sub-Contractor shall enter into a guarantee in respect of the Sub-Contractor's obligations pursuant to such CLIENT/Sub-Contractor Agreement, in the form specified by the CLIENT, or such other form as the CLIENT may agree; and that the SERVICE PROVIDER shall deliver to the CLIENT such CLIENT/Sub-Contractor Agreement and guarantee, both duly executed, within 28 (twenty-eight) Days of the CLIENT'S approval of the relevant Sub-Contractor. If that condition is not fulfilled, the CLIENT'S approval of the relevant Sub-Contractor shall be null and void, and the SERVICE PROVIDER shall cease to employ that Sub-Contractor. The CLIENT will not enter into any other direct agreement with a Sub-Contractor.

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**52. Direct appointment of other contractors**

- 52.1 Where it is indicated in Schedule 2-2 that the CLIENT intends to appoint other contractors to undertake services, the CLIENT will enter into direct agreements with such contractors and will be responsible for the payment of their fees and, where possible, the names of such contractors will be stated in Schedule 2-2.
- 52.2 Where other contractors are appointed by the CLIENT, the SERVICE PROVIDER shall co-operate fully with those appointed contractors in order to ensure that production of the SERVICE PROVIDER'S drawings, design information or other relevant documents or information are fully co-ordinated with the work of the other contractors and that they meet the required programme. The SERVICE PROVIDER shall attend all meetings which may be called by any appointed contractor in connection with the Ordered Services.
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**53. Specific parent company guarantee**

In so far as it is requested by the CLIENT the SERVICE PROVIDER shall, within 21 (twenty-one) Days of the Service Commencement Date, deliver to the CLIENT a specific parent company guarantee in the form set out in Schedule 2-6 from its ultimate holding company (if any).

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**SPECIAL TERMS**

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The Contract shall be amended by the following Special Terms agreed by the CLIENT and the SERVICE PROVIDER:

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**Limitation of SERVICE PROVIDER's Liability**

The maximum aggregate liability of the SERVICE PROVIDER under this Contract in respect of the Ordered Services shall not exceed Ten Million Pounds (£10,000,000) Sterling; provided that the foregoing limitation of liability shall not apply in respect of:

- (a) any costs, expenses, losses or damages which arise out of the death or injury of any person where such death or injury is caused or contributed to by the Default of the SERVICE PROVIDER or any of its Sub-Contractors;
- (b) any liability to any third party for any loss or damage caused by the Default of the SERVICE PROVIDER or any of its Sub-Contractors;
- (c) any liability which is or ought to be covered by the public liability insurance to be effected and maintained by the SERVICE PROVIDER under Clause 16.3; and/or

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(d) any costs, expenses, losses or damages which arise out of the fraud or wilful misconduct of the SERVICE PROVIDER or any of its Sub-Contractors.

IN WITNESS WHEREOF these presents consisting of this and the twenty-five preceding pages together with Schedules 2-1 to 2-10 inclusive, the copy of the Order, and the Fee Schedule, are executed as follows:

Subscribed for and on behalf of Lothian Health Board:

[Redacted Signature]

Signature of Authorised Signatory

JACQUELINE KATE SANBURY

Full name of Authorised Signatory

Date when signed:

10/10/11

Place where signed:

RIE

in the presence of this witness:

x

[Redacted Signature]  
Signature of witness

Full name of witness:

LORNA SEVILLE

Address of witness:

RIE, LITTLE FRANCE, EH16 4SA

Subscribed for and on behalf of Mott MacDonald Limited:

[Redacted Signature]

Signature of Director /  
~~Company Secretary~~

RICHARD WILLIAMS

Full name of Director / ~~Company Secretary~~

Date when signed:

13-6-11

Place where signed:

MERIDIAN HOUSE, CROYDON

In the presence of this witness:

[Redacted Signature]  
Signature of witness

Full name of witness:

SUSAN ANGELA BROWN

Address of witness:

[Redacted Address]

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**SCHEDULE 2-1**  
**INTERPRETATIONS**

The expressions set out below shall have the meanings ascribed thereto:

<b>Definition</b>	<b>Meaning</b>
<b>Accepted risks</b>	Means the risks of: <ul style="list-style-type: none"> <li>(a) pressure waves caused by the speed of aircraft or other aerial devices;</li> <li>(b) ionising radiations or contamination by radioactivity from any nuclear fuel or from nuclear waste from the combustion of nuclear fuel;</li> <li>(c) the radioactive, toxic, explosive or other hazardous properties of any explosive nuclear assembly (including any nuclear component); and</li> <li>(d) war, invasion, act of foreign enemy, hostilities (whether or not war has been declared) civil war, rebellion, insurrection, or military or usurped power.</li> </ul>
<b>Approved Sub-Contractors</b>	means the sub-contractors listed in Schedule 9 of the Framework Agreement.
<b>AUTHORITY</b>	means OGCbuying.solutions
<b>Catalogue of Services</b>	means the catalogue of services that shall be made available to the CLIENT by the SERVICE PROVIDER in electronic format. The Catalogue of Services specifies the Services available to the CLIENT under this Contract.
<b>CLIENT Billing Address</b>	means the customer billing address specified in Schedule 2-4 of this Contract.
<b>CLIENT'S Representative</b>	means the person employed in that capacity named in the CLIENT'S Requirements and appointed by the CLIENT to act on his behalf, or such other person as may be appointed in that capacity for the time being by the CLIENT.
<b>CLIENT'S Requirements</b>	means the CLIENT'S requirements as specified in Schedule 2-2.
<b>Confidential Information</b>	means any information designated as such by the party disclosing that information.
<b>Contract</b>	means the binding agreement, comprising the Conditions of Contract and the Schedules, incorporating any applicable Special Terms, between the CLIENT and the SERVICE PROVIDER relating to the provision of the Ordered Services resulting from the placing of an Order by the CLIENT.
<b>Contract Manager</b>	means the person (together with any duly authorised deputies) appointed by the SERVICE PROVIDER to act as Contract Manager in respect of this Contract or any replacement notified by the SERVICE PROVIDER to the CLIENT.
<b>Contract Period</b>	means the period as set out in the Order which commences on the Service Commencement Date.
<b>Contract Standard</b>	means the standard to which the Ordered Services are to be provided as set out in Clause 9.
<b>Days</b>	means calendar days.
<b>Default</b>	means any negligent act or omission, any breach of contract and/or any failure by the SERVICE PROVIDER properly to perform any of the obligations, terms and conditions of the Contract including (without limitation) any failure by the SERVICE PROVIDER to perform the Ordered Services to the Contract Standard.

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Definition	Meaning
<b>Environmental Information Regulations</b>	means the Environmental Information (Scotland) Regulations 2004 and any guidance and/or codes of practice issued by the Scottish Information Commissioner in relation to such regulations.
<b>Equalities Legislation</b>	all Legislation which makes unlawful discrimination on grounds of sex, sexual orientation, gender reassignment, age, disability, colour, race, ethnic, or national origin, religion, marital status, part time or temporary status in employment or otherwise including, without limitation, the Race Relations Act 1976, as amended by the Race Relations (Amendment) Act 2000, the Sex Discrimination Act 1975, the Equal Pay Act 1970, the Disability Discrimination Act 1995, and the Equality Act 2010.
<b>Fee Schedule</b>	means the schedule of rates, charges and/or percentages agreed between the CLIENT and the SERVICE PROVIDER for carrying out the Contract and as set out in Schedule 2-3.
<b>FOIA</b>	means the Freedom of Information (Scotland) Act 2002 and any subordinate legislation made under this Act from time to time together with any guidance and/or codes of practice issued by the Scottish Information Commissioner in relation to such legislation, together with the Scottish Ministers' Code of Practice on the Discharge of Functions by Scottish Public Authorities under the Freedom of Information (Scotland) Act 2002 and the Environmental Information (Scotland) Regulations 2004 December 2010 SG/2010/257.
<b>Framework Agreement</b>	means the framework agreement between the AUTHORITY and the SERVICE PROVIDER under which the AUTHORITY has established a contractual vehicle for the provision of Ordered Services to CLIENTS.
<b>Group</b>	means and includes a company and every holding company of that company for the time being, and every subsidiary for the time being of every such holding company, and the terms "CLIENT'S Group" and "SERVICE PROVIDER'S Group" shall be interpreted accordingly; but, while the CLIENT is a Minister of the Crown, a government department or other Crown agency or authority, the term "CLIENT'S Group" shall also include all other Ministers of the Crown, government departments and Crown agencies and authorities.
<b>Holding Company</b>	shall have the meaning given in Section 1159 of the Companies Act 2006.
<b>Information</b>	has the meaning given under section 73 of the Freedom of Information (Scotland) Act 2000.
<b>Intellectual Property Rights</b>	means any and all patents, trade marks, service marks, copyright, moral rights, rights in a design, know-how, confidential information and all or any other intellectual or industrial property rights whether or not registered or capable of registration and whether subsisting in the United Kingdom or any other part of the world together with all or any goodwill relating or attached thereto.
<b>Key Personnel</b>	means the key personnel as specified in Schedule 2-4.
<b>Method Statement</b>	means the method statements or statements included in the SERVICE PROVIDER'S Proposals.
<b>Month</b>	means a calendar month.
<b>OGC</b>	means the Office of Government Commerce.
<b>OGCbuying.solutions</b>	means the Lords Commissioners of Her Majesty's Treasury as represented by OGCbuying.solutions being a trading fund of

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Definition	Meaning
	Her Majesty's Treasury without separate legal personality.
<b>Order</b>	means an order for Ordered Services served by the CLIENT on the SERVICE PROVIDER.
<b>Ordered Services</b>	means the work performed or to be performed for the CLIENT by the SERVICE PROVIDER as specified in Schedule 2-3.
<b>Parent Company</b>	means any company which is the ultimate Holding Company of the SERVICE PROVIDER or any other company of which the ultimate Holding Company of the SERVICE PROVIDER is also the ultimate Holding Company and which is either responsible directly or indirectly for the business activities of the SERVICE PROVIDER or which is engaged in the same or similar business to the SERVICE PROVIDER.
<b>Project</b>	means the works for which the SERVICE PROVIDER is to provide professional services in accordance with the terms of this Contract.
<b>Quarter</b>	means a three (3) Month period beginning on 1st January, 1st April, 1st July or 1st October.
<b>Requests for Information</b>	means a request for information or an apparent request under the Code of Practice on Access to government Information, FOIA or the Environmental Information Regulations.
<b>Schedule</b>	means a schedule to this Contract.
<b>Service Commencement Date</b>	means the date of the commencement of this Contract as specified in the Order, or such other date as is agreed between the CLIENT and the SERVICE PROVIDER.
<b>SERVICE PROVIDER'S Programme</b>	means the programme to be provided by the SERVICE PROVIDER in accordance with the provisions of Clause 29.
<b>SERVICE PROVIDER'S Proposals</b>	means the proposals made by the SERVICE PROVIDER to the CLIENT in response to the CLIENT'S Requirements.
<b>Special Terms</b>	means any terms which are additional to the Conditions of Contract, which are agreed between the CLIENT and the SERVICE PROVIDER in the Order and included in the Contract.
<b>Staff</b>	Means all persons used by the SERVICE PROVIDER or any sub-contractor to perform the Ordered Services
<b>Statutory Requirements</b>	means all requirements to be complied with under any Act of Parliament; any instrument, rule or order made under any Act of Parliament; or any regulation or byelaw of any local authority; or any regulation, directive or decision of the European Union having the force of law
<b>Sub-Contractor</b>	means any contract or proposed contract between the SERVICE PROVIDER and any third party in respect of the provision of the Ordered Services including any Approved Sub-Contractors. The terms "Sub-Contractor" "Sub-Consultant" and "Sub-Contracting" shall be similarly construed.
<b>Subsidiary</b>	shall have the meaning given in Section 1159 of the Companies Act 2006.
<b>Working Day</b>	means Monday to Friday inclusive, excluding English public and bank holidays.
<b>Year</b>	means a calendar year.

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**SCHEDULE 2-2  
CLIENT'S REQUIREMENT**

**INTRODUCTION**

This Schedule 2-2 specifies the CLIENT'S Requirement.

The CLIENT'S Requirement is the tasks listed in the "Description" column of the Fee Schedule.



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**SCHEDULE 2-3  
THE SERVICES AND THE FEE SCHEDULE**

**INTRODUCTION**

This Schedule 2-3 specifies the Ordered Services to be provided and the corresponding Fee Schedule.

**THE SERVICES**

The Services are the tasks listed in the column titled "Description" in the Fee Schedule. The Services are to be carried out as follows:

*Team Organisation Chart:*

*Allocation of Responsibilities*

The general split of responsibilities between the technical advisory team is summarised in the following matrix:

<b>Element of Service</b>	<b>MM</b>	<b>DL</b>	<b>TG</b>	<b>TT</b>
Lead Adviser	√			
Project Management		√		
NPD Procurement Advice	√	√		
Architectural	√			
Technical and Engineering	√			

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<b>Element of Service</b>	<b>MM</b>	<b>DL</b>	<b>TG</b>	<b>TT</b>
Facilities Management	√	√		
Cost Consultancy			√	
CDM Co-ordinator				√

*Key Personnel:*

The key personnel for each organisation are:

**Mott MacDonald Limited:**

Richard Cantlay – Lead NPD Procurement Adviser  
Andrew Scott – Lead Technical Adviser / NPD Procurement Adviser  
David Stillie – Lead Architectural and Technical Adviser  
Andrew Duncan – Technical Co-ordinator  
Kenneth Birrell – Lead Facilities Management Adviser

**Davis Langdon LLP:**

Ken Fraser – Project Director  
Kevin Bradley – NPD Procurement Director  
Fraser Macquarie – Project Manager  
Richard Park – Deputy Project Manager  
Naomi Lillie – Project Administrator  
Simon McLaughlin – Lead FM Adviser

**Thomson Gray Limited:**

Ron Thomson – Lead Cost Consultant  
James Gibson – Cost Consultant  
Ian McLean – Cost Consultant

**Turner & Townsend:**

Graham Walker

*Detailed Methodology:*

A detailed methodology of how the Services will be delivered will be developed after appointment. This will set out in detail the approach that has been assumed in developing the fee for the Services to be delivered and will be used to agree between the SERVICE PROVIDER and the CLIENT the approach to be adopted. The detailed methodology will be based upon the split of responsibilities included in the table above and set out in more detail in the Fee Schedule.

*Programme:*

The key milestones are as follows:

<b>Key Stage</b>	<b>Duration</b>
Appointment of TA team	Month 0
NPD Financial Close	Month 28
Construction Complete	Month 64

**THE FEE SCHEDULE**

Enclosed is the Fee Schedule. The Fee Schedule is divided into the following components:

Section A sets out a fixed fee for delivering the Services which are required from the commencement of the Services up to the point of achieving financial close on the NPD procurement process. This fixed fee is not subject to change for inflation.

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Section B sets out a provisional sum for delivering those Services which are required during the construction period which will be reviewed and confirmed with the CLIENT in writing prior to commencing the delivery of such Services. After 1<sup>st</sup> September 2013, this provisional sum is subject to inflation adjustment using an index to be agreed in writing with the CLIENT.

Section C sets out a provisional sum for delivering those Services which are required in relation to the development of the reference design for the Project. This provisional sum is not subject to change for inflation.

Section D sets out a provisional sum for delivering prescribed additional Services with the prior written agreement of the CLIENT. After 1<sup>st</sup> September 2013, this provisional sum is subject to inflation adjustment using an index to be agreed in writing with the CLIENT.

In relation to those parts of the Services which are the subject of provisional sums (as set out above), then unless otherwise agreed in writing by the CLIENT and the SERVICE PROVIDER, the fees for such parts of the Services shall be calculated on the basis of the Blended Daily Rates specified in the Fee Schedule (and not for the avoidance of doubt on the basis of the amount of the provisional sums themselves).

Provided always that in the event that at any time during the Contract Period the SERVICE PROVIDER or any of its Sub-Contractors enters into a framework agreement with the Scottish Futures Trust (or any successor body to the Scottish Futures Trust) or the Scottish Ministers, and the rates under such framework agreement are lower than the fees calculated in accordance with this Schedule 2-3 and/or the Fee Schedule, the fee rates under this Contract in respect of the SERVICE PROVIDER or such Sub-Contractor(s) (as the case may be) shall be reduced to reflect the lower rates under such framework agreement.

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**SCHEDULE 2- 4  
KEY POSTS AND CONTACT DETAILS**

**1. INTRODUCTION**

This Schedule 2-4 contains details of the key personnel of both parties involved with this Contract and also relevant contact details.

**2. For the CLIENT (CLIENT'S Representative):**

Name of CLIENT's Representative .... Brian Currie

Telephone Number:..... [REDACTED]

Fax Number:..... [REDACTED]

Email: ..... [REDACTED]

CLIENT'S Billing address:

NHS Lothian  
Finance Services  
Accounts Payable Department  
Pentland House  
47 Robbs Loan  
Edinburgh  
EH14 1TY

**3. For the SERVICE PROVIDER (Contract Manager):**

Name of Contract Manager..... Andrew Oldfield

Telephone Number:..... [REDACTED]

Fax Number:..... [REDACTED]

Email: ..... [REDACTED]

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**SCHEDULE 2-5**  
**SUB-CONTRACTORS**

**INTRODUCTION**

This Schedule 2-5 sets out the SERVICE PROVIDER'S principal Sub-Contractors and their obligations and responsibilities arising under this Contract. Other sub-contractors shall not be used to fulfil such obligations and responsibilities.

<b>Name</b>	<b>Obligations and Responsibilities</b>
Davis Langdon LLP	As set out in the section titled "Allocation of Responsibilities" included within Schedule 2-3.
Thomson Gray Limited	As set out in the section titled "Allocation of Responsibilities" included within Schedule 2-3.
Turner & Townsend	CDM Co-ordinator and as set out in the section titled "Allocation of Responsibilities" included within Schedule 2-3.].

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**SCHEDULE 2-5  
NOT USED**

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**SCHEDULE 2-6  
PARENT COMPANY GUARANTEE**

**OGC buying.solutions Framework Agreement No. RM457/I** signed on 20 October and 2nd November 2009:

**Ordered Services:** Project Management and Design Team Services;

**CLIENT'S Reference No:** NM66866

**THIS AGREEMENT** is made

**BETWEEN:**

- (1) **MOTT MacDONALD GROUP LIMITED**, a company incorporated under the Companies Acts (Company Number 1110949) whose registered office is at Mott MacDonald House, 8-10 Sydenham Road, Croydon, Surrey CR0 2EE  
("the Guarantor"); and
- (2) **LOTHIAN HEALTH BOARD**, also known as NHS Lothian of Waverley Gate, 2-4 Waterloo Place, Edinburgh EH1 3EG  
("the CLIENT", which term shall include its successors and assignees).

**WHEREAS** by an Agreement ("the Contract") entered into on 22 March 2011 and made between the CLIENT of the one part and MOTT MacDONALD LIMITED a company incorporated under the Companies Acts (Company Number 01243967) whose registered address is at Mott MacDonald House, 8-10 Sydenham Road, Croydon, Surrey CR0 2EE ("the SERVICE PROVIDER") of the other part, the SERVICE PROVIDER is to execute certain services ("the Ordered Services") in accordance with the terms and conditions of the Contract.

**NOW IT IS HEREBY AGREED** as follows:

- 1 The Guarantor hereby absolutely irrevocably and unconditionally guarantees to the CLIENT the due and punctual performance by the SERVICE PROVIDER of all the obligations on the part of the SERVICE PROVIDER under or pursuant to the Contract ("the Terms") and (as a separate stipulation and as primary obligor) agrees that if the SERVICE PROVIDER shall in any respect commit any breach of or fail to fulfil any of the Terms, then the Guarantor will forthwith perform and fulfil in place of the SERVICE PROVIDER each and every Term in respect of which the SERVICE PROVIDER has defaulted or which is unfulfilled by the SERVICE PROVIDER. The Guarantor shall be liable to the CLIENT for all losses, damages, expenses, liabilities, claims, costs or proceedings which the CLIENT may suffer or incur by reason of the said failure or breach PROVIDED THAT the Guarantor's aggregate liability arising under this Guarantee shall not exceed the SERVICE PROVIDER'S liability under the Contract.

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- 2 The Guarantor shall be, and continue to be, liable under this Guarantee even if the Contract is or becomes for any reason not binding on, or unenforceable against, the SERVICE PROVIDER, for any reason whatsoever. No alterations in the Contract, or in the Ordered Services, and no extension of time, forbearance or forgiveness, nor any act, matter or thing whatsoever except an express release by the CLIENT, shall in any way release or reduce any liability of the Guarantor hereunder. References to the Contract in this Guarantee shall include all amendments, variations and additions to it, whether made before or after the date hereof.
- 3 This Guarantee shall remain in full force and effect until performance in full of the Terms, notwithstanding:
- (a) the insolvency or liquidation of the SERVICE PROVIDER, the Guarantor or any other person;
  - (b) any disclaimer of the Contract by a liquidator of the SERVICE PROVIDER; and/or any feature of the Contract, the negotiations prior to the SERVICE PROVIDER and the CLIENT entering into the Contract, or the performance of the Contract, making it ineffective or unenforceable.
- 4 Until the Terms have been unconditionally and irrevocably performed in full the Guarantor shall not by virtue of any performance or payment made by it hereunder:
- (a) be subrogated to any rights, security or moneys held or received or receivable by the CLIENT; or
  - (b) be entitled to exercise any right of contribution from any co-surety in respect of such performance and liabilities under any other guarantee, security or agreement; or
  - (c) exercise any right of set-off, retention, deduction, reduction or counterclaim against the SERVICE PROVIDER or any such co-surety; or
  - (d) receive, claim or have the benefit of any payment, security or indemnity from the SERVICE PROVIDER or any such co-surety; or
  - (e) claim as a creditor of the SERVICE PROVIDER or any such co-surety in competition with the CLIENT.
- 5 No delay or omission of the CLIENT in exercising any right, power or privilege hereunder shall impair such right, power or privilege or be construed as a waiver of such right, power or privilege nor shall any single or partial exercise of any such right, power or privilege preclude any further exercise thereof or the exercise of any other right, power or privilege. The rights and remedies of the CLIENT herein provided are cumulative and not exclusive of any rights or remedies provided by law.
- 6 A waiver given or consent granted by the CLIENT under this Guarantee will be effective only if given in writing and then only in the instance and for the purpose for which it is given.
- 7 (a) If at any time any one or more of the provisions of this Guarantee is or becomes invalid, illegal or unenforceable in any respect under any law, the validity, legality and enforceability of the remaining provisions hereof shall not be in any way affected or impaired thereby.



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(b) As a separate and alternative stipulation the Guarantor unconditionally and irrevocably agrees that any sum expressed to be payable by it or obligation to be performed by it under this Guarantee but which is for any reason (whether or not now existing and whether or not now known or becoming known to the Guarantor) not recoverable from or enforceable against the Guarantor on the basis of a guarantee shall nevertheless be recoverable from or enforceable against the Guarantor as if the Guarantor were the sole principal debtor or obligor (where relevant).

8 Any notice, demand or other communication to be served under this Guarantee may be served upon either party hereto only by posting by first class post or delivering the same or sending the same by facsimile transmission to the party to be served at its address or facsimile number shown below:

**CLIENT :**

Director of Finance  
 NHS Lothian  
 Waverley Gate  
 2-4 Waterloo Place  
 Edinburgh  
 EH1 3EG

**Fax:** [REDACTED]**Guarantor:**

Company Secretary  
 Mott MacDonald Group Limited  
 Mott MacDonald House  
 8-10 Sydenham Road,  
 Croydon  
 Surrey CR0 2EE

**Fax:** [REDACTED]

or at such other address or number as it may from time to time notify in writing to the other party.

9 A notice or demand served by first class post shall be deemed duly served on the second business day after the date of posting and a notice or demand sent by facsimile transmission shall be deemed to have been served at the time of transmission unless served after 5.00 p.m. in the place of intended receipt in which case it will be deemed served at 9.00 a.m. on the following business day. For the purposes of this paragraph "business day" means a day on which commercial banks are open for business in London.

10 In proving service of any notice it will be sufficient to prove, in the case of a letter, that such letter was properly stamped or franked first class, addressed and placed in the post and, in the case of facsimile transmission, that such facsimile was duly transmitted on a business day to a current facsimile number of the addressee at the address referred to above.

11 The CLIENT shall be entitled to assign or transfer all or any of the CLIENT'S rights under this Guarantee without consent of the Guarantor.

12 Nothing in this Guarantee confers or purports to confer any right to enforce any of its terms on any person who is not a party to it (except any successor or any permitted assignee of such a party).

13 The proper law of this Guarantee shall be the same as that of the Contract. Where the proper law of this Guarantee is Scots law, the parties prorogate the non-exclusive jurisdiction of the Scottish courts.

**IN WITNESS** whereof these presents consisting of this and the three preceding pages are executed as follows:

*[Testing clause or appropriate signing blocks to be inserted into engrossment in usual Scots law manner]*



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Amount Insured: £  
(not less than required by the Contract)

Excess or Deductible: £  
per claim

**SIGNED** by

for and on behalf of

\*SERVICE PROVIDER'S Insurance Broker/ SERVICE PROVIDER'S Insurers

Tel:

Fax:

Date:

20[ ]

*\*Delete inapplicable items.*

**STANDARD MODEL CONTRACT 1  
RELATING TO PROFESSIONAL SERVICES**

**SCHEDULE 2-8**

**SERVICE PROVIDER'S CERTIFICATE OF PROFESSIONAL INDEMNITY  
INSURANCE**

**OGC buying.solutions Framework Agreement No. [and Date]:**

**Ordered Services:**

**CLIENT'S Reference No:**

- 1 This certificate relates to a contract ("the Contract") dated [ ] for the provision of certain services, made between
- of
- ("the CLIENT") and
- ("the SERVICE PROVIDER"), and is furnished to the CLIENT.
- 2 Clause 16(9) of the Contract requires the SERVICE PROVIDER to effect and maintain professional indemnity insurance, in an amount not less than that stated in the Contract.
- 3 We certify that the SERVICE PROVIDER has complied with the above requirements by effecting and maintaining insurance as follows:-

Insured:

Insurers:

Policy No:

Period of Insurance: from 20[ ]

to 20[ ]

Amount Insured: £

(not less than required by the Contract) for each and every claim or series of claims arising out of or attributable to the same originating cause, without any limit being placed on the number of claims (provided that such limit of indemnity may be in the aggregate for each year of insurance in respect of claims for pollution, contamination and date recognition).

**STANDARD MODEL CONTRACT 1  
RELATING TO PROFESSIONAL SERVICES**

Excess or Deductible: £ per claim

**SIGNED** by

for and on behalf of

\*SERVICE PROVIDER'S Insurance Broker/ SERVICE PROVIDER'S Insurers

Tel:

Fax:

Date: 20[ ]

*\*Delete inapplicable items.*

**STANDARD MODEL CONTRACT 1**  
**RELATING TO PROFESSIONAL SERVICES**

**SCHEDULE 2-9**  
**CLIENT'S PROPERTY**

1. All CLIENT'S Property shall remain the property of the CLIENT and where such CLIENT'S Property is equipment, such equipment shall be used in the performance of the Ordered Services and for no other purpose without prior Approval.
- [2. The CLIENT shall be responsible for the repair or replacement of CLIENT'S Property unless the need for repair or replacement is caused by the SERVICE PROVIDER'S failure to comply with Clause 4, of this Schedule (CLIENT'S Property), or by the negligence or default of the SERVICE PROVIDER.] [Option A].
- [2. The SERVICE PROVIDER shall be responsible for the repair and/or replacement of CLIENT'S Property save where the cost of such repair and/or replacement, assessed by the CLIENT'S Representative, shall exceed the amount stated in the Abstract of particulars, in which case the CLIENT shall be responsible for such repair and/or replacement unless such repair and/or replacement was caused by the SERVICE PROVIDER's failure to comply with Clause 4, of this Schedule (CLIENT'S Property), or by the negligence and default of the SERVICE PROVIDER.] [Option B].
- [2. The SERVICE PROVIDER shall be responsible for the repair and/or replacement of the CLIENT'S Property unless the need for such repair or replacement was caused by the negligence or default of the CLIENT after the Service Commencement Date.] [Option C].
- [3. The SERVICE PROVIDER shall be responsible for his own costs resulting from any failure of CLIENT'S Property, unless he can demonstrate that the CLIENT had caused undue delay in his replacement or repair where the CLIENT was responsible for such replacement or repair.] [Delete if Option C used].
4. The SERVICE PROVIDER shall maintain all items of CLIENT'S Property in good and serviceable condition and in accordance with the manufacturer's recommendations.
5. The SERVICE PROVIDER shall be liable for any loss of or damage to any CLIENT'S Property save to the extent that the SERVICE PROVIDER is able to demonstrate that such loss or damage was caused or contributed to by the negligence or default of the CLIENT.
6. The SERVICE PROVIDER shall not in any circumstances have a lien on any CLIENT'S Property and shall take all steps necessary to ensure that the title of the CLIENT and the exclusion of any lien are brought to the attention of any third party dealing with any CLIENT'S Property.

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**RELATING TO PROFESSIONAL SERVICES**

**SCHEDULE 2-10**  
**Dispute Resolution**

**1. SETTLEMENT OF DISPUTES**

- 1.1 Any dispute or difference between the parties arising out of or relating to this Contract (a "Dispute") shall be referred, by either party, to the CLIENT'S Representative and the Contract Manager for resolution.
- 1.2 If any Dispute cannot be resolved within 10 Working Days after it has been referred under paragraph 1.1, the Dispute shall be referred to an authorised senior officer of the CLIENT and an authorised senior officer of the SERVICE PROVIDER for resolution.
- 1.3 If any Dispute cannot be resolved within 10 Working Days after it has been referred under paragraph 1.2, then the Dispute shall be further referred to mediation in accordance with the provisions of paragraph 2.

**2. MEDIATION**

- 2.1 The procedure for mediation pursuant to paragraph 1.3 and consequential provisions relating to mediation shall be as follows:
- 2.1.1 a neutral adviser or mediator ("the Mediator") shall be chosen by agreement between the CLIENT and the SERVICE PROVIDER or, if they are unable to agree upon the identity of the Mediator within ten (10) Working Days after a request by one party to the other, or if the Mediator agreed upon is unable or unwilling to act, either party shall within ten (10) Working Days from the date of the proposal to appoint a Mediator or within ten (10) Working Days of notice to either party that he is unable or unwilling to act, apply to the Centre for Effective Dispute Resolution ('CEDR') to appoint a Mediator;
- 2.1.2 the CLIENT and the SERVICE PROVIDER shall within ten (10) Working Days of the appointment of the Mediator meet with him in order to agree a programme for the exchange of all relevant information and the structure to be adopted for negotiations to be held. The parties may at any stage seek assistance from the CEDR to provide guidance on a suitable procedure.
- 2.2 Unless otherwise agreed by the CLIENT and the SERVICE PROVIDER, all negotiations connected with the Dispute and any settlement agreement relating to it shall be conducted in confidence and without prejudice to the rights of the parties in any future proceedings.
- 2.3 In the event that the CLIENT and the SERVICE PROVIDER reach agreement on the resolution of the Dispute, the agreement shall be reduced to writing and shall be binding on both parties once it is signed by a duly authorised senior officer of the CLIENT and a duly authorised senior officer of the SERVICE PROVIDER.
- 2.4 Failing agreement, the CLIENT or SERVICE PROVIDER may agree to invite the Mediator to provide a non-binding but informative opinion in writing. No such invitation shall be made without the written consent of both parties. If it is agreed that such an invitation shall be made, the opinion shall be provided on a without prejudice basis and shall not be used in evidence in any proceedings relating to this Contract without the prior written consent of both parties.
- 2.5 The CLIENT and the SERVICE PROVIDER shall each bear their own costs in relation to any reference made to the Mediator and the fees and all other costs of the Mediator shall be borne jointly in equal proportions by both parties unless otherwise directed by the Mediator.

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- 2.6 Work and activity to be carried out under this Contract shall not cease or be delayed during the dispute resolution process set out in paragraph 1 and this paragraph 2.
- 2.7 In the event that the CLIENT and the SERVICE PROVIDER fail to reach agreement in the structured negotiations within forty (40) Working Days of the Mediator being appointed, or such longer period as may be agreed, then the Dispute may, subject to the agreement of both parties, be referred to arbitration in accordance with the provisions of paragraph 3 and failing such agreement, may be referred to the Courts in accordance with paragraph 4.

**3. ARBITRATION**

- 3.1 In the event that a Dispute is not resolved pursuant to paragraph 2 (or, where the matter has been referred to adjudication, under paragraph 5), the parties may, if they both agree, refer the matter to arbitration in accordance with this paragraph 3.
- 3.2 The party seeking to initiate the arbitration shall give a written Notice of Arbitration to the other party. The Notice of Arbitration shall –
- 3.2.1 state that the Dispute is referred to arbitration;
  - 3.2.2 state the particulars of this Contract; and
  - 3.2.3 provide a brief summary of the subject of the Dispute.
- 3.3 Unless otherwise agreed in writing by the CLIENT and the SERVICE PROVIDER, the provisions of the Arbitration (Scotland) Act 2010 shall govern the arbitration commenced pursuant to this paragraph 3.
- 3.4 Any Dispute, if referred to arbitration in accordance with this paragraph 3, shall be resolved by arbitration under the Arbitration (Scotland) Act 2010.
- 3.5 It is agreed between the CLIENT and the SERVICE PROVIDER that for the purposes of the arbitration, the arbitrator shall not have the power to make provisional awards.
- 3.6 For the avoidance of doubt it is agreed by the CLIENT and the SERVICE PROVIDER that the arbitration process and anything said, done or produced in or in relation to the arbitration process (including any awards) shall be confidential between the parties, except as may be lawfully required in judicial proceedings relating to the arbitration or otherwise. No report relating to anything said, done or produced in or in relation to the arbitration process may be made to any body other than the tribunal, the CLIENT and the SERVICE PROVIDER, their legal representatives and any person necessary to the conduct of the proceedings, without the agreement of all parties to the arbitration.
- 3.7 The arbitration proceedings shall take place in Edinburgh and in the English language and the arbitration proceedings shall be governed by, and interpretations made in accordance with, Scots law.
- 3.8 The CLIENT and the SERVICE PROVIDER shall each bear their own costs in relation to any reference made to the arbitrator and the fees and all other costs of the arbitrator shall be borne jointly in equal proportions by both parties unless otherwise directed by the arbitrator.
- 3.9 In the event that the CLIENT and the SERVICE PROVIDER do not agree to refer the matter to arbitration, then any Dispute may be referred to the Courts in accordance with paragraph 4.

**4. LEGAL PROCEEDINGS**

Subject to paragraphs 1 – 3, this Contract shall be subject to the exclusive jurisdiction of the Scottish Courts to which both parties hereby submit.



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**RELATING TO PROFESSIONAL SERVICES**

**5. ADJUDICATION**

- 5.1 The provisions of paragraphs 1 – 4 above shall be without prejudice to either party's right to refer any Dispute to adjudication in accordance with the provisions of this paragraph 5.
- 5.2 The CLIENT or the SERVICE PROVIDER may at any time notify the other of intention to refer a Dispute arising under, out of, or relating to, the Contract to adjudication. Within 7 Days of such notice, the Dispute may by further notice be referred to an adjudicator to be nominated by the Law Society of Scotland. Subject only to paragraph 5.5, both the CLIENT and the SERVICE PROVIDER shall accept any such nomination as final and binding.
- 5.3 The notice of referral shall set out the principal facts and arguments relating to the Dispute. Copies of all relevant documents shall be enclosed with the notice. A copy of the notice and enclosures shall at the same time be sent by the party giving the notice to the other party.
- 5.4 If the person nominated as the adjudicator by the Law Society of Scotland is unable to act, or fails to provide the notification required by paragraph 5.5, or ceases to be independent of the CLIENT or the SERVICE PROVIDER, he shall be replaced by another adjudicator also to be nominated by the Law Society of Scotland. Again, and subject only to paragraph 5.5, both the CLIENT and the SERVICE PROVIDER shall accept any such further nomination as final and binding.
- 5.5 It shall be a condition precedent to the appointment of an adjudicator that he shall notify both parties that he will comply with this paragraph 5 and its time limits.
- 5.6 The adjudicator shall be appointed within 7 Days of the giving of a notice of intention to refer a Dispute to adjudication under paragraph 5.2. Any replacement adjudicator nominated in accordance with paragraph 5.4 shall likewise be appointed within 7 Days of the need for such a replacement having become apparent. For all such appointments, the form of adjudicator's appointment shall be the Model Form of Adjudicator's Appointment as set out in "GC/Works/5 Model Forms (1998)". A copy of each such appointment shall be supplied to each party. No such appointment shall be amended or replaced without the consent of both parties.
- 5.7 The CLIENT AND THE SERVICE PROVIDER may submit representations to the adjudicator not later than 14 Days from the receipt of the notice of referral.
- 5.8 The adjudicator shall notify his decision to the CLIENT AND THE SERVICE PROVIDER not earlier than 14 and not later than 28 Days from the receipt of the notice of referral, or such longer period as is agreed by the CLIENT and the SERVICE PROVIDER after the Dispute has been referred. The adjudicator may extend the period of 28 Days by up to 14 Days, with the consent of the party by whom the Dispute was referred. The adjudicator's decision shall state how the cost of the adjudicator's fee or salary (including overheads) shall be apportioned between the parties, and whether one party is to bear the whole or part of the reasonable legal and other costs and expenses of the other relating to the adjudication. Where the adjudicator apportions liability to each party (whether in equal or some other proportion) in relation to the payment of the adjudicator's fee or salary (including overheads), the liability of each party shall be limited to the amount apportioned to it by the adjudicator.
- 5.9 The decision of the adjudicator is binding until the Dispute is finally determined by legal proceedings, by arbitration (if the parties agree to arbitration under paragraph 3.7) or by agreement and the parties do not agree to accept the decision of the adjudicator as finally determining the Dispute.
- 5.10 The adjudicator shall act impartially.
- 5.11 The adjudicator may take the initiative in ascertaining the facts and the law.

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- 5.12 If requested by one of the parties to the dispute, the adjudicator shall provide reasons for his decision. Such requests may only be made within 14 Days of the decision being notified to the requesting party.
- 5.13 The adjudicator shall not be liable for anything done or omitted in the discharge or purported discharge of his functions as adjudicator, unless the act or omission is in bad faith. Any employee or agent of the adjudicator is similarly protected from liability.

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This is the copy of the Order referred to in the foregoing Contract between Lothian Health Board and Mott MacDonald Limited relative to the provision of project management / technical advisory and design team services for the proposed NPD project for the Royal Hospital for Sick Children / Department of Clinical Neurosciences at the Royal Infirmary of Edinburgh.

**ORDER FORM**

Order Number: NM66866

Dated: 22<sup>nd</sup> March 2011

To be quoted on all correspondence relating to this Order.

<p><b>FROM:</b> <b>LOTHIAN HEALTH BOARD</b> (also known as NHS Lothian), Waverley Gate, 2-4 Waterloo Place, Edinburgh EH1 3EG</p> <p>Name: Susan Goldsmith Job Title: Director of Finance Telephone No.: [REDACTED] Email Address: [REDACTED]</p>	<p><b>TO:</b> <b>MOTT MacDONALD LIMITED</b></p> <p>Caledonian Exchange 3rd Floor 19A Canning Street Edinburgh EH3 8EG</p>
<p><b>SERVICES TO BE PROVIDED AT:</b> Royal Infirmary of Edinburgh</p>	<p><b>INVOICE ADDRESS:</b> NHS Lothian Finance Services Accounts Payable Department Pentland House 47 Robbs Loan Edinburgh EH14 1TY</p>
<p>This Order specifies all the variables necessary for the completion of the Contract in respect of the provision of project management / technical advisory and design team services for the proposed NPD project for the Royal Hospital for Sick Children / Department of Clinical Neurosciences at the Royal Infirmary of Edinburgh.</p>	
<p><b>2. THE SERVICES</b> As set out in the draft Contract issued with this Order.</p> <p><b>3. THE CHARGES</b> As set out in the draft Contract issued with this Order.</p> <p><b>4. TIMETABLE AND OTHER DETAILS</b> <b>Service Commencement Date:</b> 22<sup>nd</sup> March 2011 <b>Contract Period</b> (measured from the Commencement Data): Up to 22<sup>nd</sup> March 2015 or commencement of availability / practical completion of the Project under the NPD Project Agreement, whichever is the earlier.</p> <p><b>Clause 16.3:</b> the public liability insurance to be effected and maintained by the SERVICE PROVIDER shall be in an amount not less than Ten Million Pounds (£10 million) Sterling) for each and every claim or series of claims arising out of or attributable to the same originating cause.</p> <p><b>Clause 16.9:</b> the professional indemnity insurance to be effected and maintained by the SERVICE PROVIDER shall be in an amount not less than Ten Million Pounds (£10 million) Sterling) for each and every claim or series of claims arising out of or attributable to the same originating cause.</p>	

**STANDARD MODEL CONTRACT 1**  
**RELATING TO PROFESSIONAL SERVICES**

**Clause 51:** It shall be a condition of the Contract that the SERVICE PROVIDER and the Sub-Contractors shall each enter into a direct CLIENT/Sub-Contractor Agreement (Warranty) in the form specified by the CLIENT, or such other form as the CLIENT may agree; and that the SERVICE PROVIDER shall deliver to the CLIENT each such CLIENT/Sub-Contractor Agreement, duly executed, within 28 (twenty-eight) Days of the Service Commencement Date or (if later) the CLIENT's approval of the relevant Sub-Contractor.

(For the avoidance of doubt, the CLIENT does not require the ultimate holding company, if any, of any of the Sub-Contractors to enter into guarantees in respect of the Sub-Contractors' obligations under such CLIENT/Sub-Contractor Agreements.)

**Clause 53:** a parent company guarantee from the SERVICE PROVIDER's ultimate parent company is required in terms of Clause 53.

**5. PROPOSED SPECIAL TERMS**

All as per the tracked changes on the attached draft of the Model Contract.

**6. PREFERRED MODEL CONTRACT**

<b>Model Contract</b>	<b>Please tick as appropriate</b>	<b>Alternative, Additional or Optional Clauses</b>
Standard Model Contract (Schedules 2A and 13)	✓	Please select required "Alternative and/or Additional Clauses" from <b>Part A</b> below
NEC Model Contract (Schedule 2B)	(Not selected)	Please select required Optional Clauses from <b>Part B</b> on next page

**PART A**

**STANDARD MODEL CONTRACT**

<b>Alternative and/or Additional Clauses</b>	<b>Tick if required</b>
6.1. Private Authorities	
6.2. Freedom of Information	
6.3. Intellectual Property Rights	
6.4. Housing Grants Construction and Regeneration Act 1996	
6.5. Duties of Care – Fitness for purpose and Standard of Materials	✓  (Add new Clause 9.3)
6.6(a) DPR – Alternative Option A	
6.6(b) DPR – Alternative Option B	
6.7. Security Measures	

**STANDARD MODEL CONTRACT 1**  
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6.8.	Access to MOD Sites	
6.9	Novation	
6.10	Collateral Warranties	
6.11	TUPE	
6.12	CRB Checks	

**PART B****NEC MODEL CONTRACT***(Not selected)*

Optional Clauses		Notes	Complete as appropriate
	Main Option	<i>Insert A, C or E</i>	N/A
	Dispute Resolution Option	<i>Insert W1 or W2</i>	N/A
Secondary Options		Notes	Tick if required
X1	Price adjustment for inflation	<i>Retain and complete Optional Statement</i>	N/A
X2	Changes in the law	<i>Delete. Not used</i>	N/A
X3	Multiple currencies	<i>Delete. Not used</i>	N/A
X4	Parent company guarantee	<i>Delete. Not used</i>	N/A
X5	Sectional completion	<i>Delete if not required</i>	N/A
X6	Bonus for early completion	<i>Delete if not required</i>	N/A
X7	Delay damages	<i>Delete if not required</i>	N/A
X8	Collateral warranty agreements	<i>Delete if not required</i>	N/A
X9	Transfer of rights	<i>Delete. Not used</i>	N/A
X10	Employer's Agent	<i>Delete if not required</i>	N/A
X11	Termination by the Employer	<i>Delete if not required</i>	N/A
X12	Partnering	<i>Delete if not required</i>	N/A
X13	Performance bond	<i>Delete if not required</i>	N/A
X18	Limitation of liability	<i>Delete if not required</i>	N/A

**STANDARD MODEL CONTRACT 1**  
**RELATING TO PROFESSIONAL SERVICES**

X20	Key performance indicators	<i>Delete if not required. Always delete if using Option X12</i>	N/A
Y(UK)2	The Housing Grants, Construction and Regeneration Act 1996	<i>Delete if services do NOT involve a construction contract/construction operations as (widely) defined by the Act.</i>	N/A
Y(UK)3	The Contracts (Rights of Third Parties) Act 1999	<i>Delete if not required</i>	N/A
<b>Option Z: Additional conditions of contract</b>		Notes	Tick if required
Z1	Freedom of information	<i>Recommended for all appointments</i>	N/A
Z2	Notices	<i>Recommended for all appointments</i>	N/A
Z3	Fair payment charter	<i>Recommended for all appointments</i>	N/A
Z4	Persons dealing with this contract	<i>Recommended for all appointments</i>	N/A
Z5	Lead designer	<i>Recommended for all appointments</i>	N/A
Z6	Disputes with Others	<i>Recommended for all appointments</i>	N/A
Z7	Conflicts of interest	<i>Recommended for all appointments</i>	N/A
Z8	Assignment	<i>Recommended for all appointments</i>	N/A
Z9	Novation	<i>Recommended for all appointments</i>	N/A
Z10	Payment forecast	<i>Recommended for all appointments</i>	N/A
Z11	Suspension for non-payment	<i>Recommended for all appointments</i>	N/A
Z12	Responsibility for documents	<i>Recommended for all appointments</i>	N/A
Z13	Official secrets	<i>Recommended for all appointments</i>	N/A
Z14	Confidentiality	<i>Recommended for all appointments</i>	N/A
Z15	Insurance	<i>Recommended for all appointments</i>	N/A

**STANDARD MODEL CONTRACT 1**  
**RELATING TO PROFESSIONAL SERVICES**

Z16	Professional indemnity insurance	<i>Recommended for all appointments</i>	N/A
Z17	Public liability insurance	<i>Recommended for all appointments</i>	N/A
Z18	Termination Events	<i>Recommended for all appointments</i>	N/A
Z19	Unincorporated joint venture	<i>Recommended for all appointments</i>	N/A
Z20	Security concern	<i>Recommended for all appointments</i>	N/A
Z21	Corrupt gifts and payment of commission	<i>Recommended for all appointments</i>	N/A
Z22	W3 Negotiation	<i>Recommended for all appointments</i>	N/A
Z23	W4 Mediation	<i>Recommended for all appointments</i>	N/A
Z24	Responsibility for work by Others	<i>Recommended for appropriate appointments only</i>	N/A
Z25	Consultant's obligation to ensure	<i>Recommended for appropriate appointments only</i>	N/A
Z26	Direct appointment of Others	<i>Recommended for appropriate appointments only</i>	N/A
Z27	Approval of Subconsultants	<i>Recommended for appropriate appointments only</i>	N/A
Z28	Environmental requirements	<i>Recommended for appropriate appointments only</i>	N/A
Z29	Access to property	<i>Recommended for appropriate appointments only</i>	N/A
Z30	Presentations	<i>Recommended for appropriate appointments only</i>	N/A
Z31	Tender documents and contracts	<i>Recommended for appropriate appointments only</i>	N/A
Z32	Recovery of VAT	<i>Recommended for appropriate appointments only</i>	N/A
Z33	Recovery of other sums	<i>Recommended for appropriate appointments only</i>	N/A

**STANDARD MODEL CONTRACT 1**  
**RELATING TO PROFESSIONAL SERVICES**

Z34	Subconsultants' collateral warranty agreements	<i>Recommended for appropriate appointments only</i>	N/A
Z35	Performance bond	<i>Recommended for appropriate appointments only</i>	N/A
Z36	The Housing Grants, Construction and Regeneration Act 1996	<i>Recommended for appropriate appointments only</i>	N/A
Z37	Consultant's records	<i>Recommended for limited use only</i>	N/A
Z38	Contract Standard	<i>Recommended for limited use only</i>	N/A
Z39	Copyright	<i>Recommended for limited use only</i>	N/A
Z40	Termination following prolonged suspension	<i>Recommended for limited use only</i>	N/A
Z41	Employer's Property Option A / B / C will apply ( <i>Delete as appropriate</i> )	<i>Recommended only for Term Contracts</i>	N/A
Z42	Security measures	<i>Recommended for limited use only</i>	N/A
Z43	Access to MOD sites	<i>Recommended for limited use only</i>	N/A
Z44	Criminal Records Bureau	<i>Recommended for limited use only</i>	N/A
Z45	The Transfer of Undertakings (Protection of Employment) Regulations 2006	<i>Recommended for limited use only</i>	N/A

**7. POINTS OF CONTACT FOR DISPUTE RESOLUTION**

CLIENT's first point of contact for dispute resolution purposes:

*Iain Graham, Director of Capital Planning and Projects, NHS Lothian*

CLIENT's second point of contact for escalation of dispute:

*Susan Goldsmith, Director of Finance, NHS Lothian*

**8. OPTION FOR FORMAT OF CONTRACT (delete as appropriate)**

~~Please send me the Contract duly executed by an authorised officer of the SERVICE PROVIDER~~

~~OF~~

Please send me a statement that a contract has been formed using the terms and conditions in the Model Contract, as amended by the special terms referred to at item 5 above, and as augmented by the information provided or referred to in this Order, such information being replicated or referenced in that statement.

(Note: at the option of the CLIENT, following the CLIENT's receipt of the SERVICE PROVIDER's acceptance statement as referred to immediately above, the SERVICE PROVIDER may also be required to formally execute an engrossment of the Contract, which engrossment will be prepared by or on behalf of the CLIENT.)



Royal Hospital for Sick Children & Department of Clinical Neurosciences  
 Technical Advisor Scope  
 17-Mar-11  
 v12

Blended Daily Rates  
 L = Lead DL £521  
 S = Support MM £521  
 R = Review TG £495  
 TT £495

Section A

CORE TECHNICAL ADVISOR ROLE UP TO FINANCIAL CLOSE

Ref	Description	Davis Langdon			Mott Macdonald			Thomson Gray			Turner & Townsend			FM				Totals			Notes	
		Role	Man Days	Fee	Role	Man Days	Fee	Role	Man Days	Fee	Role	Man Days	Fee	DLFM	Fee	MMFM	Fee	Task Total	Man Days	Section Total Man Days		Total Fee
<b>Management and Coordination</b>																				<b>234</b>		
1	Act as Lead Technical Advisor and point of contact for NHSL Client	L	0	£0		234	£121,914					£0		£0				234		£121,914		
<b>Business Cases</b>																				<b>166</b>		
2	Monitor, direct and report to NHS Health Board	L	36	£18,756	S	10	£5,210	S	8	£3,960				£0				54		£27,926		
3	Coordination of all FBC information required from advisory team by NHSL Business Case Manager	L	42	£21,882			£0	S	3	£1,485				£0				45		£23,367		
4	Manage and coordinate the review of any design proposals against the scheme brief				L	0	£0			£0				£0				0		£0		
5	Assist the Financial Advisor in the Development, Ownership and maintenance of suitably detailed Public Sector Comparator/Conventional Procurement Assessment Model including regular provision (at least quarterly) of Value for Money assessments	R	4	£2,084	S	8	£4,168	L	10	£4,950				£0	1	£521	1	£521	24	£12,244		
6	Assist in the preparation of the commercial element of the Full Business Case. This shall include full monitoring of costs, excluding whole life costs, on the basis of the bids and any refinements which develop						£0	L	5	£2,475				£0				5		£2,475		
7	Contribution to PSC as required (FM only)	L	0	£0	S	0	£0	S	2	£990				£0	3	£1,563	4	£2,084	9	£4,637		
8	Contribution to PSC as required (Lifecycle only)	S	0	£0	S	0	£0	L	3	£1,485				£0	3	£1,563	4	£2,084	10	£5,132		
9	Management of Key Stage Reviews 1 to 4	L	9	£4,689	S	5	£2,605	S	4	£1,980				£0		1	£521	19		£9,795		
All items above are FBC only. No input to OBC required by NHSL																						
<b>Procurement of NPD Co including Competitive Dialogue</b>																				<b>521</b>		
10	Prepare invitation to Partake in Dialogue (ITPD) including Output Specification, Payment Mechanism etc, for Procurement process. All prepared in association with client legal and financial advisors.	L	36	£18,756	S	214	£111,494			£0				£0	24	£12,504	45	£23,445	319	£166,199		
11	Ownership of Output Specification coordinating inputs from team	R	0	£0	L	0	£0			£0				£0	24	£12,504	0	£0	24	£12,504		
12	Ownership and coordination of Payment Mechanism	S	0	£0	L	20	£10,420			£0				£0	10	£5,210	0	£0	30	£15,630		
13	Prepare Reference Design documentation, as appropriate, for inclusion in ITPD			£0	L	10	£5,210			£0				£0		0	£0	10		£5,210		
14	Carry out any soft market testing considered necessary by the client	L	13	£6,773	S	2	£1,042			£0				£0		1	£521	16		£8,336		
15	Contribution of all necessary D&C and FM-related input to the Payment Mechanism and Output Specification in conjunction with NHSL			£0	L	0	£0			£0				£0				0		£0		
16	Check Reference Design for compliance with all appropriate NHSL and legislative guidelines and requirements (list as pre-agreed with NHSL) and identify any derogations			£0	L	5	£2,605			£0				£0		0	£0	5		£2,605		
17	Develop approved and final Room Data Sheets appropriate for inclusion in bid documents in conjunction with NHSL			£0	L	4	£2,084			£0				£0		1	£521	5		£2,605		
18	Finalise Accommodation Schedule and Adjacency Matrix in conjunction with NHSL			£0	L	1	£521			£0				£0				1		£521		
19	Preparation of Equipment Responsibility Matrix (linked to outputs of the reference design)			£0	L	26	£13,546			£0				£0				26		£13,546		
20	Receive H&S information relating to the proposed site & ERI interface from NHSL and incorporate into Output Specification			£0			£0			£0				£0				64		£31,680		
21	Advise NHSL on the correct level and balance of the Availability and Performance Standards, Handback Provisions and other components within the payment mechanism	S	0	£0	L	0	£0			£0				£0		0	£0	0		£0		
22	Technical input to Project Agreement	S	0	£0	L	18	£9,378			£0				£0		3	£1,563	21		£10,941		
The Legal Advisor shall have responsibility for ensuring consistency between the ITPD and the contract documents																						
All items above assume contract to be based on Standard PPP Form Contract																						
<b>Prepare and issue Project Information Notice (PIN) and Bidders Day</b>																				<b>33</b>		
23	Facilitate decision over whether PIN is to be used	L	4	£2,084	S	0	£0			£0				£0				4		£2,084		
24	Prepare PIN in conjunction with NHSL and legal advisors	L	9	£4,689	S	1	£521			£0				£0				10		£5,210		
25	Arrange and attend Bidders' Day in conjunction with NHSL	L	11	£5,731	S	5	£2,605	S	2	£990				£0		1	£521	19		£9,847		
<b>Pre-Qualification Process</b>																				<b>174</b>		
26	Prepare and issue PQQ pack in conjunction with NHSL and legal and financial advisors	L	25	£13,025	R	2	£1,042	S	4	£1,980				£0	4	£2,084			35	£18,131		
27	Administration of Clarifications	L	9	£4,689	S	4	£2,084	S	2	£990				£0	9	£4,689			24	£12,452		
28	Evaluation of PQQs	L	40	£20,840	S	37	£19,277	S	6	£2,970				£0	4	£2,084	4	£2,084	91	£47,255		
29	Prepare debriefing notes for unsuccessful bidders	L	7	£3,647			£0			£0				£0				7		£3,647		
30	Coordination of evaluations, reporting/recommendations to NHSL and delivery of debriefs as required	L	14	£7,294			£0	S	3	£1,485				£0				17		£8,779		
<b>Administer Competitive Dialogue Process with shortlisted Bidders (based on 3 shortlisted Bidders)</b>																				<b>499</b>		
31	Facilitate review of Competitive Dialogue Strategy and schedule	L	8	£4,168	S	1	£521			£0				£0	4	£2,084			13	£6,773		
32	Prepare Competitive Dialogue documentation (with legal and financial advisors) detailing programme, structure, agendas, interim submissions etc	L	40	£20,840	S	18	£9,378			£0				£0		2	£1,042	60		£31,260		
33	Attend formal CD meetings (include for 3 formal and 3 'informal' with each of the Bidders.	L	18	£9,378	S	36	£18,756	S	2	£990				£0	9	£4,689	9	£4,689	74	£38,502		
34	Responsibility for structure and review of all D&C and FM elements of CD process	S	17	£8,857	L	76	£39,596			£0				£0	7	£3,647	10	£5,210	110	£57,310		
35	Coordinate and document all necessary stakeholder input to D&C and FM related elements of CD process			£0	L	52	£27,092			£0				£0		7	£3,647	59		£30,739		
36	Allowance for dealing with Clarifications during CD process	L	30	£15,630	S	70	£36,470	S		£0				£0	5	£2,605	5	£2,605	110	£57,310		
37	Coordinate evaluation of and feedback to interim submissions (if any)	L	36	£18,756		30	£15,630			£0				£0	7	£3,647			73	£38,033		
38	Provide feedback on all D&C and FM -related elements of interim submissions				S	0	£0			£0				£0				0		£0		
<b>Preparation of final submissions by bidders</b>																				<b>89</b>		
39	Develop and finalise ITFSB documentation	L	30	£15,630	S	14	£7,294			£0				£0	9	£4,689			53	£27,613		
40	Develop and finalise ITFSB documentation (design elements)			£0	L	15	£7,815			£0				£0		2	£1,042	17		£8,857		
41	Develop and finalise ITFSB documentation (Capex)			£0			£0	L	5	£2,475				£0				5		£2,475		
42	Manage and administer any clarifications	L	5	£2,605	S	2	£1,042	S	5	£2,475				£0	1	£521	1	£521	14	£7,164		
<b>Evaluation of Final Tender Submissions in conjunction with client and advisory team, administration of clarifications, followed by NHSL approvals</b>																				<b>313</b>		
43	Management and coordination of evaluation process	L	36	£18,756	S	30	£15,630			£0				£0				66		£34,386		

Ref	Description	Davis Langdon			Mott Macdonald			Thomson Gray			Turner & Townsend			FM				Totals			Notes		
		Role	Man Days	Fee	Role	Man Days	Fee	Role	Man Days	Fee	Role	Man Days	Fee	DLFM	Fee	MMFM	Fee	Task Total Man Days	Section Total Man Days	Total Fee			
44	Evaluation of all D&C and FM elements of Final Tenders, in particular, compliance with bid documents and legislative requirements (Clinical Functionality will be reviewed by NHSL and does not form part of the scope at any time – (however it is likely that they will seek our guidance since this will all be part of the final evaluation)	S	0	£0	L	90	£46,890			£0							10	£5,210	10	£5,210	110		£57,310
45	Also to include evaluation of Bidders Construction proposal since these will be linked with the compliance with the Development Control Plan.			£0	L	11	£5,731			£0											11		£5,731
46	Evaluation of all commercial aspects (Capex) of Final Tenders			£0	S	4	£2,084	L	20	£9,900											24		£11,984
47	Evaluation of all commercial aspects (FM only) of Final Tenders	L	0	£0	S	4	£2,084	R	1	£495							13	£6,773	10	£5,210	28		£14,562
48	Evaluation of all commercial aspects (Lifecycle only) of Final Tenders	R	0	£0	S	4	£2,084	L	5	£2,475											9		£4,559
49	Evaluation of other technical aspects of Final Tenders	L	0	£0	S	2	£1,042			£0							0	£0		£0	2		£1,042
50	Any variant alternative proposals that may be submitted by the Tenderers, where required liaising with all other advisors to compile an evaluation report, are excluded from this Scope.			£0			£0			£0											0		£0
51	Manage and administer any clarifications	L	10	£5,210	S	0	£0	S	6	£2,970							2	£1,042	3	£1,563	21		£10,785
52	Prepare debriefing notes, and attend debrief meetings, for unsuccessful bidders	L	18	£9,378			£0			£0											18		£9,378
53	Prepare and submit recommendation report to NHSL	L	9	£4,689	S	8	£4,168	S	5	£2,475											24		£12,374
																			<b>623</b>				
54	Participate in final negotiations, along with the NHSL team and Legal and Financial Advisors, to achieve contract award and financial close	L	40	£20,840	S	85	£44,285	S	10	£4,950											160		£83,100
55	Assist in the production of a comprehensive and final version of the Contract Documents taking account of the discussions, correspondence and negotiations with the tenderers, preferred bidder and reserve preferred bidder and their respective lenders	L	40	£20,840	S	85	£44,285	S	8	£3,960							40	£20,840	14	£7,294	187		£97,219
56	Coordinate technical inputs to achieve Financial Close	L	40	£20,840	S	85	£44,285	S	1	£495							25	£13,025		£0	151		£78,645
57	Provide necessary input related to D&C, FM and Paymech elements of Financial Close including initial RDD process.				L	75	£39,075			£0											125		£65,125
		<b>636</b>	<b>£331,356</b>		<b>1403</b>	<b>£730,963</b>		<b>120</b>	<b>£59,400</b>		<b>64</b>	<b>£31,680</b>	<b>214</b>	<b>£111,494</b>	<b>215</b>	<b>£112,015</b>					<b>2418</b>		<b>1,376,908</b>

Subsconsultant management, administration & risks

£24,852

£4,455

£2,376

£8,362

£ 40,045  
 Total £ 1,416,953  
 Buying Solutions Levys £ 1,445,292  
 Discount £ 75,000  
 £ 1,370,292

**Section B**

**CORE TECHNICAL ADVISOR ROLE DURING CONSTRUCTION**

Ref	Description	Davis Langdon			Mott Macdonald			Thomson Gray			Turner & Townsend			FM				Totals			Notes		
		Role	Man Days	Fee	Role	Man Days	Fee	Role	Man Days	Fee	Role	Man Days	Fee	DLFM	Fee	MMFM	Fee	Task Total Man Days	Section Total Man Days	Total Fee			
58	Delivery of formal Authority Representative role on behalf of NHSL	L	515	£268,315			£0			£0											515		£268,315
59	Attendance and reporting at Project Board meetings as required	L	59	£30,739	S	11	£5,731	S	36	£17,820											106		£54,290
60	Ongoing management of Independent Certifier in conjunction with SPV	L	40	£20,840			£0			£0											40		£20,840
61	Monitor that Project Co provides CDM Coordinator with necessary record drawings, operating manuals for inclusion in Health & Safety file			£0	L	0	£0			£0											0		£0
62	Maintain ongoing relationship and dialogue with SPV partner	L	119	£61,999			£0			£0											119		£61,999
63	Management of Reviewable Design Data (RDD) process on behalf of Authority including progress reporting, attendance at workshops, administration and stakeholder input			£0	L	231	£120,351			£0											231		£120,351
64	Management and reporting of Change Control process (Capex)			£0			£0	L	72	£35,640											72		£35,640
65	Review of FM costs related to Change Control	L	0	£0			£0			£0			40	£20,840	39	£20,319					79		£41,159
66	Review of Lifecycle costs related to Change Control			£0			£0	L	72	£35,640											72		£35,640
67	Any required assessment and negotiation of any claims from SPV are excluded from this Scope.			£0			£0			£0											0		£0
68	Liaison with SPV and Independent Certifier as required to achieve Handover	L	15	£7,815			£0			£0											15		£7,815
69	Coordination and reporting of snagging and defects matters	L	44	£22,924			£0			£0											44		£22,924
70	All activities related to commissioning and mobilisation by NHSL are excluded.																						
		<b>792</b>	<b>£412,632</b>		<b>242</b>	<b>£126,082</b>		<b>180</b>	<b>£89,100</b>		<b>0</b>	<b>£0</b>	<b>40</b>	<b>£20,840</b>	<b>39</b>	<b>£20,319</b>					<b>0</b>		<b>£668,973</b>

**Section C**

**REFERENCE DESIGN (PROVISIONAL SUMS)**

Ref	Description	Davis Langdon			Mott Macdonald			Thomson Gray			Turner & Townsend			FM				Totals			Notes			
		Role	Man Days	Fee	Role	Man Days	Fee	Role	Man Days	Fee	Role	Man Days	Fee	DLFM	Fee	MMFM	Fee	Task Total Man Days	Section Total Man Days	Total Fee				
71	Management and Delivery of Reference Design		653	£340,213		284	£147,964		297	£147,015		75	£37,125		£0						1,309		£672,317	Provisional Sum Allowance only.
72	Provisional Sum for Design Fees (as advised by NHSL)																						£2,000,000	Allowances based on current HFS allowances for Reference Design
		<b>653</b>	<b>£340,213</b>		<b>284</b>	<b>£147,964</b>		<b>297</b>	<b>£147,015</b>		<b>75</b>	<b>£37,125</b>	<b>0</b>	<b>£0</b>	<b>0</b>	<b>£0</b>					<b>0</b>		<b>£2,672,317</b>	

**Section D**

**PRESCRIBED ADDITIONALS (PROVISIONAL SUMS)**

Ref	Description	Davis Langdon			Mott Macdonald			Thomson Gray			Turner & Townsend			FM				Totals			Notes		
		Role	Man Days	Fee	Role	Man Days	Fee	Role	Man Days	Fee	Role	Man Days	Fee	DLFM	Fee	MMFM	Fee	Task Total Man Days	Section Total Man Days	Total Fee			
73	Provision of Project Management & Programme Coordination for Little France site activities interacting with the NPD project																						Included in Total



**Royal Hospital for Sick Children/  
Department of Clinical  
Neurosciences**  
Independent Design Review  
Scottish Futures Trust

12 December 2011

# Notice

This document and its contents have been prepared and are intended solely for Scottish Futures Trust's information and use in relation to the commissioned Independent Design Review.

Atkins Consultants Ltd assumes no responsibility to any other party in respect of or arising out of or in connection with this document and/or its contents.

This document has 83 pages including the cover.

## Document history

Job number: 5106309			Document ref: Independent Design Review			
Revision	Purpose description	Originated	Checked	Reviewed	Authorised	Date
Rev 1.0	Draft	AEW				21/09/11
Rev 2.0	Updated draft – not issued	AEW			AEW	6/10/11
Rev 3.0	Updated draft – for SFT review	AEW			AEW	17/10/11
Rev 4.0	Final issue	AEW/GTW	IAS	IAS	IST	30/11/11
Rev 5.0	Finance section updated	AEW/GTW	IAS	IAS	IST	12/12/11

## Client signoff

Client	<b>Scottish Futures Trust</b>
Project	Royal Hospital for Sick Children/ Department of Clinical Neurosciences
Document title	RHSC/DCN Independent Review
Job no.	5106309
Copy no.	1 SFT, 2 SFT, 3 File Copy
Document reference	Independent Design Review

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# Summary and Recommendations

The purpose of this Independent Review was to assess the design brief for the project to replace the Royal Hospital for Sick Children and the Department of Clinical Neurosciences (RHSC/DCN) on the Little France site. The review assessed the capacity of the project to deliver value for money by meeting the strategic aims of the programme; by making best use of space and opportunities for maximising sharing with other assets; and by minimising the whole-life costs.

The recommendations are intended to indicate actions which will help to de-risk the specification and the reference design as the project progresses towards OBC and the preparation of tender documentation and to improve value for money.

## Strategic Fit and Appropriateness to Meet the Stated Need

The assessment of Strategic Fit did not form part of this review because of the advanced stage of planning of the project. In order to provide context against which to assess the proposals the objectives in the Initial Agreement documents were reviewed. In summary, the strategic intention of the project has been established in NHS Scotland's planning for some time through the approval of various business cases by the Scottish Government and is in line with general UK clinical policy of co-locating adult and children's acute services and to locate both of these with clinical neurosciences on site. There are benefits in the particular co-location of RHSC and DCN in the same building and in co-locating the new building with both the emergency department and the adult critical care services in the existing Royal Infirmary of Edinburgh (RIE).

The choice of site was established by various recorded options appraisals and feasibility studies.

## Links between the RHSC/DCN and the existing Royal Infirmary

These strategic drivers throw focus on the physical links between the new building and the existing RIE. The strategy is to integrate the RHSC/DCN services with the existing hospital and to share some clinical services such as MRI (in the new building) and adult ITU/HDU (in the existing RIE). Support services such as pharmacy, mortuary and laboratories are being provided by expansion of existing RIE departments.

### **Recommendation 1:**

*A detailed specification of the requirements of the linking buildings between the new build and the existing RIE should be prepared, outlining the number and types of patient and staff journeys that will take place, both on first opening the building and as can be foreseen in the future. The termination points of the corridors in RIE and the routes to lifts and stairs should be identified and the design should avoid routes transiting clinical areas which are not served by the link or which are sensitive patient management areas. Other physical links such as pneumatic tube and IT links should also be carefully specified.*

The advantages of a basement link were reviewed but we are advised that this is technically very difficult, has a high capital cost, and raises issues with regard to the current contractual arrangements on the existing site, and issues of interruption of clinical services during the build period. The life-cycle costs of NHS-L managing two delivery/collection yards on the same site over time therefore require to be identified. The lack of an internal FM services link means that any future integration of soft FM services on the site will be disadvantaged by the requirement to operate from two separate buildings with FM-type journeys taking place externally by van or wheeled transport trolleys.



## Planning for Future Change

A second related point is the requirement to future-proof the buildings for flexibility in the future. The stated strategic plan to accommodate change and provide flexibility in the clinical services is to be able to flex services between the new building and the existing RIE. This will allow either expansion or contraction of services as needed. For this reason also the physical links between the two buildings require to be well-specified and to terminate in appropriate locations within the new building and in particular to connect well into the general and/or clinical circulation routes within RIE. Any departments where change can reasonably be anticipated should also be highlighted in the brief.

**Recommendation 2:**

*Any elements of the building that are likely to require adaption or expansion in the future should be detailed within the output specifications.*

## Clinical Planning

The models of care for in-patients, day cases, operating theatres, radiology and emergency departments are sophisticated and thorough and incorporate appropriate benchmarked utilisation targets.

The assumptions underlying the outpatient and therapy departments are less clear and are still under discussion. For RHSC the proposed number of general consulting rooms would appear to match the projected OP attendance figures for core RHSC activity (not outreach) but detailed modelling of the individual specialist rooms has not been undertaken. DCN would appear to have more OP consulting rooms than required by the projected attendances.

**Recommendation 3:**

*The functional units for out-patients and therapies require to be under-written by a capacity-modelling exercise similar to the Bed Modelling Exercise to provide certainty that the departments are sized correctly.*

A number of detailed items of information for planning are lacking, thus preventing the assessment as to whether the proposals represent economically efficient areas. Two examples: – the numbers of patients waiting in various departments is not identified so an assessment cannot be made of the size of the space allowance for waiting, and the demand for the Family Hotel is not identified. The risk in not specifying the output requirement is that at the design stage the proposals may not match the service requirements as understood by the users.

**Recommendation 4:**

*Add detail to specifications in the Departmental Design Briefs indicating what output activities are required to be delivered from all parts of the facilities.*

## Space Planning

### In-patient Beds and Ward Planning:

#### Single Rooms

Within the current schedule of accommodation for RHSC there is a total 54% of rooms briefed as singles against a stated target in the design brief of 65%. The Glasgow project has taken a different approach to single-room provision with an overall proportion of 74% of rooms as single rooms. Single rooms contribute to the ability to manage beds flexibly for different age ranges and sexes and contribute to the control of healthcare acquired infections and to a reduced incidence of reportable errors.

The proportion of critical care beds for children that are briefed as single beds in the Glasgow project is 72% against 38% briefed in the Edinburgh project. Adult critical care units are looking towards 100% segregation of patients into single-bays or rooms.

**Recommendation 5:**

*Review the current out-turn percentage of single rooms within the SoA as it is less than the stated target. Record the rationale for the proportion of single rooms within the design brief to assist bidding teams in understanding the derogation from guidance.*

#### Bedrooms and en-suite areas

These are briefed at the absolute minimum area and may not work in practice to meet ergonomic requirements or to allow provision of a comfortable bed for parents accompanying the child. Work to test the assumptions at 1:50 scale is required, especially in the context of planning 4-bed and single rooms which often results in excess and useless space within corridors.

**Recommendation 6:**

*Test the feasibility of the briefed areas for bedrooms/ensuites at 1:50 scale in the context of a typical ward plan to ensure the designed areas do not exceed the assumptions in the schedule of accommodation and that they provide adequate functionality.*

#### Ward planning

The bed utilisation targets used in the clinical planning depend in part on the proportion of single rooms and also on beds being planned as a large “run” of beds rather than small individual “wards”. A larger “run” or “pool” of beds enables them to be used flexibly between specialties. The 1:500 plans were still in flux during our review but should be developed to ensure the maximum possible bed pool for best economy in use.

In terms of overall area per bed, RHSC Edinburgh is briefed at less area per bed than the new Glasgow children’s hospital but Glasgow has relatively less support accommodation and more space in rooms for direct patient care.

1:200 planning was not available for review.

**Recommendation 7:**

*Test the distribution of support accommodation within a run of flexible beds on a ward floor plan at 1:200 to ensure the bed distribution is sufficiently flexible to deliver the utilisation assumptions and that the support accommodation is not over-specified.*

## Emergency Department

The overall space allowance relative to the number of treatment spaces is significantly less than those suggested by guidance or used in Glasgow. The out-turn design may be a highly efficient department but equally the design stage may demonstrate that the department is in fact under-briefed in terms of support areas.

### **Recommendation 8:**

- 1 Consider modelling projected activity beyond 2013
- 2 Provide more detail within the brief on intended operational policies and patient flows within the department.
- 3 Review the brief for the Emergency Department in terms of staff rest rooms, offices, size of staff changing, storage, waiting, staff seminar/study areas and indicate within the design brief where these are to be provided elsewhere in RIE to assist bidding teams in understanding the requirements.
- 4 Resolve the issue of the Paediatric outpatient department not being adjacent to the Emergency department for use in a Major Incident as currently described in the design brief.

## Operating Theatres

Operating Theatres benchmark appropriately to space standards and include a saving of space from the sharing of the facility between RHSC and DCN.

## Radiology

Radiology benchmarks appropriately to space standards and includes a space saving from the sharing of the facility between RHSC and DCN, and further savings from the ability to cross-utilise facilities with RIE.

## Outpatients

Increasing numbers of treatments are carried out in out-patient departments and it may be that the required number of treatment rooms may increase over time. The planning of inter-changeable rooms with standardised sizes would allow future such changes in practice.

### **Recommendation 9:**

- 1 Provide more detail within the design brief on the operational policies for the out-patient areas.
- 2 Consider standardised consulting/exam and treatment rooms to provide maximum opportunity for the introduction of new methods of treatments and specialist clinical staff.

## Therapies

Insufficient information is provided in the brief to enable an assessment of the appropriateness of the planned accommodation.

### **Recommendation 10:**

*Provide more information on how the Therapy departments are to operate, for example, how patients are to be received, logged into the system and how the therapist is alerted to their arrival. Also detail what the intended purpose of each clinical room is and what large items of equipment each will contain.*

## Clinical space planning generally

The standardisation of rooms is gradually being introduced through the project and this should be developed as far as possible including into 1:50 exemplar rooms. This will result in efficiencies during the design phase, and also in equipping the rooms and in their ultimate use by staff. As an example of this last point, the standardisation of design has been proven to reduce the level of clinical incidents.

NHS Lothian standards are generally less than guidance, but may well be quite functional. Again, a few 1:50 exemplars would under-write the assumptions being used and reduce the risk of later changes or a creeping increase in area driven by functionality.

### **Recommendation 11:**

*Identify key clinical rooms – likely to be 15-20 different types of room in total and provide an indicative 1:50 layout (straight from ADB or even in sketch form) in order to under-write the proposed square metre area for each room. Utilise these standard areas throughout the schedule of accommodation.*

## Support Services Planning

Soft and hard FM services require to have dedicated accommodation provided in the new building because the soft services provider will be NHS-L separately from the current arrangement for the existing RIE. Hard FM services will be provided through the NPD contract.

Catering for patients is currently stated as being by means of a full production kitchen, but the schedule of accommodation reflects a cook-freeze methodology. Both of these methods are in use by NHS-run catering services in Scotland. An option appraisal to determine the most economic method to provide catering in the new building will be undertaken by NHS Lothian. Non-patient catering is currently still being discussed within the Board.

### **Recommendation 12:**

*Undertake an option appraisal to determine the optimum catering methodology for patient and non-patient catering to deliver best value for money.*

Other support services such as linen services and staff changing do not have sufficient information provided to enable an assessment of the economy of the planned areas.

### **Recommendation 13:**

*To ensure that best value for money will be delivered, the Board may wish to review the derivation of the scheduled areas and to record more detail on the proposed operation of the various areas. This will assist the design teams in understanding how the detailed design should be approached.*

The proposals indicate that a number of existing RIE departments such as laboratories and pharmacy will be expanded or altered to accommodate the RHSC/DCN workload. This presumably increases the efficient utilisation of these departments and prevents duplication of facilities on the site, but we are not able to make an assessment of this element of the project.

## Efficiency of Planning

The Schedule of Accommodation with which we were provided had been constructed to match costing by the DCAG methodology. Therefore we have reviewed it against that methodology and not against the current methodology as described in the Healthcare Premises Cost Guide 2010.

### Departmental Circulation Allowance

There is a smaller allowance in the RHSC/DCN schedule for Departmental Circulation in total than is derived through the use of departmental norms as published in the Health Building Guidance. The sum of departments is 1,013.6 sq.m. or 2.9% less than that calculated using the allowances in the guidance. A systematic under-estimate of circulation areas can be a problem in that the out-turn designed areas are then more than the estimated areas and this has an impact on cost.

**Recommendation 14:**

*The Board may wish to review this element with its technical advisors and healthcare planners to be confident the departments can be designed within the target areas.*

### Net to Gross Areas

The allowance for communication and plant within the current NHSL schedule is 38%. This is higher than the standard pre-design range assumption of 24%-35%. 38% may be appropriate given the requirement to link to the existing building and to accommodate two quite separate patient flows within the building. This element will move from a theoretical calculation to a measurable figure during the development of the Reference Design and should become increasingly accurate.

**Recommendation 15:**

*1. NHSL should continue to target reduction in the figure for main corridor communication, lifts and stairs and plant by value engineering of the developing design.*

*2. NHSL to check whether Glasgow Southern General has a separate energy centre or whether the plant rooms are integrated into the building which could explain the higher 38.3%.*

## Reference Design

At the point of our review the Reference Design was relatively under-developed considering the stage of the project. There was no clear and settled building diagram. This means that:-

- The clinical adjacencies are not yet wholly resolved,
- There is not an understanding of how departments can be developed in detail within the current blocks.
- There is no resolved strategy which can be expressed in supporting diagrams for communication routes, segregation of flows or FM servicing.

Clarity about these issues will be crucial to the NPD design process to ensure that the facility delivers the desired clinical efficiencies and patient satisfaction.

As previously noted, a stated requirement for the Emergency Department to be adjacent to the Outpatient Department for the purposes of Major Incident Planning is not currently being achieved.

**Recommendation 16:**

*1. Provide clinical planning diagrams now to determine the communication and circulation strategy as well as department adjacencies.*

*2. Resolve the circulation strategy within the Reference Design.*

*3. Match the adjacency matrix to the developed plan.*

## Reference Design (continued)

The site is complex and will be very highly developed. Space for future expansion is extremely limited. Risk areas in the overall site design will require to be well resolved before the project is tendered and the design of these areas to be carefully managed through the process to avoid additional costs.

**Recommendation 17:**

*To provide as much detail as possible on the site diagram including the definition of the following elements:- pedestrian access to both services; public transport routes made clear, detailed ramps and turning circles for the basement; vehicle traffic routes to be well-segregated from pedestrian walkways and entrances.*

There were no Departmental Layout drawings at 1:200 scale available for us to review, but the current 1:500 block planning includes shapes which are awkward to plan for the required function.

**Recommendation 18:**

*The departmental planning at 1:200 scale should be thoroughly resolved prior to issue within the tender documentation.*

## Design Quality and Design Output Specifications

During the review process, NHS-L agreed that it would be helpful to clarify the Board's aspirations for the quality of design to be delivered, particularly in respect of those elements of evidence-based design that affect outcomes for patients and the environment for patients and staff. NHS-L intend to involve patients, carers and staff in the definition of the objectives and standards of the design. The results of the first AEDET underscore the need to develop these criteria.

**Recommendation 19:**

*Provide within the brief an indication of the Board's aspirations towards the required quality of the design. This may be by a Design Statement similar to that recommended by Architecture and Design Scotland including an indication of "What success looks like" and detailing of the non-negotiables for patients, staff and relatives.*

## Capital Costs

The review included a high-level financial check on the Technical Cost Summary 4 NPD capital costs, FM allowances and life cycle costs for a project with a gross internal floor area of 48,188m<sup>2</sup>. The review included assessing all of the information as detailed in Section 6.1 provided by NHS Lothian/ Thomson Gray dated 12 October 2011.

The overall current total Capital Cost per square metre of £3,214 per m<sup>2</sup> (including NPD site works) for the purposes of the Outline Business Case is considered to be within the expected range for a project of this size and scope, based on the SoA Version 5. As stated, however, there are certain elements which should be reviewed and challenged as the next stage of the project is progressed and these are summarised in section 6.17.

Based on a range of benchmark information the Life Cycle Cost per square metre per annum of £27/m<sup>2</sup>, at 3Q 2011 prices, sits within the expected range of benchmarks.

Based on a range of benchmark information the FM allowance of £29/m<sup>2</sup>/year sits within the expected range of benchmarks, albeit slightly below the £34/m<sup>2</sup>/year midway point.

**Recommendation 20:**

*NHSL to review the following:-*

- 1. Post Financial Close NPD Co design development fees included at 10% by NHSL which are considered higher than other projects benchmarked.*
- 2. Review the Risk Register as the design develops and reduce accordingly as risks are mitigated and costs become more certain.*
- 3. Review design shape, specification and elemental cost plan against overall cost per square metre as the design develops during the next stage.*
- 4. Gross to Net floor area – target communication and plant area reduction and measure against South Glasgow Hospital with regard to the energy centre.*

# 1. Remit, Process and Approach

## 1.1. Remit

### 1.1.1. From SFT Invitation Letter - Independent Design Review, 1 August 2011

“To review the Design Objectives for the **Programme** :

To provide a focus for the independent review, it is important that it is targeted towards programme wide objectives. These are set out below:

- A design proposal that meets the strategic needs for efficient and effective long-term service delivery identified as part of the Initial Agreement and any other associated documentation.
- A design that eliminates unnecessary space maximises potential sharing of space between user departments and fully integrates with an efficient service strategy.
- A design specification that minimises the whole life costs of the building, including both the upfront capital cost per square metre and the ongoing maintenance and lifecycle costs. The design specification should also achieve the appropriate sustainability targets.”

### 1.1.2. From Appendix 1 to SFT Invitation Letter, 1 August 2011

“The Assessment of Value for Money: Step 3: Facility Efficiency

This aspect of the vfm assessment examines whether the actual proposal for the building design:

- Optimises the delivery of the clinical services;
- Results in an efficient building design in terms of the capital costs to construct. For example, plan efficiency and layout, siting, adopts appropriate sharing of space between departments, has an efficient approach to the specification of the facilities;
- Considers future proofing of the facility;
- Results in an efficient building design in terms of operational costs to manage and maintain;
- Deals efficiently with the interface with any existing facilities on the site and is consistent with potential future developments on the site.”

## 1.2. Process

From the SFT Invitation Letter dated 1 August 2011, the required support to SFT was described as follows:

- a) Review of documents including the Initial Agreement, options appraisals undertaken and design development decision making process;
- b) Carrying out a limited number of interviews with key members of the project and advisory teams;
- c) Review of comparisons with external benchmarks for space and unit (m<sup>2</sup>) costs made by the project team including the relevance of benchmarks selected, whether additional benchmarks would add value, and the completeness / consistency of reporting against benchmarks;
- d) Attendance at a workshop with the project team;
- e) Understanding and challenge of key design assumptions that drive space and specification / cost requirements;
- f) Feed back of review / challenge to the Project Team;
- g) Preparation of a brief report summarising observations made.



## 1.3. Approach

### 1.3.1. Review documents made available by NHS Lothian

Some 250-300 separate documents were supplied by NHS Lothian for review.

### 1.3.2. Elements of Specification of Facility

The Review was structured to address the individual elements that comprise the Design Brief for the facility. See Figure 1 over

### 1.3.3. Preparatory process for workshop

The elements for review were grouped into three and pre-meetings were held which covered these elements in detail. These allowed us to clarify certain elements of the written documentation and to seek further information on the approach which had been adopted.

Meeting 1 – Strategy, Model of Care, Activity Modelling, Derivation of Functional Units

Meeting 2 – Space Programme (Clinical and non-clinical); Whole System Brief

Meeting 3 – Reference Design

(A further informal meeting was held after the workshop on outpatients and therapy)

### 1.3.4. Workshop (“Workshop 2” in SFT protocol)

A workshop led by SFT was held on 24<sup>th</sup> August 2011. The purpose was to explore those issues which had emerged during the review of documents and the pre-meetings. The following actions were identified by SFT following the workshop.

1. Theatre Activity: further information to be provided by Capita.
2. Outpatients activity and space provision: separate discussion to take place between Aileen Walker and Graham Cumming,
3. Therapies: more information to be provided: to be taken along with Outpatients’ action.
4. Provision of independent energy centre and fm servicing yard to the RHSC/DCN : report to be prepared by NHSL for the Project Board on the qualitative analysis underpinning this agreed way forward.
5. Kitchen provision: option appraisal to be carried out by NHSL.
6. Non patient catering: NHSL to consider the options and identified a preferred route for provision.
7. Single rooms : percentage of beds within children’s hospital to be considered.
8. Single rooms (and relative en suites and circulation space) : NHSL to develop detailed drawings and mock up to consider how the single rooms will operate clinically and within the context of a ward configuration.
9. Support space in the context of the sizes of wards now developed: NHSL to consider potential to reduce support areas in the light of ward configurations.
10. Circulation flows: to be shown on drawings to assist design development.
11. Departmental Relationship: matrix to be checked against reference design.
12. Benchmarking of Costs (including benchmarking of communication and plant area) : to be carried out separately.

### **1.3.5. Cost Review**

#### **1.3.5.1. Information Exchange**

A high-level review of the capital cost assumptions was carried out by Faithful and Gould (F&G). There was an initial information exchange with NHS Lothian which provided to F&G a copy of Technical Cost Summary and appendices. This was prepared by NHSL cost advisors Thomson Gray and is dated 12/10/11. A set of architectural drawings was also provided. Following review of this information a meeting was held on 25<sup>th</sup> October 2011 with SFT and NHSL. As an outcome of this meeting an additional set of information requirements were identified by SFT. This set was received by F&G on 11 November 2011 and it is on this information that our comments are based.

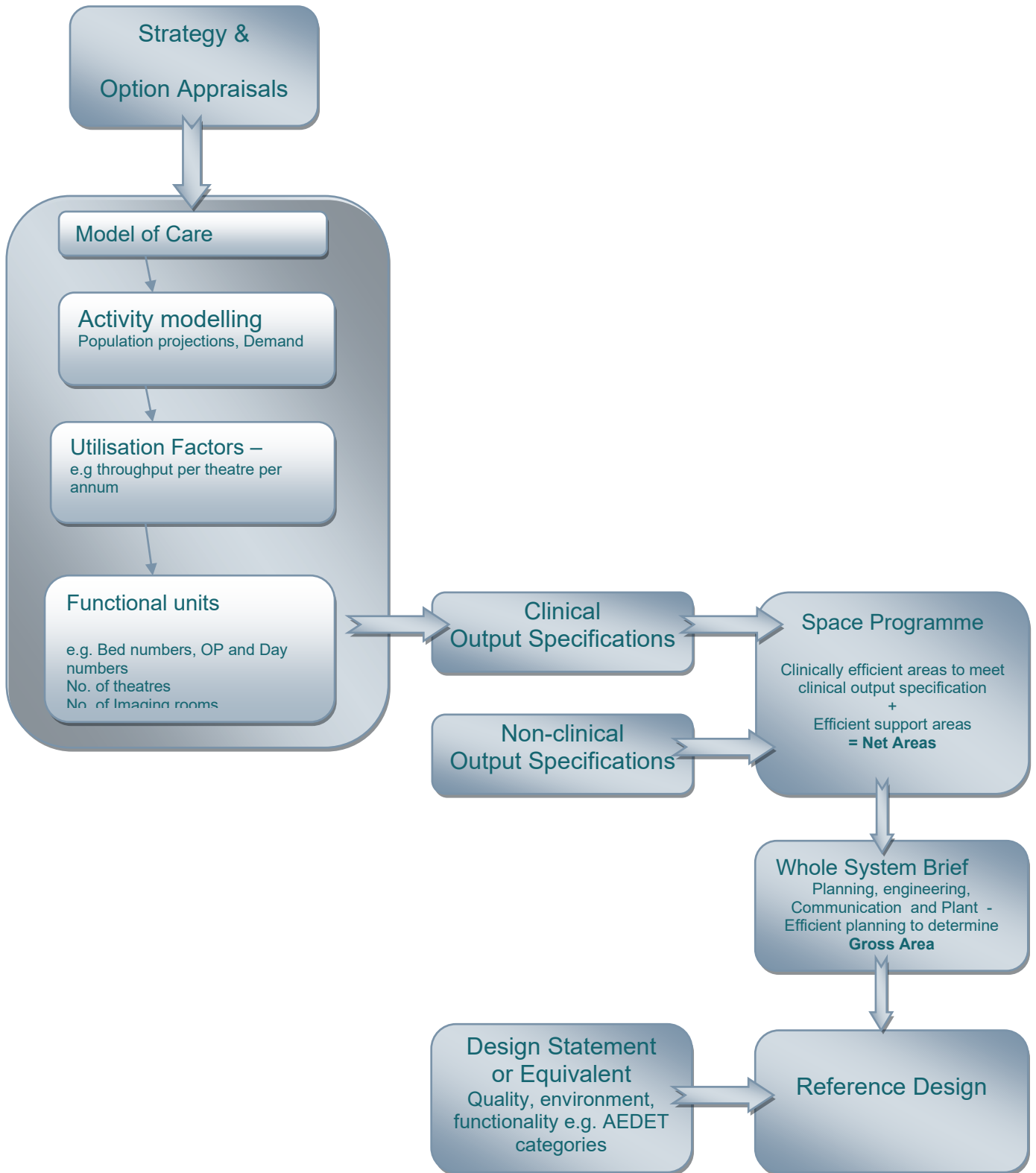
#### **1.3.5.2. Benchmarking**

The information was reviewed against benchmark information from 6 recent comparable health projects which had reached the stage of due diligence on the final capital cost. These projects were both English and Scottish in order to provide a wide basis for comparison.

### **1.3.6. Structure of elements for review**

The following diagram (Figure 1) describes the healthcare planning process towards the production of a reference design and represents the elements that we assessed in our review of the project.

Figure 1 Structure of Elements for Review



## 2. Strategic Context

The Strategic Fit and Appropriateness to meet the Stated Need was reviewed to provide a context for the assessment of the current proposals.

### 2.1. Summary of Initial Agreements

The Initial Agreement for RHSC was prepared in May 2006 and for the DCN in 2008. Therefore they both pre-date the current guidance in the Scottish Capital Investment Manual (SCIM) to provide a detailed specification in the Initial Agreement of:

- Business/service objectives
- Sustainability objectives
- Design objectives
- Key service requirements
- Critical success factors
- Expected benefits

It was not possible therefore to make a point-by-point comparison of the proposals against the objectives. However these elements are covered in principle within the documents as follows:

### 2.2. RHSC – Information from the Initial Agreement

#### 2.2.1. Current Paediatric Services in Lothian

NHS Lothian provides core children's services for the local population and a range of Regional and National Services for the wider population.

In-patient paediatric services are provided in the existing RHSC for children up to 13<sup>th</sup> birthday and at St John's Hospital at Howden.

Out-patient and community services are provided from a range of locations. In some cases these are appropriate, such as outreach services. In other cases these are inappropriately provided such as children's ophthalmology being provided with the adult service in the Princess Alexandra Eye Pavilion.

#### Current In-patient Bed numbers

RHSC – 94 beds, 26 day case, 15 crit care (6ITU, 6 HDU, 3 surgical neonatal)

St John's Hospital – 12 beds and 6 beds for GP referrals

#### Children's Services currently provided by NHSL beyond that of local population

National services	Regional services
Intensive Care Retrieval (with Glasgow)	Burns
Paediatric Intensive Care (with Glasgow)	HDU
Cleft Lip & palate	Neonatal surgery
Spinal Surgery/Scoliosis	Oncology/haematology
	Neurosciences

## 2.2.2. RHSC – Stated Objectives of the Project

### Business/Service objectives

1. Co-location of children's specialist acute services with adult, maternity and neonatal services in line with the Kennedy report (*The Report of the Public Inquiry into children's heart surgery at the Bristol Royal Infirmary 1984-1995, published 2001*) and subsequent national policy statements. The Kerr report (2005): *Building a Health Service 'Fit for the Future'*, specifically committed to the rebuilding of children's hospitals in Glasgow and Edinburgh. This was re-stated in the National Delivery Plan - a Service Model for Scotland (2009), recommendation 84.
2. Service redesign as described in Delivering for Health and the subsequent detailed policy statements towards Managed Clinical Networks, tiered into local, DGH, Regional and National levels. The goals of service re-design are to provide sustainable core and specialist services in the region.
3. Service redesign – specific examples of intentions for the project
  - a. To ensure full provision of age-appropriate care – RHSC currently only able to accommodate children up to 13<sup>th</sup> birthday
  - b. Develop ambulatory care to reduce in-patient stays
  - c. Regional re-organisation of paediatric general surgery
  - d. Regional lead from Lothian for HDU centres
  - e. PICU to operate with Glasgow as single PICU on two sites
4. Avoid further expenditure on the existing RHSC buildings which are inadequate to meet current standards
5. Accommodate increased demand from demographic change (the expected increase in population of SE Scotland) and from improved survival of children with complex needs
6. In common with every area of the health service – meet the increased demands of evolving technology, the widening range of available treatments and increased expectations of patients and carers

### Sustainability objectives

Sustainability objectives are not specifically stated in the IA – other than the aspiration to meet organisational change.

### Design Objectives

The preparation of the IA pre-dates the establishment of the mandatory A&DS process to improve design quality in health buildings. This requires the preparation of a Design Statement at IA stage which identifies elements of design quality, functionality and non-negotiable aspects of the environment which the design will be required to achieve.

### Expected Benefits

These are noted in the IA as –

1. Benefits to patients – improved quality of service (not defined further); accommodation for all age groups; improved “front-door” to reduce A&E waiting times and so on
2. Benefits to staff – improved working environment; synergy for research
3. Benefits to NHS-L – improved productivity; compliance; recruitment and retention

### 2.2.3. Summary of the Strategic Intention within the IA for RHSC

The existing RHSC buildings are too limited to deliver care to children up to and including age 16. It is in an unsuitable and inefficient building.

Children's services do require dedicated clinical facilities, but having children's services isolated from the full range of support services in the main acute and trauma centre adds to clinical risk. The key clinical benefit of co-locating with adult services rests in the potential to maximise staff cover in the emergency department and in anaesthetic cover and support. It is also beneficial to have specialist neuroscience investigations and treatment available on site to avoid duplication of these facilities and to maximise the availability of specialist staff.

"Back of house" services including important Clinical Support services such as Laboratories and Pharmacy do not require to be dedicated and can be shared with adult services.

## 2.3. DCN – Initial Agreement

The Initial Agreement for DCN is dated 30<sup>th</sup> July 2008

### 2.3.1. Summary of the Strategic Objectives of the Project, drawn from the IA

1. Co-location with emergency departments and other acute services (Ref The Society of British Neurological Surgeons (2000): *Safe Neurosurgery*)
2. Closer links to stroke medicine, critical care and orthopaedic trauma services to improve patient pathways and outcomes by increasing speed of cross-referral and facilitating communication between teams.

Stroke medicine - The co-location of acute stroke with neuro-radiology and neurology to improve outcomes for patients for whom accurate diagnosis, assessment and intervention is time-critical, and to smooth the pathway of care between these interdependent specialties.

Orthopaedics - The co-location of neurosurgery and orthopaedics to bring opportunities to develop spinal surgery. Shared training and experience across these two specialties will develop staff skills and improve care for patients.

Information technology - To provide a more robust base for the implementation of further digital image transmission and telemedicine links to allow the specialist services in neurosciences to share information in partnership with local services, in order to support clinical decision-making and remote care.

3. Co-location of adult and paediatric services

#### **Clinical issues:**

*The Bristol Royal Infirmary Inquiry* highlighted split site working as a major contributing factor to inadequate care, and like the *Review of Paediatric Neurosurgery* concluded that the safe delivery of paediatric services is supported by close proximity to acute adult neurosurgical services.

(Ref Kennedy (2001): *The Report of the Public Inquiry into children's heart surgery at the Bristol Royal Infirmary 1984-199*) and Youngson (2001): *Review of Paediatric Neurosurgery*)

**Workforce issues:**

The co-location of adult and paediatric neurosciences would improve patient safety in the increased cover that clinical staff will be able to provide, and efficiency through reduced time spent travelling between sites. Also contribute to meeting European Working Time Directive and Workforce development.

4. Fit with Edinburgh BioQuarter Development and promotion of links with the University of Edinburgh Academic and Research departments. Note NHS sharing of state-of-the-art imaging facilities, provided through research funding, in DCN.
5. Meet Increasing demand for services:
  - a. neurosurgery will continue to be emergency driven, with a year on year increase of 3% activity
  - b. the expanding older age group will place increasingly significant demands on neurosurgical services, particularly in respect of degenerative spinal surgery as well as hydrocephalus and tumour; and
  - c. that the 5% of head injuries requiring neurosurgical involvement at present will rise to 10-15% as other surgical specialities pass over responsibility for the care of these patients.
  - d. Furthermore, the survival rates of children with complex clinical needs associated with neurological and neurosurgical conditions have improved, also contributing to an increased demand on paediatric and adult neuroscience facilities.
6. Facilitating the National Managed Clinical Network - Neurosciences Implementation Group (NIG) (2008): *Report to Cabinet Secretary for Health and Wellbeing*
7. NHS Lothian Property Strategy - existing facilities achieve satisfactory rating for safety but physical condition and energy efficiency is unsatisfactory. Costs to upgrade and modernise are substantial and may not be achievable on existing site.

**2.3.2. Sustainability and Design objectives**

As with the RHSC IA, these are not explicitly stated in the Initial Agreement.

**2.3.3. Expected Benefits**

The expected benefits are described, much in line with the strategic objectives.

**2.3.4. Summary of the Strategic Intention within the IA for DCN**

Neurosciences will be optimally provided with both the main adult acute and children's facilities.

Full integration of DCN with the other adult clinical services on RIE site is required to achieve the maximum clinical benefits from co-location.

## 2.4. Integration of the Projects

### 2.4.1. Milestones in OBC and Option Appraisal

Figure 2: Milestones in OBC and Option Appraisal

Project	Milestone	Comment
RHSC as individual build	RHSC OBC submitted to SG and approved by CIG August 2008	Preferred option – Car Park B at Little France, capital funded option
	2010 – OBC superseded by proposals for Joint Build	
DCN as individual build	OBC approved by NHSL - November 2009, not submitted to SG	Preferred option – Little France, various site options were identified, capital funded
	2010 – draft OBC superseded by proposals for Joint Build	
2010 onwards – Revenue Funded Model Proposed	Benefits of co-location of RHSC/DCN identified	
	Davis Langdon – viability report – option appraisal and feasibility – Dec 2010	
	Business Case Addendum – March 2011	Option selected – Joint Build on Car Park B by NPD route

### 2.4.2. Benefits of Co-location – as drawn from the Business case Addendum of March 2011

#### Clinical

- The ability to deliver adult and child neurosurgery from the same theatre suite, maximising the utilisation of specialist equipment especially intra-operative MRI
- Joint-working and economies of scale in high-cost specialist clinical areas such as theatres, radiology and neurophysiology
- Better management of adolescent care in neurosciences

#### Non-clinical

- Economies of scale in sharing support accommodation and facilities such as health records, IT, staff changing and public space
- Minimising disruption to RIE site through having one build rather than two
- Preserving RIE expansion zone to accommodate future flexibility and growth
- Maximising the benefit of development work done to date such as existing design work



### 2.4.3. Site Option Selection

The Business Case Addendum, March 2011 summarised the findings in the individual option appraisals which selected the Little France site over the St John's Hospital site for both services and over the Western General Hospital site for DCN.

### 2.4.4. Project Options at Little France

Davis Langdon facilitated an Option Appraisal Exercise and prepared a Feasibility Report on site options at Little France. The outcome of this exercise was the selection of Car Park B as the preferred site for a joint RHSC/DCN new build.

## 2.5. Summary - Context for the Independent Review

The strategic objectives are in line with national and local strategy and with best practice, and the strategy has been approved by the Scottish Government. The proposals are to be designed to meet the stated Business and Service Objectives of the investment and to deliver the stated clinical and operational benefits.

Sustainability and design objectives were not explicitly stated in the IA and currently are being developed by NHSL.

Critical success factors were not specifically identified and may be developed through the joint Outline Business Case (in preparation).

The strategic drivers throw focus on the nature of the link between RIE and the proposed new building. The link requires to be sufficiently functional to allow the integration of certain clinical services now and to achieve some of the economies of scale which are anticipated.

## 2.6. Planning for Future Change – Future Proofing of the Design

Change is certain. The nature of clinical services and also the demand for services change regularly and often dramatically. A particular risk factor in planning children's services is the uncertainty around the continued appropriateness in the future of all health boards providing in-patient paediatric services. For DCN services, the demand is likely to increase in line with demographic factors and the ageing of the population.

A key element of the Board's forward strategic planning is to be able to flex services between the new building and the existing RIE. This means that the links between the two buildings will also require to accommodate changes in clinical services within both buildings as service profiles change.

#### **Recommendation 1:**

*A detailed specification of the requirements of the linking buildings between the new build and the existing RIE should be prepared, outlining the number and types of patient and staff journeys that will take place, both on first opening the building and as can be foreseen in the future. The termination points of the corridors in RIE and the routes to lifts and stairs should be identified and the design should avoid routes transiting clinical areas which are not served by the link or which are sensitive patient management areas. Other physical links such as pneumatic tube and IT links should also be carefully specified.*

#### **Recommendation 2:**

*Any elements of the building that are likely to require adaption or expansion in the future should be detailed within the output specifications.*

## 3. Clinical Planning

### Performance and space optimisation for key clinical departments

In this section the development of the strategy into the service specification is considered. This involves five logical stages as described in Figure 1 above and summarised in the adjacent box.

The process begins with describing the Model of Care which is to be followed, then modelling Activity and Demand, establishing the utilisation assumptions (or how the facility can most efficiently be operated) and then calculating the out-turn Functional Unit on which the Space Programme can be based.

This section considers the key clinical departments on which the nature and scale of the rest of the hospital depends, and which in themselves tend to be the most cost- and staff-intensive:

- In-patients beds (including Critical Care Facilities) and Day Case facilities
- Paediatric Emergency Department
- Operating Theatres
- Radiology
- Outpatients and other ambulatory facilities such as Therapies

<b>Elements considered in assessing vfm in planned provision</b>
1. Model of Care ->
2. Activity Modelling ->
3. Utilisation Assumptions ->
4. Functional units ->
5. Space allowance

## 3.1. In-patient beds and day case

### 3.1.1. RHSC Model of Care, Activity Modelling and Utilisation Factors

The basis for the modelling of in-patient bed numbers and day case is described in the report by Capita entitled *Planning Projections v1.6, 7<sup>th</sup> August 2011*

**Figure 3: Capita Consulting: In-patient and Day Case Bed Modelling Methodology**

Modelling Step	Summary approach
1 Extract 1 years activity data within the scope of the RHSC/DCN re-provision and generate HRG to establish baseline activity, patient mix, casemix and current LOS	The modelling has been undertaken three times for three different baseline years and includes the repatriation of activity from RIE and WGH sites (patients < 16 years of age)
2 Establish pathways to be modelled	Modelled medical emergency activity through an assessment ward (max stay 2 nights) and on to downstream specialty beds. Surgical emergency activity was modelled through a surgical assessment ward (max stay of 3 nights) and on to downstream beds
3 Apply GRO population projections to the patient mix (age/sex/HB residence) and current LOS to the baseline year	In the first two modelling rounds an additional 1% per annum growth was applied to GRO projections given the disparity between the actual and projected GRO annual birth rate. This assumption was removed from the third modelling round as activity has now converged with GRO projections (as advised by client). This was supported by comparing the reported activity and bed days used between the second and third round of modelling (9 % drop in activity and 15 % drops in OBDS). However, given the sensitivity and immediacy of impact of birth spikes to the potential demand on the service (33 % activity and 50 % of OBDS for < 3 years of age) , the latest bed modelling has included some buffering scenarios by modelling at the 99th percentile in peaks in demand across all bed pools (as well as the 95 <sup>th</sup> percentile) and by modelling a LOS of 1 for same day discharges
4 Establish bed pools and modelling occupancy rates based on peaks in demand analyses,  -optimise use of overall capacity across specialties but ensure sufficient capacity to meet demand during the busiest periods of the year	The bed pools used in the modelling have been based on the appropriateness of individual specialties to share bed resources to better manage peaks in demand; and the modelling occupancies for these bed pools have been comparable across modelling rounds.  The occupancy rate modelled to ensure sufficient flex up capacity during the winter months is around 75 %, but the overall utilisation rate (beds used/ funded beds) is around 80 % if 5 of the projected beds were open only for 6 months over the winter period. Following a review of the working occupancies which would need to be applied to model sufficient capacity to meet peaks in demand, Tribal were asked to revise the bed modelling pools to improve overall utilisation rates across specialties and to better fit with planned service models
5 Project inpatient and day case bed requirements from 3 and 4 for current LOS	Projected beds have been compared with the plan across a number of scenario years. The results of the third iteration have indicated that while there is sufficient planned bed capacity overall , there is a surplus of day only / assessment beds compared with the plans given current LOS
6 Benchmark LOS by HRG with an English Peer Group and project required inpatient and day case beds at the upper quartile in performance	Benchmarking with an English peer group did not show a significant reduction in projected beds but did show the potential to increase same day discharge rates and close more beds overnight

At the time of the review workshop, the assumptions to be used and the final proposed bed numbers were still to be fully endorsed by the senior management team. The working total at the time of the review was 168 beds including day-case beds and chairs.

Discussions are ongoing with respect to the feasibility of pooling beds and activity; the management of smallish bed pools such as the 12 for neurosciences; making changes in clinical practice to reduce lengths of stay to the benchmarked percentiles; and the choice of the appropriate level of utilisation to ensure adequate use of resources but yet to adequately allow for peaks and troughs in activity.

### **3.1.2. Summary of RHSC bed model**

Activity Projections are from a baseline of 19,019 episodes and 29,409 OBDs in 2010. This means that the most up-to-date information is being used but NHSL have also taken account of the uncertainty around what appears to have been a spike in activity in 08/09. The following parameters apply to the bed model:

- 50% of activity is pre-school
- 20% activity is out-of-area.
- Bed occupancies are modelled at 95% and 99% occupied.
- Length of stay is modelled at 50<sup>th</sup> and 75<sup>th</sup> percentiles (against a benchmarking group of hospitals)
- Bed pools are all acute beds except neurosciences and haemato-oncology which have separate bed pools respectively.

### **3.1.3. RHSC Critical care**

In the existing RHSC there is activity going through Level 1 beds which should be in level 2 and 3. The new model locates all levels within unit as per the National ITU audit.

### **3.1.4. RHSC Risk areas**

Risk applies to all elements of the assumptions uses. A significant element of risk is in the continued sustainability of the in-patient paediatric services in adjacent smaller health boards.

(See also 2.6 above)

### 3.1.5. Proposed RHSC Bed Model Assumptions: Children and Young People's Service

Table 1. NHSL: Proposed Bed Model Assumptions: Children and Young People's Service

Area	Total	Single Rooms	Beds in 2 bed bay	Beds in 4 bed Bay	Comments
<b>PARU (34)</b>		<b>65%</b>			
Medical	23	15		8	1 Isolation Bed
Adolescent	2	2			
Short Stay	4			4	
Seasonal	5	5			
<b>Sub-total</b>	<b>34</b>	<b>22</b>		<b>12</b>	
<b>Inpatient Area</b>		<b>47%</b>			
Medical	23	15		8	3 Isolation Rooms/4Transitional Care (inc 1 isolation room)/3 Adolescent
Surgical	17	9		8	7 Adolescent Beds
ASAA	12	2		8	
Neuroscience	12	4		8	1 Isolation Bed
<b>Sub Total</b>	<b>64</b>	<b>30</b>		<b>34</b>	
<b>Cancer Unit</b>		<b>100%</b>			
Inpatient	7	7			4 Isolation Beds
Adolescent	3	3			
<b>Sub Total</b>	<b>10</b>	<b>10</b>			
<b>Critical Care</b>		<b>42%</b>			<b>See below 9/24 = 38%</b>
PICU	8	4		4	2 Isolation Beds
High Acuity HDU	6	2	4		2 Isolation Beds
Low Acuity HDU	6	2		4	
Surgical NNU	4	1		3	
<b>Sub Total</b>	<b>24</b>	<b>10</b>	<b>4</b>	<b>10</b>	<b>Error in NHSL table – actual total is 9/24</b>
<b>CAMHS Inpatients</b>		<b>100%</b>			
CAMHS	12	12			
<b>Total</b>	<b>144</b>	<b>84</b>	<b>4</b>	<b>56</b>	
<b>Day Case</b>					
Surgical	10				
Medical	5	2		3	
Oncology	7	3		4	+ 2 chairs
<b>Total</b>	<b>22</b>	<b>5</b>		<b>7</b>	<b>+ 2 chairs</b>

Source: NHS Lothian (June 2011)

### 3.1.6. DCN – in-patient beds and day case

The basis for the modelling of in-patient bed numbers and day case is described in

*Tribal Consulting : Bed, Theatre and Radiology Planning for RE-provision of DCN and RHSC: Update on Projections. Report Version 1.5, 20<sup>th</sup> July 2011.*

### 3.1.7. DCN Model of Care, Activity Modelling and Utilisation Factors

Base Date is 2009/2010 and activity was 5,529 episodes and 21,324 OBDs.

Activity is projected to increase because of demographic change and an increasing proportion of older people in the population.

33% of activity is from other Health Boards

Model of care changes include:

Spinal surgery currently in RIE moving to DCN

Thrombolysis out-of-hours moving to DCN (in-hours, thrombolysis delivered at RIE, WGH and StJ's.)

Utilisation assumptions are 66% HDU and 80% acute care with DCN bed activity pooled.

Programmed Investigation unit is modelled on 2 patients/day and to be located close to in-patient neurosciences

### 3.1.8. Proposed DCN Bed Model Assumptions

Table 2. Proposed Bed Model Assumptions : DCN

Area	Total	Single Rooms	Beds in 2 Bed bay	Beds in 4 Bed bay	Comments
<b>DCN</b>		<b>100%</b>			
Critical Care (RIE)	(11)				6 Level 3 Beds 5 Level 2 Beds
DCN Acute Care	24	24			
DCN In-Patient	43	43			
Sub-total DCN	<b>67</b>				
PIU (Day Case)	2				2 Beds and 4 Chairs
<b>Inpatient Area</b>	<b>67+2</b>		<b>NIL</b>	<b>NIL</b>	<b>67+ 2 DC</b>

Source: NHS Lothian (June 2011)

### 3.1.9. Summary of service specification and performance optimisation

#### **In-patient (including critical care) and day case**

The models of care, activity projections and bed modelling for both RHSC and DCN are well-established, sophisticated and thorough, and employ appropriate benchmarking and utilisation assumptions.

The changes to models of care which are described in the strategy have been incorporated into the modelling.

In order to achieve the utilisation assumptions, flexibility will be required in the management of beds. This has implication for ward design and departmental locations. (See under space programme.)

***Recommendation 7:***

*Test the distribution of support accommodation within a run of flexible beds on a ward floor plan at 1:200 to ensure the bed distribution is sufficiently flexible to deliver the utilisation assumptions and that the support accommodation is not over-specified.*

Future expansion or change of use in the in-patient beds will be achieved by re-organising bed usage within the RIE and the new building. This serves to highlight the need for the link between the two buildings to be suitable for different types of patient and staff transfer.

***See Recommendation 1 and 2 (above) re***

*Detailing of the link corridor for flexibility and  
Identification of those facilities likeliest to require adaption in the future.*

## 3.2. Space optimisation in in-patient areas

### 3.2.1. Analysis of Bed Spaces in DCN

There are 67 new acute in-patient beds proposed, 100% in single rooms, all briefed at 19 sq.m. with a 4.5 sq.m. en-suite and isolation lobbies where required at 4 sq.m.

This provision is fully compliant with guidance.

Critical care beds (11 no.) are to be provided within an extension to the existing adult critical care unit within the RIE. This will facilitate the best utilisation of critical care facilities by allowing flexible use of the beds and concentration of appropriately trained staff in one location.

### 3.2.2. Analysis of Bed Spaces in RHSC – Single Rooms

RHSC In-patient beds are briefed as 144 in-patient and 22 day patient beds + 2 chairs as detailed above in Table 3.

#### 3.2.2.1. Proportion of single-bed rooms

Overall there is a total of only 54% (90/168) v a target of 65% quoted in the Design Brief (ver 2 10 June 2011, page 12)

**Table 3. RHSC Proportion of single-bed rooms**

Type of bed	Number/total	% singles
General acute beds	54/98	55%
Haemato-oncology	10/10	100%
PICU/HDU	9/24	38%
day beds	5/24	21%
CAHMS	12/12	100%
<b>Total</b>	<b>90/168</b>	<b>54%</b>

#### 3.2.2.2. Benchmarking of % of single rooms

**Guidance** – HBN 23 (2004) recommends a 50% minimum. However since this guidance was published the Scottish Government has published CEL (48) 2008 and CEL (27) 2010 which endorse 100% single rooms unless there are clinical reasons to diverge from this. In general the arguments are compelling for a high proportion of single rooms (see below) and most projects - new and refurbished - aim for as high a proportion as practical given the clinical models.

In the Glasgow project the overall percentage of single rooms is 74%.

See Table 6 over/



**Table 4. Glasgow RSCH - Proportion of single-bed rooms**

Glasgow RHSC Bed Complement				
Area	Total Beds	Single Rooms	%	Ref
General acute	180	152	84.4%	NMcL
Critical Care	22	16	72.7%	NMcL
23 Hour	22	12		
MDCU	10	0		
Theatre Recovery	8	0		
Child Psychiatry	6	3	50%	
Neonatal	(12)	Not in building		
<b>OVERALL BED TOTAL</b>	<b>248(260)</b>	183	74%	183/248

### 3.2.2.3. Comment

The number of single rooms in the current schedule of accommodation is less than the target of 65% overall as stated in the design brief. When special cases which require 100% singles such as CAHMS and Haemato-oncology are factored out, then only 55% of general beds are provided in single rooms.

The “correct” proportion of single rooms for children is a complex question and issues include the wide age range of patients to be accommodated, clinical choice to “cohort” patients with infections with the same organism, avoiding mixed-sex wards for older children, “wasting” space but having large bedrooms for caring for infants and younger children in cots and so on.

However it is well-established that a high proportion of single-rooms offers the greatest ability to flex the bed complement to meet varying demand – variables such as the relative proportions of males/females, older/younger children, diagnoses, pre-diagnostic risk such as risk of infectivity, needs of parents and accompanying family etc. A high proportion of single rooms has also been shown to reduce healthcare associated infection rates, and it is also a well-established principle that single-rooms reduce the incidence of reportable clinical incidents such as medication errors and so on.

Recent research has indicated that children dislike sharing with children of different ages to themselves. At younger ages, children are not particularly concerned by a mix of sexes in the ward, but this becomes very important for children of older ages and adolescents.

The Glasgow project has taken a different approach to single-room provisions with an overall proportion of 74% of rooms in single rooms against 54% in Edinburgh.

In adult critical care units, it is becoming established practice to have 100% single “bed areas” – these may not necessarily be full single rooms but would offer fixed glazed screening between patients with dedicated clinical wash-hand basins and work-stations. The proportion of critical care as singles in Glasgow is 72% against 38% in Edinburgh.

Overall, the Glasgow proposals are more in line with recent wider practice.

### 3.2.3. Analysis of Bed Spaces in RHSC – Room Sizes

The current proposed room areas as listed in the SoA 27 July 2011 have been analysed by Capita consulting who highlighted the divergence of the child single-bedroom size from current practice. We note the following comment from Capita:

*“Single Bedroom: although HBN 23 sizes a Children’s inpatient single room at 15sqm, potentially there may be limited space for parent overnight stay in a 15sqm room. We realise that the Board has addressed this issue previously and understands that this area allocation may prove to be a challenge and will require confirmation of functionality at 1:50 level”.*

*Source: Jason Speck & Craig Dixon, Capita Report 17/8/2011*

There is further comment in this document with respect to the size of the en-suite WC and shower:-

*Ensuite WCs: the Board area is 4.5 sqm for single room ensuites.HBN 23 (as no equivalent SHPN) area recommendation is 6sqm) and Capita standard area is 6.5sqm. We understand that this issues is still under review by the Board and requires functionality to be tested via 1:50 drawings.*

(Note: this issue does not apply to DCN en-suites briefed at 4.5 sq.m. where the corresponding 19 sq.m. within the single-bed room allows space to open WC doors out fully to allow use of mobile hoists.)

#### 3.2.3.1. Benchmarking of room sizes

**Table 5. Square Metre Allocation per bed-room and key clinical space**

	RHSC - E	Glasgow	New-castle	HBN23 (2004)	Capita Standard	Capita exemplar
single	15	16.5	19.4 - 20	15		17
WC/sh (s)	4.5	4.5	4 - 4.5	6	6.5	
lobby	4	7		4		
4-bed	63	68		80		63
WC/sh (4)	6	7.5		7		
CAHMS	10 & 11.5	16.5		n/a		

For further comparison, the designed areas at the new Forth Valley Royal Hospital which is designed and operational are shown for comparison:

**Table 6. Forth Valley Paediatrics for further comparison**

Clinical Space	RHSC Edinburgh Sq.m.	FVRH Area Sq.m.
Single Bedrooms - large	15.0	19.0
Single Bedrooms -standard	15.0	16.0
Ensuite Shower/wash/WC	4.5	4.5
4-Bedded Bays	63	59.0
Ensuite Shower/wash/WC (4-bed)	6.0	6.5
Isolation Lobby for single bedroom	4.0	6.0

The combination of a restricted briefed area for the single-bed room and the minimum area for the en-suite WC will require to be proven at 1:50 level and in the context of an overall ward layout. A mix of single-beds and 4-bed rooms is notoriously difficult to plan economically. It may be that additional useful area within the bedrooms enables the departmental circulation to be less i.e. paying for bigger bedrooms means not paying extra for useless corridor space.

Bedrooms and en-suite areas are briefed at the absolute minimum square metre areas and may not work in practice to meet the ergonomic requirements of The Moving and Handling Regulations and health and Safety Requirements and Infection Control Standards.

### **3.3. Efficiency of “ward” briefing – Benchmarking area per bed in wards**

#### **3.3.1. DCN In-patient Wards Ward Area per bed – based in Net Areas**

DCN Acute Care (24 beds) -	34.7 sq.m. per bed
DCN In-patients (43 beds)	32.5 sq.m. per bed
HBN 04-01(2010);100% singles in 24-bed ward	33.2 sq.m. per bed

DCN as a whole therefore benchmarks close to the guidance level. Design development may reduce the need for support accommodation and bring the area closer to benchmark.

### 3.3.2. RHSC In-patient Wards Ward Area per bed

As HBN 23 is somewhat out-dated, the ward areas were bench-marked against Glasgow as representative of current good practice.

**Table 7. RHSC Areas per bed v Glasgow Project**

RHSC Edinburgh						Glasgow
ref	Dept	bed nos	gross area sq.m.	area/ bed	note	
A3	PARU	34	1196	35.19		38.1
C1.1	Medical Inpatients - 23 Beds	23	946	41.13		41.4
C1.2	Surgical Inpatients - 17 Beds	17	711	41.85		41.4
C1.3	Neuroscience Inpatients - 12 Beds	12	689	57.41	rehab in Ed	41.4
C1.4	Haematology / Oncology Inpatients & Daycases - 17 Beds & 2 Chairs	19	936	55.07	based on 17	58.4
E1	Acute Surgical Admissions Area - 12 Beds	12	517	43.07		41.4
A3	PARU / Emergency / Radiology Shared Support	say 50%	100			
C1.5	Med / Surg / etc Shared Support		72			
C1.6	Adolescent Shared Accommodation		50			
C2	Wards Support Areas		136			
C3	Special Feeds Unit		63			
C4	Sleep Lab		118			
C5	Classrooms		114			
All general beds		117	5648	48.27	v	50.4
B1	PICU	24	1632	68.02	v	104.3
F1	CAMHS	12	1362	113.5	v	128
day	surg	10				
day	med	5				
		168				

From this table, RHSC Edinburgh benchmarks well against the equivalent Glasgow areas. However, it has already been noted that Glasgow has larger bedroom areas and many more single rooms. A detailed analysis of the different types of space was therefore carried out:- over/

Table 8. Proportion of direct patient bed/day space v "support" areas							
Ref	dept	bed nos	net area sq.m.	"bed/patient"	support	% "pt" areas	Glasgow
A3	PARU	34	867	691	176	80%	76%
C1.1	Medical Inpatients - 23 Beds	23	686	528.5	157	77%	80%
C1.2	Surgical Inpatients - 17 Beds	17	516	365.5	150	71%	80%
C1.3	Neuroscience Inpatients - 12 Beds	12	499	294	205.2	59%	71% cf cardio
C1.4	Haematology / Oncology IP& DC - 17 Beds & 2 Chairs	19	678	420.5	257.9	62%	67%
E1	Acute Surgical Admissions Area - 12 Beds	12	375	230	144.5	61%	80%
All general wards			3620	2530	1091	70%	75%
A3	PARU / Emergency / Radiology Shared Support		100		100		
C1.5	Med / Surg / Neuro / Haemo Shared Support		72		72		
C1.6	Adolescent Shared Accommodation		50		50		
C2	Wards Support Areas		136		136		
C3	Special Feeds Unit		63		63		
C4	Sleep Lab		118		118		
C5	Classrooms		114		114		
All general + support		117	4273	2530	1744	59%	63%
B1	PICU	24	1166	624.5	541.5	54%	
F1	CAMHS	12	1009	420	589	42%	
day	surg	10					
day	med	5					
		168					

This table shows that although the Edinburgh schedule of accommodation appears to be more economic in briefed space, in fact, more support accommodation is briefed relative to the direct patient-care areas.

The briefing of larger, standardised wards in Glasgow may account for this difference.

### 3.4. Summary of Space Planning for Inpatient Wards

#### Single-rooms for RHSC

Overall there is a total of only 54% (90/168) against a target of 65% quoted in the Design Brief (ver 2 10 June 2011, page 12) The Glasgow project has taken a different approach to single-room provisions with an overall proportion of 74% of rooms in single rooms v 54% in Edinburgh.

The proportion of critical care as singles in Glasgow is 72% against 38% in Edinburgh.

The Glasgow proposals are more in line with wider practice.

**Recommendation 5:**

*Review the current out-turn percentage of single rooms within the SoA as it is less than the stated target. Record the rationale for the proportion of single rooms within the design brief to assist bidding teams in understanding the derogation from guidance.*

#### Bedrooms and en-suite areas in RHSC

These are briefed at the absolute minimum square metre areas and may not work together in practice to meet the ergonomic requirements of The Moving and Handling Regulations and Health and Safety Requirements and Infection Control Standards. Work to test the assumptions at 1:50 scale would ameliorate this risk. Ward planning is also advisable to avoid introducing non-functional space into corridors and circulation that would more usefully contribute to clinical functionality within the room.

**Recommendation 6:**

*Test the feasibility of the briefed areas for bedrooms/ensuites at 1:50 scale in the context of a typical ward plan to ensure the designed areas do not exceed the assumptions in the schedule of accommodation and that they provide adequate functionality.*

#### Ward briefing

In terms of overall area per bed, RHSC Edinburgh is briefed at less area per bed than the new Glasgow children's hospital. However this hides the fact that Glasgow has relatively less support accommodation and more space in rooms for direct patient care. The briefing of larger, standardised wards in Glasgow may account for this difference.

**Recommendation 7: as above**

*Test the distribution of support accommodation within a run of flexible beds on a ward floor plan at 1:200 to ensure the bed distribution is sufficiently flexible to deliver the utilisation assumptions and that the support accommodation is not over-specified.*

## 3.5. Emergency Department

### 3.5.1. Model of care summary – from NHSL Design Brief

1. Purpose: The emergency care of children aged 0 to 15 years inclusive who have been injured or become acutely un-well.
2. The department is complemented by community facilities including the Lothian Unscheduled Care service, the Minor Injuries Unit at WGH and the emergency department at St John's.
3. The Emergency Department will contribute to the NHSL capability to achieve the four hour unscheduled care target.
4. The new RHSC will be the designated receiving hospital for paediatric casualties in the event of a Major Incident. The design brief notes a required adjacency to Paediatric Out-patient department to fulfil this requirement. (In the drawings reviewed by us (those supplied for the Planning Submission) this adjacency was not being achieved.
5. The department is to be located adjacent to the RIE adult emergency department to improve the availability of staff for consultation and supervision.

A&E departments have various models of organisation. In this case no particular hierarchy of treatment spaces or patient and staff flows is described and segregation into major and minor treatment areas is not described. It would be helpful to include information on operational policies and patient flows within the Design Brief for the department.

### 3.5.2. Activity Modelling

**Table 9. RHSC Emergency Department Activity Levels - ref Design brief A1**

Source	2009 ("current")	Projected Activity 2013
RHSC ED	38,660	42,000
RIE ED 0-12 yrs	597	650
RIE ED 13-15 yrs	3,191	3,510
<b>Total numbers</b>	<b>42,448</b>	<b>46,610</b>

Commentary on the projections was not provided, nor modelling beyond 2013. It would be helpful to have this horizon match that of the in-patient bed modelling.

### 3.5.3. Utilisation factors

*From Design brief A1:*

The Emergency Department will provide a 24 hour / 7 day per week service.

Over 98% of patients will remain in the ED for less than 4 hours.

Average lengths of stay for individual rooms within the department will be:-

Resuscitation room	1 to 2 hours
Generic Treatment rooms	1 to 2 hours
Specialist rooms	½ to 1hour
Bereavement Suite	3 hours

### 3.5.4. Functional Unit and Space Programme - benchmarking

The Functional unit employed to size an emergency department is the number of attendances per annum. HBN 22 (2005) gives exemplar schedules for 40,000 and 50,000 attendances.

The key operational areas are the number of Assessment/Treatment spaces which may have various functions and descriptions and the number of Resuscitation Spaces.

The following table benchmarks the number of treatment spaces against the relevant Health Building Guidance for 40,000 and 50,000 attendances. The proposed provision for the Glasgow Children's Hospital is also provided.

**Table 10. Emergency departments – treatment spaces and net departmental areas**

	RHSC – proposed 46,000 attendances	HBN 22(2005) 40,000 attendances	HBN 22(2005) 50,000 attendances	Glasgow RHSC 40,000 attendances
Assessment/treatment spaces	16	12	16	24
Resuscitation Spaces	4	3	4	4
Sub-Dept area	803 sq.m.	865 sq.m.	1087 sq.m.	1203 sq.m.
Plaster suite	included	19 sq.m.	19 sq.m.	included
X-ray room	included	47.sq.m.	47.sq.m.	47.sq.m.
<b>Dept area</b>	<b>803 sq.m.</b>	<b>884 sq.m.</b>	<b>1087 sq.m.</b>	<b>1250 sq.m.</b>

The number of " treatment" areas proposed in the RHSC benchmarks appropriately to the guidance for the upper level of throughput (HBN 22, 50,000 attendances) that are required and allows for some increase in activity to occur over time. As noted above activity has not been modelled beyond 2013 and it is not clear if it is anticipated to continue to increase.

In terms of area, the RHSC proposal is less than both Glasgow and HBN 22. The difference between RHSC and the HBN areas is explained by inclusion in the HBN of the following elements:

117 sq.m. additional for staff rest-room, seminar, study area and overnight stay rooms – all provided elsewhere in RHSC and serving more than the emergency department.

- Increased areas for patients and visitors waiting and amenities
- Larger areas for staff changing
- Greater storage facilities
- More office space

### 3.5.5. Reference design

It is noted that within the current Reference design the outpatient department is not adjacent to the emergency department as requested in the departmental design brief. The purpose of this adjacency is to facilitate Major Incident Planning.



### 3.5.6. Summary: Emergency Department

The RHSC Emergency department is based on projected activity to 2013 but not modelled beyond this date.

The proposed number of treatment spaces is appropriate and will allow some flexibility for activity to increase in the future.

The overall space allowance relative to this number of treatment spaces is significantly less than those suggested by guidance or used in Glasgow. The out-turn design may be a highly efficient department but equally the design stage may demonstrate that the department is in fact under-briefed in terms of support areas.

Within the current Reference design the outpatient department is not adjacent to the emergency department as requested in the departmental design brief. The purpose of this adjacency is to facilitate Major Incident Planning.

#### **Recommendation 8:**

*1 Consider modelling projected activity beyond 2013*

*2 Provide more detail within the brief on intended operational policies and patient flows within the department.*

*3 Review the brief for the Emergency Department in terms of staff rest rooms, offices, size of staff changing, storage, waiting, staff seminar/study areas and indicate within the design brief where these are to be provided elsewhere in RIE to assist bidding teams in understanding the requirements.*

*4 Resolve the issue of the Paediatric outpatient department not being adjacent to the Emergency department for use in a Major Incident as currently described in the design brief.*

## 3.6. Operating Theatres

### 3.6.1. Activity Modelling

The basis for the modelling of theatre requirements is provided in:

*Tribal Consulting : Bed, Theatre and Radiology Planning for RE-provision of DCN and RHSC: Update on Projections. Report Version 1.5, 20<sup>th</sup> July 2011.*

- Two scenarios were modelled - 10 sessions per week and 13 sessions per theatre per week.
- Modelling assumptions – 3.5 hours per session, 7.5% cancelled sessions, 7.5% anaesthetic time
- Utilisation assumption is 90% utilisation of available time.
- Activity data – number of patients with procedure and operating time not provided, but projections quote 2017 and 2020.
- Projections are based on extrapolation of numbers of theatres currently in use
- The out-turn number of theatres is based on the higher utilisation rate (13 sessions/week); and assumptions that a combined theatre suite will provide efficiency in utilisation; future availability of “CEPOD” theatre and extended out-of-hours sessions for emergency work.

#### Combined operating theatre department

The economy of scale to be found in having a joint DCN/RHSC theatre suite has been factored in. NHS Lothian calculate a space saving of 222.2 sq.m. net area over the required area for separate theatre suites. The saving is achieved by reducing the number of support rooms.

Out-turn Functional unit: 9 theatres

### 3.6.2. Benchmarking of Combined Operating Theatres – Briefed Areas

#### RHSC/DCN

9 theatres + intra-operative MRI + Digital Angiography + day case unit –

Net departmental Area 2,810 sq.m.

#### Guidance

HBN 26 (2004): 8 theatres = 2283 sq.m. – pro-rata 2568 sq.m.

Add MRI and DA @ 217 sq.m. 2,785 sq.m.

#### Glasgow

9 theatres, larger day case unit, no interventional radiology

Glasgow Net Area adjusted by omission of Anaesthetic department &

23-hr ward and by addition of space for MRI and DA

Glasgow Net Area (adjusted) 2,581 sq.m.

RHSC/DCN is close to the Guidance Area. The difference between Edinburgh and Glasgow of 229 sq.m. is almost wholly explained by having 2 services using 1 set of theatres, as follows:

Table 11. Operating Theatres: comparison of briefed areas: Edinburgh and Glasgow

<b>Theatre Sub- Areas</b>	<b>Edinburgh Sq.m</b>	<b>Glasgow sq.m.</b>
<b>Pre-op</b>		
DCN	157	-
RHSC	289	317
<b>Op Theatres</b>	1027	1135
<b>Post-op</b>		
DCN	171	-
RHSC	397	392
<b>Support</b>	299	268
<b>Staff support</b>	252	263

This table illustrates the fact that the briefed areas for a children-only theatre suite in Glasgow are similar to the areas for the children's service in RHSC.

Despite the fact that space is needed to keep the two types of patients separate, there are still area savings in having a combined theatre suite. NHS Lothian note a saving of 222.2 sq.m. when the operating suites were combined in a single suite from the previously briefed two individual suites.

There will almost certainly revenue savings in running a single suite, in terms of staffing levels, stock levels, flexibility (say in having single CEPOD theatre) and so on. There will also be life-cycle savings in the reduced requirements for space and equipment and in lower energy costs.

## 3.7. Radiology

### 3.7.1. Activity Modelling

The basis for the modelling of radiology requirements is provided in:

*Tribal Consulting : Bed, Theatre and Radiology Planning for RE-provision of DCN and RHSC: Update on Projections. Report Version 1.5, 20<sup>th</sup> July 2011.*

- Activity Projections include current activity at RHSC + <16 years at RIE and WGH (excluding minor injuries (A&E) at WGH); all activity referred by DCN specialty across sites
- Activity growth assumptions of 5% per annum for MRI, CT and U/S
- Utilisation based on current time per procedure and normal working hours.
- Utilisation assumptions are 80% occupancy, available 52 weeks per year.
- The projected requirements based on this analysis are described in above report Table 4 Radiology page 35.
- Out-turn planning assumptions provide by NHS-L (June2011) match the projected requirement as described in the following table:

**Table 12. Out-turn Planning Units Radiology**

Modality	Paeds 2017 projected requirement	RHSC Brief	DCN 2017 projected requirement	DCN Brief
General Radiography	2.26	2	0.19	1
General ultrasound	2.05	2	0.40	1
MRI	1.82	2 (1shell)	2.42	3
Fluoroscopy	0.50	1 (multi-p)	0.20	0
CT	0.21	1	0.86	1
Specialist	0.75 (radionuclide)	1	0.85 (angiography)	1

### 3.7.2. Combined imaging department

It is proposed to co-locate the two radiology departments and to share accommodation where possible. NHS Lothian calculate a reduction of 271.3 sq.m. of net floor area by reducing the number of support rooms.

### 3.7.3. Future proofing

Interventional Imaging - a plan to modernise practice is exemplified by the provision of Interventional Imaging in the Operating Department including an intra-operative MRI.

The shell space for NHS MRI anticipates future increasing demand for this modality.

The link with RIE provides future flexibility in the use of radiology facilities.

### 3.7.4. Sharing with RIE

Some DCN patients will access RIE radiology for simple radiography and RIE patients will on occasion access specialised DCN radiology.

RIE patients will access the gamma camera in RHSC which will be the sole nuclear medicine department on site.

The recommendation to carefully detail the link between the new building and the RIE is noted again in this context, both for immediate practice and for future practice and flexibility.

### 3.7.5. Area benchmarking

Broad Brush benchmarking - Sq.m. per "room"

<u>Project</u>	<u>Radiology department area per Imaging room (sq.m.)</u>
Edinburgh	170.0
Forth Valley	139.9
Glasgow	237.0

## 3.8. Ambulatory Care

### 3.8.1. Outpatients – RHSC

Information was provided within the *Departmental Design Briefs* for:

D1	General outpatients
D2	Cardiology and respiratory specialist
D3	Orthoptics
D4	Audiology
D5	Paediatric dentistry
D7	Plastics dressings clinic
D8	Social work
D10	Ambulatory care shared support

#### 3.8.1.1. Model of Care

There are relatively few explicit references in the Design Brief to outpatient models of care, service redesign, modernisation or specific patient pathways such as the streamlining of reception facilities, or co-ordinating physiological measurement.

*D2 Cardiology* describes a “one-stop” shop approach to link investigations to consultation and treatment-planning

*D4 Audiology* describes alternative patient pathways

#### 3.8.1.2. Comment

As these are the key documents which allows designers to understand the clinical requirements it would be useful to have some information within them.

#### 3.8.1.3. Activity Modelling

##### Activity Information Available from Design Briefs:

Only D7 gives an indication of expected activity

*D7 Plastics dressings clinic – the P.D.C. sees an average of 160 patients per month.*

Tribal Consulting (17/7/09) – RHSC –Schedule of Accommodation Review – Appendix 1

Mention of 11,450 new and 32,000 follow up attendances but no base date given.

Correspondence with NHS-L (Fiona Halcrow and Grahame Cumming) identified current baseline activity and proposed efficiencies through re-design of services. Actions include work through Shifting the Balance of Care, LEAN in Lothian and the 18 week RTT initiatives to change how clinics are organised and how accommodation is used. For example, much of the proposed shift in activity can occur if HEAT target performance for DNAs and for new to Review ratios can be achieved. Nurse-led and AHP clinics that can be provided off the RHSC site are being developed which should reduce demand on the central clinic space.

On the other hand, acute speciality activity currently takes place off-site and a new holistic model for children’s services would integrate these services which include orthopaedics at RIE, Dermatology and ENT at Laurieston and Ophthalmology at PAEP.

**Table 13. Base Outpatient Data**

<b>Activity</b>	<b>2020/11 activity</b>
Existing RHSC	53,700
Activity at other sites	15,742
<b>Overall total</b>	<b>69,442</b>
<b>25% reduction</b>	<b>17,360</b>
<b>Net capacity</b>	<b>52,082</b>
Source: G Cumming	

Note: these figures do not yet include an analysis of impact of population projections and change in age range.

#### **3.8.1.4. Comment**

Outpatient planning is always a complex issue, but the high number of sub-specialties within paediatrics and the relatively small numbers of patients involved make the margin of error very large. Additional services tend to spring up very regularly as a result of new initiatives e.g. specialist epilepsy nurse appointed who requires consulting facilities in addition to medical consulting for the specialty.

Work is on-going within NHS-L to continue to re-design OP services and to under-write the Activity Assumptions.

#### **3.8.1.5. Utilisation Assumptions**

Reference: *Tribal Consulting (17/7/09) – RHSC – Schedule of Accommodation Review – Appendix 1 to: Modelling assumptions*

- 50 weeks/year
- 15 sessions/week
- 3 hours/session
- 85% utilisation of rooms
- New appointments = 45 minutes
- Follow-up appointments = 30 minutes

These assumptions have not been adopted by NHSL in planning the department.

The individual design briefs contain some commentary on opening hours and numbers of staff, patients and carers. As an example:

##### *D1 General Out-patients*

*Extended working day, Monday to Friday, 8am (first appointment 8.30am) until 7.15pm (last appointment 6.30pm).*

*Child protection medical examinations may take place out of working hours.*

*Maximum number who would be within the OPD (all suites) at a given time on a normal, busy day: 210 (including staff, patients and carers), of which 40 staff*

#### **3.8.1.6. Comment:**

Applying these utilisation to 52,082 attendances per annum gives an out-turn of 16.43 rooms

### 3.8.1.7. Functional Units

#### Current proposal

From the *Joint Build Accommodation Summary 27 July Version 2*

General consulting/examination rooms	17 no.
General treatment rooms	3 no.
Cardiology/Respiratory Specialist Rooms - patient	6 no.
Orthoptic Specialist Rooms - patient	4 no.
Orthoptic fields test	1 no.
Audiology Specialist Rooms – patient	4 no.
Dental Surgeries	4 no.
Plastic Dressings clinic	2 no.

#### 3.8.1.8. Comment:

The number of general consulting rooms would appear to match the projected OP attendance figures, however detailed modelling of the individual specialist rooms was not possible because of insufficient data.

Note that an increasing numbers of treatments are carried out in out-patient departments. It may be that the proposed number of treatment rooms may not be adequate at 3.

It would be advisable to consider more inter-changeable rooms with standardised sizes to allow future changes in practice. For example in the new Stobhill Hospital, consulting rooms and treatment rooms are standardised at 16 sq.m. and can be used for either function with the minimum of alteration.



## 3.8.2. DCN Outpatients, Pre-admission clinic (PAC) and Programmed Investigation Unit (PIU)

### 3.8.2.1. Information provided:

Departmental Design Briefs: M1 DCN outpatients and M3 DCN PIU

### 3.8.2.2. Model of Care

There are references to new ways of working within *Design Brief M1 and M3*:

*Neurovascular outpatient visits are 'one stop' whenever possible, at which all investigations and assessments required are combined in a streamlined single clinic visit.*

*The neurosurgical Pre-admissions Clinic shares accommodation with OPD*

*Outpatients will contribute to DCN and NHSL capability to achieve:*

- *The 18-week referral-to-treatment standard by delivering the outpatients standard in the patient pathway*
- *Reduction in first outpatient attendance 'DNA' rates*
- *Reduction of review to new outpatient appointment ratios*

### Meeting 1 comment from staff:

*OP activity will continue on WGH site and there is an intention to continue to drive activity more locally where possible.*

### 3.8.2.3. Activity Modelling

#### Outpatients

*Design Brief M1: 21,000 attendances – base date not given*

*A reference to increasing activity is made, but not modelled.*

**PIU** - Activity does not appear to be modelled

### 3.8.2.4. Utilisation Assumptions

#### No utilisation assumptions provided

The individual design briefs contain some commentary on opening hours and numbers of staff, patients and carers. For example:-

M3 *PIU has the facilities and workforce to accommodate up to six patients.*

### 3.8.2.5. Functional Units

#### Current proposal

From the *Joint Build Accommodation Summary 27 July Version 2*

General consulting/examination rooms	14 no.
Consulting/examination rooms – multi-disc	2 no.
General treatment rooms	2 no.
PIU – treatment area (6 places)	1 no.
PIU – treatment room	1 no.

### 3.8.2.6. Comment

Without information on activity projections and clarity regarding utilisation assumptions it is impossible to assess the appropriateness of the proposed functional units. 16 rooms would theoretically be able to deal with 51,000 attendances per annum, over against the current (?) number of 21,000.

### 3.8.3. RHSC Therapies

#### 3.8.3.1. Information provided:

Departmental Design Briefs: D6 RHSC Therapies

#### 3.8.3.2. Model of Care

There is no particular reference to new Models of Care within the design brief. There is an historic reference in *Final Report of Proposed Redesign of Patient Pathways 2007* as follows:

*For children and young people with complex needs, (for example, neuro rehabilitation), an Assessment and Treatment Centre should be established. This Centre would be a focal point for therapy services, with skilled personnel and excellent facilities, providing young people with expert care from experienced staff.*

It is unclear if this is the proposed Therapy department.

#### 3.8.3.3. Activity Modelling

Design Brief D6 - No activity stated

*Tribal Consulting (17/7/09) – RHSC –Schedule of Accommodation Review – Appendix 1*

Mention of 17,700 attendances but no base date given

Projections of future activity – “model assumes 20% increase” – over what time period?

No other activity information is provided.

#### 3.8.3.4. Utilisation Assumptions

Design Brief D6

*The Therapies department will be staffed from 8am to 6pm, with peak staffing levels from 8.30 am to 5 pm.*

*The number of rooms is based on an assumption that each will be utilised 90% of the available time.*

*An appointment will normally be for 40-50 minutes, a session will constitute 3.5 -4 hours, and each day will comprise 2 sessions.*

*Maximum number who would be within the unit at a given time on a normal, busy day:*

*35 Patients 65 Visitors 92 Staff*

Reference in *Tribal Consulting (17/7/09) – RHSC –Schedule of Accommodation Review – Appendix 1* to:

*Modelling assumptions:*

- 50 weeks/year
- 10 sessions/week
- 3.5 hours/session
- 85% utilisation of rooms
- All appointments = 45 minutes

**Comment:** Not clear which assumptions have been adopted by NHSL in planning the department?

#### 3.8.3.5. Functional Units

##### Current proposal

From the *Joint Build Accommodation Summary 27 July Version 2:-*

Treatment Rooms – various 14 no.

5 of these rooms would appear to be sized for more than 1 patient – Rehabilitation Room @ 30 sq.m.

*Tribal Consulting (17/7/09) – RHSC –Schedule of Accommodation Review – Appendix 1* based on utilisation assumptions described above modelled 11 patient rooms/treatment spaces

#### 3.8.3.6. Comment:

Without more information on activity projections and clarity regarding utilisation assumptions it is impossible to assess the appropriateness of the proposed functional units.

### 3.8.4. DCN Therapies

#### 3.8.4.1. Information provided:

Departmental Design Brief: M2 DCN Therapies

#### 3.8.4.2. Model of Care

Models of Care are briefly described. There are no particular modernisation proposals described and the design briefs are still described separately for OT, physiotherapy and SALT rather than describing an integrated service.

#### 3.8.4.3. Activity Modelling

Design Brief M2: 2009-2010 Activity data is provided, although there are no projections of future activity.

#### 3.8.4.4. Utilisation Assumptions

Hours of work are described but not utilisation factors

#### 3.8.4.5. Functional Units

Current proposal

From the *Joint Build Accommodation Summary 27 July Version 2*

OT ADL suite	1 no.
Physio multi-purpose room (occupancy not stated)	1 no.
Physio individual treatment room	1 no.
Dietetics consulting/examination room	2 no.
SALT treatment rooms	2 no.

It is surprising not to see any mention of multi-disciplinary treatment rooms, although clearly some accommodation does require to be dedicated for particular purposes.

#### 3.8.4.6. Comment:

Without clarity regarding utilisation assumptions, and ideally projection of anticipated workload it is difficult to assess the appropriateness of the proposed functional units.

For example: OT activity is stated as follows:

OP Total contacts	6
IP Total contacts	4523

The relevance of these number is unresolved within the brief, for example:

How many of these patients required ADL assessment?

Depending on the proportion involved, is a full ADL assessment suite justified? Could the RIE suite be better utilised?

The design briefs are written as separate therapy disciplines. There is no evidence of a move to multidisciplinary working and sharing of rooms.

### 3.8.5. Summary of Service and Space Planning for Ambulatory Care

#### 3.8.5.1. RHSC Outpatients

RHSC out-patient activity is subject to on-going review. The model of care is changing in order to increase efficiency in the service by reducing the proportion of DNAs and the number of return visits per new visit. Additional services are being re-located from non-children's hospitals to within the new RHSC which will increase demand. The resulting workload assumptions are still tentative.

Formal utilisation assumptions have not been adopted, but using standard assumptions it would appear that the proposed number of rooms is appropriate for the target assumptions. The proportion of rooms described as treatment rooms might usefully be reviewed, or an approach to more standardisation in room sizes that would allow future flexibility.

#### 3.8.5.2. DCN Outpatients

DCN outpatient numbers have not been modelled. The proposed number of rooms appears greater than the current out-patient attendance figures would suggest.

#### 3.8.5.3. RHSC Therapies

Activity figures and projections (particularly for individual specialist activities such as ADL assessments) are not provided. Tribal Consulting modelled "current" (2007/8?) activity which suggests there may be more treatment spaces planned than required but this is a tentative suggestion without the necessary information being available.

#### 3.8.5.4. DCN Therapies

DCN therapies are difficult to assess because workload figures for individual specialist activities are not provided. There is not a description of a multi-disciplinary approach or use of shared rooms, and indeed the design brief continues to describe separate services. It is not clear if the therapy departments in RIE are at full capacity or if any future integration of adult therapy services is proposed.

### 3.8.6. Recommendations to strengthen proposals for outpatients and therapies

**Recommendation 3:**

*The functional units for out-patients and therapies require to be under-written by a capacity-modelling exercise similar to the Bed Modelling Exercise to provide certainty that the departments are sized correctly.*

**Recommendation 9:**

*1 Provide more detail within the design brief on the operational policies for the out-patient areas.*

*2 Consider standardised consulting/exam and treatment rooms to provide maximum opportunity for the introduction of new methods of treatments and specialist clinical staff.*

**Recommendation 10:**

*Provide more information on how the Therapy departments are to operate, for example, how patients are to be received, logged into the system and how the therapist is alerted to their arrival. Also detail what the intended purpose of each clinical room is and what large items of equipment each will contain.*

### **3.9. Opportunities for sharing accommodation**

#### **3.9.1. Within RHSC/DCN**

Within the analysis of the key clinical areas it has been noted that combining the RHSC and DCN Operating Theatres and Imaging Departments has resulted in requiring 1 theatre less and 1 imaging room less plus savings in support accommodation. These savings are 222.2 and 271.3 sq.m. respectively

Neurophysiology has also been briefed as a combined RHSC/DCN department resulting in a saving of 50.9 sq.m.

#### **3.9.2. Economies of integration with existing hospital**

The following table shows where departments are intended to be built new and where the intention is to use or extend existing RIE departments.

Table 14/over

Table 14. Table of RHSC/DCN Services and Departments and Proposed Location

Category	Service/ Department	RHSC new	DCN new	RIE existing/ amended	Comment
Clinical	Emergency department	X		X (adult/DCN)	
	In-patient beds & day case	X	X		
	Critical care	X		X (DCN)	Key link
	Outpatients	X	X		
	PIU		X		
	Therapy	X	X		
Clinical Support	Radiology - general	X		X (DCN)	
	MRI – specialist radiology	X	X		
	Operating theatres	X	X		
	Neurophysiology	X	X		
	Cardiology investigations			X	
	Laboratory services			X	Pn. tube
	Mortuary			X	Key link
	Pharmacy			X	Pn. Tube+link
	Health records	X	X		
	Equipment library	X			
	Bed and toy store	X			
	ICT	X	X	X	Node rooms-new
	Medical physics			X	
	Medical photography			X	
Patient & visitor support	Main entrance	X	X		
	Bereavement suite	X		X (DCN)	
	Spiritual & pastoral care	X		X (DCN)	
	Family support	X		X (DCN)	O/N stay
	Family Hotel - RMcD	X			
	Family Hotel - CLIC	X			
Academic	Child Life & health	X			
	Clinical research facility	X		X (DCN)	QMRI
	Clinical education suite	X		X (DCN)	Chancellor's
staff	On-call	X			n/r DCN
	Clinical/management offices	X	X		
	Staff changing	X	X		
	Staff restrooms	X	X		
	Staff Dining			X	
	Occupational Health			X	
FM	Catering	X	X		
	Domestic services	X	X		
	Linen & laundry	X	X		
	Materials management	X	X		
	Estates	X	X		

### 3.9.3. Commentary on Table

#### 3.9.3.1. Built new – specialist, requires to be dedicated

All the RHSC clinical accommodation will be built new because a service for children requires dedicated facilities specifically designed for them.

#### 3.9.3.2. Built new - no capacity or other expansion potential in RIE

DCN clinical accommodation is built new in the main because there is no available spare capacity in RIE. It will make best use of specialist radiology and so on to integrate DCN IP and OPs in the same building.

Clinical support departments which require additional capacity and/or there are specialist requirements include Radiology, Theatres and Neurophysiology and so are built new.

#### 3.9.3.3. Support Services – could be integrated but built new - no capacity or expansion potential in RIE

Those Support Services which are not specialist and could be wholly integrated but are being built new for reasons of lack of capacity or an inability to expand at RIE include: Health records, Offices, Staff changing and Staff Restrooms and Academic departments for children's services.

#### 3.9.3.4. Support Services – able to be integrated in RIE

1. Adult Critical Care – Levels 2 and 3 will be accommodated in the expanded RIE department
2. Labs – in the process of redesigning across Lothian
3. Pharmacy - redesigning within RIE for additional capacity
4. Mortuary/PM will cope in current accommodation, already use existing from off-site for RHSC
5. Other adult specialist investigations e.g. DCN in-patients to cardiac investigation, DCN in-patients to simple radiology
6. Medical physics
7. Medical photography - redesigning within RIE
8. DCN – spiritual care, relatives overnight stay – all in RIE
9. DCN research and academic – using QMRI and Chancellor's building
10. Main staff dining and other non-patient catering – remains under consideration

The wide variety in nature of transfers between new RHSC/DCN and RIE again puts a focus on the nature of the link between the two buildings and its ability to provide for all these services.

## 3.10. Clinical Space Planning – General Comments

### 3.10.1. Use of standardisation of room sizes

The standardisation of rooms is gradually being introduced through the project and this should be developed as far as possible including into 1:50 exemplar rooms. This will result in efficiencies during the design phase, and also in equipping the rooms and in their ultimate use by staff. As an example of this last point, the standardisation of design has been proven to reduce the level of clinical incidents.

NHS Lothian have a set of standards which differs from guidance and is generally less than guidance. As an example waiting is generally briefed at 1.5 sq.m. per person waiting rather than 1.7 sq.m. per person and open-plan office areas at 4.1 sq.m. per person rather than 5 sq.m. per person. (Based on HBN 00-03 2010)

Although the NHS Lothian standards are generally less than guidance, they may well be quite functional. Again, a few 1:50 exemplars would under-write the assumptions being used and reduce the risk of later changes or a creeping increase in area driven by functionality.

***Recommendation 11:***

*Identify key clinical rooms – likely to be 15-20 different types of room in total and provide an indicative 1:50 layout (straight from ADB or even in sketch form) in order to under-write the proposed square metre area for each room. Utilise these standard areas throughout the schedule of accommodation.*



## 4. Support Services Planning

### 4.1. Soft FM

Soft FM services will be provided by NHS-Lothian who are therefore required to incorporate a means of providing these services on site. RIE services are provided in the main by Consort Healthcare.

#### 4.1.1. Catering

The current schedule of accommodation represents a cook-freeze facility for patients' meals with traditional preparation of snacks and meals for staff.

However the stated operational policy is to provide a traditional kitchen for reasons of quality of output. NHS Lothian agreed that it would be worthwhile to undertake an option appraisal of the alternative methods of providing patient meals within an NHS-run service. Methods such as cook-freeze are in wide use within services provided directly by NHS staff. The capital and revenue costs of the various methodologies vary quite widely. No further comment is provided until completion of the option appraisal.

The optimum method to provide non-patient catering is still under discussion within the health board.

**Recommendation 12:**

*Undertake an option appraisal to determine the optimum catering methodology for patient and non-patient catering to deliver best value for money.*

Other support services such as linen services and staff changing do not have sufficient information provided to enable an assessment of the economy of the planned areas.

#### 4.1.2. Domestic Services

The new building is sufficiently large to allow management of an efficient service from within the building with minimal central accommodation being required other than the storage of materials and a management office.

Linen services are covered under this heading within the design brief and an area of 90 sq.m. net is proposed for a "linen pool". The nature of the service is not specified in great detail but the laundry is taken off-site and can presumably be delivered daily with limited requirements for buffer storage. It is not possible to make an accurate assessment of the area without more information. The service is in the central belt of Scotland with good transport links so a large buffer store may not be required

#### 4.1.3. Materials Management

Materials Management (Supplies and, Waste collection)- It is proposed to provide a full service from within the new building, including the provision of a new external delivery point and holding store. Suppliers will therefore deliver to two separate points on the RIE site. The current RIE delivery point is managed by NHS Lothian and excluding the delivery of linen, materials are delivered and collected by NHS staff.

NHS-L will therefore be providing two separate services on-site with de-facto duplication of back-up supplies such as medical gas cylinders, laundry stock, buffer stores etc.

### 4.2. Other support services

These were not reviewed in detail as there was a lack of supporting information in the documentation provided. For example - the number of health records to be stored is not identified; derivation of the requirements for family accommodation in the Hotel is not stated.

**Recommendation 13:**

*To ensure that best value for money will be delivered, the Board may wish to review the derivation of the scheduled areas and to record more detail on the proposed operation of the various areas. This will assist the design teams in understanding how the detailed design should be approached.*

## 5. Efficiency of Planning

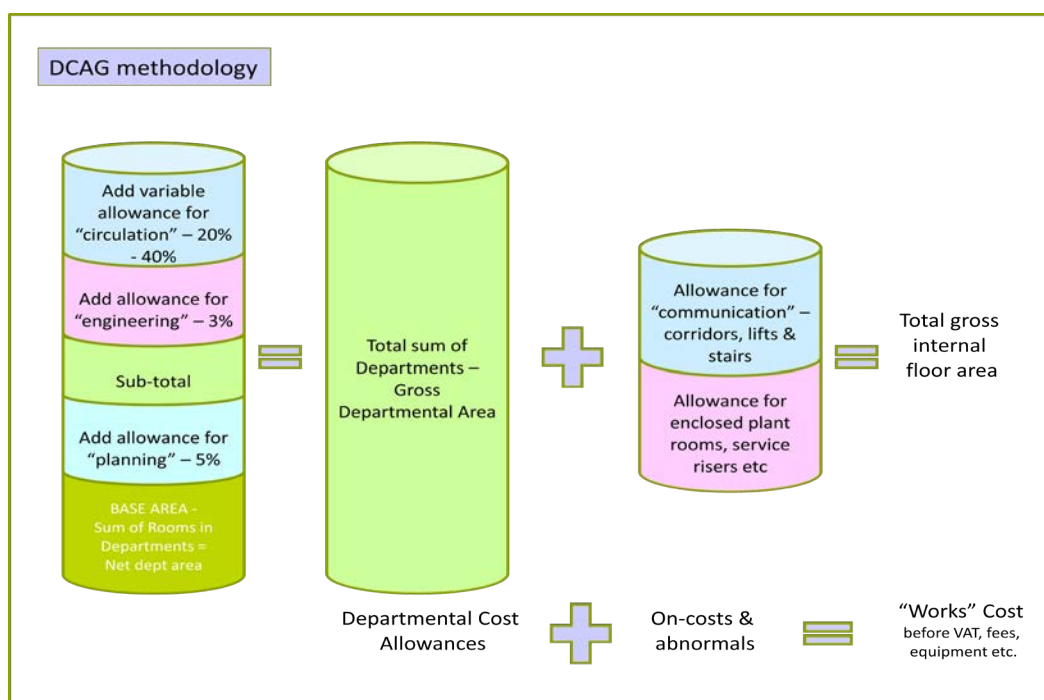
### 5.1. Gross Area Benchmarking – Healthcare Planning Perspective

#### 5.1.1. Reference documents

How to Cost a Hospital (2005) – now superseded by:  
Health Premises Cost Guides (2010)

The following diagram illustrates the previously approved DCAG methodology for estimating the total area of a proposed healthcare building. Both the RHSC project and the DCN project began life under the earlier system and **the current NHSL schedule of accommodation is compiled on this basis.**

Figure 4: DCAG methodology



#### 5.1.2. Gross Areas of Departments – our understanding

Health Building Notes and Scottish Healthcare Planning Notes usually include an indicative Schedule of Accommodation for a typical department, listing the required rooms and the recommended area of each room for its function.

In recent years, the SoAs have demonstrated the addition of an allowance for **planning** and **engineering** at 5% and 3% respectively. These allowances cover flexibility in design, internal partitions and an engineering zone to allow for the distribution of services within the department, radiators and small vertical ducts.

An additional allowance for departmental **circulation** is also indicated – generally around 25%-30%, (but sometimes as much as 40%) to allow the design of corridors.

The sum of these inter-departmental areas represents the **Gross Departmental Areas**. (A reference diagram in SHPN04 (2010) para 5.13 describes this approach which was in general use until last year.)

### 5.1.3. Total Gross Internal Floor Area of the Hospital

In order to estimate the gross area of the hospital, the individual departments are summed and then an additional allowance is made for energy centre, communication – main corridors, lifts, stairs etc. and for engineering – main ducts and shafts. In recent years this allowance has tended also to include main internal plant areas, allowing an estimate of the Gross Internal Floor Area of the building prior to its design. (The GIFA is useful in estimating revenue and life-cycle costs at this stage.)

I am not aware of any guidance in the DCAG methodology for the scale of these elements. In Atkins we generally indicate a range of between 25% and 35% additional area for these elements at the planning stage. These allowances are based on the out-turn of a range of projects that we have been involved in. The lower figure is useful for small-scale projects with few technically complex departments. The upper range is appropriate for complex projects with a greater number of highly-serviced technical departments.

The actual area required for communication and plant is not known until the out-turn of the design and planning process.

### 5.1.4. Healthcare Premises Cost Guides (2010)

This new guidance changes the methodology as described above and gives explicit guidance on the areas to be included. However its application necessitates ordering of each schedule of accommodation and differentiating its elements into public, clinical and staff zones. NHS Lothian have not undertaken this exercise on the Schedule of Accommodation.

## 5.2. Information provided by NHS Lothian on Gross Area Benchmarking

- 1) SoA Joint Build Accommodation Summary 27 July Version 2.xls  
Email SC – 5<sup>th</sup> August 2011
- 2) Commentary on Benchmarking – email and CD, David Stillie, 5<sup>th</sup> August 2011  
Mott MacDonald, Area, Quality and Cost Benchmarking – especially Item 3 – Gross Area Benchmarking (reference RM)  
Reference is made to both departmental circulations and to communication and plant and a comparison is made with the Glasgow Sick Children's Hospital project.
- 3) Glasgow Sick Children's Hospital Schedule of Accommodation (dated 27/5/2010)

### 5.3. Analysis – Gross Departmental Areas

The basis for reaching Gross Departmental Areas is not totally explicit within the documentation, however the Mott MacDonald commentary indicates that the standard elements of 5% planning and 3% engineering were applied.

The derivation of the percentages for departmental circulation is not described, although the departmental design briefs indicate which guidance document should be complied with e.g. SHPN 22 for Emergency Department.

An audit was undertaken of the circulation percentages indicated in the SoA against the percentages listed in the relevant guidance documents. The results of this audit are shown in Appendix 1

See Appendix A - RHSC/DCN Departmental Circulation v SHPN/HBN guidance

## 5.4. Commentary on RHSC/DCN departmental circulation v SHPN/HBN guidance

In only a small minority of cases does the out-turn area in the RHSC/DCN schedule exceed that of the guidance and never by more than 2.1%.

On the other hand most departments in the RHSC/DCN schedule are estimated at less than the guidance would suggest. In general departments are between 3% and 8% under the gross area indicated by guidance figures.

The departments where problems tend to occur are wards, outpatients, theatres and imaging. The following table summarises the findings for these areas

**Table 15. Key departmental circulation allowances**

Department	RHSC/DCN	SHPN/HBN	Glasgow	RHSC/DCN v SHPN/HBN
In-patient wards/ PARU	30%	35%	34%	- 5.5%
Outpatients	28%	35% (HBN23) or 33% (HBN 12)	31%	- 6.1% to -7.5%
Operating theatres	30%	25%	30% (was 25% but required uprating)	2.1%
Imaging	30%	27%	30% (was 27% but required uprating)	0.5%

### 5.4.1. In-patient wards

It was proposed earlier in this report that an indicative ward plan be drawn up as soon as possible to resolve issues of room sizing that are likely to exacerbate the problem of designing within the scheduled area.

### 5.4.2. Out-patients

The large number of small spaces may make this department difficult to design efficiently and the designed area of this may come to exceed the estimate.

### 5.4.3. Operating Theatres

NHSL has included an uprated allowance for operating theatres based on the requirement to separate flows for children and adult DCN patients.

### 5.4.4. Imaging

NHSL has included an uprated allowance for operating theatres based on the requirement to separate flows for children and adult DCN patients.

### 5.4.5. Departments overall

A systematic under-estimate of circulation areas is generally a problem in that designed areas are greater than estimated areas and have an impact on cost. In this project overall there is 1,013.6 s.m. (2.9%) less in the RHSC/DCN schedule than the area derived through the use of the departmental norms.

This may be sufficient to have an impact on the cost model if the design development cannot match the targeted areas while meeting the demands of functionality.

**Recommendation 14:**

*The Board may wish to review this element with its technical advisors and healthcare planners to be confident the departments can be designed within the target areas.*

## 5.5. Analysis – Gross Internal Floor Area

### 5.5.1. Comment on allowances made for Communication and Plant at planning stage:

Healthcare planners generally give an indication at IA/early feasibility to assist with cost estimates until design commences and measurement of these areas can commence. Atkins uses an indicative range of 25-35% as described above. Within the commentary provided by Mott MacDonald, the figures used by Tribal Consulting are quoted as 25-35% which is identical to the range used by Atkins.

### 5.5.2. Current NHSL approach

NHSL prepared a report entitled “Plant Communication Allowance Analysis – Technical Advisory Paper” on the 8 November 2011. This report was submitted to SFT on the 11 November 2011. The report notes that the areas are based on Schedule of Accommodation 6 (SoA 6) and a 1:200 design and not SoA 5 - 1:500 design on which Technical Cost Summary 4 dated 12 October 2011 is based, (See Section 6.0 of our report)

The report highlights that the current revised total communication area is 13,352m<sup>2</sup> which represents 38.8% of the SoA 6 departmental total (34,333 m<sup>2</sup>). The Gross Internal floor area of SoA 6 amounts to 47,685m<sup>2</sup> which is 503m<sup>2</sup> less than Technical Cost Summary 4’s Gross Internal floor area of 48,188m<sup>2</sup> (excluding nib area). It should be noted that external plant areas and particularly the separate Energy centre are not included within the above percentage of 38.8%. The internal area of the energy centre as noted in TCS 4 is 1,000m<sup>2</sup>.

NHS Lothian highlight within their report that the original ‘Framework Scotland’ Phase (RHSC-Only) included 38% for communication allowance noting the following:-

*“the current reference design in the context of previous iterations of the scheme (Framework Scotland phase), particularly where the reference design brief / Schedule of Accommodation has taken the previous iteration as a starting point. Identifying abnormal and peculiarities of the site / brief that applied during the prior phase, and continues to be relevant, is therefore important and these are referred to as follows:*

*Connections to RIE – a ground - and first-floor hospital street connection to the existing Royal Infirmary Edinburgh (RIE) was required;*

*Basement – a small basement containing plant and linking via a service tunnel was a previous requirement;*

*‘O-Zone’ – the original scheme was founded on the concept of a generous internal amenity space, which became known as the ‘O-Zone’. Although not strictly ‘communication’ space, the area associated was included and was sized at 450m<sup>2</sup>”*

NHS Lothian highlight within their report that the current 'Reference Design' Phase (RHSC+DCN) includes 38.8% for communication and plant allowance including brief alterations are noted below:-

*Helipad – this is a new requirement for the scheme and requires a dedicated vertical circulation core to serve it and allow the required connections to the emergency department;*

*Autonomous Energy Centre – the introduction of an autonomous energy centre (previously not a requirement for the proposed development site) has limited the available ground space, upon which previously it was easier to locate proximity car-parking, service yard and associated departments, and good quality external amenity space;*

*DCN – the introduction of the DCN is a key addition in terms of the development of the scheme from the previous RHSC-only iteration. The need to consider careful separation of adult and children patient groups inherent with the integration of the DCN is not a factor that applied previously and necessitates a proportion of additional communication allowance to allow such separation;*

*Full Production Kitchen – in the prior RHSC-only phase, the scheme was not autonomous in terms of its catering provision and was to be served from the main RIE facilities. The current scheme now includes a full production catering facility which therefore attracts a proportion of dedicated communication space within it as well as the functional accommodation.*

For full details of these points please refer to NHS Lothian's full report dated 8 November 2011.

It should be noted that Atkins and Faithful+Gould have not received a copy of SoA 6 or of the 1:200 designs during the course of the preparation of our report.

### 5.5.3. Benchmarking

NHSL'S report includes a benchmarking exercise based on nine projects. They have stated that the average communication allowance for these projects is 32.6% although this includes the "rogue" North Wales Alltwn project which had an allowance of 57.4%.

Faithful+Gould have checked this total and our average total amounts to 34.5% including the outlier North Wales Alltwn project which included the design of a large, covered 'winter-garden' / atrium within this area. If this project is omitted the average percentage decreases to 31.7% over eight projects.

Apart from the Alltwn project the only benchmarked project with a comparable communication allowance percentage is the Glasgow Southern General Hospital with 38.3% communication space. The communication percentage is again higher than the average figure and may be explained by the inclusion of a large internal atrium of approximately 1,500m<sup>2</sup>.

NHSL confirmed that benchmarking has also been discussed with the health planners, Capita Consulting, who were also instrumental in developing Schedules of Accommodation for the previous RHSC-only phase. Capita have confirmed that in their experience of this type of facility, they would expect a figure of approximately 35% to be applied as a communication percentage.

### 5.5.4. Net to Gross Areas - Summary

The allowance for communication and plant within the current NHSL schedule is 38.8%. This is higher than the standard pre-design range assumption of 24%-35%. 38.8% may be appropriate given the above noted alterations and the requirement to link to the existing building and to accommodate two quite separate patient flows within the building. This element will move from a theoretical calculation to a measurable figure during the development of the Reference Design and should become increasingly accurate.

#### **Recommendation 15:**

1. NHSL should continue to target reduction in the figure for main corridor communication, lifts and stairs and plant by value engineering of the developing design.

2. NHSL to check whether Glasgow Southern General has a separate energy centre or whether the plant rooms are integrated into the building which could explain the higher 38.3%.

## 6. Review of Capital Cost

### 6.1. Introduction

This report reviewing the capital cost of totalling £154,900,000 (comprising a cost ex VAT of £152,700,000 and NPD site works of £2,200,000) , prepared by Thomson Gray on behalf of NHS Lothian for the project has been based on the following information:-

NHS Lothian Brian Currie email received on the 13 October 2011 including answers in response to Faithful+Gould's questions dated the 6 October 2011 and the 19 October 2011 and the following attachments:

- Technical Cost Summary 4 - 12/10/11 prepared by Thomson Gray
- Appendix 1 - Elemental Cost Model – 12-10-11
- Current Departmental Schedule of Accommodation Version 5 amounting to 48,380.6m2 adjusted to delete 193m2 of A&E nib stated as not forming part of the NPD contract = 48,188m2 GIFA SoA arithmetic not checked by Faithful+Gould. Thomson Gray confirmed this area excludes the GIFA area of the Energy Centre although the cost of the Energy Centre is included within the above total
- Appendix 2 – Back-up to Elemental Cost Model – 12-10-11 for 48,188m2
- Appendix 3 – Life Cycle Cost Breakdown
- Appendix 4 – Inflation Figures
- Appendix 5 – Cash Flow Forecast Arithmetic not checked by Faithful+Gould
- Appendix 6 – Risk Register V10 – 12-10-11 - Arithmetic not checked by Faithful+Gould
- Appendix 7 - Equipment Schedule (costed) Arithmetic not checked by Faithful+Gould

Nightingale Associates and BMJ Architects Drawings received on the 24 October 2011:

- NA/10727/L (25) B/01 Rev B Proposed Reference Design : Basement Plan
- NA/10727/L (100)G/02 Rev B Proposed Reference Design : Ground Floor Plan & Site Layout
- NA/10727/L (251) 1/01 Rev B Proposed Reference Design : First Floor Plan
- NA/10727/L (251) 2/01 Rev B Proposed Reference Design : Second Floor Plan
- NA/10727/L (251) 3/01 Rev B Proposed Reference Design : Third Floor Plan
- NA/10727/L (251) 4/01 Rev B Proposed Reference Design : Fourth Floor Plan

### 6.2. Technical Cost Summary 4 (TCS4)

Technical Cost Summary 4 was issued by Thomson Gray on the 12 October 2011 including all supporting appendices. Appendix 1 Elemental Cost Model is shown below. This is based on the latest Gross Internal Floor Area of 48,188m2.

*TSC4/ over*

Table 16. Technical Cost Summary 4 (TCS4)

**EDINBURGH ROYAL HOSPITAL FOR SICK CHILDREN AND DEPARTMENT OF NEUROSCIENCES**

**TECHNICAL COST SUMMARY 4 – APPENDIX 1 ELEMENTAL COST MODEL**

GROSS INTERNAL FLOOR AREA		48,188m	2	518,696
			m2	ft2
ELEMENT	COST	COST/M <sup>2</sup>	COST/FT <sup>2</sup>	
	£	£	£	
<b>0.5</b>	<b>DEMOLITIONS AND DOWNTAKINGS</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>1</b>	<b>SUBSTRUCTURE</b>	<b>14,663,640</b>	<b>304.3</b>	<b>28.27</b>
<b>2</b>	<b>SUPERSTRUCTURE</b>	<b>28,263,417</b>	<b>586.52</b>	<b>54.49</b>
2.1	Frame & Helipad	11,960,386	248.2	23.06
2.2	Upper Floors (included in 2.1)	0	0	0
2.3	Roof	3,614,533	75.01	6.97
2.4	Stairs	763,256	15.84	1.47
2.5	External Walls	2,571,228	53.36	4.96
2.6	Windows and External Doors	3,125,531	64.86	6.03
2.7	Internal Walls and Partitions	3,638,982	75.52	7.02
2.8	Internal Doors	2,589,501	53.74	4.99
<b>3</b>	<b>FINISHES</b>	<b>7,891,505</b>	<b>163.76</b>	<b>15.21</b>
3.1	Wall Finishes	3,518,392	73.01	6.78
3.2	Floor Finishes	2,787,654	57.85	5.37
3.3	Ceiling Finishes	1,585,459	32.9	3.06
<b>4</b>	<b>FITTINGS AND FURNISHINGS</b>	<b>3,380,748</b>	<b>70.16</b>	<b>6.52</b>
<b>5</b>	<b>SERVICES INSTALLATIONS</b>	<b>41,142,360</b>	<b>853.79</b>	<b>79.32</b>
5.1	Sanitary Appliances	1,462,123	30.34	2.82
5.2	Services Equipment	2,529,870	52.5	4.88
5.3	Disposal Installations	1,155,313	23.98	2.23
5.4	Water Installations	3,794,805	78.75	7.32
5.5	Heat Source	354,182	7.35	0.68
5.6	Space Heating and Air Treatment	2,985,247	61.95	5.76
5.7	Ventilating Systems	5,302,630	110.04	10.22
5.8	Electrical Installations	14,408,311	299	27.78
5.9	Gas Installations	0	0	0
5.1	Lift and Conveyor Installations	1,134,000	23.53	2.19
5.1	1 Protective Installations	910,753	18.9	1.76
5.1	2 Communication Installations	758,961	15.75	1.46
5.1	3 Special Installations	5,869,298	121.8	11.32
5.1	4 Builders Work in Connection with Services	476,868	9.9	0.92
5.1	5 Builder's Profit and Attendance on Services	0	0	0
			0	0



	<b>Building Sub-Total</b>	<b>95,341,670</b>	<b>1,978.54</b>	<b>183.81</b>	
<b>6</b>	<b>EXTERNAL WORKS</b>	<b>9,441,915</b>	<b>195.94</b>	<b>18.2</b>	
6.1	Site Works	2,642,042	54.83	5.09	
6.2	Drainage & surveys	604,873	12.55	1.17	
6.3	External Services	5,250,000	108.95	10.12	
6.4	Minor Building works	945,000	19.61	1.82	
		<b>104,783,585</b>	<b>2,174.47</b>	<b>202.01</b>	
<b>7</b>	<b>PRELIMINARIES</b>	<b>12,574,030</b>	<b>260.94</b>	<b>24.24</b>	<b>12.00 %</b>
		<b>117,357,615</b>	<b>2,435.41</b>	<b>226.26</b>	
<b>8</b>	<b>DESIGN FEES</b>	<b>10,824,912</b>	<b>224.64</b>	<b>20.87</b>	<b>9.20%</b>
		<b>128,182,527</b>	<b>2,660.05</b>	<b>247.12</b>	
<b>9</b>	<b>RISK ASSESSMENT + CONTRACTORS FEES O/P</b>	<b>9,861,544</b>	<b>204.65</b>	<b>19.01</b>	<b>7.70%</b>
		<b>138,044,071</b>	<b>2,864.70</b>	<b>266.14</b>	
<b>10</b>	<b>OUTTURN INFLATION</b>	<b>14,599,287</b>	<b>302.97</b>	<b>28.15</b>	<b>10.60 %</b>
		<b>152,643,358</b>	<b>3,167.66</b>	<b>294.28</b>	
<b>11</b>	<b>EQUIPMENT COSTS</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.00%</b>
		<b>£152,643,358.0</b>			
	<b>TOTAL COST</b>	<b>0</b>	<b>3,167.66</b>	<b>294.28</b>	
		1Q 2015			

INFLATION TO 1Q 2015 MID POINT

1Q 2015

<b>152,700,000</b>	<b>3,168.84</b>	<b>294.39</b>
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Source: Thomson Gray

### 6.3. Review Meeting

A meeting was held on the 25 October 2011 in SFT's Edinburgh office with the following in attendance:-

- Donna Stevenson - SFT
- Colin Proctor – SFT
- Gordon Wilkinson – Faithful+Gould
- Brian Currie – NHS Lothian
- Carol Potter – NHS Lothian
- Stuart Gray – Thomson Gray
- James Gibson – Thomson Gray
- Michael Pryor – Ernst & Young

### 6.4. Clarifications received at Review Meeting

#### 6.4.1. Elemental Cost Model

Thomson Gray confirmed at the meeting on the 25 October 2011 that Appendix 1 Elemental Cost Model was derived from Supporting Documentation Appendix 2 – Back-up to Elemental Cost Model and took full cognisance of the building shape, design, site constraints, and measurement of external works noted within the drawings highlighted in 6.1 above.

#### 6.4.2. A&E nib

It was confirmed at the meeting on the 25 October 2011 that the 193m<sup>2</sup> of A&E nib stated as not forming part of the NPD contract will be funded from a separate capially funded traditional enabling contract.

#### 6.4.3. Equipment

Referring to the Technical Cost Summary 4 Section 1.0 Introduction on page 2/8 – FF&E and NHSL response to SFT question 2.3 dated 24 October 2011 it was confirmed by NHS Lothian that the following TCS 4 FF&E allowance of

Group 1 - £2,950,000

Group 2 - £150,000

Is superseded by the current Appendix 2 combined figure of £3,036,600 excluding artwork.

Group 2 supply and Groups 3 and 4 supply and fit is excluded from cost.

### 6.5. Gross Internal Floor Area

Referring to the Technical Cost Summary 4 Section 2.0 Gross Internal Floor Area (GIFA) on page 2/8 5 it is noted that the area has increased from the Technical Cost Summary 2 (TCS 2) dated August 2011 of 46,601m<sup>2</sup> to 48,188m<sup>2</sup>.

This 48,188m<sup>2</sup> area has increased 530m<sup>2</sup> from TCS 3 and 1,587m<sup>2</sup> from TCS 2. It is noted that this area has increased due to the following:-

single bedrooms in accordance with current requirements – 15m<sup>2</sup> increased to 17m<sup>2</sup>  
 client additions in relation to non patient catering  
 associated increased kitchen area  
 gamma camera provision  
 general design development.

It is noted that in respect of the kitchen and catering provision an option appraisal is being carried out by NHS Lothian.

## 6.6. Schedule of Accommodation

It should be noted as per our report Section 5.5.2 that SoA 6 has now been prepared and superseded SoA 5 on which this Cost Review is based.

Schedule of Accommodation 6 (SoA 6) is based on 1:200 design drawings and not SoA 5 - 1:500 design drawings on which Technical Cost Summary 4 dated 12 October 2011 is based.

The Gross Internal floor area of SoA 6 amounts to 47,685m<sup>2</sup> which is 503m<sup>2</sup> less than Technical Cost Summary 4's Gross Internal floor area of 48,188m<sup>2</sup> (excluding nib area). A breakdown of this reduction in area, 1:200 drawings and SoA 6 should be forwarded to SFT.

It should be noted that Atkins and Faithful+Gould have not received a copy of SoA 6 or 1:200 designs for the preparation of our report

## 6.7. Capital Costs

Referring to the Technical Cost Summary 4 Section 3.0 Capital Cost on page 3/8, Thomson Gray confirmed at the meeting dated 25 October 2011 that the cost is based on mid construction point at (1Q 2015).

### 6.7.1. NPD Site Works

Thomson Gray confirmed that the £2.2m NPD site works in TCS item 8.4 is additional to the site works in the Appendix 1 Elemental Cost Model within the £152,700,000 figure excluding VAT.

NHS Lothian / Thomson Gray confirmed that these works, which include pedestrian areas, and landscaping works were included within Consort's enabling works but were now brought into the NPD works envelope. The enabling works breakdown works was submitted to SFT by NHSL on the 11 November 2011.

### 6.7.2. Preliminaries

Referring to the Technical Cost Summary 4 Section 3.0 Capital Cost on page 3/8 and NHSL response to SFT question 5 dated 13 October 2011 regarding the preliminaries, it is noted from NHSL response to question 5 that during the RHSC Standalone stage, BAM and Thomson Gray agreed a strategy for Market Testing preliminaries which involved extensive contact with the Sub Contract market and analysis of Main Contractor management time. However once BAM were no longer involved on the project Thomson Gray independently concluded the preliminaries cost exercise without contractor involvement.

Thomson Gray confirmed at the meeting on the 25 October 2011 that many of the TCS 4 preliminaries costs were based on the previous scheme including scaffolding, temporary accommodation etc. and were confident that that they have utilised the correct market tested information.

It is also noted that the Construction start date has changed from November 2013 to January 2014 although the construction completion date remains at July 2016.

### 6.7.3. Exclusions

Referring to the Technical Cost Summary 4 Section 3.0 Capital Cost on page 3/8 and NHSL responses to SFT question 2.7 dated 24 October 2011 and question 6 dated 13 October 2011, it is noted that the £152,700,000 cost excludes:-

- Group 2A supply and 3 and 4 supply and fit of equipment
- Optimism Bias
- Clinical enabling works
- External enabling works
- Potential town planning issues

#### 6.7.4. Finance Matrix

NHS Lothian forwarded the project Finance Matrix FMAT008 Summary and enabling works REVISED 091111 – Appendices 1 and 2 on the 11 November 2011. This is the confidential draft Finance Summary Matrix is included for SFT's review of the project and includes-

##### Appendix 1

Non NPD current projected spend including equipment (medical and non medical), clinical enabling works, external enabling works, Town Planning work, Reference design costs (B1)  
 Reference Design Cash flow projection – (B2) – by Ernst & Young  
 Unitary payment versus Indexing costs (B3) – by Ernst & Young  
 25 year NPD costs (B4) – by Ernst & Young  
 Risk Register Version 10 – (B5)  
 Unitary Charge Summary (B6) – by Ernst & Young  
 Base Case 92017/18) and Sensitivities (B7) – by Ernst & Young  
 Recurring / non recurring revenue (5 year plans) – (B8)  
 Indicative NHS Board Shares based on 2010/11 payments – (B9)

##### Appendix 2

Enabling works summary

Appendix 1 and 2 are for SFT's review and Faithful+Gould has not made any comment within this high level review on costs.

#### 6.8. Cost Estimate Base

Referring to the Technical Cost Summary 4 Section 4.0 Cost Estimate Base on page 3/8

It is noted that the NHS Lothian / Thomson Gray estimate has been prepared using the HPCG's guidance and that the cost assessment has been made for HPCG's system on the basis of the reference design and knowledge gained from previous market testing on the previously proposed standalone RHSC Development.

Thomson Gray, at the meeting on the 25 October 2011, did not fully explain how they used both HPCG's and "Market tested costs" to prepare TCS 4. It was unclear on what split was used in preparation of the cost.

The original RHSC scheme's rates and costs should have been the basis of TCS 4 with new market tested costs obtained from element unit quantities without the requirement to use HPCG's.

For the next stage measured elemental costs will need to be used which will be fully market tested. This will provide robust check on each element as some elements like external walls appear to be low when reviewing against the drawings stated in 6.1 above.

Faithful+Gould requested that NHSL provide a detailed breakdown of the original market tested RHSC Target Cost elemental summary and 1:500 site and floor plans for comparison with the current RHSC/DNS combined scheme drawings in 6.1 to check whether the original cost per m2 was in line with the current estimate and whether plan shape of the original scheme was similar.

NHSL provide the following drawings on the 11 November 2011 and noted that the equivalent market tested cost for the original Standalone scheme (notionally adjusted to include for an Energy Centre and Heli-Pad, and keeping the percentages for fees, inflation, risk etc, as per the joint build) is just over £3,000/m<sup>2</sup>:-

AR-XX-RF-PL-200-296 Roof Plan Rev A  
 AR-XX-ML-EL-251-201 Elevations Sheet 2  
 AR-XX-ML-EL-251-200 Elevations Sheet 1  
 AR-XX-BL-PL-200-510H - A1 Basement

A47316415

AR-XX-04-PL-200-295 Fourth Floor – 200 - Plan Rev A  
 AR-XX-03-PL-200-294 Third Floor – 200 - Plan Rev A  
 AR-XX-02-PL-200-293 Second Floor – 200 - Plan Rev A  
 AR-XX-01-PL-200-292 First Floor – 200 - Plan Rev A  
 AR-XX-00-PL-200-291 Ground Floor – 200 - Plan Rev A

It should be noted that only the overall cost per m2 was submitted and that no detailed cost breakdown was received.

A high level review of the original scheme highlights that it would appear to have a simpler plan shape than the current scheme.

## 6.9. Back-up to the Elemental Cost Model

Reference is made to Appendix 2 – Back-up to the Elemental Cost Model:-

Appendix 2 comprises the Feasibility Cost Estimate based on the Schedule of Accommodation Version 5 amounting to 48,380.6m2 adjusted to delete 193m2 of A&E nib stated as not forming part of the NPD contract = 48,188m2

### Reconciliation of allocation of costs in Appendix 2 cost model –“Allocation of Elemental Cost Model”

The Appendix 2 elemental reconciliation of costs measured against Appendix 1 Elemental Cost Model was provided in the Allocation of Elemental Cost Model submitted by NHS Lothian / Thomson Gray on the 11 November 2011. It is noted that Appendix 2 elements match the sub totals for Appendix 1 although some elements should be coded under different elements .

For the purposes of this high level review Faithful+Gould has not checked any of the quantities It is noted that on many elements the original “Market Tested” RHSC project has been used as a basis and adjusted in line with the combined project GIFA

Some elements have been adjusted in line with the new combined footprint

Some elements have had approximate measures

Some elements have been adjusted in line with the façade area

It is noted in page 8/16 Bathroom Pods include en-suite complete Sanitary pods. Reviewing Appendix 7 FF&E there are Group 1 costs allowed for WHB's/ WC's and showers. NHS Lothian / Thomson Gray confirmed at the meeting dated 25 October 2011 that there was an element of double counting. NHS Lothian formally confirmed on the 11 November 2011 Item 8 that the amount of potential double counting equates to circa £200,000 (£150,000 of equipment plus percentages for prelims, fees and inflation). The overall cost has not been adjusted to reflect this currently.

Faithful+Gould's high level reconciliation, at this stage, has not allowed for a number of small arithmetical anomalies, in total amounting to under £2,000, within Appendix 2 as it is assumed that these are formulae related to separate related spreadsheets and the total is minor in relation to the overall cost

## 6.10. Fees

Referring to the Technical Cost Summary 4 Section 5.0 Fees on page 3/8, it is noted that TCS 4 has an allowance for design fees of 10% associated with NPD Design development post Financial Close and that design costs prior to FC are assumed to be included in SPV set up costs.

NHS submitted their fee response below in conjunction with their fee diagram on the 11 November 2011:-

Breakdown and benchmarking of post financial close design fees :

“at present, there is an amount that equates to 15% of the capex in the shadow bid model to cover all fees, whatever they may be.

this would, therefore, cover all design fees, advisor fees (financial, technical, legal), set up costs for the SPV, diligence & model audit, success fee for the SPV team, all of which would be included in the borrowing requirements of the SPV and thus included in the unitary charge.

this is split 10% fees post-financial close, as per TG's TC4, and 5% as per the SFT guidance advising that NHSL should include 3-5% in the shadow bid model for bid costs.

NHSL have chosen to set this value at the top end of this range because of the complexity of the project, the constraints that the NPD SPV will have to work within on the site and the Consort interface, which NHS Lothian state will generate a considerable amount of extra work during the procurement. It is not entirely clear what the 3-5% is intended to include, but NHSL have assumed that it includes all of the cost headings above - there are no other sums in NHSL model to cover fees of any sort outside of the 10% and 5% values.

the amount attributed to development of the reference design equates to around 2% of the capex. This is incurred by NHS Lothian and addressed in the wider affordability model - it is not included in the shadow bid model.

further, NHS Lothian's own procurement costs are excluded from the shadow bid model but dealt with in the wider affordability model

if we add together the 2% incurred on reference design, the 10% post-financial close and assume that 2% of the 5% within the shadow bid model relates to design, then a figure of 15% is reached".

Faithful+Gould's comment on fees at this stage of the project is that based on our experience of similar hospital projects we would expect design fees to be in the region of 9% to 10% for the full design works pre and post contract.

The 15% figure stated above from NHSL would be higher than we have seen in projects of a similar nature.

## 6.11. Planning Contingency

Referring to the Technical Cost Summary 4 Section 6.0 Planning Contingency on page 4/8

Reconciliation of quantification of risk allowance for risks transferred to NPD (totalling £9,861,544)

It is noted that the V10 Risk Register is the current register and the NPD Project level total of £9,861,544 is included in TCS 4. It is also noted Client changes are excluded from this figure.

For a scheme moving towards OBC, which should be between the end of outline design and in detail design, we believe that the risk / contingency level based on our experience is within the acceptable range of our benchmarks ie between 5% and 10%. This project is currently at 7% of the £152,700,000 excluding the risk amount.

However as we have only had access to the drawings listed above and have had no review of the 1:500 drawings this risk / contingency level may be low if the scheme is not at the above stage, unless it is very well understood.

We note that Optimism Bias is not included within the above figure.

Overall the Risk Register would appear to cover the right aspects in terms of content.

## 6.12. Inflation

Referring to the Technical Cost Summary 4 Section 7.0 Inflation on page 4/8

It is noted that the BCIS Five year Forecast 2011, September 2011 has been used to calculate inflation costs to midpoint of construction assumed as 1Q 2015. These BCIS figures would appear to be above the trend of the current tenders received in the local market.

It is also noted that the Construction start date has changed from November 2013 to January 2014 although the construction completion date remains at July 2016.

## 6.13. BREEAM

Reference is made to the Technical Cost Summary 4 Section 8.0 BREEAM on page 4/8 which states: Assumed target to achieve “excellent” rating under the BREEAM 2008 guidance or a “very good” rating under the BREEAM 2011 guidance.

## 6.14. Net to Gross Ratio

The current Net to Gross Area Ratio: explanation (with relative areas) of elements which NHS Lothian consider greater than "standard" position is included in Section 5.5.

## 6.15. FM and Life Cycle Costs

Referring to the 9.0 and 10.0 FM and Life Cycle Costs, the following are the Faithful+Gould comments with the NHS Lothian responses noted in bold.

### 6.15.1. FM allowances:

Based on a range of benchmark information, the FM allowance of £29/m<sup>2</sup>/yr sits within the expected range of benchmarks, albeit slightly below the £34/m<sup>2</sup>/yr midway point.

1. FM cost advice provided to Thomson Gray by Davis Langdon.
2. No indication on provided schedule as to what “General” service comprises although 10% of FM budget. - **The term General Services is based on the DOH SLS terminology and is deemed to cover costs associated with general management costs.**
3. Arrangements for space cleaning and grounds maintenance? - **The NPD contractor will be responsible for external façade cleaning, and lifecycle of external hard landscaping. “Soft” FM elements of the Hard Landscaping e.g. Litter picking, sweeping, general cleaning etc are retained by NHSL as this is deemed to demonstrate best value.**
4. What level of demarcation exists between authority and FM provider for the responsibilities for maintaining healthcare equipment – budget appears to wholly exclude this based upon our benchmark data. - **All specialist healthcare equipment will be maintained by NHSL.**
5. Can we confirm the data excludes cost of utilities provision and simply allows for utilities management role? - **Confirmed**
6. No indication as to basis of FM provider appointment. This needs to identify any risk transfer and associated commercial risk, which if applies what is the sensitivity of these commercial and technical performance parameters for impact upon adequacy of identified budget. Also needs to identify basis of maintaining cost adequacy over the 30 year term (benchmarking, RPI / etc) - **NHSL will contract with the NPD contractor on the basis of the Project Agreement (PA). However our costs are on the basis that the FM provider shall have a separate Facilities Management Agreement (FMA), which is a direct step down of the PA with appropriate headroom (based on expected market positions) between the PA and FMA in terms of thresholds for Warning Notices, Termination etc.**

### 6.15.2. Life Cycle Costs

Based on a range of benchmark information the Life Cycle Cost per square metre per annum of £27/m<sup>2</sup>, at 3Q 2011 prices, sits within the acceptable range of benchmarks.

## 6.16. General Project Benchmarking

Referring to the 11.0 General Project Benchmarking, TSC 4 included three of the following benchmarked projects summary for comparison:-

NHS Fife - New Acute Hospital: £170m - GIFA 51,444m<sup>2</sup> - £3,506.35/m<sup>2</sup>

NHS Forth Valley - New Acute Hospital: £293m - GIFA 95,115m<sup>2</sup> - £2,880.70/m<sup>2</sup>

New South Glasgow Hospital: £487m – 171,000m<sup>2</sup> - £2,850 /m<sup>2</sup>

NHS Lothian / Thomson Gray's comparable figure for the proposed RHSC+DCN: £3,169 / m<sup>2</sup> (excluding NPD site works).

Faithful+Gould has not received detailed back up for these to check construction costs build ups, Gross Internal Floor areas, fee percentages, base dates etc and can only make the following comment on the inflation calculations.

Based on the dates presented and using the BCIS September 2011 five year forecast the inflationary increase is 4.98% for Forth Valley and 17.13% for NHS Fife.

## 6.17. Executive Cost Summary and Conclusions

The overall current total Capital Cost per square metre of £3,214 per m<sup>2</sup> (including NPD site works) included in Technical Summary 4 for the purposes of the Outline Business Case is considered to be within the expected range for a project of this size and scope, based on the SoA Version 5. As stated, however, within our report there are elements which should be reviewed and challenged progressing to the next stage of the project including:-

1. 10% Post Financial Close NPD design development fees
2. Current design shape measured against the cost per square metre
3. Specification measured against the cost per square metre
4. Planning contingency Risk Register
5. Inflation allowances
6. Although the global figure cost per square metre is within the expected range individual elemental sections require further review where they appear to low eg the external walls element or high including FFE bathroom pods and the substructure element even allowing for the basement car park
7. Further review of the net to gross floor ratio

Based on a range of benchmark information the Life Cycle Cost per square metre per annum of £27/m<sup>2</sup>, at 3Q 2011 prices, sits within the acceptable range of benchmarks.

Based on a range of benchmark information, the FM allowance of £29/m<sup>2</sup>/yr sits within the expected range of benchmarks, albeit slightly below the £34/m<sup>2</sup>/yr midway point.

### **Recommendation 20:**

*NHSL to review the following:-*

1. *Post Financial Close NPD Co design development fees included at 10% by NHSL which are considered higher than other projects benchmarked.*
2. *Review the Risk Register as the design develops and reduce accordingly as risks are mitigated and costs become more certain.*
3. *Review design shape, specification and elemental cost plan against overall cost per square metre as the design develops during the next stage*
4. *Gross to Net floor area – target communication and plant area reduction and measure against South Glasgow Hospital with regard to the energy centre.*



## 7. Reference Design

The aim of this section of the review is to assess value for money in the creation of the environment for patients and staff.

### 7.1. Design Quality Statement

The project was instigated before the incorporation into the procurement process of the guidance from Architecture and Design Scotland (A&DS) on ensuring design quality in healthcare buildings in Scotland. However the objectives of this process still apply to the project and it will be monitored by A&DS. A&DS recommend the preparation of a Design Statement.

A&DS describes the function of the Design Statement as follows:

*The Design Statement is a means of setting out the Board's objectives for an individual project in a series of agreed statements of intent and then defining benchmarks for how the physical result of the project will help deliver those objectives. The third part of the Design Statement is a plan of action for how the objectives and benchmarks (as can be found in our database Pulse) established for the project will inform key decisions throughout the project. At later stages the emerging design is then assessed against the requirements and standards in the Design Statement and related healthcare specific guidance primarily as part of the Board's own self assessment, but also by the NDAP in order to provide advice to decision makers within the board, and the CIG, regarding the extent to which the project is on track to deliver on the standards established.*

<http://www.ads.org.uk/healthierplaces/guidance/introduction-to-design-statements-2>

### Comment

At Meeting 3, it was agreed that it would be helpful to clarify the Board's aspirations of the quality of design to be delivered, particularly in respect of those elements of evidence-based design that affect outcomes for patients and the environment for patients and staff.

At the Workshop, NHS-L indicated their wish to involve patients, carers and staff in the definition of the objectives and standards of the design, and although a Design Statement in the manner of A&DS is not mandatory to this project, it would be a useful means of creating a consensus on the design outcomes for the project.

### 7.2. AEDET

#### 7.2.1. Use of AEDET

The Achieving Excellence Design Evaluation Toolkit (AEDET Evolution) is published by the Department of Health. It has strong external validation and is used throughout the NHS to assist health service bodies in design development and in particular in benchmarking the developing design. It is an evaluation and benchmarking tool rather than a briefing and planning tool such as the Design Statement process from A&DS.

From the AEDET website:-

*The AEDET Evolution toolkit evaluates a design by posing a series of clear, non-technical statements, encompassing the key areas of impact, build quality and functionality. It is a benchmarking tool .... (and) The NHS has worked closely with the University of Sheffield, the Commission for Architecture in the Built Environment (CABE), the Construction Industry Council (CIC) to develop evaluation criteria which ensure that design takes place within a common industry-wide framework.*

[http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH\\_082089](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_082089)

### 7.2.2. RHSC/DCN AEDET

NHS Lothian undertook an AEDET on 12<sup>th</sup> August 2011. Attendees at the workshop were 16 NHS staff (mixed clinical and management) and 2 patient representatives. There was no external facilitation.

The results of the first AEDET are shown in the following table. **Results of First AEDET on RHSC/DCN, 12<sup>th</sup> August 2011**

#### Results summary:

A:	? Character and innovation							?	4.4	5 of 5 scored
B:	? Form and materials							?	3.5	4 of 5 scored
C:	? Staff and patient environment							?	4.0	3 of 8 scored
D:	? Urban and social integration							?	5.7	3 of 4 scored
E:	? Performance									0 of 4 scored
F:	? Engineering									0 of 5 scored
G:	? Construction									0 of 7 scored
H:	? Use							?	3.5	2 of 7 scored
I:	? Access							?	4.7	3 of 7 scored
J:	? Space									0 of 6 scored
		1	2	3	4	5	6			

NOTE: A filled traffic light dot [?] in the table above indicates a valid average score, a hollow dot [?] indicates that one or more statements have been marked as 'unable to score'.

### 7.2.3. Scored and Un-scored Elements

A number of elements are unable to be scored at this stage because the design is insufficiently developed. In particular performance, engineering and construction cannot be scored at this stage.

However, some of the elements which have not been scored are surprising, for example:-

- Space – circulation distances, segregation of space could be commented on
- Access – pedestrian routes are not commented on although these are well-developed
- Staff and Patient environment – patient privacy and dignity, staff facilities all have some elements already present in the design but are not scored.
- Urban and social integration – sensitivity to neighbours could be commented upon but is not scored.

It may be that the reluctance to score elements results from the need to be more explicit in the design brief about objectives and expectations.

### 7.2.4. AEDET findings

There are a number of important comments from the AEDET group which echo a number of points raised at Meeting 3 and at the workshop. Note there are many positive scores.

#### A.04 The building appropriately expresses the values of the NHS

“Overall felt did express values of NHS, with the exception of CAMHS as felt should not be placed in an acute hospital as this was not social inclusion and it should be part of the community”

#### A.05 The building is likely to influence future designs

“DCN Acute area - not all single rooms, needs to be some bed bays for clinical safety reasons (medical staff & DCN patient reps)”

#### B.03 Entrances are obvious and logically positioned in relation to likely points of arrival on site

“The access to RHSC and DCN entrances need to be clearly defined. There is a concern that the RHSC entrance will be used by DCN. Patient flow for both entrances need to be clearly defined”

**C.03 Patients and staff have good access to outdoors**

“Important to have quiet space for parents away from children (use of Drop in Centre). Outdoor areas must be controlled to ensure no smoking. Need to ensure where there are courtyards that there is access to them.”

**C.05 The building is clearly understandable**

“Signposting to car parks needs to be clear. Signage to basement car park needs to be clear and access into the hospital for both patient groups.”

**H.05 The building is sufficiently adaptable to respond to change and to enable expansion**

“Concerns re clinical expansion. RIE - there are underutilised areas which could possibly be used however concerns about appropriateness for this. Potential for MRI expansion. Highlighted potential for upward expansion.”

**H.07 The layout facilitates both security and supervision**

“Car parking - patient safety - basement car park needs controlled access. Lighting externally around building and to car parks required.”

**I.01 There is good access from available public transport including any on-site roads**

“Concerns re bus routes. Possible bottle neck at Car Park A. Cul de sac at RIE a concern”

**I.02 There is adequate parking for visitors and staff cars with appropriate provision for disabled people**

“Experience from WGH not good in terms of parking, blocking of basement parking needs to be managed. Will there be Mother/Child parking”

***Recommendation 19:***

*Provide within the brief an indication of the Board’s aspirations towards the required quality of the design. This may be by a Design Statement similar to that recommended by Architecture and Design Scotland including an indication of “What success looks like” and detailing of the non-negotiables for patients, staff and relatives. AEDET can be used as a validated measure of achieving the stated objectives.*

## 7.3. Development Control Plan

### 7.3.1. Choice of Site

The choice of site was assessed by option appraisal but the key drivers were the clinical requirement to co-locate the adult and child emergency departments, and to relate DCN acute care to the emergency and receiving facilities in RIE, and to the existing adult critical care unit. There is an AEDET comment above on the appropriateness of CAHMS being located on the acute site. Clinical models for CAHMS vary as to the appropriate location for the service. Glasgow is intending to provide it on the acute of the new Glasgow RHSC.

### 7.3.2. Scale of Development

The aim would be for an appropriate balance of built form and green space. The design fills almost the entire site with either the built form or with roads and accesses. There is relatively little opportunity for development of green-space or expansion areas. We were informed that the building already has as many stories as will be acceptable to the urban planners.

### 7.3.3. Physical expansion of the building

There is little opportunity for external expansion in the future. There is a limited possibility on the edge of radiology (identified as potential future expansion of MRI) and outside DCN OPD; CAHMS could be relocated if the clinical model allowed for this thereby freeing up a corner of the building on the ground floor.

### 7.3.4. Access, entrances and drop-off

The AEDET comments reflect our concerns about the lack of clarity of entrances and the proposals to avoid mixing children and adult patients. This is being addressed in the current revision of the plan.

The AEDET also reflects our concerns re proximity/convenience of bus stops and taxi rank to the entrances.

AEDET comments also reflect our concerns with respect to drop-off & disabled parking areas which are required at both RHSC and DCN Main Entrances. We were advised that this would be provided in the basement car park but the drawing does not demonstrate this approach in terms of drop-off.

The main entrance to the children's hospital is currently shown alongside the ramp to the basement. This will require careful treatment to avoid creating a hazard.

The emergency entrances demonstrate a good segregation of ambulance arrivals from paediatric ambulant and again from adult ambulant. There is a limited amount of parking at both ambulant entrances. Note that the onward parking is relatively remote. This emergency arrangement has been shown without resolution of the 1:200 planning of the department. It is notoriously difficult to make these arrangements work and so the site arrangement remains a risk area.

### 7.3.5. Service access

A separate ramped access for service traffic to a basement turning circle is shown. Considerable design development is required to meet all the requirements of turning arcs, turning circles and control of noise and exhaust fumes in a confined area close to in-patient wards.

### 7.3.6. Summary of DCP comments

Unresolved design issues represent risk items (and thus potential cost) at this stage. The design requires to be developed sufficiently to engineer out as many risks as possible. There is also a risk that resolution of the civil engineering requirements may impact on clinical departments and clinical functionality. These risks should be resolved or at least clarified before acceptance of the reference design.

**Recommendation 17:**

*To provide as much detail as possible on the site diagram including the definition of the following elements:- pedestrian access to both services; public transport routes made clear, detailed ramps and turning circles for the basement; vehicle traffic routes to be well-segregated from pedestrian walkways and entrances.*

## 7.4. Link between RHSC/DCN and RIE

The importance of effective links between the new RHSC/DCN building and the existing RIE in order to fulfil clinical operational assumptions has been emphasised previously. At the workshop the potential uses of the link were discussed and identified as follows:-

### 7.4.1. Ground Floor Link – on completion of RHSC/DCN

**Patients:**

- Adult DCN admissions from RIE emergency department
- Adult DCN patients to RIE main radiology department
- Adult RIE patients to specialist MRI in DCN
- Bodies of children and DCN patients to the RIE mortuary

**Materials management**

- Pharmacy supplies from RIE pharmacy to RHSC/DCN
- Small numbers of pathology specimens not suitable for pneumatic tube transport (No general supplies, linen or food to be transferred between buildings – completely separate materials management infrastructure.)

**Staff**

- Specialist staff reviewing patients in either building e.g. neurologist assessing patient in medical in-patient ward of RIE; cardiologist visiting patient in DCN wards
- Staff to/from main staff dining within RIE?

### 7.4.2. First Floor Links

**For Patients**

- DCN to ITU/HDU
- Neonates to RHSC from Simpson
- Flex management of theatres

### 7.4.3. Future Links

**Potential future uses**

- Future flexibility in use of the building, changing requirements of specialties
- Expansion of either DCN or children's services by displacement of services into RIE

#### 7.4.4. Importance of Detailed Specification

These links were not demonstrated on the current drawings, nor were the “arrival” points for the connections within the existing building demonstrated. We were advised that on the ground floor the general corridor circulation of the new building will connect to a general staff and patient communication street within RIE. By this means patients and staff can reach the required departments without passing through another clinical department. We were advised that this connection would allow access to a vertical circulation core within the RIE which would then connect to mortuary, pharmacy, laboratories and so on.

On the first floor we were advised that the entry point would be to a corridor between theatres and critical care which would be a staff-only area but would not traverse a clinical department. If so, this would be appropriate for the proposed use in transferring high dependency patients on bed or in an incubator. It would not be appropriate for any other use.

In our view it is absolutely critical to understand all the current and future requirements of this link and to detail its design requirements in terms of functionality (width, finishes etc.) design for privacy and dignity, for control of infection and for segregation of flows.

#### 7.4.5. Basement Link and Other Levels

##### Basement

The advantages of a basement link were reviewed but we are advised that this is technically very difficult to achieve, has a high capital cost, and raises issues with regard to the current contractual arrangements on the existing site. There would also be disruption to clinical services.

There would be an advantage in having this link to enable NHS-L to have a single delivery yard at the existing RIE and to manage a single supplies delivery and collection service through both existing and new buildings. (NHS currently uses portering services to deliver goods (except linen) within RIE.)

There is an additional capital cost in providing the second service yard for the new building and in the infrastructure to support it and potentially additional life-cycle costs of NHS-L managing two delivery/collection yards on the same site over time.

The life-cycle costs of NHS-L managing two delivery/collection yards on the same site over time therefore require to be identified. The lack of an internal FM services link means that any future integration of soft FM services on the site will be disadvantaged by the requirement to operate from two separate buildings with FM-type journeys taking place externally by van or wheeled transport trolleys.

##### Other levels

Connections at levels above first floor were examined but these are technically very difficult as the RIE has only plant rooms at higher levels and no hospital circulation routes to link into.

##### ***Recommendation 1: As previously noted***

*A detailed specification of the requirements of the linking buildings between the new build and the existing RIE should be prepared, outlining the number and types of patient and staff journeys that will take place, both on first opening the building and as can be foreseen in the future. The termination points of the corridors in RIE and the routes to lifts and stairs should be identified and the design should avoid routes transiting clinical areas which are not served by the link or which are sensitive patient management areas. Other physical links such as pneumatic tube and IT links should also be carefully specified.*

## 7.5. Environment for Patients and Staff

There is no design strategy yet for elements such as the orientation of patient bedrooms for sunlight and connection to the natural environment. There has been minimal consideration as to the introduction of green-space, or usable courtyards or for offices to have daylight and so on. Evidence-based design features were discussed with the design team and it is recommended that these form part of the developing design brief prepared by NHS Lothian.

The north element of the building is still under significant development. It will require to provide a suitable environment for the family hotel, for staff offices and for the main out-patient departments and so is also of key importance.

As discussed under AEDET, these elements require to be significantly strengthened in the brief for the NPD design teams or considerably further developed in the reference design.

***Recommendation 19: As previously noted***

*Provide within the brief an indication of the Board's aspirations towards the required quality of the design. This may be by a Design Statement similar to that recommended by Architecture and Design Scotland including an indication of "What success looks like" and detailing of the non-negotiables for patients, staff and relatives.*

## 7.6. 1:500 Block Planning

We were advised that the 1:500 departmental relationships drawings that we were supplied with are in the process of being updated.

### 7.6.1. Design of Hospital Circulation

#### 7.6.1.1. Approach to the Hospital Diagram

This is relatively under-developed and we were not able to demonstrate a fully cohesive approach to segregation of flows between visitors/general traffic and patients in beds or trolleys/staff. This requirement is complicated within this building by the wish to keep adult DCN traffic relatively separate from children's traffic.

#### 7.6.1.2. Patient Journeys

Routes from the entrances are currently being developed and cannot be finally reviewed. Separate vertical cores are proposed for RHSC visitors and out-patients and for DCN visitors. These are complemented by a "hot" core which is primarily designed to take patients from the emergency department to in-patient wards, ITU/HSU and operating theatres.

This circulation diagram appears to work fairly well on Level G and on 3, the latter being RHSC departments only.

On level 1, there may be a crossover between child patients being transferred from theatres to critical care and visitors attending DCN in-patients. On level 2 there is a crossover for RHSC patients going to Neurophysiology with DCN patients being transferred from ITU in RIE which is probably of no significance, giving the numbers of patients involved and timing of journeys, but acceptance of the cross-over should be noted. Certain routes seem circuitous and may result in patients opting to use the "wrong" core – e.g. route for DCN patients from front door to DCN therapies.

#### 7.6.1.3. Staff routes

These are not clearly identified. It would be useful to detail staff journeys from either the parking areas or public transport drop-off points to the staff changing areas and on to the various departments. Careful planning is necessary to avoid staff using unfortunate desire lines through clinical departments. It is assumed that the route for staff to the main hospital will be externally across the bus route to the existing RIE entrance, or to the Chancellor's building or the research building.

#### 7.6.1.4. FM circulation

A linking corridor is shown at basement level in the new building and we understand that the intention is to service each zone of the building through the vertical cores. This should be a successful means of efficiently delivering food and supplies and collecting waste. However we note that the DCN core is not shown as connecting to this corridor system at basement level.

#### 7.6.1.5. Comment

We are aware that the proposals are currently being developed and that lift positions may change and affect the diagram, and that the above comments may no longer apply. However the circulation diagram is absolutely critical to the safe and efficient operation of the hospital. It affects clinical risk, staff efficiency and patient privacy and dignity. It should be carefully reviewed after each change to the 1:500 plan.



## 7.6.2. Departmental Adjacencies

### 7.6.2.1. Departmental Relationship Matrix

The current departmental relationships appear to meet most of the adjacencies described in the Matrix. As a good number of departments are currently being re-located, and as some of the smaller departments are not identified on the 1:500 plan, a detailed assessment of how the plans meet the Matrix has not been carried out.

Normally one would assess the percentage of requirements being met, but the situation is currently too fluid to make this meaningful. This is useful piece of information to have if bidders propose an alternative design and can demonstrate where the reference design out-performs the alternative or vice-versa.

### 7.6.2.2. Ward planning

Ward planning is still under discussion. As noted above the assumptions regarding bed modelling, efficiency in support provisions and the staffing model all depend on having flexibility in the management of beds. This implies that the beds should be designed as a “run” of beds rather than small discrete wards which are more expensive to staff and which do not offer flexibility to match peaks and troughs in demand for particular specialties.

**Recommendation 16:**

1. Provide clinical planning diagrams now to determine the communication and circulation strategy for the building.
2. Resolve the circulation strategy within the Reference Design in addition to achieving the required department adjacencies.
3. Match the adjacency matrix to the developed plan prior to issue of tender documents.

## 7.7. Departmental Planning

No 1:200 drawings were available for review but there would appear to be some significant problems to be resolved as the design matures. A few examples:

- Ward shapes and spans look difficult to plan with a mix of single and 4-bed rooms
- Radiology is very deep plan
- DCN outpatients is very deep plan
- Theatres split by DCN core and corridor

**Recommendation 18:**

*The departmental planning at 1:200 scale to be well-resolved prior to issue within tender documentation*

## 7.8. Building Services and Progress to BREEAM

The approach to building services design and progress towards a high BREEAM score was not assessed as it anticipated this will form part of the technical monitoring of the project by both the Scottish Government and HFS.

# **Appendix A. RHSC/DCN Departmental Circulation v SHPN/HBN Guidance**

Royal Hospital for Sick Children & DCN Edinburgh - Re-provision						DCAG methodology									
Departmental Schedule Summary Version 5															
Ref.	Department	Net Area	Circ Plan & Eng		Total Area	Reference		planning @5% sq.m.	sub-total sq.m.	engineering @ 3% sq.m.	departmental circulation		Department Total sq.m.	difference NHS v guidance	
			%	Area		HFS Ref Guide 8.0	Alternate				%	sq.m.		sq.m.	%
<b>RHSC SPECIFIC DEPARTMENTS</b>															
<b>A</b>	<b>Front Door - A&amp;E / Assessment Ward</b>														
A1	Emergency Department	803.1	45	361.4	1,164.5	SHPN22 (2007)		40.2	843.3	25.3	33%	286.6	1,155.2	9.3	0.8%
A2	Paediatric Acute Receiving Unit - 34 Beds	867.0	38	329.5	1,196.5	HBN 23 (2005)	SHPN04 (2010)	43.4	910.4	27.3	35%	328.2	1,265.8	-69.4	-5.5%
A3	PARU / Emergency / Radiology Shared Support	144.0	38	54.7	198.7	-	HBN00-03 (2010)	7.2	151.2	4.5	25%	38.9	194.7	4.1	2.1%
A4	Adult Link	50.0	45	22.5	72.5	SHPN22 (2007)		2.5	52.5	1.6	33%	17.8	71.9	0.6	0.8%
	<b>Sub-total</b>	<b>1,864.1</b>		<b>768.1</b>	<b>2,632.2</b>										
<b>B</b>	<b>Critical Care / HDU / Neonatal Surgery</b>														
B1	PICU and HDU's - 24 Beds	1,166.0	40	466.4	1,632.4		SHPN27 (2000) excl paed	58.3	1,224.3	36.7	30%	378.3	1,639.3	-6.9	-0.4%
	<b>Sub-total</b>	<b>1,166.0</b>		<b>466.4</b>	<b>1,632.4</b>		HBN57 (2003) not endorsed								
<b>C</b>	<b>RHSC In Patient Pathway / Ward Care</b>														
C1.1	Medical Inpatients - 23 Beds	685.5	38	260.5	946.0	HBN 23 (2005)	SHPN04 (2010)	34.3	719.8	21.6	35%	259.5	1,000.8	-54.9	-5.5%
C1.2	Surgical Inpatients - 17 Beds	515.5	38	195.9	711.4	HBN 23 (2005)	SHPN04 (2010)	25.8	541.3	16.2	35%	195.1	752.6	-41.3	-5.5%
C1.3	Neuroscience Inpatients - 12 Beds	499.2	38	189.7	688.9	HBN 23 (2005)	SHPN04 (2010)	25.0	524.2	15.7	35%	189.0	728.8	-39.9	-5.5%
C1.4	Haematology / Oncology	678.4	38	257.8	936.2	HBN 23 (2005)/SHPN54 (2002)	SHPN04 (2010)	33.9	712.3	21.4	35%	256.8	990.5	-54.3	-5.5%
C1.5	Med etc Shared Support	52.0	38	19.8	71.8	HBN 23 (2005)	SHPN04 (2010)	2.6	54.6	1.6	35%	19.7	75.9	-4.2	-5.5%
C1.6	Adolescent Shared Accommodation	36.0	38	13.7	49.7	HBN 23 (2005)	SHPN04 (2010)	1.8	37.8	1.1	35%	13.6	52.6	-2.9	-5.5%
C2	Wards Support Areas	99.0	38	37.6	136.6	-	HBN00-03 (2010)	5.0	104.0	3.1	25%	26.8	133.8	2.8	2.1%
C3	Special Feeds Unit	46.0	38	17.5	63.5	HBN 23 (2005)	SHPN04 (2010)	2.3	48.3	1.4	35%	17.4	67.2	-3.7	-5.5%
C4	Sleep Lab	86.0	38	32.7	118.7	-	-	4.3	90.3	2.7	35%	32.6	125.6	-6.9	-5.5%
C5	Classrooms	84.5	35	29.6	114.1	HBN 23 (2005)	SHPN04 (2010)	4.2	88.7	2.7	35%	32.0	123.4	-9.3	-7.5%
	<b>Sub-total</b>	<b>2,782.1</b>		<b>1,054.7</b>	<b>3,836.8</b>										
<b>D</b>	<b>RHSC Ambulatory Care</b>														
D1	RHSC Main Outpatients Department	875.0	35	306.3	1,181.3	HBN 23 (2005)	HBN 12 (2005)	43.8	918.8	27.6	35%	331.2	1,277.5	-96.3	-7.5%
D2	Cardiology & Respiratory	162.5	35	56.9	219.4	HBN 23 (2005)	HBN 12 (2005)	8.1	170.6	5.1	35%	61.5	237.3	-17.9	-7.5%
D3	Orthoptics	103.5	35	36.2	139.7	HBN 23 (2005)	HBN 12 (2005)	5.2	108.7	3.3	35%	39.2	151.1	-11.4	-7.5%
D4	Audiology	180.9	35	63.3	244.2	HBN 23 (2005)	HBN 12 (2005)	9.0	189.9	5.7	35%	68.5	264.1	-19.9	-7.5%
D5	Paediatric Dentistry	138.5	35	48.5	187.0	SHPN36 (2006)		6.9	145.4	4.4	33%	49.4	199.2	-12.2	-6.1%
D6	RHSC Therapies	781.8	35	273.6	1,055.4	HBN 23 (2005)	SHPN08 (2009)	39.1	820.8	24.6	25%	211.4	1,056.8	-1.5	-0.1%
D7	Plastics Dressings Clinic	55.0	35	19.3	74.3	HBN 23 (2005)	HBN 12 (2005)	2.8	57.8	1.7	35%	20.8	80.3	-6.1	-7.5%
D8	Social Work	54.1	30	16.2	70.3	HBN 23 (2005)	HBN 12 (2005)	2.7	56.8	1.7	25%	14.6	73.1	-2.8	-3.8%
D9	Medical Day Care Unit - 5 Beds	287.4	38	109.2	396.6	HBN 23 (2005)	SHPN52-3 (2001)	14.4	301.8	9.1	35%	108.8	419.6	-23.0	-5.5%
D10	Ambulatory Care Shared Support	76.0	38	28.9	104.9	HBN 23 (2005)	HBN 12 (2005)	3.8	79.8	2.4	35%	28.8	111.0	-6.1	-5.5%
	<b>Sub-total</b>	<b>2,714.7</b>		<b>958.3</b>	<b>3,673.0</b>										

Royal Hospital for Sick Children & DCN Edinburgh - Reprovision Departmental Schedule Summary Version 5						DCAG methodology										
Ref.	Department	Net Area	Circ Plan & Eng		Total Area	Reference		planning @5% sq.m.	sub-total sq.m.	engineering @ 3% sq.m.	departmental circulation		Department Total sq.m.	difference NHS v guidance		
			%	Area		HFS Ref Guide 8.0	Alternate				%	sq.m.		sq.m.	%	
<b>RHSC SPECIFIC DEPARTMENTS</b>																
<b>A</b>	<b>Front Door - A&amp;E / Assessment Ward</b>															
<b>E</b>	<b>Theatre Floor Ward</b>															
E1	Acute Surgical Admissions Area - 12 Beds	374.5	38	142.3	516.8	HBN 23 (2005)	SHPN04 (2010)	18.7	393.2	11.8	35%	141.8	546.8	-30.0	-5.5%	
	<b>Sub-total</b>	<b>374.5</b>		<b>142.3</b>	<b>516.8</b>											
<b>F</b>	<b>Child and Adolescent Mental Health</b>															
F1	CAMHS - 12 Beds	1,009.0	35	353.2	1,362.2	-	say as in-patient	50.5	1,059.5	31.8	35%	381.9	1,473.2	-111.0	-7.5%	
	<b>Sub-total</b>	<b>1,009.0</b>		<b>353.2</b>	<b>1,362.2</b>											
<b>G</b>	<b>Clinical Support</b>															
G2	Equipment Library	60.0	30	18.0	78.0	-	basic circn	3.0	63.0	1.9	25%	16.2	81.1	-3.1	-3.8%	
G3	On-Call Suite	43.5	28	12.2	55.7	-	basic circn	2.2	45.7	1.4	25%	11.8	58.8	-3.1	-5.3%	
	<b>Sub-total</b>	<b>103.5</b>		<b>30.2</b>	<b>133.7</b>											
<b>H</b>	<b>Academic</b>															
H1	Child Life & Health	473.5	30	142.1	615.6		basic circn	23.7	497.2	14.9	25%	128.0	640.1	-24.6	-3.8%	
H2	Clinical Research Facility	242.5	30	72.8	315.3		basic circn	12.1	254.6	7.6	25%	65.6	327.8	-12.6	-3.8%	
H3	Clinical Education Suite	248.5	30	74.6	323.1		basic circn	12.4	260.9	7.8	25%	67.2	335.9	-12.9	-3.8%	
	<b>Sub-total</b>	<b>964.5</b>		<b>289.4</b>	<b>1,253.9</b>											
<b>I</b>	<b>Facilities / Infrastructure Support Services</b>															
I1	Main Entrance - Public Spaces	202.0	28	56.6	258.6	HBN 23 (2005)	SHPN 51 (1993)	10.1	212.1	6.4	40%	87.4	305.8	-47.3	-15.5%	
I2	Bed & Toy Stores	115.0	28	32.2	147.2			5.8	120.8	3.6	25%	31.1	155.5	-8.3	-5.3%	
	<b>Sub-total</b>	<b>317.0</b>		<b>88.8</b>	<b>405.8</b>											
<b>J</b>	<b>Patient / Family Support</b>															
J1	Bereavement Suite	45.5	30	13.7	59.2	HBN 23 (2005)		2.3	47.8	1.4	28%	13.5	62.7	-3.6	-5.7%	
J2	Spiritual & Pastoral Care	73.0	30	21.9	94.9	HBN 23 (2005)		3.7	76.7	2.3	28%	21.7	100.7	-5.8	-5.7%	
	<b>Sub-total</b>	<b>118.5</b>		<b>35.6</b>	<b>154.1</b>											
<b>K</b>	<b>Family Facilities</b>															
K1	Family Support	334.0	28	93.5	427.5	HBN 23 (2005)		16.7	350.7	10.5	28%	99.3	460.6	-33.0	-7.2%	
K2	Family Hotel - Ronald McDonald	956.0	30	286.8	1,242.8	HBN 23 (2005)		47.8	1,003.8	30.1	28%	284.3	1,318.2	-75.4	-5.7%	
K3	Family Hotel - CLIC Sargent	385.5	30	115.7	501.2	HBN 23 (2005)		19.3	404.8	12.1	28%	114.7	531.6	-30.4	-5.7%	
	<b>Sub-total</b>	<b>1,675.5</b>		<b>496.0</b>	<b>2,171.5</b>											

<b>L DCN In Patient Pathway / Ward Care</b>															
L1	DCN Acute Care - 24 Beds	1,000.5	38	380.2	1,380.7	SHPN04 (2000)	SHPN04 (2010)	50.0	1,050.5	31.5	25%	270.5	1,352.6	28.1	2.1%
L2	DCN Inpatients - 43 Beds	1,399.5	38	531.8	1,931.3	SHPN04 (2000)	SHPN04 (2010)	70.0	1,469.5	44.1	25%	378.4	1,891.9	39.4	2.1%
	<b>Sub-total</b>	<b>2,400.0</b>		<b>912.0</b>	<b>3,312.0</b>										
<b>M DCN Out Patient Departments</b>															
M1	DCN Outpatients	586.5	35	205.3	791.8	HBN 12 (2005)		29.3	615.8	18.5	33%	209.3	843.6	-51.8	-6.1%
M2	DCN Therapies	363.1	35	127.1	490.2	SHPN08 (2009)		18.2	381.3	11.4	23%	90.3	483.0	7.2	1.5%
M3	Programmed Investigations Unit	78.0	35	27.3	105.3	SHPN52-3 (2001)		3.9	81.9	2.5	28%	23.2	107.6	-2.3	-2.1%
	<b>Sub-total</b>	<b>1,027.6</b>		<b>359.7</b>	<b>1,387.3</b>										
<b>N DCN Support Space</b>															
N1	DCN Entrance	23.5	28	6.6	30.1	-	as children?	1.2	24.7	0.7	40%	10.2	35.6	-5.5	-15.5%
	<b>Sub-total</b>	<b>23.5</b>		<b>6.6</b>	<b>30.1</b>										
<b>O Combined Neurophysiology</b>															
O1	Neurophysiology	302.6	35	105.9	408.5		as OPD?	15.1	317.7	9.5	33%	108.0	435.3	-26.7	-6.1%
	<b>Sub-total</b>	<b>302.6</b>		<b>105.9</b>	<b>408.5</b>										
<b>P Combined Theatres</b>															
P1	Operating Theatres & RHSC Day surg	2,810.6	38	1,068.0	3,878.6	SHPN52-1 (2001)		140.5	2,951.1	88.5	25%	759.9	3,799.6	79.0	2.1%
<b>Q Combined Radiology</b>															
Q1	Radiology	1,724.9	38	655.5	2,380.4	SHPN06 (2004)		86.2	1,811.1	54.3	27%	503.7	2,369.2	11.2	0.5%
	<b>Sub-total</b>	<b>1,724.9</b>		<b>655.5</b>	<b>2,380.4</b>										
<b>R Office / Admin Support Services</b>															
R1	Clinical / Management Suite	1,785.5	30	535.7	2,321.2		basic circn	89.3	1,874.8	56.2	25%	482.8	2,413.8	-92.6	-3.8%
R2	Health Records	483.8	28	135.5	619.3		basic circn	24.2	508.0	15.2	25%	130.8	654.0	-34.8	-5.3%
	<b>Sub-total</b>	<b>2,269.3</b>		<b>671.1</b>	<b>2,940.4</b>										
<b>S Combined Facilities / Infrastructure Support Services</b>															
S1	Kitchen	295.5	28	82.7	378.2		no info	14.8	310.3	9.3	25%	79.9	399.5	-21.2	-5.3%
S2	e-Health infrastructure	40.0	28	11.2	51.2		no info	2.0	42.0	1.3	25%	10.8	54.1	-2.9	-5.3%
S3	Domestic Services	114.7	28	32.1	146.8		no info	5.7	120.4	3.6	25%	31.0	155.1	-8.2	-5.3%
S4	Materials Management	130.0	28	36.4	166.4		no info	6.5	136.5	4.1	25%	35.1	175.7	-9.3	-5.3%
S5	Central Staff Changing	352.0	28	98.6	450.6		no info	17.6	369.6	11.1	25%	95.2	475.9	-25.3	-5.3%
S6	Estates	188.0	25	47.0	235.0		no info	9.4	197.4	5.9	25%	50.8	254.2	-19.2	-7.5%
	<b>Sub-total</b>	<b>1,120.2</b>		<b>308.0</b>	<b>1,428.2</b>										
<b>T Combined Plant</b>															
T1	Node Rooms / UPS	168.0	33	55.4	223.4		no info	8.4	176.4	5.3	25%	45.4	227.1	-3.7	-1.6%
	<b>Sub-total</b>	<b>168.0</b>		<b>55.4</b>	<b>223.4</b>										
	<b>Total Internal Floor Area</b>	<b>24,936.1</b>		<b>8,824.9</b>	<b>33,761.0</b>							<b>34,774.6</b>	<b>-1,013.6</b>	<b>-2.9%</b>	
							Not specified - area for energy centre					estimate	450.0		
							specific additional area for O-zone						450.0		
	<b>Plant &amp; Communications</b>		36.7		<b>12,840.3</b>		main corridor communication - 10%-15%				17%		5,911.7		
							enclosed plant rooms and service risers				17%		5,911.7		
	<b>OVERALL FLOOR AREA</b>				<b>46,601.3</b>		<b>gross internal floor area</b>					<b>47,498.0</b>	<b>-896.7</b>	<b>-1.9%</b>	

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SCOTTISH HOSPITALS INQUIRY  
Hearing Commencing 26 February 2024  
Bundle 13 – Miscellaneous  
Volume 9