

SCOTTISH HOSPITALS INQUIRY

Bundle 7 **Documentation relating to** **the Cabinet Secretary's decisions** **Volume 2 (of 3)**

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The terms of that Restriction Order are published on the Inquiry website.

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From: Roche R (Rowena)
Sent: 22 July 2019 16:10
To: Crowe B (Barbara)
Cc: Morrison A (Alan)
Subject: FW: ECYPH - Action List (Close Down)
Attachments: NHS Lothian - Edinburgh Childrens's Hospital - Action List Closure.docx

Hi Barbara,

This is the action list as it stood and that we will take forward now that resilience are stepping down. See Stuart's note below too.

Rowena

Rowena Roche
Directorate of Health Finance
Scottish Government | Floor BR | St Andrew's House | Regent Road | Edinburgh EH1 3DG
[REDACTED] [REDACTED]

Please note that I do not work on Thursday afternoons or on Fridays.

From: Low S (Stuart) [REDACTED]
Sent: 18 July 2019 15:03
To: Morrison A (Alan) [REDACTED]
Cc: Roche R (Rowena) [REDACTED]; McLaughlin C (Christine) [REDACTED]; Connaghan J (John) (Health) [REDACTED]; Healy M (Michael) [REDACTED]
Subject: ECYPH - Action List (Close Down)

Alan

I have attached the Action List that Health Resilience were maintaining as part of the initial response arrangements around the delay to the ECYPH migration.

We are now closing off this action list and have identified two ongoing actions (highlighted amber) and one action in progress (all of which sit with Finance). Grateful if you could continue to monitor and review.

Outstanding / Ongoing Actions

Number	Actions	Lead Officer	Comments	Completed (Yes/No/In Progress)
1	Weekly Progress Reports requested from NHS Lothian on: a) Plan for critical care ventilation fix b) Contingency plan for remaining on existing site for up to 6 months Weekly updates to be provided to the Cabinet Secretary.	Director of Finance	Anticipated that development of full plan will take 4 weeks (9 Aug). Alex/Rowena to ensure updates provided	Ongoing
2	Cabinet Secretary and Ministers to be copied in on NHS Lothian IMT activity	Director of Finance	Alex/Rowena to ensure IMT summary provided to Cabinet Secretary	Ongoing
3	Letter to be drafted for Forth Valley	Director of Resilience & Delivery	John Connaghan has been in contact with Cathie Cowan to discuss. Christine taking forward in John Connaghan's absence. Helen Maitland copied into John's email of 17 July and Christine to clear letter .	In Progress

Kind regards
Stuart

Stuart Low, Scottish Government, Directorate for Health Performance & Delivery, Health Resilience Unit, [REDACTED]

Official Sensitive

Number	Actions	Lead Officer	Comments	Completed (Yes/No/In Progress)
1 (8/7)	SG Finance to make immediate contact with NSS to ensure that HFS and HPS are on site at NHS Lothian.	Director of Finance	HFS/HPS engaged with Board Monday 8 th July to scope and commence work. Director of Finance is meeting NSS Chief Executive 9 th July on NHS L work	Yes
2	SG Finance to put in place appropriate audit with NHS Lothian and Terms of Reference to be produced.	Director of Finance	Engagement discussions held with KPMG. In principle agreed to undertake work and work can commence this week. Director of Finance meeting KPMG 9 th July to scope out terms of reference.	Yes
3	SG Finance to establish and confirm reports that are in place in addition to the initial 'snagging' list received and confirm whether the report sent covers the whole building or part of the building.	Director of Finance	Response from NHS L was that snagging list was not part of a fuller report. Further confirmation requested from NHS L (by 10am 9 th July) that no other assessment/reports have been produced.	Yes
4	Health Resilience arrangement to be set up for Health & Social Care Directorates to support activity.	Head of Health Resilience	Resilience Room operational	Yes
5	Group to meet up before meeting Cabinet Secretary on Tuesday 9 th July	DG Office	Cabinet Secretary meeting to be confirmed by private office (proposed time 2:30pm). A meeting request will be scheduled in advance once known. Post Huddle note – meeting confirmed at 2:30	Yes
6. (9/7)	SG Finance to have discussion with NHS L Director of Finance on various information and reporting requests as discussed at huddle	Director of Finance		Yes
7.	SG Finance to circulate audit engagement terms of reference for comment before finalising.	Director of Finance	Terms of reference agreed	Yes
8.	SG Finance to check lines of advice and preparation of Cabinet Secretary's statement to parliament	Director of Finance		Yes

Number	Actions	Lead Officer	Comments	Completed (Yes/No/In Progress)
9.	SG Delivery and Resilience to prepare paper for HSCMB to discuss escalation on 10 July 2019. Escalation grid to be circulated in advance.	Director of Delivery & Resilience		Yes
10.	Health Resilience to invite NSS representative to provide update to huddle meetings	Head of Health Resilience	Jaquie Reilly (HPS) invited to attend	Yes
11.	All to consider support (if any) needed to supplement management capability at NHS Lothian (to be considered at HSCMB as part of action point 9)	All		Yes
12	Communications Healthier to work with NHS L on developing communications plan going forward. Update to be provided at Cabinet Secretary meeting.	Communications Healthier		Yes
13	Update Action List with all outstanding actions to create a comprehensive rolling action list	Health Resilience	Christine has provided note of additional actions for inclusion this list.	Yes
14	Detailed explanation requested from NHS Lothian about flow of information on critical care ventilation issues between 25 and 28 June – specifically when did anyone in the board become aware that the air flow change was 4 rather than 10 per hour	Director of Finance		Yes
15	Copy of report from inspections requested by Monday 15 July	Director of Finance		Yes
16	Weekly Progress Reports requested from NHS Lothian on: a) Plan for critical care ventilation fix b) Contingency plan for remaining on existing site for up to 6 months Weekly updates to be provided to the Cabinet Secretary.	Director of Finance	Anticipated that development of full plan will take 4 weeks (9 Aug). Alex/Rowena to ensure updates provided	Ongoing
17	Provide contact details for counterparts in KPMG Audit and HPS/HPA	Director of Finance		Yes
18	Provide acknowledgement to NSS to proceed to the next stage of development of the Centre for Expertise on Infection Control	Director of Finance		Review & confirm
19	Review information provided by NHS Lothian to SG on settlement agreement and whether it contained information on change to ventilation of critical care and ward areas	Director of Finance		Review & confirm

Number	Actions	Lead Officer	Comments	Completed (Yes/No/In Progress)
20	Contact Audit Scotland to inform them of the situation and action being taken	Director of Finance		Yes
21 (10/07)	Scope and prioritisation of HFS/HPS Audit to be agreed with SG Finance	Director of Finance	Reprioritised timescale for migration sent to SG by next Mon (15/07/19) for Christine to agree.	Yes
22	KPMG Audit letter of engagement to be signed by Friday (12/07/19) and Audit to start on Monday (15/07/19)	Director of Finance	Due Diligence phase completed	Yes
23	Q&A for staff to be posted on NHS Lothian website once point clarified on helpline.	Communications Healthier	Suzanne to confirm with Board comms team when this can be posted.	Yes
24	HRU to discuss formal situation reporting NHS Lothian on 10/07/19	HRU	Mike met with Alex McMahon and Jacquie Campbell and agreed that the Board would provide operational, helpline, staffing, comms and other relevant info to the SGHRU mailbox by 10.00 each day.	Yes
25	Christine to receive note of reason for delay in escalation to the SG from Tracy Gillies	Director of Finance		Yes
26	Discussion to be had with NHS Lothian around maintaining Helpline		Helpline will be maintained until Sunday 20 th July and will be reviewed on Monday 21 July.	Yes
27	Make media announcement that KPMG have been appointed as auditors.	Director of Finance / Communications Healthier	Letter of engagement now signed – media announcement can be made.	Yes
28	Site visit to be arranged for Cabinet Secretary	Communications Healthier	Arranged for Thurs 18 July. This will be a social media visit. Consider whether the visit should take in both Edinburgh Children's Hospital and DCN. Letter to staff to issue ahead of visit.	Yes
29	NHS Lothian position to be considered with regard to presenting information on the delay to a Public Board and the SPF.	Director of Finance	NHS Lothian have now provided further information on planned staff briefings and events.	Yes
30	Prepare letter to MSPs /MPs, GIQ Q&A, and Media Release for concurrent issue when appropriate.	Director Finance	Finance to liaise with Comms regarding issue of media release	Yes
31	Prepare update for FM for Friday 12 July	HRU		Yes
32	Update to be provided on NHS Lothian escalation following HSCMB	Director of Finance		Yes
33 (15/07)	Set out delivery expectations and timeframes for NHS Lothian as a consequence of level 3 escalation.	Director of Finance	Christine to discuss with John.	Yes

Number	Actions	Lead Officer	Comments	Completed (Yes/No/In Progress)
34	Consider what a package of support might look like and how long this might need to be in place for.	Director of Finance	All to consider	Yes
35	Outline of contractual arrangements for the NDP agreement to be pulled together	Director of Finance	Rowena taking forward	Yes
36	Points 33-36 to be completed by Tues 16 July and information pack to be provided to DGHSC and Finance.	Director of Resilience & Delivery	John Connaghan to ask Roy Sturrock to compile contributions across performance related domains..	Yes
37	Cabinet Secretary and DGHSC to meet with SG officials prior to meeting with NHS Lothian Chair and CEO on Thurs 18 July. This will be followed by a site visit to meet staff.	DGHSC		Yes
38	Cabinet Secretary and Ministers to be copied in on NHS Lothian IMT activity	Director of Finance	Alex/Rowena to ensure IMT summary provided to Cabinet Secretary	Ongoing
39	Letter to be drafted for Forth Valley	Director of Resilience & Delivery	John Connaghan has been in contact with Cathie Cowan to discuss. Christine taking forward in John Connaghan's absence. Helen Maitland copied into John's email of 17 July and Christine to clear letter .	In Progress
40	Christine to discuss GIA and Board escalation with Susan Goldsmith on Mon 15 July.	Director of Finance	Follow up on NHS Lothian's plans for public engagement.	Yes

From: Roche R (Rowena)
Sent: 08 August 2019 12:47
To: McLaughlin C (Christine)
Cc: Crowe B (Barbara)
Subject: FW: For clearance - news release and letters giving update on RHCYP
Attachments: Cab Sec letter_RHCYP_MSPs.pdf; Letter from JF_1.pdf; Letter from JF.pdf

Christine,

Her are the letters to PAPLS. H&SC and MSPs/MPs – all note the escalation.

I'll send on the AGS letter from DG in a moment.

Rowena

Rowena Roche

Directorate of Health Finance

Scottish Government | [REDACTED]
[REDACTED]

Please note that I do not work on Thursday afternoons or on Fridays.

From: Bowman D (David) [REDACTED] **On Behalf Of** Cabinet Secretary for Health and Sport
Sent: 18 July 2019 10:23
To: Hart S (Suzanne) [REDACTED]
Cc: Mair S (Suzi) [REDACTED]; Klein G (Gerard) [REDACTED]; Hutchison D (David) [REDACTED];
[REDACTED]; Rogers S (Shirley) [REDACTED]; Roche R (Rowena) [REDACTED];
[REDACTED]; Connaghan J (John) (Health) [REDACTED]; Smith G (Gregor) [REDACTED];
[REDACTED]; Murray D (Diane) [REDACTED]; Calderwood C (Catherine) [REDACTED];
[REDACTED]; Communications Healthier [REDACTED]; Neill S (Sean) [REDACTED];
[REDACTED]; Low S (Stuart) [REDACTED]; Healy M (Michael) [REDACTED];
[REDACTED]; McLaughlin C (Christine) [REDACTED]; Scottish Government
Health Resilience Unit [REDACTED]; Morrison A (Alan) [REDACTED]; Minister for Public Health,
Sport and Wellbeing [REDACTED]; Minister for Mental Health [REDACTED]; Cabinet
Secretary for Health and Sport [REDACTED]
Subject: RE: For clearance - news release and letters giving update on RHCYP

Good Morning

Thank you for drafting these letters.

I have now sent them out. Signed copies attached for reference.

Regards

David Bowman
Deputy Private Secretary
Ministerial Private Office (Health)
[REDACTED]

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From: Hart S (Suzanne) [REDACTED]
Sent: 17 July 2019 16:10
To: Cabinet Secretary for Health and Sport [REDACTED]
Cc: Mair S (Suzi) [REDACTED]; Klein G (Gerard) [REDACTED]; Hutchison D (David) [REDACTED]; Rogers S (Shirley) [REDACTED]; Roche R (Rowena) [REDACTED]; Connaghan J (John) (Health) [REDACTED]; Smith G (Gregor) [REDACTED]; Murray D (Diane) [REDACTED]; Calderwood C (Catherine) [REDACTED]; Communications Healthier [REDACTED]; Neill S (Sean) [REDACTED]; Low S (Stuart) [REDACTED]; Healy M (Michael) [REDACTED]; McLaughlin C (Christine) [REDACTED]; Scottish Government Health Resilience Unit [REDACTED]; Morrison A (Alan) [REDACTED]; Minister for Public Health, Sport and Wellbeing [REDACTED]; Minister for Mental Health [REDACTED]
Subject: For clearance - news release and letters giving update on RHCYP

Andy,

Please find attached:

- Letters to PAPLS, Health and Sport Committee and MSP – which PO will issue tomorrow
- Letter to NHS Lothian staff which will be cascaded by the health board at 9am (see table below)
- News release which comms will issue at 11am tomorrow

Can you confirm Cab Sec is content with all documents?

Gerard will attend the walk round to meet staff tomorrow. He will take some images which we will tweet from [REDACTED]

We imagine we will get interview bids in on this and will be back in touch once/if we receive requests. We are also working with policy colleagues on lines to take re the wider NSS review of current and recently completed major NHS capital projects.

Cascade of letter to staff:

NHS Lothian will send to staff as outlined below. In addition they will ask managers to print hard copies for staff who are not often on email.

Date	Time	Audience	Channel/method	Led by
Thursday 18 July	9am	All Staff	All staff email	Comms (Fiona Murray)
Thursday 18 July	9am	All staff	Staff Intranet	Comms (Lynsey Cullen)
Thursday 18 July	9am	RHSC staff	Site email	Fiona Mitchell/ Michaela Muir
Thursday 18 July	9am	DCN staff	Site email	Chris Myers /Paul Collins
Thursday 18 July	9am	CAMHS	Service email	Dawn Carmichael/Gwyneth Bruce
Thursday 18 July	9am	RIE (receiving site)	Site email	Michael Pearson/Lyn McDonald

Suzanne Hart

Head of Health Communications | [REDACTED]

Scottish Government | www.gov.scot



[REDACTED]
[REDACTED]

All Lothian MPs/MSPs

By email.

18 July 2019

Dear Colleague

Following my decision on the 4th of July 2019 to delay the move to the new hospital Royal Hospital for Children and Young People (RHCYP), I write to provide you with detail on the reason for that decision, the work that I have instructed to identify the factors that led to that decision and to determine the actions required to allow the move to go ahead, and the support being provided to the Board, patients and staff.

On Tuesday 2 July, NHS Lothian informed the Scottish Government to an issue with the ventilation system at the Royal Hospital for Children and Young People in Edinburgh. We were advised that the air change in the ventilation system in the critical care unit did not meet the frequency required to meet the 2014 standard.

I was not satisfied that the issue could be resolved within the very short timeframe available before services were to move to the new hospital, and given the late notice of the failure in the critical care unit, I required further assurance on all aspects of compliance with standards across the new hospital.

I therefore instructed that the planned move be halted in the interests of patient safety. There is no greater responsibility of the NHS than to ensure the clinical safety of their patients, not least when those patients are children.

Work has been initiated to identify the solution needed to ensure the ventilation in the critical care unit in the new site meets the required clinical and safety standards.

I have commissioned NHS National Services Scotland (NSS) to undertake a detailed assessment of all buildings systems in the new hospital which could impact safe operation for patients and staff, recognising how infection prevention must always be embedded within the design, planning, construction and commissioning activities of all new and refurbished healthcare facilities.

This work will be phased, with assessment of water, ventilation and drainage systems prioritised, including the proposed fix for the ventilation unit. This will determine the timeframe for migration of services to the new hospital and a full report is anticipated in September.

Running in parallel, NSS will also provide assurance that current and recently completed major NHS capital projects comply with national standards. This work will take a risk-based approach and will inform development of the potential expansion of the current function and services provided by Health Facilities Scotland; including providing assurance going forward that NHS buildings meet extant standards.

Where required, additional specialist expertise will be secured by NSS to facilitate their work.

It is also important that we understand the factors, including information flow and timeframes, that led to the decision, announced on 4 July, to delay the move to the new hospital. KPMG have been engaged to conduct an independent audit of the governance arrangements for RHCYP, to provide an external and impartial assessment of the factors leading to the delay. This work began on 15 July and in the first instance will focus on collecting and reviewing all pertinent documentation. This will inform next steps, including interviews with key personnel and timeline for reporting, and I expect to have further clarity on this within the next week.

I recognise that the cumulative impact of the significant work required to complete the move to the new RHCYP, together with the requirement for improved performance across a number of other areas, including scheduled and unscheduled care, cancer, delayed discharge and mental health, will place significant pressure on the leadership capacity of the Board. Reflecting the significance of this challenge, NHS Lothian have been placed at Level 3 of the NHS Board Performance Escalation Framework which is defined as: 'Significant variation from plan; risks materialising; tailored support required'.

A formal Recovery Plan has been requested from the Board, setting out clear milestones to address each of the areas I have highlighted. A package of tailored support will be made available to the Board, in order to develop and implement the Recovery Plan.

I understand that this is a disappointing time for parents and carers of patients who have appointments at the new RHCYP, and for staff.

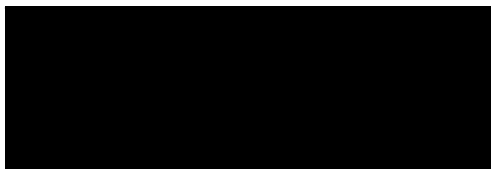
Parents and carers are being contacted directly by the team at the existing Royal Hospital for Sick Children to confirm arrangements for their child's appointment. Those with appointments in July are being contacted by phone in the first instance and those with appointments in August onwards will be contacted by letter. Every effort is being made to retain the same appointment date and time wherever possible. A dedicated helpline is in place for families and carers to discuss any concerns about appointments or treatment with the clinical team already caring for their child.

NHS Lothian staff have all made considerable efforts to help make the move and some have made personal and domestic plans to coincide with the move. I have written to staff today to thank them for their hard work in preparing for the move, for all that they are doing to help manage the situation and for their excellent track record of providing high quality patient care.

NHS Lothian have also carried out a number of staff sessions and a Q&A has been posted on the NHS Lothian Intranet to answer questions received from staff to date, and going forward. The Senior Team at NHS Lothian will continue to work with all staff as we proceed with the work required to allow the move to take place.

Safe, effective and high quality clinical services continue to be delivered from the existing site in Sciennes and my officials are working very closely with the management of the Board and clinical professional organisations to ensure that we take all the necessary actions to allow the move to go ahead as quickly and safely as possible.

I have this morning answered a GIQ updating Parliament of this information and I will keep them informed of progress of the reviews being undertaken and the timeframe for moving to the new hospital.



JEANE FREEMAN



[Redacted]

Jenny Marra MSP
Convener, Public Audit & Post-Legislative Scrutiny
Committee

By email.

18 July 2019

[Redacted]

Following my decision on 4th July 2019 to delay the move to the new hospital Royal Hospital for Children and Young People (RHCYP), I write to provide you with detail on the reason for that decision, the work that I have instructed to identify the factors that led to that decision and to determine the actions required to allow the move to go ahead, and the support being provided to the Board, patients and staff.

On Tuesday 2 July, NHS Lothian informed the Scottish Government to an issue with the ventilation system at the Royal Hospital for Children and Young People in Edinburgh. We were advised that the air change in the ventilation system in the critical care unit did not meet the frequency required to meet the 2014 standard.

I was not satisfied that the issue could be resolved within the very short timeframe available before services were to move to the new hospital, and given the late notice of the failure in the critical care unit, I required further assurance on all aspects of compliance with standards across the new hospital.

I therefore instructed that the planned move be halted in the interests of patient safety. There is no greater responsibility of the NHS than to ensure the clinical safety of their patients, not least when those patients are children.

Work has been initiated to identify the solution needed to ensure the ventilation in the critical care unit in the new site meets the required clinical and safety standards.

I have commissioned NHS National Services Scotland (NSS) to undertake a detailed assessment of all buildings systems in the new hospital which could impact safe operation for patients and staff, recognising how infection prevention must always be embedded within the design, planning, construction and commissioning activities of all new and refurbished healthcare facilities.

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[Redacted]

This work will be phased, with assessment of water, ventilation and drainage systems prioritised, including the proposed fix for the ventilation unit. This will determine the timeframe for migration of services to the new hospital and a full report is anticipated in September.

Running in parallel, NSS will also provide assurance that current and recently completed major NHS capital projects comply with national standards. This work will take a risk-based approach and will inform development of the potential expansion of the current function and services provided by Health Facilities Scotland; including providing assurance going forward that NHS buildings meet extant standards.

Where required, additional specialist expertise will be secured by NSS to facilitate their work.

It is also important that we understand the factors, including information flow and timeframes, that led to the decision, announced on 4 July, to delay the move to the new hospital. KPMG have been engaged to conduct an independent audit of the governance arrangements for RHCYP, to provide an external and impartial assessment of the factors leading to the delay. This work began on 15 July and in the first instance will focus on collecting and reviewing all pertinent documentation. This will inform next steps, including interviews with key personnel and timeline for reporting, and I expect to have further clarity on this within the next week.

I recognise that the cumulative impact of the significant work required to complete the move to the new RHCYP, together with the requirement for improved performance across a number of other areas, including scheduled and unscheduled care, cancer, delayed discharge and mental health, will place significant pressure on the leadership capacity of the Board. Reflecting the significance of this challenge, NHS Lothian have been placed at Level 3 of the NHS Board Performance Escalation Framework which is defined as: 'Significant variation from plan; risks materialising; tailored support required'.

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Kind regards



JEANE FREEMAN

(Handwritten flourish)

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[REDACTED]

Lewis Macdonald MSP
Convenor, Health and Sport Committee

Via email: healthandsport@parliament.scot

18 July 2019

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I have this morning answered a GIQ updating Parliament of this information and I will keep them informed of progress of the reviews being undertaken and the timeframe for moving to the new hospital.

Kind regards

[Redacted signature block]

JEANE FREEMAN

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From: HARLEY, Kate (NHS NATIONAL SERVICES SCOTLAND)
Sent: 18 July 2019 10:09
To: MILLER, James (NHS NATIONAL SERVICES SCOTLAND); MCLAUGHLAN, Edward (NHS NATIONAL SERVICES SCOTLAND); JAMES, Gordon (NHS NATIONAL SERVICES SCOTLAND); STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND); MCGROGAN, Kelly (NHS NATIONAL SERVICES SCOTLAND)
Subject: FW: government inspired question re RHCYP

Here is the Gov Inspired question in case you haven't seen it – apologies if you have received this twice.

Regards

Kate

Kate Harley
Associate Director
Health Protection
National Services Scotland



(Public Health and Intelligence is a strategic business unit of National Services Scotland; it subsumes the former divisions of Information Services Division and Health Protection Scotland).

From: CHAPPLE, Paul (NHS NATIONAL SERVICES SCOTLAND)
Sent: 18 July 2019 09:54
To: IMRIE, Laura (NHS NATIONAL SERVICES SCOTLAND); MCVEY, Chris (NHS NATIONAL SERVICES SCOTLAND); HARLEY, Kate (NHS NATIONAL SERVICES SCOTLAND); RANKIN, Annette (NHS NATIONAL SERVICES SCOTLAND)
Subject: government inspired question re RHCYP

Hi All

Below government inspired question re RHCYP. Published today.

Link is as follows, with below a direct copy and paste:

<https://www.parliament.scot/parliamentarybusiness/28877.aspx?SearchType=Simple&Keyword=ventilation&ExactPhrase=True&DateChoice=0&SortBy=DateSubmitted&ResultsPerPage=10>

[Question S5W-24397: Angela Constance, Almond Valley, Scottish National Party, Date Lodged: 17/07/2019](#)

To ask the Scottish Government what action is being taken to remedy the issues that have delayed the opening of Royal Hospital for Children and Young People and to identify learning and any additional support to be provided to NHS boards undertaking similar projects in future.

Answered by Jeane Freeman (18/07/2019):

On Tuesday 2 July, NHS Lothian alerted the Scottish Government to an issue with the **ventilation** system at the Royal Hospital for Children and Young People (RHCYP) in Edinburgh.

I was not satisfied that the issue could be resolved within the very short timeframe available before services were to move to the new hospital, and I required further assurance on all aspects of compliance with standards across the new hospital.

For this reason, I instructed that the planned move be halted in the interests of patient safety. There is no greater responsibility of the NHS than to ensure the clinical safety of their patients, not least when those patients are children.

Work has been initiated to identify the solution needed to ensure the **ventilation** in the critical care unit in the new site meets the required clinical and safety standards.

I have commissioned NHS National Services Scotland (NSS) to undertake a detailed assessment of all buildings systems in the new hospital which could impact safe operation for patients and staff, recognising how infection prevention must always be embedded within the design, planning, construction and commissioning activities of all new and refurbished healthcare facilities. This work will be phased, with assessment of water, **ventilation** and drainage systems prioritised, including the proposed fix for the **ventilation** unit. This will determine the timeframe for migration of services to the new hospital and a full report is anticipated in September.

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The Scottish Government will keep Parliament informed of progress of the reviews being undertaken and the timeframe for moving to the new hospital.

Current Status: Initiated by the Scottish Government. Answered by Jeane Freeman on 18/07/2019

Paul Chapple

Programme Portfolio Manager
ARHAI Group
Health Protection Scotland

NHS National Services Scotland

4th Floor

[Redacted]

[Redacted]

<http://nhsnss.org/>

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From: Henderson, Ronnie [REDACTED]
Sent: 18 July 2019 15:16
To: MCLAUGHLAN, Edward (NHS NATIONAL SERVICES SCOTLAND); Currie Brian (NHS Lothian)
Cc: STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND); [REDACTED]
Subject: RE: G1547 - RHSC DCN
Attachments: Environmental Matrix V11 Excel.xls; Environmental Matrix V11.pdf

Hi Eddie,

Brian has asked that I reply on his behalf.

Thanks for discussing this with me yesterday, hopefully I have interpreted the various points correctly in the reply below against each item.

If you need to discuss or clarify anything please give me a call.

Regards

Ronnie

Ronnie Henderson
Commissioning Manager Hard FM
RHSC & DCN - Little France
NHS Lothian

From: MCLAUGHLAN, Edward (NHS NATIONAL SERVICES SCOTLAND) [REDACTED]
Sent: 17 July 2019 16:21
To: Currie, Brian
Cc: Henderson, Ronnie; STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND); Goldsmith, Susan
Subject: RE: G1547 - RHSC DCN

Brian

Following a brief review of your contractor's review of ventilation provision we would comment as follows:

1. A question was asked at the design meeting on 12 July about the meaning of the 10pa pressure requirement in table 1a of SHTM 03-01, which I interpreted at the time as should the 10pa be relative to a corridor, which can effectively be at negative pressure or did it relate to all surrounding environments. I asked for this to be clarified in writing but I have not seen the clarification and suspect it might be superseded by this review paper. **Our assumption, based solely on the guidance in table A1, is that the room is pressurised to 10pa with reference to the adjoining space which in critical care is a corridor.**
2. The review appears to focus on an interpretation of the guidance as relating to isolation rooms, rather than Critical Care areas. As the application column in table 1a of SHTM 03-01 states that it refers to Critical Care areas and Isolation rooms are mentioned separately, we can see no

justification for this interpretation. This is a significant point we need clarity and guidance on in that we assume this to mean the entirety of critical care rooms whereas they refer only to isolation rooms.

3. The review refers to an environmental performance matrix and Acconex correspondence as the source of the 4ACH. I don't think we have these. This will be available to you on ACONEX once registration is complete but for speed I have attached the latest version of the matrix to this e-mail, the PDF version has the comments section. For completeness all previous versions of the matrix can be reviewed on ACONEX.
4. The contractor is clearly still questioning the need to change, which seems to be delaying design work. You may wish to make your requirements more explicit. At Tuesday's meeting, attended by IHSL and MPX but not TUV Sud, we clarified that we want design to proceed based on SHTM 03-01, Appendix 1, Table A1 – specifically 10 ac/h and +10pa. As per point 2 above this is a significant point where we need clarity and guidance..
5. The appendices indicate that NHSL has specifically asked for 4ACH in relation to 4 bed bays but this has no implication for ICU as far as we can see. There are 4 multi-bed rooms within critical care that are included within the 14 rooms referenced. The e-mail attached is in response to a schedule that TUV Sud produced showing all 14 rooms at ac/h rates below 4, the response was not specific to critical care.

Please give me a call if you wish to discuss any of this.

Thanks

Eddie

Eddie McLaughlan
Assistant Director
Engineering, Environment and Decontamination
Health Facilities Scotland
Procurement, Commissioning and Facilities
NHS National Services Scotland



www.hfs.scot.nhs.uk

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From: Wallace Weir [REDACTED]
Sent: 17 July 2019 14:29
To: Currie Brian (NHS LOTHIAN)
Cc: Henderson Ronnie (NHS LOTHIAN); MCLAUGHLAN, Edward (NHS NATIONAL SERVICES SCOTLAND); Claire L

McArthur; Craig Simpson; David Wilson
Subject: FW: G1547 - RHSC DCN

Brian,

Please find attached Review of Ventilation Provisions for (B1) Critical Care / HDU / Neonatal Surgery, produced by TUV-SUD as discussed at the recent workshops. Please excuse the delay in issuing, the message was caught in our junk mail filter.

I have copied Eddie McLaughlan at HFS.



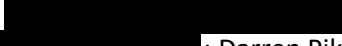
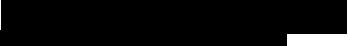

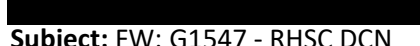

Kind regards

Wallace

Wallace Weir
Project Director
IHSL

IHS Lothian Limited



From: David Wilson 
Sent: 16 July 2019 13:27
To: Wallace Weir 
Cc: Craig Simpson ; Ken Hall ; Colin Grindlay 
; Darren Pike 
Subject: FW: G1547 - RHSC DCN

Wallace,

See attached information from TUV-Sud relating to the critical care 10ac/h and 10Pa positive pressure for sending on to NHSL / HFS.

David

David Wilson
Commissioning Manager

MULTIPLEX

Multiplex Construction Europe Ltd



W www.multiplex.global





From: Little France@WallaceWhittle [REDACTED]
Sent: 16 July 2019 13:22
To: David Wilson
Cc: McKechnie, Stewart; [REDACTED]; Glasgow Filing
Subject: G1547 - RHSC DCN

David,

Please find attached our Review of Ventilation Provisions Report.

Regards,

Angela

Angela Jackson

Senior Secretary

TÜV SÜD - Real Estate Division
[REDACTED]

[REDACTED]
www.tuv-sud.co.uk/real-estate



Business address
TÜV SÜD
The Venlaw Building



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Registered Address: Napier Building, Scottish Enterprise Technology Park, East Kilbride, Glasgow. G75 0QF United Kingdom

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Royal Hospital for Sick Children and Department for Clinical Neurosciences - Edinburgh

RHSC / DCN RDS Environmental Matrix

Dept Code	Index
~	Cover
~	Guidance Notes
~	Room Function Reference Sheet
~	Occupancy & Equipment Load Allowances
A1 - A4	Front Door - A&E / Assessment Ward
B1	Critical Care / HDU / Neonatal Surgery
C1- C5	RHSC In Patient Pathway / Ward Care
D1 - D10	RHSC Ambulatory Care
E1	Pod
F1	Child and Adolescent Mental Health
G2 - G3	Clinical Support
H1 - H3	Academic
I1 - I2	Facilities / Infrastructure Support Services
J1 - J2	Patient / Family Support
K1 - K2	Family Facilities
L1 - L2	DCN In Patient Pathway / Ward Care
M1- M4	DCN Support Space
N1	DCN Out Patient Departments
P1	Combined Theatres
Q1	Combined Radiology
R1 - R2	Office / Admin Support Services
S1 - S7	Combined Facilities / Infrastructure Support Services
T1	Plant
U1	Shelled Space

Updated to incorporate Board Comments and revised accommodation schedule.

WW-XX-XX-DC-XXX-001
Rev 11

25th October 2017

RDD	
Irreversible Design Data Section 5 of Schedule Part 6	
Board	
Name	[Redacted]
Date	17/11/17
Sign	[Redacted]
Level	B
Comments: REFER TO MM-CC-005531	
In accordance with the Levels as set out in clause 4 Effect of Review and Schedule Part 6: Review Procedure: Level A: No Comment Level B: Noted subject to Amendment as noted Level C: Rejected subject to amendment as noted Level D: Rejected	

Brookfield MULTIPLEX	BM
Built to outperform.	
Contractor Document Review RHSC & DCN Edinburgh	
A <input type="checkbox"/> No Comment B <input checked="" type="checkbox"/> Noted subject to comments - review and resubmit within 7 business days C <input type="checkbox"/> Rejected - review and resubmit within 7 business days	
BM Checked by:	[Redacted]
Date:	23/11/17
Brookfield Multiplex uses a status code not absolute the consultant of its obligations with regard to cooperation and conformity with the other Consultants and specialists. Subcontractor's design and the project Agreements, Employer's Requirements are the cost plan and for ensuring that there are no ambiguities, discrepancies, inconsistencies or omissions within this document or between it and any other design document.	

As per
MPX-CC-022871

Royal Hospital for Sick Children and Department for Clinical Neurosciences - Edinburgh

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R1 - R2	Office / Admin Support Services
S1 - S7	Combined Facilities / Infrastructure Support Services
T1	Plant
U1	Shelled Space

Updated to
incorporate
Board
Comments and
revised
accommodation
schedule.

WW-XX-XX-DC-
XXX-001
Rev 11

25th October
2017

Rev 6. The following table indicates Board Comments, initial response together with the Environmental Matrix to reflect the following Board comments

Item	Initial Response	Feed back	Reconciliation
1	Update 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.	Individual room numbering being applied.	OK Agreed
2	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.'	We have made reference to the figure of 31°C in the Guidance Notes. 'Theatre temperatures are to be able to be raised to 31°C for certain operations.'	Temperature control in theatres is covered in the Operational Design Notes V5 14th Oct2014 for RHSC Theatres 1 & 2. Operating theatres 1-P1-032 and 1-P1-044 shall operate normally as detailed in the Environmental Matrix. These rooms shall be provided with a manual control to raise the temperature to 31°C within a period of 2 hours. This manual control function shall be logged in the BMS and the temperature requirements of the Environmental Matrix shall not apply for the duration of the elevated temperature operation. THIS HOWEVER IS NOT NOTED ANYWHERE This statement is now incorporated within the guidance notes of the matrix
3	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- Treatment Rooms, Consulting Rooms; Laboratory; Physiotherapy Studio, Recovery. These room shall not exceed the maximum acceptable level of 25°C for more than 50 hours per annum	The Temp (max) column within the table has been updated to 25°C for the agreed rooms 3.1- 3.5 above.	OK Agreed
4	Detailed proposal awaited on bedroom ventilation to achieve balanced/ negative pressure relative to corridor.,	The single bedrooms have had their ensuite extract increased to achieve a balance within the room, this has been noted within the matrix.	NOTE 26 AND VENTILATION TYPE HAVE NOT BEEN ALTERED. Refer to Matrix
5	Colour rendering all stated as 80 where certain areas should be 90	Amended.	NEEDS TO BE CHECKED FOR ALL Refer to Matrix
6	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.	The figure of 25-8 is now reflected within the matrix.	OK Matrix now amended. See item 7 below.
7	Further discussion is required on the minimum temperate requirement for the Body View Room.	Awaiting confirmation on this one from the client, however discussion at the meeting on the 11/11/14 was that rather than take the room temperature down to 8°C which would require specialist cooling they would look at providing a cold blanket for the body and room temperatures would be retained as a normal room.	NHSL confirm following discussion with users that the use of a cooling blanket or cooling cot for the body is appropriate and therefore there is no requirement to have the room at 8 degrees and 25°C is acceptable Matrix amended to minimum temperature of 18°C in place of 8°C.



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NHSL Reference	NHSL Comment	Response	Environmental Matrix Status	Drawing Implication	FC Comment	Post FC Comment
1	Technical Submittal MER-XX-SL-TS-015 appears to contradict environmental note 13 by way of radiant panel controls.	Note 13 has been deleted from the matrix and Mercury's technical submittal takes precedent.	Now updated.	X	X	✓
2	1-B1-010 medical gas cylinder store, SHTM 02-01 states internal cylinders stores may require mechanical ventilation, please confirm no ventilation provided.	Extract ventilation has been provided. Matrix updated and drawings where appropriate.	Now updated.	✓	X	✓
3	IPS room max/min temperatures stated as "Manufacturer Dependant", this is not acceptable, temperatures to be stated. Room has 3ac/h mechanical extract therefore heating type should be Adjacent space transfer air and temperatures accordingly.	Room temperatures have been added. Adjacent space transfer air added into heating type.	Now updated	X	X	✓
4A	Isolation cubicles and bedrooms are not shown with any extract ventilation.	Extract rate and note added	Now updated	X	X	✓
4B	Gowning lobby, supply stated as "in line with SHPN 04" and extract stated as "To match total bedroom air volume", design development review required.	Note removed and extract rate added.	Now updated	X	X	✓
5	Technical Submittal MER-XX-SL-TS-015 shows room 1-B1-057 with a radiant panel which contradicts Environmental Matrix room 1-B1-057 warm air reheat battery.	The air is heated by a heater battery which is BMS controlled as per the matrix.	No action required	X	X	✓
6	Where ventilation rates 10l/s per person are stated, room occupancy to be detailed and ventilation rates calculated.	These particular areas have been designed based on occupancies; occupancy figures and ventilation rates have been added to these areas to provide clarity.	Now updated	X	X	✓
7	1-B1-063 Stated as supply air 4ac/h, extract via en-suite, this room does not have en-suite facilities.	Room extract rate added	Now updated	X	X	✓
8	1-B1-090 has an area of 8m2 which is not stated in the matrix. PCo to populate areas.	A review will be carried out and any blank GIFA rates will be noted - Updated schedule of accommodation required for this item.	Now updated	X	X	✓



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NHSL Reference	NHSL Comment	Response	Environmental Matrix Status	Drawing Implication	FC Comment	Post FC Comment
9	3-C1.2-036 review ventilation type, only showing supply when 4ac/h supply and extract.	Ventilation type note amended to incorpoarte extract.	Now updated	X	X	✓
10	Room 1-G3-003/005/007 bathroom temperatures stated as 28 / 20 with adjacent space transfer air from area with temperatures of 28 / 18.	These bathrooms have their own radiant panel.	Now updated	X	X	✓
11	Similarly isolation bedroom 3-C1.4-040, temperatures stated as 28 / 21 with adjacent space transfer air from area with temperatures of 28 / 18, ventilation described as "balanced".	The adjacent area; Lobby 3-C1.4-039 is heated via heater battery and will be at least 21°C. Matrix has been updated.	Now updated	X	X	✓
12	3-C1.7-003, 004, 005 supply and extract "to suit location" not acceptable.	Air change rates will be noted and the "to suit location" will be removed.	Now updated	X	X	✓
13	G-D2-006 supply and extract "to suit location", statement "to suit location" is not acceptable.	Air change rates will be noted and the "to suit location" will be removed.	Now updated	X	X	✓
14	Theatre ventilation stated as "in line with SHTM 03-01", correct, this is a BCR requirement. However dental surgeries are not mentioned in SHTM 03-01, I would suggest SHPN 36 part 2. The required ventilation to be designed and detailed.	In line with the SHTM 03-01 removed and air change rates added.	Now updated	X	X	✓
15	1-H2-021 is currently labelled a single bedroom but it is an isolation room, review ventilation.	This room function was RFI'd and has been designed as an isolation room (matrix has been updated).	Now updated	X	X	✓
16	1-P1-003 and 005 are bedrooms, not bathrooms.	Bathroom changed to bedroom.	Now updated	X	X	✓
17	Kitchen states DW172 dependant, actual design detail to be added.	Design details will be noted and "DW172" will be removed.	Now updated	X	X	✓



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NHSL Reference	NHSL Comment	Response	Environmental Matrix Status	Drawing Implication	FC Comment	Post FC Comment
18	Complete Estates SOA areas.	A review will be carried out and any blank GIFA rates will be noted.	Now updated	X	X	✓
19	Room B-S3-002 and 005 stated in Environmental Matrix as Adjacent Space Transfer Air, however shown with radiant panel on drawing.	Matrix will be updated with radiant panel noted.	Now updated	X	X	✓
20	ADB code reference should be confirmed.	ADB code reference is an unnecessary column for the use of this matrix so the column will be deleted from the environmental matrix.	Now updated	X	X	✓
21	Last column not titled. What does it refer to?	This column to the IET grouping but this column has now been superseded by the categorisation document. Column will be deleted from the environmental matrix.	Now updated	X	X	✓
22	B-S3-002 & B-S4-001 can min temp be increased to 18?	Temperature will be altered to 18°C	Now updated	X	X	✓
23	Disposal hold – can min temp be reduced to 16.	Sensor could be set to 16°C rather than 18°C but the reduction to the maximum temperature from 28°C to 25°C is problematic though so if required, cooling will be need to be added - Confirmed at meeting that 28°C is to be retained.	Now updated	X	X	✓
24	During a recent PG it was made clear that due to the nature of the research being carried out in the Clinical Research Department in rooms H2-013, 014, 016 and 020 the temperature cannot at any time exceed 25°C.	Cooling has been provided in H2-014, H2-016 and H2-020. H2-013 requires cooling. Matrix has been updated to reflect this but drawing requires updating.	Environmental Matrix updated and drawing to be updated	✓	X	✓
25	Further to the recent discussion regarding hepa filtration in the isolation rooms the matrix should have been updated to reflect this.	The matrix doesn't note HEPA filter requirements but all isolation rooms have the capability of HEPA filters being installed.	No action required	X	X	✓
26	G-F1 Bedrooms with 6ac/h where most bedrooms are taken as 4ac/h.	This is a CAHMS bedroom so 6 AC/H has been utilised, reference to natural ventilation will be removed.	Now updated	X	X	✓



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NHSL Reference	NHSL Comment	Response	Environmental Matrix Status	Drawing Implication	FC Comment	Post FC Comment
27	B-S4-004, no supply air.	Supply air reference will be added.	Now updated	X	X	✓
28	G-S6-016, Cooling - Yes, Cooling Type – None.	Comfort cooled fresh air is now noted.	Now updated	X	X	✓
29	G-Q1-007, Cooling – No, Cooling Type - Comfort cooled fresh air.	Cooling note removed.	Now updated	X	X	✓
30	G-Q1-161, Heating type – Adjacent space transfer air, supply at 10 l/s/p positive pressure. Diagnostic rooms, "To suit location"	This room is part of corridor and shares heating and ventilation with corridor.	No action required	X	X	✓
31	G-A1-004, supply 4 ac/h extract 3 ac/h positive, different to other diagnostic rooms.	We have treated this room like an office.	No action required	X	X	✓
32	Confirm where natural ventilation, i.e. 1-B1-063/065/067.	Extent of ventilation clarified on schedule.	Now updated	X	X	✓
33	3-C1.3-018, supply 4 ac/h extract 3 ac/h positive , different to other offices.	Air change rates utilised are in line with cellular offices	No action required	X	X	✓
34	1-L1-005 Resus area 30m2 with extract at 3 ac/h.	This room has been updated on the matrix.	Now updated	X	X	✓
35	G-A1-028/029, Resus area with central general extract with supply at 10 ac/h extract at 6 ac/h.	Ventilation type for these rooms has been updated in line with design.	Now updated	X	X	✓



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NHSL Reference	NHSL Comment	Response	Environmental Matrix Status	Drawing Implication	FC Comment	Post FC Comment
36	Consider absence detection to all offices, meeting rooms and node rooms.	The lighting control has generally been described in the matrix as either presence or switched. If this is causing confusion the reference to presence could be renamed automatic. As a general note, automatic detection has been used in all suitable areas.	No action required	X	X	✓
37	1-D3-002 Circulation Equipment Storage Bays, all others are presence detection.	Automatic controls added.	Now updated	X	X	✓
38	Disposal hold, LG2 recommends 200 lux.	100 lux will be changed to 200 lux.	Now updated	X	X	✓
39	IPS rooms normal lux stated as n/a.	200 lux will be added to the matrix.	Now updated	X	X	✓
40	G-F1-028, 030, 053, 045 and 1-L1-028 are described as offices but have local lux of 1000.	Local lux figures to be removed.	Now updated	X	X	✓
41	Anaesthetic rooms, LG2 recommends local lux 1000 and Ra 80.	Ra 80 has been noted in the environmental matrix and 1000 lux is for local lighting but 500 lux is for general; all as noted in the environmental matrix.	No action required	X	X	✓
42	Theatre exit bays (transfers), LG2 recommends normal lux 300 local lux not required and Ra 80.	500 lux will be dropped to 300 lux, Ra 90 will be reduced to Ra 80 and local lux will be removed.	Environmental Matrix updated and drawings to be updated	✓	X	✓
43	Preparation rooms and scrub up, LG2 does not require local lux 10,000 – 100,000, or Ra 90.	Ra 90 will be reduced to Ra 80 and local lux will be removed.	Environmental Matrix updated and drawings to be updated	✓	X	✓
44	Theatre utility rooms, LG2 recommends local lux 100 – 150 and does not require local lux 10,000 – 100,000, or Ra 90.	500 lux will be dropped to 150 lux, RA 90 will be reduced to Ra 80 and local lux will be removed.	Environmental Matrix updated and drawings to be updated	✓	X	✓



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RHSC & DCN
Environmental Matrix Comments
Second Batch

NHSL Reference	NHSL Comment	Response	Environmental Matrix Status	Drawing Implication	FC Comment	Post FC Comment
45	Recovery areas, LG2 does not require local lux 1000 but does recommend Ra90.	RA 80 will be increased to Ra 90 and local lux will be removed.	Environmental Matrix updated and drawings to be updated	✓	X	✓
46	Nurse/touchdown bases not shown to have night lighting, confirm this achieved by dimming.	All night lighting is achieved by dimmable fittings.	No action required	X	X	✓
47	Resus trolley bay 1-D1-009 to be as other trolley bays, Ra 80 and presence detection.	1-D1-009 will be updated to reflect other trolley bays.	To be updated	X	X	✓
48	Review colour rendering, e.g. theatre suite, prep, anaesthetic, scrub utility, exit bay all Ra 80. Review consult/ examination rooms to have the higher colour rendering of Ra 90. All to be as CIBSE LG2.	RA 90 is currently shown in theatres, preparation rooms, scrub rooms, utility rooms and exit bay. Anaesthetic room will be changed to Ra90 from Ra80. We feel that the consultant room are general treatment rooms so should remain as Ra80; where Ra90 is required, it will be achieved via the examination luminaire.	Environmental Matrix updated and drawings to be updated	✓	X	✓
49	No absence detection or daylight control detailed included from drawings.	The lighting control has generally been described in the matrix as either presence or switched. If this is causing confusion the reference to presence could be renamed automatic. As a a general note, automatic detection has been used in all suitable areas.	No action required	X	X	✓
50	Medical location column states "See Guidance Notes" for every entry and not mentioned in those guidance notes.	This has been superseded by the risk profile document which sets out the medical grouping and classification. Column has been removed.	Now updated	X	X	✓

Environmental Matrix - Guidance Notes

- 1 This workbook is prepared for the Financial Close Stage as an easier reference tool to replace ADB RDS M&E Sheets for the Environmental Criteria elements as described on these sheets.
- 2 The services matrices are produced from the Schedule of Accommodation Sheets.
- 3 The design of the HVAC systems to the theatres shall be in accordance with SHTM 03-01.
- 4 Where radiant panels are indicated in any room in these matrices, detailed design development may remove the need for these without detriment to environmental temperature. This design development is dependant on actual room layout - i.e. whether a room is located adjacent to an external wall, ground bearing floor, roof surface or is internal.
- 5 Ventilation air change rates and the use of natural ventilation in Patient Areas shall be reviewed throughout the detail design process to ensure a maximum internal temperature of 25°C (dry bulb) is not exceeded during normal occupancy. This criteria shall also apply to cellular and open plan office spaces.
- 6 Maximum internal temperatures listed relate to normal occupancy and Summer Design Conditions ; External Summer Conditions for Cooling Plant Selection as per SHTM2025, Enthalpy 54kJ/kgda. 26deg°Cdb, 19deg°C wb. External Winter Conditions as per CIBSE Guide A Table A 2.2 for locality = - 6°C for Heat Losses, and as SHTM 2025 for locality = -10°C for AHU Ventilation Plant design.
- 7 Examination lamp notes where listed are provisional. Detailed requirements (fixed, mobile, illumination) will be detailed on C sheets as agreed from signed off 1:50 RDS, which shall take precedence over this schedule.
- 8 All lighting levels are derived from CIBSE Lighting Guide LG2.
- 9 Colour rendering refers to CIBSE Lighting Design Guide and will be applied throughout.
 80 : Normal
 90 - Enhanced to provide close as possible match to natural light for clinical purposes
- 10 Thermostatic Mixing Devices - SHTM 04-01 Guidance shall be employed for specific TRV Type versus listed Area/Activity.
- 11 Standby Lighting to be Grade A throughout .
- 12 The internal temperature in naturally or mechanically ventilated rooms shall not exceed the maximum temperature as listed on these Environmental Matrices provided external summer design criteria is not exceeded .
- 13 Note Deleted
- 14 Local Control BMS Temperature Sensors for ducted reheat zones and chilled water cassettes for hotspots shall be provided with local range adjustment to +/- 2°C of BMS Set Point. BMS set point shall be adjustable via operator/user dialogue through formal FM
- 15 **Typical bedroom** - Design Criteria - SHTM 03-01 Clause 2.11 - internal temperatures in patient areas should not exceed 28°C db for more than 50 hrs per year. Appendix 1 SHTM 03-01 gives 18°C to 28°C float range. NHSL however require that the maximum internal design temperature should not exceed 25°C for more than 50 hrs per year.

HDU bed areas - Design Criteria - HBN 57 gives specific guidance as well as SHTM 03-01 - Appendix 1 for air change rates - 10ac/hr Supply, 18°C to 25°C control range. (Capability shall be provided but not at the summer and winter external ambient design extremes against the internal maximum and minimum range conditions).

 The department will be comfort cooled and controlled on a zonal basis.

 Central AHU to be provided with blank section for future provision of humidification.

Post theatre recovery areas - Design Criteria - SHTM 03-01 - Appendix 1 for air change rates - 15ac/hr S&E , 18°C to 25°C control range.(Capability shall be provided but not at the summer and winter external ambient design extremes against the maximum and minimum range conditions).

Critical Care areas - Design Criteria - SHTM 03-01 - Appendix 1 for air change rates - 10ac/hr Supply for isolation cubicles , 18°C to 25°C control range.(Capability shall be provided but not at the summer and winter external ambient design extremes against the maximum and minimum range conditions). NHSL may require specific rooms to have a control range up to 28°C.

 Central AHU to be provided with blank section for future provision of humidification.
- 16 **Corridor** ventilation may be either mechanical or where the opportunity exists natural. To be determined during detailed design with due regard to clinical functionality.
- 17 **Single Room WC** - SHTM 03-01 Appendix 1 suggests 3ac/hr extract air change rate only. We have applied 10ac/hr extract rate to provide a more robust rate of extract.
- 18 **Diagnostic Rooms** - (X Ray, CT Scanner, MRI Scanners, Gamma Camera) - air change rates listed at 8ac/hr. Actual air change rate must be derived through room heat gain analysis and actual equipment guidance.
- 19 **Operating Theatre Laminar Flow/UCV Requirements** - Refer to Operational Policy Documents for specific theatres which require Laminar Flow/UCV canopy style ventilation solution.

 Central AHU to be provided with blank section for future provision of humidification.

 Operating Theatres 1-P1-032 and 1-P1-044 shall operate normally as detailed in the Environmental Matrix. These rooms shall be provided with a manual control to raise the temperature to 31°C within a period of 2 hours. This manual control function shall be logged on the BMS and the temperature requirements of the Environmental Matrix shall not apply for the duration of the elevated temperature operation.
- 20 **Small workshop Areas** - Local Extract Ventilation (LEV) unit requirement to be determined from room equipment schedules.
- 21 **Note that Isolation Suite ventilation solutions for this project shall follow HBN 4 Supplement 1 Section 4 Item 4.8 Guidance i.e.**
 A common departmental AHU shall be employed to provide supply air ventilation (and shall therefore employ duty & standby fans).
 Isolation Rooms En Suite Extracts shall be provided with an independent Isolation Room toilet extract ventilation system.
 Isolation Rooms En Suite Extracts shall be provided with either externally located 3 mtr high discharge stack in a safe location or with extract filters (H14) within a safe change housing outside the building on the suction side of the fan.
 Heating & Cooling the Isolation Suites shall be provided via the ventilation system.
- 22 **Retail Provision** - Service provisions listed are Infrastructure only for future fit-out by retailer. (Fire detection shall be provided to assist completion).
- 23 **Comfort Cooled Fresh Air** - Where noted as such on the matrix, these are provided via departmental air handling plant via chilled water cooling coils.
- 24 **Body View Room** - A cooling blanket or cooling cot shall be used in this room.
- 25 Anti ligature rooms (17no. off) will be treated as sealed rooms with Supply at 6ac/hr and Extract to match to achieve a balanced pressure.
- 26 **Single Bedroom** - The design philosophy for ventilation is for a mixed mode operation where natural vent is encouraged which has benefits both physiological with users being partly in control, and from an energy stand point where mechanical vent loading is partly reduced (2/3rds). This strategy results in zero pressure differential regime within the room where supply and extract is balanced.
 En suite dirty extract volume flow rate has been increased to achieve a balanced ventilation system.
- 27 **Offices** have been noted as being 400Lux however have the ability through the KNX system to be dimmed to 300Lux

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
G-A1-002	A1 Emergency Department	Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-003		Store - Medical Gas Cylinders	1	Storage Area Med Gas	28	16	Adjacent Space Transfer	None	No	None	Central General Extract	0	7	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-004		Processing Room	1	Diagnostic room	25	18	Radiant Panels	Remote Adjustable Sensor	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3 people at 10 l/s per person (4ach)	3 people at 10 l/s per person (4ach)	Balanced	F7	43	n/a	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
G-A1-005		Changing Cubicles	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-006		General X-Ray Room	1	Diagnostic room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	By Specialist	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
G-A1-007		Dirty Utility	1	Dirty utility	28	18	Radiant Panels	Remote Adjustable Sensor	No	None	Isolation Bedroom	0	6	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-008		Washdown Room	1	Dirty utility	28	18	Radiant Panels	Remote Adjustable Sensor	No	None	Central Dirty Extract	0	6	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-009		WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-010		ED Laboratory	1	Laboratory	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	6	Balanced	F7	43	60	500	n/a	None	A	80	Switch	General working plane 1m
G-A1-011		Linen Bay (1 Trolley)	1	Linen Bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-012		Bay 5	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-A1-013		Bay 14	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-A1-014		Bay 6	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-A1-015		Bay 13	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-A1-016		Staff Base	1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Supply and Extract	4 people at 10 l/s per person (4ach)	4 people at 10 l/s per person (4ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-A1-017		Clean Utility	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-018		Bay 7	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-A1-019		Bay 12	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-A1-020		Bay 8	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-A1-021		Bay 11	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-A1-022		Bay 9	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-A1-023		Store Room	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-025		Bay 10	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-A1-026		Emergency / Ambulance Entrance	1	Circulation Areas - Entrance Lobby	28	Not Controlled	Warm Air Door Curtain	BMS Adjustable Sensor	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-028		Resus 1	1	Resuscitation Bay	25	21	Radiant Panels	Remote Adjustable Sensor	Yes	Wall Mounted Unit	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	None	A	80	Switch	Bed / Trolley 1.45m
G-A1-029		Resus 2	1	Resuscitation Bay	25	21	Radiant Panels	Remote Adjustable Sensor	Yes	Wall Mounted Unit	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	None	A	80	Switch	Bed / Trolley 1.45m
G-A1-030		IPS Room	1	IPS Room	30	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-031		Viewing Room	1	Body View	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	6	Negative	F7	43	41	100 (KNX)	n/a	None	A	80	Switch / Dimmer	Floor 0m
G-A1-032		Relatives Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
G-A1-033		WC - Wheelchair accessible	1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-034		Store - Major Incident / Ambulance Equipment	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-035		Triage Room	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply Air	10	0	Positive	F7	43	41	300	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-A1-036		Reception:2 staff	1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	2 people at 10 l/s per person (2ach)	2 people at 10 l/s per person (2ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-A1-037		Parking Bay: 6 wheelchairs	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-038		Main Entrance Draught Lobby	1	Circulation Areas - Entrance Lobby	28	Not Controlled	Warm Air Door Curtain	BMS Adjustable Sensor	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-039		Parking Bay: 3 accident trolleys & 3 wheelchairs	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-040		Store - Equipment & Supplies	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-041		WC - Wheelchair accessible	1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-042		WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-043		Female Staff Changing and Lockers: 30 places	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-044		Staff Shower: ambulant	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-045		Waiting Area inc Play Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	36 people at 10 l/s per person (8ach)	36 people at 10 l/s per person (8ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
G-A1-046		Baby Infant / Feeding Room	1	baby Feeding	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	100	n/a	None	A	80	Switch	Floor 0m
G-A1-047		Nappy Change	1	Nappy Change	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-048		Male Staff Changing Room and Lockers: 20 places	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-049		Staff Shower: ambulant	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-050		Consultant Office (6 person)	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Concealed Cassette Unit	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
G-A1-052		Senior Charge Nurse Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Concealed Cassette Unit	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-A1-053		Interview/Meeting Room: 6 persons	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6 people at 10 l/s per person (9ach)	6 people at 10 l/s per person (9ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-A1-054		Beverage Bay	1	Tea Making	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	41	100 (KNX)	n/a	None	A	80	switch	Floor 0m
G-A1-055		WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-056		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-057		Medical Staff / Audit / Secy Office (3 Person)	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-A1-058		WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-059		Store - Stock & Sterile Supplies	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-060		Bay 2	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-A1-061		Bay 1	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-A1-062		Bay 4	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-A1-063		Pantry - Staff / Patient	1	Pantry	28	18	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	n/a	41	300	n/a	None	A	80	Switch	Floor 0m
G-A1-064		Bay 3	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-A1-065		Store - Plaster	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-066		Plaster Suite (2 bays)	1	Plaster Suite (2 bays)	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	7	7	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-A1-067		WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-072		Mobile X-Ray Bay	1	Mobile X Ray Bay	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-001A		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-001B		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-024		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	11	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-027		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	4	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-051		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-068		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-069		Draught Lobby	1	Draught Lobby	28	Not Controlled	Warm Air Door Curtain	BMS Adjustable Sensor	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-070		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-A1-071		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-002		Single Room 27	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-003		Room 27 - Ensuite	14	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-004		Single Room 28	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-005		Room 28 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-006		Single Room 26	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-007		Room 26 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-008		Reception	1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract Air	2 people at 10l/s/per person (5ach)	2 people at 10l/s/per person (5ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
G-A2-009		Single Room 29	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-010		Room 29 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-011		Touchdown Base 2	4	staff base	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	n/a	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
G-A2-012		Single Room 31	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-013		Room 31 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-014		Single Room 30	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-015		Room 30 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10 minimum	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-016		Resus Bay	1	Resus Trolley bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-017		Single Room 6	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-018		Room 6 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-019		Single Room 5	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-020		Room 5 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-021		Clean Utility	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m
G-A2-022		Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-023		WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-024		WC - Visitors	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
G-A2-025	A2 Paediatric Acute Receiving Unit - 34 Beds	Linen Bay (1 Trolley)	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-026		Touchdown Base 1	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	None	0	0	n/a	n/a	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
G-A2-027		Hoist Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-028		Observation Bay	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural and Central Supply Air	4	via ensuite	positive to ensuite	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m
G-A2-029		Observation Bay - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-030		Observation Bay - Toilet	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-031		Single Room 1	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-032		Room 1 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-033		Single Room 2	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-034		Room 2 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-035		Single Room 3	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-036		Room 3 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-037		Single Room 4	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-038		Room 4 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-039		Treatment Room	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-A2-040		Dining / Play Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	7	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
G-A2-041		Ward Kitchen	1	Ward Kitchen	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	6	Negative	None	43	60	500	n/a	None	A	80	Switch	General working plane 1m
G-A2-042		Single Room 7	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-043		Room 7 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-044		Single Room 8	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract Air	6	6 via bedroom & ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-045		Room 8 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-046		Bay 2	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural and Central Supply Air	4	via ensuite	positive to ensuite	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m
G-A2-047		Bay 2 - Toilet	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-048		Bay 2 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-049		Touchdown Base 3	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
G-A2-050		Single Room 9	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-051		Room 9 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-052		Single Room 10	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-053		Room 10 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-054		Bay 1	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural and Central Supply Air	4	via ensuite	positive to ensuite	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m
G-A2-055		Bay 1 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-056		Bay 1 - Toilet	1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-058		Single Room 11	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-059		Room 11 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-060		Single Room 12	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-061		Room 12 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-062		WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-063		Linen Bay (1 Trolley)	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-064		Store - Equipment	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-065		Single Room 16	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-066		Room 16 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-067		Single Room 14	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-068		Room 14 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-069		Touchdown Base 4	1	Staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	2 people at 10 l/s per person (8ach)	0	Positive	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
G-A2-070		Single Room 15	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-071		Room 15 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-072		Single Room 17	1	Isolation Bedroom	28	21	Adjacent Space Transfer Air	Local / BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Supply Via Lobby	10	10 via the ensuite	Balanced	H14	n/a	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
G-A2-073	Room 17 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	43	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-A2-074	Room 17 - Lobby	1	Isolation Lobby	28	21	Warm Air - Reheat Battery	Local / BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply	46	0	Positive	H14	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane	
G-A2-075 A&B		Store - General	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-A2-076		Patients' Assisted Bathroom	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Switch	Floor 0m	
G-A2-077		Multi-Disciplinary Office	1	Multi Disciplinary Work Areas	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
G-A2-078		Senior Charge Nurse Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-A2-079		On-Call Consultant Office (2 Person)	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-A2-080		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-A2-081		Clinical Coordination Office (2 Person)	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-A2-082		Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-A2-083		Patient Interview Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6 people at 10 l/s per person (9ach)	6 people at 10 l/s per person (9ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-A2-084		Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-A2-001			Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-057			Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-085			Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-086			Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-A2-088	Switch Cupboard		1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-A2-089	Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m		
G-A3-001	A3 PARU / Emergency / Radiology Shared Support	Staff Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m	
G-A3-002		Seminar & Training Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	22 people at 10 l/s per person (9ach)	22 people at 10 l/s per person (9ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-A3-003		Meeting / Case Conference Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	25 people at 10 l/s per person (11ach)	25 people at 10 l/s per person (11ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-A3-004		Lobby	1	Lobby	18	28	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-A3-005		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
1-B1-002		Retrieval Equipment Store	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-B1-003		Staff Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m	
1-B1-004		Senior Charge Nurse Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
1-B1-005		WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-B1-006		WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-B1-007		Equipment Service Room	1	Small Workshop	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	6	Negative	F7	43	41	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
1-B1-008		IPS Room	1	IPS Room	30	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-B1-009		Bay 1	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural and Central Supply Air	4	1.7	positive	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m	
1-B1-010		Gas Cylinder Store	1	Storage Area Med Gas	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	7	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-B1-011		Multidisciplinary Work Area PICU	1	Multi Disciplinary Work Areas	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	400	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
1-B1-012		Staff Base 1	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
1-B1-014		Resuscitation Trolley Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-B1-015		Lobby 5	1	Isolation Lobby	28	21	Warm Air - Reheat Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply	55	0	Positive	H14	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-B1-016		Single Room 5 Isolation	1	Isolation Bedroom	28	21	Adjacent Space Transfer Air	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Supply via lobby	10	10	Balanced	H14	n/a	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
1-B1-017		Single Room 6 Isolation	1	Isolation Bedroom	28	21	Adjacent Space Transfer Air	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Supply via lobby	10	10	Balanced	H14	n/a	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
1-B1-018		Lobby 6	1	Isolation Lobby	28	21	Warm Air - Reheat Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply	55	0	Positive	H14	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-B1-019		Single Room 8	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply & Extract	4	4	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
1-B1-020		Single Room 7	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply & Extract	4	4	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
1-B1-021		Single Room 9	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply & Extract	4	4	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
1-B1-023		Staff Base 2	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
1-B1-024		Resuscitation Trolley Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-B1-025		Lobby 10	1	Isolation Lobby	28	21	Warm Air - Reheat Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply	62	0	Positive	H14	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-B1-026		Single Room 10 - Isolation	1	Isolation Bedroom	28	21	Adjacent Space Transfer Air	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Supply via lobby	10	10	Balanced	H14	n/a	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
1-B1-027		Clean Utility	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m	
1-B1-028		Bed/Patient Chair / Buggy Storage	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-B1-029		Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-B1-030		Linen Bay (1 Trolley)	1	Linen Bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m	
1-B1-031		Bay 2	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply & Extract	4	1.8	positive	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane	
1-B1-032	B1	PICU and HDU's - 24 Beds	Patients' Assisted Bathroom	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Switch	Floor 0m
1-B1-033			Lobby 16	1	Isolation Lobby	28	21	Warm Air - Reheat Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply	45	0	Positive	H14	na	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-034			Linen Bay (1 Trolley)	1	Linen Bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-035			Hoist Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-036			Single Room 16 Isolation	1	Isolation Bedroom	28	21	Adjacent Space Transfer Air	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Supply via lobby	10	10	Balanced	H14	n/a	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-B1-037			Single Room 17	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply & Extract	4	4	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-B1-038			Staff Base 3	1	Staff Base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	200/300	n/a	None	A	80	Switch / Dimmer	General working plane 1m
1-B1-039			Resuscitation Trolley Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-041			Clean Utility	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m
1-B1-042			Multidisciplinary Work Area HDU	1	Multi Disciplinary Work Areas	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	400	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-B1-043			Laboratory	1	Laboratory	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	6	Balanced	F7	43	60	500	n/a	None	A	80	Switch	General working plane 1m
1-B1-044			IPS Room	1	IPS Room	30	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-045			Quiet / Interview Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4 people at 10 l/s per person (7ach)	4 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-B1-046			Store - Equipment	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-047			Family Interview Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	5 people at 10 l/s per person (5ach)	5 people at 10 l/s per person (5ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-B1-048			On call consultant	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-B1-049			Retrieval Team	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-B1-050			Bulk Supplies Store	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-051			Data Manager & Secretarial Office (3 person)	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-B1-055			Waiting Area (Visitors)	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	5	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
1-B1-056			WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-057			X-Ray Processing	1	Diagnostic room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
1-B1-058			Mobile X-Ray / Ultrasound Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	Central Supply & Extract	8	8	Balanced	F7	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-059			Cardiac Echo/ECG Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	8	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-060			Seminar Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	19 people at 10 l/s per person (7ach)	19 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-B1-061			Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-062			WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-063			Bay 3	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply & Extract	4	3	Positive	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m
1-B1-064			Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-065			Neonatal Bay 4	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	4	Balanced	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m
1-B1-066			Clean Utility (Neo-Natal)	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m
1-B1-067	Medical Gas Store	1	Storage Area Med Gas	28	16	Adjacent Space Transfer Air	None	No	None	General Central Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-B1-068	Baby Infant / Feeding Room	1	Baby Feeding	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Dirty Extract	0	10	Negative	None	43	41	100	n/a	None	A	80	Switch	Floor 0m		
1-B1-069	Staff Base 4	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
1-B1-071	Resuscitation Trolley Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-B1-072	Play Specialist Base & Store	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-B1-073	Pantry / Milk Store	1	Pantry	28	18	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	n/a	41	300	n/a	None	A	80	Switch	Floor 0m		
1-B1-074	Neonatal Cot 22 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-B1-075	Neonatal Cot 22	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m		
1-B1-077	DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m		
1-B1-078	Relative Overnight Stay Room 1	1	Relatives Overnight Stay	28	20	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	4	0	Positive	F7	43	n/a	100	n/a	None	A	80	Switch	Bed / Trolley 1.45m		
1-B1-079	Relative Overnight Room 1 Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-B1-080	WC - Relatives	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-B1-082	Relative Overnight Stay Room 2	1	Relatives Overnight Stay	28	20	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	4	0	Positive	F7	43	n/a	100	n/a	None	A	80	Switch	Bed / Trolley 1.45m		
1-B1-083	Relative Overnight Room 2 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-B1-084	Relatives' Sitting Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	8	Negative	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m		
1-B1-090	Equipment Cleaning	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m		
1-B1-001	Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-B1-013	Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
1-B1-013A		Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-013B		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-013C		Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-022		Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-040		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-052		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-070		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-076		Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-086		Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-087		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-B1-088	Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-B1-089	Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.1-002	Medical Inpatients	IPS Room	1	IPS Room	30	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-003		Senior Charge Nurse Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-C1.1-004		Single Room 4 (Transitional Care Bed)	1	Isolation Bedroom	28	21	Adjacent Space Transfer Air	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Supply via lobby	10	10 via the ensuite	Balanced	H14	n/a	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.1-005		Room 4 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	25	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-006		Room 4 - Lobby	1	Isolation Lobby	28	21	Warm Air - Reheat Battery	Local 7 bms Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply	48	0	Positive	H14	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-007		Hoist Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-008		Sitting Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
3-C1.1-009		Single Room 6 (Transitional Care Bed)	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.1-010		Room 6 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-011		Touchdown Base 2	1	Staff Base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	1 person at 10 l/s per person (8ach)	0	Positive	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
3-C1.1-012		Resus Bay	1	Resus Trolley bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-013		Single Room 5 (Transitional Care Bed)	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.1-014		Room 5 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-015		Single Room 7 (Transitional Care Bed)	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.1-016		Room 7 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-017		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-018		Bay 2 (beds 15-18)	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural and Central Supply Air	4	via ensuite	positive to ensuite	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m
3-C1.1-019		Bay 2 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-020		Bay 2 - Toilet	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-021		Dining / Play Room	1	Eating/Drinking	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	8 people at 10 l/s per person (4ach)	8 people at 10 l/s per person (4ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
3-C1.1-022		Store - Equipment	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-023		Ward kitchen	1	Ward Kitchen	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central General Extract	0	6	Negative	None	43	60	500	n/a	None	A	80	Switch	General working plane 1m
3-C1.1-024		Linen Bay (1 Trolley)	1	Linen Bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-025		Store - General	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-026		WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-027		WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-028		Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-029		Mobile X-Ray/ultrasound Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-030		Multi-disciplinary Office	1	Multi Disciplinary Work Areas	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-C1.1-031		Reception / Staff Base	1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	Yes	wall Mounted Unit	Central Supply Air	1 person at 10 l/s per person (3ach)	0	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-C1.1-032	Room 21 - Lobby	1	Isolation Lobby	28	21	Warm Air - Reheat Battery	Local 7 bms Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply	48	0	Positive	H14	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.1-033	Single Room 21	1	Isolation Bedroom	28	21	Adjacent Space Transfer Air	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Supply via lobby	10	10 via the ensuite	Balanced	H14	n/a	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
3-C1.1-034	Room 21 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	42	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.1-035	Room 20 - Lobby	1	Isolation Lobby	28	21	Warm Air - Reheat Battery	Local 7 bms Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply	38	0	Positive	H14	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.1-036	Single Room 20	1	Isolation Bedroom	28	21	Adjacent Space Transfer Air	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Supply via lobby	10	10 via the ensuite	Balanced	H14	n/a	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
3-C1.1-037	Room 20 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	42	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
3-C1.1-038	C1 Medical inpatients 23 Beds	Touchdown Base 1	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Supply and Extract	1 person at 10l/s/per person (Bach)	1 person at 10l/s/per person (Bach)	Balanced	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
3-C1.1-039		Room 19 - Lobby	1	Isolation Lobby	28	21	Warm Air - Reheat Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply	50	0	Positive	H14	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-040		Single Room 19	1	Isolation Bedroom	28	21	Adjacent Space Transfer Air	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Supply via lobby	10	10 via the ensuite	Balanced	H14	n/a	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.1-041		Room 19 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	42	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-042		Clean Utility	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m
3-C1.1-043		Treatment Room	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
3-C1.1-044		Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-045		Touchdown Base 3	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	1 person at 10l/s/per person (Bach)	0	Positive	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
3-C1.1-046		Bay 1 (beds 10-14 excl 13)	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural and Central Supply Air	4	via ensuite	positive to ensuite	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m
3-C1.1-047		Bay 1 - Toilet	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-048		Bay 1 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-049		Patients' Assisted Bathroom	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Switch	Floor 0m
3-C1.1-050		Patient Interview Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4 people at 10 l/s per person (7ach)	4 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-C1.1-051		Touchdown Base 4	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	0	0	n/a	n/a	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
3-C1.1-052		Single Room 9	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.1-053		Room 9 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-054		Single Room 8	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.1-055		Room 8 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-056		Single Room 3	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.1-057		Room 3 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-058		Single Room 1	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	6 via bedroom & ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.1-059		Room 1 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-060		Single Room 2	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.1-061		Room 2 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-062		Touchdown Base 5	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	None	0	0	n/a	n/a	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
3-C1.1-063		Single Room 24	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.1-064		Room 24 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-065		Single Room 23	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.1-066		Room 23 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-067		Single Room 22	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.1-068		Room 22 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-070		WC - Visitors	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-001		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.1-071	Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.1-073	Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.1-072	Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-002	Single Room 9	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
3-C1.2-003	Room 10 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-004	Linen Bay	1	Linen Bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-005	Single Room 11	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
3-C1.2-006	Room 11 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-007	Single Room 12	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
3-C1.2-008	Room 12 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-009	Touchdown Base 1	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	0	0	n/a	n/a	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m	
3-C1.2-010	Single Room 10	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
3-C1.2-011	Room 9 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-012	Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-013	DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane	
3-C1.2-014	C1.2 Surgical Long Stay Inpatients - 15 Beds	Single Room 14	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
3-C1.2-015		Room 14 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-016		Hoist Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-017		Patients' Assisted Bathroom	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Switch	Floor 0m	
3-C1.2-018		Single Room 15	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
3-C1.2-019		Room 16 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-020		Single Room 16	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
3-C1.2-021		Room 15 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-022		Touchdown Base	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	None	None	0	0	n/a	n/a	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
3-C1.2-023		Bay 2 (beds 5-8)	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural and Central Supply Air	4	via ensuite	positive to ensuite	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m	
3-C1.2-024		Bay 2 - Toilet	1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-025		Bay 1 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-026		Bay 1 (beds 1-4)	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural and Central Supply Air	4	via ensuite	positive to ensuite	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m	
3-C1.2-027		Bay 1 - Toilet	2	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-028		Senior Charge Nurse Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
3-C1.2-029		Resuscitation Trolley Bay	1	Resus Trolley bay	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-030		Store - Equipment	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-031		Clean Utility	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m	
3-C1.2-032		Treatment Room	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m	
3-C1.2-033		Dining / Play Room	1	Eating/Drinking	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5 people at 10 l/s per person (5ach)	5 people at 10 l/s per person (5ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m	
3-C1.2-034		Ward kitchen	1	Ward Kitchen	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central General Extract	0	6	Negative	None	43	60	500	n/a	None	A	80	Switch	General working plane 1m	
3-C1.2-035		Patient Interview Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	5 people at 10 l/s per person (8ach)	5 people at 10 l/s per person (8ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
3-C1.2-036		Reception / Staff Base	1	Reception	28	18	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	Central Supply Air	3	0	Positive	F7	n/a	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
3-C1.2-037		Discharge Lounge	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m	
3-C1.2-038		Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-039		Store - General	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-040		WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-041		WC - Visitors	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-042		Touchdown Base 3	1	Staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	None	None	0	0	n/a	n/a	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
3-C1.2-043		Multi-Disciplinary Office	1	Multi Disciplinary Work Areas	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
3-C1.2-044	WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.2-001	Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-045	Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.2-046	Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.3-002	C1.3	Waiting Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	5	5	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m	
3-C1.3-003		Reception / Staff Base	1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply Air	3	0	Positive	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
3-C1.3-004		WC Accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.3-005		Store - Equipment	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.3-006		Touchdown Base	1	Staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	1 person at 10l/s/per person (7ach)	0	Positive	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m	
3-C1.3-007		Room 1 - Lobby	1	Isolation Lobby	28	21	Warm Air - Reheat Adjustable Battery	Local BMS Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply	64	0	Positive	H14	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.3-008		Single Room 1	1	Isolation Bedroom	28	21	Adjacent Space Transfer Air	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Supply via lobby	10	10 via the ensuite	Balanced	H14	n/a	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
3-C1.3-009		Room 1 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	43	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.3-010		Bay 1 - Toilet	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.3-011		Bay 1 (Bed 2-5)	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural and Central Supply Air	4	via ensuite	positive to ensuite	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m	
3-C1.3-012		Bay 1 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.3-013		Bay 2 (beds 6-9)	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural and Central Supply Air	4	via ensuite	positive to ensuite	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m	
3-C1.3-014		Bay 2 - Toilet	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.3-015		Resuscitation Trolley Bay	1	Resus Trolley bay	28	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.3-016		Linen Bay	1	Linen Bay	28	16	Adjacent Space Transfer Air	None	No	None	None	None	0	0	n/a	None	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane		
3-C1.3-017	C1.3	Neuroscience Inpatients - 12 Beds	1	Store - General	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.3-018			1	Multi-Disciplinary Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
3-C1.3-019			1	Patient Interview Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4 people at 10 l/s per person (6ach)	4 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m		
3-C1.3-020			1	Senior Charge Nurse Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
3-C1.3-021			1	WC - Staff	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.3-022			1	WC - Staff	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.3-023			1	WC - Visitors	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.3-024			1	Snoezelen Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m		
3-C1.3-025			1	Rehabilitation Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m		
3-C1.3-026			1	Hoist Bay	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.3-027			1	Touchdown Base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	1 person at 10l/s/per person (7ach)	0	Positive	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m		
3-C1.3-028			1	Single Room 10 (VT)	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m		
3-C1.3-029			1	Room 10 - Ensuite	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.3-030			1	Single Room 11 (VT)	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m		
3-C1.3-031			1	Room 11 - Ensuite	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.3-032			1	Single Room 12	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m		
3-C1.3-033			1	Room 12 - Ensuite	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.3-034			1	Ward Kitchen	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	6	Negative	None	43	60	500	n/a	None	A	80	Switch	General working plane 1m		
3-C1.3-035			1	Patients' Assisted Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Switch	Floor 0m		
3-C1.3-036			1	Dirty Utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.3-037			1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m		
3-C1.3-038			1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m		
3-C1.3-039			1	Dining / Play Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6 people at 10 l/s per person (5ach)	6 people at 10 l/s per person (5ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m		
3-C1.3-040			1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.3-041			1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.3-001			1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.4-002			C1.4	Neuroscience Inpatients - 12 Beds	1	Quiet Study Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-C1.4-004					1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-005					1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-006					1	Store - General	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-007	1	Patient Interview Room			25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4 people at 10 l/s per person (6ach)	4 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
3-C1.4-008	1	Complementary Therapy Room			25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m		
3-C1.4-009	1	Room 11 - Ensuite			28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.4-010	1	Single Room 11			28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m		
3-C1.4-011	1	Assisted Bathroom			28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Switch	Floor 0m		
3-C1.4-012	1	Touchdown Base 4			28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	1 person at 10l/s/per person (7ach)	0	Positive	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m		
3-C1.4-013	1	Single Room 12			28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m		
3-C1.4-014	1	Room 12 - Ensuite			28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.4-015	1	Social Space			28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m		
3-C1.4-016	1	Single Room 14			28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m		
3-C1.4-017	1	Room 14 - Ensuite			28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.4-018	1	Single Room 10			28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m		
3-C1.4-019	1	Room 10 - Ensuite			28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.4-021	1	Hoist Bay			28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.4-022	1	Dirty Utility			28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-C1.4-023	1	Nursing Staff Office			25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m		
3-C1.4-024	1	Multi-Disciplinary Office			28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
3-C1.4-025	C1.4 Haematology / Oncology Inpatients & Daycases - 17 Beds & 2 Chairs	Medical Staff Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-C1.4-026		Consultant Office (5 person)	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-C1.4-027		Store - Equipment	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-028		Research Staff Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-C1.4-029		Pharmacy Base	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-C1.4-030		Senior Charge Nurse Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-C1.4-032		Single Room 9	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.4-033		Room 9 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-034		Touchdown Base 3	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	1 person at 10/s/per	0	Positive	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
3-C1.4-035		Linen Bay (1 Trolley)	1	Linen Bay	28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-036		WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-037		WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-038		Clean Utility	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
3-C1.4-039		Room 8 Lobby	1	Isolation Lobby	28	21	Warm Air - Reheat Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply	61	0	Positive	H14	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-040		Single Room 8 (Isolation)	1	Isolation Bedroom	28	21	Adjacent Space Transfer Air	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Supply via lobby	10	10 via the ensuite	Balanced	H14	n/a	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.4-041		Room 8 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	44	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-042		Room 7 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	43	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-043		Single Room 7 (Isolation)	1	Isolation Bedroom	28	21	Adjacent Space Transfer Air	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Supply via lobby	10	10 via the ensuite	Balanced	H14	n/a	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.4-044		Room 7 Lobby	1	Isolation Lobby	28	21	Warm Air - Reheat Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply	64	0	Positive	H14	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-045		Touchdown Base 2	1	Staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	1 person at 10/s/per person (7ach)	0	Positive	F7	n/a	43	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
3-C1.4-046		Single Room 15	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.4-047		Room 15 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-048		Room 6 - Lobby	1	Isolation Lobby	28	21	Warm Air - Reheat Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply	63	0	Positive	H14	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-049		Single Room 6 (Isolation)	1	Isolation Bedroom	28	21	Adjacent Space Transfer Air	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Supply via lobby	10	10 via the ensuite	Balanced	H14	n/a	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.4-050		Room 6 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	42	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-051		Room 5 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	41	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-052		Single Room 5 (Isolation)	1	Isolation Bedroom	28	21	Adjacent Space Transfer Air	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Supply via lobby	10	10 via the ensuite	Balanced	H14	n/a	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.4-053		Room 5 - Lobby	1	Isolation Lobby	28	21	Warm Air - Reheat Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply	61	0	Positive	H14	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-054		Resuscitation Trolley Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-055		Single Room 16	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.4-056		Room 16 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-057		Single Room 17	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.4-058		Room 17 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-059	Single Room 18	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
3-C1.4-060	Room 18 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.4-061	Bay 1 (Beds 1-6)	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural and Central Supply Air	4	via ensuite	positive to ensuite	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m	
3-C1.4-062	Bay 1 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.4-063	Play Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m	
3-C1.4-064	Ward Kitchen	1	Ward Kitchen	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	6	Negative	None	43	60	500	n/a	None	A	80	Switch	General working plane 1m	
3-C1.4-065	Treatment Room	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m	
3-C1.4-066	Clean Utility	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m	
3-C1.4-067	WC - Visitors	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.4-068	Waiting Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	5	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.4-069	Reception / Staff Base	1	Reception	28	18	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	3	3	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
3-C1.4-071	Room 4 - Lobby	1	Isolation Lobby	28	21	Warm Air - Reheat Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply	36	0	Positive	H14	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.4-072	Single Room 4 (Isolation)	1	Isolation Bedroom	28	21	Adjacent Space Transfer Air	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Supply via lobby	10	10 via the ensuite	Balanced	H14	n/a	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
3-C1.4-073	Room 4 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	41	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.4-074	Single Room 3	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
3-C1.4-075	Room 3 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
3-C1.4-076	C1.4	Single Room 2	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.4-077		Room 2 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-078		Single Room 1	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.4-079		Room 1 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-080		Reception	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	None	0	0	n/a	n/a	n/a	43	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
3-C1.4-081		Touchdown Base 1	1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	3	0	Positive	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
3-C1.4-083		Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-084		Bay 2 (Beds 7-9)	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural and Central Supply Air	4	via ensuite	positive to ensuite	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m
3-C1.4-085		Bay 2 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-086		Equipment Bay	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-087		Consult Room	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
3-C1.4-088		Beverage Bay	1	Tea Making	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	41	100 KNX	n/a	None	A	80	switch	Floor 0m
3-C1.4-001		Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	N/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-003		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-020		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-031		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-082		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.4-070		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.5-002	C1.5	Store - back up clothing	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.5-003		Family Sitting Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
3-C1.5-004		Baby Infant / Feeding Room	1	Baby Feeding	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	100	n/a	None	A	80	Switch	Floor 0m
3-C1.5-005		Nappy Change	1	Nappy Change	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.5-006		Breast Pump Room	1	Baby Feeding	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	100	n/a	None	A	80	Switch	Floor 0m
3-C1.5-007		WC-Wheelchair Accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.5-008		WC-Wheelchair Accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.5-001		Corridor	1	Corridor	28	18	None	None	No	None	Central Supply Air	20	0	Positive	F7	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.6-001	C1.6	Dining / Recreation Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
3-C1.6-002		Quiet Room / Study	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-C1.7-002	C1.7	EEG Review Room	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-C1.7-003		EEG Recording Room 2	1	Diagnostic room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
3-C1.7-004		EEG Recording Room 1	1	Diagnostic room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
3-C1.7-005		Evoked Potential Recording Room	1	Diagnostic room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
3-C1.7-001		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	none	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-002	C1.8	Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-003		Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-005		Single Room 9	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.8-006		Room 9 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-007		Staff WC	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-008		WC - Visitors	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-009		Dining / Play Room	1	Eating/Drinking	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5 people at 10 l/s per person (4ach)	5 people at 10 l/s per person (4ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
3-C1.8-010		Ward Kitchen	1	Ward Kitchen	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	6	Negative	None	43	60	500	n/a	None	A	80	Switch	General working plane 1m
3-C1.8-011		Reception Desk/Staff Base	1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply Air	3	0	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-C1.8-012		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-013		Store - General	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-014		Clean Utility	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m
3-C1.8-015		Treatment Room	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
3-C1.8-016		Bay 1 (beds 1-4)	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural and Central Supply Air	4	via ensuite	positive to ensuite	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m
3-C1.8-017		Bay 1 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-018		Bay 1 - Toilet	1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-019		Touchdown Base 1	1	Staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	None	0	0	n/a	n/a	n/a	43	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
3-C1.8-020	C1.8 Surgical Short Stay Inpatients - 14 Beds	Resuscitation Trolley Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-021		Single Room 10	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.8-022		Room 11 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-023		Single Room 15	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.8-024		Room 15 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-025		Single Room 14	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.8-026		Room 14 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-027		Bay 2 (beds5-8)	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural and Central Supply Air	4	via ensuite	positive to ensuite	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m
3-C1.8-028		Bay 2 - Toilet	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-029		Bay 2 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-030		Single Room 12	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.8-031		Room 12 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-032		Single Room 11	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C1.8-033		Room 10 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-034		Linen Bay (1 Trolley)	1	Linen Bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-035		Patient's Assisted Bathroom	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Switch	Floor 0m
3-C1.8-036		Store - Equipment	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-037		Senior Charge Nurse Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-C1.8-040		Touchdown Base 2	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	n/a	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
3-C1.8-001		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C1.8-004	Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C1.8-038	Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
3-C2-003	C2	DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
3-C2-004		Seminar Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	18 people at 10 l/s per person (9ach)	18 people at 10 l/s per person (9ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-C2-005		Staff Room	1	Common room/staff room/ lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
3-C2-006		Parent Shower Room	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C2-001		Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C3-002	C3 Special Feeds Unit	Food Prep Area	1	Ward Kitchen	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	6	Negative	None	43	60	500	n/a	None	A	80	Switch	General working plane 1m
3-C3-003		Wash Room	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C3-004		Office Ante Room	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	4	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-C3-005		Store - Feeds	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C3-001		Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C4-002	C4 Sleep Lab	Store	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C4-003		Room 1 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C4-005		Sleep Room 1	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Positive	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C4-006		Parents Room	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	None	positive	F7	43	n/a	100	n/a	None	A	80	Switch / Dimmer	Floor 0m
3-C4-007		Control Room	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	2	Negative	None	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-C4-008		Sleep Room 2	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Positive	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-C4-009		Parents Room	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	4	None	positive	F7	43	n/a	100	n/a	None	A	80	Switch / Dimmer	Floor 0m
3-C4-010		Room 2 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C4-001		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C4-001A		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-C4-001B	Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
4-C5-002	C5 Classrooms	WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-C5-003		Store	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-C5-004		Primary Classroom	1	Classroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	7 people at 10 l/s per person (5ach)	7 people at 10 l/s per person (5ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-C5-005		Upper Primary Classroom	1	Classroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	7 people at 10 l/s per person (5ach)	7 people at 10 l/s per person (5ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-C5-006		Secondary Classroom	1	Classroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	11 people at 10 l/s per person (8ach)	11 people at 10 l/s per person (8ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
4-C5-007		Administration Area	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-C5-008		Resource Storage	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-C5-009		WC Ambulant	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-C5-001		Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D1-001		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
1-D1-002		Consulting Room 1	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D1-003		Treatment Room 4	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
1-D1-004		Linen Bay	1	Linen Bay	28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m
1-D1-005		Consulting Room 2	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D1-008		Treatment Room 5	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
1-D1-009		Resuscitation Trolley Bay	1	Resus Trolley bay	28	18	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Bed / Trolley 1.45m
1-D1-010		Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D1-011		WC wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D1-012		Shower Room	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D1-013		Clean Utility	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m
1-D1-014		Consulting Room 3	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D1-015		Play Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
1-D1-016		Consulting Room 6	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D1-017		Consulting Room 7	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D1-018		Consulting Room 14	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D1-019		Consulting Room 12	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D1-020		Consulting Room 8	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D1-021		Consulting Room 9	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D1-022		Consulting Room 11	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D1-023		Consulting Room 10	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D1-025		Physical Measurement	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	300	n/a	1000	A	80	Switch	General working plane 1m
1-D1-026		Infant Measuring Room	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	2 people at 10 l/s per person (4ach)	2 people at 10 l/s per person (4ach)	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	General working plane 1m
1-D1-027		Sub Waiting Area (incl supervised play) with Nurse Base	1	Waiting Room	28	18	Underfloor Heating	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	5	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
1-D1-029		Baby Infant / Feeding Room	1	Baby Feeding	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Dirty Extract	0	10	Negative	None	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m
1-D1-030		Nappy Change	1	Nappy Change	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m
1-D1-031		Equipment / General Store	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D1-032		WC wheelchair accessible	1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D1-033		Phlebotomy Room	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	2 people at 10 l/s per person (4ach)	2 people at 10 l/s per person (4ach)	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D1-034		Mobile Hoist Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D1-035		Disposal Hold	1	Disposal Hold	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	6	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D1-036		Physical Measurement	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	300	n/a	1000	A	80	Switch	General working plane 1m
1-D1-037		Reception	1	Reception	28	18	Underfloor Heating	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (4ach)	2 people at 10 l/s per person (4ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
1-D1-038		Staff WC	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D1-040		Staff Office 2 (Person)	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
1-D1-041		Parking Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D1-042		WC & handwash: specimen; wheelchair	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D1-043		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
1-D1-044		Fields Test Room	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	41	300	n/a	1000	A	80	Switch	Desk 0.75 to 0.85m
1-D1-045		Consulting Room 15	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D1-046		Consulting Room 16	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D1-047		Consulting Room 17	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D1-048		Consulting Room 18	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-D1-001		Nappy Change	1	Nappy Change	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
G-D1-002	D1 RHSC Main Outpatients Department	Baby Infant / Feeding Room	1	Baby Feeding	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-D1-003		WC wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D1-004		Staff WC	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D1-005		Store Room	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D1-006		Disposal Hold	1	Disposal Hold	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	6	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D1-007		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-D1-008		Plaster Suite (3 bays)	1	Plaster Suite (3 bays)	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	7	7	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-D1-009		Store: Plaster	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D1-010		Orthotics Workshop	1	Small Workshop	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	6	Negative	F7	43	41	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-D1-011		Consulting Room 12	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-D1-012		Consulting Room 11	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-D1-013		Consulting Room 10	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-D1-014		Consulting Room 9	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-D1-015		Physical Measurement	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	300	n/a	1000	A	80	Switch	General working plane 1m
G-D1-016		Acorn Room 1	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-D1-019		Equipment / General Store	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D1-020		Phlebotomy Room	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (3ach)	2 people at 10 l/s per person (3ach)	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-D1-021		Acorn Room 2	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-D1-022		Mobile Hoist Bay	1	Circulation Equipment Storage Bays	28	16	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D1-023		Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D1-024		Beverage Bay	1	Tea Making	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	41	100 (KNX)	n/a	None	A	80	switch	Floor 0m
G-D1-025		Physical Measurement	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	General working plane 1m
G-D1-026		Specimen/ Disabled WC	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D1-027		Resuscitation Trolley Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D1-028		Infant Measuring Room	1	Infant Measuring Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	General working plane 1m
G-D1-029		Staff WC	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D1-030		Linen Bay (1 Trolley)	1	Linen Bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m
G-D1-031		Clean Utility	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m
G-D1-032		Consulting Room 1	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-D1-033		Treatment Room 8	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-D1-034		Consulting Room 2	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-D1-035		Consulting Room 3	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-D1-036		Consulting Room 4	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-D1-037		Meeting Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	10 people at 10 l/s per person (9ach)	10 people at 10 l/s per person (9ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
G-D1-038		Consulting Room 5	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-D1-039		Consulting Room 6	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-D1-040		Consulting Room 7	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	8 people at 10 l/s per person (4ach)	8 people at 10 l/s per person (4ach)	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-D1-041		Senior Charge Nurse Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	3 people at 10 l/s per person (4ach)	3 people at 10 l/s per person (4ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-D1-042		Acorn Room 2 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D1-017		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D1-017A	Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-D1-017B	Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-D1-043	Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-D1-007	Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-D1-044	Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
1-D1-039	Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
1-D1-049	Manifold	1	Manifold	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane	
G-D2-001	D2	Cardiology & Respiratory	Waiting Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6 people @ 10 l/s per person (9ach)	6 people @ 10 l/s per person (9ach)	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
G-D2-003			Admin Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-D2-004			WC Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D2-005			CardioPulmonary Exercise Lab	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	6	Balanced	F7	43	41	500	n/a	None	A	90	Switch	Bed / Trolley 1.45m
G-D2-006			Echocardiograph Lab	1	Diagnostic room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	None	A	80	Switch / Dimmer	General working plane 1m
G-D2-007			DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-D2-008			Store/ Equipment	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D2-009			ECG Procedure Room	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	6	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Bed / Trolley 1.45m
G-D2-010			Admin Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
G-D2-012			pH/Impedance Lab	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	6	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Bed / Trolley 1.45m
G-D2-013			Pulmonary Function Laboratory	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	6	Balanced	F7	43	41	500	n/a	None	A	90	Switch	Bed / Trolley 1.45m
G-D2-014			Cardiac Stress Lab	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	6	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Bed / Trolley 1.45m
G-D2-015			Physical Measurement	1	Consulting Room	25	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	300	n/a	1000	A	80	Switch	General working plane 1m
G-D2-002			Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D2-002A			Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D2-002B	Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-D4-001	D4	Audiology	Waiting Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	7 people @ 10 l/s per person (7ach)	7 people @ 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
1-D4-002			ABR Room	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	6	Negative	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
1-D4-003			Test Room	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	6	Negative	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
1-D4-004			Shared Staff Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-D4-005			Consulting Room 2	1	Consulting Room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	3	3	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-D4-006			Control Room 1	1	Diagnostic room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
1-D4-007			Consulting Room 1	1	Consulting Room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	3	3	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-D4-008			Control Room 2	1	Diagnostic room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
1-D4-009			Waiting Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people @ 10 l/s per person (6ach)	2 people @ 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
1-D4-010			Work Room	1	Small Workshop	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	6	Negative	F7	43	41	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-D4-012			Store	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D4-013			Mould Room	1	Small Workshop	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	6	Negative	F7	43	41	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-D4-011			Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D4-011A			Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D4-011B			Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D5-002	D5	Paediatric Dentistry	Dental Lab	1	Laboratory	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	6	6	Balanced	F7	43	60	500	n/a	None	A	80	Switch	General working plane 1m
G-D5-003			Clean Utility / Dental Store	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m
G-D5-004			Surgery 1	1	Dental Surgery	25	18	warm air via AHU Battery	Local BMS Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	10	10	Balanced	F7	43	41	500	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m
G-D5-005			Dirty Utility	1	Dirty utility	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D5-006			Mobile Inter-oral Storage	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D5-007			Recovery	1	Recovery Bay / Recovery Room	25	20	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	None	A	90	Switch / Dimmer	Bed / Trolley 1.45m
G-D5-008			Surgery 4	1	Dental Surgery	25	18	warm air via AHU Battery	Local BMS Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	10	10	Balanced	F7	43	41	500	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m
G-D5-009			Surgery 3	1	Dental Surgery	25	18	warm air via AHU Battery	Local BMS Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	10	10	Balanced	F7	43	41	500	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m
G-D5-010			Surgery 2	1	Dental Surgery	25	18	warm air via AHU Battery	Local BMS Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	10	10	Balanced	F7	43	41	500	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m
G-D5-001			Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D5-011			Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-001			Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	4	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-D6-002			Staff Office - All specialties (39 person)	1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-D6-003			Meeting Room - 6 person	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	6 people at 10 l/s per person (9ach)	6 people at 10 l/s per person (9ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-D6-004			Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	4	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
1-D6-005	D6 RHSC Therapies	Meeting Room - 4 person	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4 people at 10 l/s per person (10ach)	4 people at 10 l/s per person (10ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-D6-006		WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-007		WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-009		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	4	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
1-D6-010		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	4	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
1-D6-014		Store - Physio	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-016		Management Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-D6-017		A&C Staff Office/Appliance Officer	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-D6-018		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-019		Equipment Decontamination	1	Equipment Decontamination	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	200	n/a	None	A	80	Automatic Controls	General working plane 1m
1-D6-020		Clinic Room 1	1	Diagnostic room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	None	A	80	Switch / Dimmer	General working plane 1m
1-D6-021		Clinic Room 2	1	Diagnostic room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	None	A	80	Switch / Dimmer	General working plane 1m
1-D6-022		Waiting Play Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	16 people at 10 l/s per person (6ach)	16 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
1-D6-023		Reception	1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (5ach)	2 people at 10 l/s per person (5ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
1-D6-024		WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-025		Infant Measuring Room	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	2 people at 10 l/s per person (5ach)	2 people at 10 l/s per person (5ach)	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	General working plane 1m
1-D6-026		Linen Bay	1	Linen Bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-027		Treatment Room 3	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
1-D6-028		Treatment Room 4	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
1-D6-029		Treatment Room 5	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
1-D6-030		Treatment Room 6	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply	10	0	Positive	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D6-031		Store - Dietetic	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-032		Treatment Room 16	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply	10	0	Positive	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D6-035		Treatment Room 7	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply	10	0	Positive	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D6-036		Treatment Room 15	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
1-D6-037		Store - Physio	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-038		Store - OT	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-039		Rehabilitation Room 9	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	6	Negative	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
1-D6-040		Splinting / Casting Room 14	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D6-041		Store - OT	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-042		Pantry	1	Pantry	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
1-D6-043		Store - Physio	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-044		WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-045		Store - SALT	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-046		Rehabilitation Room 10	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	6	Negative	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
1-D6-047		Store - OT	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-048		Rehabilitation Room 8	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	6	Negative	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
1-D6-049		Changing Cubicles	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-050		Store - Physio	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-052		Store - Physio	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-053		Rehabilitation Room 12	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	5	6	Negative	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
1-D6-054		Rehabilitation Room 11	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	5	6	Negative	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
1-D6-057		WC - assisted (large+changing)	1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-060		Resus Bay	1	Resuscitation Bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-061		Hoist Bay	1	Circulation Equipment Storage Bays	28	16	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-034		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	5	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-055		Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D6-056		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	4	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane	
1-D6-062		Corridor	1	Corridor	28	18	None	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-D6-058		Riser/Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
1-D6-059		Riser/Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
1-D7-001	D7	Plastics Dressings Clinic	Assisted Bathroom	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Switch	Floor 0m
1-D7-002			Dressings / Doppler Store	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D7-003			Clinic Room 1	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply	10	0	Positive	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D7-004			Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D7-005			01:01	1	Circulation Areas	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	4	Balanced	F7	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D7-006			Clinic Room 2	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-D7-007			Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-D7-008			Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D8-001	D8	Social Work	Social Work Office	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
G-D8-002			Interview Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	4	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
G-D8-003			Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-D8-005			Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
3-D9-002	D9	Medical Day Care Unit - 5 Beds	Waiting Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	5	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
3-D9-003			Reception:1 staff	1	Reception	28	18	Adjacent Space Transfer Air	None	Yes	Wall Mounted Unit	Central Supply and Extract	3	3	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-D9-004			WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-D9-005			Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-D9-006			Interview, Counselling & Quiet Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4 people at 10 l/s per person (6ach)	4 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-D9-007			Office and Storage 2 staff	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-D9-008			Resuscitation Trolley Bay	1	Resus Trolley bay	28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-D9-009			Physical Measurement	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
3-D9-010			Waiting Play Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	5	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
3-D9-011			Consulting Room	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
3-D9-012			Clean Utility	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m
3-D9-013			Treatment Room	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
3-D9-014			Pantry	1	Pantry	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
3-D9-015			Senior Charge Nurse Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-D9-016			Bay 2	1	Patient Treatment Lounge	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
3-D9-017			Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-D9-018			Touchdown Base 1	1	Staff base	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
3-D9-019			Single Room 1	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-D9-020			Room 1 - Ensuite	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-D9-021			Parking Bay: 1 patient trolley/whch	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-D9-022			Bay 1 (beds 3-5)	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural and Central Supply Air	4	via ensuite	positive to ensuite	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m
3-D9-023			Bay 1 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-D9-024			Single Room 2	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-D9-025			Room 2 - Ensuite	1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-D9-026			Linen Bay	1	Linen Bay	28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m
3-D9-027			Store - General	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-D9-028			WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-D9-030			DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	100	n/a	None	A	80	Automatic Controls	Floor 0m
3-D9-001	Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-D9-029	Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
Switch Cupboard	Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m		
G-D10-001	D10	Ambulatory Care Shared Support	Staff Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
G-E1-001			Multi-Functional Activity Zone	1	Patient Accommodation Day	25	18	Underfloor Heating	BMS Adjustable Sensor	No	None	0	0	n/a	None	43	41	100	n/a	None	A	80	Switch	Floor 0m	
G-E1-002			RHSC OPD Reception	1	Reception	28	18	Underfloor Heating	BMS Adjustable Sensor	No	None	0	0	n/a	None	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane	
G-E1-003	E1 Pod	RHSC OPD Suite A Sub Waiting	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people @ 10l/s per person	2 people @ 10l/s per person	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-E1-004		Wheelchair Accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-E1-005		Wheelchair Accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-E1-006		WC Fully Accessible changing room	4	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-E1-007		Wheelchair Accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-E1-008		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-E1-009		WC - Ambulant	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-E1-010		Wheelchair Accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-E1-011		RHSC OPD Main Waiting	1	Waiting Room	28	18	Underfloor Heating	BMS Adjustable Sensor	No	None	None	None	0	0	n/a	None	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
G-E1-012		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-E1-012A		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-E1-012B		Manifold	1	Manifold	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-T2-013		Manifold	1	Manifold	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-002	E1 Pod	Consultant Psychiatrist / Psychologist Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-F1-003		Storage (testing)	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-004		Senior Charge Nurse Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-F1-005		Meeting Room 3	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4 people at 10 l/s per person (6ach)	4 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-F1-006		Reception	1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	2 people at 10 l/s per person (6ach)	0	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-F1-007		Meeting Room 4	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4 people at 10 l/s per person (6ach)	4 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-F1-008		Meeting Room 1	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4 people at 10 l/s per person (6ach)	4 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-F1-009		Meeting Room 2	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4 people at 10 l/s per person (6ach)	4 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-F1-010		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
G-F1-011		Waiting Area 2	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-013		Storage / Photocopy	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-014		Secretary/Filing Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-F1-016		Multi-Disciplinary Office	1	Multi Disciplinary Work Areas	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-F1-017		Shower / WC / WHB assisted	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Switch	Floor 0m	
G-F1-018		WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-019		Play Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	12 people at 10 l/s per person (8ach)	12 people at 10 l/s per person (8ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m	
G-F1-020		Group Room 4	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	13 people at 10 l/s per person (8ach)	13 people at 10 l/s per person (8ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-F1-021		Screening Room	1	Diagnostic room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	5 people at 10 l/s per person (7ach)	5 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m	
G-F1-022		Calm Down Zone	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	4	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m	
G-F1-023		Meeting Room 5	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	8 people at 10 l/s per person (10ach)	8 people at 10 l/s per person (10ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-F1-024		Group Room 3	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	13 people at 10 l/s per person (6ach)	13 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-F1-026		Meeting Room 6	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	8 people at 10 l/s per person (6ach)	8 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-F1-027		Sitting Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m	
G-F1-028		Multi-Disciplinary Office	1	Multi Disciplinary Work Areas	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-F1-030		Multi-Disciplinary Office	1	Multi Disciplinary Work Areas	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
G-F1-031	F1 CAMHS - 12 Beds	Sitting Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	8 people at 10 l/s per person (10ach)	8 people at 10 l/s per person (10ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
G-F1-032		Group Room 2	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	10 people at 10 l/s per person (10ach)	10 people at 10 l/s per person (10ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
G-F1-033		Art Room	1	Classroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15 people at 10 l/s per person (9ach)	15 people at 10 l/s per person (9ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-F1-034		Therapy / Play Therapy Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
G-F1-036		Dining Room (Inpatients & Day Prog)	1	Eating/Drinking	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	4	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
G-F1-037		Therapy Kitchen	1	Ward Kitchen	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central General Extract	0	6	Negative	None	43	41	500	n/a	None	A	80	Switch	General working plane 1m
G-F1-038		WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-039		Ward kitchen	1	Ward Kitchen	28	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	6	Negative	None	n/a	60	500	n/a	None	A	80	Switch	General working plane 1m
G-F1-040		WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-041		Waiting Area 1	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	10 people at 10 l/s per person (10ach)	10 people at 10 l/s per person (10ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-042		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-043		WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-044		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	2 people at 10 l/s per person (10ach)	2 people at 10 l/s per person (10ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
G-F1-045		Multidisciplinary Office - ITS	1	Multi Disciplinary Work Areas	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-F1-047		Recreation Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	6	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
G-F1-048		Group Room 1	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-F1-049		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	2 people at 10 l/s per person (10ach)	2 people at 10 l/s per person (10ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
G-F1-050		Small Treatment Room	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	3	Positive	F7	43	41	300	n/a	1000	A	80	Switch	General working plane 1m
G-F1-051		Treatment Room	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-F1-052		Treatment Room Store	1	Drug Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m
G-F1-053		Multi-Disciplinary Office	1	Multi Disciplinary Work Areas	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-F1-054		Laundry Room	1	Laundry	28	18	Adjacent Space Transfer Air	None	Yes	Wall Mounted Unit	Central Supply and Extract	6	10	Negative	F7	n/a	60	300	n/a	None	A	80	Switch	Floor 0m
G-F1-056		Open Space	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	5	5	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
G-F1-057		Pantry	1	Pantry	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
G-F1-058		WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-059		Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-061		Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-062		Staff Base	1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-F1-065		Quiet Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
G-F1-067	Bedroom 1	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	6 via bedroom & ensuite	Balanced	F7	43	n/a	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
G-F1-068	Room 1 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-069	Bedroom 8	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	6 via bedroom & ensuite	Balanced	F7	43	n/a	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
G-F1-070	Room 8 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-071	Bedroom 11	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	6 via bedroom & ensuite	Balanced	F7	43	n/a	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
G-F1-072	Room 11 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-073	Bedroom 10	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	6 via bedroom & ensuite	Balanced	F7	43	n/a	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
G-F1-074	Room 10 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-075	Bedroom 9	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	6 via bedroom & ensuite	Balanced	F7	43	n/a	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
G-F1-076	Room 9 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-077	Bedroom 2	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	6 via bedroom & ensuite	Balanced	F7	43	n/a	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
G-F1-078	Room 2 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-079	Bedroom 3	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	6 via bedroom & ensuite	Balanced	F7	43	n/a	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane	
G-F1-080		Room 3 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-081		Bedroom 4	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	6 via bedroom & ensuite	Balanced	F7	43	n/a	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
G-F1-082		Room 4 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-083		Bedroom 5	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	6 via bedroom & ensuite	Balanced	F7	43	n/a	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
G-F1-084		Room 5 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-085		Bedroom 12	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	6 via bedroom & ensuite	Balanced	F7	43	n/a	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
G-F1-086		Room 12 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-087		Bedroom 6	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	6 via bedroom & ensuite	Balanced	F7	43	n/a	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
G-F1-088		Room 6 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-089		Linen Bay	1	Linen Bay	28	16	Adjacent Space Transfer Air	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-090		Bedroom 7	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	6 via bedroom & ensuite	Balanced	F7	43	n/a	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
G-F1-091		Room 7 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-092		Quiet Room	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4 people at 10 l/s per person (4ach)	4 people at 10 l/s per person (4ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
G-F1-096		Store	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-101		Intensive Nursing Room	1	Seclusion Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	3	0	Positive	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-001		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-015		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-025		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-029		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-035		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-046		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-055		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-060		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-066		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-093		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-097		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-098		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-100		Lobby	1	Lobby	28	18	Adjacent Space Transfer	None	No	None	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-094		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-095		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-F1-102	E-S Duct 1	1	E-S Duct 1	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-103	E-S Duct 2	1	E-S Duct 2	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-104	E-S Duct 3	1	E-S Duct 3	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-105	E-S Duct 4	1	E-S Duct 4	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-106	E-S Duct 5	1	E-S Duct 5	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-107	E-S Duct 6	1	E-S Duct 6	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-108	E-S Duct 7	1	E-S Duct 7	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-F1-109	E-S Duct 8	1	E-S Duct 8	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
2-G2-002	G2 Equipment Library	DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m	
2-G2-003		Clean Equipment	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-G2-004		Dirty Equipment	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	60	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-G2-005		Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-G2-001		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-G3-002		On-Call Bedroom	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	n/a	100	n/a	None	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
1-G3-003		En-suite Shower / WC / WHB	1	Bathroom	28	18	Radiant Panels	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-G3-004		On-Call Bedroom	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	n/a	100	n/a	None	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
1-G3-005		En-suite Shower / WC / WHB	1	Bathroom	28	18	Radiant Panels	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
1-G3-006	G3	On-Call Suite	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	n/a	100	n/a	None	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-G3-007			1	Bathroom	28	18	Radiant Panels	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-G3-008			1	Eating/Drinking	28	18	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	Central General Extract	0	5	Negative	None	n/a	41	300	n/a	None	A	80	Switch	Floor 0m
1-G3-009			1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
1-G3-001			1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-H1-002	H1	Child Life & Health	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	15 people at 10 l/s per person (8ach)	15 people at 10 l/s per person (8ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-H1-003			1	Classroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	36 people at 10 l/s per person (12ach)	36 people at 10 l/s per person (12ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-H1-004			1	Classroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	32 people at 10 l/s per person (10ach)	32 people at 10 l/s per person (10ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-H1-005			1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-H1-006			1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-H1-007			1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	5	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
4-H1-008			1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	positive to wc	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
4-H1-009			1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-H1-010			1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-H1-011			1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
4-H1-012			1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-H1-013			1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-H1-014			1	Tea Making	28	18	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	41	100 (KNX)	n/a	None	A	80	switch	Floor 0m
4-H1-015			1	Cellular / Ward Offices	28	18	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
4-H1-016			1	Laboratory	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	6	Balanced	F7	43	60	500	n/a	None	A	80	Switch	General working plane 1m
4-H1-017			1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4 people at 10 l/s per person (8ach)	4 people at 10 l/s per person (8ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-H1-018			1	Laboratory	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	6	Balanced	F7	43	60	500	n/a	None	A	80	Switch	General working plane 1m
4-H1-019			1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-H1-020			1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-H1-021			1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central Supply and Extract	4	3	Positive	F7	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-H1-022			1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-H1-024			1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-H1-025			1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-H1-026			1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	Yes	Wall Mounted Cassette	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-H1-027			1	Laboratory	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	6	Balanced	F7	43	60	500	n/a	None	A	80	Switch	General working plane 1m
4-H1-028			1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-H1-029			1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-H1-030			1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-H1-031			1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-H1-032			1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-H1-033			1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-H1-035	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m		
4-H1-036	1	Storage Area Med Gas	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
4-H1-001	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
4-H1-023	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
4-H1-034	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m		
1-H2-001	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-H2-002	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	5	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m		
1-H2-004	1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	3	0	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
1-H2-005	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-H2-006	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m		
1-H2-007	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane			
1-H2-008	H2	Clinical Research Facility	Linen Bay	1	Linen Bay	28	16	Adjacent Space Transfer	None	No	None	0	0	n/a	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m			
1-H2-009			Consulting Room 2	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m		
1-H2-010			Consulting Room 1	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m		
1-H2-011			WC Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-H2-012			Pantry	1	Pantry	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m		
1-H2-013			Store - Equipment	1	Storage Area Equipment	25	16	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-H2-014			Bay 1	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m		
1-H2-015			Bay 1 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-H2-016			Sample Processing	1	Diagnostic room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m		
1-H2-017			Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-H2-018			Room 4 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	39	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-H2-020			Clean Utility	1	Clean Utility	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m		
1-H2-021			Single Room 4	1	Isolation Bedroom	28	21	Adjacent Space Transfer Air	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Supply Via Lobby	10	10 via the ensuite	Balanced	H14	n/a	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m		
1-H2-022			Room 5 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-H2-023			Room 4 - Lobby	1	Isolation Lobby	28	21	Warm Air - Reheat Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply	36	0	Positive	H14	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-H2-024			Single Room 5	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	H14	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m		
1-H2-028			Touch Down Base	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	2 people at 10 l/s per person (12ach)	0	Positive	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m		
1-H2-019			Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-H2-026			Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-H2-029			Corridor	1	Corridor	28	18	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
1-H2-027			Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m		
3-H3-001			H3	Clinical Education Suite	Scenario Room 1	1	Classroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	10 people at 10 l/s per person (7ach)	10 people at 10 l/s per person (7ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-H3-002					Control Room	1	Control Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled	Central Supply and Extract	3 people at 10 l/s per person (5ach)	3 people at 10 l/s per person (5ach)	Balanced	F7	43	n/a	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
3-H3-003	Storage	1			Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-H3-004	Teaching Room 1	1			Classroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	10 people at 10 l/s per person (7ach)	10 people at 10 l/s per person (7ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
3-H3-005	Scenario Room 2	1			Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	10 people at 10 l/s per person (7ach)	10 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
3-H3-006	WC / WHB disabled	1			Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-H3-007	WC Ambulant	1			Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-H3-008	WC Ambulant	1			Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-H3-010	Teaching Room 2	1			Classroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	10 people at 10 l/s per person (7ach)	10 people at 10 l/s per person (7ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
3-H3-011	Beverage Bay	1			Tea Making	28	18	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	41	100 (KNX)	n/a	None	A	80	switch	Floor 0m		
3-H3-012	DSR	1			DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m		
3-H3-013	Manual Handling, Health & Safety	1			Classroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
3-H3-014	Practice Based Educators Office	1			Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
3-H3-015	Meeting Room	1			Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	14 people at 10 l/s per person (7ach)	14 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
3-H3-016	Seminar Room	1			Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	23 people at 10 l/s per person (8ach)	23 people at 10 l/s per person (8ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
3-H3-018	Management/ Admin Office	1			Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
3-H3-019	Computer Carrels	1			Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6 people at 10 l/s per person (7ach)	6 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
3-H3-020	Lockers	1			Circulation Equipment Storage Bays	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central Supply and Extract	5	4	Positive	F7	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-H3-009	Corridor	1			Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
3-H3-021	Corridor	1			Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
G-11-001	G-11	Circulation Areas			Draught Lobby	1	Entrance Lobby	28	Not Controlled	Warm Air Door Curtain	BMS Adjustable Sensor	No	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-11-002					Wheelchair Bay	1	Circulation Areas	28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-11-003					Security Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane			
G-11-004	I1	Main Entrance - Public Spaces	Vending Machine	1	Vending Machine	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	n/a	n/a	None	n/a	n/a	n/a	Floor 0m		
G-11-005			Reception / Information Desk	1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	3	2	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
G-11-006			Retail Shop	1	Retail Shop	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	3	3	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m		
G-11-007			Catering Shop	1	Catering Shop	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	3	3	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m		
G-11-008			Waiting Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	9 people at 10 l/s per person (7ach)	9 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m		
G-11-009			Public Telephone Booth	1	Circulation Phone Booth	28	18	Adjacent Space Transfer Air	None	No	None	n/a	n/a	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-11-010			WC - Visitors	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
G-11-011			WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
G-11-012			Assisted Change/Nappy Change	1	Nappy Change	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m		
G-11-013			DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m		
G-11-014			Fire Control room	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
B-12-002			I2	Bed & Toy Stores	DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
B-12-004					Store - Beds	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-12-005					Store - Toys	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-12-006	Vending & Café Store	1			Storage Area	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	2	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
B-12-007	Store	1			Storage Area	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	2	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
B-12-008	Store	1			Storage Area	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	2	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
J-11-001	J1	Bereavement Suite			Lobby	1	Circulation Areas - Entrance Lobby	28	18	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
J-11-002			WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
J-11-003			Viewing Room	1	Body View	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	6	Negative	F7	43	41	100 (KNX)	n/a	None	A	80	Switch / Dimmer	Floor 0m		
J-11-004			Sitting Room with Beverage Bay	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m		
G-J2-002	J2	Spiritual & Pastoral Care	Interview Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6 people at 10 l/s per person (10ach)	6 people at 10 l/s per person (10ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
G-J2-003			Sanctuary	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	8	Negative	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m		
G-J2-004			WC wheelchair accessible / Ritual Washing Area	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
G-J2-005			Store	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
G-J2-006			Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
G-J2-001			Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
G-J2-007			Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m		
G-K1-001			K1	Family Support	Meeting Rooms (family size)	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	10 people at 10 l/s per person (9ach)	10 people at 10 l/s per person (9ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-K1-002	Meeting Rooms (family size)	1			Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	10 people at 10 l/s per person (9ach)	10 people at 10 l/s per person (9ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
G-K1-003	Office 1	1			Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
G-K1-004	Office 2	1			Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
G-K1-005	Office 3	1			Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
G-K1-006	Waiting	1			Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5 people at 10 l/s per person (8ach)	5 people at 10 l/s per person (8ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m		
G-K1-007	Nappy Changing Room	1			Nappy Change	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m		
G-K1-008	WC - Wheelchair accessible	1			Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
G-K1-010	Interview Room	1			Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4 people at 10 l/s per person (6ach)	4 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m		
G-K1-011	Office 4	1			Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
G-K1-012	Office 5	1			Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m		
G-K1-013	Store	1			Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
G-K1-015	Interview Room	1			Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4 people at 10 l/s per person (6ach)	4 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m		
G-K1-016	Drop-In Lounge / Beverage Bay	1			Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m		
G-K1-017	Drop-In Multi-Purpose Room	1			Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m		
G-K1-018	WC - Staff	1			Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m		
G-K1-019	Beverage Bay	1			Tea Making	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	5	Negative	None	43	41	100 (KNX)	n/a	None	A	80	switch	Floor 0m		
G-K1-021	Complementary Therapy Room	1			Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m		

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
3-K2-047		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-048		WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-050		Kitchen / Dining Rooms	1	Pantry	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	48 people at 10 l/s per person (6ach)	48 people at 10 l/s per person (6ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
3-K2-051		Residents Day Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	15 people at 10 l/s per person (6ach)	15 people at 10 l/s per person (11ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
3-K2-053		Residents Play Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	13 people at 10 l/s per person (10ach)	13 people at 10 l/s per person (10ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
3-K2-054		Switch/Meter Cupboard	1	Switch/Meter Cupboard	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-057		Store	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-058		En-suite Shower / WC / WHB	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-059		Family Room for 4 persons inc en-suite	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Positive	F7	43	n/a	100	n/a	None	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-K2-060		Family Room accessible for 4 persons inc en-suite	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Positive	F7	43	n/a	100	n/a	None	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-K2-061		En-suite Shower / WC / WHB	1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-062		Family Room for 4 persons inc en-suite	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Positive	F7	43	n/a	100	n/a	None	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-K2-063		En-suite Shower / WC / WHB	1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-064		En-suite Shower / WC / WHB	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-065		Family Room for 4 persons inc en-suite	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Positive	F7	43	n/a	100	n/a	None	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-K2-066		Family Room for 4 persons inc en-suite	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Positive	F7	43	n/a	100	n/a	None	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-K2-067		En-suite Shower / WC / WHB	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-068		En-suite Shower / WC / WHB	1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-069		Family Room for 4 persons inc en-suite	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural & Central Supply Air	4	via ensuite	Positive	F7	43	n/a	100	n/a	None	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-K2-071		En-suite Shower / WC / WHB	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-072		Family Room for 4 persons inc en-suite	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural & Central Supply Air	4	via ensuite	Positive	F7	43	n/a	100	n/a	None	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-K2-073		Family Room for 4 persons inc en-suite	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Natural & Central Supply Air	4	via ensuite	Positive	F7	43	n/a	100	n/a	None	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-K2-074		En-suite Shower / WC / WHB	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-075		Family Room for 4 persons inc en-suite	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Positive	F7	43	n/a	100	n/a	None	A	80	Switch / Dimmer	Bed / Trolley 1.45m
3-K2-076		En-suite Shower / WC / WHB	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-078		Laundry	1	Laundry	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	6	10	Negative	F7	43	60	300	n/a	None	A	80	Switch	Floor 0m
3-K2-080		Storage - refuse	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-086		Office - 4 person	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
3-K2-001		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-018		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-049		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-052		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-056		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-054		Switch/Meter Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-081		Switch Cup	1	Switch Cup	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-082		Switch Cup	1	Switch Cup	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-083		Switch Cup	1	Switch Cup	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
3-K2-084		Switch Cup	1	Switch Cup	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-002		Single Room 1	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-L1-003		Room 1 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-004		Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-005		Intensive Treatment Room	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
1-L1-006		Single Room 2	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-L1-007		Room 2 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-008		Touchdown Base 1	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10l/s/per person (13ach)	2 people at 10l/s/per person (13ach)	Balanced	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
1-L1-009		Resuscitation Trolley Bay	1	Resus Trolley bay	28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-010		Single Room 3	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
1-L1-011	L1 DCN Acute Care - 24 Beds	Room 3 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-012		Waiting Area, relatives	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	5	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
1-L1-013		Refreshment: Vending Machine	1	Refreshment: Vending Machine	28	18	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m
1-L1-014		WC - Wheelchair accessible (Visitors)	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-015		Single Room 4	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	6	6 via bedroom and ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-L1-016		Room 4 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-017		Single Room 5	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-L1-018		Room 5 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-019		Linen Bay	1	Linen Bay	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-020		Hoist Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-021		Single Room 6	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-L1-022		Room 6 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-023		Staff Base 1	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10l/s/per person (5ach)	2 people at 10l/s/per person (5ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-L1-024		Single Room 22	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-L1-025		Room 2 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-026		WC - Wheelchair accessible (Visitors)	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-027		Patient Waiting	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	11 people at 10l/s/per person (7ach)	11 people at 10l/s/per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
1-L1-028		Multi-Disciplinary Office / Reception	1	Multi Disciplinary Work Areas	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-L1-029		Consulting Room 1	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-L1-030		Consulting Room 2	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-L1-031		Consulting Room 3	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-L1-032		Consulting Room 4	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-L1-033		Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-034		Single Room 23	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-L1-035		Room 23 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-036		Touchdown Base 2	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air & Extract	2 people at 10l/s/per person (14ach)	2 people at 10l/s/per person (14ach)	Balanced	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
1-L1-037		Interview/Relatives Quiet Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4 people at 10 l/s per person (6ach)	4 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
1-L1-038		Single Room 24	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-L1-039		Room 24 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-040		Room 25 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-044		Single Room 25	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-L1-046	Senior Charge Nurse Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
1-L1-047	Clean Utility	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m	
1-L1-052	Staff Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5 people at 10l/s/per person (7ach)	5 people at 10l/s/per person (7ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m	
1-L1-053	Multi-disciplinary Office	1	Multi Disciplinary Work Areas	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	400	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
1-L1-054	Ward Kitchen	1	Ward Kitchen	28	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	6	Negative	None	n/a	60	500	n/a	None	A	80	Switch	General working plane 1m	
1-L1-055	Touchdown Base 3	1	staff base	28	18	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	Central General Extract	0	2 people at 10l/s/per person (6ach)	Negative	n/a	n/a	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m	
1-L1-060	Teaching Room	1	Classroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	10 people at 10 l/s per person (6ach)	10 people at 10 l/s per person (6ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
1-L1-061	Dirty Utility	1	Dirty utility	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	6	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-L1-066	Single Room 7	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
1-L1-067	Room 7 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-L1-068	Single Room 8	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	10 via the ensuite	Positive	H14	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m	
1-L1-069	Room 8 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	45	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-L1-070	Interview/Relatives Quiet Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4 people at 10 l/s per person (6ach)	4 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
1-L1-071	Linen Bay	1	Linen Bay	28	16	Adjacent Space Transfer	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
1-L1-072		WC Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-073		WC Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-074		Resuscitation Trolley Bay	1	Resus Trolley bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-075		Staff Base 2	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
1-L1-076		Storage Consumables	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-077		Relatives Room - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-078		Hoist Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-079		WC Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-080		WC: Independent Wheelchair	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-082		Relatives Overnight Stay Room	1	Relatives Overnight Stay	28	20	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	4	0	Positive	F7	43	n/a	100	n/a	None	A	80	Switch	Bed / Trolley 1.45m
1-L1-083		Single Room 21	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-L1-084		Room 21 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-085		Mobile X-Ray Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-086A		Storage Equipment	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-086B		Storage Equipment	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-087		Room 20 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-088		Single Room 20	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-L1-089		Touchdown Base 5	1	Staff base	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Supply and Extract	2 people at 10/s/per person (7ach)	2 people at 10/s/per person (7ach)	Balanced	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
1-L1-090		Storage Stationery	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-091		Single Room 19	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-L1-092		Room 19 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-093		Single Room 18	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-L1-094		Room 18 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-095		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-096		Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-097		Bay 1	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural and Central Supply Air	4	via ensuite	positive to ensuite	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m
1-L1-099		Bay 1 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-100		Bay 2	1	Multi-bed Wards	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural and Central Supply Air	4	via ensuite	positive to ensuite	F7	43	41	100	5	300	A	80	switch / dimmer	Bed / Trolley 1.45m
1-L1-101		Bay 2 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-103		Treatment Room	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
1-L1-104		Room 8 - Lobby	1	Isolation Lobby	28	21	Warm Air - Reheat Adjustable Battery	Local 7 bms	Yes	Comfort Cooled Fresh Air	Central Supply Air	56	0	Positive	H14	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-108		Physical Measure	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	n/a	n/a	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
1-L1-109		Touchdown Base 4	1	Staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central General Extract	0	2 people at 10/s/per person (14ach)	Negative	n/a	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
1-L1-001		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-105		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-106		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
1-L1-107		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-002		Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-003		Linen Bay	1	Linen Bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-004		Single Room 7	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-005		Room 7 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-006		Single Room 8	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-007		Room 8 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-008		Hoist Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-009		Touchdown Base 4	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	2 people at 10/s/per person (13ach)	0	Positive	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
2-L2-010		Single Room 9	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	6	6 via bedroom ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-011		Room 9 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
2-L2-012		Store	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-013		Single Room 10	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-014		Room 10 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-015		Single Room 11	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-016		Room 11 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-017		Touchdown Base 3	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	2 people at 10l/s/per person (13ach)	0	Positive	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
2-L2-018		Single Room 6	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-019		Room 6 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-020		Resuscitation Trolley Bay	1	Resus Trolley bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-021		Single Room 12	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-022		Room 12 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-023		Single Room 5	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-024		Room 5 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-025		Touchdown Base 2	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	2 people at 10l/s/per person (13ach)	0	Positive	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
2-L2-026		Single Room 14	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-027		Room 14 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-028		Single Room 4	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-029		Room 4 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-030		Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-031		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-032		Single Room 15	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-033		Room 15 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-034		Single Room 16	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-035		Room 16 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-036		Single Room 17	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-037		Room 17 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-038		Room 20 - Lobby	1	Isolation Lobby	28	21	Warm Air - Reheat Battery	Local BMS Adjustable Sensors	Yes	Comfort Cooled Fresh Air	Central Supply	49	0	Positive	H14	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-039		Single Room 20	1	Isolation Bedroom	28	21	Adjacent Space Transfer Air	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Supply via lobby	10	10 via the ensuite	Balanced	H14	n/a	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-040		Room 20 - Ensuite	1	Isolation Shower Room Ensuite	28	20	Adjacent Space Transfer Air	None	No	None	Dirty Extract	0	49	Negative	None	n/a	41	150 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-041		Single Room 2	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-042		Room 2 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-043		Single Room 1	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-044		Room 1 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-045		Touchdown Base 1	8	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	2 people at 10l/s/per person (13ach)	0	Positive	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
2-L2-046		Single Room 18	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-047		Room 18 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-048		Single Room 19	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-049		Room 19 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-050		Single Room 3	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-051		Room 3 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-052		Clean Utility	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m
2-L2-053		Interview Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4 people at 10 l/s per person (6ach)	4 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
2-L2-054		Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-055		Sitting Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
2-L2-056		Senior Charge Nurse Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	3 people at 10 l/s per person (4ach)	3 people at 10 l/s per person (4ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
2-L2-057		Multi-disciplinary Office	1	Multi Disciplinary Work Areas	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
2-L2-058	L2 DCN Inpatients - 43 Beds	Store	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-059		Hoist Bay	3	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer	None	No	None	Central General Extract	0	8	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-060		WC: Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-061		WC: Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-062		Ward Kitchen	1	Ward Kitchen	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central General Extract	0	6	Negative	None	43	60	500	n/a	None	A	80	Switch	General working plane 1m
2-L2-063		Touchdown Base 6	7	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	2 people at 10/s/per person (13ach)	0	Positive	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
2-L2-064		Mobile X-Ray Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-065		WC: Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-066		WC: Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-067		Clinical Supplies Store	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-068		WC: Independent Wheelchair	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-069		Teaching Room	1	Classroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	9 people at 10 l/s per person (6ach)	9 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
2-L2-070		Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-071		WC: Ambulant	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-072		WC: Ambulant	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-073		Reception	1	Reception	28	18	Adjacent Space Transfer Air	None	Yes	Wall Mounted Unit	Central Supply and Extract	1 people at 10/s/per person (4ach)	1 people at 10/s/per person (4ach)	Balanced	F7	n/a	n/a	300	n/a	None	A	80	None	Desk 0.75 to 0.85m
2-L2-074		Waiting Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	9 people at 10/s/per person (7ach)	9 people at 10/s/per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
2-L2-075		Multi-disciplinary Office	1	Multi Disciplinary Work Areas	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
2-L2-076		Senior Charge Nurse Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3 people at 10/s/per person (4ach)	3 people at 10/s/per person (4ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
2-L2-077		Interview Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4 people at 10 l/s per person (6ach)	4 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
2-L2-078		Ward Kitchen	1	Ward Kitchen	28	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	6	Negative	None	n/a	60	500	n/a	None	A	80	Switch	General working plane 1m
2-L2-079		Clean Utility	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m
2-L2-080		Assisted Bathroom	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Switch	Floor 0m
2-L2-081		Sitting Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
2-L2-082		Single Room 14	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-083		Room 14 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-084		Single Room 12	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-085		Room 12 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-086		Touchdown Base 7	1	Staff base	28	18	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10/s/per person (13ach)	2 people at 10/s/per person	Balanced	F7	n/a	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
2-L2-087		Single Room 25	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-088		Room 25 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-089		Hoist Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-090		Single Room 24	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-091		Room 24 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-092		Single Room 11	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-093		Room 11 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-094		Single Room 10	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-095		Room 10 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-096		Room 23 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-097		Single Room 23	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-098	Hoist Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-L2-099	Resuscitation Trolley Bay	1	Resus Trolley bay	28	16	Adjacent Space Transfer	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-L2-100	Touchdown Base 5	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air & Extract	2 people at 10/s/per person (13ach)	2 people at 10/s/per person (13ach)	Balanced	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
2-L2-101		Touchdown Base 4	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply & Extract	2 people at 10/s/per person (13ach)	2 people at 10/s/per person (13ach)	Balanced	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
2-L2-102		Single Room 22	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-103		Room 22 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-104		Single Room 21	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-105		Room 21 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-106		Single Room 9	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-107		Room 9 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-108		Single Room 8	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-109		Room 8 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-110		Room 20 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-111		Single Room 20	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-112		Hoist Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-113		Single Room 19	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-114		Room 19 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-115		Touchdown Base 3	1	staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	2 people at 10/s/per person (13ach)	0	Positive	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
2-L2-117		Single Room 7	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-118		Room 7 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-119		Single Room 6	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-120		Room 6 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-121		Single Room 18	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-122		Room 18 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-123		Single Room 5	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-124		Room 5 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-125		Single Room 4	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-126		Room 4 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-127		Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-128		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-129		Touchdown Base 2	1	Staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	2 people at 10/s/per person (13ach)	0	Positive	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
2-L2-130		Single Room 3	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-131		Room 3 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-132		Single Room 2	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-133		Room 2 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-134		Room 1 Lobby	1	Isolation Lobby	28	21	Warm Air - Reheat Battery	Local / BMS Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply	47	0	Positive	H14	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-135		Single Room 1	1	Isolation Bedroom	28	21	Adjacent Space Transfer Air	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Supply via lobby	10	10 via the ensuite	Balanced	H14	n/a	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-136		Room 1 - Ensuite	1	Isolation Shower Room Ensuite	28	20	Adjacent Space Transfer Air	None	No	None	Dirty Extract	0	47	Negative	None	n/a	41	150 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-137		Touchdown Base 1	1	Staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	2 people at 10/s/per person (13ach)	0	Positive	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
2-L2-138		Room 16 - Ensuite	1	Bathroom	28	20	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-139		Single Room 16	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-140		Single Room 15	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Natural & Central Supply Air	4	via ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-141		Room 15 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	Minimum 10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-142		Single Room 17	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	6 via bedroom & ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
2-L2-143		Room 17 - Ensuite	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-144		Linen Bay	1	Linen Bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m
2-L2-152		Physical Measure	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	3	3	Balanced	F7	43	n/a	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
2-L2-153		Store	1	Store	28	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200/300	n/a	None	A	80	Automatic Controls	Floor 0m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane	
2-L2-001		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-L2-145		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-L2-146		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-L2-147		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-L2-148		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-L2-151		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-L2-149		Switch Cup	1	Switch Cup	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
2-L2-150		Switch Cup	1	Switch Cup	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
2-L2-154		Switch Cup	1	Switch Cup	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-M1-002		Consulting Room 1 (PreAssessment)	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-003		Consulting Room 2 (PreAssessment)	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-004		Staff Base	1	Staff base	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Supply and Extract	1 person at 10/s/per person (7ach)	1 person at 10/s/per person (7ach)	Balanced	F7	43	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	Desk 0.75 to 0.85m	
G-M1-005		WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-M1-006		Linen Bay	1	Linen Bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-M1-007		Consulting Room 3 (PreAssessment)	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-008		Physical Measurement	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	3	3	Balanced	F7	43	n/a	300	n/a	1000	A	80	Switch	General working plane 1m	
G-M1-009		Consulting Room 4 (PreAssessment)	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-010		Pre Op Clinic Team Office (3 person)	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-M1-011		Consulting Room 1	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-012		Consulting Room 16	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-013		Consulting Room 2	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-014		Consulting Room 15	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m	
G-M1-015		Consulting Room 3	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-016		Clean Utility	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m	
G-M1-017		Consulting Room 4	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-018		Consulting Room 5	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-019		Consulting Room 6	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-020		Consulting Room 7	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-021		Consulting Room 8	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-022		Consulting Room 9	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-023		Consulting Room 10	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-024		Consulting Room 11	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-025		Consulting Room 12	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-027		Consulting Room 14	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-028		Senior Charge Nurse Office	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-M1-029	M1	DCN Outpatients	Outpatients Management Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-M1-031		Staff Base	1	Staff base	28	18	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	Central Supply Air	1 person at 10/s/per person (8ach)	0	Positive	F7	n/a	n/a	200/300	n/a	1000	A	80	Switch / Dimmer	Desk 0.75 to 0.85m	
G-M1-032		Main Waiting	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	35 person at 10/s/per person (8ach)	35 person at 10/s/per person (8ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m	
G-M1-034		WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-M1-035		WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-M1-036		Staff Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m	
G-M1-037		Store: Clinical Supplies, Equipment & Stationery	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-M1-038		Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-M1-039		WC Fully Accessible Changing Room	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	10	Negative to corridor	None	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-M1-040		Physical Measurement	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	300	n/a	1000	A	80	Switch	General working plane 1m	
G-M1-041		Store - Equipment / General	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-M1-042		Phlebotomy Room	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	2 people at 10 l/s per person (4ach)	2 people at 10 l/s per person (4ach)	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
G-M1-043		Public Telephone Booth	1	Circulation Phone Booth	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane	
G-M1-045		WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-M1-046		Medical Records Store	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
G-M1-047		Enquiry / Information Desk: 2 staff	1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	2 people at 10 l/s per person (2ach)	2 people at 10 l/s per person (2ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-M1-049		Patient Interview Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4 people at 10 l/s per person (7ach)	4 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-M1-050		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-M1-051		Sub Waiting Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	9 people at 10 l/s per person (7ach)	9 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m	
G-M1-001		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-M1-026		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-M1-030		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-M1-048		Corridor	1	Corridor	28	18	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-M1-052		Switch Cup	1	Switch Cup	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
2-M2-002		M2 DCN Therapies	Staff Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
2-M2-003	Reception		1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply Air	3	0	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-M2-004	Interview Room		1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4 people at 10 l/s per person (6ach)	4 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-M2-005	Interview Room		1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4 people at 10 l/s per person (6ach)	4 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-M2-006	Waiting		1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	9 people at 10 l/s per person (7ach)	9 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m	
2-M2-007	ADL Bathroom, Shower, WC with hoists		1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-M2-008	Treatment Room 1		1	Physiotherapy Studio	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	10	0	Positive	F7	43	41	300	n/a	None	A	80	Switch / Dimmer	Floor 0m	
2-M2-009	ADL Kitchen		1	Pantry	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central General Extract	0	6	Negative	None	43	41	300	n/a	None	A	80	Switch	Floor 0m	
2-M2-010	Consulting Room 2		1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
2-M2-011	Treatment Room 3		1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m	
2-M2-012	Treatment Room 4		1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m	
2-M2-013	Staff Lockers		1	Changing Facilities	28	18	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
2-M2-014	WC Accessible		1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-M2-015	Staff Toilet		1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-M2-016	Staff Toilet		1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-M2-017	Changing Cubicle 1		1	Changing Facilities	28	18	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
2-M2-018	Changing Cubicle 2		1	Changing Facilities	28	18	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
2-M2-019	Changing Cubicle 3		1	Changing Facilities	28	18	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
2-M2-020	Changing Cubicle 4		1	Changing Facilities	28	18	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
2-M2-021	Store: General/Equipment		1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-M2-022	Patient Toilet		1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-M2-023	Rehabilitation Room 5		1	Physiotherapy Studio	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	5	6	Negative	F7	43	41	300	n/a	None	A	80	Switch / Dimmer	Floor 0m	
2-M2-024	Store: General/Equipment		1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-M2-025	Store: General/Equipment		1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-M2-001	Corridor		1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-M2-026	Switch Cupboard		1	Switch Cup	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
2-M3-002	M3 Programmed Investigations Unit	Treatment Room	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m	
2-M3-003		Treatment Bays 1-4	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m	
2-M3-004		Waiting area; 4 & 2 wheelchairs	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	5	5	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m	
2-M3-001		Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-M4-002		Waiting Area (DCN)	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	5	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m	
2-M4-003		Secretarial Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-M4-004		Reporting Room	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-M4-005		Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-M4-006		WC - wheelchair accessible (DCN)	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-M4-007		Quiet Room	1	Common room/staff room/ounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane	
2-M4-008	M4	DCN Neurophysiology	EMG/Nerve Conduction Room 3	1	Diagnostic room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
2-M4-009			EMG/Nerve Conduction Room 1	1	Diagnostic room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
2-M4-011			EMG/Nerve Conduction Room 2	1	Diagnostic room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
2-M4-012			VTEM/Ambulatory Review Room	1	Diagnostic room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
2-M4-013			Clinical Physiologist Room	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
2-M4-014			WC - Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-M4-016			Store / Records	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-M4-017			EEG Recording Room 5	1	Diagnostic room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
2-M4-018			EEG Recording Room 4	1	Diagnostic room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
2-M4-019			EEG Recording Room 6	1	Diagnostic room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
2-M4-001			Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-M4-020			Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Supply	1	0	Positive	F7	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-M4-021			Switch Cupboard	1	Switch Cup	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
2-M4-022			Switch Cupboard	1	Switch Cup	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-N1-001	N1	DCN Entrance	Reception / Information Desk	1	Reception	28	18	underfloor heating	BMS Adjustable Sensors.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	4	4	Balanced	F7	43	n/a	300	n/a	None	A	80	None	Desk 0.75 to 0.85m
G-N1-002			Draught Lobby	1	Circulation Areas - Entrance Lobby	28	Not Controlled	Warm Air Door Curtain	BMS Adjustable Sensor	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-N1-003			WC - Wheelchair accessible	1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-N1-004			WC - Visitors	1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-N1-005			Wheelchair Bay	1	Circulation Equipment Storage Bays	28	16	underfloor heating	BMS Adjustable Sensors.	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-N1-006			Vending Machine	1	Vending Machine	28	16	underfloor heating	BMS Adjustable Sensors.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-N1-007			Waiting Area	1	Waiting Room	28	18	underfloor heating	BMS Adjustable Sensors.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	5	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
G-N1-008			Manifold	1	Manifold	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
2-N2-002	N2	DCN Wards / Health Records Support - (N2)	Staff Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	18 people at 10 l/s per person (7ach)	18 people at 10 l/s per person (7ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
2-N2-003			Coffee Bar	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central Supply and Extract	6	8	Negative	F7	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-N2-004			Disposal Hold (small)	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-N2-005			DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
2-N2-001			Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-002	P1	DCN Wards / Health Records Support - (N2)	Physical Measurement Bay	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	General working plane 1m
1-P1-003			Single Room 1	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	6 via bedroom and ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-P1-004			Room 1 - Ensuite	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-005			Single Room 2	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	6 via bedroom and ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-P1-006			Room 2 - Ensuite	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-007			Consulting Room 5	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
1-P1-008			Consulting Room 4	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
1-P1-009			Interview Room - DCU	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4 people at 10 l/s per person (7ach)	4 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-P1-010			Single Room 3 - Ensuite	1	Bedroom	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	6 via bedroom and ensuite	Balanced	F7	43	41	100	5	300	A	80	Switch / Dimmer	Bed / Trolley 1.45m
1-P1-011			Room 3 - Ensuite	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-012			Discharge Lounge	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
1-P1-013			WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-014			Interview Room - DCU	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4 people at 10 l/s per person (7ach)	4 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-P1-015			Clean Utility (Dispensary)	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m
1-P1-016			Pantry (DCU)	1	Pantry	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
1-P1-017		Wheelchair Parking Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer	None	No	None	Central Supply Air	37	0	Positive	F7	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-018		Linen Bay	1	Linen Bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-020		WC - Patients	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-021		Staff Base - Recovery	1	Staff base	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	200/300	n/a	None	A	80	Switch / Dimmer	Desk 0.75 to 0.85m
1-P1-022		Recovery Clean Utility	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m
1-P1-023		Recovery Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-024		Recovery	1	Recovery Bay / Recovery Room	25	20	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	None	A	90	Switch / Dimmer	Bed / Trolley 1.45m
1-P1-025		Recovery Bay 6	1	Recovery Bay / Recovery Room	25	20	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	None	A	90	Switch / Dimmer	Bed / Trolley 1.45m
1-P1-026		Recovery Bay 10	1	Recovery Bay / Recovery Room	25	20	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	None	A	90	Switch / Dimmer	Bed / Trolley 1.45m
1-P1-027		Linen Bay	1	Linen Bay	28	16	Adjacent Space Transfer	None	No	None	Central Supply Air	37	0	Positive	F7	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-028		Recovery Staff Base	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	41	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-P1-029		Post Op Recovery	1	Recovery Bay / Recovery Room	25	20	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	None	A	90	Switch / Dimmer	Bed / Trolley 1.45m
1-P1-030		Bay 5	1	Recovery Bay / Recovery Room	25	20	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	None	A	90	Switch / Dimmer	Bed / Trolley 1.45m
1-P1-031		Bay 6	1	Recovery Bay / Recovery Room	25	20	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	None	A	90	Switch / Dimmer	Bed / Trolley 1.45m
1-P1-032		Theatre 30	1	Operating Theatre Suite	31	18	warm air via AHU Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	25	7	Positive	F7	43	41	1000	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m
1-P1-033		Anaesthetic Room 30	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m
1-P1-034		Scrub Room 30	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central General Extract	0	12	Negative	None	n/a	41	500	n/a	None	A	90	Switch	General working plane 1m
1-P1-035		Dictation / 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (7ach)	2 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
1-P1-036		Image Intensifier Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-038		Satellite Pharmacy Store	1	Clean Utility	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	n/a	n/a	150	n/a	None	A	80	Automatic Controls	General working plane 1m
1-P1-039		Preparation Room 30	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	None	A	90	Switch	General working plane 1m
1-P1-040		Exit Bay	1	Operating Theatre Suite	25	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	300	n/a	None	A	80	Automatic Controls	Bed / Trolley 1.45m
1-P1-041		Utility Room	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central General Extract	0	39	Negative	None	43	41	500	n/a	None	A	90	Switch	General working plane 1m
1-P1-042		Bronchoscope Parking Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-043		X-Ray/Ultrasound Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-044		Theatre 31	1	Operating Theatre Suite	31	18	warm air via AHU Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	25	7	Positive	F7	43	41	1000	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m
1-P1-045		Preparation Room 31	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	None	A	90	Switch	General working plane 1m
1-P1-046		Scrub Room 31	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central General Extract	0	12	Negative	n/a	43	41	500	n/a	None	A	90	Switch	General working plane 1m
1-P1-047		Anaesthetic Room 31	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m
1-P1-048		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-049		Clean Scopes Store	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-050		Theatre 35	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	25	7	Positive	F7	43	41	500	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m
1-P1-051		MRI Reporting	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-P1-052		WC-Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-053		Staff Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	35 people at 10 l/s per person (8ach)	35 people at 10 l/s per person (8ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
1-P1-054		Sub-Wait Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	3 people at 10 l/s per person (8ach)	3 people at 10 l/s per person (8ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-055		Holding Bay 2	1	Circulation Equipment Storage Bays	28	16	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply	4	0	Positive	F7	43	41	200	n/a	None	A	80	Automatic Controls	Bed / Trolley 1.45m
1-P1-056		Holding Bay 1	1	Circulation Equipment Storage Bays	28	16	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply	4	0	Positive	F7	43	41	200	n/a	None	A	80	Automatic Controls	Bed / Trolley 1.45m
1-P1-057		Trolley Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer	None	No	None	Central Supply	41	0	Positive	F7	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-058		Angiography Procedures Machine Room	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local BMS Adjustable Sensor	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	6	Balanced	F7	43	n/a	500	n/a	None	A	90	Switch	General working plane 1m
1-P1-059		Angio Preparation Room	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	None	A	90	Switch	General working plane 1m
1-P1-060		Trolley Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-061		WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-063		MRI 5 Preparation Room	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	None	A	90	Switch	Bed / Trolley 1.45m
1-P1-064		MRI 5	1	Diagnostic room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	Cooling Battery	Central Supply and Extract	15 & 25 (Theatre Mode)	8	Positive	F7	43	n/a	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
1-P1-065		MRI 5 - Control Room	1	Cellular / Ward Offices	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-P1-066		Angio Anaesthetic Room	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m
1-P1-067		Exit Bay 6	1	Operating Theatre Suite	25	18	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Bed / Trolley 1.45m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane	
1-P1-068	P1 Operating Theatres & RHSC Surgical Day Case Unit	Equipment Room - MRI	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	Yes	Floor Mounted Unit Chilled Water	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-069		Anaesthetic Room 37	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m	
1-P1-070		Theatre 37	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	25	7	Positive	F7	43	n/a	1000	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m	
1-P1-071		Scrub Room 37	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central General Extract	0	12	Negative	None	n/a	41	500	n/a	None	A	90	Switch	General working plane 1m	
1-P1-072		Prep Room 39	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	None	A	90	Switch	General working plane 1m	
1-P1-073		Scrub Room 39	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central General Extract	0	12	Negative	None	n/a	41	500	n/a	None	A	90	Switch	General working plane 1m	
1-P1-074		Anaesthetic Room 39	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m	
1-P1-075		Prep Room 37	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	None	A	90	Switch	General working plane 1m	
1-P1-076		Exit Bay 5	1	Operating Theatre Suite	25	18	Adjacent Space Transfer	None	No	None	None	None	0	0	n/a	None	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Bed / Trolley 1.45m
1-P1-077		Utility Room 5	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central General Extract	0	39	Negative	None	43	41	500	n/a	10,000 - 100,000	A	80	Switch	General working plane 1m	
1-P1-078		Theatre 38	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	25	7	Positive	F7	43	n/a	1000	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m	
1-P1-079		Prep Room 38	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	None	A	90	Switch	General working plane 1m	
1-P1-080		Scrub Room 38	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central General Extract	0	12	Negative	None	n/a	41	500	n/a	None	A	90	Switch	General working plane 1m	
1-P1-083		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (7ach)	2 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
1-P1-084		Image Intensifier Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-085		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (7ach)	2 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
1-P1-086		Medical Gas Cylinder Store	1	Storage Area Med Gas	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	7	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-087		Clinical Equipment Store	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-088		IPS Room	1	IPS Room	30	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-089		DCN Management Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	3 people at 10 l/s per person (5ach)	3 people at 10 l/s per person (5ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
1-P1-090		Dirty Utility: bedpan disposal & urine test	1	Dirty utility	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	6	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-091		Theatre 39	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	25	7	Positive	F7	43	n/a	1000	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m	
1-P1-092		Utility Room 6	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central General Extract	0	39	Negative	n/a	43	41	500	n/a	10,000 - 100,000	A	80	Switch	General working plane 1m	
1-P1-093		Angiography Procedures Room	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply Air	25	0	Positive	F7	43	41	500	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m	
1-P1-094		Angiography Procedures Control Room	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	500	n/a	1000	A	90	Switch	Desk 0.75 to 0.85m	
1-P1-095		Sterile Supplies Store	1	Clean Utility	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	n/a	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m	
1-P1-097		Image Intensifier Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	10	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-098		WC-Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-099		Sterile Supplies Store	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	n/a	150	n/a	None	A	80	Automatic Controls	General working plane 1m	
1-P1-100		Female Staff Changing and Lockers	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-101		Clean Trays	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-102		Male Staff Changing and Lockers	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-103		Footwear Machine Washing Area	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	Yes	Ceiling Cassette - Chilled Water	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-104		Dirty Trays	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-105		Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-106		Clean Utility	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m	
1-P1-107		Resuscitation Trolley Bay	1	Resus Trolley bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-108		Linen Bay	1	Linen Bay	28	16	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-109		Recovery bay: post anaesthetic, place	1	Recovery Bay / Recovery Room	25	20	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	None	A	90	Switch / Dimmer	Bed / Trolley 1.45m	
1-P1-113		Staff Base	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
1-P1-116		Consulting Room 2	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
1-P1-117		IPS Room	1	IPS Room	30	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-118		Consulting Room 3	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
1-P1-119		Reception	1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	2	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
1-P1-120		Consulting Room 1	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
1-P1-121		Interview Counselling / Quiet Room	1	Office	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	5 people at 10 l/s per person (9ach)	5 people at 10 l/s per person (9ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
1-P1-122		WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-123		WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
1-P1-124		Store	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-P1-127		Changing Cubicles	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-128		Admissions Lounge	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
1-P1-129		Theatre 33	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	25	7	Positive	F7	43	n/a	1000	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m
1-P1-130		Utility Room	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central General Extract	0	39	Negative	n/a	43	41	500	n/a	None	A	90	Switch	General working plane 1m
1-P1-131		Theatre 32	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	25	7	Positive	F7	43	n/a	500	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m
1-P1-132		Anaesthetic Room 32	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m
1-P1-133		Scrub Room 32	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central General Extract	0	12	Negative	n/a	43	41	500	n/a	None	A	90	Switch	General working plane 1m
1-P1-134		Prep Room 32	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	None	A	90	Switch	General working plane 1m
1-P1-135		Exit Bay	1	Operating Theatre Suite	25	18	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Bed / Trolley 1.45m
1-P1-136		Prep Room 33	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	None	A	90	Switch	General working plane 1m
1-P1-137		Scrub Room 33	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central General Extract	0	12	Negative	None	n/a	41	500	n/a	None	A	90	Switch	General working plane 1m
1-P1-138		Anaesthetic Room 33	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m
1-P1-140		Theatre 34	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	25	7	Positive	F7	43	n/a	1000	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m
1-P1-141		Anaesthetic Room 34	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m
1-P1-143		RHCYP Management Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-P1-144		Image Intensifier Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-145		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (7ach)	2 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
1-P1-146		Clinical Equipment Store	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-147		Office Staff	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-P1-148		Scrub Room 34	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central General Extract	0	12	Negative	None	n/a	41	500	n/a	None	A	90	Switch	General working plane 1m
1-P1-149		Prep Room 34	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	None	A	90	Switch	General working plane 1m
1-P1-151		Exit Bay	1	Operating Theatre Suite	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	None	0	0	n/a	None	43	n/a	300	n/a	None	A	80	Automatic Controls	Bed / Trolley 1.45m
1-P1-152		Utility Room	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central General Extract	0	39	Negative	None	43	41	500	n/a	None	A	90	Switch	General working plane 1m
1-P1-153		Prep Room 36	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	None	A	90	Switch	General working plane 1m
1-P1-154		Scrub Room 35	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central General Extract	0	12	Negative	None	n/a	41	500	n/a	None	A	90	Switch	General working plane 1m
1-P1-155		Theatre 36	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	25	7	Positive	F7	43	n/a	1000	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m
1-P1-156		Anaesthetic Room 35	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local 7 bms Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m
1-P1-158		Dirty Scopes Store	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-159		Store - Plaster	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-161		Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-162		Staff Reception / Office / Control Base	1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
1-P1-163	DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-164	Changing Cubicle 2	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-165	Changing Cubicle 1	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-167	Changing Cubicle 3	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-168	WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-169	WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-170	Immediate Pre Theatre Wait	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	5	5	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Bed / Trolley 1.45m	
1-P1-171	WC-Staff	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-172	Senior Charge Nurse Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
1-P1-173	Locker Bay	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-174	General Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
1-P1-175	Reception	1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	3	0	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
1-P1-176	Consulting Room 6	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
1-P1-177	Consulting Room 7	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m	
1-P1-178	Main Waiting/Play Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	25 people at 10 l/s per person (7ach)	25 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-179	WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-180	WC Accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane	
1-P1-183		Anaesthetic Room 36	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local BMS Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m	
1-P1-184		Anaesthetic Room 38	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local BMS Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	10,000 - 100,000	A	90	Switch	Bed / Trolley 1.45m	
1-P1-185		Scrub Room 36	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local BMS Adjustable	Yes	Comfort Cooled Fresh Air	Central General Extract	0	12	Negative	None	n/a	41	500	n/a	None	A	90	Switch	General working plane 1m	
1-P1-186		Exit Bay 4	1	Operating Theatre Suite	25	18	Adjacent Space Transfer Air	None	No	None	None	None	0	0	n/a	None	n/a	41	300	n/a	None	A	80	Switch	Bed / Trolley 1.45m
1-P1-187		Utility Room (interoperative)	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local BMS Adjustable	Yes	Comfort Cooled Fresh Air	Central General Extract	0	39	Negative	None	43	41	500	n/a	None	A	90	Switch	General working plane 1m	
1-P1-193		Toy Wash Store	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-194		Cleaner Cupboard	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-195		Store (RHSC)	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-196		Prep Room 35	1	Operating Theatre Suite	25	18	warm air via AHU Battery	Local BMS Adjustable	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	None	A	90	Switch	General working plane 1m	
1-P1-197		IV Store	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-001		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-019		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-037		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-062		Corridor	1	Corridor	28	18	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-082A		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-082B		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-110		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-114		Corridor	1	Corridor	28	18	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-115		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-125		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-126		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-142		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-150		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-166A		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-166B		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-189		Corridor	1	Corridor	28	18	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-190		Corridor	1	Corridor	28	18	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-199		Corridor	1	Corridor	28	18	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-182		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-182A		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-183B		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
1-P1-191	Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
1-P1-192	Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-Q1-002		IPS Room	1	IPS Room	30	18	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-Q1-003		Nappy Change Room with handwash	1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-Q1-004		General X-Ray Room	1	Diagnostic room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m	
G-Q1-005		Changing Cubicles	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-Q1-006		Changing Cubicles	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-Q1-007		Trolley Bay	1	Circulation Equipment Storage Bays	28	16	Radiant Panels	Remote Sensor Adj.	No	None	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-008		Processing Area	1	Diagnostic room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	8	8	Balanced	F7	43	n/a	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m	
G-Q1-009		Acute Reporting	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4 people at 10 l/s per person (6ach)	4 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-Q1-010		Ultrasound Room 1	1	Diagnostic room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	15	15	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m	
G-Q1-011		Changing Cubicle 3	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-Q1-012		General X-Ray Room	1	Diagnostic room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	Ceiling Suspended Unit	Central Supply and Extract	8	8	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m	
G-Q1-013		Changing Cubicle 4	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-Q1-014		Ultrasound Room 2	1	Diagnostic room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	15	15	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m	
G-Q1-015		Changing Cubicle 5	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-Q1-016		Fluoroscopy Screening Room	1	Diagnostic room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	Ceiling Suspended Unit	Central Supply and Extract	15	15	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m	
G-Q1-017		Fluoroscopy Preparation Room	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	300	n/a	1000	A	80	Switch	General working plane 1m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
G-Q1-018		Ultrasound Waiting Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6 people at 10 l/s per person (10ach)	6 people at 10 l/s per person (10ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-019		WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-020		Patient Interview Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply & Extract	4	4	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-021		Baby Infant / Feeding Room	1	Baby Feeding	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	100	n/a	None	A	80	Switch	Floor 0m
G-Q1-022		WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-023		Registrars Office (5 desks)	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-024		Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-025		Radioactive Waste Store	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	10	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-027		Cold Waiting Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6 people at 10 l/s per person (8ach)	6 people @ 10 l/s/p + Make Up Air (12ach)	Positive	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-028		Radioisotope Preparation Room	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	300	n/a	1000	A	80	Switch	General working plane 1m
G-Q1-029		WC - Wheelchair accessible (hot)	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-030		Gamma Camera Admin Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-031		Medical Physics Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-032		Radio Nuclide Imaging Reporting	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-033		Emergency Shower	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-034		Hot Waiting Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6 people at 10 l/s per person (8ach)	6 people @ 10 l/s/p + Make Up Air (12ach)	Positive	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-035		Radioisotope Injection Room 1	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	10	0	Positive	F7	43	41	300	n/a	1000	A	80	Switch	General working plane 1m
G-Q1-036		Recovery Area 1	1	Recovery Bay / Recovery Room	25	20	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	None	A	90	Switch / Dimmer	Bed / Trolley 1.45m
G-Q1-037		Changing Cubicles	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-039		Radio Nuclide Imaging 1	1	Diagnostic room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit & Ceiling Suspended Unit	Central Supply and Extract	15	15	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
G-Q1-042		Control Room	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-Q1-043		Changing Room 2	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-044		Radio Nuclide Imaging 2	1	Diagnostic room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit & Ceiling Suspended Unit	Central Supply and Extract	15	15	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
G-Q1-045		Radioisotope Injection Room 2	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	10	0	Positive	F7	43	41	300	n/a	1000	A	80	Switch	General working plane 1m
G-Q1-046		Stress Room	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	3	3	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-Q1-047		Hot Waiting Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6 people at 10 l/s per person (8ach)	6 people at 10 l/s per person (8ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-048		WC - Wheelchair accessible (hot)	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-049		WC - Wheelchair accessible (cold)	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-050		Cold Waiting Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6 people at 10 l/s per person (8ach)	6 people at 10 l/s per person (8ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-052		Radioisotope Counting Laboratory	1	Laboratory	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6 people at 10 l/s per person (6ach)	6 people at 10 l/s per person (6ach)	Balanced	F7	43	60	500	n/a	None	A	80	Switch	General working plane 1m
G-Q1-053		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-054		Meeting Room 1	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4 people at 10 l/s per person (10ach)	4 people at 10 l/s per person (10ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-055		Meeting Room 2	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6 people at 10 l/s per person (9ach)	6 people at 10 l/s per person (9ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-057		Other Clinical Staff Office (7 Person)	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-058		Acute Reporting	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	10 people at 10 l/s per person (5ach)	10 people at 10 l/s per person (5ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-059		CT Room 1	1	Diagnostic room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit & Ceiling Suspended Unit	Central Supply and Extract	15	15	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
G-Q1-061		Disabled Toilet	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-062		WC - Patients	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-063		Linen Bay	1	Linen Bay	28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-064		Resuscitation Trolley Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-066		Preparation Room	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	300	n/a	1000	A	80	Switch	General working plane 1m
G-Q1-067		Disabled Toilet	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-068		Toilets	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
G-Q1-069	Q1 Radiology	CT - Changing Cubicle 1	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-070		CT - Changing Cubicle 2	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-071		Control Room - CT	1	Cellular / Ward Offices	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	5 people at 10 l/s per person (4ach)	5 people at 10 l/s per person (4ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-072		Imaging Reporting	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4 people at 10 l/s per person (4ach)	4 people at 10 l/s per person (4ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-073		Quiet Reporting	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	8 people at 10 l/s per person (5ach)	8 people at 10 l/s per person (5ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-074		Consultant Office (5 person)	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-075		Consultant Office (5 person)	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-076		Ultrasound Admin Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-077		Admin Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-078		Waiting Area - Main Dept	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	31 people at 10 l/s per person (10ach)	31 people at 10 l/s per person (10ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
G-Q1-079		Reception	1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply Air	4	0	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-080		Waiting Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	20 people at 10 l/s per person (8ach)	20 people at 10 l/s per person (13ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
G-Q1-081		Doppler Ultrasound	1	Diagnostic room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
G-Q1-082		Meeting Room 3	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4 people at 10 l/s per person (9ach)	4 people at 10 l/s per person (9ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-083		Photocopy Room	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
G-Q1-084		Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-086		MRI 4 Control Room (Shelled Space)	1	Cellular / Ward Offices	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-089		Inpatient Holding Bays	1	Circulation Equipment Storage Bays	28	16	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	10	6	Positive	F7	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-092		MRI 4 (Shelled Space)	1	Diagnostic room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	By Specialist	Central Supply and Extract	15	15	Balanced	F7	43	n/a	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
G-Q1-094		Waiting Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6 people at 10 l/s per person (13ach)	6 people at 10 l/s per person (13ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
G-Q1-095		Cubicle 1	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-096		Cubicle 2	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-097		WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-098	Recovery Bays	1	Recovery	28	16	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	None	A	90	Switch	Floor 0m	
G-Q1-099	Equipment Room 1 (Shelled Space)	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	Yes	Floor Mounted Unit Chilled Water	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-Q1-100	Equipment Room	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	Yes	Floor Mounted Unit Chilled Water	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-Q1-102	DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-Q1-103	Cubicle 3	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-Q1-104	Cubicle 4	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-Q1-105	Cubicle 5	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-Q1-106	Cubicle 6	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
G-Q1-108	Adult Injection Room 1	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	10	0	Positive	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m	
G-Q1-109	Toilets	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-Q1-110	MRI 3	1	Diagnostic room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	By Specialist	Central Supply and Extract	15	15	Balanced	F7	43	n/a	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m	
G-Q1-111	MRI 3/4 Control Room	1	Control Room - MRI	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Suspended Unit	Central Supply and Extract	6	4	Positive	F7	43	n/a	400	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-Q1-112	Clean Utility	1	Clean Utility	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply Air	6	0	Positive	F7	43	41	150	n/a	None	A	80	Automatic Controls	General working plane 1m	
G-Q1-113	Dirty Utility	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-Q1-114	Store Room	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-Q1-115	Adult Waiting Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4 people at 10 l/s per person (7ach)	4 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m	
G-Q1-119	Waiting Area	1	Waiting Room	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4 people at 10 l/s per person (4ach)	4 people at 10 l/s per person (4ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m	
G-Q1-120	MRI Reporting	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4 people at 10 l/s per person (5ach)	4 people at 10 l/s per person (5ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
G-Q1-121	Baby Infant / Feeding Room	1	Baby Feeding	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	100	n/a	None	A	80	Switch	Floor 0m	
G-Q1-123	MRI 2	1	Diagnostic room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	By Specialist	Central Supply and Extract	15	15	Balanced	F7	43	n/a	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
G-Q1-124		Equipment Room 3	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	Yes	Floor Mounted Unit Chilled Water	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-125		Recovery Area - 1 place	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-Q1-126		WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-127		WC - Wheelchair accessible & change	1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-128		Cubicle 7 - Accessible	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-129		Cubicle 8 - Accessible	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-130		Induction Area - 1 place	1	Treatment Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	15	15	Balanced	F7	43	41	500	n/a	1000	A	90	Switch	Bed / Trolley 1.45m
G-Q1-131		Staff WC	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-132		WC - Wheelchair accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-133		Equipment Room - MRI	1	IT equipment (comms server)	25	18	None	None	Yes	Floor Mounted Unit Chilled Water	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m
G-Q1-134		MRI Room	1	Diagnostic room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	By Specialist	Central Supply and Extract	15	15	Balanced	F7	43	n/a	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
G-Q1-135		Control Room - CT/MRI	1	Cellular / Ward Offices	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-136		CT Room	1	Diagnostic room	25	18	Warm Air - Reheat Battery	BMS Adjustable Sensor	Yes	Ceiling Suspended Unit	Central Supply and Extract	15	15	Balanced	F7	43	41	300	n/a	1000	A	80	Switch / Dimmer	General working plane 1m
G-Q1-137		Main Reporting	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	10 people @ 10 l/s/p	10 people @ 10 l/s/p	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-138		Resuscitation Trolley Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-139		Linen Bay	1	Linen Bay	28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-140		IPS Room	1	IPS Room	30	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-141		Dental Room	1	Consulting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	10	10	Balanced	F7	43	41	300	n/a	1000	A	80	Switch	Bed / Trolley 1.45m
G-Q1-142		Disposal Hold	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-143		Staff WC	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-144		Female Staff Changing and Lockers	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-145		Trolley Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	None	0	0	n/a	F7	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-146		Staff WC	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-148		Store Room	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-149		Resource Room / Library	1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	24 people at 10 l/s per person (9ach)	24 people at 10 l/s per person (9ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-150		Male Staff Changing and Lockers	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-151		Consultant Office (5 person)	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-152		Admin Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-153		Reception Area	1	Reception	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	24 people @ 10 l/s/p	24 people @ 10 l/s/p	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-Q1-160		Shelled Space	1	Shelled Space	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
G-Q1-161		Trolley Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-001A		Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	None	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-001B		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-026		Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	None	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-038		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-040		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-051		Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-056		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-065		Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-065B		Corridor	1	Corridor	28	18	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-085		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-087		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-107		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-116		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-122		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-147		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-162		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-155		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-156		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
G-Q1-157		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
G-Q1-158		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-001		Staff Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
2-R1-002		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-003		Meeting Room - 4 person	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4 people at 10 l/s per person (9ach)	4 people at 10 l/s per person (9ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-004		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-005		Beverage Bay	1	Tea Making	28	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	5	Negative	None	n/a	41	100 (KNX)	n/a	None	A	80	switch	Floor 0m
2-R1-006		Meeting Room - 6 person	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	6 people at 10 l/s per person (9ach)	6 people at 10 l/s per person (9ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-007		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-008		Store Clinical	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-009		Printer/Photocopier Room	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer Air	None	Yes	Wall Mounted Unit	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-010		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-011		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-012		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-013		WC - Staff (Female)	1	toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-014		WC - Staff (Male)	1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-015		Meeting Room - 6 person	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	6 people at 10 l/s per person (8ach)	6 people at 10 l/s per person (8ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-016		WC - Wheelchair Accessible	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-017		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-018		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-019		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-020		Printer/Photocopier Room	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Wall Mounted Unit	Central General Extract	0	3	Negative	None	43	n/a	400	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-021		Beverage Bay	1	Tea Making	28	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	5	Negative	None	n/a	41	100	n/a	None	A	80	switch	Floor 0m
2-R1-022		Disposal Hold (small)	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-023		Meeting Room - 4 person	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4 people at 10 l/s per person (8ch)	4 people at 10 l/s per person (8ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
2-R1-024		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-025		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-026		Beverage Bay	1	Tea Making	28	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	5	Negative	None	n/a	41	200	n/a	None	A	80	switch	Floor 0m
2-R1-027		Meeting Room - 4 person	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4 people at 10 l/s per person (8ch)	4 people at 10 l/s per person (8ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	switch	Desk 0.75 to 0.85m
2-R1-028		Meeting Room - 4 person	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4 people at 10 l/s per person (8ch)	4 people at 10 l/s per person (8ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	switch	Desk 0.75 to 0.85m
2-R1-029		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-030		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-031		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-032		WC - Wheelchair Accessible	1	toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-033		WC - Staff (Male)	1	toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-034		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-035		Printer/Photocopier Room	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer Air	None	Yes	Wall Mounted Unit	Central General Extract	0	3	Negative	None	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-036		Meeting Room - 4 person	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4 people at 10 l/s per person (9ach)	4 people at 10 l/s per person (9ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane	
2-R1-037	R1 Clinical Management Suite	Store Clinical	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-R1-038		WC - Staff (Female)	1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-R1-039		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
2-R1-040		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
2-R1-041		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
2-R1-042		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
2-R1-043		Store Clinical	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-044		Printer/Photocopier Room	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer Air	None	Yes	Wall Mounted Unit	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
2-R1-045		Meeting Room - 4 person	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4 people at 10 l/s per person (9ach)	4 people at 10 l/s per person (9ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-R1-046		Meeting Room - 4 person	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4 people at 10 l/s per person (7ach)	4 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-R1-047		Store Clinical	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
2-R1-048		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
2-R1-049A		2nd Floor Desks	1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-R1-049B		2nd Floor Desks	1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-R1-050		2nd Floor Desks	1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-R1-051A		2nd Floor Desks	1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-R1-051B		2nd Floor Desks	1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-R1-051C		2nd Floor Desks	1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-R1-052A		2nd Floor Desks	1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-R1-052B		2nd Floor Desks	1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-R1-052C		2nd Floor Desks	1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-R1-053		2nd Floor Desks	1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-R1-054		2nd Floor Desks	1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-R1-055A		2nd Floor Desks	1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-R1-055B		2nd Floor Desks	1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-R1-055C		2nd Floor Desks	1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
2-R1-055D		2nd Floor Desks	1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
4-R1-001		Management Conference Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	16 people at 10 l/s per person (7ach)	16 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
4-R1-002		Management Conference Room	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	16 people at 10 l/s per person (8ach)	16 people at 10 l/s per person (8ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
4-R1-003		Meeting Room - 6 person	1	Meeting Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	6 people at 10 l/s per person (9ach)	6 people at 10 l/s per person (9ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
4-R1-004		Beverage Bay	1	Tea Making	28	18	Adjacent Space Transfer Air	None	No	None	Central Supply and Extract	4	3	Positive	F7	n/a	41	100 (KNX)	n/a	None	A	80	switch	Floor 0m	
4-R1-005		WC - Staff (Male)	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
4-R1-006		WC - Wheelchair Accessible	1	toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
4-R1-007		Meeting Room - 4 person	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4	4	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
4-R1-008		WC - Staff (Female)	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
4-R1-009		Staff Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	4	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m	
4-R1-010		4th Floor Desks	1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	4	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m	
4-R1-011		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
4-R1-012		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
4-R1-013		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	
4-R1-014		Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	2 people at 10 l/s per person (6ach)	2 people at 10 l/s per person (6ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
4-R1-015	R1	Store Management	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-R1-016		Store Management	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-R1-017		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
4-R1-018		Disposal Hold (small)	1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-R1-019		Printer/Photocopier Room	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
2-R1-057		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-058		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-059		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-060		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-061		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-062		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-063		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-R1-020		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-R1-021		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-064		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-065		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-066		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
2-R1-067		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
4-R1-022		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
4-R1-023		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
4-R2-002		R2	Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch
4-R2-003	Assistant Health Records Manager / Supervisors		1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-R2-004	RHSC / DCN Office 17 Person		1	Open Plan Office	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-R2-005	WC Staff		1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-R2-006	Receipt / Dispatch Counter		1	Reception	28	18	Adjacent Space Transfer Air	None	Yes	Wall Mounted Unit	Central Supply and Extract	3	40	Negative	F7	n/a	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-R2-007	Trolley Area		1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-R2-008	RHSC & DCN Records Library (160,000 records)		1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	2	3	Negative	F7	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-R2-010	Accessible WC		1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-R2-011	Dictation/ 1:1/Phone Booth		1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	3	Positive	F7	n/a	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
4-R2-001	Corridor		1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-R2-009	Switch Cupboard		1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
B-S1-001	S1	Preparation/Cooking Area	1	CDS	28	18	None	None	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	36	42	Negative	F7	n/a	60	500	n/a	None	A	80	Switch	General working plane 1m
B-S1-005		Temperature Controlled Sandwich Prep	1	CDS	12	10	None	None	Yes	Ceiling Cassette - DX	General Supply and Extract	2 people at 10 l/s per person (2ach)	2 people at 10 l/s per person (2ach)	Balanced	F7	n/a	41	500	n/a	None	A	80	Switch	General working plane 1m
B-S1-006		Bakery Preparation	1	CDS	12	10	None	None	Yes	Ceiling Cassette - DX	General Supply and Extract	2 people at 10 l/s per person (2ach)	2 people at 10 l/s per person (2ach)	Balanced	F7	n/a	41	500	n/a	None	A	80	Switch	General working plane 1m
B-S1-007		Staff Room	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	6	8	Negative	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m
B-S1-008		Office 5 person	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	5 people at 10 l/s per person (4ach)	5 people at 10 l/s per person (4ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
B-S1-009		Female Staff Changing inc Shower	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m
B-S1-010		Male Staff Changing inc Shower	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m
B-S1-012		Pan Wash	1	CDS	28	18	None	None	Yes	Ceiling Cassette - Chilled Water	Central Extract	0	6	Negative	None	n/a	60	300	n/a	None	A	80	Switch	General working plane 1m
B-S1-013		Returned Trolleys	1	CDS	28	16	Adjacent Space Transfer Air	None	Yes	Comfort Cooled Fresh Air	General Supply and Extract	16	16	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-S1-015		Refuse	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-S1-016		DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
B-S1-017		Clean Trolleys Park	1	CDS	28	16	Adjacent Space Transfer Air	None	No	None	General Supply and Extract	3	3	Balanced	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-S1-018		Disposables / Detergent	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
B-S1-019		Raw Meat	1	CDS	8	5	None	None	Yes	DX Cooling Unit	None	0	0	n/a	None	n/a	n/a	300	n/a	None	A	80	Switch	General working plane 1m
B-S1-020		Veg Store	1	CDS	28	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-S1-021	Freezer	1	CDS	-18	-20	None	None	Yes	DX Cooling Unit	None	0	0	n/a	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
B-S1-022	Freezer	1	CDS	-18	-20	None	None	Yes	DX Cooling Unit	None	0	0	n/a	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane	
B-S1-023		Receipt Bay	1	Circulation Areas	28	18	Radiant Panels	Remote Sensor Adj.	No	None	General Extract	0	6	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
B-S1-025		Dairy Store	1	CDS	5	2	None	None	Yes	DX Cooling Unit	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
B-S1-027		Dry Goods	1	Storage Area Equipment	28	16	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
B-S1-031		Pick and Pack	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	General Supply and Extract	3	3	Balanced	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
B-S1-024		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
B-S1-030		Lobby	1	Lobby	18	28	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
B-S1-028		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
B-S1-029		Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m	
2-S2-001	S2	e-Health Infrastructure	2-N01 - Core Server Room	1	IT equipment (comms server)	25	18	None	None	Yes	Floor Mounted Close Control	1	4	Normal Operation Positive	F7	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
B-S3-002	S3	Domestic Services	Linen Pool (Clean)	1	Linen Bay	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	60	100 (KNX)	n/a	None	A	80	Automatic Controls	Floor 0m
B-S3-003			Supplies Store	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-S3-004			Laundry (microfibre)	1	Laundry	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	6	6	Balanced	F7	43	60	300	n/a	None	A	80	Switch	Floor 0m
B-S3-005			Linen Pool (Dirty)	1	Dirty utility	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	6	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-S3-007			Cleaning Equipment Store	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-S3-008			Sanitary Bins Store	1	Dirty utility	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-S3-009			DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
B-S3-010			Bulk Equipment Store	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	60	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-S3-011			Dictation/ 1:1/Phone Booth	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted Unit	Central Supply and Extract	2 people at 10 l/s per person (7ach)	2 people at 10 l/s per person (7ach)	Balanced	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
B-S3-012			Domestic Service Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
B-S3-013			Curtain Store	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-S3-001			Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-S3-006			Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Supply Air	9	0	Positive	F7	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-S3-030			Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
B-S4-001	S4	Materials Management	Storage/Holding Area	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	5	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-S4-003			Mailroom	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
B-S4-004			Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
B-S4-005			Porters Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
B-S4-050			Clocking In	1	Cellular / Ward Offices	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Desk 0.75 to 0.85m
B-S4-002			Lobby	1	Lobby	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-S5-002	S5	Central Staff Changing	Bay for Token Machine	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-S5-003			DSR	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m
2-S5-004			Male Staff Changing, Shower, WC & Lockers	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m
2-S5-005			Female Staff Changing, Shower, WC & Lockers	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m
2-S5-001			Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
2-S5-006			Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-S6-003	S6	Estates	BMS Room	1	BMS Room	25	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Floor 0m
B-S6-004			Workshop (NPD)	1	Small Workshop	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	6	Negative	F7	43	41	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
B-S6-006			Staff Change	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	5	4	Positive	F7	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m
B-S6-007			Shower	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-S6-008			Shower	1	Bathroom	28	20	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-S6-009			Workshop (NHSL)	1	Small Workshop	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	6	Negative	F7	43	41	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
B-S6-010			Staff WC	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-S6-011			Supervisors	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
B-S6-012			Estates Library	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted	Central Supply and Extract	2	3	Negative	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
B-S6-013			Office	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Ceiling Cassette - Chilled Water	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
B-S6-014			Store	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-S6-015			Contract Manager	1	Cellular / Ward Offices	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Wall Mounted	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
G-S6-016			Office / Reception	1	Cellular / Offices	28	18	Electric Heater	Remote Sensor Adj.	No	None	Central Supply and Extract	4	3	Positive	F7	43	n/a	300	n/a	None	A	80	Switch	Desk 0.75 to 0.85m
B-S6-019			Staff WC	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane	
G-S6-020		Atrium Cleaning Equipment	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
B-S6-021		Staff WC	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-S6-022		WC - Staff	1	Toilet	28	18	Electric Heater	Remote Sensor Adj.	No	None	Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-S6-023		Chemical Store	1	Storage Area Equipment	28	16	Electric Heater	Remote Sensor Adj.	No	None	Dedicated Extract System	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
G-S6-024		Trolley Holding Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
B-S6-025		Trolley Holding Bay	1	Circulation Equipment Storage Bays	28	16	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
B-S6-050		Staff Welfare	1	Common room/staff room/lounge	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	12 people at 10 l/s per person (6ach)	12 people at 10 l/s per person (6ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m	
B-S6-017		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
4-S7-002		S7	Male WC	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-S7-003			Female WC	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-S7-004	Male WC		1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
4-S7-007	Disposal Hold		1	Disposal Hold	28	16	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
4-S7-008	Storage/Dishwashing		1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	60	200	n/a	None	A	80	Automatic Controls	Floor 0m	
4-S7-009	DSR		1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m	
4-S7-010	Restaurant		1	Eating/Drinking	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	100 people at 10 l/s per person (9ach)	100 people at 10 l/s per person (9ach)	Balanced	F7	43	41	300	n/a	None	A	80	Switch	Floor 0m	
4-S7-011	WC Accessible		1	Toilet	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Dirty Extract	0	10	Negative	None	43	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
4-S7-001	Corridor		1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
4-S7-005	Corridor		1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
4-S7-013	Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m		
4-S7-012	Switch Cupboard	1	Switch Cupboard	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m		
B-S8-001	S8	Sterile Support Store	1	Circulation Equipment Storage Bays	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
4-S9-001	S9	WC Ambulant	1	Toilet	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	10	Negative	None	n/a	41	200	n/a	None	A	80	Automatic Controls	Floor 0m	
4-S9-002A		RFFS Changing / Support	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	10	8	Positive	F7	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m	
4-S9-002B		RFFS Changing / Support	1	Changing Facilities	28	18	Radiant Panels	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Dirty Extract	0	6	Negative	F7	43	41	100	n/a	None	A	80	Automatic Controls	Floor 0m	
4-S9-004A		RFFS Medical Equipment Store	1	Storage Area Equipment	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
4-S9-005		Trolley Bay Equip St	1	Trolley bay	28	18	Adjacent Space Transfer Air	None	No	None	Central General Extract	0	3	negative	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
4-S9-006		Cleaner	1	DSR	28	18	Adjacent Space Transfer Air	None	No	None	Central Dirty Extract	0	6	Negative	None	n/a	60	100	n/a	None	A	80	Automatic Controls	Floor 0m	
4-S9-003A		Lobby	1	Lobby	28	16	Radiant Panels	Remote Sensor Adj.	No	None	Central Supply and Extract	3	3	Balanced	F7	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
4-S9-003B		Lobby	1	Lobby	18	28	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m	
B-T1-001	T1	B-N02	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
B-T1-002		B-N04	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
B-T1-003		B-N03	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
G-T1-003		G-N09	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
G-T1-004		G-N08	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
G-T1-005		G-N07	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
G-T1-006		G-N06	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
G-T1-007		G-N05	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
1-T1-001		1-N14	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
1-T1-002		1-N12	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
1-T1-003		1-N11	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
1-T1-004		1-N10	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
1-T1-005		1-N13	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
2-T1-001		2-N20	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
2-T1-002		2-N19	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
2-T1-003		2-N17	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
2-T1-004		2-N18	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
2-T1-005		2-N16	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
2-T1-006		2-N15	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	
3-T1-001		3-N25	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	2	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m	

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
3-T1-002		3-N24	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m
3-T1-003		3-N23	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m
3-T1-004		3-N22	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m
3-T1-005		3-N21	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m
4-T1-001		4-N26	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m
4-T1-002		4-N27	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m
4-T1-003		4-N28	1	IT equipment (comms server)	25	18	None	None	Yes	Wall Mounted	Central General Extract	0	3	Negative	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m
B-V1-001		Confidential Waste	1	Storage Area Equipment	n/a	n/a	Adjacent Space Transfer	None	No	None	Central General Extract	0	3	Negative	None	n/a	n/a	200	n/a	None	A	80	Switch	Floor 0m
B-V1-002		Store	1	Storage Area Equipment	n/a	n/a	Radiant Panels	Remote Sensor Adj.	No	None	Central General Extract	0	3	Negative	None	43	n/a	200	n/a	None	A	80	Switch	Floor 0m
G-X1-001		EC Plant Room 1	1	Storage Area Equipment	n/a	n/a	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Switch	Floor 0m
G-X1-002		EC Plant Room 2	1	Storage Area Equipment	n/a	n/a	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Switch	Floor 0m
G-X1-003		HV Gen Control Room	1	Storage Area Equipment	n/a	n/a	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Switch	Floor 0m
G-X1-004		HV Generator	1	Storage Area Equipment	n/a	n/a	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Switch	Floor 0m
G-X1-005		HV Plant	1	Storage Area Equipment	n/a	n/a	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Switch	Floor 0m
G-X1-006		HV Plant	1	Storage Area Equipment	n/a	n/a	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Switch	Floor 0m
G-X1-008		Entrance Lobby	1	Entrance Lobby	28	16	Radiant Panel	Remote Sensor Adj.	No	None	None	0	0	43	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
M-X1-001		Mezz Plant 1	1	Storage Area Equipment	n/a	n/a	Adjacent Space Transfer Air	None	No	None	Natural	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-X1-010		Corridor	1	Corridor	28	18	Adjacent Space Transfer Air	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-COR-014		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Supply and Extract	1	1	Balanced	F7	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-Z1-009		Stair 9	1	Stair 9	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	None	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-X1-007		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-X1-008		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Z1-012		Stair 9	1	Stair 9	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	None	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Y1-001A		Clinical Waste - Dirty	1	Dirty utility	n/a	n/a	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Y1-001B		Clinical Waste - Dirty	1	Dirty utility	n/a	n/a	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Y1-001C		Clinical Waste - Dirty	1	Dirty utility	n/a	n/a	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Y1-002		General Waste	1	Storage Area Equipment	n/a	n/a	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Y1-003		Gas Manifold	1	Storage Area Equipment	40	10	Electric Heater	Remote Sensor Adj.	No	None	Natural	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Y1-004		Kitchen Waste	1	Storage Area Equipment	n/a	n/a	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Y1-005		Clinical Waste - Clean	1	Storage Area Equipment	n/a	n/a	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Y1-006		Wash Area	1	Storage Area Equipment	n/a	n/a	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-Y1-008		Medical Gas Cylinder Store	1	Bottle Store	40	10	Electric Heater	Remote Sensor Adj.	No	None	Natural	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-Plant 006		Plantroom 006	1	4-Plant 006	32	8	Ceiling Cassette DX	Remote Sensor Adj.	Yes	Ceiling Cassette DX	Natural	0	0	n/a	None	43	n/a	100	n/a	None	A	80	Switch	Floor 0m
G-Y1-007		Circulation	1	Circulation	n/a	n/a	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-COR-001		Corridor	1	Corridor	28	18	Radiant Panel	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply	1	0	Positive	F7	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-COR-002		Corridor	1	Corridor	28	18	Radiant Panel	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-COR-003		Corridor	1	Corridor	28	18	Radiant Panel	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-COR-004		Corridor	1	Corridor	28	18	Radiant Panel	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply	0.5	0	Positive	F7	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-COR-005		Corridor	1	Corridor	28	18	Radiant Panel	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-COR-006		Corridor	1	Corridor	28	18	Radiant Panel	Remote Sensor Adj.	Yes	Comfort Cooled Fresh Air	Central Supply	1	0	Positive	F7	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-COR-007		Corridor	1	Corridor	28	18	Radiant Panel	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-COR-008		Corridor	1	Corridor	28	18	Radiant Panel	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-COR-009		Corridor	1	Corridor	28	18	Radiant Panel	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-COR-010		Corridor	1	Corridor	28	18	Radiant Panel	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-COR-011		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-COR-012		Corridor	1	Corridor	28	18	Radiant Panel	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-COR-013		Corridor	1	Corridor	28	18	Radiant Panel	Remote Sensor Adj.	No	None	Central Supply	4	0	positive	F7	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-COR-014		Corridor	1	Corridor	28	18	Radiant Panel	Remote Sensor Adj.	No	None	Central Supply and Extract	4	4	Balanced	F7	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-Z1-002		Stair 02	1	Stair 02	28	18	Radiant Panel	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
G-COR-001		Atrium	1	Atrium	28	18	Underfloor	BMS Adjustable Sensor	Yes	Comfort Cooled Fresh Air	Central Supply and Extract	4	4	Balanced	F7	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
3-COR-008		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-COR-009		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	Central Supply Air	2	0	Positive	F7	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-COR-010		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-COR-011		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-COR-012		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-COR-013		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-COR-014		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-COR-015		Lift Lobby	1	Lift Lobby	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
3-COR-017		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-COR-001		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-COR-001A		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-COR-001B		Corridor	1	Corridor	28	18	Adjacent Space Transfer	None	No	None	None	0	0	n/a	None	n/a	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-COR-002		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-COR-003		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-COR-004		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-COR-005		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-COR-006		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-COR-007		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-COR-008		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-COR-009		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
4-COR-010		Corridor	1	Corridor	28	18	Radiant Panels	Remote Sensor Adj.	No	None	None	0	0	n/a	None	43	n/a	200	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-001		Plant Room	1	Plant Room	Not Controlled	Not Controlled	None	None	No	None	Central Supply & Extract	1	1	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-001A		HV Plant Room 01	1	Plant Room	32	Not Controlled	None	None	No	None	Natural & Dedicated Supply	17	17	Balanced	G3	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-001B		HV Plant Room 02	1	Plant Room	32	Not Controlled	None	None	No	None	Natural & Dedicated Supply	21	21	Balanced	G3	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-001C		HV Plant Room Lobby	1	Plant Room	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-002		Heat Station 04	1	Plant Room	Not Controlled	Not Controlled	None	None	No	None	Central Supply & Extract	3	3	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-003		Heat Station 01	1	Plant Room	Not Controlled	Not Controlled	None	None	No	None	Central Supply & Extract	3	3	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-004		Water Tank Room	1	Plant Room	Not Controlled	Not Controlled	None	None	No	None	Central Supply & Extract	5	5	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-005		UPS Plant Room	1	Plant Room	Not Controlled	Not Controlled	None	None	No	None	Central Supply & Extract	1	1	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-007		Plant Room	1	Plant Room	Not Controlled	Not Controlled	None	None	No	None	Central Supply & Extract	1	1	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-007A		HV Plant Room 03	1	Plant Room	32	Not Controlled	None	None	No	None	Natural & Dedicated Supply	16	16	Balanced	None	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-007B		HV Plant Room 04	1	Plant Room	32	Not Controlled	None	None	No	None	Natural & Dedicated Supply	16	16	Balanced	None	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-008		Rainwater Tank Room	1	Plant Room	Not Controlled	Not Controlled	None	None	No	None	Central Supply & Extract	0.5	0.5	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-009		Plant Room 09	1	Plant Room	Not Controlled	Not Controlled	None	None	No	None	Central Supply & Extract	1	1	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-006		Heat Station 02	1	Plant Room	Not Controlled	Not Controlled	None	None	No	None	Central Supply & Extract	3	3	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-011		PTS Plant Room	1	Plant Room	Not Controlled	Not Controlled	None	None	No	None	Central Supply & Extract	1.5	1.5	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-10		Heat Station 03	1	Plant Room	Not Controlled	Not Controlled	None	None	No	None	Central Supply & Extract	3	3	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-12		Plantroom 12	1	Plant Room	Not Controlled	Not Controlled	None	None	No	None	Central Supply & Extract	3	3	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-15A		Plantroom 15A	1	Plant Room	Not Controlled	Not Controlled	None	None	No	None	Central Supply & Extract	3	3	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-15B		Plantroom 15B	1	Plant Room	Not Controlled	Not Controlled	None	None	No	None	Central Supply & Extract	3	3	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-PLANT-16		Plantroom 16	1	Plant Room	Not Controlled	Not Controlled	None	None	No	None	Central Supply & Extract	3	3	Balanced	F7	n/a	n/a	300	n/a	None	A	80	Automatic Controls	Floor 0m
B-T2-001-E3		Riser Plant	1	Riser Plant	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
B-T2-002-M3		Riser Plant	1	Riser Plant	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
B-T2-003-V10		Riser Plant	1	Riser Plant	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
B-T2-004-V3		Riser Plant	1	Riser Plant	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
B-T2-005-E2		Riser Plant	1	Riser Plant	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
B-T2-006-E1		Riser Plant	1	Riser Plant	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
B-T2-007-KEF		Riser Access	1	Riser Access	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m
B-T2-011-V		Riser Plant	1	Riser Plant	Not Controlled	Not Controlled	None	None	No	None	None	0	0	n/a	None	n/a	n/a	100	n/a	None	A	80	Automatic Controls	Floor 0m

Room No.	Department	Room Name	Qty	Room Function	Temp (max)	Temp (min)	Heating Type	Heating Control	Cooling (present)	Cooling (type)	Ventilation (type)	Supply (ac/hr)	Extract (ac/hr)	Relative pressure	Min filtration	Surface temp	Water temp	Normal lux	Night lux	Local lux	Standby grade	Colour render	Control	Plane
4-PLANT-001		Central AHU Plant Room 01	1	Plant Room 01	Not Controlled	Not Controlled	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m
4-PLANT-002		Central AHU Plant Room 02	1	Plant Room 02	Not Controlled	Not Controlled	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m
4-PLANT-004		AHU Plant Room East	1	Plant Room 04	Not Controlled	Not Controlled	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m
4-PLANT-005		AHU Plant Room West	1	Plant Room 05	Not Controlled	Not Controlled	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m
4-PLANT-006		Water Tank Room	1	Plant Room 06	Not Controlled	Not Controlled	None	None	No	None	Natural	0	0	n/a	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m
4-PLANT-007		Medical Gas Plant Room	1	Plant Room 07	40	10	Electric Heater	Remote Sensor Adj	No	None	Natural	0	0	n/a	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m
4-PLANT-008		Medical Gas Bottle St	1	Bottle Store	40	10	Electric Heater	Remote Sensor Adj	No	None	Natural	0	0	n/a	None	n/a	n/a	300	n/a	None	A	80	Switch	Floor 0m

From: MCLAUGHLAN, Edward (NHS NATIONAL SERVICES SCOTLAND)
Sent: 17 July 2019 15:35
To: STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND)
Subject: Emailing - 20190715 Review of Ventilation provisions for (B1) PICU and HDU.pdf
Attachments: 20190715 Review of Ventilation provisions for (B1) PICU and HDU.pdf

And here's my thoughts annotated. I'll adopt your tabular method from here on in.

Ed



Add value.
Inspire trust.

RHSC DCN

Review of Ventilation
Provisions for (B1) PICU and
HDU Departments

July 2019

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

[Redacted text]

Issue / Revision Record

Issue	Date	By	Checked	Comment
1	15.07.19	SMcK	BR	Issue 1

WW24i



We aim to be the pre-eminent provider of quality building services solutions and the best to work with, in the view of our clients, partners and colleagues. We believe in a sustainability led approach to design for the benefit of our clients and the world we live in.

It is our ultimate goal to work closely with our fellow professionals and clients to minimise carbon emissions and to deliver a better environment for us all to live in.

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1.0 Introduction

Following a review of the installed ventilation systems of the Hospital NHSL have stated that the design standards for rooms: -

1 – B1 - 009	4 bed
1 – B1 - 019	1 bed
1 – B1 – 020	1 bed
1 – B1 – 021	1 bed
1 – B1 – 031	4 bed
1 – B1 – 037	1 bed
1 – B1 – 063	4 bed
1 – B1 – 065	4 bed
1 – B1 – 076	1 cot

Are not in compliance with SHTM-03-01 specifically Appendix 1 row of table as below.

Application	Ventilation	a/c hour	Pressure	Filter	Noise	Temperature	Comments
Critical care areas	S	10	+10	F7	30	18-25	Isolation Rooms may be -ve press

We have therefore carried out a full review of the standards quoted along with other requirements as briefed.

Section 2 of this report records our findings.

2.0 Review of Relevant Standards

2.1 The Clinical Output Based Specification for B1 Critical Care refers to a number of design guidance documents the ones relating to engineering services being:

HBN 23 – Hospital Accommodation for children and young people

HBN 57 – Now superseded by HBN 04 – 02 Critical Care Units

SHTM 2025 – now superseded by SHTM 03 – 01 – Ventilation for Healthcare premises

SHFN 30 Version 3 – Infection control in the built environment Design & Planning

2.2 Clinical Output Based Specification for B1 Critical Care.

In addition to the referenced document there are notes on Page 14 for “lobbied single bed isolation cubicles”. This is exactly what we have provided.

Single cubicles are also mentioned but with no detailed ventilation requirements, in terms of air changes nor pressure

2.3 HBN – 04 – 02 Critical Care Units

Section 6 of this document explains the requirement for Isolation Rooms however with no particular detail of actual performance criteria, hence our RFI query and accepted guidance (25/09/15 Acconex correspondence MM-RTRFI-000088, see Appendix).

2.4 SHTM – 03 – 01 – Ventilation for Healthcare premises.

Our interpretation of the line being quoted here is that it pertains to Isolation Rooms conditions within the Critical Care Area as referenced by the Isolation Room reference in the Comments Column of Appendix 1 of SHTM 03-01.

Ward Isolation Rooms are referenced in the table as being referenced in SHPN 4 Supplement 1. This document specifically refers to design standards for Isolation Rooms with En-Suite Facilities (see Appendix).

The Isolation Rooms in the PICU and HDU areas do not have En-Suite facilities as such, there is no system performance guidance other than the line referenced in SHTM 03 – 01 which we have utilised for design.

Application	Ventilation	a/c hour	Pressure	Filter	Noise	Temperature	Comments
Critical care areas	S	10	+10	F7	30	18-25	Isolation Rooms may be -ve press

We had also, during the design period, specifically raised this with NHSL, refer to Acconex of 25/09/2015 (see Appendix) who agreed with our approach here.

2.5 SHFN 30 Version 3 – Infection Control in the Built Environment

Whilst this document gives good guidance on general design principles and practices, it doesn't specifically provide technical guidance e.g. air change rates etc. which are referenced to SHTM 2025 (superseded by SHTM 03 – 01).

2.6 Information Exchange during design process

In addition to the specific RFI re isolation rooms as previously noted we would also record that both the single and the 4 room areas have been subject of detailed review involving NHSL

Further the services levels to the rooms in question are all as per the original Client provided Environmental Matrix in terms of supply air changes with no positive pressurisation figure ever being noted.

We carried out various exercises including all parties during the Construction period when Air change rates post FBC were discussed and reviewed. The current design reflects the agreements and directions agreed from these reviews. For example refer to Acconex NHSL-GC-002953 12 April 2018 (see Appendix) where NHSL confirmed which of the 4 bed areas were to be installed to achieve 4 Air Changes, this includes rooms currently under review.

3.0 Implications of Suggested Criteria

At the meeting held on 12th July NHSL confirmed that they wished these areas to be designed to 10A/C and 10 Pa positive pressure in these rooms.

We advised at that time that if this is a definitive instruction then in our opinion extensive alterations not only to the ventilation installation but the building fabric, fittings and layouts would be necessary, including:

- 1) Ventilation distribution and fittings as installed is not suitable for this volume increase – Additional AHU, new ductwork, grillage, pressure currently stabilisers etc. would need to be considered. This would also impact on electrical, heating and cooling distribution systems.
- 2) Ceiling is unsuitable for 10 Pa and would require to be replaced
- 3) Windows – currently openable – are not suitable and would require replacement
- 4) Light fittings also unsuitable for 10 Pa, replacements required
- 5) Existing ceiling track and pendants would require review but possibly as unlikely to be suitable for 10 Pa
- 6) If 10 Pa is to be maintained in the rooms as suggested, to maintain the integrity of pressure this would require pressure loss protection at opening doors. This would normally involve some form of airlock potentially with Interlocking doors.

4.0 Conclusions

From our detailed study of available design guidance we can find no information to support the statement that compliance with SHTM 03-01 requires these room to have 10 Air Change and 10Pa positive pressurisation.

However, if it is NHSL's preference to now modify the design standards. We can of course do this, however if 10 air change is required it will require extensive alterations, replacement and additions to the ventilation systems currently installed.

Should the requirement for the additional pressure also be required then this could result in extensive remodelling of the department as per Section 3 of this report.

5.0 Appendix

The following extracts from relevant guidance documents are included these being:

1. Clinical Output Based Specification for B1 Critical Care – Page 14 & 15
2. Appendix 1 from SHTM 03 – 01
3. SHPN4 Supplement 1 – Page 5 Paragraph 2.5
4. Acconex of 25/09/2015 refers to RFI confirming services required to Isolations Rooms are in accordance with our design.
5. Acconex of 12/04/18 confirms rooms which are required to have 4 Air Changes which is in line with current provisions.

1. Clinical Output Based Specification for B1 Critical Care – Page 14 & 15

2. Appendix 1 from SHTM 03 – 01

3. SHPN4 Supplement 1 – Page 5 Paragraph 2.5

4. Acconex of 25/09/2015 refers to RFI confirming services required to Isolations Rooms are in accordance with our design.

5. Acconex of 12/04/18 confirms rooms which are required to have 4 Air Changes which is in line with current provisions.



**Add value.
Inspire trust.**

Aberdeen Office

[Redacted]

Belfast Office

[Redacted]

Ireland Office

[Redacted]

Glasgow Office

[Redacted]

London Office

[Redacted]

Warrington Office

[Redacted]

UAE Office

[Redacted]

From: Bowman D (David) on behalf of Cabinet Secretary for Health and Sport
Sent: 19 July 2019 16:16
To: First Minister
Cc: Cabinet Secretary for Health and Sport; Roche R (Rowena); Connaghan J (John) (Health); Healy M (Michael); Low S (Stuart); McPherson G (Grant); McLaughlin C (Christine); DG Health & Social Care; Chief Medical Officer; Calderwood C (Catherine); Murray D (Diane); Hart S (Suzanne); Klein G (Gerard); Rogers S (Shirley); Hutchison D (David)
Subject: Health Finance and Infrastructure - Edinburgh Children's Hospital - First Minister - 19 July 2019
Attachments: 2019-20 - Health Finance and Infrastructure - Edinburgh Children's Hospital - First Minister - 19 July 2019.docx

PS/First Minister

Please find attached a note from the Cabinet Secretary for Health and Sport, Jeane Freeman MSP.

Regards

David Bowman
Deputy Private Secretary
Ministerial Private Office (Health)
St Andrew's House
Edinburgh

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First Minister**EDINBURGH CHILDREN'S HOSPITAL - UPDATE****Purpose**

1. Following my note of 12 July, please find an update on the current situation in respect of the Royal Hospital for Children and Young People (RHCYP) and Department of Clinical Neurosciences (DCN).

Priority

2. High.

Background

3. In earlier briefings, I had provided a summary of the issues currently facing the opening of the new hospital and this note provides a further update on the operational impact and support provided to patients along with current actions being taken to resolve the technical issues at the new hospital.

Operational Impact and Support

4. The dedicated helpline set up by NHS 24 has received 73 patient calls as at 17th July. All of these calls were appointment related. The helpline will remain in place and NHS 24 are providing daily updates on activity levels.

5. NHS Lothian have been contacting patients by telephone for those who have appointments in July and issuing letters to patients who have scheduled appointments from August onwards. NHS Lothian are providing daily update reports on patient contact position for patients with appointments in July. As at 16 July, all 158 paediatric inpatients have been contacted by phone. Of the 1,586 paediatric outpatient appointments, all have received a letter and 1,248 have received a phone call. NHS Lothian continue to try to make contact by phone for the remaining 338 patients.

6. For Department of Clinical Neurosciences patients, all 11 inpatients have received a phone call and all 669 outpatients have received a letter; 448 outpatients have also received a phone call and work continues on contacting the remaining 221 outpatients by phone.

7. NHS Lothian have also been asked to monitor any complaints received about the situation, but no complaints have been reported. There are also no reports of any significant staffing issues as part of the operational impact. The support staff to re-direct any patients who turn up at the new site was in place until today (18/7). The Board have not reported any activity and this support has been stood down, though it will be re-instated if it is needed.

Site Visit

8. On Thursday, I visited both the existing Children's Hospital and the DCN at the Western General Hospital. Both visits were extremely helpful as they allowed me to see first-hand the level of disappointment and inconvenience for staff that the delay has caused and also the impact and disruption on patients.

9. However, staff did appreciate the visit and it allowed them the opportunity to feedback their experiences direct to myself, DG Health and Social Care and the Chief Medical Officer. I gave staff my personal assurance that they would receive the necessary support to enable them to continue to provide high quality healthcare in the existing sites while NHS Lothian work through the technical issues causing the delay.

10. Staff at DCN informed me that they had already been working on a migration plan that would allow them to move as quickly as possible once I have received the necessary assurance that the new facility is safe.

11. Prior to the visit, I met with the Chair and Chief Executive of NHS Lothian and asked that they focus on the following issues as a matter of priority:

- Identify what works need to be done to allow children's services and DCN to operate safely in existing premises until they move to the new hospital;

First Minister

- A full written migration plan for all services moving into the new hospital. This should include timeline, interdependencies, constraints and a full description of the judgements the board have made whilst making the recommendations, including the level of clinical input into these recommendations;
- Details on when all snagging issues will be resolved.

Technical Fix – Critical Care Ventilation

12. The technical fix for the ventilation in critical care is being worked through, but timelines still suggest 4 weeks design, 10-12 weeks procurement and 10-12 week installation; we are establishing what elements of the programme can be undertaken concurrently.

External Checks – NHS National Services Scotland (NSS)

13. I have commissioned NHS National Services Scotland (NSS) to undertake a detailed assessment of all buildings systems in the new hospital which could impact safe operation for patients and staff, recognising how infection prevention must always be embedded within the design, planning, construction and commissioning activities of all new and refurbished healthcare facilities. This work has already started and will be phased, with assessment of water, ventilation and drainage systems prioritised, including the proposed fix for the ventilation unit. This will determine the timeframe for migration of services to the new hospital and a full report on the first phase anticipated in September.

14. Running in parallel, NSS will also provide assurance that current and recently completed major NHS capital projects comply with national standards. This work will take a risk-based approach and will inform development of the potential expansion of the current function and services provided by Health Facilities Scotland; including providing assurance going forward that NHS buildings meet extant standards.

Phased Migration – Options working to develop it

15. Migration of DCN and non-critical care paediatric services will follow assuming a positive conclusion from the report ie nothing will move before September. Due to rota considerations, migration will not happen immediately though we are exploring options to minimise any further delay.

KPMG Audit of Governance

16. It is also important that we understand the factors, including information flow and timeframes, that led to the decision, announced on 4 July, to delay the move to the new hospital. KPMG have been engaged to conduct an independent audit of the governance arrangements for RHCYP, to provide an external and impartial assessment of the factors leading to the delay. This work began on 15 July and in the first instance will focus on collecting and reviewing all pertinent documentation. This will inform next steps, including interviews with key personnel and timeline for reporting; I will receive weekly updates prior to receiving the final report in mid-August.

NHS Lothian – Escalation Level 3

17. I recognise that the cumulative impact of the significant work required to complete the move to the new RHCYP, together with the requirement for improved performance across a number of other areas, including scheduled and unscheduled care, cancer, delayed discharge and mental health, will place significant pressure on the leadership capacity of the Board. Reflecting the significance of this challenge, NHS Lothian have been placed at Level 3 of the NHS Board Performance Escalation Framework which is defined as: 'Significant variation from plan; risks materialising; tailored support required'.

18. A formal Recovery Plan has been requested from the Board, setting out clear milestones to address each of the areas I have highlighted. A package of tailored support will be made available to the Board, in order to develop and implement the Recovery Plan. We have already received a positive, constructive response from the Board on what will be required to develop a credible Recovery Plan.

Oversight Group

19. In order to provide me with necessary assurance to confirm the compliance with standards across the new hospital, I will establish a Project Oversight Group. Membership will potentially consist of Scottish

First Minister

Government, NHS Lothian, Scottish Futures Trust, Health Facilities Scotland and Health Protection Scotland, with a focus on ensuring that we have sufficient clinical and technical expertise as part of the Group.

20. Recognising that Scottish Futures Trust have experience and involvement across the public sector on construction quality issues, I have arranged through their Chief Executive that in addition to them being represented on the Oversight Group, they will also provide advice and support on the management of the NPD contract, commercial advice on remedial works and they will fully cooperate with any internal or external investigation or review of the events leading to the current circumstances.

Parliamentary Issues

21. I answered a GIQ on Thursday 18 July, which outlines what action we are taking to remedy the issues that have delayed the opening of the hospital. I also wrote to the convenors of the Health and Sport Committee and the Public Audit and Post-legislative Scrutiny Committee, local MSPs/MPs, Shadow Health Spokespersons and the Auditor General for Scotland.

22. I am also aware that Miles Briggs has suggested to the convenor of the Health and Sport Committee that the committee '*look to include and take forward an inquiry into the ongoing problems at the new Sick Kids*'. I will provide an update when the committee decides what they are going to do.

Media and Communications

23. Following publication of the GIQ, I issued a press statement summarising the current position and I sent a letter to all NHS Lothian staff; the Chief Executive of NHS Lothian also sent a separate communication to his staff, which was cleared by me.

Conclusion

24. I remain focussed on ensuring that we address all these issues as quickly as possible and I will continue to provide updates as progress is made.

Cabinet Secretary for Health and Sport
19 July 2019

From: Morrison A (Alan)
Sent: 24 July 2019 17:56
To: DG Health & Social Care; McLaughlin C (Christine); Wright M (Malcolm)
Cc: Roche R (Rowena); Crowe B (Barbara)
Subject: Sick Kids - Update note to Cabinet Secretary
Attachments: 2019-20 - Health Finance and Infrastructure - Edinburgh Sick Kids - Update - 25 July 2019.docx

Malcolm

Normally Christine would review before I send this up to you, but due to annual leave she has not had an opportunity to comment.

Attached is a draft note to the Cabinet Secretary on the Sick Kids which she is hoping to receive by Thursday lunchtime.

In the last hour, we have received the latest update from NSS regarding the review and they are now flagging September conclusion as an amber risk as the initial response back from NHS Lothian on water, ventilation and drainage will require further validation; the attached note reflects this position.

I am also aware that Christine attended a meeting yesterday afternoon (as an observer) between NHSL and IHSL and while I have not had an opportunity to discuss with her, her note would suggest there are some risks around critical care ventilation, ventilation across the whole site and some of the other issues which we have tended to classify as snagging. I still feel we need to better understand these issues, so the key question is when do we highlight to Cabinet Secretary.

Regards

Alan

Alan Morrison
Health Finance and Infrastructure
Scottish Government Health and Social Care Directorates



Cabinet Secretary for Health and Sport**EDINBURGH CHILDREN'S HOSPITAL - UPDATE****Purpose**

1. To provide an update on the current situation regarding the new Edinburgh Children's Hospital.

Priority

2. Routine.

Background

3. I have previously provided a summary of the issues currently facing the opening of the new hospital and this note provides a further update on the current actions being taken to resolve the various issues at the new hospital.

Operational Impact and Support

4. In the past week, the NHS Lothian Children's Hospital Helpline has received 16 calls, which is less than half the number of calls in the previous week (33 calls). No staffing issues have been escalated, no complaints have been received and no communication issues have been escalated.

Technical Fix – Critical Care Ventilation

5. The Chief Finance Officer NHS Scotland, and Director of Health Finance, Corporate Governance and Value attended a Steering Group meeting between NHS Lothian and IHSL as an observer on 23 July, where critical care ventilation and ventilation in general was discussed. There remains no agreed technical solution for critical care and further follow up action is required before a fix is identified. This presents a risk to the initial timeline indicated by NHS Lothian of four weeks to identify a design solution for the critical care ventilation.

External Review – NHS National Services Scotland (NSS)

6. NSS have sent 130 questions to NHS Lothian on phase 1 of the review – ventilation, water and drainage. Water and ventilation specialist resources have also been commissioned to undertake an initial assessment and there are provisions in place for site visits on 25 and 26 July. The initial response from NHS Lothian has been received, but some aspects will require follow up action and due to this, delivery of the planned timetable (final report early September) is now assessed by NSS as an amber risk.

Phased Migration

7. Migration of DCN and non-critical care paediatric services will not begin until the NSS review concludes, however these departments are considering how rota and clinic plans can be adapted to minimise any delay between the review being completed and the move to the new facility starting.

KPMG Audit of Governance

8. KPMG have been on site at NHS Lothian and they have met with relevant officials and received all the documentation which they have requested. It is too early to draw any conclusions from their fieldwork, but they are due to meet with the Chief Finance Officer NHS Scotland, and Director of Health Finance, Corporate Governance and Value on 25 July to provide a verbal update and weekly calls are planned going forward.

Oversight Group

9. Draft Terms of Reference for the Oversight Board have been shared with you and a response to your six questions were provided on 24 July. The Board will include appropriate representation from Scottish Government, NHS Lothian, NHS National Services Scotland and Scottish Futures Trust and it will provide advice in relation to five key issues - phased occupation, critical care technical solution, migration, commercial arrangements and contract management. The regularity of the meetings will be determined by the progress of the five key issues highlighted above.

Cabinet Secretary for Health and Sport

Cabinet

10. We are expecting that a SCANCE note will be required for the Cabinet meeting next week. The note will be based on this summary, though it will be updated to reflect further developments with the technical fix, NSS review, KPMG audit etc.

Summary

11. You are invited to note the current position and potential risks to the initial timelines for both the design solution and NSS report. Further updates will be provided on a weekly basis going forward unless there are any significant developments which require an immediate note.

Alan Morrison
Health Finance
25 July 2019

From: STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND)
Sent: 24 July 2019 14:00
To: MCLAUGHLAN, Edward (NHS NATIONAL SERVICES SCOTLAND); RANKIN, Annette (NHS NATIONAL SERVICES SCOTLAND)
Subject: RE: 2019-07-24 RHCYP SCART

Engineering services (Water services)	
4.37	Are water systems designed, installed and maintained in accordance with current guidance? (SHTM 04-01 series Water safety)

Regards

Ian

Ian Storrar BSc CEng FCIBSE FIHEEM MIET
Head of Engineering - Health Facilities Scotland
Procurement, Commissioning and Facilities

NHS National Services Scotland
3rd Floor

[REDACTED]

[REDACTED]

[REDACTED]

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From: MCLAUGHLAN, Edward (NHS NATIONAL SERVICES SCOTLAND) [REDACTED]
Sent: 24 July 2019 13:55
To: STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND) [REDACTED]; RANKIN, Annette (NHS NATIONAL SERVICES SCOTLAND) [REDACTED]
Subject: RE: 2019-07-24 RHCYP SCART

Well that's interesting. Is the SCRIBE owned by someone? It would be useful to send them that and ask for the risk assessment and the sign off process.

Eddie

Eddie McLaughlan
Assistant Director
Engineering, Environment and Decontamination
Health Facilities Scotland
Procurement, Commissioning and Facilities
NHS National Services Scotland



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From: STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND)

Sent: 24 July 2019 13:49

To: MCLAUGHLAN, Edward (NHS NATIONAL SERVICES SCOTLAND); RANKIN, Annette (NHS NATIONAL SERVICES SCOTLAND)

Subject: 2019-07-24 RHCYP SCART

Going through the documents and found this as part of their stage 4 SCRIBE. I will put this on the master question list and get it off to them this afternoon.

Engineering services (Ventilation)			
4.25	Are heat emitters, including low surface temperature radiators, designed, installed and maintained in a manner that prevents build up of dust and contaminants and are they easy to clean?	✓	
4.26	Is the ventilation system designed in accordance with the requirements of SHTM 03-01 'Ventilation in Healthcare Premises'?	✓*	
4.27	Is the ventilation system designed so that it does not contribute to the spread of infection within the healthcare facility? <i>(Ventilation should dilute airborne contamination by removing contaminated air from the room or immediate patient vicinity and replacing it with clean air from the outside or from low-risk areas within the healthcare facility.)</i>	✓	
4.28	Are the ventilation system components e.g. air handling, ventilation ductwork, grilles and diffusers designed to allow them to be easily cleaned?	✓*	

Regards

Ian

Ian Storrar BSc CEng FCIBSE FIHEEM MIET
Head of Engineering - Health Facilities Scotland
Procurement, Commissioning and Facilities

NHS National Services Scotland



www.hfs.scot.nhs.uk

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Draft**RHCYP/DCN: Commissioning/Ventilation**

Note of a meeting held at 4.00 pm on Thursday 25 July 2019 in Meeting Room 5, Waverley Gate, Edinburgh.

Present: Susan Goldsmith (Chair), Tim Davison, Tracey Gillies, Alex McMahon, Iain Graham, Brian Currie, Lindsay Guthrie, Donald Inverarity, Ian Laurence, Jacquie Campbell and Kizzy Taylor.

Apologies: George Curley

In Attendance: Chris Graham.

1. Minutes of the Meeting held on 22 July 2019.

1.1 Approved.

2. Technical Update

2.1 Ventilation Workshop – Update - Brian Currie referred to the updated tracking document and email which had been circulated. Brian updated on the following key points to bring to the IMT's attention:

1. **Very limited extract in theatre corridors. Corridors are not at 0 absolute pressure and do not meet required 7 ach/hr ([SHTM03-01 part A appendix 2 Table A2](#))** – MPX say some work has been carried out however IOM anticipate this will require additional ductwork and grilles and could therefore be disruptive if carried out in operational phase
2. **Excessive flexible ductwork in theatre ceilings** – Although this could be done during theatre maintenance downtime it would be better to do now as access is required above ceilings. Exact extent of this issue is still to be established so may not be difficult to do. Also worth noting that the theatres are balanced and safe to use with this ductwork in place.
3. **Scrub Extract Grilles** – PCo have installed grille at high level, guidance says should be low level, may not be an issue, info awaited from designers and HFS to review. If change is required better it is done now
4. **Back up arrangements appear to be very complex and as such likely to be challenging in future** – Isolation room maintenance bypass facility still to be fully tested
5. **Cabling inside AHU also cable connectors inside AHU, potential for electrical faults to cause as source of fire within the airstream. Potential for smoke/fume to enter clinical areas. Cables and connectors will be difficult to clean and soapy water used to clean AHU internals may impact on connections** – Await confirmation from PCo that these units and cabling are [SHTM 03-01](#) compliant. If remedial work is required it will be fairly significant and will result in periods of downtime at each AHU. Although this can be planned to coincide with

maintenance downtime to minimise disruption, critical systems would be better done now.

6. **Some motors running at over 95% speed so there is limited scope for system to overcome dirty filter pressure drop and maintain system performance** – PCo to confirm spare capacity will overcome dirty filters, if not implications are replace with larger fan (better done now) or increase frequency of filter changing (possibly more frequent downtime but can be planned)
7. **The use of pressure control sensors downstream of AHU but upstream of UCV canopy has been shown at other hospitals to cause fluctuating or hunting airflows within UCV canopy. The use of air flow sensors appears to have been more stable** – PCo reviewing location of these, if location is as designed they may require changing out for a flow sensor which will result in downtime.

2.1.1 It was hoped to have a firm position in place and greater clarity around these issues following the meeting tomorrow with IHSL.

2.1.2 There was also discussion on the board change and step in rights processes. Susan Goldsmith reported that a Board Change would be prepared and that at the ventilation workshop the scope of work to be done in critical care would be agreed. There would need to be a covering paper to go with it to Christine McLaughlin as the position on critical care.

2.1.3 It was hoped to have the board change prepared tomorrow; begin dialogue with MacRoberts LLP around board change and step in rights and have the paper with Christine McLaughlin for sign off by Tuesday (30th July 2019).

SG

2.1.4 Brian Currie also explained that although the MPX team on site were being co-operative with a concept design now reached. The challenge was that some of the MPX designers had now stepped away. It was key for MPX to bring the designers back on board or for MPX to find different designers or contractor. If MPX are unable to do this IHSL can go somewhere else or NHSL can step in.

2.1.5 There was also discussion on the importance of having ventilation works undertaken before the hospital is occupied; the construction costs associated with any remedial works and the single room 6 air changes issue which remained unresolved.

2.1.6 In relation to the 6 air changes for single rooms issue there was a need for HFS and HPS to be involved in coming to a view on delivery of the standard regarding air changes. Brian Currie confirmed that HFS was reviewing single bed and 4 bed room ventilation at the moment along with drainage. Susan Goldsmith added that HFS/HPS required to understand NHS Lothian's risk assessment of the derogation already agreed for 4 air changes.

- 2.1.7 Tim Davison asked about the clarity of the evidence trail for the 6 to 4 air change. Brian Currie stated that the paperwork for the single rooms was light; however there was clear organisational knowledge around this within the team. It was noted that there remained an understanding with IHSL and MPX that 6 air changes could not be delivered with the pressure regime NHSL had requested.
- 2.1.8 Susan Goldsmith reported that NSS (HFS&HPS) would be visiting the new hospital on 5th and 7th August for technical workshops. Brian Currie added that they were in the hospital today and tomorrow (26th July) and would be starting to conclude their views to share with NHSL which would help start to put things into context. It was noted that the 7th August was also the NHSL Board Meeting.
- 2.2 Water Report – Update - There was discussion on water testing and getting the water regime up and running. This would be taken forward and agreed at the workshop to be held on Monday 29th July. HFS and HPS would be attending the workshop.
- 2.2.1 Brian Currie reported that there was testing for biological organisms being undertaken today. Donald Inverarity added that additional testing for other organisms may relate to lessons learned from the Queen Elizabeth University Hospital in Glasgow with regards to patients developing water related infections and draft guidance relating to preventing healthcare water-associated infection incidents water was currently out for consultation from HPS. It was noted the despite what biological organisms may be found the control measures for addressing these remained the same and this work would be a step forward in influencing the RAG rating for water.
- 2.2.2 There was also discussion on drainage. It was noted that this had not yet been looked at. Brian Currie reported that there was a lot of documentation around drainage which had been part of the settlement agreement. Alex McMahon added that it was proving difficult working through all this documentation and that the workshop approach was proving more beneficial.
- 2.2.3 Alex McMahon agreed to bring the Water Report to IMT on 1st August.

AMcM

3. SGHD Assurance Group

- 3.1 It was noted that although the group had now been agreed in principle, there was nothing to share at this time. The Terms of Reference for the Group were awaited.

4. HFS/HPS/KPMG

- 4.1 Critical Systems – Independent Testing – It was not yet clear how some of the critical systems would be tested and this could have an impact on the migration plan.

- 4.2 Feedback KPMG Interviews – It was noted that most people had now been interviewed and that KPMG were currently taking stock of the information provided. There was discussion on the scope KPMG may be looking at, this would definitely include the process of agreeing derogations however it was not clear how this would link with the work being undertaken by HFS.
- 4.2.1 It was understood that KPMG were meeting with Jennifer McKay on her return from leave. Jennifer had been clear and robust in stating that NHSL had no responsibility to be checking compliance or a right to check this and it was important that this was fed into KPMG's review.
- 4.2.2 It was noted that Christine McLaughlin had asked KPMG to consider the circumstances around NHSL board assurance that the settlement agreement had been met so the hospital could open.
- 4.2.3 Brian Currie confirmed that KPMG would also be meeting with the independent tester next week, but remained unable to meet with IHSL despite the request being made.

5 Phased Move – Update

- 5.1 Jacquie Campbell outlined the anticipated Migration Plan. It was noted that DCN had done work around the opportunity for them to move in isolation to children's services. It had been concluded that there were no issues that would stop DCN moving as an independent unit. This would be a condensed 4 day phased move (original plan was 9 day) with a 5th day for any decommissioning work to take place. The service would require 8 weeks' notice ahead of any move and this could be progressed once assurances were signed off.
- 5.2 There were still some risks with the service remaining in the existing DCN facilities with some actions still in progress. Jacquie Campbell stated that Michael Pearson would be providing regular updates as actions are completed.
- 5.3 There was discussion around the Sick Kids migration plan. Jacquie stated that a similar piece of work to DCN had been requested for Sick Kids and would be developed with Fiona Mitchell once back from leave. It was noted that there would also be a meeting with the Sick Kids Medical Staff Association at the end of August. Radiology was also looking at a plan around split site working. Jacquie added that the Cabinet Secretary was also keen to understand the Migration Plan.
- 5.4 Jacquie Campbell to follow up with Fiona Mitchell and bring the Paediatric Migration Plan to the IMT in the next few weeks.

JC

6. IHSL Steering Group Meeting 23 July - Update

- 6.1 Nothing further reported.

7. RHSC – Sciennes

- 7.1 Iain Graham reported on discussions with the Sciennes purchasers around a long stop date extension.

8. Any Other Competent Business

- 8.1 NHS24 telephone Helpline – It was noted that this was not yet being stepped down but would be reviewed again in the following week.
- 8.2 Site Visit Request from European Association for Children in Hospital (EACH) – It was agreed that the request from EACH to visit the new hospital in September 2019 would be declined.

BC

9. Date and Time of Next Meeting

- 9.1 The next meeting would be held at 4.00 pm on Monday 29 July 2019 in Meeting Room 5, Waverley Gate, Edinburgh.

From: Roche R (Rowena)
Sent: 25 July 2019 16:07
To: Cabinet Secretary for Health and Sport
Cc: Connaghan J (John) (Health); McLaughlin C (Christine); DG Health & Social Care; Chief Medical Officer; Calderwood C (Catherine); Murray D (Diane); Hart S (Suzanne); Klein G (Gerard); Rogers S (Shirley); Aitken L (Louise); Crowe B (Barbara); Morrison A (Alan); Smith G (Gregor)
Subject: Edinburgh Children's Hospital - Cab Sec update - 25 July 2019
Attachments: 2019-20 - Health Finance and Infrastructure - Edinburgh Sick Kids - Update - 25 July 2019 (003) (002).docx

Jack,

Please see attached briefing to Cab Sec to provide an update on RHCYP.

Kind regards,

Rowena

Rowena Roche
Directorate of Health Finance
Scottish Government | [REDACTED]
[REDACTED]

Please note that I do not work on Thursday afternoons or on Fridays.

Cabinet Secretary for Health and Sport**EDINBURGH CHILDREN'S HOSPITAL - UPDATE****Purpose**

1. To provide an update on the current situation regarding the new Edinburgh Children's Hospital.

Priority

2. Routine.

Background

3. Following previous summaries of the issues currently facing the opening of the new hospital, this note provides a further update on the current actions being taken to resolve the various issues at the new hospital.

Operational Impact and Support

4. In the past week, the NHS Lothian Children's Hospital Helpline has received 16 calls, which is less than half the number of calls in the previous week (33 calls). No staffing issues have been escalated, no complaints have been received and no communication issues have been escalated.

Technical Fix – Critical Care Ventilation

5. Christine McLaughlin attended a Steering Group meeting between NHS Lothian and IHSL as an observer on 23 July, where critical care ventilation and ventilation in general was discussed. Work is ongoing on the technical solution and NHS Lothian are considering bringing in an outside design contractor to expedite this process. It is NSS' assessment that the 6-month timeframe for agreeing, implementing and testing the solution remains realistic and they will fully support this process. Briefing will be provided as soon as we have full details of the proposed solutions.

External Review – NHS National Services Scotland (NSS)

6. NSS have sent 130 questions to NHS Lothian on phase 1 of the review – ventilation, water and drainage. Water and ventilation specialist resources have also been commissioned to undertake an initial assessment and there are provisions in place for site visits on 25 and 26 July. The initial response from NHS Lothian has been received, but some aspects will require follow up action and due to this, delivery of the planned timetable (final report early September) is now assessed by NSS as an amber risk. However, they expect to provide an interim position in the third week of August.

7. NSS are undertaking an expert technical review of the agreed design change from 6 to 4 air changes per hour in general wards. Scottish Health Technical Memorandum 03 (SHTM03) sets out guideline of 6 changes per hour and NSS's review will consider scientific evidence on this and lower rates. This will take into account that delivered rate change is a cumulative figure, made up of multiple factors, and not solely the rate change provided by a ventilation unit (for example, trickle vents on windows would contribute to rate change). From this review they will provide an expert assessment of whether the current air change rate is sufficient. The initial literature review will be completed by 16 August and will be followed by technical discussions in order to form a view on this matter. I would propose that a meeting be arranged with you and the relevant HPS/HFS leads at that point.

Phased Migration

8. Migration of DCN and non-critical care paediatric services is unlikely to begin until the NSS review concludes, however these departments are considering how rota and clinic plans can be adapted to minimise any delay between the review being completed and the move to the new facility starting.

KPMG Audit of Governance

9. Christine McLaughlin met with KPMG today, 25 July, and weekly calls are planned going forward. KPMG have been on site at NHS Lothian collecting documentation and holding meetings with relevant officials, NSS and Scottish Futures Trust. They have also made contact with the independent tester and will approach IHSL (the special purpose vehicle) and Multiplex (the contractor)

Cabinet Secretary for Health and Sport

to request their input. We expect an initial draft of their findings by 9 August and the finalised report the following week.

Oversight Group

10. Draft Terms of Reference for the Oversight Board have been shared with you and a response to your six questions were provided on 24 July. The Board will include appropriate representation from Scottish Government, NHS Lothian, NHS National Services Scotland and Scottish Futures Trust and it will provide advice in relation to five key issues - phased occupation, critical care technical solution, migration, commercial arrangements and contract management. The regularity of the meetings will be determined by the progress of the five key issues highlighted above. We expect the Board to meet in early August.

Cabinet

11. A SCANCE note will be required for the Cabinet meeting next week. The note will be based on this summary, though it will be updated to reflect further developments with the technical fix, NSS review, KPMG audit, etc.

Summary

12. You are invited to note the current position and potential risks to the initial timelines for both the design solution and NSS report. Further updates will be provided on a weekly basis going forward unless there are any significant developments which require an immediate note.

Alan Morrison
Health Finance
25 July 2019

From: Goldsmith, Susan
Sent: 26 July 2019 16:22
To: [REDACTED] Executive, Chief
Subject: FW: RHCYP + DCN - Little France - Draft High Value Change (Tech Spec Only) - Paediatric Critical care Ventilation
Attachments: CC Vent Remedials_Board Change_DRAFT_Tech Spec Only.pdf
Importance: High

For info

Draft only at this stage as agreed with IHSL/MPX this am. Formal Board change to be issued early next week as discussed at our IMT yesterday

Susan

From: Currie, Brian [REDACTED]
Sent: 26 July 2019 14:21
To: 'Wallace Weir' [REDACTED]
Cc: 'David Wilson' [REDACTED]; Ken Hall [REDACTED]; 'Craig Simpson' [REDACTED]; Goldsmith, Susan [REDACTED]; Curley, George [REDACTED]; Graham, Iain [REDACTED]; Henderson, Ronnie [REDACTED]; STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND) [REDACTED]
Subject: RHCYP + DCN - Little France - Draft High Value Change (Tech Spec Only) - Paediatric Critical care Ventilation
Importance: High

Wallace

Further to our workshop this morning and your request for further confirmation of our requirements, as detailed to our email of the 16th July, 2019, we attach a Draft High Value Change Notice (Tech Spec Only).

You intimated that you would taking advice from MPX in relation to this and in particular the appointment of a designer and that you hoped to be able to respond early next week.

As you are acutely aware no design progress has been made since issue of our email on the 16th July, 2019.

We also discussed this morning the need for IHSL to investigate and communicate all other potential options for delivery of these remedials at the earliest possible opportunity.

Regards

Brian

Brian Currie
Project Director - NHS Lothian
RHCYP + DCN
[REDACTED]

Edinburgh



High Value Change Notice

Project:	RHCYP & DCN		
1 – Issue of Change Notice to Project Co			
Title:	Paediatric Critical Care Ventilation		
Reference No:		Date:	
Target Cost Capital:	£1.9m	Target Cost Revenue:	TBA
High Value Change Requirements (Schedule Part 16, Section 4, Clause 2.1.3)			
<p>In accordance with Schedule Part 16 (Change Protocol), the Board requires Project Co to Design, Supply and Install a ventilation system or systems capable of delivering 10 air changes/hour at +10kpa as per SHTM 03-01, Appendix 1, Table A1 to the following rooms:</p> <p>1-B1-065 including 1-B1-022, 1-B1-069, 1-B1- 076 and 1- B1-071 which are all open to 1-B1-065</p> <p>1-B1-075</p> <p>1-B1-063</p> <p>1-B1-037</p> <p>1-B1-031</p> <p>1-B1-021</p> <p>1-B1-020</p> <p>1-B1-019</p> <p>1-B1-009</p> <p>All environmental requirements for <u>all</u> spaces served by these systems shall be met.</p> <p>All works to be carried out and monitored after and with reference to a collaborative full Stage 3 HAI SCRIBE assessment being approved by NHS Lothian.</p> <p>Design development to include input from the board and all appropriate stakeholders.</p>			
Value for Money Assessment (Schedule Part 16, Section 4, Clause 2.1.4)			
<p>To allow the Board will 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"> • 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 programme • Construction phase method statement 			
Date by which parties are required to meet to review the High Value Change			<i>Input 5BDs</i>

LVCN



Notice and agree the content for the High Value Change Proposal (Schedule Part 16, Section 4, Clause 2.3.1)

following receipt of Notice

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:

Name of Signatory (type or print):

Date:

DRAFT

From: Goldsmith, Susan [REDACTED]
Sent: 28 July 2019 09:49
To: 'Matthew Templeton'
Subject: RE: Critical Care

Thanks Matt

Susan

From: Matthew Templeton [REDACTED]
Sent: 26 July 2019 17:41
To: Goldsmith, Susan [REDACTED]; [REDACTED]; Stephen Gordon [REDACTED]; Richard Osborne (MacCap) [REDACTED]; Viv Cockburn [REDACTED]; 'Roger Thompson RMT' [REDACTED]
Cc: [REDACTED]
Subject: RE: Critical Care

Hi Susan,

Thanks for the email. IHSL and Multiplex are due to have a catch-up call on Monday where Critical Care is on the agenda, so we will discuss your points then, and update you on our call on Tuesday morning.

Regards
Matt

From: Goldsmith, Susan [REDACTED]
Sent: 26 July 2019 16:37
To: [REDACTED]; Stephen Gordon [REDACTED]; Richard Osborne (MacCap) [REDACTED]; Matthew Templeton [REDACTED]; Viv Cockburn [REDACTED]; 'Roger Thompson RMT' [REDACTED]
Cc: [REDACTED]
Subject: FW: Critical Care
Importance: High

Dear All

It has now been 3 weeks since we have been tasked with addressing compliance with SHTM03-01 for critical care and I am appreciative of all the engagement there has been with the team at the twice weekly technical workshops.

I was expecting from today's workshop that there would have been complete clarity on the designer to enable progress but unfortunately that was not the case. It became apparent at the workshop that you require further confirmation from us of our requirements as emailed to you on the 16th July and this has now been issued in the form of a Draft High Value Change Notice (Technical Specification only).

From discussions with you I understand the importance of getting TUV Sud to do the detailed design. However your clarification of all other options available to you should this not be achievable is required. You are all aware of how urgent this is and if TUV Sud do not come back to the table we must get another designer on board now.

This was raised at the Steering group meeting this week and Ross agreed to take away. We have not heard anything further other than feedback from today's workshop as outlined above and confirmation from Wallace Weir that IHSL would be taking advice from MPX.

I look forward to hearing from you

Regards

Susan

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Please note from Monday 17th June, we are moving the Edinburgh office to 2nd Floor, Caledonian Exchange, 19A Canning Street, Edinburgh, EH3 8EG. All telephone numbers will remain the same. We look forward to welcoming you to our new office.

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NHS Lothian

Susan Goldsmith Director of Finance

RHCYP + DCN UPDATE – CRITICAL CARE VENTILATION REMEDIALS**1 Purpose of the Report**

- 1.1 The purpose of this report is to update the Executive on the current status of the proposed remedial works to the installed Paediatric Critical Care ventilation system.

2 Recommendations

- 2.1 That failing co operation from IHSL to undertake the works by any means available to them, the Board exercise it's "step in" rights under the terms of the Project Agreement and appoint a Design and Build Contractor through an established NHS framework using an "open book" approach fully scrutinised by the Board's consultant Quantity Surveyor, Thomson Gray, to ensure value for money.

3 Discussion of Key Issues

The installed ventilation system serving Paediatric Critical Care cannot deliver sufficient air changes to satisfy compliance with SHTM 03-01, Appendix 1, Table A1 to the following nine rooms:

1-B1-065
1-B1-075
1-B1-063
1-B1-037
1-B1-031
1-B1-021
1-B1-020
1-B1-019
1-B1-009

- 3.1 A concept design solution has been arrived at following six workshops (9th, 12th, 16th, 23rd and 26th July) attended by IHSL, MPX, TUV SUD, BYES, NHSL and HFS at three of those workshops. This comprises the installation of a new Air Handling Unit (AHU) external to the facility situated in the PARU Garden in close proximity to Critical Care in combination with the existing AHU serving Critical Care. Space restrictions in existing plant rooms and within the existing Critical Care AHU itself have prohibited a solution within the existing footprint of the facility.

The Board's Quantity Surveyor has estimated these works could attract a cost of £1.9m inclusive of a 30% risk allowance.

- 3.2 A Draft Board Change (technical specification only) requiring IHSL to undertake the remedial works (see attached) was shared with IHSL at the workshop held on the 26th July, 2019 and subsequently issued to IHSL that day. HFS's Chief Engineer was consulted regarding the drafting and supports the technical specification outlined.

IHSL commented that MPX were currently unable progress with the design of the remedial works using the designer they had employed on the installed system. No reason was given.

However, IHSL consider they may be able to respond to this draft Board Change early in w/c 29th July, 2019 once MPX have obtained TUV SUD's view on whether they will participate further.

- 3.3 Utilising IHSL's Hard FM Contractor Bouygues (BYES) to undertake both design and installation was not considered appropriate by IHSL and they reaffirmed their preference that MPX undertake this work.
- 3.4 Should IHSL persist in not facilitating the remedial works, the Board could exercise it's "step in" rights available to them in order that a framework design and build contractor be employed directly by the Board.

[MacRoberts to comment]

It is recognised that difficulties in relation to warranties may arise in the future between parties but it is considered that the overriding need to ensure these essential works are undertaken outweighs any potential risk in this respect.

4 Key Risks

- 4.1 The successful execution of the Critical Care Remedial Ventilation Works is on the critical path for migration of paediatric services into the facility and as such must be delivered in as short a programme as possible. Any slippage has a direct consequence for migration.

Warranty disputes should the Board exercise it's "step in" rights.

5 Risk Register

- 5.1 Datix to be updated as appropriate.

6 Impact on Inequality, Including Health Inequalities

- 6.1 None

7 Duty to Inform, Engage and Consult People who use our Services

- 7.1 Not applicable.

8 Resource Implications

- 8.1 The resource implications are primarily additional capital expenditure of circa £1.9m and technical adviser fees.

Brian Currie

Project Director RHSC + DCN

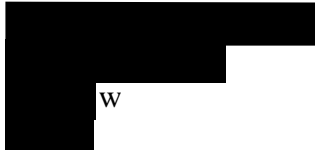
26th July 2019



Malcolm Thomas

Consulting Engineer

Mr. Ian Storrar
Head of Engineering
Health Facilities Scotland
NHS Nation Services Scotland



27 July 2019

Dear Ian,

Children's Hospital, Edinburgh Site Visit 25 July 2019

I visited site on 25 July to gain an appreciation of the ventilation system as installed. The Hospital is new and yet to be taken into use.

General

Overall first impressions were that the ventilation plant installation overall was average but that there were many minor air leaks, faults and niggles. Most of these will be straightforward to rectify but what was alarming was that even though the Hospital opening had been delayed they still remained to be resolved. The report from IOM highlighted similar issues and it was evident that the system when offered for validation was not ready.

I was concerned to read about the length and configuration of flexible ductwork above the ceilings. The HTM is quite clear that flexible ductwork should be as straight and short as possible, not exceed 1m in length and never be used in lieu of a bend.

Air Handling Units

A major non compliance arises with the ability to change the supply and extract fans in the major Air Handling Units (AHU). They are buried within the AHU with no obvious way to access or remove them. HTM03-03 requires that all elements of an AHU be accessible for maintenance and that over the life of the unit they may need to be removed or replaced. This will not be possible without major disruption with the units as installed. Given the large areas that the individual AHU's serve, changing fans will take a significant amount of time and render the section of the hospital that they serve unavailable.

It was also noted that there is a large amount of loose wiring and plug connectors inside the units and the IOM report also highlighted this issue.

Helicopter Landing Pad

I am unhappy with the location of the helicopter landing pad. There are open courtyards below and various air supply intakes and extract discharges in the vicinity. The downdraft from the helicopter when using the pad will have an adverse effect on the performance of these systems and may result in reverse air flows into the hospital.

I note that there is a ground level helicopter pad adjacent to the neighboring building and within easy reach of the children's hospital and wonder why this facility is not considered adequate. I understand the desire to have a short transfer route for a patient arriving by helicopter but there are also the needs of all the patients in the hospital to consider.

Operating Theatres

UCV Theatres

The "Clean zone" under the Ultra Clean Ventilation terminal is only delineated by a thin line on the floor. Good practice in a new installation such as this is to delineate the entire floor zone in a contrasting colour to that of the surrounding floor area. In that way it is immediately obvious when personnel or instrument trolleys stray or get nudged out of the zone. From the comments in the IOM report the line is a late addition so the contractor evidently did not intend to meet the HTM requirement when the flooring was originally laid.

Conventional Theatres - Preparation room

Noted that all the preparation rooms are designed as "Sterile Pack Store" (SPS) rooms. This is normal for Ultra Clean Ventilated (UCV) theatres where good practice recommends that lay up of instruments takes place under the UCV terminal. In Conventional Operating suites instrument packs are normally opened and prepared in "Lay up" preparation room as this cuts down the time between cases. The Preparation room in the conventional theatre in this development is a SPS Prep. It is important that staff using the facility are made aware of this.

Scrub areas

The scrub rooms are effectively an open corridor off the operating room so their volume does not need to be included in the total volume of the operating room. The scrub areas do however need a good air flow from the operating room, down the length of the scrub and out at the far end. The existing ceiling level extract terminal is only designed to extract 100L/s which given that the approximate average volume of the scrub is 33m³ only gives 11 air changes per hour to this area. I recommend providing an additional low level extract terminal in the corner adjacent to the far end of the scrub trough. This terminal to extract 100L/s which together with the existing ceiling terminal will result in approximately 20 air changes per hour from the scrub area. Corner duct to be formed with plaster board and fitted with a pull off face extract terminal for ease of cleaning.

Anaesthetic rooms

Supply and extract in Anaesthetic rooms should provide a clean air flow path for the staff to reduce the possibility of them being casually exposed to leaking and /or exhaled Anaesthetic agents. Most rooms are satisfactory but Anaesthetic rooms 31 and 34 need the ceiling supply terminal moving to the opposite side of the room and in Anaesthetic room 30 the ceiling supply terminal is too close to the door and should be relocated towards the middle or further end of the room. (See attached information)

Shared Utility rooms

The extract for the utility rooms is shared between two air handling units. If one AHU is shut down or put into “set back” then there will not be sufficient air extract in the utility. Rather than installing complicated constant volume boxes it would be simpler to fit a small auxiliary extract fan that is controlled by room pressure.

Recovery areas

Satisfactory as these are ventilated with high level supply down the center of the room and low level extract at the head end of the beds.

Isolation rooms

There is an obvious problem of resilience and routine maintenance as up to five isolation rooms are fed from a single AHU which, to make matters worse also serves the critical care unit and some general areas. All the eggs are in one basket! There is an emergency bypass that will allow the load to be taken by another AHU during routine maintenance or breakdown but the operation of this has yet to be proved.

I understand that there is an intention to split the load in two, an approach that I endorse. I have left information about cabinet AHU's with Ian Brodie of Mott Macdonald as these may offer a simpler solution to splitting the load than just adding a single conventional AHU.

Conclusions

Taken overall the design and provision of ventilation in this development has I consider made insufficient allowance for the routine operation and maintenance of the systems. As a consequence resilience is very poor. Breakdowns and unforeseen stoppages will result in significant portions of the hospital without active ventilation. It should be remembered that ventilation is provide in critical areas such as theatres, isolation rooms and critical care in order to reduce the possibility of infection by the airborne route.

The ventilation installation itself is below the standard that would be expected with many outstanding issues that are yet to be resolved. I recommend a full snagging inspection of each systems from its supply intake right through to the discharge position. This should be followed by “cause and effect” testing to prove the control and indication functions.

The fire dampers also need to have their operation proved. Note that in many locations inspection access panels have not been installed so the action of the fire dampers cannot be directly observed. This needs to be rectified.

It is evident that much remains to be done before the hospital can accept patients.

Malcolm Thomas

Consulting Engineer

Lead Author HTM 03-01 – Specialised Ventilation for Healthcare Premises

Draft**RHCYP/DCN: Commissioning/Ventilation**

Note of a meeting held at 4.00 pm on Thursday 29 July 2019 in Meeting Room 5, Waverley Gate, Edinburgh.

Present: Susan Goldsmith (Chair), Tracey Gillies, Alex McMahon, Alex Joyce, Iain Graham, George Curley, Janice Mackenzie, Ronnie Henderson, Lindsay Guthrie, Ian Laursen, Jacquie Campbell and Clifford Burden.

Apologies: Tim Davison, Brian Currie.

In Attendance: Lyndsay Baird

1. Minutes of the Meeting held on 25 July 2019.

- 1.1 Approved subject to the following amendment:
- Alex Joyce being included in the attendees list.

2. Technical Update

2.1 Ventilation Workshop – Update – Iain Graham referred to 7 action detailed within 25 July 2019 minute of the Incident Management Team. Overall there had not been much progress against the actions. Iain updated on the following key points to bring to the IMT's attention:

1. **Very limited extract in theatre corridors. Corridors are not at 0 absolute pressure and do not meet required 7 ach/hr ([SHTM03-01 part A appendix 2 Table A2](#))** – This action remained with MPX to agree a way forward.
2. **Excessive flexible ductwork in theatre ceilings** – This action remained with MPX to agree a way forward.
3. **Scrub Extract Grilles** – HFS had been given further information and a response on whether the review of the installation of grille at high level was acceptable was awaited. If this is not acceptable a Board change will be required.
4. **Back up arrangements appear to be very complex and as such likely to be challenging in future** – the full position in respect of the Isolation room maintenance bypass facility testing remained unclear. Work was ongoing through the engagement with HFS.
5. **Cabling inside AHU also cable connectors inside AHU, potential for electrical faults to cause as source of fire within the airstream. Potential for smoke/fume to enter clinical areas. Cables and connectors will be difficult to clean and soapy water used to clean AHU internals may impact on connections** – Following an inspection of a unit and cabling it was clear that there were issues to be addressed. Remedial work was required to address the gaps between the cables, the fit of the interim filter and the thermal wheels. The risk related to the AHU

was that contaminants could potentially bypass the filters. HFS and MPX to consider further and fix through redesign.

6. **Some motors running at over 95% speed so there is limited scope for system to overcome dirty filter pressure drop and maintain system performance** –Work was ongoing and the issue is not resolved.
7. **The use of pressure control sensors downstream of AHU but upstream of UCV canopy has been shown at other hospitals to cause fluctuating or hunting airflows within UCV canopy. The use of air flow sensors appears to have been more stable** –Work was ongoing and the issue is not resolved.

2.1.1 Iain Graham was tasked with producing a table that listed the 7 key points of concern in respect of ventilation with a clear track of changes from meeting to meeting. This table would include Infection Control and Engineer narrative and an assigned lead against it on the table. IG

2.1.2 There was discussion in respect of the Board Change for Critical Care. Susan Goldsmith confirmed that the Board Change related only to critical care and would not affect the 7 key points raised by Brian Currie at 25 July 2019 meeting. Those 7 points remained with HFS and MPX for assurance and to identify a fix.

2.1.3 There was some discussion in respect of the Thermal Wheels relating to point 5 (**Cabling inside AHU**). There was an expectation that HFS would come back and confirm the position relating to the efficiency of the thermal wheels and whether they should in fact be disconnected. On receipt of the advice from HFS, George Curley would provide a facilities perspective on the advice given and whether he was content to accept it. GC

2.1.4 It was noted that in the absence of Brian Currie, Janice Mackenzie and Ronnie Henderson would cover work on the ground at the RHSCY/ DCN site. Iain Graham would pick up the actions and feedback to the IMT.

2.1.5 The group noted that it was disappointing that little progress had been made since the previous meeting.

2.2 Critical Care Remedials – The previously circulated draft change notice was noted. Next steps would be for IHSL and MPX to engage with designers and bring back proposals complete with detailed costings. Throughout the process of engagement there would be opportunities for dialog and scrutiny of the proposals. If there was a failure to engage on the part of the designers, IHSL and MPX had already been advised that a the appointment of a different supply chain was imperative. A teleconference was set up for Tuesday am to get IHSL/MPX's response on the general ventilation issues and the Board change for Critical Care.

2.2.1 Iain Graham advised that the risk associated with the Board change not being clear enough to specify the works against SHTM 03-10 was minimal. The

change was explicit in respect of the expected work, and where issues may arise would be other environmental areas.

2.2.2 There was agreement that there should be caveat detailed within the Board Change that states that any offer or proposal presented to the Board was subject to sign off by HFS and HBS.

2.2.3 The importance of accurate dates and version control on all proposals was noted. There was agreement that it was imperative that there was a clear audit trail that could be evidenced going forward.

2.2.4 Legal advice had been sought in respect of NHS Lothian 'stepping in' to get the works instructed by another designer and contractor if there was no engagement. MacRoberts advised that it would not be wise at this stage for NHS Lothian to take such action. Advice was to continue to put pressure on IHSL and MPX to engage with designers.

2.2.5 Next steps would focus on formalising the Board change, seeking approval from HFS and assurance from MacRoberts on the legal aspect of the change. Iain Graham took an action to formalise the Board change and issue it.

IG

2.3 Water Report – Update – A Formal report had been expected for consideration. It was noted that due to the short timeline this had not been possible on this occasion.

2.3.1 George Curley advised that the meeting in respect of the water testing and regime have been positive. Key stakeholders were in attendance and the results provided from all stakeholders had indicated that in the main the water distribution systems were healthy.

2.3.2 There were a number of localised actions required. George Curley advised the group of the intention to create a remedial package in respect of the localised actions to share with key stakeholders. He advised that stakeholders recognised that the actions were required and appropriate. Estimated timeframe for habitation was 3 months at this time in respect of the work and suite of testing required.

2.3.3 Members stressed the importance of emphasising that the water quality was safe for occupation and that the works proposed were being taken because of the opportunity for enhancement in advance of occupation

2.3.4 There was agreement that a written report should be presented to the IMT for full consideration at its next meeting. The report should detail the outcomes of recent testing, conclusions reached, timelines for the actions working back from the anticipated point of occupation, explicit narrative of how each action would be achieved and who was responsible. There was agreement that ventilation remained a separate issue and should not be considered in this report at this stage. George Curley was agreed to liaise with colleagues and bring forward a detailed written plan for consideration to the IMT on 1st August 2019.

GC

- 2.3.5 Tracey Gillies was comfortable for George Curley links the actions and report to the lessons learned from the Queen Elizabeth University Hospital in Glasgow with regards to patients developing water related infections.
- 2.3.6 George Curley advised that the timeline for the production of the water quality plan remained unclear. Clarification on this matter would need to be sought from Brookfields [note – Multiplex: Brookfields is previous company name].
- 2.3.7 Following consideration at the IMT the report would be shared with HFS and HPS.

GC

3. SGHD Assurance Group

- 3.1 The Terms of Reference for the Group was in draft. Susan Goldsmith would send the draft to Alex McMahon and Tracey Gillies for their comments, before bringing it to the IMT for consideration

4. HFS/HPS/KPMG

- 4.1 HFS/HPS – HPS/ HFS dialog was playing into all discussion however, the formal process they intended to follow remained unclear. It was noted that there would be 2 workshops on 5th and 7th August 2019. The group agreed to take the opportunity to present the reports on ventilation and water quality to the 5th August 2019 workshop to initiate discussion in respect of the formal process to be taken. Iain Graham agreed to issue the reports to Jim Miller in Susan Goldsmith's absence.

IG

- 4.2 There was agreement that establishing the work programme for HFS would also be important

4.2 Feedback KPMG Interviews

- 4.2.1 There was nothing else to report at this time.

5. Helipad Testing

- 5.1 There was some discussion on the process of testing for the Helipad to ensure that staff who received training can experience the first hand effects of the helicopter landing. An assessment of the impact of the downdraft on courtyards and the surrounding areas would be taken at the time of testing.

- 5.2 The group agreed to take the opportunity to test the helicopter pad and associated ventilation whilst the hospital remained unoccupied. Janice Mackenzie agreed to confirm a date for testing and feedback to the group. **JMacK**

- 5.3 Susan Goldsmith would write to Christine McLaughlin at Scottish Government to advise her of the date of testing.

6. Communication

- 6.1 The group were conscious that there had not been a communication for some time and the consequence was that there were a number of rumours circulating that could potentially harm engagement with staff in services affected. Member recognised that any communication would need to be signed off by Scottish Government.
- 6.2 There was agreement that the Board meeting in August should be used as an opportunity to communicate the current position to the Board and Staff at the same time. Susan Goldsmith would work with Christine McLaughlin, Scottish Government to approve the Board paper and communication to staff. **SG**

7. Any Other Competent Business

- 7.1 DCN Migration Risk Assessment – the DCN Migration Risk Assessment had been submitted to Christin McLaughlin at Scottish Government to consider as part of the Scottish Government Programme Board. She welcomed receipt of the report and work completed to date.
- 7.1.2 It was noted that Senior Management within DCN anticipated feedback in due course. Tracey Gillies requested that a copy of the report to assess the current capacity and whether those services previous halted should be reinstated given the extended timeline for the migration. Susan Goldsmith would forward a copy of the report to Tracey Gillies. **SG**
- 7.2.3 There was some discussion on equipment installed at the new RHSCY/ DCN site and its expected lifespan. How this could be extended and what alternative were available to the organisation to increase capacity. There was agreement that a written report would be brought back to the IMT detailing the timeline for the evaluation of the equipment and the proposed response to evaluation including options for leasing equipment or purchasing new. **JMack/ TG**
- 7.3 Confirmation of Contract Position – There was discussion relating to the Board's approach to enforcing the contract in the event of a further warning notice being due to be issued and the consequences that could impose. Iain Graham and Susan Goldsmith took an action to review the position with the contract with MacRoberts. **IG/SG**
- 7.4 Frequency of IMT Meetings – Following poor progress made against essential actions Susan Goldsmith advised the group it would not be appropriate to reduce the frequency of meetings to weekly at this time.

9. Date and Time of Next Meeting

- 9.1 The next meeting would be held at 4.00 pm on Monday 1 August 2019 in Meeting Room 5, Waverley Gate, Edinburgh.

Project title Royal Hospital of Sick Children

Subject Ventilation Meeting Minutes

Location NHSL Project Office, Clinical Management Suite, Royal Hospital of Sick Children, Edinburgh

Date and time of meeting 30/07/2019 10:00

Recorded by: RS

Circulation: Via Email

Attendees

Name	Initials	Company/organisation
Ian Graham	IG	National Health Service Lothain (NHSL)
Craig Simpson	CS	Integrated Health Solution Lothain (IHSL)
David Gordon	DG	Bouygues (BYES)
Lindsay Guthrie	LG	Infection Control Lead (NHSL)
Elham Khatamzas	EK	Infection Control (NHSL)
David Wilson	DW	Multiplex (MPX)
Ronnie Henderson	RH	National Health Service Lothain (NHSL)
Wallace Weir	WW	Integrated Health Solution Lothain (IHSL)
Ross Southwell	RS	Mott MacDonald
Colin Macrae	GC	Mott MacDonald
Malcolm Thomas	MT	Health Facilities Scotland (HFS)
Eddie McLaughlan	EM	Health Facilities Scotland (HFS)
George Curley	GC	National Health Service Lothain (NHSL)

Apologies

Name	Initials	Company/organisation
Ian Brodie	IB	Mott MacDonald
Brian Currie	BC	National Health Service Lothain (NHSL)
Ken Hall	KH	Multiplex (MPX)
Billy Loudon	BL	Currie & Brown

Item	Text	Action
1.	<p><u>Remedial Works</u></p> <p>MPX has been in discussions with the commercial team and TUV-SUD. MPX have issued a response on the draft instruction to IHSL. TUV SUD are still on board. Some wording comments have been issued to IHSL but not the scope of works. IHSL required to send this to the Board asap. BYES has no comments except the capex. Steering group meeting is to discuss the wording of the change. GC stated that they need confirmation by Wednesday am. GC asked if there is a plan B. MPX again confirmed preliminary discussions with DSSR & FES.</p> <p>WW change drafted wording from IHSL side to Susan today. The content not discussed at the steering group meeting.</p> <p>Deadline set for final decision on design Wed AM</p>	IHSL
2.	<p><u>Ventilation Board Change</u></p> <p>Previously WW confirmed he would discuss with IHSL directors additional avenues/options. WW has discussed and do not have a response at this time.</p>	IHSL

3.	<p>MPX have forwarded comment from TUV-SUD regarding if there are any examples with a multibed ward with 10ACH. LG stated Dumfries hospital and Aberdeen childrens hospital are good examples and could be used. EM stated the regs haven't changed since 1990's. NHSL will try and distribute any information gathered back to MPX.</p>	NHSL
	<p><u>Ventilation Issues Log</u></p>	
	<p>DW stated that all isolation rooms have been retested and passed, RH to confirm with IOM.</p>	NHSL
	<p>DG stated that Zutec has not got enough information about the AHUs, particularly very limited manufacturer information. CM stated that there was no Zutec information regarding AHU. MPX stated Schneider have AHU commissioning and it should be on Zutec. MPX to confirm all information has been provided. DW stated Sandometal and Q-Nis expected on site W/C 05/08</p>	MPX
	<p>GC stated a concern regarding the Inverter drive and location. No redundancy if they need to fix something as they will have to shut down the whole AHU. MT stated on inspection last week there is no easy way of replacing the fan. MPX to review</p>	MPX?
	<p>MT stated that we shouldn't focus on just the AHU. it is the entire system. There are a number of little issues that need to be looked at. Regarding the position of BYES, DG stated that the AHU is one pack and they need to get the information from the manufacturer. LG stated that there is a potential areas of air leakage and gaps within the AHU.</p>	MPX
	<p>WW (IHSL) sent through ventilation log – with comments on the high level issues and numbered. To be sent to all to update with comments from this meeting.</p>	MPX
4.	<p><u>Any other Business</u></p>	
	<p>BYES stated valves are passing and MPX have added that to the defects list. DEF04-04 – MPX to confirm if fan is back to commissioning values and NHSL confirmed IOM would check to validate. MPX stated that the standby fan is still to be checked. MPX confirmed it will notify once its back to commissioning values.</p>	MPX
	<p><u>Date of Next Meeting</u></p>	
	<p>Friday 2nd August 2019 @ 10:00 Warlow</p>	

Malcolm Thomas

Consulting Engineer

Mr. E. McLaughlan & Mr. I. Storrar
Health Facilities Scotland
NHS Nation Services Scotland



30 July 2019

Dear Eddie and Ian,

Children's Hospital, Edinburgh

I have been thinking about how to get you out of the present situation and have concluded that you may need to go back a few steps in order to get forward!

In order to get from where you are now to where you want to be will take more that trying to solve a list of individual faults while juggling the contractual legal complexities of the interested parties. I have come up with a route map that I consider may help so for what its worth here goes.

Overall Strategy

Step 1	Carry out a design appraisal of the ventilation needs for the critical areas	
	Theatres	Issues with the Scrub extracts, lac of extract in the corridors, possible over design of in theatre extract (all of which have impacted on the supply side) and shared Sluice room extract provision. There is also the lac of clarity in delineating the clean zone in the floor covering.
	Critical care	The lac of resilience is a major concern. Plans are already afoot to resolve this but whatever proposals are made they will need to be reviewed to ensure that they will deliver the client's needs before implementation.
	Neo-Nates	Similar issues.
	Isolation rooms	Similar issues.
Step 2	Specify and undertake remedial works.	
Step 3	Carry out a full and detailed snagging exercise of all the ventilation systems from their air intake through the entire supply system including the Air Handling Unit and their point of use. Then back through the extract system to the point of	

	discharge out to atmosphere. The snagging must include the building fit out such as doors and windows of the area served by the system.
Step 4	Recommission and rebalance the ventilation systems as necessary. This to include a “cause and effect” exercise to ensure that the control systems operate correctly and that information on the location of sensors and the control settings are recorded.
Step 5	Independently validate the performance ventilation systems.
Step 6	Use a combination of particle counting and microbiological testing in order to achieve confidence in the quality of the environment within the areas served by the ventilation systems.
Step 7	The systems can then be taken into beneficial use.

This sounds a fair amount of work and it is but I think that its a realistic strategy that will deliver a more positive result in the long run.

I hope you find these thoughts of help rather than hinderance. All good wishes

Malcolm Thomas

Consulting Engineer

Lead Author HTM 03-01 – Specialised Ventilation for Healthcare Premises

From: Tim Wafer [REDACTED]
Sent: 30 July 2019 16:05
To: STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND)
Subject: Not good news
Attachments: HFS positive mould.pdf; ATT00001.htm; Water-Solutions-Group.png; ATT00002.htm

Hi Ian

Out of the 60 samples 12 have failed for mould, which is not what we would expect to see at this stage.

(10 x Pre samples 2 x Post samples)

Unfortunately majority are Neonatal and CCU

Speak shortly

Cheers
Tim



TEST REPORT

Receipt Date: 26/07/2019
Order Number: F

Sample Condition on Receipt Satisfactory

Report ID: W-291522
Report Issued: 30/07/2019

Lab Reference	Test Date	Sample Description	* Mould @ 25oC DRBC cfu/100ml	* Yeast @ 25oC DRBC cfu/100ml	M042 Aerobic Colony Count @ 22°C 68hrs cfu/ml	M043 Aerobic Colony Count @ 37oC 44h cfu/ml	M044 Confirmed E.coli cfu/100ml	M044 Confirmed Total Coliforms cfu/100ml
WS10638366	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Neonatal Sample 7 Infant Feed Room 1-B1-068 Small Mixer Pre	3	0	0	30	0	0
WS10638368	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Neonatal Sample 9 Relative Room en-suite Shower 1-B3-083 Pre	8	0	0	210	0	0
WS10638369	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Neonatal Sample 10 Relative Room en-suite Shower 1-B3-083 Pre	4	0	0	0	0	0
WS10638374	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Sample 15 011-015 WHB Mixer (next to printer) 1-B1-031 Pre	1	0	200	300	0	0
WS10638384	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Sample 25 001 Bed 001 (ES) 1-L1-002 Shower Pre	55	0	100	960	0	0
WS10638385	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Sample 26 001 Bed 001 (ES) 1-L1-002 Shower Post	6	0	0	12	0	0

Multiple sample test report approved under the direction of: Dominic Holloway BSc (Hons); MRSPH, Water Laboratory Manager;

Tests marked * in this report are not included in the scope of our UKAS accreditation

Opinions and Interpretations expressed herein are outside the scope of our ISO17025 accreditation.
 These results are representative of the sample submitted by the client

Intertek Food (UK), [Redacted]
 A4548908
 ITS Testing Services (UK) Limited Registered in England & Wales. Company Number: 1408264
 Registered office : [Redacted]





TEST REPORT

Receipt Date: 26/07/2019
Order Number: F

Sample Condition on Receipt Satisfactory

Report ID: W-291522
Report Issued: 30/07/2019

			* Mould @ 25oC DRBC cfu/100ml	* Yeast @ 25oC DRBC cfu/100ml	M042 Aerobic Colony Count @ 22°C 68hrs cfu/ml	M043 Aerobic Colony Count @ 37oC 44h cfu/ml	M044 Confirmed E.coli cfu/100ml	M044 Confirmed Total Coliforms cfu/100ml
WS10638386	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Sample 27 006 Bed 1-L1-021 WHB Mixer Pre	1	0	0	0	0	0
WS10638393	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Sample 34 Bed 009-012 WHB Mixer 1-L1-097 Post	4	0	0	0	0	0
WS10638414	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Sample 55 Dunvegan Ward 3-C1-8-035 Bathroom Arjo Shower Main Fill Pre	86	0	0	250	0	0
WS10638416	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Sample 57 Dunvegan Ward 3-C1-8-035 Bathroom WHB Mixer Pre Bed 012	8	0	2.2x10 ^{^3}	960	0	0
WS10638418	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Sample 59 3-C1-8-31 Shower Pre Bed 012	> 101	0	300	225	0	0
WS10638419	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Sample 60 3-C1-8-31 Shower Pre Bed 012	45	0	213	74	0	0

Multiple sample test report approved under the direction of: Dominic Holloway BSc (Hons); MRSPH, Water Laboratory Manager;

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TEST REPORT

Receipt Date: 26/07/2019
Order Number: F

Sample Condition on Receipt Satisfactory

Report ID: W-291522
Report Issued: 30/07/2019

Lab Reference	Test Date	Sample Description	M047 Pseudomonas aeruginosa cfu/100ml
WS10638366	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Neonatal Sample 7 Infant Feed Room 1-B1-068 Small Mixer Pre	0
WS10638368	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Neonatal Sample 9 Relative Room en-suite Shower 1-B3-083 Pre	0
WS10638369	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Neonatal Sample 10 Relative Room en-suite Shower 1-B3-083 Pre	0
WS10638374	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Sample 15 011-015 WHB Mixer (next to printer) 1-B1-031 Pre	0
WS10638384	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Sample 25 001 Bed 001 (ES) 1-L1-002 Shower Pre	0
WS10638385	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Sample 26 001 Bed 001 (ES) 1-L1-002 Shower Post	0

Multiple sample test report approved under the direction of: Dominic Holloway BSc (Hons); MRSPH, Water Laboratory Manager;

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TEST REPORT

Receipt Date: 26/07/2019
Order Number: F

Sample Condition on Receipt Satisfactory

Report ID: W-291522
Report Issued: 30/07/2019

M047 Pseudomonas
aeruginosa cfu/100ml

Sample ID	Date	Location	Result
WS10638386	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Sample 27 006 Bed 1-L1-021 WHB Mixer Pre	0
WS10638393	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Sample 34 Bed 009-012 WHB Mixer 1-L1-097 Post	0
WS10638414	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Sample 55 Dunvegan Ward 3-C1-8-035 Bathroom Arjo Shower Main Fill Pre	0
WS10638416	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Sample 57 Dunvegan Ward 3-C1-8-035 Bathroom WHB Mixer Pre Bed 012	0
WS10638418	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Sample 59 3-C1-8-31 Shower Pre Bed 012	0
WS10638419	26/07/2019	The Royal Hospital for Children and Young People Edinburgh Sample 60 3-C1-8-31 Shower Pre Bed 012	0

Multiple sample test report approved under the direction of: Dominic Holloway BSc (Hons); MRSPH, Water Laboratory Manager;

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TEST REPORT

Receipt Date: 26/07/2019
Order Number: F

Sample Condition on Receipt: Satisfactory

Report ID: W-291522
Report Issued: 30/07/2019

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These results are representative of the sample submitted by the client

Intertek Food (UK), [REDACTED]
A4548908
ITS Testing Services (UK) Limited Registered in England & Wales. Company Number: 1408264
Registered office : [REDACTED]



From: Roche R (Rowena)
Sent: 30 July 2019 16:29
To: Cabinet Secretary for Health and Sport
Cc: McCallum R (Richard); Morrison A (Alan); DG Health & Social Care; McLaughlin C (Christine); Crowe B (Barbara)
Subject: Edinburgh Children's Hospital - SCANCE
Attachments: Sick Kids - SCANCE - 30 July 2019.doc

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Printed for DG

Andy,

Please find attached the SCANCE contribution for Thursday's Cabinet for Cab Sec's review.

Following the update provided to Cab Sec on 25 July, NHS Lothian have advised that a solution for the re-design of the critical care ventilation is still to be agreed. In order to expedite this process, Lothian have been considering bringing in an outside designer but this has the potential to impact on warranties. Lawyers for NHS Lothian have advised that it would not be in the Board's interests to exercise step in rights – i.e. engage another designer; this could also take some time. This matter is being treated as a matter of urgency by the Board and we will continue to keep you updated.

Kind regards,

Rowena

Rowena Roche
Directorate of Health Finance
Scottish Government | [REDACTED]
[REDACTED]

Please note that I do not work on Thursday afternoons or on Fridays.

SCANCE Contribution**Edinburgh Children's Hospital**

On 2 July, NHS Lothian informed Scottish Government that the air change frequency in the ventilation system of critical care areas did not meet the 2014 standard. Due to the late notice, lack of certainty on a fix and need for assurance on the overall safety of the new hospital, the Cabinet Secretary for Health and Sport instructed that the move be halted.

Patients with appointments at the new hospital have been contacted and a dedicated helpline remains in operation. Ms Freeman wrote to staff, MSPs and MPs and the convenors of the Health and Sport Committee and Public Audit and Post-legislative Scrutiny Committee on 18 July detailing the events that led to the postponement, work instructed to identify and remedy the factors that led to that decision, and the support being provided to the Board, patients and staff.

NHS National Services Scotland (NSS) are carrying out an assessment of compliance of all building systems which could impact on patient and staff safety. An interim report is expected in the third week of August with the final report expected in September. Work continues on the technical solution to the issues with critical care ventilation and ventilation in general. NSS have assessed that significant work and re-design is required that will involve contractual arrangements and this may impact on the 6-month timeframe that was originally anticipated.

KPMG are undertaking an audit of governance of the project; an initial draft of their findings is expected by 9 August and the finalised report the following week.

An Oversight Board including Scottish Government, NHS Lothian, NSS, Scottish Futures Trust will provide advice to Ministers on key issues, such as phased occupation and the critical care technical solution. The Board's first meeting will take place in August.

Speaking Note

- On 2 July, NHS Lothian notified the Scottish Government of an issue with the ventilation system at the Royal Hospital for Children and Young People. I required further assurance on this issue and on all aspects of compliance with standards across the new hospital and I therefore instructed that the planned move be halted.
- NHS National Services Scotland are undertaking a detailed assessment of compliance of all building systems which could impact on the safety of patients and staff at the new site and a full report is anticipated in September.
- This assessment will determine the timeframe for services moving to the new hospital. Services will move over on a phased basis as soon as it is safe to do so.
- An expert Oversight Board will provide advice on the readiness of the facility to open and on the migration of services to the new facility.
- KPMG are currently undertaking an audit of governance, to establish the factors that led to the delay and their report is expected by mid-August.
- I will keep Parliament informed of progress of these reviews and timeframe for moving to the new hospital.
- Patients with appointments at the new hospital have been contacted and a dedicated helpline is in operation. I have also written to and visited staff to thank them for their ongoing work in managing the move and providing high-quality care.

Name of Official: Barbara Crowe	Extension Number: XXXXXXXXXX
--	---

From: Graham, Iain
Sent: 31 July 2019 07:58
To: Goldsmith, Susan
Cc: Walker, Anna
Subject: FW: RHCYP + DCN - Little France - Draft High Value Change (Tech Spec Only) - Paediatric Critical care Ventilation

Importance: High

Susan,

I think the basic principle of the table Peter produced would be helpful for the governance group at a high level. Some thoughts follow, which are to clarify / amend / update rather than discount this work.

- we need to reduce the list to those rooms that are applicable.
- SHTM 03 does not reflect Paediatric spaces (ie it is one of the areas of interpretation). Need to reflect against some of the item lines
- need to consider the list of rooms against these heading (ie our hundreds of rooms and spaces being categorised)
- need to consider against the schedules and work being done by HFS too. There may be duplication and / or timing issues - but would seek to have one master list.
- not the same as discussed at IMT - therefore two lists (and the IMT one needs to be broader on the other workstreams)
- need to resource this - not appropriate to be left with Ronnie and Janice (they are drowning with information requests on top of the assessment / negotiations with MPX)
- other workstreams include (not exhaustive):
- communications - this needs to be more than asking the team for information in reactive way. Taking Tracey's point on language we need that input into the broader reporting.
- Operational - Stuart Davidson would be grateful for the help offered by SST from HFS / SFT. Different workstreams within this.
- Commercial - IHSL's sudden and demanding interest in the paymech / warning notices is not a surprise (ie focus on their cashflow implications and Bank covenants) but is in a marked contrast to the speed and pressure applied to Multiplex. This must be explored / linked to help us?
- Designers (and progress on design development, procurement, etc) - the delay in getting to a satisfactory position needs attention. Linked to the above point, I don't think the partnership approach is getting results - that is perhaps something worth discussing with Peter. I am not suggesting court action, per se, but Peter may be able to guide us on the best routes to get performance.
- other works - home team all on the same page on agenda - We need to get an agreed strategic direction laid out (about best available solution versus everything perfect). Difficult to do whilst Health Minister's position is not known?
- HFS / KPMG - there is increasing cross over, more from KPMG towards the HFS work as they seek to understand how everything fits together. This is draining resources from other areas.
- Programming - I can pick up revised programmes as information crystallises.

I'll get Michael onto the commercial bit. Perhaps Nick could pick up the support resources for the reporting regime (ie Shelly and Aidan?)?

Sorry, a bit rushed.

I'll be available on the phone until about 9. Thereafter, not sure yet.

Good luck.

Iain F Graham
Director of Capital Planning and Projects NHS Lothian Waverley Gate

-----Original Message-----

From: Peter Reekie [redacted]
Sent: 30 July 2019 17:58
To: Graham, Iain
Cc: Goldsmith, Susan; Walker, Anna
Subject: RE: RHCYP + DCN - Little France - Draft High Value Change (Tech Spec Only) - Paediatric Critical care Ventilation

Iain,
Absolutely no desire to cause additional work so happy to look at anything else which produced - I hope the paper is useful in suggesting what sort of information I believe this element of governance is likely to require in some digestible format.

Peter

Peter Reekie
Chief Executive

[redacted]
Scottish Futures Trust

-----Original Message-----

From: Graham, Iain [redacted]
Sent: 30 July 2019 17:43
To: Peter Reekie [redacted]
Cc: Goldsmith, Susan [redacted]; Walker, Anna [redacted]
Subject: RE: RHCYP + DCN - Little France - Draft High Value Change (Tech Spec Only) - Paediatric Critical care Ventilation

Peter,

Thanks for all this work! Its arrival has coincided with similar tracking schedules being sought for other meetings/ groups.

I had hoped to maintain just one schedule linked to the timetables to avoid double work and potential gaps or misreporting. That is looking potentially less likely given the disparate needs.

I will take a look further and we will provide feedback.

Regards

Iain

Iain F Graham
Director of Capital Planning and Projects, NHS Lothian mobile [REDACTED]

From: Peter Reekie [REDACTED]

Sent: 30 Jul 2019 12:10

To: "Graham, Iain" [REDACTED]

Cc: "Goldsmith, Susan" [REDACTED]; "Walker, Anna" [REDACTED]

Subject: RE: RHCYP + DCN - Little France - Draft High Value Change (Tech Spec Only) - Paediatric Critical care Ventilation

Iain,

Thanks for the conversation and for sending this through. We discussed that this covers the critical care areas but doesn't represent the whole of what may need to be resolved given (at least) the potential 4 versus 6 changes point.

We also discussed the team's approach of amending the environmental matrices on a room by room basis as the technical means by which any change should be communicated. That clearly needs to follow the structure of the documents and not create any future difficulties - so others are much better placed to comment on that than me.

However, as discussed with both you and Susan, I do feel that it is important that we understand and are able to capture the full scope of this for the governance processes - both between NHSL and HFS and Scottish Government, and for discussion with IHSL / Multiplex.

To that end, I thought it would be valuable to be able to refer to a table which set out in a single place:

- * The SHTM ventilation standards (possibly just pressure and air changes if those are the only contentious points against which there may be variance, but in some areas may require more (noise?));
- * A list of which rooms / spaces each standard description applies to on the project - ideally by individual reference number, but may require some shorthand - and may only require those clinical spaces where there are potential issues (?)
- * The Project Agreement ventilation requirement - only for any spaces where these differed from the SHTM
- * Project Agreement Changes ventilation requirements - including SA changes
- * Agreed ventilation requirements between NHLS and HFS - which would form the basis of the specification for remedial works and should represent a position which if designed, constructed and tested, both NHSL and HFS would deem acceptable

* Any rooms / spaces for which there is not a directly applicable SHTM03 category could be added to the table.

* The table could then be completed with the "Achieved" rated following remedial work so that the governance process could be sealed off.

I've had a go at drafting the format for such a table (attached).

If there is a shorthand way of only covering rooms / spaces where there is to be any variance from the SHTM standard, that could be useful, but I'd be keen to understand that there was a good level of agreement that the standard for all other spaces was clear and agreed by all parties.

I'm very happy to discuss, and if there is an alternative approach to setting this out in a single place for the governance arrangements to agree on, I'd be very happy to comment on that as appropriate.

It seems to me that the first test of this will be that the Oversight Board will have to ensure that there is agreement on the standards to be achieved across all spaces between NHSL and HFS and I'm keen that can happen as smoothly as possible for you.

Regards,

Peter

Peter Reekie
Chief Executive

[REDACTED]
Scottish Futures Trust

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From: Graham, Iain [REDACTED]

[REDACTED]
Sent: 29 July 2019 12:22

To: Peter Reekie [REDACTED]

[REDACTED]
Cc: Goldsmith, Susan [REDACTED]

; Walker, Anna

Subject: FW: RHCYP + DCN - Little France - Draft High Value Change (Tech Spec Only) - Paediatric Critical care Ventilation
Importance: High

Peter,

Further to our telephone conversation, I have attached a copy of the draft High Value Change Notice (Tech Spec only) issued again to IHSL last Friday.

I have also attached the chaser Susan issued to IHSL on Friday afternoon.

I will let you know if there is anything further back on this or the other issues of progress.

Regards

Iain

Iain F Graham
Director of Capital Planning and Projects NHS Lothian Waverley Gate

[REDACTED]

From: Currie, Brian
Sent: 26 July 2019 14:21
To: 'Wallace Weir'
Cc: 'David Wilson'; Ken Hall; 'Craig Simpson'; Goldsmith, Susan; Curley, George; Graham, Iain; Henderson, Ronnie; STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND)
Subject: RHCYP + DCN - Little France - Draft High Value Change (Tech Spec Only) - Paediatric Critical care Ventilation
Importance: High

Wallace

Further to our workshop this morning and your request for further confirmation of our requirements, as detailed to our email of the 16th July, 2019, we attach a Draft High Value Change Notice (Tech Spec Only).

You intimated that you would taking advice from MPX in relation to this and in particular the appointment of a designer and that you hoped to be able to respond early next week.

As you are acutely aware no design progress has been made since issue of our email on the 16th July, 2019.

We also discussed this morning the need for IHSL to investigate and communicate all other potential options for delivery of these remedials at the earliest possible opportunity.

Regards

Brian

Brian Currie
Project Director - NHS Lothian
RHCYP + DCN

[REDACTED]

[Redacted]

[Redacted]

[Redacted]

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Message

From: Claire L McArthur [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=8385A7A9A1674316919A267F5BC57ABA-CLAIRE L MC]
Sent: 01/08/2019 09:43:41
To: Natasha Scarisbrick [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=32c89de3c8914c88b063bc6a0698e719-Natasha Sca]
Subject: RE: RHCYP - PMS - COB 30-07-2019

Thanks Tash – it’s certainly getting tougher to stay positive, think it would be nice for us all if we could get a bit of luck and catch a break or two!

If you or Matt need anything else for the call, just let me know and I’ll do what I can to help.

Claire McArthur
Project Administrator
IHSL

IHS Lothian Limited
RHCYP+DCN Project Office | [REDACTED]
[REDACTED] | [REDACTED] | [REDACTED]



From: Natasha Scarisbrick [REDACTED]
Sent: 01 August 2019 09:34
To: Claire L McArthur [REDACTED]
Subject: RE: RHCYP - PMS - COB 30-07-2019

£544k....just fell off my chair!

Crikey – this is not going well. Hope you are okay. I’m speaking to Matt shortly about what to do on the deductions for this month’s invoice. I will let you know what we decide for the tracker.

Thanks and I am about all day if you need someone to talk too!

Thanks, Tash

Natasha Scarisbrick
Finance Manager

HCP
[REDACTED] (0) [REDACTED]



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From: Claire L McArthur [REDACTED]
Sent: 01 August 2019 09:32
To: Matthew Templeton [REDACTED]
Cc: Wallace Weir [REDACTED]; Craig Simpson [REDACTED]; Natasha Scarisbrick [REDACTED]; Linsey Cormie [REDACTED]
Subject: RE: RHCYP - PMS - COB 30-07-2019

Morning Matt,

As per Craig's email, please find attached the tracker for the deductions to date – I've added the £544K figure in red, as it is provisional at the moment.

It's just me in the office today, but if I can do anything to help, just let me know.

Kind regards,

Claire McArthur
Project Administrator
IHSL

IHS Lothian Limited
RHCYP+DCN Project Office | [REDACTED] | [REDACTED]
[REDACTED] | [REDACTED] | [REDACTED]



From: Craig Simpson [REDACTED]
Sent: 01 August 2019 07:38
To: Matthew Templeton [REDACTED] Claire L McArthur [REDACTED]
Cc: Wallace Weir [REDACTED]
Subject: FW: RHCYP - PMS - COB 30-07-2019

A4548908

Matt,

Please see below for the latest prediction of applicable penalties for the month of July.

I am on annual leave at the moment but will try and have Claire forward a table and graph prepared by Wallace to accurately track the actual penalties applied.

This graph also demonstrates the applicable threshold and breach points.

On the activity on the project in general this mainly falls to three activities

- 1 Reduction of the defects logged on the helpdesk, particularly the aged ones which have either been closed in history but not updated on the system, or investigated and not dealt with. In the last few weeks now that the tangible impact has been demonstrated we have managed significant reductions in this issue. This is reflected in the value of penalties applied as penalty is applied on closure.
- 2 The Clinical Critical Vent, having established a no blame way forward on the air change issue, we now seem to be entering a focus on whether the equipment was fit for purpose and SHTM compliant. The drive in the latest inspections is towards 'could never have been compliant' driven by penetrations through the AHU sections and the location of equipment in the air flow.
- 3 Water management, Board are openly seeking an enhanced service level, greater than SHTM 04 001 or even HTM 04 001, this to be defined in an Operational Change now being drafted.

I trust this covers what you need

Best Regards

Craig Simpson

From: GORDON, David [REDACTED]

Sent: 31 July 2019 10:32

To: Craig Simpson [REDACTED] Wallace Weir [REDACTED]

Subject: RHCYP - PMS - COB 30-07-2019

Gents,

The PMS for July 2019 is **£544k** as of COB 30-07-2019.

There were still 276 items which were open.

I am trying to get as many jobs closed as we can

We are receiving so many now and are having to log complaints with regards to the SR's.

I am really concerned for the Health and Wellbeing of my staff on this contract and the approach from the NHS is unacceptable.

David

David GORDON BSc(Hons), MSc

Regional Manager

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From: Henderson, Ronnie [REDACTED]
Sent: 31 July 2019 12:00
To: STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND); MCLAUGHLAN, Edward (NHS NATIONAL SERVICES SCOTLAND)
Subject: RE: TUV-Sud Design Intent
Attachments: 20190731115248767.tif

Ian,

No risk assessment that I am aware of, meetings were held to discuss. Apologies for the drip fed nature but see attached from 31/01/17 for further info on vent design considerations.

Regarding CCU, there are vents in the clinical corridor at the touchdown bases but think they are supply will check the ductwork layouts.

Regards

Ronnie

Ronnie Henderson
Commissioning Manager Hard FM
RHSC & DCN - Little France
NHS Lothian

[REDACTED]

[REDACTED]

From: STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND) [REDACTED]
Sent: 31 July 2019 11:33
To: Henderson, Ronnie; MCLAUGHLAN, Edward (NHS NATIONAL SERVICES SCOTLAND)
Subject: RE: TUV-Sud Design Intent

Ronnie

Thanks for these.

Is there a risk assessment or statement which they have written down how they got from 6ACH to 4ACH?
I also note that there is a comment regarding corridor ventilation being natural or extract.....am I correct in recalling that CCU area corridor did not have any extract?

Regards

Ian

Ian Storrar BSc CEng FCIBSE FIHEEM MIET
Head of Engineering - Health Facilities Scotland
Procurement, Commissioning and Facilities

NHS National Services Scotland

[Redacted]

[Redacted]

[Redacted]

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From: Henderson, Ronnie [Redacted]
Sent: 31 July 2019 11:01
To: MCLAUGHLAN, Edward (NHS NATIONAL SERVICES SCOTLAND) [Redacted]
Cc: STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND) [Redacted]
Subject: TUV-Sud Design Intent

Hi Eddie,

Managed to find the report from 2015 on their design intent, please see attached.

Regards

Ronnie

Ronnie Henderson
Commissioning Manager Hard FM
RHSC & DCN - Little France
NHS Lothian

[Redacted]

[Redacted]

From: Henderson, Ronnie
Sent: 31 July 2019 10:46
To: 'MCLAUGHLAN, Edward (NHS NATIONAL SERVICES SCOTLAND)'
Cc: STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND)
Subject:

Hi Eddie,

As requested please see attached rev 1 environmental matrix from 2015 and most recent rev 11 version. The section you are looking for is 'guidance notes' specifically note 26 which explains their philosophy for single bedroom design.

Let me know if you have any questions

Regards

Ronnie

Ronnie Henderson
Commissioning Manager Hard FM
RHSC & DCN - Little France
NHS Lothian

[Redacted]

[Redacted]

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RHSC & DCN, Little France, Edinburgh



Wallace Whittle

Bedroom Ventilation – Key Considerations

1.0 Introduction

Following the recent Bedroom Ventilation Workshop held on site 23/01/17 we now detail Key Considerations on the items reviewed.

Single Bedroom En-Suite Ventilation

The en-suite extract within the single bedrooms is being provided at 17ac/hr, this will change the room air every 3.5 minutes thus keeping the environment fresh for the patient, staff and visitors. Whilst the shower is in operation, the room moisture content will be low due to the air change rate.

As discussed at the meeting and for comparison purposes we have reviewed CIBSE Guide B paragraph 2.3.14.2 for hotel ventilation design, this asks for 10 to 15 ac/hr in the bathroom and also states some hotels choose even higher rates to minimise condensation in bathrooms and improve air quality generally.

The en-suite has been provided with twin doors with an opening size of 1810 x 2110mm. Based on the air volume of 0.054m³/s, with the doors open, the velocity entering the room would be 0.014m/s and with one door open this would be 0.028m/s.

CIBSE environmental criteria states that comfort criteria is achieved where the air velocity is maintained at 0.25m/s.

Noise

The en-suite branch ducts have been sized to minimise air noise at circa 2.5m/s and the grilles sized to provide a compliant NR value of 40, which is in line with SHTM 08-01 Acoustics.

Heat Recovery

Heat recovery is provided within all air handling units, via a thermal wheel arrangement. SHTM 03-01 paragraph 4.145 asks for 65% energy transfer efficiency. The minimum provision for the proposed air handling units on the job is 70%.

4 Bed Room Ventilation

As agreed at the workshop we have undertaken a review of the 4 bed rooms current ventilation design with the view to getting the rooms into a balance. We have looked at a compromise solution by increasing the en-suite and WC ventilation rates from 10ac/hr to 17ac/hr and decreasing the room supply air from 4ac/hr to circa 3ac/hr, which would give a room balance and still maintain supply air to provide the minimum parameters in SHTM 03-01 of 10l/s per person.

In order to achieve this we would need to undertake ductwork alterations which in some instances are quite extensive inclusive of the additional grillage on the dirty extract system as well as increasing the room grille sizes to accommodate the larger air volumes.

There is little opportunity to utilise the general extract system due to ductwork location as it does not tend to run the full length of the systems and main branch sizes, accordingly are relatively small at the duct terminations.

Issue	Date	By	Checked
1	31.01.17	BR	SMcK

p:\g1547\admin\reports\20170130 bedroom ventilation key considerations.doc
WW25f

1 of 1



From: Peter Reekie [REDACTED] >
Sent: 31 July 2019 11:40
To: Goldsmith, Susan, [REDACTED]
Subject: Oversight Board

Susan, Christine,

I'll accept the oversight Board on next Thursday but would very much appreciate it being a little earlier if possible. I will be leaving on time as I'm driving with family down to Manchester that evening.

I thought it may help to set expectations and some deadlines if we could be clear in advance, and in a little more detail, the agenda items for that group to be able to see, discuss and agree in a week's time. What I have set out below is Intended as a first draft – straight out of my head and therefore my interpretation of the Board's TORs- you are closer to most elements than I:

Papers would ideally be circulated 24 hours in advance and can in my mind be working papers with content and common understanding much more important than "board" formatting etc.

Technical

Purpose:

- a) to put the Board in a position to advise the Cabinet Secretary that NHSL and HFS have agreed the technical standards requiring to be met for ventilation, water and drainage and seek her endorsement of the interaction between this position and published SHTMs.
- b) to create certainty for the technical teams that the specification passed to designers (as part of a board change or otherwise) for the ventilation system will, if successfully implemented, be acceptable

Papers:

1. Ventilation Solution

A schedule of the air changes per hour and pressures for all clinical areas – setting out the SHTM standard (if applicable) and the changes / pressures agreed by HFS and NHSL to be acceptable for all areas – highlighting any differences from SHTM and explaining why both parties consider any variance to the standard (or particular specification where the standard is not directly applicable) is acceptable. This could use the format I forwarded or other approach.

A complete and agreed between NHSL and HFS list (or explanation of what is outstanding in order to complete that list and programme to complete it) of any other works to be undertaken on the ventilation system in order to bring it to a state which both parties agree will be acceptable

2. Water & drainage system

A clear and agreed between NHSL and HFS statement of the applicable standards and any variance to those standards agreed by both parties to be acceptable (along with explanation of why).

A clear and agreed between NHSL and HFS statement that the ongoing works to the water system, (if properly undertaken) could be expected to lead to an acceptable system;

A clear and agreed between NHSL and HFS statement that the drainage system is acceptable – if not possible for the whole system, at least in respect of the internal basement sump

Validation

Purpose

- a) To put the Board in a position to advise the Cab Sec on HFS / HPS's approach to undertaking its Review of the RHSYP/DCN project
- b) To ensure there is clarity on working arrangements, interfaces and programme for HFS undertaking its review activities.

Papers

3. A clear statement from HFS as to the extent of its proposed validation activities:
 - Systems to be covered;
 - Validation approach – desktop review of activity undertaken / sample audit / sample inspection / sample testing / complete inspection / complete testing – including escalation approach (eg, approach x with possibility to move to approach y if non-conformance is identified);
 - Phasing - what is required pre-occupation for any or parts of the building
Above for cab sec advice, below to ensure parties are coordinated
 - Interface arrangements – not necessarily technical detail, but clarity that HFS / NHSL / IHSL (if required) have agreed interface and support requirements (eg builders work uncovering resource) for HFS work
 - Programme – HFS programme for currently anticipated validation activity (potentially noted a X-days following completion of works for some elements)
 - Escalation / reporting arrangements – HFS interface with NHSL on any issues identified.

Programme / Occupation

Purpose

- a) To put the Board in a position to advise Cab Sec on the potential for phased occupation and provide an update as far as is possible on programme to occupation.
- b) To support consideration of any internal / external communication of progress / programme to occupation

Papers

4. A paper from NHSL setting out any proposal for phased occupation including clear alignment to HFS assurance activity
5. A high-level programme for ventilation works, assurance activity, migration planning setting out key decision points, uncertainties at this stage and points at which greater certainty can be expected.

Commercial

Purpose

- a) To update the Board on commercial position and allow for consideration of what Cab Sec may require to be advised on

Papers:

6. An update on the commercial position with IHSL on any change / works which are required;
7. A paper agreed by NHSL and the HFS/SFT Operational Support Team establishing an approach to contract management over this pre-occupation period

I hope that helps – happy to discuss

Peter

Peter Reekie
Chief Executive





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From: Goldsmith, Susan
Sent: 31 July 2019 17:42
To: Pryor, Michael
Subject: FW: RHSC: Critical Care Ventilation
Attachments: Draft Option 3 Instruction_IHSL 31 07 19.DOCX

From: Matthew Templeton [REDACTED]
Sent: 31 July 2019 15:54
To: Goldsmith, Susan [REDACTED]
Cc: Graham, Iain [REDACTED]; Richard Osborne (MacCap) [REDACTED]; Roger Thompson RMT [REDACTED]; Callum Tuckett [REDACTED]; Viv Cockburn [REDACTED]; Wallace Weir [REDACTED]; Currie, Brian [REDACTED]
Subject: RHSC: Critical Care Ventilation

Dear Susan,

As discussed on our call yesterday IHSL received a draft Board Change on the 26th July 2019 with respect to Critical Care Ventilation, proposing a High Value Change as set-out within Project Agreement Schedule 16 (Change Protocol). The High Value Change process is by its nature prescriptive and iterative and will take time to administer and hence may not be appropriate for this situation, where NHSL are seeking parties immediately progress with the design and installation of the amendments to the Critical Care ventilation. Hence we agreed we require a fast track process which enables the works to be started as soon as possible and completed at the earliest opportunity.

IHSL and their supply-chain require a clear and clean instruction from NHSL to proceed with the required amendments to the Critical Care ventilation, backed up by an obligation on NHSL to pay for the design, installation and any additional FM/lifecycle costs. Furthermore, the IHSL parties do not wish to proceed with any amendments to the critical care ventilation where NHSL are reserving their rights in respect of any alleged breach of the PA/SA with respect to critical care ventilation as signed off by the Independent Tester.

As I mentioned on our call there is no perfect solution, however IHSL has considered the three options below:

1. **Option 1: High Value Change (Schedule 16 (Change Protocol)).** As stated above, this has very prescriptive iterative steps and may take several weeks or even months to arrive at the point where design and works can commence. This proposal does not allow a twin-tracking of activities and essentially requires the whole change to be documented prior to any works commencing. This has the advantage of using a clear process where the design, costs and contract amendments are fully agreed before work commences, however time would be lost whilst preparing and agreeing.
2. **Option 2: Amended Process by Agreement:** Board serve a High Value Change: (1) setting out the required additional works and services; and (2) proposing the PA Schedule 16 process is set aside to enable design and ordering of key materials (e.g. AHUs) to commence prior to signature of a contract documenting the additional works and additional services. NHSL will, contemporaneously with the issue of the High Value Change Notice, provide IHSL with a letter similar to that drafted for Option 3 (see below and attached), whereby NHSL provide certain assurances to IHSL/MPX to progress with development and delivery of critical care ventilation amendments (e.g. obligation to pay costs,). This would allow design to progress immediately and when required the placement of orders for critical items of plant. Whilst the ventilation design is progressing under essentially an advanced works style agreement, the parties can agree by a specified date the full Project Agreement supplemental agreement (as well as the necessary Construction Contract and Services Contract supplemental agreements and ancillary documentation).

- Option 3: Depart from High Value Change process:** rather than issue a High Value Change notice, the parties could jump straight to the conclusion of an advance works type agreement and Project Agreement Supplemental Agreement (both of which are the likely outcomes of the proposed change in any event) as well as the necessary Construction Contract and Services Contract supplemental agreements and ancillary documentation. This has the advantages of option 2 in terms of speed of delivery plus the advantage of not tying up all the parties in knots in terms of following the Change Protocol. Please find attached a draft Heads of Terms Agreement for Option 3 (Note this is indicative only of such an agreement and requires further review by all IHSL parties).

Due to the pressing time constraints IHSL has not had the opportunity to consult with Bouygues or lenders on the above options, however as discussed on our call it was considered more time critical to issue the options to NHSL such that they could be considering in tandem.

The strong preference of Multiplex is Option 3. Circumventing the Change Protocol best achieves the overall objective to facilitate the migration of RHSC into the new facilities at the earliest opportunity.

IHSL parties cannot progress with the design, supply and install of the critical care ventilation works until it is clear what the Board are instructing, and that the Board will cover all costs.

I hope the above helps and is provided with the intention of supporting NHSL and agreeing a way forward.

The above and attached are provided without prejudice.

Regards
Matt

Matt Templeton | Director
Dalmore Capital



Please note from Monday 17th June, we are moving the Edinburgh office to 2nd Floor, Caledonian Exchange, 19A Canning Street, Edinburgh, EH3 8EG. All telephone numbers will remain the same. We look forward to welcoming you to our new office.

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NHS Lothian Headed Paper

IHS Lothian Limited

[REDACTED]

[REDACTED]

Dear Sirs

PROJECT AGREEMENT DATED 12TH AND 13TH FEBRUARY 2015 BETWEEN Lothian Health Board (the "BOARD") AND IHS Lothian Limited ("PROJECT CO"), AS AMENDED ("PROJECT AGREEMENT")**ADDITIONAL WORKS: PAEDIATRIC CRITICAL CARE VENTILATION HEADS OF TERMS AGREEMENT ("HoTA")**

- (1) Save where the context requires otherwise or where otherwise defined in this letter, capitalised terms defined in the Project Agreement shall have the same meaning in this letter.
- (2) The Board wishes to procure the additional works described in Appendix 1 to this HoTA (the "**Additional Works**").
- (3) The Board also requires that following completion of the Additional Works, maintenance of the equipment provided as part of the Additional Works will be provided by or on behalf of Project Co (the "**Additional Services**").
- (4) Pursuant to this HoTA, the Board and Project Co undertake to use reasonable endeavours to enter into a supplemental agreement to the Project Agreement to document the Additional Works and Additional Services (the "**PA Supplemental Agreement**"), as soon as reasonably practicable.
- (5) For the avoidance of doubt, Project Co shall owe to the Board no obligation in relation to the Additional Works and/ or Additional Services, beyond that expressly noted in this HoTA, and/or, when entered into, the PA Supplemental Agreement.
- (6) In recognition that the PA Supplemental Agreement has not been entered into before commencement of the Additional Works or Additional Services, and that the Funders have not yet granted formal consent to the Additional Works or Additional Services, the Board by signature of this letter hereby agrees and undertakes that it shall:
 - (a) approve the design, or otherwise confirm why no approval shall be given, within 10 (ten) days of receipt of the design from Project Co. Approval of the design, when received, shall be conclusive confirmation of compliance of the design with the requirements of the HoTA. Should no approval, or otherwise be forthcoming within the timescales noted in this Paragraph (6)(a), the design shall be deemed to be approved and that deemed approval shall be conclusive confirmation of compliance of the design with the requirements of the HoTA;
 - (b) inspect the installation when complete and approve compliance of the supply and install with the requirements of this HoTA;
 - (c) pay to Project Co within **[14]** Business Days of receipt of a written invoice the costs incurred by Project Co relating to:
 - i. the procurement of the design of the Additional Works;

- ii. the procurement of equipment to be ordered in order to provide the Additional Works and/ or Additional Services;
- iii. the implementation of the Additional Works [*note: this would need to be fully inclusive of all costs, including any increased insurance premiums etc*];
- iv. the provision of the Additional Services;
- v. [REDACTED]

[Note: parties to agree how far reaching this letter should be in terms of costs incurred before the PA Supplemental Agreement is in place.]

- (d) indemnify Project Co on demand from and against any and all costs, damages, expenses, liabilities and losses suffered or incurred by Project Co which may arise out of or in connection with the Additional Works or Additional Services to the extent not reimbursed pursuant to Paragraph (6)(c) above;

[Note: the indemnity will cover costs Project Co did not anticipate when entering into this letter prior to full knowledge of the costs/ risks involved.]

- (e) be liable for all reasonable and direct costs to Project Co, the Funders and the Sub-Contractors of entering into this HoTA and the PA Supplemental Agreement and all ancillary documentation required to facilitate the Additional Works and Additional Services.
- (7) Project Co shall provide regular updates (no less than at monthly intervals) to the Board on all costs, damages, liabilities and losses suffered or incurred, arising out of or in connection with the carrying out of the Additional Works and/ or Additional Services; and/or the entering into of the PA Supplemental Agreement.
 - (8) On entering into this HoTA, the Board confirms and agrees that they have no right of recourse, and no claim will be made against Project Co in relation to the design, supply and install of the paediatric critical care ventilation, certified as achieving Actual Completion on 22 February 2019.
 - (9) The parties agree that the Board's requirements in respect of the Additional Works and Additional Services in the HoTA take precedence in the case of any inconsistency with the Board's ventilation requirements in the Project Agreement.
 - (10) The Board waives any and all actions, claims, liabilities, rights, demands, set-offs and counterclaims to additional payment arising out of any inconsistencies of the Additional Works with:
 - (a) the terms of the Project Agreement (as drafted prior to the entry into of this letter or the PA Supplemental Agreement); and/ or
 - (b) NHS Requirements.
 - (11) The Board acknowledges and agrees that:
 - (a) Project Co will not be required to provide any Services to, or perform any other obligations; and
 - (b) no Deductions, Warning Notices, or other penalty under the Project Agreement shall be incurred by Project Co;

in respect of *[Note: all areas of Facilities which may be affected by the Additional Works to be referenced – including entrances, corridors, welfare facilities, the relevant critical*

care rooms etc from commencement of the Additional Works until the later of: (a) completion of the Additional Works; or (b) the consent of the Funders in respect of the entry into of the PA Supplemental Agreement has been received and the PA Supplemental Agreement has been entered into.

- (12) The Board acknowledges and agrees that no Deduction, Warning Notice, or other penalty under the Project Agreement which arises as a result of the carrying out of the Additional Works or the subsequent rectification of any snagging works or defects in the Additional Works shall be incurred by Project Co.
- (13) The Board acknowledges and agrees that no Project Co Event of Default shall arise if that Project Co Event of Default has been caused by the Additional Works or Additional Services.
- (14) Where a Sub-Contractor is entitled to claim any compensation and/or relief from Project Co under a Sub-Contract and Project Co subsequently makes a claim against the Board under this letter in relation to such compensation and/or relief, the Board waives any right to defend Project Co's claim on the ground that Project Co is only required to pay compensation or grant relief to the Sub-Contractor under the Sub-Contract as the case may be to the extent the same is recoverable from the Board.
- (15) Any dispute arising under or in connection with this letter shall be resolved in accordance with Clause 56 (*Dispute Resolution Procedure*) of the Project Agreement.
- (16) The parties agree that Schedule Part 16 (*Change Protocol*) of the Project Agreement does not apply to the Additional Works and Additional Services which are the subject of the HoTA.
- (17) This letter may be executed in any number of counterparts, all of which when taken together shall constitute one and the same instrument.

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

by

..... Director

..... Full Name

before this witness

.....

..... Full Name

..... Address

DRAFT

THIS IS APPENDIX 1 REFERRED TO IN THE FOREGOING HEAD OF TERMS AGREEMENT

The Board requires Project Co to undertake additional works to develop a design and supply, install and maintain a ventilation system, and make any necessary alterations to the fabric of the Facilities, in accordance with the general principles of SHTM 03-01, in order to deliver 10 air changes and 10Pa positive pressure for critical care areas in respect of the following rooms:

- 1-B1-065 including 1-B1-022, 1-B1-069, 1-B1-066 and 1-B1-071 which are all open to 1-B1-065.
- 1-B1-075
- 1-B1-063
- 1-B1-037
- 1-B1-031
- 1-B1-021
- 1-B1-020
- 1-B1-019
- 1-B1-009

DRAFT

From: John Bryson [REDACTED]
Sent: 31 July 2019 14:03
To: Curley, George
Cc: 'CURLEY, George (NHS Lothian)'; Henderson, Ronnie
Subject: Private

George

As it seems every man and his dog are involved in the water issues at the RHCYP (and I understand why), I am happy to take a back seat and only respond to specific requests for advice or service provision, so please feel free to ignore the following. However, from all the meetings I have attended and research carried out (guidance, papers, correspondence etc) it is my impression that HFS, HPS, SHTMs, HTMs cannot provide the answers needed and from a personal professional perspective, I am keen to assist in providing an effective and lasting solution to the Ps ae. problems experienced at the RHCYP, old DCN and potentially throughout the NHSL portfolio of properties, and in view of this, I would submit the following;

Mrs Goldsmith makes a hugely valid point with her remark "Why are we doing remedial work on a system that is ok? Is this about maintenance regimes?". I think this is the crux of the matter, and that the solution lies in the development and implementation of an appropriate maintenance regime, rather than the implementation of specific, one-off remedial actions. Fundamental to this therefore is the identification of an effective SOP for thermostatic mixing devices which controls the presence of micro-organisms (pathogenic or otherwise), biofilm, and particularly Ps. ae. so, the "pilot" you refer to is important as a basis for taking this forward, and I would *really* like it to be formatted as follows for the Markwick 21s;

- Select **five** Markwicks which returned a high PS.ae. count (probably the 4 I used for my investigative sampling, plus 1 other), and remove, clean and sanitise the filter/NRT assembly of both hot and cold inlet barrels, on all four taps. Replace assemblies.
- Carryout a thermal disinfection of the **First**, using the tappings provided behind the shrouds. This procedure is described in Section 10 of the Markwick 21 manual (I have a copy if required), and may require a slight raising of the DHWS circulating temperature.
- Remove entire assembly of the **Second**, and autoclave. (This may not be possible, as the AS Maintenance manual seems to suggest only the spout is autoclavable – I am awaiting confirmation from AS in this respect).
- Replace the cartridge on the **Third** tap with a new, sanitised one.
- The Bouyges hygiene maintenance contractor who phoned into Monday's meeting said they had a chemical sanitising procedure for this type of outlet – this should be implemented on the **Fourth** outlet, with details of the applied process provided.
- The **Fifth** outlet should be left with just the strainer/NRT cleaned and sanitised.
- On completion of these works, **3** samples should be retrieved as follows for **each** outlet, and analysed for the standard suite plus Ps.ae.
 1. Remove spout, and take an initial discharge sample from the cartridge chamber.
 2. Replace spout and take an initial discharge sample from the complete unit
 3. Flush outlet for > 1 minute, and take 3rd sample.
 4. Samples should be taken by operating the lever all the way round to the full hot position.
 5. Samples should be taken not less than two hours after previous operation (refer Bouyges flushing programme).

I don't know if you can get Bouyges to do the above process, but it will give us invaluable information for further developing the next step (ie, chemical, thermal, or just cleaning).

As far as the remote TMVs are concerned, I believe they will have to be removed and replaced with point-of-use mixers (in the augmented care areas at least). I know there will be a cost implication, as maybe some sinks/whbs may also have to be changed, but I got the impression on Monday that these are few.

Shower TMVs will also need to be sanitised, but before expanding on this, I would like to take some further samples to see if the contamination is predominantly in the hoses and heads (hopefully), or the TMVs themselves are providing the harbour. To this end Ronnie I would like to nip in tomorrow morning for a couple of hours, so if you could confirm that is OK?

Finally, and in support of my cynicism about the guidance everything seems to be getting defined by, last night I read both the SHTM and HTM Part Bs, and nowhere do either mention or address the (I believe inevitable) deterioration in hygienic condition which will arise in blended systems or components. The focus is entirely on the functionality of managing scald risk, and D 08 similarly only provides in-service testing procedures to monitor the thermal performance of the devices. I think this means NHSL is kinda screwed contractually if the FM provider is to provide the necessary supplementary maintenance required, and also means we are kinda on our own in providing a solution. This latter assertion is where I'm coming from, and hope you agree.

Regards
John

From: Goldsmith, Susan [redacted]
Sent: 30 July 2019 20:19
To: Calder, Marion [redacted]; Guthrie, Lindsay [redacted];
[redacted]; Henderson, Ronnie [redacted];
Olson, Ewan [redacted]; John Bryson [redacted];
[redacted]
Cc: Curley, George [redacted]
Subject: RE: Water Safety Meeting 29072019

Hi George

Thanks for this. I have shared with Tracey and Alex and although this is a good start it is not quite there yet.

General view is that it starts as a write up of the workshop but seems to move to make lots of recommendations not based on any discussion. Why are we doing remedial work on a system that is ok? Is this about maintenance regimes?

We also need to see the recommendation and actions set out in a timeline working back from the hypothetical 15 weeks and also in the order and sequencing if the work that needs to be done.

It might be better to structure it as if it was a formal CMT/Board paper to help with the flow. If you need some help with it can you let me know asap and I will see what I can do

Regards

Susan

From: Calder, Marion [redacted]
Sent: 30 July 2019 15:23
To: Guthrie, Lindsay [redacted]; Henderson, Ronnie [redacted];
[redacted]; Olson, Ewan [redacted];
'johnbryson [redacted]; [redacted]
Cc: Goldsmith, Susan [redacted]; Curley, George [redacted]
[redacted]
Subject: Water Safety Meeting 29072019
Importance: High

Dear all
Attached is first draft from yesterday's meeting. Please feel free to add/comment.

Regards George

The information contained in this message may be confidential or legally privileged and is intended for the addressee only. If you have received this message in error or there are any problems please notify the originator immediately. The unauthorised use, disclosure, copying or alteration of this message is strictly forbidden.

From: Roche R (Rowena)
Sent: 31 July 2019 16:23
To: Cabinet Secretary for Health and Sport
Cc: McCallum R (Richard); Morrison A (Alan); DG Health & Social Care; McLaughlin C (Christine); Crowe B (Barbara)
Subject: RE: Edinburgh Children's Hospital - SCANCE
Attachments: Sick Kids - SCANCE - 31 July 2019 (004).doc

Andy,

As discussed, we have costs to end of this week from KPMG of £160k (excluding outlays and VAT). There will be further costs over the next few weeks to the point of finalising their report (weekly cost for the each of the last two weeks has been c. £65k). We also have an estimated cost of £1.8 million for the ventilation fix but the fix has not yet been finalised so this is subject to change.

At this point we do not have full or final costs and these will come as the work required and timeline emerge. As such, I have not added this into the SCANCE. In case needed, Cab Sec's previous statement on costs which ran on an STV lunchtime bulletin earlier this month, was:

We don't yet know, because we have not got the first set of assurances what additional cost this might bring. But certainly, cost and additional resources will not be an obstacle in delivering a quality, safety-assured, patient-centred service in the new hospital. And that's what we're working towards.

I have updated the SCANCE (attached) for the standard, as requested.

Thanks,

Rowena

Rowena Roche
Directorate of Health Finance
Scottish Government | [REDACTED]
[REDACTED]

Please note that I do not work on Thursday afternoons or on Fridays.

From: Corr A (Andrew) [REDACTED] **On Behalf Of** Cabinet Secretary for Health and Sport
Sent: 31 July 2019 15:36
To: Crowe B (Barbara) [REDACTED]; Cabinet Secretary for Health and Sport [REDACTED]
Cc: McCallum R (Richard) [REDACTED]; Morrison A (Alan) [REDACTED]; DG Health & Social Care [REDACTED]; McLaughlin C (Christine) [REDACTED]; Roche R (Rowena) [REDACTED]
Subject: RE: Edinburgh Children's Hospital - SCANCE

Barbara,

The Cabinet Secretary has considered the SCANCE. She has asked for you to add in the name of the standard referred to in the first line of the SCANCE. She would also like a line added into the SCANCE about costs. Grateful if these could be added asap so I can get it cleared and lodged with Cabinet Secretariat.

Thanks,
Andy

From: Crowe B (Barbara) [REDACTED]
Sent: 31 July 2019 11:35
To: Cabinet Secretary for Health and Sport [REDACTED]
Cc: McCallum R (Richard) [REDACTED]; Morrison A (Alan) [REDACTED]; DG Health & Social Care [REDACTED]; McLaughlin C (Christine) [REDACTED]; Roche R (Rowena) [REDACTED]
Subject: RE: Edinburgh Children's Hospital - SCANCE

Andy,

Following the update provided to Cab Sec on 25 July and our previous submission, we have been advised by NHS Lothian that they are now working to formally engage the original designers for the critical care ventilation fix. The Board had been considering bringing in an outside designer but this had the potential to impact on warranties and lawyers for NHS Lothian had advised that it would not be in the Board's interests to do so. The Board will be meeting on 7 August and we will continue to keep you updated.

Regards,

Barbara

Barbara Crowe
Financial Accounting and Planning
Health Finance and Infrastructure Team
Directorate for Health Finance
Scottish Government

[REDACTED]

From: Corr A (Andrew) [REDACTED] **On Behalf Of** Cabinet Secretary for Health and Sport
Sent: 31 July 2019 08:23
To: Crowe B (Barbara) [REDACTED]; Roche R (Rowena) [REDACTED]; Cabinet Secretary for Health and Sport [REDACTED]
Cc: McCallum R (Richard) [REDACTED]; Morrison A (Alan) [REDACTED]; DG Health & Social Care [REDACTED]; McLaughlin C (Christine) [REDACTED]
Subject: RE: Edinburgh Children's Hospital - SCANCE

Thanks for letting me know Barbara.

A

From: Crowe B (Barbara) [REDACTED]
Sent: 31 July 2019 08:08
To: Roche R (Rowena) [REDACTED]; Cabinet Secretary for Health and Sport [REDACTED]
Cc: McCallum R (Richard) [REDACTED]; Morrison A (Alan) [REDACTED]; DG Health & Social Care [REDACTED]; McLaughlin C (Christine) [REDACTED]
Subject: RE: Edinburgh Children's Hospital - SCANCE

Andy,

To note that we have some further updates to this paper which emerged after sending up and will send an update as soon as possible.

Regards,

Barbara

Barbara Crowe
Financial Accounting and Planning
Health Finance and Infrastructure Team
Directorate for Health Finance
Scottish Government

From: Roche R (Rowena) [REDACTED]
Sent: 30 July 2019 16:29
To: Cabinet Secretary for Health and Sport [REDACTED]
Cc: McCallum R (Richard) [REDACTED]; Morrison A (Alan) [REDACTED]; DG Health & Social Care [REDACTED]; McLaughlin C (Christine) [REDACTED]; Crowe B (Barbara) [REDACTED]
Subject: Edinburgh Children's Hospital - SCANCE

Andy,

Please find attached the SCANCE contribution for Thursday's Cabinet for Cab Sec's review.

Following the update provided to Cab Sec on 25 July, NHS Lothian have advised that a solution for the re-design of the critical care ventilation is still to be agreed. In order to expedite this process, Lothian have been considering bringing in an outside designer but this has the potential to impact on warranties. Lawyers for NHS Lothian have advised that it would not be in the Board's interests to exercise step in rights – i.e. engage another designer; this could also take some time. This matter is being treated as a matter of urgency by the Board and we will continue to keep you updated.

Kind regards,

Rowena

Rowena Roche
Directorate of Health Finance
Scottish Government | [REDACTED]

Please note that I do not work on Thursday afternoons or on Fridays.

SCANCE Contribution**Edinburgh Children's Hospital**

On 2 July, NHS Lothian informed Scottish Government that the air change frequency in the ventilation system of critical care areas did not meet the 2014 standard (Scottish Health Technical Memorandum 03; SHTM03). Due to the late notice, lack of certainty on a fix and need for assurance on the overall safety of the new hospital, the Cabinet Secretary for Health and Sport instructed that the move be halted.

Patients with appointments at the new hospital have been contacted and a dedicated helpline remains in operation. Ms Freeman wrote to staff, MSPs and MPs and the convenors of the Health and Sport Committee and Public Audit and Post-legislative Scrutiny Committee on 18 July detailing the events that led to the postponement, work instructed to identify and remedy the factors that led to that decision, and the support being provided to the Board, patients and staff.

NHS National Services Scotland (NSS) are carrying out an assessment of compliance of all building systems which could impact on patient and staff safety. An interim report is expected in the third week of August with the final report expected in September. NHS Lothian is working to formally engage the original designers for the rectification work on critical care ventilation. Work will commence as soon as agreement has been reached on the Board change required.

KPMG are undertaking an audit of governance of the project; an initial draft of their findings is expected by 9 August and the finalised report the following week.

An Oversight Board including Scottish Government, NHS Lothian, NSS, Scottish Futures Trust will provide advice to Ministers on key issues, such as phased occupation and the critical care technical solution. The Board's first meeting will take place on 8 August.

Speaking Note

- On 2 July, NHS Lothian notified the Scottish Government of an issue with the ventilation system at the Royal Hospital for Children and Young People. I required further assurance on this issue and on all aspects of compliance with standards across the new hospital and I therefore instructed that the planned move be halted.
- NHS National Services Scotland are undertaking a detailed assessment of compliance of all building systems which could impact on the safety of patients and staff at the new site and a full report is anticipated in September.
- This assessment will determine the timeframe for services moving to the new hospital. Services will move over on a phased basis as soon as it is safe to do so.
- An expert Oversight Board will provide advice on the readiness of the facility to open and on the migration of services to the new facility.
- KPMG are currently undertaking an audit of governance, to establish the factors that led to the delay and their report is expected by mid-August.
- I will keep Parliament informed of progress of these reviews and timeframe for moving to the new hospital.
- Patients with appointments at the new hospital have been contacted and a dedicated helpline is in operation. I have also written to and visited staff to thank them for their ongoing work in managing the move and providing high-quality care.

Name of Official: Barbara Crowe	Extension Number: XXXXXXXXXX
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From: Crowe B (Barbara)
Sent: 01 August 2019 11:15
To: Cabinet Secretary for Health and Sport
Cc: Connaghan J (John) (Health); McLaughlin C (Christine); DG Health & Social Care; Chief Medical Officer; Calderwood C (Catherine); Murray D (Diane); Hart S (Suzanne); Klein G (Gerard); Rogers S (Shirley); Aitken L (Louise); Morrison A (Alan); Smith G (Gregor); Roche R (Rowena); Communications Healthier; McCallum R (Richard)
Subject: RE: Edinburgh Children's Hospital - Cab Sec update - 25 July 2019
Attachments: 2019-20 - Health Finance and Infrastructure - Edinburgh Sick Kids - Update - 1 August 2019.docx

Please see attached briefing to Cab Sec to provide an update on RHCYP.

Regards,

Barbara

Barbara Crowe
Health Finance and Infrastructure Team
Directorate for Health Finance
Scottish Government



Cabinet Secretary for Health and Sport**EDINBURGH CHILDREN'S HOSPITAL - UPDATE****Purpose**

1. To provide an update on the current situation regarding the new Edinburgh Children's Hospital.

Priority

2. Routine.

Background

3. Following previous summaries of the issues currently facing the opening of the new hospital, this note provides a further update on the current actions being taken to resolve the various issues at the new hospital.

Operational Impact and Support

4. In the past week, the NHS Lothian Children's Hospital Helpline received only 3 calls. This compares to 15 calls and 32 calls in the previous two weeks. The helpline will remain open until you are satisfied that it is no longer required. The Board have advised that no staffing issues have been escalated, no complaints have been received and no communication issues have been escalated.

Technical Fix – Critical Care Ventilation

5. NHS Lothian had been considering bringing in an outside designer for the fix to the critical care ventilation but lawyers for the Board had advised that it would not be in their interest to do so. The board is now working to formally engage the original designers and the rectification work will commence as soon as agreement has been reached on the change required.

External Review – NHS National Services Scotland (NSS)

6. NSS sent 130 questions to NHS Lothian on phase 1 of the review – ventilation, water and drainage. Initial analysis of responses received to date is underway and site visits have taken place. Meetings have been arranged with NHS Lothian on 5 and 7 August to discuss their responses. Delivery of the planned timetable (final report early September) remains an amber risk with an interim position expected in the third week of August.

Phased Migration

7. Migration of DCN and non-critical care paediatric services is unlikely to begin until the NSS review concludes. NHS Lothian have developed a DCN stand-alone migration plan which would allow DCN to move 8 weeks after confirmation that the new build is fit for purpose.

KPMG Audit of Governance

8. KPMG are continuing their review of documentation and follow-up interviews. A number of meetings will take place this week including a meeting with Tim Davidson, NSS and Mott MacDonald. They remain on track to provide an initial draft of their findings by 9 August and the finalised report the following week.

Oversight Group

9. The Oversight Board will meet for the first time on 8 August and weekly thereafter. We will advise of progress with the five key issues that they will be considering in future updates (phased occupation, critical care technical solution, migration, commercial arrangements and contract management).

Communications

10. NHS Lothian's Board will meet on 7 August. Board papers will be shared ahead of the meeting and officials and comms will prepare any required briefing and lines and the comms team will liaise with the NHS Lothian comms team following the board meeting.

Summary

11. You are invited to note the current position and risks to the initial timelines for both the design solution and NSS report. Further updates will be provided on a weekly basis going forward unless there are any significant developments which require an immediate note.

Barbara Crowe, Health Finance

1 August 2019

From: Finnigan C (Carole) on behalf of DG Health & Social Care
Sent: 01 August 2019 17:29
To: Connaghan J (John) (Health)
Cc: DG Health & Social Care
Subject: FW: NHS Lothian RHSCYP Board Paper 07-08-19
Attachments: RHSCYP Board Paper 07-08-19 (010819).DOC

As discussed.

Regards

Carole

Carole Finnigan | Private Secretary to Malcolm Wright | DG Health and Social Care and Chief Executive
NHS Scotland

  [Redacted contact information]

From: Corr A (Andrew) [Redacted] **On Behalf Of** Cabinet Secretary for Health and Sport
Sent: 01 August 2019 17:25
To: Wright M (Malcolm) [Redacted]; Cabinet Secretary for Health and Sport
[Redacted]
Cc: DG Health & Social Care [Redacted]
Subject: RE: NHS Lothian RHSCYP Board Paper 07-08-19

As discussed.

The Cabinet Secretary has indicated that she is not going to clear this because once again it reads as if 1. The issue has not much to do with NHSL and 2. They are somehow leading the current process.

She would be grateful if you could speak to the CEO and get this sorted before she clears it.

Thanks,
Andy

From: Crowe B (Barbara) [Redacted]
Sent: 01 August 2019 14:11
To: Communications Healthier [Redacted]; Hart S (Suzanne) [Redacted];
Klein G (Gerard) [Redacted]; Aitken L (Louise) [Redacted]; Cabinet Secretary for Health
and Sport [Redacted]
Cc: Roche R (Rowena) [Redacted]; Morrison A (Alan) [Redacted]; McLaughlin C
(Christine) [Redacted]
Subject: NHS Lothian RHSCYP Board Paper 07-08-19
Importance: High

Please find attached the Board paper from NHS Lothian re an update on the delay to the opening of the RHCYP, DCN and CAMHS - the Board meeting is on 7 August. Grateful if you can advise if NHS Lothian can issue this paper and whether any lines are required to be prepared ahead of the meeting.

Thanks,

Barbara

Barbara Crowe
Health Finance and Infrastructure Team
Directorate for Health Finance
Scottish Government



NHS Lothian

Board Meeting
7 August 2019

Director of Finance

Update on Royal Hospital for Children and Young people, the Department of Clinical Neurosciences and Child and Adolescent Mental Health Services**1 Purpose of the Report**

The purpose of this report is to update Board members on the delay to the opening of the Royal Hospital for Children and Young people, the Department of Clinical Neurosciences, and Child and Adolescent Mental Health services. In particular, this covers the reviews underway and NHS Lothian's response to the work required to address all the associated issues.

2 Recommendations

Board members are asked to consider and note the update.

3 Discussion of Key Issues**Background**

- 3.1 Board members are aware that following the late identification of a problem with Ventilation in the Critical Care of the new hospital, a decision was made to delay the opening of the Royal hospital for Children and Young people, the Department of Clinical Neurosciences and Child and Mental Health Services at the Little France Campus. This problem was identified by IOM, a specialist Ventilation company, brought in by NHS Lothian to carry out checks on the ventilation in augmented clinical care areas. This work was delayed because of the ongoing construction work impeding access to the key areas. As a consequence of their findings we have instructed IOM to carry out further ventilation checks in all clinical areas and in a further sample of general areas to gain additional assurance that the required standards are met.
- 3.2 Following the announcement of the delay, NHS Lothian established its own internal Incident Management team, led by the Director of Finance. This team has been meeting twice a week and will continue to meet regularly until a clearer programme of work is established which takes the hospital to a revised opening date. The initial focus of the meetings has been overseeing patient and staff communication, the review of ventilation and the plans for rectification, and given the pause in occupation any opportunities to alter or amend the water infrastructure to take account of the facts learned from the Queen Elizabeth Hospital and Dumfries and Galloway Royal Infirmary. In addition, both Facilities and Infection control teams are planning for anticipated new standards in water safety which will require a Board change, as well as giving urgent consideration to how water safety will be maintained during this period. More recently, there has been discussion on migration plans, and planning for engagement with IHSL and Multiplex.
- 3.3 In order to provide co-ordinated advice to the Cabinet Secretary for Health and Sport, an Oversight Board has been established to seek assurance from NHS Lothian that according to its due diligence and governance, the facility is ready to open; and from NHS National Services Scotland that its agreed diligence has been successfully completed.

- 3.4 To support the work of the Oversight Board, two reviews have been commissioned by Scottish Government with the Director of Health Finance as the Lead Director. The first is by KPMG to review the events leading up to the decision to delay the move, the professional and technical advice given to the Board in relation to derogations and the governance arrangements for the project. The second is a technical review by Health Facilities Scotland (HFS) and Health Protection Scotland (HPS) to verify that all aspects of the building design and build meet the appropriate standards. This work will be undertaken in partnership with IHSL who own the building and Multiplex the contractor, whose contract is with IHSL, and its supply chain.
- 3.5 Both these reviews are underway with a number of internal interviews already completed by KPMG and a number with external partners including Scottish Futures Trust, IHSL, and our legal and technical advisers. In addition, KPMG have been provided with the high-level review undertaken by Scott Moncrieff on Audit Scotland's behalf around the Settlement Agreement between NHSL and IHSL considering project governance and value for money. This concluded that the Board had provided evidence of detailed evaluation of the qualitative and quantitative options available to it before proceeding with the Settlement Agreement option. It also noted that all the options reasonably available to NHS Lothian came with some adverse impact.
- 3.6 In terms of the HFS/HPS commission, the project team have made available a wide range of information including the overall Project Agreement with IHSL (as amended by the Settlement Agreement). Both HFS and HPS have participated in a number of technical workshops with a further two planned on the 5th and 7th August. The immediate priorities for the Commission are the ventilation, water, and drainage systems and evaluation will include advice from HFS/HPS' independent experts. This phase is anticipated to be complete by early September. However, their scope includes all critical systems and the timeline for this is not known at this stage, nor how it will interface with any phased migration agreed once the outcome of the initial phase is concluded.

Current Position on Rectification

- 3.7 Following a number of technical workshops on the Critical Care ventilation, all parties have a common (high level) understanding of the solution for this. This now requires engagement from Multiplex's designers to further develop the technical design in relation to the introduction of a second air-handling unit, this being dependent on the agreement of the most effective means of managing its implementation. At the time of writing, a Board Change request has been issued in draft form to IHSL, following the change process as set out in the Project Agreement. The Board and IHSL are assessing how best contractually to deliver a response to this request in order to minimise delay. However, the timeline for rectification will only be known once the design is complete. Over and above this, there are several other ventilation issues identified by IOM but not deemed critical to opening. The Board is currently working with IHSL, Multiplex and HFS/HPS to agree if change is required and where responsibility lies for this.
- 3.8 It should be noted that until the HFS/HPS review of ventilation is complete, as well as the Board's commissioned IOM review, it is not possible to assess whether any other works will be required.

Programme/Occupation

- 3.9 Recognising that changes required for critical care are only relevant for Children's services the Chief Officer (Acute) has been looking at whether a partial migration might be possible. The initial assessment has focussed on DCN services and concluded that services could move independently of Children's services. Any decision on a partial migration will however be dependent on understanding the works required to address critical care and to ensure that this does not impinge on DCN at anytime. Without a timeline for this, it is not possible to conclude this work.

Communication with staff and patients

- 3.10 Board members were advised on the action taken to brief patients and staff in the immediate period after the announcement of the delay. This included the establishment of a helpline, hosted by NHS 24 and still live, contact with all patients booked for Outpatients and diagnostics in date order, a general letter for patients and families, a new campaign on the radio and a media release with key messages for patients and their families. In relation to the site, a Senior Paediatric nurse and doctor were available at the RIE Emergency department and transport and on-site support for redirection was established.
- 3.11 In parallel with the issue of the Board paper, it is proposed that the update to the Board will form the basis for a further communication with staff.

4. Key Risks

- 4.1 There is a risk that there are further critical system issues requiring rectification which will impact on the timeline for occupation. In addition, there is a risk that IHSL will require extended engagement with their funders on changes required.

5. Risk Register

- 5.1 The delay to the Project and the lack of certainty on the timeline for occupation will be added to the NHS Board risk register.
- 5.2 Once the programmes are established, there may well be a need for wider staff engagement and consultation and indeed potentially for public and patient engagement in relation to service delivery but this will be determined by each programme. Any such work may also require an impact assessment to be carried out. Where any changes are deemed to be significant in service terms the Scottish Health Council and any other bodies would be involved.

6. Resource Implications

- 6.1 There will be capital and revenue implications associated with the delay and rectification. The quantification of these implications is currently being assessed and will be reported to the Finance & Resources Committee.

Susan Goldsmith
 Director of Finance
 1 August 2019

Draft**RHCYP/DCN: Commissioning/Ventilation**

Note of a meeting held at 4.00 pm on Thursday 1 August 2019 in Meeting Room 5, Waverley Gate, Edinburgh.

Present:

Alex McMahon (Chair), Tim Davison, Tracey Gillies (until 4.40pm), Alex Joyce, Iain Graham, George Curley, Janice Mackenzie, Lindsay Guthrie, Ian Laurenson, Jacque Campbell (from 4.30pm), Kizzy Taylor and Janis Butler.

Apologies:

Susan Goldsmith and Brian Currie.

In Attendance: Chris Graham

1. Minutes of the Meeting held on 29 July 2019.

1.1 Approved subject to amendment of the meeting date from Thursday to Monday.

2. Technical Update

2.1 Ventilation – Iain Graham referred to the circulated update paper. It was noted that work remained in progress and ongoing with MPX against the IOM schedule and tracker.

2.1.1 There was discussion on the 7 key points as listed in the 25th July 2019 minute. A separate table showing an abbreviated version of these points and mapping out progress against each point and who was responsible for the point was requested.

2.1.2 Iain Graham was working on developing this along with looking to combine with the technical tracking template supplied by Peter Reekie (SFT). Tracey Gillies made the point that for members of the IMT who did not have an engineering background it would be helpful to easily track issues in relation to ventilation and in particular decisions made around the air handling unit. It was agreed that Iain Graham would take this work away and develop further.

IG

2.1.3 Alex McMahon added that it was important to be able to track this and have appropriate version control in place in order to be able to demonstrate to the Oversight Assurance Board the clarity around sequences of when issues were discussed and evidence of any sign offs.

- 2.1.4 Iain Graham also reported on the draft board changed issued by IHSL and the process to convert the draft board change into the correct technical format. Alex McMahon asked if the document would then come to the IMT prior to submission to the Oversight Assurance Board. Alex referred to the circulated email received from Professor Jacqui Reilly with a question from NSS regarding the scheduling of support work:

“There are a number of reviews currently taking place around the water, ventilation and drainage systems within RHCYP. We are aware that the critical care ventilation has already been identified as a system that will require to be replaced and we understand the process of commissioning this is underway by NHS Lothian.

It would be helpful to understand whether NHS Lothian have made a decision on whether they will move any services into the new hospital prior to the critical care unit ventilation system being redesigned, commissioned and signed off. If so, what services are planned to move and how long would the lead in time be for the transfer?

Understanding this will help NSS schedule our support work in line with your needs.”

It was agreed that this needed to go to the first meeting of the Oversight Assurance Group for discussion and agreement.

AMcM/TG

- 2.1.5 There was discussion on the sequence and process following ventilation, water and drainage sign off. Lindsay Guthrie highlighted issues from an infection control point of view and stated that the air handling system could not be guaranteed beyond the air filters and that the ability for outside air to ingress throughout the system remained a very large risk. The IMT noted that TUV-SUD had been invited from Portugal to discuss the system design and to clarify how the system achieves SHTM03-01 compliance.
- 2.1.6 Lindsay Guthrie reported that Malcolm Thomas (HFS) had been engaged to undertake a site walk-round to pick up issues around the whole system. It was noted that Malcolm Thomas was the engineer who wrote SHTM03-01. Malcolm Thomas has suggested that IOM be brought back in and given an expanded brief in relation to testing other clinical areas.
- 2.1.7 Tracey Gillies explained that the IOM report into air handling had only tested the outside of the unit and not the inside. IOM had been briefed to test the number of air changes and pressure only and not to look at wiring or filter fit within the unit which would not have been obvious when in operation.
- 2.1.8 George Curley added that it had been recommended to undertake a full snagging exercise around ventilation which included looking at the dual fans within the unit which were meant to have 100% redundancy; however the whole system depends on one speed controller.

2.1.9 Tracey made the point that it would be helpful to keep a timeline of who was coming and when; what they were looking at and what was emerging when in order to mitigate the risk of answering different issues. There were 2 separate issues here:

1. Compliance issues
2. Faults with work done

2.1.10 Lindsay Guthrie commented that a Red, Amber, Green (RAG) Score would be given to the full list of issues. Issues would remain Red until evidence demonstrating that the risk had decreased could be provided. Tracey added that it was important to know if the air handling units were fit for purpose and to know when this was found out and from what source.

2.1.11 Iain Graham agreed to incorporate this information as part of the revised, version controlled tracker. Iain would bring the updated tracker with the look ahead attached to the 5th August IMT.

IG

2.1.12 The IMT noted that there would be HFS workshops held on 5th and 7th August 2019.

2.2 Critical Care Remedials – Iain Graham reported on the circulated draft board change issued by IHSL and referred to the three options outlined in the email correspondence from Matt Templeton, Director, Dalmore Capital (31/07/19):

1. **Option 1:** High Value Change (Schedule 16 (Change Protocol))
2. **Option 2:** Amended Process by Agreement
3. **Option 3:** Depart from High Value Change process

2.2.1 The IMT noted that the strong preference of Multiplex is Option 3, circumventing the Change protocol best achieves the overall objective to facilitate the migration of RHCYP into the new facilities at the earliest opportunity. There remained a piece of work to undertake in the next couple of days with IHSL and MacRoberts to move this forward. Any proposal would then need to go to the Oversight Assurance Board for sign off.

2.3 Water Report – Update – The IMT noted that the paper in development was on the back of the work being undertaken by Lindsay Guthrie and George Curley. There was discussion on what else was required in order to complete and strengthen the recommendations being put forward in the report so it could be provided to the Oversight Assurance Board.

- 2.3.1 There was also discussion on the oversight of the whole water system; capability to deliver good quality water; instances of temperatures out of specification and the augmented areas that were showing significant contamination from Pseudomonas.
- 2.3.2 In relation to pseudomonas the IMT discussed the previously agreed strategy around removing taps and steam flushing the system. George Curley outlined the detail behind this approach and the discussion to whether or not this work could be done 'in situ'.
- 2.3.3 Consideration was also being given to reviewing the system to look for presence of any biofilm build up. The recommendation would be that this would be a good thing to do whilst the building remained unoccupied. Lindsay Guthrie made the point that once the actions had been achieved in relation to pseudomonas the continued quality monitoring of microbiological safety issues would not prevent occupation of the building. Ian Laurenson stated that the temperature monitoring for legionella would require further investigation. Tracey Gillies added that corrective actions would be included within the water safety plan.
- 2.3.4 Alex McMahon stated that the paper was developing well to the point where it was clearly outlining an understanding of the elements and actions being taken to make the water safe and actions to mitigate against harm to patients once the building is occupied.
- 2.3.5 It was agreed that Tracey Gillies would circulate the version controlled paper for Lindsay Guthrie and George Curley to further work on to develop a report for 6th August 2019 that could be taken to the Oversight Assurance Board on 8th August. George Curley pointed out that there were significant components of work which had been requested to be opened up which would not have concluded before the 6th.

TG/LG/GC

3. DCN Imaging Report

- 3.1 The circulated paper from Fiona Halcrow considering if there was any impact on the 'Imaging Equipment' installed within the new RHCYP building as a result of the site not becoming operational, was noted.
- 3.2 Janice Mackenzie explained that there no impact currently due to the delay. On a positive note, all imaging warranties would not commence until the site was operational. This was good news particularly in relation to the MRI Scanners where there was most anxiety from a safety point of view. The imaging department were conducting weekly imaging equipment checks to pick up any issues. Most of the equipment, except the MRI Scanners, had been switched off.

- 3.3 There was discussion around the provision of neuro angiography service and the recent DCN issues. NHSL were in contact Siemens around logistics of moving the new equipment and the recommendation was not to transfer equipment as this could potential lead to a 10 week period where there was no service provided in Scotland. Additionally it was noted that DCN were not confident the equipment would fit into the room selected if it was transferred. Jacquie Campbell commented that it was helpful to have this information around timescale which could be referenced in any future risk assessments.

4. Oversight Assurance Board – Terms of Reference

- 4.1 The Terms of Reference for the Oversight Assurance Board were noted.

5. HFS/HPS/KPMG Feedback

- 5.1 The IMT noted that the KPMG were hoping to have concluded their report by the end of next week and this would be brought to IMT when available. In relation to HFS and HPS it was noted that there would be workshops held on 5th and 7th August 2019.

6. Draft Board Report and Staff Communication

- 6.1 Iain Graham reported that the version of the Draft Board Report circulated included the additional Scottish Government paragraph at 3.3:

“In order to provide co-ordinated advice to the Cabinet Secretary for Health and Sport, an Oversight Board has been established to seek assurance from NHS Lothian that according to its due diligence and governance, the facility is ready to open; and from NHS National Services Scotland that its agreed diligence has been successfully completed.”

- 6.2 The IMT discussed this added paragraph and it was felt to be contradictory as the Oversight Assurance Board would be chaired by the Scottish Government. It was agreed to go back to the Scottish Government to pick this up and to also look to include mention of the Oversight Assurance Board Terms of reference. The Board Paper for the Board Meeting on 7th August 2019 would be held back until early next week.

IG/SG

- 6.3 There were also revisions to be made to paragraphs 3.2 and 3.7. Lindsay Guthrie to reword these sections and send this through to Iain Graham, Alex McMahon and Kizzy Taylor.

LG/IG/AMcM/KT

- 6.4 In relation to Staff Communication it was agreed that any communication to staff should be issued ahead of the Board Paper being published for the Board Meeting on 7th August 2019. Kizzy Taylor would undertake to develop this and bring it to the IMT meeting on 5th August 2019. It was also agreed that the Staff Communication would go out to all NHSL staff.

KT

7. Any Other Competent Business

- 7.1 Meeting with DCN re Water - Lindsay Guthrie reported that these meetings would be reconvened week beginning 18th August 2019. The meetings would discuss the concerns around the number of positive test results being thrown up. It was acknowledged that no worsening situation had been reported but it remained a significant risk to patients and staff.

8. Date and Time of Next Meeting

- 8.1 The next meeting would be held at 4.00 pm on Monday 5 August 2019 in Meeting Room 5, Waverley Gate, Edinburgh.

Project title Royal Hospital of Sick Children

Subject Ventilation Meeting Minutes

Location NHSL Project Office, Clinical Management Suite, Royal Hospital of Sick Children, Edinburgh

Date and time of meeting 02/08/2019 10:00

Recorded by: RS

Circulation: Via Email

Attendees

Name	Initials	Company/organisation
Graeme Salmon	GS	Integrated Health Solution Lothain (IHSL)
Lindsay Guthrie	LG	Infection Control Lead (NHSL)
Elham Khatamzas	EK	Infection Control (NHSL)
Billy Loudon	BL	Currie & Brown
David Wilson	DW	Multiplex (MPX)
Ronnie Henderson	RH	National Health Service Lothain (NHSL)
Wallace Weir	WW	Integrated Health Solution Lothain (IHSL)
Ross Southwell	RS	Mott MacDonald
Colin Macrae	GC	Mott MacDonald
Ian Storer	IS	Health Facilities Scotland (HFS)

Apologies

Name	Initials	Company/organisation
Ian Brodie	IB	Mott MacDonald
Brian Currie	BC	National Health Service Lothain (NHSL)
Ken Hall	KH	Multiplex (MPX)
George Curley	GC	National Health Service Lothain (NHSL)

Item	Text	Action
1.	<p>Remedial Works</p> <p>WW stated a set of technical/commercial proposals had been sent to Susan Thursday 1st August 2019. RH asked if TUV-SUD are committed to undertaking the work. WW recommended to speak to Ian Graham re discussions at steering group. DW had been engaging technically. These discussions were around the following:</p> <ul style="list-style-type: none"> - Preliminary discussion about power – Will there be a need for dual supplies for the new AHU - Are pressure stabilisers needed in all rooms? 2 no. rooms that have doors at both sides of each floor. How do control the pressure regime when both doors are open? - Openable windows – Looking at these to be locked and shutoff. - AHU – heating and cooling – Looking into a heat pump arrangement - AHU - Looking at acoustic outputs of the external condenser, potentially pushing them over to the energy centre. - Looking at different ceiling types (DW stated his preference would be plasterboard ceiling). - Isolation rooms – Would air permeability tests need to be carried out in these rooms? - Any expectations on pressure gauges (visual meter required?). - Neonatal – single room that opens to 3 bed cot – treat the whole area as 10 Pa? RH stated he had indicated this on walk around. 	IHSL

IS stated that he would not comment at this time until the full design had been issued.

WW stated that if there was a yes before the assurance group next week, then they can progress when the instruction is received. IS stated contingency wise, if NHSL declines the proposal, WW stated that there would be another group meeting. There was a general consensus that 7-10 days before design starts.

LG stated that how would the change impact the current ventilation issues. DW stated that there is 1 AHU being affected and if it would required to be removed (worst case), it wouldn't affect the critical path. IS stated that we wouldn't want to replicate the same issues on this AHU. DW agreed.

2.

Ventilation Board Change

Change to previous meeting notes. DW asked to change the following:
'MPX have forwarded comment from TUV-SUD regarding if there are any examples with a multibed ward with 10ACH and 10PA. LG stated Dumfries hospital and Aberdeen childrens hospital are good examples and could be used. EM stated the regs haven't changed since 1990's. NHSL will try and distribute any information gathered back to MPX.'

RH stated department 215 – critical care in Royal infirmary is a good example and could arrange a walkthrough if required. RH suggested to add more resilience to the new system if possible. 4 no isolation rooms could be split into 2 groups of 2 with the new ventilation proposal.

NHSL/MPX

3.

Ventilation Issues Log

DG previously stated that Zutec has not got enough information about the AHUs, particularly very limited manufacturer information. DW stated Sandometal and Q-Nis expected on site W/C 05/08. DW have requested manufacture for CE marking as this information was found to not be on Zutec and are to be added.

MPX

4.

Any other Business

RH has sent another invite for future meetings.

Date of Next Meeting

Tuesday 6th August 2019 @ 10:00 Warlow

From: Aitken L (Louise)
Sent: 05 August 2019 11:56
To: Cabinet Secretary for Health and Sport
Cc: Klein G (Gerard); News Desk; Leitch J (Jason); Maxwell S (Stewart) (Special Adviser); Communications Healthier; Morrison A (Alan); Black A (Alasdair); Knight S (Stephanie); Grieve B (Bethany); Calderwood C (Catherine); Smith G (Gregor); McQueen F (Fiona); Summers Y (Yvonne); McLaughlin C (Christine); Roche R (Rowena); McAllister C (Colin); Wilson S (Stuart) (HLTH); Gilbert A E (Anna); Lea-Ross S (Stephen); DG Health & Social Care; Crowe B (Barbara); Rogers S (Shirley); McCallum R (Richard); Neill S (Sean)
Subject: FOR INFO: Transcripts - Sick Kids Herald splash follow up - PA, BBC, Daily Mail, Scotsman, Telegraph
Attachments: Penny Taylor - BBC Radio Scotland Good Morning Scotland.docx; Tom Waterson - BBC Radio Scotland Good Morning Scotland.docx; Jeane Freeman - BBC Radio Scotland Good Morning Scotland.docx

Hi Andy,
Cc'ing Ministers for awareness.

Please find attached a transcript of Cab Sec on GMS today.

Please also find attached transcripts of Mr Waterson and health journalist, Penny Taylor.

Thank you
Louise

Louise Aitken

Senior Media Manager | Health Communications | 

The Scottish Government | www.gov.scot

Programme(s)	BBC Radio Scotland Good Morning Scotland
Date & time	Monday 05 August 2019 06.36
Subject/Interviewee	Interview – Penny Taylor
Duration	6.31

Gary Robertson, presenter: Scotland's Health Secretary, Jeane Freeman, is facing calls to consider her position in the wake of the latest revelations about Edinburgh's new children's hospital. Last month it was revealed the official opening of the £150 million facility had been delayed indefinitely because of concerns about the ventilation system. Speaking on this programme at the time, the Health Secretary revealed she'd stepped, overruling NHS Lothian.

Jeane Freeman MSP, Health Secretary: Well, NHS Lothian were looking at options. They hadn't made a decision about what they wanted to do. They were looking at a range of options. I took the decision that it wasn't safe to open the hospital next week in any respect until I'd been assured for patient safety that every other area of that hospital met national standards.

GR: Well, earlier this month the story took a fresh twist when the BBC disclosed that the health board is currently paying the developers £1.4 million a month for a hospital which it clearly can't use. Over the weekend, the chairman of UNISON, Scotland's health committee, revealed that ventilation isn't the only problem, Tom Waterson claiming the drainage system isn't fit for purpose and parts of the hospital may have to be demolished. So where do we stand? Well, health journalist, Penny Taylor, joins me now.

Morning to you, Penny.

Penny Taylor, health journalist: Good morning.

GR: *This hospital has been a long time coming, hasn't it?*

PT: Hasn't it just? Yeah. I mean, I think it goes really as far back as the early years of the 2000s when the Royal Infirmary of Edinburgh relocated to a site at Little France on the southern outskirts of the city, because at that point it was certainly being discussed that the Sick Kids would have to move to be alongside the new adult facility. Now, work started in 2015 on-site and it was due to complete in 2017, but it was already two years overdue, two years delayed, by the time the decision was taken to halt the transfer.

GR: *Not unusual for big projects to run over, but then we're hearing about other problems now and that's what's led to the hospital not opening.*

PT: Well, we've been hearing about this actually for a wee while. It seems that ventilation in the critical care areas of the children's hospital, which are meant to clean the air about 10 times an hour, they are allegedly not powerful enough to do that. There have been questions about the water supply. You've heard issues raised about drainage. There are plenty of concerns about the new hospital. It's an interesting arrangement in that it's not the old-fashioned private finance initiative. The model that this hospital is being delivered under is called a non-profit distributing system. It's the Scottish Government's private/public kind of finance model, and so that has meant that on completion and acceptance of that building in February the health board has been paying £1.4 million per month to the consortium since February, and although it only cost £150 million to build, there is a 25-year contract worth more than £430 million for maintenance and facilities management way into the future.

GR: *When it comes to responsibility here and people asking questions, we obviously have the developer, we have the health board and we have the Health Secretary all in the firing line.*

PT: There are very, very many questions being asked, clearly, and there is a large number of reviews taking place into different aspects of this. There has always been rumours of a fraught relationship between NHS Lothian and the consortium that has been developing the hospital. The Scottish Government has, basically, said the Health Secretary has made it clear that her top priority is patient safety and that, therefore, that is the reason for the delay. It says that Jeane Freeman (the Health Secretary) recognises the frustrations of families, the children themselves and staff. The Health Secretary has been down to the hospital to say thanks to everyone for their efforts while this impasse, I suppose, takes place. For NHS Lothian's part, they are pointing to a number of independent reviews that are underway to ensure the new hospital's safety,

and they say that an oversight board has been appointed with representatives from the Scottish Government, NHS Lothian and the Scottish Futures Trust, which is the body that mediates, I suppose, between the public sector and the private sector over such deals and this is to advise on readiness to open and that will be reported to the Health Secretary in due course.

GR: We spoke to Labour's Monica Lennon a little earlier and she raised the issue of the problems at the children's ward in Glasgow, the Queen Elizabeth Hospital. Was the children's hospital built by the same contractor?

PT: Well, it is the whole of the Queen Elizabeth University Hospital is built by the same contractors working on the Edinburgh Sick Kids Hospital and there have been some very high profile issues there. It is the same design build contract, in other words, the contractor does the design, puts up the building and then is involved in the consortium to manage it into the future. Now, the Royal Hospital for Children in Glasgow has been dogged by problems pretty much soon after its opening in 2015/2016 to do with ventilation, to do with the water supply, to do with drainage, and in December last year, we saw three adults infected with a fungal infection associated with pigeon droppings. There were two deaths related to that infection in January of this year. That fungal infection was decided to be a contributing factor to the death of a 10-year-old boy at the Sick Kids Hospital in Glasgow, and then in March, a 64-year-old woman had contracted a fungal infection associated with soil, which may have come through the water supply – it was the theory then – also died. There are also ongoing concerns, at the current time a ward is closed at the Sick Kids in Glasgow to new admissions, because two children contracted infections and there is a review of infection control and environmental issues there.

GR: Penny Taylor, health journalist, thank you very much for that.

Ends

Programme(s)	BBC Radio Scotland Good Morning Scotland
Date & time	Monday 05 August 2019 07.08
Subject/Interviewee	Interview – Tom Waterson
Duration	6.07

Gary Robertson, presenter: The Scottish Government is coming under renewed pressure over the fate of the new hospital for sick children in Edinburgh. The official opening of the £150 million building was put on hold last month, delayed indefinitely after concerns emerged about the safety of its ventilation system.

Gillian Marles, presenter: Over the weekend, the chair of UNISON, Scotland's health committee, Tom Waterson poured fuel on the flames, highlighting concerns about the drainage system on the Little France site, suggesting the building might have to be demolished. Scottish Labour's health spokesperson, Monica Lennon, is calling for a public inquiry into the handling of the project.

Monica Lennon MSP, Scottish Labour's Health Spokesperson: This is very serious and it's heart-breaking to think that we have a hospital that might never open, because the defects in that building were so bad. We have a hospital that should have been opened several years ago, but the delays just continue and continue. The Cabinet Secretary can't say if the hospital will open this year, next year, or indeed if it will ever open.

GR: Well, Tom Waterson from UNISON joins us now.

Good morning to you.

Tom Waterson, Health Committee Chair, UNISON: Good morning.

GR: *What are you basing your assertions on?*

TW: I'm basing my assertions on speaking to senior members of NHS Lothian who alerted me to the fact that there was an issue with the drainage between 18 and 36 months ago, that was remedied, or they hoped to have been remedied, to the tune of £11.5 million. However, what they told me was that they cannot guarantee that the drainage is fit for purpose due to the fact that the construction company kept on building.

GR: *What are the specifics with the drainage?*

TW: I don't know the full specifics. I can only go on what the senior executives have said to me, that there was an issue that was raised with the holding company, that the drainage wasn't up to specification. They paid, as I said NHS Lothian, taxpayers' money, £11.5 million, to remedy it. There is no guarantee it's been remedied.

GR: *And this is over and above the issues with the ventilation system that led to the Health Secretary stepping in to say that the hospital shouldn't open.*

TW: Yes, absolutely, over and above, and in fact I was unaware until I met with the senior managers of NHS Lothian, who alerted me to the issue. I've since then spoken to other members of staff, staff who were involved in the project, and they have confirmed their fears that the drainage may – and I have to reiterate may – not be fit for purpose.

GR: *Have they said to you how it could be fixed?*

TW: No. No. I spoke to one of the state's guys on the site. It was him, in fact, who said that he felt that some part of the building may need to be ripped down. Not myself. I don't know. I am not an engineer, I am not qualified to say how you fix the drainage, I am just assuming it is not an easy job.

GR: *Monica Lennon has said there that she has concerns that we haven't been told if the hospital will open at all. Do you share those concerns?*

TW: I am not as pessimistic as Monica. I would hope that the building will be opened soon, open and safe. I have to say, I agree that the Health Minister made the right decision in delaying the move. Our concern is that the drainage only seems to have come to light after the ventilation issues. However, there were three members of the Scottish Futures Trust, basically, three members of the Government who sat on that project board from day one, so the Scottish Government must have been aware there were issues, as I say, 18-36 months ago.

GR: *So what should happen now as far as you're concerned?*

TW: I think we need to take immediate remedial action with the drainage. We need to find out if, indeed, there is an issue and if there is, we need to fix it before we even attempt to move any of the services in. Remember, it isn't just the Sick Children's Hospital, it is children and adolescent mental health and it is apparently clinical neurosciences that also need to move into that unit.

GR: *Do you agree with the calls for various inquiries? The Scottish Conservatives saying Audit Scotland should become involved. Also, a call for the Health Committee at Holyrood and Monica Lennon calling for a full public inquiry.*

TW: Yes, I absolutely agree that there should be a full public inquiry. The Scottish Government has employed KPMG to do an audit. However, as I have just said, the Scottish Government was fully involved in this project from day one. It is the SNP's flagship policy, Scottish Futures Trust, replacing the disgraced PFI, but from what I can see, there is no difference.

GR: *But ultimately the Scottish Government will say that this was a health board matter.*

TW: They may say it was a health board matter, I will go back to my previous point, there were three members of the Scottish Futures Trust, Government appointees sitting on that board from day one and still sitting on the board when the hospital was transferred over in February.

GR: *What are staff saying to you about their concerns in terms of moving into the new building, the uncertainty around this, and also the state of the current building, because Monica Lennon was raising the issue of ongoing maintenance not being carried out because there was a thought that everybody would be moving?*

TW: There are absolutely issues with the current Sick Children's Hospital at Sciennes Place and indeed the [inaudible] at the Western General. Staff have been fantastic, albeit they are extremely frustrated. Again, it should be noted that those staff were still packing up to go on the Thursday afternoon on the 4 July despite the fact that the Cabinet Secretary had made the decision on the 1 July. Staff were packing boxes, speaking to patients, speaking to young children, getting them ready to move, when in fact the Cabinet Secretary knew they weren't moving.

GR: *Tom Waterson from UNISON, thank you very much for that.*

Ends

Programme(s)	BBC Radio Scotland Good Morning Scotland
Date & time	Monday 05 August 2019 08.08
Subject/Interviewee	Interview – Jeane Freeman
Duration	8.46

Gillian Marles, presenter: The buck stops with the Health Secretary. That's the verdict of Jeane Freeman's political opponents amid renewed controversy over the state of Edinburgh's new children's hospital.

Gary Robertson, presenter: The Health Secretary intervened at the eleventh hour to block the official opening of the hospital early last month, delaying the move indefinitely until concerns about the ventilation system could be addressed. But over the weekend, fresh claims emerged about the hospital. The chair of UNISON, Scotland's Health Committee, Tom Waterson suggesting the drainage on the Little France site could be an even greater problem.

Tom Waterson, Health Committee Chair, UNISON: Depending on who you speak to, some say we will wait and see, but we won't actually know until the building is up and running and at full capacity. Others are quite clear that they do not believe the drainage to be sufficient and it needs immediate remedy, otherwise it's unsafe. My concern is that we move in whilst basically just crossing our fingers and hope that we move in and we leave the old building at Sciennes Place, the building fails, we have nowhere left to go, and we're talking about sick children here. I don't think we can take that chance.

GM: Well, in the wake of these latest revelations, the Scottish Conservatives are calling for Audit Scotland to be brought in to investigate the handling of this £150 million project, and Scottish Labour's health spokesperson, Monica Lennon, is demanding a full public inquiry into what she's described as the Sick Kids Scandal.

Monica Lennon MSP, Scottish Labour's Health Spokesperson: This should be a wake-up call to Jeane Freeman. We have hospitals in crisis in Edinburgh, in Glasgow. We have a health board, which is already cash strapped, paying out £1.4 million a month for a hospital that can't be used, has no patients, and basically has no future. So if I were in Jeane Freeman's position I would be looking at what I'm doing very carefully, because things can't continue as they are.

GR: Well, the Health Secretary, Jeane Freeman, joins us on the line now.

Good morning to you.

Jeane Freeman MSP, Health Secretary: Good morning.

GR: *Tom Waterson has raised this issue of the basement flooding, issues with drainage. Have you been aware of this?*

JF: So my understanding is that those were the issues that were discussed and were part of the reason why the hospital was – one of the reasons why the hospital was delayed earlier on, and of course that is part of what I have initiated when I decided that the move couldn't take place. That was because of the ventilation issue in critical care, but at the same time, I have asked for a number of other critical areas of the existing new hospital site to be double-checked to make sure that they are compliant with all standards and that will include drainage.

GR: *As regards that problem, as you say, it was part of the reason that the whole project was delayed, but we were told that millions was spent on resolving that issue. Do you know whether the issue of drainage actually has been resolved?*

JF: As far as both those involved in addressing the issue and the board are concerned, the issue has been resolved, but I have asked for those additional checks, along with others, not just on drainage, to be made so that I can be sure that every aspect of that hospital that relates to patient safety and staff safety that I have the additional assurance that they are all compliant with the relevant standard.

GR: *Have you been told of any other problems other than drainage and ventilation?*

JF: No, I haven't, but I am clear that regardless of whether problems are raised with me or not, there is a range of known areas of any hospital which impact on patient and staff safety that need to be compliant with standards, and I just want to be absolutely sure before we move on that we are compliant across all those areas in that new site. That compliance with the correction of the ventilation of the critical care level, that level of compliance will help trigger, I hope, a phased migration of [early phase] into the new hospital from the existing site and, indeed, from the Western General, but I won't know that until I have the results of that work from Health Protection Scotland and Health Facilities Scotland.

GR: *So what is the timeframe for getting that work and the timeframe for the migration?*

JF: Well, as I said at the time, I think I was on your programme on the 5 July, Gary, and at that point I said that there were two main areas of work that I had commissioned, one was now involving KPMG to look at all of the decision-making in this project in terms of the board and the contractors and so on to identify how we had got to that very late stage problem with the ventilation in critical care. That work is underway. I expect to have that information soon, being undertaken by KPMG. The other work from Health and Protection Scotland and Health Facilities Scotland, I expect to have a report from them by the end of August into the early days of September.

GR: *We have got various calls for inquiries, the Labour Party saying there should be a full public inquiry, we have got the Tories saying that Audit Scotland should be involved here. Would you welcome these moves?*

JF: Well, of course. I have been very careful, as I should be, to make sure that local MSPs and MPs are kept informed with everything that I have done so far and I will inform them as that information becomes available, that I have just spoken about. To inform the Parliament, I have written to all the staff involved and I have given the staff my absolute personal assurance that when I have the information, they will have the information. Of course, all of that includes the Health and Sport Committee. For the Health and Sport Committee of the Parliament, it is of course entirely up to them how they want to proceed on any matter, but I will cooperate with whatever they decide, as I always have done. I think the key thing to do at this point is to work our way through, we are on track with the timetable that I set out on the 4/5 July, hear what information we get from those two reviews that I have initiated and then determine at that stage, most importantly, whether or not there are areas of the hospital where it is safe to migrate services to from the Western General, where we have the DCN unit, for outpatients from the existing site and what steps need to be taken to improve the ventilation in the critical care unit in order to ensure that that is meeting national standards.

GR: *But here is a building that is not, at the moment, open, but is costing the health board £1.4 million a month in repayments. If you were in opposition in these circumstances, you would be calling for heads to roll, wouldn't you. Have you considered your position on this?*

JF: No, I honestly believe that if I was in opposition, two things. One, I would wait for facts to emerge and two, I would never personalise matters. I don't think that really is particularly helpful. Opposition are entitled to do and say and demand whatever they think is politically appropriate for them.

GR: *It is not just about politics, it is about public money here, isn't it, at the end of the day. I mean, £1.4 million a month in repayments on a building that cannot be used, plus you don't know what the costs may be of fixing the problems that you have identified.*

JF: That is right, I don't know the cost of that just yet, because that work that I have outlined to you has to take its course and we have to then deal with facts, and once we have the facts about how we replace and improve the existing ventilation in the critical care unit, then we will have a cost associated...

GR: *So it may be need to be completely replaced.*

JF: ... I and everyone concerned will know what that figure is and we will get on and do that work.

GR: *So just to clarify, will it need to be completely replaced, is that your understanding?*

JF: No, I do not yet know that because technicians and designers and engineers are working, right at this moment, to look at what exactly is the right fix for this without unnecessarily disrupting other areas of the build.

GR: *Thanks very much for speaking to us this morning.*

Ends

From: Henderson, Ronnie [REDACTED]
Sent: 05 August 2019 10:01
To: STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND)
Subject: FW: 2019-08-02 RHCYP IT report 20
Attachments: FW: RHSC, Edinburgh - IT Key Issues Report, November 2016

Hi Ian,

Missing report as requested.

Regards

Ronnie

From: Southwell, Ross [REDACTED]
Sent: 05 August 2019 09:52
To: Kolodziejczyk, Kamil; Henderson, Ronnie
Subject: RE: 2019-08-02 RHCYP IT report 20

Hi Kamil/Ronnie,

Please find attached the email with IT Report No. 20 for your information.

Best regards,

Ross Southwell
Graduate Mechanical Buildings Services Engineer

[REDACTED]

From: Kolodziejczyk, Kamil [REDACTED]
Sent: 02 August 2019 09:15
To: Henderson, Ronnie [REDACTED]; Southwell, Ross
[REDACTED]
Subject: RE: 2019-08-02 RHCYP IT report 20

Ronnie,

Don't think all reports were issued through Aconex and I don't see IT report No 20 there. Ross, can you check whether this is somewhere on PiMS? I am sure Graeme had download of all or most of IT reports.

Kamil

From: Henderson, Ronnie
Sent: 02 August 2019 08:53
To: Kolodziejczyk, Kamil
Subject: FW: 2019-08-02 RHCYP IT report 20

Kamil,

Can you dig this out and send to Ian please.

Regards

Ronnie

Ronnie Henderson
Commissioning Manager Hard FM
RHSC & DCN - Little France
NHS Lothian

RHSC & DCN Site Office

[Redacted]

[Redacted]

From: STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND) [Redacted]
Sent: 02 August 2019 07:53
To: Henderson, Ronnie
Subject: 2019-08-02 RHCYP IT report 20

Ronnie

Can you please forward me another copy of the above as the one on our server is reporting that it is corrupt and cannot be repaired.

Regards

Ian

Ian Storrar BSc CEng FCIBSE FIHEEM MIET
Head of Engineering - Health Facilities Scotland
Procurement, Commissioning and Facilities

NHS National Services Scotland

[Redacted]

[Redacted]

www.hfs.scot.nhs.uk

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From: Currie, Brian [REDACTED]
Sent: 16 March 2018 14:44
To: Bain, Kelly J
Subject: FW: RHSC, Edinburgh - IT Key Issues Report, November 2016
Attachments: Key Issue Report Nr 20.pdf

Brian Currie

[REDACTED]

[REDACTED]



From: Edwards, John [REDACTED]
Sent: 08 December 2016 12:22
To: Andrew Eagleton; Currie, Brian; Colin Grindlay; Cunningham, David; Darren Pike; David Martin [REDACTED]; Hayley Prowse; 'Hugh Gallagher' [REDACTED]; John Wales [REDACTED]
Cc: Paris, Greig; Doyle, Alick; Credali, Gio
Subject: RHSC, Edinburgh - IT Key Issues Report, November 2016

All,

Please find a copy of the latest Key Issues Report for the month of November 2016, with the IT monthly report to follow later today.

Should you have any queries, please do not hesitate to contact any member of the IT team.

Regards

John

John Edwards
BEng, MSc, PGCE, CEng, MCIBSE, MCIQB
Senior Consultant

[REDACTED]



Be green, leave it on the screen.

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ROYAL HOSPITAL FOR SICK CHILDREN EDINBURGH

Key Issues Report No. 20

Site:	Royal Hospital for Sick Children – Little France								
Report:	Independent Tester Key Issue Report No 20								
Date:	20 th October 2016								
Present:	<table> <tr> <td>John Edwards</td> <td>Arcadis</td> </tr> <tr> <td>Alick Doyle</td> <td>Arcadis</td> </tr> <tr> <td>Colin Grindlay</td> <td>Multiplex</td> </tr> <tr> <td>Hugh Gallagher</td> <td>Multiplex</td> </tr> </table>	John Edwards	Arcadis	Alick Doyle	Arcadis	Colin Grindlay	Multiplex	Hugh Gallagher	Multiplex
John Edwards	Arcadis								
Alick Doyle	Arcadis								
Colin Grindlay	Multiplex								
Hugh Gallagher	Multiplex								

Introduction		Status / Compliance Risk Level
<p>This Key Issues Report has been issued to record and inform the project parties of the key issues identified and inform of the IT's activities undertaken and planned.</p> <p>This report No 20. For RHSC and DCN has been issued to record the issues outstanding following the compliance reviews undertaken on 14th 15th and 30th November 2016.</p> <p>The report is issued on an exception basis with the exception of the progress noted; only issues identified by the IT have been noted in the report.</p> <p>We understand from Multiplex that they are revising their zone identification system to align with the departmental boundaries, however we are yet to receive details of this change and for the purpose of this report have continued with the original system</p>		N/A
1.0	Activities undertaken	
Item	Comments	
1.1	<p>To undertake a review of compliance and site progress and to inform the parties of the activities undertaken to date.</p> <p>The report comments on the following:</p> <ul style="list-style-type: none"> ▪ The key site activities noted during site inspection ▪ Compliance with the Contract Project Construction Programme ▪ A review of compliance ▪ A review of quality management 	Note
1.2	Progress and Site Activity	
Item	Comments	
1.2.1	<p>Core and Stair Progress</p> <ul style="list-style-type: none"> ▪ Boarding, decorations, handrails and M&E services are progressing in the stairwells and in respect of Zone A are nearing completion. 	Multiplex

	<ul style="list-style-type: none"> The IT is satisfied with the quality of works reviewed on site and the alignment with QA processes and specifications with no non-compliances identified in the sample reviewed. 	
1.2.2	<p>Floor Slab formation:</p> <ul style="list-style-type: none"> All internal floor slabs have now complete apart from the small area where the tower crane has been removed and making up the areas where underfloor heating is to be installed. The IT is satisfied with the quality of works reviewed on site and the alignment with QA processes and specifications with no non-compliances identified in the sample reviewed. 	Multiplex
1.2.3	<p>Concrete Works (Stephenson's)</p> <ul style="list-style-type: none"> Works are close to completion following the handover to Stephenson following Dunne's departure from site including the fin walls and the remaining upstands. Minor slab infills and some external works are ongoing. 	Multiplex
1.2.4	<p>Drainage Installations:</p> <ul style="list-style-type: none"> Pressure testing in Zone A has commenced and further tests are planned in December 2016. 	Multiplex
1.2.5	<p>Waterproofing to slab base</p> <ul style="list-style-type: none"> Waterproofing is nearly complete with Minor slab infills outstanding. The IT will review the last elements of the supporting documentation when available. 	Note
1.2.6	<p>Window Installation</p> <ul style="list-style-type: none"> The window installation is continuing with an emphasis on making the building wind and weathertight as soon as possible. The IT will continue to sample window installations across all zones. To date the installation methodology is compliant meeting all design standards. 	Multiplex
1.2.7	<ul style="list-style-type: none"> Vinyl flooring is being laid on the ground floor of zone A. Temporary space heaters have been provided by Multiplex to provide a suitable internal environment. 	Multiplex
1.2.8	<p>Envelope and Steel Framing System (SFS) / Cladding</p> <ul style="list-style-type: none"> Works/Installations progressing well <p>The IT inspected the following:</p> <ul style="list-style-type: none"> Zone C inner leaf and windows progressing Zone B inner leaf and windows progressing. The majority of external sealing between joints is being undertaken from motorised climbers which allows very good access and maintains a high standard to the works. All works inspected were carried out in accordance with the required specification. The ECL Cladding (Render) works has continued within the internal courtyards with the base coat application in progress and the top coat commenced in some locations. Multiplex advised that external temperatures were being monitored to avoid low temperature issues. 	Multiplex

1.2.9	<p>Internal Partitioning</p> <ul style="list-style-type: none"> ▪ Partitioning continues to be progressed across the project. With door and internal screen frames being installed in zone A ▪ Framework and boarding is in progress in the pod. ▪ The IT reviewed a further 85 Point Plan (Drywall) review of installation being carried out by Astins and noted that the process issues previously identified by the IT were not present in this review and that all items were in accordance with the design. The IT can confirm satisfaction with the audit, approach and standard of workmanship provided. ▪ Code 3 lead lining is being installed to theatres. The installation was reviewed by the IT and appears compliant subject to final review and testing. 	Multiplex
1.2.10	<p>Steel Frame</p> <ul style="list-style-type: none"> ▪ Steel frame to the Energy Centre is physically complete. ▪ The concrete works to the energy centre frame are now complete and all inspected works appeared to be compliant with approved designs and standards. ▪ The steel decking and concrete topping is complete ▪ Brick cladding to the energy centre is continuing but has been delayed by low temperatures. ▪ The roof steelwork has progressed further during the month with the majority of primary steelwork and a significant amount of secondary steelwork installed. ▪ The primary steelwork for the Helipad has commenced. ▪ The IT confirms that all information and workmanship reviewed was completed to the required standard with no non-compliances. 	Multiplex
1.2.11	<p>Roof</p> <ul style="list-style-type: none"> ▪ The IT previously reviewed the QA documentation for the main ETFE roof with no apparent non-conformances present. ▪ The small ETFE roof has been completed. ▪ Plant room louvres are continuing. ▪ The green roof is now expected to commence first quarter of 2017. ▪ The IT reviewed the detail and physical installation of insulation in the steel substructure supporting the high level window units above the large atrium and cover plates fitted to seal the structure between the window units. The IT confirmed the arrangement was appropriate but requested condensation calculations to ensure the amount of insulation provided was adequate. 	Multiplex
1.2.12	<p>Mechanical Services:</p> <ul style="list-style-type: none"> ▪ Zone A completing subject to testing and commissioning with taps and basins fitted on the ground floor and progressing on other floors. ▪ Basement heat stations are nearing completion. 	Multiplex
1.2.12.1	<ul style="list-style-type: none"> ▪ The final prefabricated riser V5 has been installed. 	Note
1.2.12.2	<p>Ventilation - The air handling units have been installed in the plant rooms serving zone A. The IT has undertaken a preliminary review of the plant and can confirm that subject to completion they are in accordance with SHTM 03-01.</p>	Multiplex

	<ul style="list-style-type: none"> ▪ Services are progressing in zones B and C with theatre ventilation ducting and ultra-clean hoods now installed. ▪ Random checks of fire damper installations confirmed compliance 	
1.2.12.3	<ul style="list-style-type: none"> ▪ Drainage – The replacement of the fire collars previously installed to a type that had been tested and certified located against the same building fabric elements has commenced. 	Note
1.2.12.4	<ul style="list-style-type: none"> ▪ Medical gases distribution is complete in Zone A with the installation of behead trunking and AVSU complete. ▪ The pipework distribution system continues in Zones B and C to upper floors. ▪ Pressure testing on a sectional basis is continuing. ▪ Fire rated insulation is being fitted to the pipework either side of fire rated partitions and other structures 	Note
1.2.12.5	<ul style="list-style-type: none"> ▪ Domestic H&C Water/ LTHW and Chilled WS (Pipework) – Modules being completed through Zones B and C ▪ Heat stations have been piped up. 	Multiplex
1.2.12.6	<ul style="list-style-type: none"> ▪ The heating mains from the energy centre to the heat stations are complete. The IT will require the appropriate documentation in respect of the welded joints. 	Multiplex
1.2.12.7	<ul style="list-style-type: none"> ▪ The Boilers have been positioned within the energy centre and the gas trains are being assembled 	Multiplex
1.2.13	<p>Electrical Services</p> <ul style="list-style-type: none"> ▪ Zone A. The Installation of dado trunking is complete. ▪ The installation of the Wago pre-wired trunking for the lighting circuits is complete. ▪ Zone B progressing with the installation of the Wago pre-wired trunking for the lighting circuits is 70% complete. ▪ Zone C progressing with the Installation of the Wago pre-wired trunking for the lighting is 40% complete. ▪ The IT was satisfied with installation methodology being employed for the electrical installation works to all areas and was compliant with standards of installation and working practices ▪ Distribution boards have been installed in Zone A and connections commenced. ▪ Installation of busbars and sub-mains is in progress ▪ The initial dead testing of electrical circuits is due to commence in December 2016 in advance of the initial power on process. ▪ The generators have been installed in the Energy Centre 	Multiplex
1.2.14	<p>Nurse Call</p> <ul style="list-style-type: none"> ▪ The installation of the Nurse Call system is complete subject to testing and commissioning in Zone A. 	Multiplex
1.2.15	<p>Data/Comms/Control cabling</p> <ul style="list-style-type: none"> ▪ The construction of the main server room on level 2 is in progress. 	IT/Multiplex
1.2.16	<p>General</p> <ul style="list-style-type: none"> ▪ Door Access/Security cabling being installed and containment. IT satisfied with methodology. ▪ A workshop with the Board was held on 20th October 2016 to finalise the required locations. 	Multiplex
1.2.17	<p>Fire Safety Systems</p> <ul style="list-style-type: none"> ▪ Fire alarm cabling progressing across all zones. 	Multiplex

	<ul style="list-style-type: none"> ▪ IT happy with methodology. ▪ Fire alarm – Fire Strategy remains under consultation ▪ Cause and effect remains in discussion and progressing. Multiplex continue to update the IT with progress. 	
1.2.18	Lifts <ul style="list-style-type: none"> ▪ Two lifts for beneficial use are complete. 	Multiplex
1.2.19	Stairs The installation of handrails on stairs is in progress in Zone A	
1.3	Project Quality Plan (PQP)	
Item	Comments	
1.3.1	<ul style="list-style-type: none"> ▪ The IT reviewed the NCR Tracker during the 30th November visit. 129 NCRs have been raised with 33 currently outstanding. ▪ A further 6 NCRs were added during November 2016. ▪ Multiplex have confirmed that Stephenson's are continuing to work through the legacy Dunne NCR's and further formal closure of these issues will be reviewed by the IT during the December 2016 visit. ▪ The IT will continue to closely monitor the position and management of all NCR's and carry out a further review at the December visit. 	Multiplex
1.4	Issues Raised by the IT on 24th August 2016	
Item	Comments	
1.4.1	<ul style="list-style-type: none"> ▪ The IT noted during the review that the movement joint incorporated into the level 1 appears to run through the Prep Room adjacent to the Ultraclean Theatre. ▪ The IT raised two concerns in respect of this issue: <ul style="list-style-type: none"> ○ The ability to provide appropriate surfaces to allow infection control. ○ Meeting the requirements of 3.7 Services Contract – Schedule 5 - FM Guide to Design and Construction Page 23 in respect of movement joints in critical areas ▪ Multiplex are reviewing the situation. 	Multiplex
1.5	Issues Previously Raised by the IT	
Item	Comments	
1.5.1	<ul style="list-style-type: none"> ▪ The IT is awaiting confirmation of the condensation calculations in respect of the insulation present in the steel substructure supporting the high level window units above the large atrium. 	Note
1.5.2	<ul style="list-style-type: none"> ▪ An informal review of the contract construction programme versus progress viewed on site shows that the delay across the project of 18 weeks previously reported may have reduced slightly with good progress on roof steelwork and envelope enclosure. ▪ The IT understands that the board is considering alternative revised completion dates provided by IHS. 	Multiplex
1.5.3	<ul style="list-style-type: none"> ▪ The IT noted during the previous review that the movement joint incorporated into the level 2 slab appears to run above Theatre 5 Scrub. ▪ The IT raised two concerns in respect of this issue: 	Multiplex

	<ul style="list-style-type: none"> ○ The ability to provide and support the solid ceiling required in this area without issues of cracking due to movement of the slab above. ○ Meeting the requirements of 3.7 Services Contract – Schedule 5 - FM Guide to Design and Construction Page 23 in respect of movement joints in critical areas ▪ Multiplex are currently reviewing the installed locations of all movement joints. 	
2.0	Ongoing actions to be undertaken by the IT	
Item	Comments	
2.1	<ul style="list-style-type: none"> ▪ The IT will continue to attend site on a regular basis to review the site activity and compliance. Our next reviews are planned for 12th and 13th December 2016. 	IT
3.0	Statutory Authorities	
Item	Comments	
3.1	<ul style="list-style-type: none"> ▪ The IT will review comments made by Building Control. 	Note
3.2	<ul style="list-style-type: none"> ▪ The Building Warrant tracker is to be monitored on Aconex. 	Note
4.0	Key Issues	
Item	Comments	
4.1	<ul style="list-style-type: none"> ▪ The contract construction programme is in delay of circa 18 weeks. 	Multiplex
4.2	<ul style="list-style-type: none"> ▪ The issues associated with the movement joint incorporated into the level 2 slab which appears to run above Theatre 5 Scrub. 	Multiplex
4.3	<ul style="list-style-type: none"> ▪ The issues associated with the movement joint incorporated into the level 1 slab which appears to run the prep room adjacent to the Ultraclean Theatre. 	Multiplex

Risk Register Legend:

HIGH	High – Potential show stopper, Completion at risk
MED	Medium – Capacity to affect or halt construction, Completion unlikely to be at risk
LOW	Low – Cosmetic issues or resolved by later construction processes, Completion is not at risk

Appendix A - Photographs

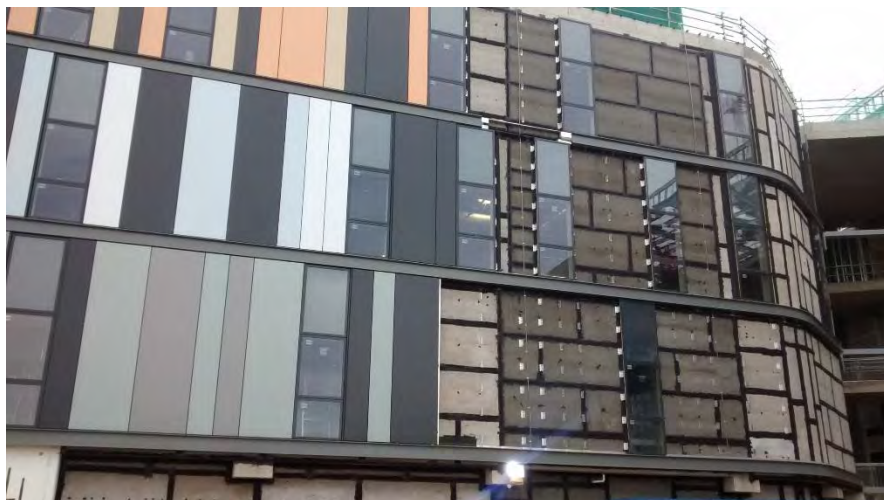


Figure 1 – External envelope progress

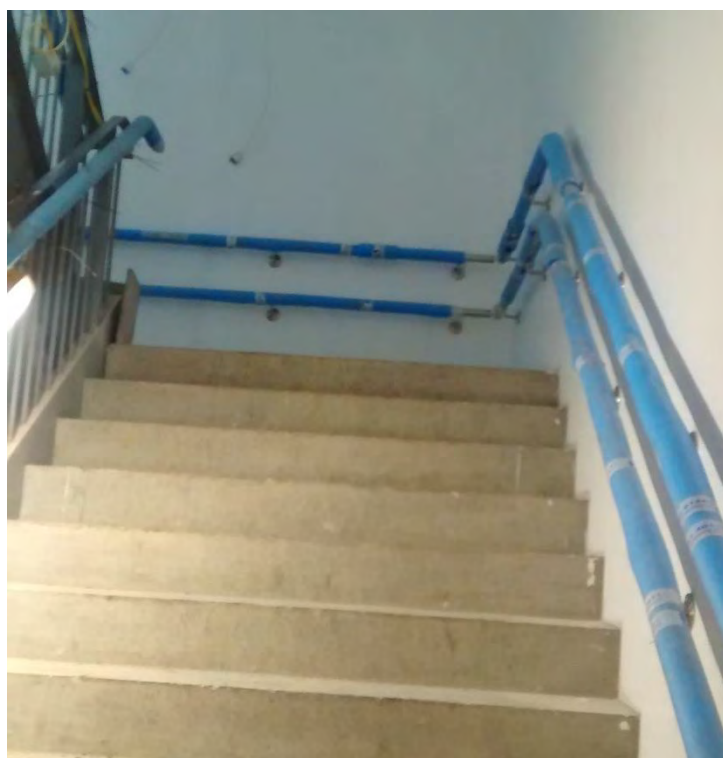


Figure 2 – Stairway in Zone A showing Handrail Installation



Figure 3 – Sealing of external boarding showing climber unit

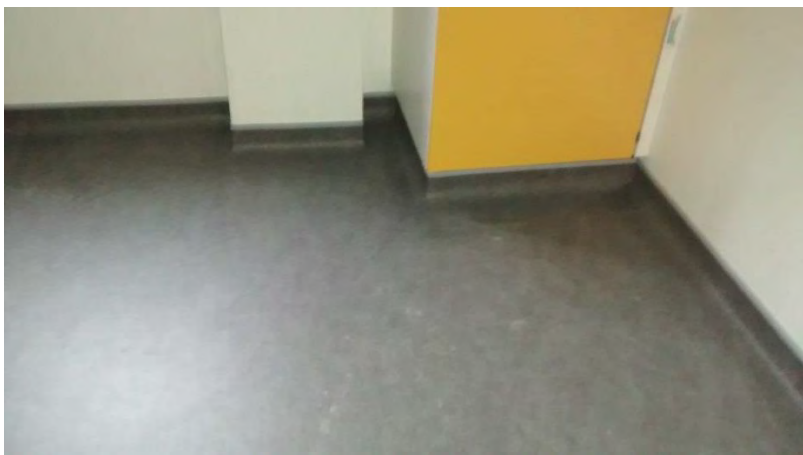
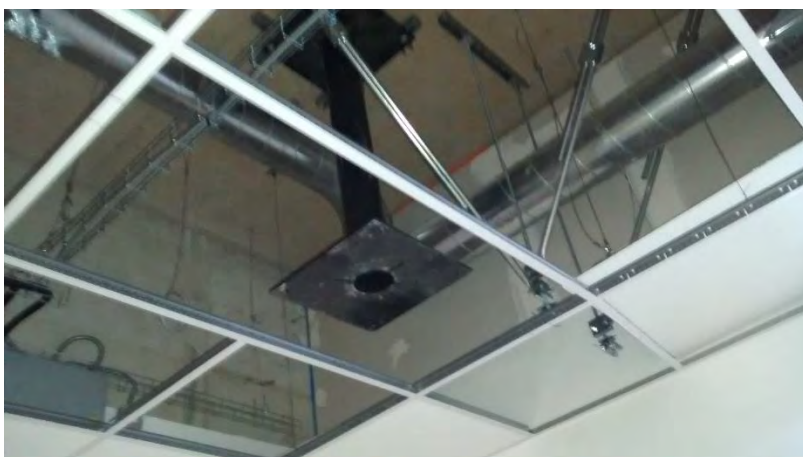


Figure 4 – Vinyl Flooring showing coving detail around base of cabinet



Consultation Room Ceiling showing support for examination lamp



Figure 5 – Fire stopping seal around installed door frame



Figure 6 – Compliant tails to hand basin Hot and Cold Mixer Tap



Fig 7 – Compliant Hand Basin and Hot and Cold Mixer Tap



Fig 8 – Nurse Call Panel in Consultation Room



Fig 9 – Above ceiling Partition showing fire stopping of penetrations

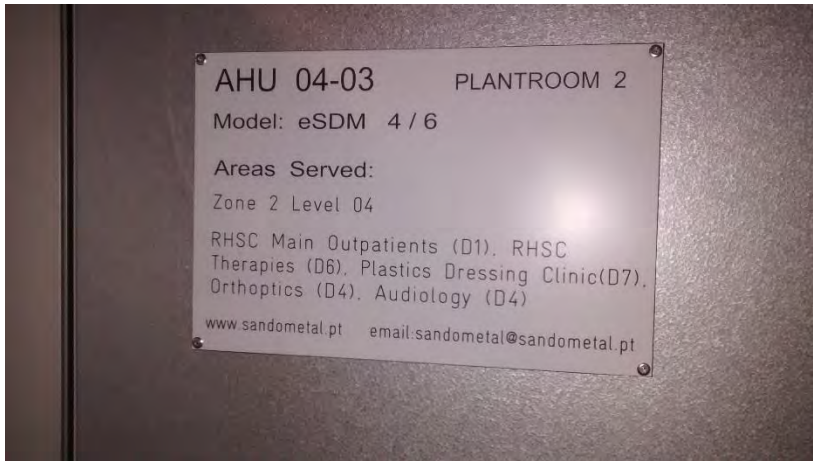


Fig 10 – Identification Plate on AHU 04-03 Plantroom 2

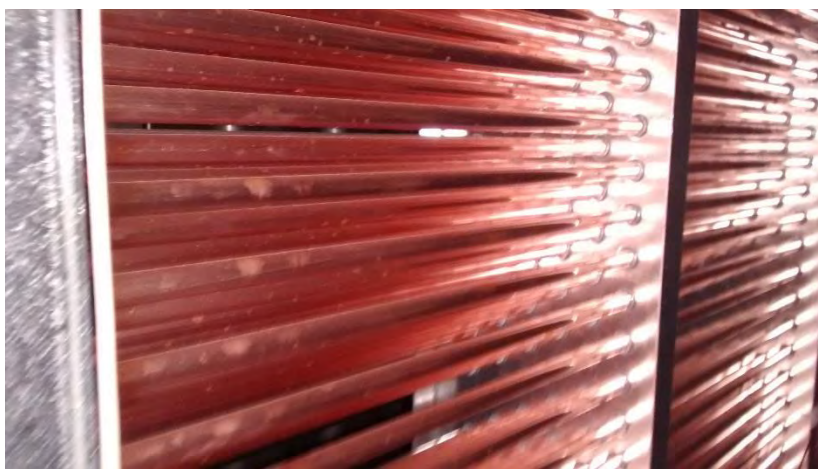


Fig 11 – Compliant plain tube frost coils in AHU 04-03 Plantroom 2

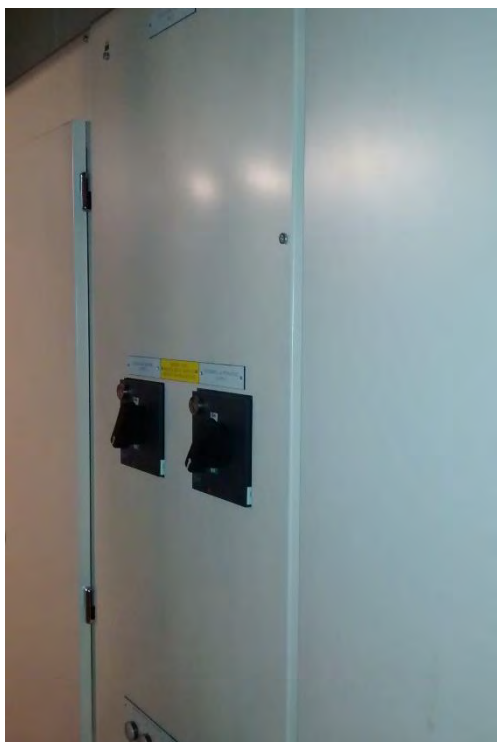


Fig 12 – Compliant Electrical distribution equipment in Zone A



Fig 13 – One of Three Boilers in Energy Centre



Fig 14 – Roof Waterproofing and Temporary Protection around Service Penetrations



Fig 15 – Helipad Steelwork in progress



Fig 16 – Theatre Ventilation and Pendant Supports Level 1

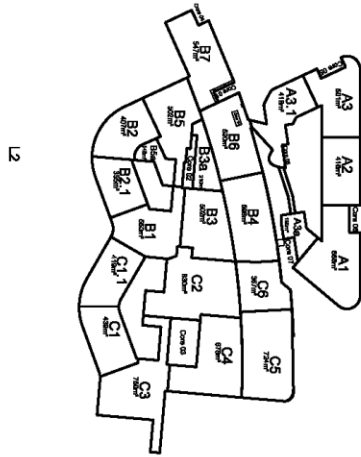


Fig 17 – Code 3 Lead Lining to Theatre Level 1

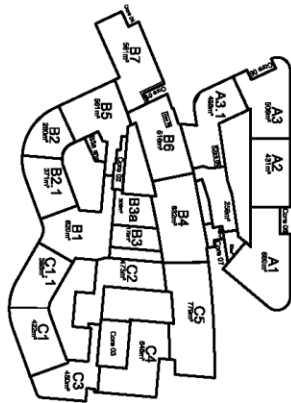


Fig 18 – Slab to be completed following removal of Tower Crane

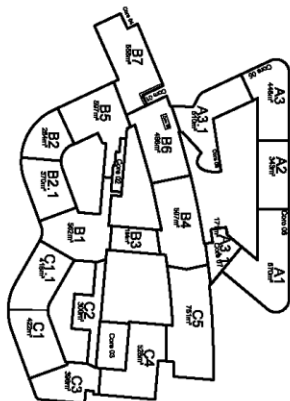
Appendix B – Original Site Location References



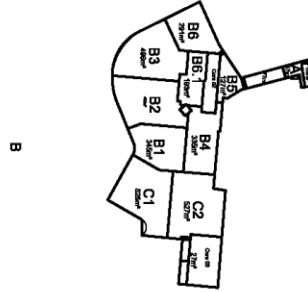
L2



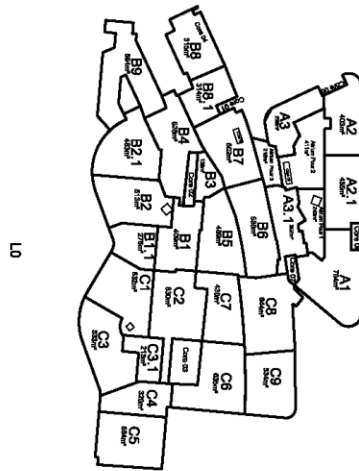
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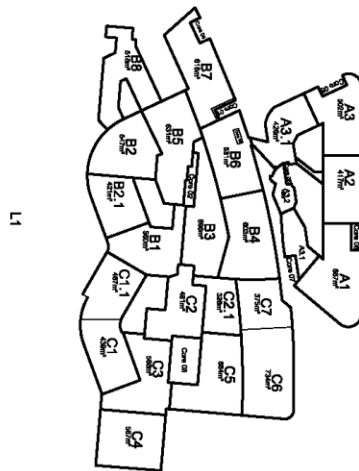
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L1

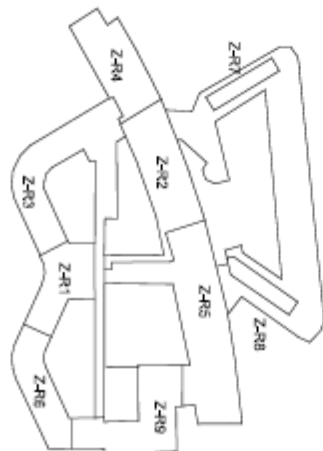
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L3



L4



8



L9



L1



Draft**RHCYP/DCN: Commissioning/Ventilation**

Note of a meeting held at 4.00 pm on Monday 5 August 2019 in Meeting Room 5, Waverley Gate, Edinburgh.

Present: Susan Goldsmith; (Chair); Janis Butler; Iain Graham; Janice Mackenzie; Ian Laurenson; Kizzy Taylor; Alex McMahon; Lindsay Guthrie; Donald Inverarity; George Curley and Tracey Gillies (from 4.15pm).

Apologies: Tim Davison; Jacquie Campbell; Alex Joyce and Brian Currie.

In Attendance: Chris Graham

1. Minutes of the Meeting held on 1 August 2019.

1.1 Approved subject to amendment of paragraph 2.1.5 relating to the air handling unit manufacturer.

2. Technical Update

2.1 Ventilation Tracker – Iain Graham reported that the further report issued by IHSL was yet to be incorporated into the tracker. Iain would complete this and circulate the tracker to the group with an aim to take the tracker to the government oversight assurance board.

IG

2.1.1 Ian Laurenson suggested as well as the tracker, it would be useful to have an organogram showing all the agencies involved and links between them. There was also discussion around the timelines coming out of reviews. It was noted that the Scottish Government had also asked for timeline information. Iain Graham was working on overcoming software issues to provide the information to the Government.

2.1.2 The IMT confirmed that there was a need for a timeline and structure chart of governance (including external agencies). The tracker should be developed to the point that actions and outputs from each meeting of all the various groups are included. Water issues would also be added to the tracker.

IG

2.1.3 Susan Goldsmith added that following the government oversight assurance board on Thursday there should be a clearer idea around moving forward and an update bringing some of these components together would come to the IMT meeting on Monday 12 August 2019.

SG

- 2.1.4 Susan Goldsmith reported on the meeting held between herself, Peter Reekie, HFS and HPS today. It was noted that the HFS/HPS RAG report should be with the Scottish Government by the end of today and would be shared with NHS Scotland once agreed with Christine McLaughlin (Chief Finance Officer). It was hoped that some of the actions that will be shown as Red in the report would be able to move away from Red quickly. Once the RAG report was received the tracker actions could be populated.
- 2.2 Ventilation Critical Care – It was noted that the IHS Board Change proposition could not move forward until it was clear what work would be required and what the implications for critical care would be. There was a risk of issuing financial instructions when it was not clear what the financial commitment would be.
- 2.2.1 There was also clarification required around the sign off process for the technical solution to ventilation. Susan Goldsmith asked Iain Graham to clarify this with Jim Miller and Gordon James with a view to providing information to the government oversight assurance board that was endorsed by NHS Scotland, HFS and HPS.
- IG**
- 2.3 Water Report – Update – It was noted that the report remained a work in progress and still required further refinements before being submitted to the government oversight assurance board.
- 2.3.1 There was discussion on the chronology of the issues within the report and the separation of issues that came from the 29 July 2019 workshop and additional issues that have arisen since then.
- 2.3.2 Tracey Gillies made the point that the report had initially being a write up of the technical workshop and should not include additional items. The paper should reflect the position, requirements and next steps as they were up to the end of last week and then any new issues should come to the group as separate items.
- 2.3.3 Tracey confirmed that she had the version controlled document at the moment and was reviewing it to introduce clarity around the format, structure and chronology. Infection Control colleagues comments were also currently being incorporated.
- 2.3.4 George Curley would outline the additional issues from the accountable engineer in a separate concise document which would come to the group separately.
- GC**
- 2.3.5 Susan Goldsmith commented that it would be helpful to have the report finalised for next week ahead of the HFS/HPS water review findings.

2.3.6 As per paragraph 2.2.2 above. It was agreed that the output from the subsequent water remedial workshop to be held on 07 August 2019 should form a separate report to the group.

2.3.7 The importance of the chairing of the workshops and administrative support to these was recognised, in particular the need for a clear, formally agreed agenda along with an accurate record/minute of the workshops.

2.3.8 The IMT agreed that George Curley would chair the water remedial workshop on 07 August 2019. George would share an outline agenda with the IMT for review ahead of it being issued.

GC

2.3.9 The IMT also discussed programme support arrangements and requirements. These arrangements would be taken forward out with the meeting.

SG/IG/JB/AMcM

2.4 Water Testing – George Curley would bring this item back when appropriate.

GC

3. Meeting with HFS/HPS

3.1 Susan Goldsmith reported that she had met with HFS/HPS and Peter Reekie and it had been confirmed that only water, ventilation and drainage were currently being reviewed. Once the RAG report was produced NHSL would be supported in finding solutions. The next action would be to bottom out what the next piece of work would be. There was also discussion around impact on phasing work linked to the review of patient critical systems. Susan would take this action forward on Thursday at the government oversight assurance board.

SG

4. Staff Communications/Board Paper Update

4.1 The IMT noted that the Board Report and Staff communication would be published at the same time. Kizzy Taylor stated that the staff communication would reference all the current media coverage and provide staff with accurate information that aligned with the Board Paper.

4.2 Janis Butler added that the Board's formal communications were still at a place where they were being reviewed by the Scottish Government for approval prior to release. There was discussion on the development of a communications plan for regular position updates. It was suggested that the Thursday government oversight assurance board meetings could be used to agreed and sign off communications ahead of issuing updates on a Friday, this could be on a fortnightly basis with any additional to the regular update being handled out with this. This would be raised at the government oversight assurance board.

SG

5. Any Other Competent Business

- 5.1 Children's Hospital and CAMHS Risk Assessment - Alex McMahon confirmed that current arrangements for outpatients and day patients were under review through Jacquie Campbell. This had also been flagged to the Board's Healthcare Governance Committee.

6. Date and Time of Next Meeting

- 6.1 The next meeting would be held at 4.00 pm on Monday 12 August 2019 in Meeting Room 5, Waverley Gate, Edinburgh.

The IMT Scheduled for 8th August was postponed as the Government Oversight Board would be meeting on this date.

From: RANKIN, Annette (NHS NATIONAL SERVICES SCOTLAND)
Sent: 05 August 2019 14:23
To: STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND)
Subject: Fwd: 2019 07 04 Ventialtion SBAR for information re new build
Attachments: 2019 07 04 Ventialtion SBAR for information re new build.docx; ATT00001.htm

Sent from my iPhone






Begin forwarded message:

From: "Guthrie, Lindsay" >
To: "RANKIN, Annette (NHS NATIONAL SERVICES SCOTLAND)"
Subject: 2019 07 04 Ventialtion SBAR for information re new build

Annette
As discussed, please find attached the SBAR compiled by Janette in July 2019 confirming the issues known to us

Regards
Lindsay

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Situation
05/07/19 Contacted by Fiona Cameron Head of Service IPCT, with request for SBAR re communication and input re ventilation services at new Royal Hospital for Children and Young People and Department of Clinical Neurosciences.
Background
This hospital was to be opened 09/07/19, with a Lothian wide schedule of moves presented to the public, however this is no longer the case. A statement by the Health Secretary Jeane Freeman 04/07/19, has stated that the new hospital will not open. This appears to be in light of final safety checks revealing that the ventilation system within the critical care department in the new hospital requires further work to meet national standards.
Assessment
<p>Embedded in this document is information that has previously been presented in view of ventilation concerns in areas of the new hospital where the HAISCRIBE IPCN had involvement. This includes isolation rooms and CT scanner induction and process areas.</p> <div style="display: flex; flex-wrap: wrap; justify-content: space-around;"> <div style="text-align: center; margin: 5px;">  2016 09 16 Ventilation RHSC DCN </div> <div style="text-align: center; margin: 5px;">  2016 Ct ventilation 2.docx </div> <div style="text-align: center; margin: 5px;">  2016 Ct ventilation 2 EO comments.docx </div> <div style="text-align: center; margin: 5px;">  VENTILATION MEETING 0916.pdf </div> <div style="text-align: center; margin: 5px;">  VENTILATION MEETING 1116.pdf </div> </div> <p>Further information in regards to various emails and other issues that were to be highlighted and part of a freedom of information issue are available at</p> <p>Q:\IPCT Geographical\jrfoi emails etc</p> <p>Other than the information above Donald Inverarity, Ewan Olson and Pota Kalima all Microbiologists Consultants with IPC responsibilities have advised at various times. There has been communication with Jackie Sansbury, Commissioning Manager, re having independent review of ventilation systems with reports to be given to Donald Inverarity and or Pota Kalima prior to the accepting of the new build by NHS Lothian.</p> <p>Communication has been carried out with HFS, Ian Storrar, Geraldine O'Brien and Susan Grant as required. Ronnie Henderson NHSL Estates has also been involved along with comments from John Reiner NHS (AE Ventilation) and Colin Macrae (Motts MacDonald)</p>
Recommendation
This information is to remain confidential.
Janette Richards HAISCRIBE Bank Nurse (IPCN)
<p>Primary Distribution Group:</p> <ul style="list-style-type: none"> ❖ Fiona Cameron Head of Service IPCT ❖ Lindsay Guthrie Lead IPCN

From: Graham, Iain
Sent: 06 August 2019 10:43
To: Pryor, Michael
Cc: Goldsmith, Susan; Walker, Anna
Subject: RE: RHSCYP Board Paper 07-08-19

ok

Iain F Graham

Director of Capital Planning and Projects
NHS Lothian
Waverley Gate

From: Pryor, Michael
Sent: 06 August 2019 10:41
To: Graham, Iain
Cc: Goldsmith, Susan; Walker, Anna
Subject: RE: RHSCYP Board Paper 07-08-19

Ok, so maybe something like this:

A Ventilation Design Group has been established with membership drawn from IHSL (including their Multiplex and their supply chain), NHS Lothian (including project, facilities and Infection Control personnel) and supportive attendance from HFS, and which was formed principally to develop the revised design for Critical Care ventilation. The Group has been working through the IOM report and has identified seven key points that require specific management by the Group, which meets twice weekly in a workshop format to progress work and oversee any design development. The workshops provide a forum for ongoing discussions on the detail behind each of these points and the development and implementation of solutions.

The 7 points are:

1. Very limited extract in theatre corridors.
2. Excessive flexible ductwork in theatre ceilings
3. Scrub Extract Grilles
4. Back up arrangements appear to be very complex and as such likely to be challenging in
5. Cabling inside AHU also cable connectors inside AHU
6. Some motors running at over 95% speed
7. The use of pressure control sensors downstream of AHU but upstream of UCV

From: Graham, Iain [REDACTED]
Sent: 06 August 2019 10:33
To: Pryor, Michael [REDACTED]
Cc: Goldsmith, Susan [REDACTED]; Walker, Anna
Subject: RE: RHSCYP Board Paper 07-08-19

Keen not to provide the tracker as it's technical detail is not fully representative to paint a picture.

Iain

Iain F Graham

Director of Capital Planning and Projects
NHS Lothian
Waverley Gate

[Redacted]

From: Pryor, Michael
Sent: 06 August 2019 10:31
To: Graham, Iain
Cc: Goldsmith, Susan; Walker, Anna
Subject: RE: RHSCYP Board Paper 07-08-19

Thanks Iain – happy for me to combine this with Susan’s comment in her e-mail just now and for me to revert to Barbara?

Michael

From: Graham, Iain [Redacted]
Sent: 06 August 2019 10:30
To: Pryor, Michael [Redacted]
Cc: Goldsmith, Susan [Redacted]; Walker, Anna
Subject: RE: RHSCYP Board Paper 07-08-19

The IOM report was developed into a tracker document listing some 54 line items. A Ventilation Design Group established with IHSL (including their supply chain), NHSL (project, facilities, Infection Control, etc) and supportive attendance from HFS, was formed principally to develop the revised design for Critical Care ventilation. The Group has been working through the IOM report has identified some 7 points from the tracker requiring more focus by the group. The group meets twice weekly to progress work and any design development.

The 7 points include:

1. **Very limited extract in theatre corridors.**
2. **Excessive flexible ductwork in theatre ceilings**
3. **Scrub Extract Grilles**
4. **Back up arrangements appear to be very complex and as such likely to be challenging in**
5. **Cabling inside AHU also cable connectors inside AHU**
6. **Some motors running at over 95% speed**
7. **The use of pressure control sensors downstream of AHU but upstream of UCV**

As there are ongoing discussions the detail behind these are developing towards resolutions and IHSL continue to work with the Board on them.

Iain

Iain F Graham

Director of Capital Planning and Projects

NHS Lothian

[Redacted]

From: Pryor, Michael
Sent: 06 August 2019 09:55
To: Graham, Iain
Cc: Goldsmith, Susan
Subject: FW: RHSCYP Board Paper 07-08-19
Importance: High

And so it goes on – who should I speak to for an answer this latest query?

Michael

From: [Redacted]
Sent: 06 August 2019 09:17
To: Pryor, Michael [Redacted]
Subject: RE: RHSCYP Board Paper 07-08-19
Importance: High

Michael,

Thanks for your help with responses to various queries I have been sending. Another query that we need an urgent response to: in paragraph 3.7 of the board paper, it states,

Over and above this, there are **several other ventilation issues** identified by IOM

Can you please provide a summary of these other ventilation issues and an update on any progress with them.

Thanks,

Barbara

Barbara Crowe
Health Finance and Infrastructure Team
Directorate for Health Finance
Scottish Government

[Redacted]

From: Pryor, Michael [Redacted]
Sent: 02 August 2019 12:36
To: Crowe B (Barbara) [Redacted]; Roche R (Rowena) [Redacted]; McLaughlin C (Christine) [Redacted]
Cc: McCallum R (Richard) [Redacted]; Morrison A (Alan) [Redacted]; Connaghan J (John) (Health) [Redacted]; Graham, Iain [Redacted]; Goldsmith, Susan [Redacted]; Executive, Chief [Redacted]; Gillies, Tracey [Redacted]; McMahon, Alex [Redacted]; Taylor, Kizzy [Redacted]; Guthrie, Lindsay [Redacted]; Walker, Anna [Redacted]
Subject: RE: RHSCYP Board Paper 07-08-19

Dear all

Please find attached a final draft of the Board paper, now incorporating comments from among those copied in above, including from John Connaghan. Please note that final sign off of the paper rests with Susan Goldsmith, who will be unable to clear it until Monday morning. However, as there is unlikely to be any major change, the document should be in an appropriate state for clearance, although you may wish to hold off until we can provide you with a NHS Lothian-cleared version on Monday. It would be very helpful to get any further comments in the meantime so that we can incorporate these on Monday for Susan to then sign off.

Kind regards

Michael

Michael Pryor

Asset Development Consultant
Capital Planning and Projects

[Redacted]

From: [Redacted]
Sent: 02 August 2019 10:01
To: Pryor, Michael [Redacted]; Walker, Anna [Redacted];
[Redacted]
Cc: Graham, Iain [Redacted]; Goldsmith, Susan [Redacted]
Subject: RE: RHSCYP Board Paper 07-08-19

Thanks Michael – can you please let me know once this paper has been finalised so that I can arrange clearance from the Cabinet Secretary.

Regards,

Barbara

Barbara Crowe
Health Finance and Infrastructure Team
Directorate for Health Finance
Scottish Government

[Redacted]

From: Pryor, Michael [Redacted]
Sent: 02 August 2019 09:15
To: Walker, Anna [Redacted]; Roche R (Rowena) [Redacted];
McLaughlin C (Christine) [Redacted]
Cc: Graham, Iain [Redacted]; Crowe B (Barbara) [Redacted]; McCallum
R (Richard) [Redacted]; Goldsmith, Susan [Redacted]
Subject: RE: RHSCYP Board Paper 07-08-19

Dear all

Following input from others within Lothian, we've made a couple more minor amendments – revised version attached. Alex McMahon is, I understand, forwarding this also to John Connaghan, who may also have some suggested amendments.

Kind regards

Michael

From: Walker, Anna [REDACTED]
Sent: 01 August 2019 11:01
To: 'Rowena.Roche [REDACTED]
Cc: Graham, Iain [REDACTED]; Goldsmith, Susan [REDACTED]
Subject: RE: RHSCYP Board Paper 07-08-19
Importance: High

Attached is now the updated RHSCYP Board paper.

Regards
Anna Walker
Executive Assistant to Director of Finance
& Director of Capital Planning and Projects
NHS Lothian

[REDACTED]

[REDACTED]

Working Pattern - Monday - Thursday

[REDACTED]



From: [REDACTED]
Sent: 01 August 2019 09:33
To: Pryor, Michael; [REDACTED] Goldsmith, Susan
Cc: Graham, Iain; Walker, Anna; [REDACTED]
Subject: RE: RHSCYP Board Paper 07-08-19

Thanks, Michael. Wording is as follows:

In order to provide co-ordinated advice to the Cabinet Secretary for Health and Sport, an Oversight Board will seek assurance from NHS Lothian that according to its due diligence and governance, the facility is ready to open; and from NHS National Services Scotland that its agreed diligence has been successfully completed.

Could you provide the updated paper for clearance please.

Many thanks,

Rowena
Rowena Roche

Directorate of Health Finance
 Scottish Government | [REDACTED]

Please note that I do not work on Thursday afternoons or on Fridays.

From: Pryor, Michael [REDACTED]
Sent: 01 August 2019 08:29
To: McLaughlin C (Christine) [REDACTED]; Roche R (Rowena) [REDACTED];
 Goldsmith, Susan [REDACTED]
Cc: Graham, Iain [REDACTED]; Walker, Anna [REDACTED]
Subject: RE: RHSCYP Board Paper 07-08-19

Thanks Christine – I'll add this in once Rowena has sent the wording and get it straight back over to you.

Michael

From: [REDACTED]
Sent: 01 August 2019 07:52
To: [REDACTED]; Goldsmith, Susan [REDACTED]
Cc: Pryor, Michael [REDACTED]; Graham, Iain [REDACTED];
 Walker, Anna [REDACTED]
Subject: RE: RHSCYP Board Paper 07-08-19
Importance: High

Susan

Would you not want to reference the role of the Cabinet Secretary and the Oversight Board, so that your own Board understands the decision making process?

I'll ask rowena to send you the wording that we have used publicly. Could someone then update it and send back to me please.

Thanks

Christine

Sent with BlackBerry Work (www.blackberry.com)

From: "Goldsmith, Susan" [REDACTED]
Sent: 31 Jul 2019 18:15
To: "McLaughlin C (Christine)" [REDACTED]
Cc: "Pryor, Michael" [REDACTED]; "Graham, Iain"
 [REDACTED]; "Walker, Anna" [REDACTED]
Subject: FW: RHSCYP Board Paper 07-08-19

Christine here is the draft Board paper. It is marked as to follow so if you are happy with it can you let Anna know.

In my absence please feel free to liaise with either Iain or Michael depending on availability

I am also on the train for 4 hours tomorrow morning so happy to chat

Susan

From: Walker, Anna [REDACTED]
Sent: 31 July 2019 16:29
To: Goldsmith, Susan [REDACTED]
Subject: RHSCYP Board Paper 07-08-19
Importance: High

Susan – attached is the updated Board Paper.

Anna

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Tha am post-d seo (agus faidhle neo ceanglan còmhla ris) dhan neach neo luchd-ainmichte a-mhàin. Chan eil e ceadichte a chleachdadh ann an dòigh sam bith, a’ toirt a-steach còraichean, foillseachadh neo sgaoileadh, gun chead. Ma ’s e is gun d’fhuair sibh seo gun fhiosd’, bu choir cur às dhan phost-d agus lethbhreac sam bith air an t-siostam agaibh agus fios a leigeil chun neach a sgaoil am post-d gun dàil. Dh’fhaodadh gum bi teachdaireachd sam bith bho Riaghaltas na h-Alba air a chlàradh neo air a sgrùdadh airson dearbhadh gu bheil an siostam ag obair gu h-èifeachdach neo airson adhbhar laghail eile.

Dh'fhaodadh nach eil beachdan anns a' phost-d seo co-ionann ri beachdan Riaghaltas na h-Alba.

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Project title Royal Hospital of Sick Children

Subject Ventilation Meeting Minutes

Location NHSL Project Office, Clinical Management Suite, Royal Hospital of Sick Children, Edinburgh

Date and time of meeting 06/08/2019 10:00

Recorded by: RS

Circulation: Via Email

Attendees

Name	Initials	Company/organisation
Graeme Salmon	GS	Integrated Health Solution Lothain (IHSL)
Lindsay Guthrie	LG	Infection Control Lead (NHSL)
Donald Inverarity	DI	Consultant Microbiologist (NHSL)
David Wilson	DW	Multiplex (MPX)
David Gordon	DG	Bouygues (BYES)
Ronnie Henderson	RH	National Health Service Lothain (NHSL)
Wallace Weir	WW	Integrated Health Solution Lothain (IHSL)
Ross Southwell	RS	Mott MacDonald
Colin Macrae	CM	Mott MacDonald
Ian Brodie	IB	Mott MacDonald
George Curley	GC	National Health Service Lothain (NHSL)

Apologies

Name	Initials	Company/organisation
Brian Currie	BC	National Health Service Lothain (NHSL)
Ken Hall	KH	Multiplex (MPX)
Ian Storrar	IS	Health Facilities Scotland (HFS)

Item	Text	Action
1.	<p><u>Remedial Works/Ventilation Board Change</u> DW stated no further details regarding technical discussions had been made since the previous meeting (02/08/19).</p> <p>WW stated proposals regarding the change are being considered and will be discussed (and hopefully concluded) at the oversight steering group on Thursday 8th August. IHSL are having on-going discussions with MPX and TUV SUD. Stewart Mckechnie (From TUV SUD) will be returning from annual leave and will be attending these meetings. WW stated that there is a commitment to design pending outcome of documentation (Change).</p>	
2.	<p><u>Ventilation Issues Log</u> NHSL asked for timescales on all of these actions (even if just preliminary). DW stated that he has provided some initial information.</p> <p>LG asked if there was any issues with the log. RH stated issue regarding drainage from the AHU. In general drainage was suitable but in some situations they did not appear to provide 50mm gap at the bottom of the condensate pipe. RH stated some of the traps were dirty. DG noted this.</p>	<p>IHSL/MPX</p> <p>BYES</p>

3.	<p><u>Manufacturers visit</u> RH stated that the aim of the AHU manufacturer (Q-nis - Sandometal) site visit on Wednesday 07/08/19@11:00 was to verify compliance with SHTM 03-01. DW intention was that they would come to site and agree the action plan/timescales of any remedial works. Paul (from IOM) has sent through a list of things to focus on. GC stated NHSL wants to see suitable evidence to show compliance and assurance. DW agreed on this. Any works carried out will be resolved internally between IHSL/MPX/MER.</p> <p>GS asked the question on how to best provide assurance, if there a format best to provide the nessessary information (report, certificates). GC confirmed it should be similar to a AHU audit report. GS to get previous templates used. GC has a audit checklist which can be provided.</p>	All
4.	<p><u>Any other Business</u> RH stated, as a general comment, HFS/HPS has provided over 120 items of information required. Information and documents are required from IHSL/BYES/MPX. Due to the urgent nature, RH asked if he can attach the list to an email rather than a formal letter to expedite the response. RH to send via email to WW cc DG & DW. DG said they are happy to sit down and go through.</p>	IHSL/NHSL
	<p><u>Date of Next Meeting</u> Friday 9th August 2019 @ 10:00 Warlow</p>	IHSL/MPX/BYES

From: Roche R (Rowena)
Sent: 06 August 2019 19:17
To: Cabinet Secretary for Health and Sport; Aitken L (Louise)
Cc: Leitch J (Jason); Calderwood C (Catherine); Smith G (Gregor); McQueen F (Fiona); Summers Y (Yvonne); McLaughlin C (Christine); Wilson S (Stuart) (HLTH); Lea-Ross S (Stephen); Gilbert A E (Anna); Crowe B (Barbara); Rogers S (Shirley); News Desk; Communications Healthier; Klein G (Gerard); Morrison A (Alan); Black A (Alasdair); Knight S (Stephanie); Grieve B (Bethany); McCallum R (Richard); Neill S (Sean); McAllister C (Colin); Ingebrigtsen R (Ross); Minister for Public Health, Sport and Wellbeing; Minister for Mental Health; Connaghan J (John) (Health); Lunt A (Aislinn); Antognetti E (Elettra); Scott J (Jenny)
Subject: RE: NHS Lothian Lines: URGENT - AUDIT SCOTLAND REPORT
Attachments: NHS Lothian - Annual Audit Report.docx; AAR_18-19_NHSLO.pdf

Andy,

Please find briefing, including lines, attached. I have also attached a copy of the report.

Kind regards,

Rowena

Rowena Roche
 Directorate of Health Finance
 Scottish Government | [REDACTED]
 [REDACTED]

Please note that I do not work on Thursday afternoons or on Fridays.

From: Cabinet Secretary for Health and Sport [REDACTED]
Sent: 06 August 2019 18:50
To: Aitken L (Louise) [REDACTED]
Cc: Leitch J (Jason) [REDACTED]; Calderwood C (Catherine) [REDACTED]; Smith G (Gregor) [REDACTED]; McQueen F (Fiona) [REDACTED]; Summers Y (Yvonne) [REDACTED]; McLaughlin C (Christine) [REDACTED]; Wilson S (Stuart) (HLTH) [REDACTED]; Lea-Ross S (Stephen) [REDACTED]; Gilbert A E (Anna) [REDACTED]; Crowe B (Barbara) [REDACTED]; Rogers S (Shirley) [REDACTED]; News Desk [REDACTED]; Communications Healthier [REDACTED]; Klein G (Gerard) [REDACTED]; Roche R (Rowena) [REDACTED]; Morrison A (Alan) [REDACTED]; Black A (Alasdair) [REDACTED]; Knight S (Stephanie) [REDACTED]; Grieve B (Bethany) [REDACTED]; McCallum R (Richard) [REDACTED]; Neill S (Sean) [REDACTED]; McAllister C (Colin) [REDACTED]; Ingebrigtsen R (Ross) [REDACTED]; Minister for Public Health, Sport and Wellbeing [REDACTED]; Minister for Mental Health [REDACTED]; Connaghan J (John) (Health) [REDACTED]; Lunt A (Aislinn) [REDACTED]; Antognetti E (Elettra) [REDACTED]; Scott J (Jenny) [REDACTED]
Subject: RE: NHS Lothian Lines: URGENT - AUDIT SCOTLAND REPORT

Rowena,

Any update on when briefing on this will be with us. Am aware that there are outstanding lines on this as well.

Thanks,
Andy

Sent with BlackBerry Work (www.blackberry.com)

From: "Aitken L (Louise)" [REDACTED]
Sent: 6 Aug 2019 18:04
To: Cabinet Secretary for Health and Sport [REDACTED]
Cc: "Leitch J (Jason)" [REDACTED]; "Calderwood C (Catherine)" [REDACTED]; "Smith G (Gregor)" [REDACTED]; "McQueen F (Fiona)" [REDACTED]; "Summers Y (Yvonne)" [REDACTED]; "McLaughlin C (Christine)" [REDACTED]; "Wilson S (Stuart) (HLTH)" [REDACTED]; "Lea-Ross S (Stephen)" [REDACTED]; "Gilbert A E (Anna)" [REDACTED]; "Crowe B (Barbara)" [REDACTED]; "Rogers S (Shirley)" [REDACTED]; News Desk [REDACTED]; Communications Healthier [REDACTED]; "Klein G (Gerard)" [REDACTED]; "Roche R (Rowena)" [REDACTED]; "Morrison A (Alan)" [REDACTED]; "Black A (Alasdair)" [REDACTED]; "Knight S (Stephanie)" [REDACTED]; "Grieve B (Bethany)" [REDACTED]; "McCallum R (Richard)" [REDACTED]; "Neill S (Sean)" [REDACTED]; "McAllister C (Colin)" [REDACTED]; "Ingebrigtsen R (Ross)" [REDACTED]; "Minister for Public Health, Sport and Wellbeing" [REDACTED]; "Minister for Mental Health" [REDACTED]; "Connaghan J (John) (Health)" [REDACTED]; "Lunt A (Aislinn)" [REDACTED]; "Antognetti E (Elettra)" [REDACTED]; "Scott J (Jenny)" [REDACTED]
Subject: RE: NHS Lothian Lines: URGENT - Audit Scotland Report

Hi Andy,

We've discussed the below. I've called NHS Lothian and they will hold the below comment until Cab Sec has seen briefing and fed back.

Thank you,
Louise

Louise Aitken

Senior Media Manager | Health Communications | [REDACTED]

The Scottish Government | www.gov.scot

From: Corr A (Andrew) [REDACTED] **On Behalf Of** Cabinet Secretary for Health and Sport
Sent: 06 August 2019 17:18
To: Aitken L (Louise) [REDACTED] Cabinet Secretary for Health and Sport [REDACTED]
Cc: Leitch J (Jason) [REDACTED]; Calderwood C (Catherine) [REDACTED]; Smith G (Gregor) [REDACTED]; McQueen F (Fiona) [REDACTED]; Summers Y (Yvonne) [REDACTED]; [REDACTED]; McLaughlin C (Christine) [REDACTED]; Wilson S (Stuart) (HLTH) [REDACTED]; Lea-Ross S (Stephen) [REDACTED]; Gilbert A E (Anna) [REDACTED]; Crowe B (Barbara) [REDACTED]; Rogers S (Shirley) [REDACTED]; News Desk [REDACTED]; Communications Healthier [REDACTED]; Klein G (Gerard) [REDACTED]; Roche R (Rowena) [REDACTED]

[REDACTED]; Morrison A (Alan) [REDACTED]; Black A (Alasdair)
 [REDACTED]; Knight S (Stephanie) [REDACTED]; Grieve B (Bethany)
 [REDACTED]; McCallum R (Richard) [REDACTED]; Neill S (Sean)
 [REDACTED]; McAllister C (Colin) [REDACTED]; Ingebrigtsen R (Ross)
 [REDACTED]; Minister for Public Health, Sport and Wellbeing [REDACTED]; Minister
 for Mental Health [REDACTED]; Connaghan J (John) (Health) [REDACTED]; Lunt A
 (Aislinn) [REDACTED]; Antognetti E (Elettra) [REDACTED]
Subject: RE: NHS Lothian Lines: URGENT - Audit Scotland Report

Louise,

The Cabinet Secretary has considered the lines below and has indicated that she is a bit stuck to clear or not clear these since she had no knowledge of this report and have no briefing on what it says (although this is coming later tonight). Therefore she does not know if NHSL are spinning a good story or being straight. The one question she would like answered just now is this: is the Audit Scotland report on NHSL and Sick kids as unvarnished in its positivity as these lines suggest and if not, how should the lines be changed?

Thanks,
 Andy

From: Aitken L (Louise) [REDACTED] >
Sent: 06 August 2019 16:42
To: Cabinet Secretary for Health and Sport [REDACTED]
Cc: Leitch J (Jason) [REDACTED]; Calderwood C (Catherine) [REDACTED]; Smith G (Gregor) [REDACTED]; McQueen F (Fiona) [REDACTED]; Summers Y (Yvonne) [REDACTED]; McLaughlin C (Christine) [REDACTED]; Wilson S (Stuart) (HLTH) [REDACTED]; Lea-Ross S (Stephen) [REDACTED]; >; Gilbert A E (Anna) [REDACTED]; Crowe B (Barbara) [REDACTED]; Rogers S (Shirley) [REDACTED]; News Desk [REDACTED]; Communications Healthier [REDACTED]; Klein G (Gerard) [REDACTED]; Roche R (Rowena) [REDACTED]; Morrison A (Alan) [REDACTED]; Black A (Alasdair) [REDACTED]; Knight S (Stephanie) [REDACTED]; Grieve B (Bethany) [REDACTED]; McCallum R (Richard) [REDACTED]; Neill S (Sean) [REDACTED]; McAllister C (Colin) [REDACTED]; Ingebrigtsen R (Ross) [REDACTED]; Minister for Public Health, Sport and Wellbeing [REDACTED]; Minister for Mental Health [REDACTED]; Connaghan J (John) (Health) [REDACTED]; Lunt A (Aislinn) [REDACTED]; Antognetti E (Elettra) [REDACTED]
Subject: NHS Lothian Lines: URGENT - Audit Scotland Report

Hi Andy,

Please find below NHS Lothian's lines on the Audit Scotland report.

For awareness, we have been approached by various media for our lines on this –now including BBC. These lines will follow shortly to clear.

In the meantime, grateful if you could advise if Cab Sec is content for NHS Lothian to issue the below.

Susan Goldsmith, Finance Director, NHS Lothian, said:

“We welcome the report from Audit Scotland around the decisions made on the Royal Hospital for Children and Young People, the Department of Clinical Neurosciences, and Child and Adolescent Mental Health Services at the Little France campus.

“It reviewed the Settlement Agreement between NHSL and IHSL and considered the project governance and value for money.

“The report highlights that NHS Lothian provided evidence of detailed evaluation of the qualitative and quantitative options available to it before proceeding with the settlement. It also shows that the board sought technical advice and expertise throughout the project to ensure the safety of patients, staff and visitors remained the priority throughout.”

Thank you
Louise

Louise Aitken

Senior Media Manager | Health Communications | [REDACTED]

The Scottish Government | www.gov.scot

From: Aitken L (Louise)

Sent: 06 August 2019 13:35

To: Cabinet Secretary for Health and Sport [REDACTED]

Cc: Leitch J (Jason) [REDACTED]; Calderwood C (Catherine) [REDACTED]; Smith G (Gregor) [REDACTED]; McQueen F (Fiona) [REDACTED]; Summers Y (Yvonne) [REDACTED]

[REDACTED]; McLaughlin C (Christine) [REDACTED]; Wilson S (Stuart) (HLTH) [REDACTED]

[REDACTED]; Lea-Ross S (Stephen) [REDACTED]; Gilbert A E (Anna) [REDACTED]

[REDACTED]; Crowe B (Barbara) [REDACTED]; Rogers S (Shirley) [REDACTED]

[REDACTED]; News Desk [REDACTED]; Communications Healthier [REDACTED]

[REDACTED]; Klein G (Gerard) [REDACTED]; Roche R (Rowena) [REDACTED]

[REDACTED]; Morrison A (Alan) [REDACTED]; Black A (Alasdair) [REDACTED]

[REDACTED]; Knight S (Stephanie) [REDACTED]; Grieve B (Bethany) [REDACTED]

[REDACTED]; McCallum R (Richard) [REDACTED]; Neill S (Sean) [REDACTED]

[REDACTED]; McAllister C (Colin) [REDACTED]; Ingebrigtsen R (Ross) [REDACTED]

[REDACTED]; Minister for Public Health, Sport and Wellbeing [REDACTED]; Minister

for Mental Health [REDACTED]; Connaghan J (John) (Health) [REDACTED]; Lunt A

(Aislinn) [REDACTED]

Subject: RE: URGENT - AUDIT SCOTLAND REPORT - publishing 1pm today

Extending copylist.

Barbara, we've spoken and you / Rowena are looking at the report now and a note is going to Cab Sec on this.

Please see below media comment from the Auditor General - they aren't putting anyone up for media bids.

NHS Lothian are working on a draft statement, which I'll circulate as soon as I have it. They have also advised they won't be doing bids.

Caroline Gardner, Auditor General for Scotland, said: “We have continued to monitor events since the annual audit report was issued and will be taking a close interest in the NHS safety review's findings and KPMG's report on the governance of the project.”

Thank you

Louise

Louise Aitken

Senior Media Manager | Health Communications | [REDACTED]

The Scottish Government | www.gov.scot

From: Aitken L (Louise)

Sent: 06 August 2019 12:51

To: Cabinet Secretary for Health and Sport [REDACTED]

Cc: Leitch J (Jason) [REDACTED]; Calderwood C (Catherine) [REDACTED]; Smith G (Gregor) [REDACTED]; McQueen F (Fiona) [REDACTED]; Summers Y (Yvonne) [REDACTED]; McLaughlin C (Christine) [REDACTED]; Wilson S (Stuart) (HLTH) [REDACTED]; Lea-Ross S (Stephen) [REDACTED]; Gilbert A E (Anna) [REDACTED]; Crowe B (Barbara) [REDACTED]; Rogers S (Shirley) [REDACTED]; News Desk [REDACTED]; Communications Healthier [REDACTED]; Klein G (Gerard) [REDACTED]; Roche R (Rowena) [REDACTED]; Morrison A (Alan) [REDACTED]; Black A (Alasdair) [REDACTED]; Knight S (Stephanie) [REDACTED]; Grieve B (Bethany) [REDACTED]; McCallum R (Richard) [REDACTED]; Neill S (Sean) [REDACTED]; McAllister C (Colin) [REDACTED]; Ingebrigtsen R (Ross) [REDACTED]; Minister for Public Health, Sport and Wellbeing [REDACTED]; Minister for Mental Health [REDACTED]; Klein G (Gerard) [REDACTED]

Subject: URGENT - AUDIT SCOTLAND REPORT - publishing 1pm today

Importance: High

Hi Andy,
Cc'ing Ministers for awareness.

Please see the email below we have received from Audit Scotland comms. Aware Malcolm is on leave this this may not have reached SG colleagues as outline below.

They will issue the attached annual audit report to media at 1pm today.

Grateful if you could make Cab Sec aware.

Policy colleagues, we will start getting media approaches on this shortly which will require policy views / info.

NHS L have also just been made aware. We are contacting them now to get info on handling.

Thank you
Louise

Louise Aitken

Senior Media Manager | Health Communications | [REDACTED]

The Scottish Government | www.gov.scot

Hi team,

As discussed on the phone just now. This note should be going out to media before 1pm today. I'll let you know if that changes.

Report attached.

Our controller of audit was in touch with Malcolm Wright late this morning to let him know.

Patrick

Royal Hospital for Children and Young People

In light of the ongoing public interest in the new Royal Hospital for Children and Young People, Audit Scotland is today (6 August) publishing the Annual Audit Report (AAR) on NHS Lothian.

Pars 163 to 175 of the report cover a high level review of the arrangements around the settlement agreement between NHS Lothian and the contractor, IHS Lothian Ltd, and consider project governance and value for money. The Auditor General for Scotland asked Scott Moncrieff, the external auditors of NHS Lothian, to carry out the review to provide assurance in this area.

The report – as with all health AARs – was issued to NHS Lothian’s board and the Auditor General at the end of June in line with the deadline for NHS audits, and would normally be published by Audit Scotland in September. This gap between the completion of the AAR and publication gives the Auditor General time to consider whether to bring any issues to the attention of Parliament through an accompanying [Section 22 report](#).

However, given the high levels of interest in the new children’s hospital, the Auditor General is making the report available now.

Caroline Gardner, Auditor General for Scotland, said: “We have continued to monitor events since the annual audit report was issued and will be taking a close interest in the NHS safety review’s findings and KPMG’s report on the governance of the project.”

ENDS

Notes to editor:

- The review work by Scott Moncrieff was conducted earlier this year and the auditors were not aware of the subsequent issues that arose at the children’s hospital in early July.

NHS Lothian Annual Audit Report

Purpose

1. Following early publication on NHS Lothian's annual audit report today, to provide an overview of content of the report, reason for early publication and lines to take.

Priority

2. **Immediate.**

Background

3. The NHS Lothian 2018/19 Annual Audit Report was published today, 6 August. This is the Annual Report that is prepared each year for Board Members and for the Auditor General for Scotland. It is usually published at the end of September/beginning of October and is therefore approximately 2 months ahead of the usual publication date.

4. The Report was presented in draft to the Board in a private session on 26 June. Papers from the private session refer to a verbal overview and to two key issues covered: 1. the external audit progress to date, and 2. a high level review of the arrangements for agreeing and approving the settlement agreement between NHS Lothian and the contractor with respect to the Royal Hospital for Children and Young People (RHCYP), Department of Clinical Neurosciences (DCN) and Child and Adolescent Mental Health Services project. The review was carried out by Scott Moncrieff, the external auditors, at the request of Audit Scotland. The review is included as part of the Annual Audit Report and looked at the governance arrangements relating to the settlement agreement only; and not those relating to the whole project.

5. Scottish Labour called for publication of the 'secret report into sick kids hospital payments' in a release published on 5 August and this was picked up by various media outlets.

6. In light of the ongoing public interest in the new Royal Hospital for Children and Young People (RHCYP), the Auditor General took the decision to publish the Annual Audit Report on NHS Lothian today. Scottish Government officials were made aware of the publication and associated press release (Annex A) shortly ahead of the 1pm release today.

Awareness of content of the annual audit report

7. Annual audit reports are prepared by the external auditor for audit committee members and the auditor general. The reports are not sent to Scottish Government and are (usually) not published until the accounts have been laid in parliament.

8. As part of the work currently underway to review and progress the RHCYP project, Scottish Government officials were made aware of Scott-Moncrieff's review of the governance arrangements of the settlement agreement, and this was highlighted to KPMG to review as part of their review of overall governance arrangements of the project.

9. No separate briefing was provided on this matter as there were no significant findings coming from the review, or new information to that already provided in briefing.

Audit findings

10. The Annual Audit Report confirms that NHS Lothian's accounts received an unqualified audit opinion. In addition, the Report sets out findings from the high level review of governance arrangements of the settlement agreement, along with findings on financial sustainability, financial management, governance and transparency and value for money.

Settlement agreement findings

11. The board provided evidence of detailed evaluation of the qualitative and quantitative options available to it before proceeding with the settlement agreement option between NHS Lothian and the contractor, HIS Lothian Ltd (IHSL) considering project governance and value for money.

12. This included a range of professional advice (including legal, contractual and technical construction advice), extensive analysis and resources committed at senior levels – both executive and non-executive – to appraise the options available and weigh up the pros and cons of different scenarios.

13. The issue was discussed regularly at various management meetings and by the Board and its sub-committees and the Scottish Government was consulted and ultimately supported the supplemental business case for the Settlement Agreement.

14. NHS Lothian has consistently maintained its position that the issues experienced were materially non-compliant with the original specifications and raised concerns over the facilities for patients, visitors and staff (relating to aspects such as function, safety, adequacy and future capacity).

15. The priority of providing a safe and robust facility was in evidence throughout the board's approach to the resolution of the dispute.

16. Professional advice on technical standards, legal and commercial matters was taken throughout the process and includes ongoing involvement from advisors in infection control; fire, health and Safety; and facilities engineering.

17. On a number of occasions, where significant construction lessons had been learnt from other buildings or where other problems had been identified that may impact the project, the project team engaged with IHSL to seek formal assurances over these key issues. For example, given recent issues experienced at Queen Elizabeth University Hospital in Glasgow, NHS Lothian requested assurances regarding the cladding on the new hospital.

Other key findings

18. Financial sustainability: the report notes that the annual operational plan sets out financial gaps for the 3 years of the plan and that there are limited plans to close the gap. The 2019/20 financial plan outlines a financial gap of £26 million. The report shows this gap increasing to £90 million by 2020/21. The report notes that this is in line with previous years projections and that while the plan shows financial gaps in each year, at this stage, the board does not intend to request brokerage.

19. Waiting times performance: The report notes that performance metrics have marginally improved in the year but the overall position continues to reflect a challenging environment and there has been a deterioration in performance against waiting times standards.

20. Funding and reform: The Report notes that there is a clear intention to focus on improving patient outcomes and reducing future demand, but there is limited funding available to support extensive improvement initiatives.

Lines to take

Settlement agreement review

As part of this year's audit, Audit Scotland commissioned Scott-Moncrieff to carry out a high level review looking specifically at arrangements around the settlement agreement between NHS Lothian and the contractor.

The report notes that NHS Lothian sought professional advice and provided evidence of detailed evaluation of the available options before proceeding with the settlement agreement **and that** provision of a safe facility remained the board's priority at all times.

The results of this review will be considered as part of the independent audit of the overall governance arrangements for the new hospital that KPMG are conducting, at the Cabinet Secretary's request, to provide an external and impartial assessment of the factors leading to the delay.

Financial sustainability and funding

NHS Lothian has received additional funding this year of £43.5 million, taking their overall budget in excess of £1.4 billion, along with and a share of £392 million to go towards improving patient outcomes.

As has been demonstrated in each of the previous financial years, it is normal for NHS Boards to begin the year with a relatively high variance against budget and for this to reduce throughout the year as savings plans are developed and as expenditure patterns become clearer.

NHS Lothian are working to deliver a breakeven position this year, and over their three year financial plan.

Waiting times

NHS Lothian continue to work to reduce waiting times, with their first quarterly performance review showing steady progress on reducing waiting times.

In 2019/20, additional investment of £16 million has been provided to specifically to target waiting times.

Rowena Roche [REDACTED]
Health Finance and Infrastructure

6 August 2019

Annex A

Audit Scotland press release, 6 August

Royal Hospital for Children and Young People

In light of the ongoing public interest in the new Royal Hospital for Children and Young People, Audit Scotland is today (6 August) publishing the Annual Audit Report (AAR) on NHS Lothian.

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The report – as with all health AARs – was issued to NHS Lothian’s board and the Auditor General at the end of June in line with the deadline for NHS audits, and would normally be published by Audit Scotland in September. This gap between the completion of the AAR and publication gives the Auditor General time to consider whether to bring any issues to the attention of Parliament through an accompanying [Section 22 report](#).

However, given the high levels of interest in the new children’s hospital, the Auditor General is making the report available now.

Caroline Gardner, Auditor General for Scotland, said: “We have continued to monitor events since the annual audit report was issued and will be taking a close interest in the NHS safety review’s findings and KPMG’s report on the governance of the project.”

ENDS

Notes to editor:

- The review work by Scott Moncrieff was conducted earlier this year and the auditors were not aware of the subsequent issues that arose at the children’s hospital in early July.

NHS Lothian

2018/19 Annual Audit Report to the
Board and the Auditor General for
Scotland

June 2019

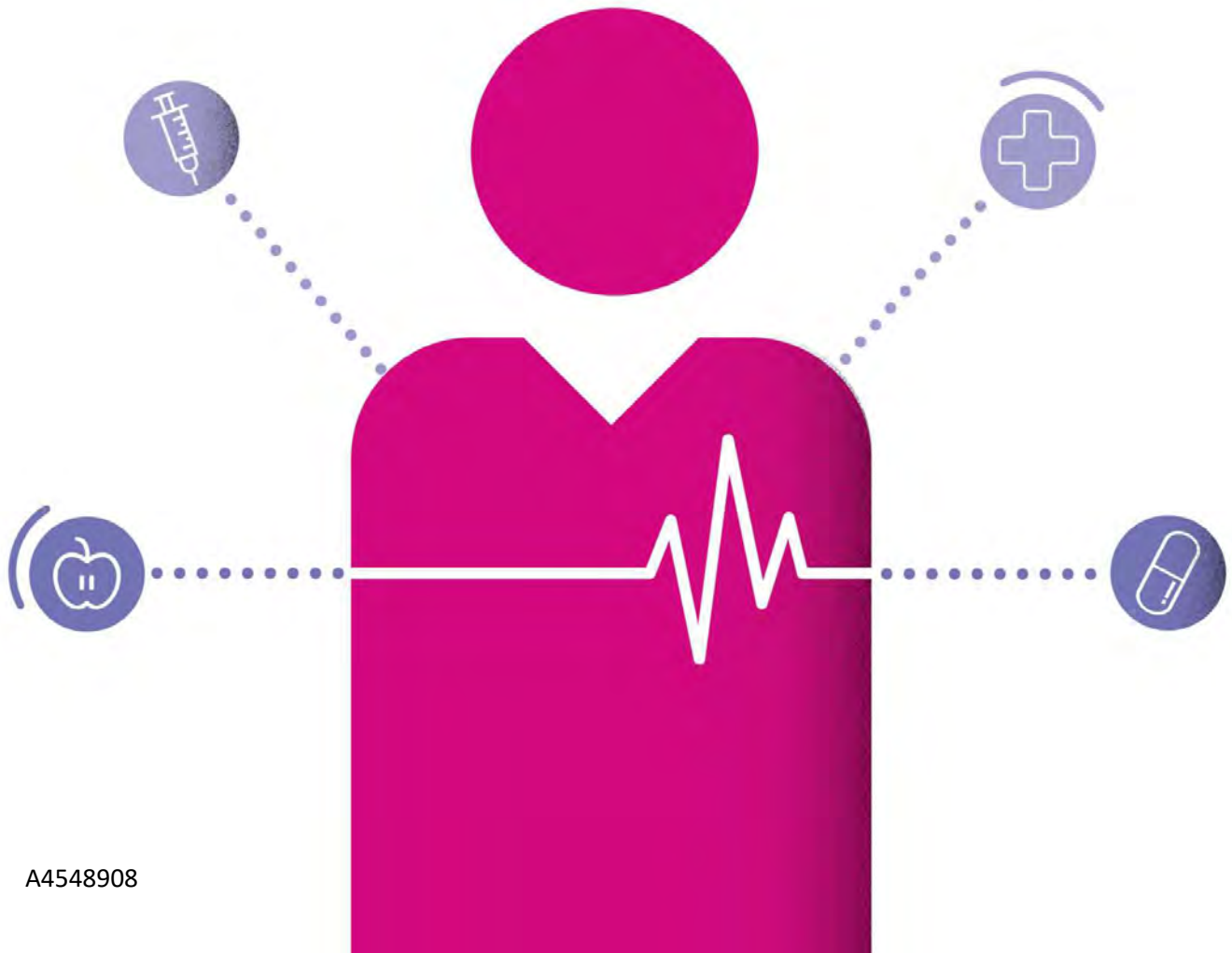




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1. Key messages



Annual accounts audit

All key financial targets were met in 2018/19. NHS Lothian achieved a saving of £0.410million against its revenue resource limit, and a breakeven position against its capital resource limit of £89.526million.

The annual report and accounts were approved by the Board on 26 June 2019. Our independent auditor's report includes an unqualified opinion on the annual accounts, regularity and on other prescribed matters.

The annual accounts and supporting schedules were of a good standard. Our thanks go to staff at NHS Lothian for their assistance with our work.

Wider scope audit

Financial sustainability

Work continues on developing a financially sustainable model. The Finance and Resources Committee continues to be able to take only limited assurance on long term financial sustainability. In line with previous projections, the Annual Operational Plan sets out financial gaps for the next three financial years with limited plans in place to deliver savings to close the gap. The 2019/20 financial plan outlines a financial gap of £26million.

Additional scrutiny of business units' savings plans will be performed by the Sustainability and Value Group. The new Lothian Integration Care Forum represents a significant and important development to achieving long term financial sustainability.

Financial management

Whilst meeting its key financial targets in 2018/19, NHS Lothian did not achieve all planned savings, and reliance on non-recurring savings increased in the year.

NHS Lothian has adequate arrangements in place for managing its overall financial position and use of resources to date, but relied on an increasing amount of non-recurring savings to achieve financial balance in 2018/19.

The board's key financial systems and internal financial controls are adequate to help prevent material misstatements in the annual accounts.

Governance and transparency

Governance arrangements at NHS Lothian were found to be satisfactory and appropriate. NHS Lothian's self-assessment against the Blueprint for Good Governance demonstrates a commitment to continuous improvement, with a number of actions identified to strengthen existing arrangements.

The board's response to the external review of emergency care waiting times has been extensive and is ongoing. Programme management arrangements have been implemented to help ensure the effective management of issues and associated actions. The focus needs to move to closing off extant actions and agreeing a timetable to return to business as usual.

Value for money

Performance metrics have marginally improved this year although the overall position continues to reflect a challenging environment. There has been a deterioration in performance against waiting times standards.

The board can demonstrate clear focus on quality improvement, with a Quality Strategy approved in 2018/19. While there is a clear intention to focus on improving patient outcomes and reducing future demand, there is limited funding available to support extensive improvement initiatives.

There is evidence of detailed evaluation of the qualitative and quantitative options before approval of the £11.6m settlement agreement in relation to the RHSCYP.

Conclusion

This report concludes our audit for 2018/19. Our work has been performed in accordance with the Audit Scotland Code of Audit Practice, International Standards on Auditing (UK) and Ethical Standards.



2. Introduction

This report is presented to those charged with governance and the Auditor General for Scotland, and concludes our audit of NHS Lothian for 2018/19.

We carry out our audit in accordance with Audit Scotland’s Code of Audit Practice (May 2016). This report also fulfils the requirements of International Standards on Auditing (UK) 260: Communication with those charged with governance.

At NHS Lothian, the Audit and Risk Committee has been designated as “those charged with governance”.



Scope of audit

1. This report summarises the findings from our 2018/19 audit of NHS Lothian.
2. We outlined the scope of our audit in our External Audit Plan, which we presented to the Audit and Risk Committee in November 2018 and again (updated) in February 2019. The core elements of our work include:
 - an audit of the 2018/19 annual report and accounts and related matters;
 - consideration of the wider dimensions of public audit work, as set out in Exhibit 1;
 - monitoring NHS Lothian's participation in the National Fraud Initiative (NFI); and
 - any other work requested by Audit Scotland. Accordingly, in March 2019, Audit Scotland asked us to take on some additional work which involved high level review of the arrangements around the settlement agreement between NHS Lothian and the contractor (IHS Lothian Ltd - IHSL) considering project governance and value for money.

Exhibit 1: Audit dimensions within the Code of Audit Practice



Board's responsibilities

3. NHS Lothian is responsible for preparing an annual report and accounts which show a true and fair view, and for implementing appropriate internal control systems. The weaknesses or risks identified are only those that have come to our attention during our normal audit work, and may not be all that exist. Communication in this report of matters arising from the audit of the annual report and accounts or of risks or weaknesses does not absolve management from its responsibility to address the issues raised and to maintain an adequate system of control.
4. The report contains an action plan with specific recommendations, responsible officers and dates for implementation. Senior management should assess these recommendations and consider their wider implications before deciding on appropriate actions.
5. We discussed and agreed the content of this report with the Director of Finance. We would like to thank all management and staff for their co-operation and assistance during our audit.

Confirmation of independence

6. International Standards on Auditing in the UK (ISAs (UK)) require us to communicate on a timely basis all facts and matters that may have a bearing on our independence.
7. We confirm that we comply with the Financial Reporting Council's (FRC) Revised Ethical Standard (June 2016). In our professional judgement, the



audit process is independent and our objectivity has not been compromised in any way.

8. We set out in Appendix 1 our assessment and confirmation of independence.

Adding value through the audit

9. All of our clients demand of us a positive contribution to meeting their ever-changing business needs. Our aim is to add value to NHS Lothian through our external audit work by being constructive and forward looking, by identifying areas of improvement and by recommending and encouraging good practice. In this way, we aim to help the board promote improved standards of governance, better management and decision making and more effective use of resources.
10. As part of our 2018/19 audit we added value to NHS Lothian and Audit Scotland in a range of ways:

Regular contact with the board

11. We invest senior time to ensure that we keep up to date with significant issues and share that knowledge across our team. Examples include:
 - We are members of the NHS Technical Accounting Group and Sub group, and we share that knowledge across our team and with the board;
 - We maintain regular dialogue with the Director of Finance and her team, including early discussion on potential audit and accounting issues;
 - We hold discussions with the board's finance team in advance of the preparation of the annual accounts;
 - We ran two non-executive forums during the year, to which NHS Lothian non-executive directors were invited. These forums covered areas such as achieving transformational change, cyber resilience, change & project management, and Brexit;
 - We ran an NHS Finance roundtable event for our NHS external audit clients to discuss the audit process, accounting framework changes and common audit and accounting issues.

Providing assurance to the Board and Audit Scotland

- We have met the deadlines set out in Audit Scotland's annual planning guidance in respect of the delivery of audit plans, independent auditor reports and annual reports.

- We participated in meetings of the Sharing Intelligence for Health & Care Group alongside NHS Lothian's other scrutiny bodies.
- At the request of Audit Scotland, we performed a high level review of the arrangements for agreeing and approving the settlement agreement between NHS Lothian and the contractor with respect to the Royal Hospital for Children and Young People, Department of Clinical Neurosciences and Child and Adolescent Mental Health Services project.

Feedback

12. Any comments you may have on the service we provide, the quality of our work and our reports would be greatly appreciated at any time. Comments can be reported directly to the audit team or through our online survey: www.surveymonkey.co.uk/r/S2SPZBX
13. While this report is addressed to the Board and the Auditor General for Scotland, it will be published on Audit Scotland's website www.audit-scotland.gov.uk



3. Annual report and accounts

NHS Lothian’s annual report and accounts are the principal means of accounting for the stewardship of its resources and its performance in the use of those resources.

In this section we summarise the findings from our audit of the 2018/19 annual report and accounts.



Annual report and accounts

An unqualified audit opinion on the annual report and accounts

The annual report and accounts for the year ended 31 March 2019 were approved by the Board on 26 June 2019. We report unqualified opinions within our independent auditor's report. We did not identify any significant adjustments to the unaudited annual report and accounts.

The Board has appropriate administrative processes in place to prepare the annual report and accounts and the required supporting working papers.

Overall conclusion

An unqualified audit opinion on the annual report and accounts

14. We report within our independent auditor's report:
 - An unqualified opinion on the financial statements;
 - An unqualified opinion on regularity; and
 - An unqualified opinion on other prescribed matters.
15. We are also satisfied that there were no matters which we are required to report by exception.

Good administrative processes were in place

16. We received the unaudited annual report and accounts and supporting working papers for the majority of expected areas in line with our agreed audit timetable. Our thanks go to staff at NHS Lothian for their assistance with our work.
17. The annual report and accounts were submitted to the Scottish Government and Auditor General for Scotland by the 30 June 2019 deadline.

Our assessment of risks of material misstatement

18. The assessed risks of material misstatement described in Exhibit 2 are those that had the greatest effect on our audit strategy, the allocation of resources in the audit and directing the efforts of the audit team. Our audit procedures relating to these matters were designed in the context of our audit of the annual report and accounts as a whole, and not to express an opinion on individual accounts or disclosures. Our opinion on the annual report and accounts is not modified with respect to any of the risks described in Exhibit 2.



Exhibit 2 – Our assessment of risks of material misstatement and how the scope of our audit responded to those risks

1. Management override

In any organisation, there exists a risk that management has the ability to process transactions or make adjustments to the financial records outside the normal financial control processes. Such issues could lead to a material misstatement in the financial statements. This is treated as a presumed risk area in accordance with ISA (UK) 240 - *The auditor's responsibilities relating to fraud in an audit of financial statements*.

Excerpt from the 2018/19 External Audit Plan

19. We have not identified any indication of management override in the year. We have reviewed the board's accounting records and obtained evidence to ensure that transactions outside normal processes were valid and accounted for correctly. We have also reviewed management estimates and the journal entries processed in the period and around the year end. We did not identify any areas of bias in key judgements made by management and judgements were consistent with prior years.

2. Revenue recognition

Under ISA (UK) 240- *The auditor's responsibilities relating to fraud in an audit of financial statements* there is a presumed risk of fraud in relation to revenue recognition. The presumption is that the board could adopt accounting policies or recognise revenue transactions in such a way as to lead to a material misstatement in the reported financial position.

Excerpt from the 2018/19 External Audit Plan

20. At the planning stage of our audit, we reported that we did not consider there to be a significant risk of fraud in relation to revenue recognition from government resourcing streams. For all non-government income, we have evaluated the type and extent of revenue transactions and reviewed the controls in place over revenue accounting. We have considered the board's key revenue transactions and carried out testing to confirm that the board's revenue recognition policy is appropriate and has been applied consistently throughout the year. We have gained reasonable and appropriate assurance that this area is free from material misstatement, but we have raised a management action point to revise the current approach to how research and development income and expenditure is matched in year (an area which is not material).

Action Plan Point 1



3. Risk of fraud in the recognition of expenditure

The FRC published a revised Practice Note 10 which applies to the audit of financial statements of public sector bodies in the UK, for periods commencing after June 2016. The Practice Note recognises that most public sector bodies are net spending bodies and notes that there is an increased risk of material misstatement due to improper recognition of expenditure. In line with the practice note, our presumption is that the board could adopt accounting policies or recognise expenditure in a way that materially misstates the board's financial performance.

Excerpt from the 2018/19 External Audit Plan

21. We have evaluated each type of expenditure transaction and documented our conclusions. We gained reasonable assurance over the completeness and occurrence of expenditure and are satisfied that expenditure is fairly stated in the annual accounts. To inform our conclusion we carried out testing to confirm that the board's policy for recognising expenditure is appropriate and has been applied consistently throughout the year.

4. Capital transactions

The board holds a significant level of high value estate. The board values its assets on a five year cycle, with an element of the estate being subject to valuation each year. In addition, the Board expects to make significant capital additions during 2018/19. Additions are expected through traditional procurement routes as well as through Hub projects. The board's Capital Resource Limit for 2018/19 is £53.263million and it is expected that this will be fully utilised.

Given the value of assets held, and the scale of the in-year capital transactions expected, any misstatement in the accounting for assets could potentially result in a material misstatement in the financial statements.

Excerpt from the 2018/19 External Audit Plan

22. We have reviewed capital transactions to ensure they that they have been accounted for in line with the Government Financial Reporting Manual ('the FReM') and the board's accounting policies. We have gained assurance over the completeness and accuracy of these transactions and are satisfied that the carrying value of the board's estate in the financial statements is materially correct.



5. PFI and related assets

The board has a range of legacy facilities which were delivered through the Public-Private Partnerships (PPP) / Private Finance Initiatives (PFI), including The Royal Infirmary of Edinburgh, Midlothian Community Hospital, East Lothian Community Hospital, Ellens Glen and Findlay House. The cumulative estimated base capital value of these agreements is in excess of £200million.

During 2017/18 phases 1 & 2 of the East Lothian Community Hospital project were brought into operation in addition to three other PFI projects at a capital value of £32million. The board expects further Hub developments in 2018/19.

In practice, the accounting arrangements for the REH development, and the other Hub developments, are generally consistent with those used for the board’s legacy PPP/PFI assets. Due to the complexity of accounting and the high value of the transactions, there is a risk that the board’s financial statements do not show the correct accounting entries and related commitments, and that the unitary payments in relation to these facilities are not correctly accounted for.

Excerpt from the 2018/19 External Audit Plan

- 23. We have reviewed the board’s PPP/PFI/NPD accounting and related commitment disclosures against the requirements of the FReM, the Manual and against the supporting contracts. We have also reviewed relevant aspects of the transactions against the NHS Scotland Capital Accounting Manual. No exceptions were identified.
- 24. During 2018-19, practical completion of the Royal Hospital for Children and Young People, Department of Clinical Neurosciences and Child and Adolescent Mental Health Services was achieved. From the range of work performed, we are satisfied that the various accounting entries present a true and fair review of these assets and related commitments.

Our application of materiality

- 25. The assessment of what is material is a matter of professional judgement and involves considering both the amount and the nature of the misstatement. This means that different materiality levels will be applied to different elements of the financial statements.
- 26. Our initial assessment of materiality for the financial statements of the board and group was £23.4million. On receipt of the 2018/19 draft accounts, we reassessed materiality and maintained this threshold. We consider that our updated assessment has remained appropriate throughout our audit.
- 27. Our assessment of materiality is set with reference to the revenue resource limit. We consider this to be the principal consideration for the users of the financial statements when assessing financial performance.

aggregate of the uncorrected and undetected misstatements exceed materiality for the annual accounts overall.

- 29. We set a performance (testing) materiality for each area of work (based on a risk assessment for the area). We perform audit procedures on all transactions and balances that exceed our performance materiality. This means that we perform a greater level of testing on the areas deemed to be of more significant risk of material misstatement. Performance testing thresholds used are set out in the table below:

	Area risk assessment		
	High	Medium	Low
Performance materiality	9.3	12.8	17.5

Performance materiality

- 28. Performance materiality is the amount set by the auditor at less than overall materiality for the annual accounts as a whole, to reduce to an appropriately low level the probability that the

- 30. We agreed with the Audit and Risk Committee that we would report on all material corrected misstatements, uncorrected misstatements with a value in excess of £250,000, as well as other misstatements below that threshold which, in our view, warranted reporting on qualitative grounds.



Group accounts

31. NHS Lothian consolidates the four integration joint boards and the Edinburgh and Lothian Health Foundation.
32. We reviewed the consolidation process in 2018/19 and concluded that group bodies had been correctly included in the group accounts of the board.

Audit differences

33. We are pleased to report that there were no material adjustments to the unaudited annual accounts. We identified some disclosure and presentational adjustments during our audit, which have been reflected in the final set of accounts.
34. We also identified two unadjusted errors which are not considered material to the annual accounts. These relate to (i) adjustment of £1.06m between lines of receivables, and (ii) a national issue with respect to the calculation of the CNORIS provision which impacts NHS Lothian by £1.04m. These are set out further in Appendix 3. These have been reported to the Director of Finance and Audit & Risk Committee and are included as an appendix to the letter of representation and this report. The letter covers a number of issues and we have requested that it be presented to us at the date of signing the annual accounts.

An overview of the scope of our audit

35. The scope of our audit was detailed in our External Audit Plan, which was presented to the Audit and Risk Committee in February 2019. The plan explained that we follow a risk-based approach to audit planning that reflects our overall assessment of the relevant risks that apply to the board. This ensures that our audit focuses on the areas of highest risk. Planning is a continuous process and our audit plan is subject to review during the course of the audit to take account of developments that arise.
36. At the planning stage we identified the significant risks that had the greatest effect on our audit. Audit procedures were then designed to mitigate these risks.
37. Our standard audit approach is based on performing a review of the key financial systems in place, substantive tests and detailed analytical procedures. Tailored audit procedures, including those designed to address significant risks, were completed by the audit fieldwork team and the results were reviewed by the audit manager and audit partner. In performing our work we have

applied the concept of materiality, which is explained earlier in this report.

Other matters identified during our audit

38. During the course of our audit we noted the following:

Other information in the annual report and accounts

39. “Other information” in the annual report and accounts comprises any information other than the financial statements and our independent auditor’s report. We do not express any form of assurance conclusion on the “other information” except as specifically stated below. Overall, we found this narrative compliant with requirements. There was slight delay and piecemeal receipt of this information. More generally, we will work in collaboration with NHS Lothian management to explore any opportunities for continuous improvement in the length, flow and focus of the narrative sections in 2019/20 and beyond (considering Audit Scotland, Financial Reporting Council and other good practice guidance).

The performance report

40. The performance report provides information on the entity, its main objectives and strategies and the principal risks that it faces. It comprises an overview of the organisation and a detailed summary of how the entity measures performance.
41. We have concluded that the performance report has been prepared in accordance with directions from Scottish Ministers and is consistent with the financial statements.

The accountability report

42. The accountability report is required in order to meet key parliamentary accountability requirements and comprises three sections: a corporate governance report (including the governance statement), a remuneration and staff report; and a parliamentary accountability report.

Governance statement

43. The coverage of the governance statement is in line with our expectations.
44. We have concluded that the governance statement has been prepared in accordance with the National Health Service (Scotland) Act 1978 and directions from Scottish Ministers and is consistent with the financial statements.



Remuneration and staff report

45. We have concluded that the audited part of the remuneration and staff report has been prepared in accordance with the National Health Service (Scotland) Act 1978 and directions from Scottish Ministers.

Regularity

46. We have planned and performed our audit recognising that non-compliance with statute or regulations may materially impact on the annual report and accounts. We did not identify any instances of irregular activity.

Looking forward – IFRS 16 Leases

47. IFRS 16 *Leases* will be effective from 1 April 2020. This will lead to a substantial change in accounting practice for lessees where the current distinction between operating and finance leases will be removed. Instead, it requires that a lessee recognises assets and liabilities for all leases with a term of more than 12 months unless the underlying asset is of low value. A lessee will recognise a right-of-use asset representing its right to use the underlying leased property, and a lease liability representing the lessee's obligation to pay for that right.
48. There are new requirements for measurement of the lease liability, which will initially be measured at the present value of the lease payments payable over the lease term but may rise to reflect any reassessment or lease modifications, or revised lease payments.
49. Board finance staff have attended a number of recent events at which the anticipated changes resulting from adoption of the standard have been discussed. The board has also commenced work to quantify the financial impact of the change in accounting standard. This will be a key area of focus for our 2019/20 audit.

Qualitative aspects of accounting practices and financial reporting

50. During the course of our audit, we consider the qualitative aspects of the financial reporting process, including items that have a significant impact on the relevance, reliability, comparability, understandability and materiality of the information provided by the annual accounts. The following observations have been made:



Qualitative aspect considered	Audit conclusion
The appropriateness of the accounting policies used.	The accounting policies, which are disclosed in the annual accounts, are in line with the NHS Accounts Manual and are considered appropriate.
The timing of the transactions and the period in which they are recorded.	We did not identify any concerns over the timing of transactions or the period in which they were recognised.
The appropriateness of the accounting estimates and judgements used.	We are satisfied with the appropriateness of the material accounting estimates and judgements used in the preparation of the annual accounts. Significant estimates have been made in relation to the valuation of liabilities related to the board's membership of the Clinical Negligence and Other Risks Indemnity Scheme (CNORIS); property valuations and asset depreciation rates. Where appropriate, these estimates have been informed by advice from qualified, independent experts. We evaluated the competence, objectivity and capability of management experts in line with the requirements of ISA (UK) 500 and concluded that use of the experts' advice is appropriate.
The appropriateness of the going concern assumption	We have reviewed the detailed financial forecasts for 2019/20. Our understanding of the legislative framework and activities undertaken provides us with sufficient assurance that the board's activities will continue to operate for at least 12 months from the signing date.
The potential effect on the annual accounts of any uncertainties, including significant risks and related disclosures that are required.	We have not identified any uncertainties, including any significant risk or required disclosures, which should be included in the annual accounts beyond those already made.
The extent to which the annual accounts have been affected by unusual transactions during the period and the extent that these transactions are separately disclosed.	From the testing performed, we identified no significant unusual transactions in the period to report here.
Apparent misstatements in the annual report or material inconsistencies with the financial statements.	The annual report contains no material misstatements or inconsistencies with the financial statements.
Any significant annual accounts disclosures to bring to your attention.	There are no significant annual accounts disclosures that we consider should be brought to your attention. All the disclosures required by relevant legislation and applicable accounting standards have been made appropriately.
Disagreement over any accounting treatment or annual accounts disclosure.	While disclosure and presentational adjustments were made during the audit there was no material disagreement during the course of the audit over any accounting treatment or disclosure.
Difficulties encountered in the audit.	There were no significant difficulties encountered during the audit.



4. Financial sustainability

Financial sustainability looks forward to the medium and longer term to consider whether the board is planning effectively to continue to deliver its services and the way in which they should be delivered.



Work continues on developing a medium to long term financial strategy, including working with regional partners, but NHS Lothian needs clearer plans for where and how savings will be delivered. The new Lothian Integration Care Forum will be an important mechanism to take this challenge forward.

The 2019/20 financial plan outlines a financial gap of £26million, after taking into account financial recovery plans of £25million. 12 risks have been identified as high impact and likelihood on NHS Lothian's ability to continue to meet its financial target in 2019/20, reflecting the increasing financial challenges faced by the board.



Significant audit risk

- 51. Our audit plan identified a significant risk in relation to financial sustainability under our wider scope responsibilities

Financial sustainability

In April 2018, the Board and Finance and Resources Committee considered a Financial Plan to support the Annual Operational Plan. The paper outlined a remaining financial gap of £21.4 million. Our work on the financial projections from 2018/19 onwards notes ongoing challenges in achieving the recurring savings targets and medium to longer term financial stability.

NHS Lothian has an ongoing challenge relating to the impact of demography as funding has not kept pace with population changes. Since the NRAC formula was introduced in 2009, NHS Lothian’s actual allocation has fallen considerably below the target level of funding. While in 2018/19 all boards, including NHS Lothian, have moved to within 0.8% of NRAC parity, NHS Lothian has estimated that the annual value of this shortfall will be £14m at the end of 2018/19.

Excerpt from the 2018/19 External Audit Plan

- 52. We reviewed NHS Lothian’s achievement of the outturn position as part of our work on financial management and the financial statements. This work has highlighted that the board continues to face challenges in achieving savings targets, including recurrent savings. The board achieved an underspend in 2018/19 due to a number of one-off savings and careful financial management during the year.
- 53. The Financial Plan presented to the Finance and Resources Committee in March 2019 sets out a financial gap of £25.985million for 2019/20. Our work on the financial projections from 2019/20 onwards is set out below and highlights the ever increasing challenges the board faces in achieving financial sustainability, while maintaining an appropriate level of performance. We have concluded that financial sustainability continues to be a significant risk for 2019-20 onwards, with difficult decisions forced in optimising the balance between financial and non-financial performance metrics.

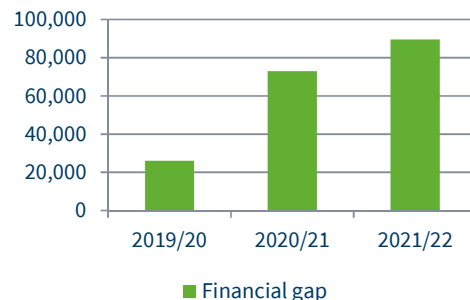
Health and social care medium term financial framework

- 54. In October 2018, the Scottish Government published its Health and Social Care Medium Term Financial Framework. The Framework is supported by financial modelling and highlights the necessity for not only additional investment but continued reform of the Health and Social Care system. It is anticipated that the development of the Framework will provide NHS Boards with more information and funding assurances in order to develop longer term financial and reform plans.
- 55. The framework was supported by a statement in Parliament by the Cabinet Secretary for Health and Sport. The Cabinet Secretary confirmed that a 3-year deal would be offered to support all NHS Territorial Boards to move to a level position through the removal of outstanding brokerage and the creation of a new 3-year financial planning arrangement.

Financial projections

- 56. Under the revised financial framework, all NHS Boards are required to submit a three-year financial plan. The board’s 2019/20 Operational Plan outlines a financial gap of £25.985million after taking into account financial recovery actions of £25.240million, with notably increasing gaps in years thereafter.

Exhibit 3: Future Financial Gap (£'000s)



Source: NHS Lothian 2019/20 Operational Plan



57. NHS Lothian's 2019/20 financial gap is largely in line with those identified in the previous three years. Each year, the board has achieved a breakeven position however this is thanks to an increasing reliance on one-off savings.
58. Delivery of savings is a fundamental component of NHS Lothian's ability to deliver financial balance. In 2018-19, the board did not achieve all identified financial recovery plans and in response to this issue, additional financial review meetings with Business Units have been planned to focus on savings delivery.
59. Specific Business Units, based on risk and financial projections, will be asked to report back to the Sustainability and Value Group (chaired by the Director of Finance) to examine the Business Units' approach to financial sustainability and what opportunities there may be to improve the financial position. Business Units will also be invited to present to the Finance and Resources Committee in the coming year to update on progress.
60. In line with previous financial years, the Finance and Resources Committee has only been able to take limited assurance that the board will achieve financial balance in 2019-20. At this stage, there are no clear plans to close the financial gap on a recurring basis.
62. The assumptions underpin the operational plan and include an assessment of risk. From our review of the financial plan and presentations made to Finance and Resources Committee, it is positive to see scenario planning has been used to understand the implications of movements in the assumptions and to stress test financial sensitivities.
63. To complete the scenario planning, all Business Units were asked to consider their optimistic, realistic and pessimistic financial plans. Plans were collated and reviewed centrally to ensure there was consistency in overall application of key assumptions. The consolidated position showed a financial gap in each scenario ranging from £14.1million to £48million.
64. In line with previous submissions, boards have been asked to identify the key risks to delivering their financial plan. NHS Lothian has identified a total of 20 risks to delivering their financial plan split between three categories:
- 12 High risk (2018/19: 6)
 - 5 medium (2018/19: 5)
 - 3 low risk (2018/19: 1)

Key assumptions and risks in the Financial Plan

61. The assumptions included within the 2019/20 Financial Operational Plan are largely consistent with prior years. The board has highlighted the key issues that may impact on the achievement of a balanced financial outturn including:
- NHS Lothian remains behind NHS Scotland Resource Allocation Committee ('NRAC') parity relative to Scotland by up to an estimated £15million. The board is continuing to highlight its view on the ongoing inequity within overall allocations;
 - While the plan shows financial gaps in each year, at this stage, the board does not intend to request brokerage;
 - The plan assumes that costs associated with Waiting times improvement to be matched by Scottish Government funding; and
 - There are ambitions to further develop unscheduled care which have not been taken into account within the financial plan.

Exhibit 4: Significant Risks

Integration	Delayed discharge	Winter Costs
Changes to Pay T&Cs	Scottish Government Allocations	Capital Programme
Waiting Times	Brexit	Mental Health
New Ultra-Orphan Pathways	Safe staffing	Acute Medicines

65. The increase in the number and significance of the risks to the financial plan reflects the growing pressures on the board's financial sustainability. New risk areas for 2019/20 generally relate to Scottish Government priorities, including Mental Health and Waiting times.
66. In line with prior years, funding levels for additional cost pressures in relation to pay consequentials in 2019/20 have not yet been confirmed by the Scottish Government and will apply across all NHS Boards in Scotland. There remains further uncertainty around



whether these costs will be funded in full in future years.

67. The achievement of efficiency savings plans has also been recognised as a risk area in delivery of the financial plan. NHS Lothian has encountered challenges in delivering the full savings targets in recent financial years. The 2019/20 financial plan includes a total of £25.240million in identified financial recovery plans, however in future financial years identified savings are currently less than £5million per annum.
68. The Health and social care medium term financial framework should move boards towards preparing more detailed medium term financial plans. However this will take time to be embedded in financial planning cycles as is demonstrated at NHS Lothian by the increasing financial gaps with limited plans for how the gaps will close.

Financial Strategy

69. In March 2018, a financial strategy was presented to the Finance and Resources Committee. A four tiered approach to achieving financial sustainability was outlined which recognises the limits that NHS Lothian can achieve on its own.

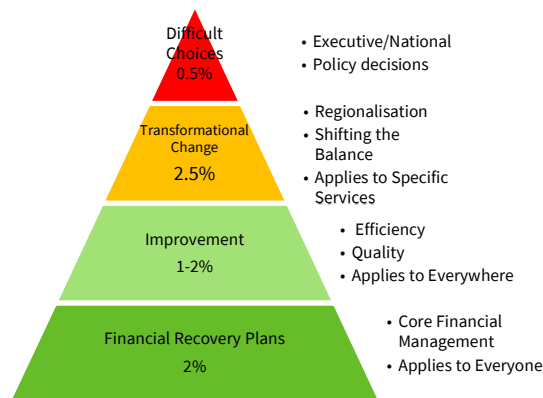


Exhibit 5: NHS Lothian identified a four tiered approach to achieving sustainability

70. During 2018/19, this work has been further developed through the collection of data and cost modelling to inform the financial strategy. The Finance and Resources Committee agreed a number of key financial strategy principles, however it was agreed that the Committee would benefit from a dedicated workshop to consider the strategy.

71. While the board has outlined an overall strategic direction and framework for achieving financial sustainability, a detailed financial strategy is not yet in place.

Prior year Action Plan Point 1

Strategic and Operational Planning

72. NHS Lothian's Strategic Plan *Our Health Our Care Our Future* recognises that, against a background of rising quality aspirations, major demographic challenges and resource constraints, delivery will not be achieved without radical change, accelerating innovation and changing mindsets.
73. The 2019-20 annual operational plan outlines the delivery of expected levels of operational performance, with a focus on supporting the delivery of national priorities associated with improvement in scheduled and unscheduled care, access to mental health and well-being services, alongside greater progress and pace in the integration of Health and Social Care to deliver a shift in the balance of care from hospital to community services.
74. The plan focuses primarily on how NHS Lothian anticipates delivering performance targets while achieving financial balance. The plan also includes an overview of the approach for developing workforce and various improvement programmes.
75. Key areas of focus for 2019/20 include supporting Scottish Government priorities such as Mental Health and the Waiting Times Improvement Plan.

Working in Partnership

76. There is an increasing requirement for boards to work collaboratively across their geographical regions, including with integration authorities, other health boards, local authorities and private sector partners. This is a key feature of NHS Lothian's 2019/20 Operational Plan which has a focus on services delivered with Integration Authorities and also work performed on the East Region Plans.

Integration Authorities

77. In April 2019, the first meeting of the Lothian Integration Care Forum took place with the group meeting bi-monthly moving forward. The membership of the Group includes the NHS Lothian Chair and Chief Executive, Four Integration Joint Board Chairs and Vice Chairs, Chief Officer Acute Services, Chief Officer IJBs and NHS Lothian Director of Strategic Planning.



78. For 2019-20, the focus of the Forum will be to consider services such as unscheduled care, emergency departments, community hospitals and inpatient mental health services. Key aims agreed at its first meeting include to:
- Create an infrastructure for joint planning;
 - Improve relationships and understanding, including the different approaches, cultures and challenges between IJBs, Councils and NHS Lothian;
 - Work towards medium and long-term joint financial planning; and
 - Ensure that the delivery of care in Lothian is agreed in collaboration with partners; allowing more efficient strategic working and improvements to transpire that take into account the needs of all organisations.
79. The Forum will help enable the four Lothian Integration Joint Boards and NHS Lothian to discuss progress and develop proposals set out in the Ministerial Strategic Group for Health and Community Care Report¹.
80. In our view, the introduction of the Forum is a positive step to promote increased collaboration and a coherent approach to delivering health care services across the Lothians. We endorse this development, given the need for NHS Lothian and partners to move to a more strategic, long term and impact/outcome focussed approach. We will review the operations and effectiveness of the Forum as part of our 2019/20 audit.
- Partnership for the prevention and reversal of Type 2 diabetes
 - Radiology
 - Innovation and Digital developments
 - Cancer services

East Region Plans

81. For many years, NHS Lothian has worked collaboratively with boards across the south east of Scotland. Following the publication of the National Health and Social Care Delivery Plan, the region augmented its programme of work to include a wider range of services, assessing potential opportunities in supporting delivery against 5 agreed regional objectives.
82. Included within the 2019/20 Operational Plan are a number of priorities being progressed in partnership, such as:
- Laboratory Medicine
 - Ophthalmology
 - Regional Trauma Network

¹ <https://www.gov.scot/publications/ministerial-strategic-group-health-community-care-review-progress-integration-health-social-care-final-report/>



5. Financial management

Financial management is concerned with financial capacity, sound budgetary processes, and whether the control environment and internal controls are operating effectively.



NHS Lothian has generally effective arrangements in place for financial management and the use of resources, albeit it continues to face significant resource pressures.

The board met its key financial targets once again in 2018/19, delivering an underspend against its revenue resource limit and a breakeven position against its capital resource limit.

NHS Lothian did not achieve all planned savings and the board's reliance on non-recurring savings increased in the year.



Financial performance

83. All boards have to work within the resource limits and cash requirements set by the Scottish Government.
84. The board achieved a saving against its RRL of £410,000, which represents an underspend of 0.025%. This surplus is effectively in line with the breakeven position outlined within the 2018/19 Operational Plan.

Exhibit 6: Performance against resource limits

Financial target	Limit £000	Actual £000	Variance £000	Target achieved?
Core revenue resource limit	1,535,514	1,535,104	410	Yes
Non-core revenue resource limit	93,525	93,525	-	Yes
Core Capital resource limit	54,377	54,377	-	Yes
Non-core Capital resource limit	35,149	35,149	-	Yes
Cash requirement	1,724,008	1,724,008	-	Yes

Delivering financial balance

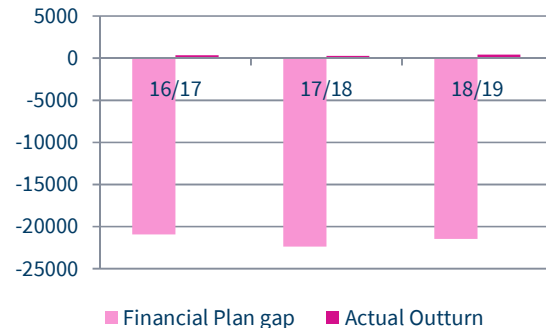
85. The 2018/19 Operational Plan outlined an expected financial gap of £21.4million against a full year recurring expenditure budget of £1.57billion as illustrated below:

2018/19 Budget (£'000)	Limit £000
Full year recurring Expenditure Budget	1,571,621
Baseline pressures	(53,945)
Projected Expenditure uplifts and commitments	(78,776)
Additional resources	83,575
Financial Recovery Plans	27,671
Financial Plan Gap	(21,475)

86. The financial gap represents 1.5% of the full year recurring budget. In line with previous years, limited assurance was given to the Board and Finance and Resources Committee on achieving a breakeven outturn during early 2018/19. By September 2018 moderate assurance was provided, with significant assurance only being provided in March 2019.
87. NHS Lothian has not been able to set a breakeven budget for the last three financial years. Despite the

challenging financial position, NHS Lothian has continued to deliver against financial targets in each year.

Exhibit 7: Analysis of outturn against financial plan gaps



Source: Annual audit reports

88. NHS Lothian has been able to deliver financial targets recurrently in the context of increasing financial pressures from the likes of pay changes, growing demographic challenges in Lothian, strategic investment and the implementation of national policies.
89. This has been achieved partly through one-off benefits such as the delayed opening of RHCYP, CNORIS contributions and depreciation. Financial balance was achieved by:



Description	(£'000)
2018/19 Financial plan gap	(21,475)
Improvement in operational position	14,355
Increase in availability of reserves in financial plan	727
Depreciation benefit	677
Slippage in RHSC investment	2,000
CNORIS benefit	1,866
Benefits from prior year accounting adjustments	1,000
In year corporate commitments net of benefits	(840)
2018/19 Year end outturn	410

90. While NHS Lothian achieved an overall underspend against the RRL in 2018/19, the baseline operational overspend was £13.1million which was offset by the net release of reserves flexibility of £13.5million.
91. The board has recognised the significant risk to the achievement of breakeven in relation to health component of the four Integration Joint Boards (IJBs). All of the IJBs achieved a breakeven position but this was only possible as a result of the distribution of non-recurring corporate flexibility.

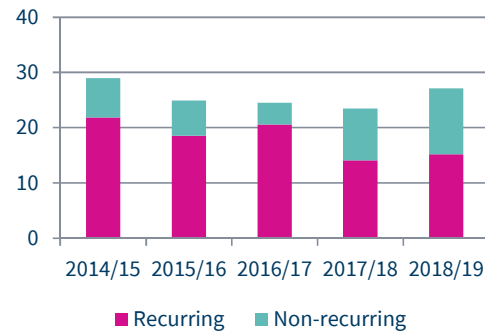
Efficiency savings

NHS Lothian did not deliver all planned savings and experienced challenges in delivering savings on a recurring basis

92. NHS Lothian's 2018/19 Operational Plan outlined a plan to deliver £29.467million of savings. £27.063 million was actually delivered, leaving a shortfall of £2.404million.
93. The amount of recurring savings achieved, as a percentage of total savings, has continued to decrease in 2018/19 by 6% (although the absolute value of recurring savings has increased). Exhibit 8

outlines how NHS Lothian has become increasingly reliant on non-recurring savings.

Exhibit 8: Historical analysis of savings achieved (£'000s)



Source: NHS Lothian Financial Monitoring reports to Finance and Resources Committee

94. Reliance on non-recurring savings places additional pressures on the future financial position of the board and therefore requires careful management.
95. Traditionally, NHS Lothian does not perform a financial performance review in quarter 4. However, due to the shortfall in savings achieved, an additional review was initiated with the intention to challenge and support individual business units to deliver an increased level of savings to help reduce the financial gap during 2019/20.

Capital programme was delivered in full

96. The Property and Asset Management Programme underpins the vision for the estate based on the four 'stakes' within the Board's Strategic Plan. NHS Lothian broke even against the CRL set in 2018/19 (£89.526million). Key developments include:
- Practical completion of the Royal Hospital for Children and Young People, Department of Clinical Neurosciences and Child and Adolescent Mental Health Services was achieved in February 2019. Commissioning work is progressing and the facility is planned to be operational from July 2019.
 - Construction work continues on the new East Lothian Community Hospital planned for completion in early 2020.
 - Partnership developments include the development of an Equally Safe Multi-Agency Centre, with works beginning in 2019. Projects for primary care facilities include Cockenzie, East Lothian and East Calder.



Budget monitoring and control

97. As part of our audit we considered NHS Lothian's system of budgetary control and financial management and did not identify any significant deficiencies, whilst acknowledging the challenging financial situation and the need for the board to be flexible in how it ultimately delivers financial balance. Comprehensive financial regulations and policies are in place which are subject to regular review and are available on the board's Finance Online intranet site.
98. Financial monitoring reports are submitted to all meetings of the Board, the Finance and Resources Committee, and Corporate Management Team. The reports include forecasts to the year end and explanations of key movements in the year.
99. During the year, the Finance and Resources Committee held a development session which took account of the non-executive checklist included within Audit Scotland's NHS in Scotland 2018 report and also linked in to the whole system of governance review through the NHS Scotland Blueprint for Good Governance.
100. The output from the self-assessment was an Action Plan for the Committee which includes development of online induction and training material for all Board members (including financial matters). The aim will be to support members in providing appropriate scrutiny of financial issues through a greater understanding of NHS Scotland financial terminology, technical framework and risks.

Prior Year Action Plan Point 2

Prevention and detection of fraud and irregularity

101. Our audit was planned to provide a reasonable expectation of detecting material misstatements in the financial statements resulting from fraud and irregularity. We found the board's arrangements for the prevention and detection of fraud and other irregularities to be adequate and appropriate.
102. The Fraud Liaison Officer provides an annual report to the Audit and Risk Committee outlining any cases that have been referred to Counter Fraud Services, and the progress of any investigations. The Audit and Risk Committee also receive updates on current counter fraud activity from the Fraud Liaison Officer at each meeting.

National Fraud Initiative

103. The National Fraud Initiative (NFI) is a counter-fraud exercise co-ordinated by Audit Scotland working

together with a range of Scottish public bodies to identify fraud and error.

104. Participating bodies were required to submit data in October 2018 and received matches for investigation in January 2019. Investigation work should be largely complete by 30 September 2019 and the results recorded on the NFI system.
105. We reviewed NHS Lothian's participation in the NFI scheme in May 2019, including an assessment of progress in addressing identified matches. We are satisfied that NHS Lothian is appropriately prioritising matches and the majority of matches have either been closed or are being actively investigated.
106. To date, results of the NFI investigation have not identified any frauds, errors or other such observations. Based on our review, we have concluded that NFI arrangements are satisfactory and NHS Lothian is adequately prepared to meet the September 2019 deadline for the 2018/19 NFI exercise.

Standards of conduct

107. In our opinion NHS Lothian's arrangements in relation to standards of conduct and the prevention and detection of bribery and corruption are adequate. Our conclusion has been informed by a review of the arrangements for adopting and reviewing standing orders, financial instructions and scheme of delegation and for complying with national and local codes of conduct. We have also considered compliance with the regulatory guidance produced by the SGHSCD throughout the year.

Systems of internal control

108. We have evaluated the Board's key financial systems and internal financial controls to determine whether they are adequate to prevent material misstatements in the annual accounts. Our approach has included documenting the key internal financial controls and performing walkthroughs to confirm that they are operating as intended.
109. We did not identify any material weaknesses in the board's accounting and internal control systems.

Internal audit

110. An effective internal audit service is an important element of NHS Lothian's governance arrangements and supports the system of internal control. The NHS Lothian internal audit service is provided through a co-sourced arrangement with Grant Thornton. The service operates in line with Public Sector Internal Audit Standards. During our audit we



considered the work of internal audit wherever possible to avoid duplication of effort and make the most efficient use of NHS Lothian's audit resource.



6. Governance and transparency

Governance and transparency is concerned with the adequacy of governance arrangements, leadership and decision making, and transparent reporting of financial and performance information.



Our audit planning identified a significant risk in relation to the board's response to the alleged mismanagement of waiting times reporting. We have concluded that governance arrangements in place to support the programme are extensive and appropriate, but the focus needs to move to agreeing a timetable to return to business as usual.

The board performed a self-assessment against the Blueprint for Good Governance demonstrating a commitment to continuously improving governance arrangements.



Significant audit risk

111. Our audit plan identified a significant risk in relation to governance and transparency under our wider scope responsibilities.

External Review of Waiting Times

Our Audit Plan identified a risk relating to an investigation into specific concerns raised under the Board's whistleblowing arrangements about the alleged mismanagement of waiting times reporting. The report noted that NHS Lothian was not consistently complying with the guidance set out in the A&E Data Recording reference manual (2013), the Scottish Government clarification guidance on ambulance waits (2015) and the board's own standard operating procedures.

The Cabinet Secretary for Health and Wellbeing commissioned the Royal College of Physicians of Edinburgh to undertake an investigation into the concerns, which was published in June 2018. As a result of the internal and external reviews over 60 actions have been identified to address concerns raised.

Excerpt from the 2018/19 External Audit Plan

112. We are satisfied that the board has responded clearly and openly to the issues raised, as part of an extensive programme led by senior management and regularly scrutinised by non-executive committees. Work continues on ensuring that all actions identified in the reports and subsequent programme plan are addressed and implemented, as discussed further below.

113. NHS Lothian first became aware of concerns relating to the culture and management of the 4 hour emergency care standard in October 2017. It was agreed that there was ambiguity in the NHS Lothian 4 hour emergency care standard operating procedure (SOP) and that this required to be reviewed and revised.
114. The key catalyst for this occurred on 11 October 2017, when the Chief Executive received an email containing allegations of misconduct in relation to the management of the four hour emergency care standard in the Emergency Department at St John's hospital. An investigation was launched in compliance with the Board's whistleblowing arrangements, led by the Board's Non-Executive Whistleblowing champion.
115. The board's internal auditors then carried out an investigation, with oversight from a non-executive Board member. The scope of the investigation was extended to all four emergency departments.
116. The internal auditor's report was presented to the Board in December 2017 and highlighted a number of findings and contributing factors which indicated that NHS Lothian was not consistently complying with the guidance set out in the A&E Data Recording reference manual (2013), the Scottish Government clarification guidance on ambulance waits (2015) and the board's own standard operating procedures.
117. The report set out an action plan to address procedural, cultural and governance issues and was accepted in full by the Board.
118. On 26 June 2018, the Scottish Government published the independent report from the Academy of Royal Medical Colleges on the reporting of A&E waiting times against the 4 Hour Emergency Access Standard. The report underpins a range of findings and actions from the earlier reviews and identifies a number of additional, prioritized recommendations which will be used to inform and enhance the existing improvement plan.
119. The main actions being taken to address the recommendations within the report fall under four themes:
- Governance
 - Patient Safety and Quality of Care
 - Culture
 - Recording of 4 Hour Emergency Access Standard and Unscheduled Care Data
120. A full programme plan is in place which identifies key tasks, the task owner and the start and end dates for key tasks. Where actions have been closed, the programme team ensures that there is appropriate evidence in place to support the closure of the action.



121. A formal Programme Delivery Group was established, chaired by the Deputy Chief Executive. This group receives scrutiny and challenge from the Programme Oversight Group. The Audit and Risk Committee has been responsible for exercising overall governance oversight of the measures taken. We have confirmed that both the Audit and Risk Committee and the Board have received comprehensive updates throughout the year.
122. In February 2019, the Board received the delivery report summarising work undertaken in Phase 1 (September to December 2018) and the actions to be taken during Phase 2. Under each theme, the following information is shown:
- What the external investigation report outlined;
 - What the intended outcomes are;
 - Progress to date; and
 - What is still to come.
123. An external support team was appointed by the Scottish Government in Summer 2018 to support the board in addressing the issues identified. In January 2019, the team formally reduced the level of support provided.
124. Formal 'touch points' have been agreed for follow up with the Scottish Government and external support team with the first of these taking place on 26 March 2019 and the second scheduled for June 2019. These take the form of detailed deep dives into performance data; walks round the adult acute sites and feedback from staff.
125. The board has been able to make significant progress in addressing the original whistleblower's concerns, the internal audit investigation and the independent report. This has involved tackling a range of issues, including those linked to wider factors not explicitly raised in the original concerns given the integrated nature of the system. During 2019/20, focus needs to turn to agreeing an approach to returning activities to business as usual rather than a specific, ring-fenced area of special activity and scrutiny.
127. NHS Lothian has continued to assess the overall impact that Brexit may have on each of the above key areas. Initially, a short-life working group was established to outline the key risks and practical issues. In January 2019, an organisation-wide resilience response structure was established. This included setting up:
- Small Impact Assessment Groups in areas most likely to be affected;
 - A Brexit Management Group to consider the response options and agree actions as appropriate; and
 - A Brexit Secretariat to develop and maintain an information picture and produce in-house planning assumptions for Brexit, and to support other parts of the assessment and response cycle.
128. The first meeting of the Brexit Management Group took place on 30 January 2019 and the meetings were initially held fortnightly. Following the delay of the Brexit, it was decided that meetings would be held on a less frequent basis.
129. The board recognised early on that workforce is likely to be a key area of impact. The Staff Governance Committee has received regular updates and these are reported to the Board through Committee updates. Brexit was added to the Board's corporate risk register in April 2019 and also features as a significant risk in the financial plan.

Action Plan Point 2

Impact of EU withdrawal

126. Audit Scotland has highlighted EU withdrawal as a significant risk facing public bodies across Scotland. Three streams of potential impact were identified:
- Workforce;
 - Funding; and
 - Regulation.

Key supplier dependency

130. One of the sector risks identified by Audit Scotland for 2018-19 relates to the reliance of public sector organisations on key suppliers. Following the collapse of Carillion, it became apparent that public sector bodies face significant risks where suppliers are experiencing difficult trading conditions.
131. We have evaluated the board's key suppliers and considered what contract management arrangements are in place as part of our work on expenditure. We consider the key area of risk for NHS Lothian to be in relation to capital projects, due to the significant value associated with these. During 2018/19 we have focused particularly on contract arrangements and supplier issues through our work on the Royal Hospital for Children and Young People, Department of Clinical Neurosciences and Child and Adolescent Mental Health Services project.



Openness and transparency

132. Audit Scotland also cited a risk in relation to public sector organisations keeping pace with public expectations on openness and transparency.
133. In our opinion, NHS Lothian demonstrates good practice with respect to openness and transparency in the following ways:
- Board agendas and papers are published on NHS Lothian's website in advance of meetings being held;
 - Committee minutes and updates are available to the public through Board papers;
 - Key publications (including operational plan, results of annual review, annual accounts) are available on NHS Lothian's website; and
 - Up-to-date register of interests are available on NHS Lothian's website.

Blueprint for good governance

134. In February 2019, the Scottish Government published the Blueprint for Good Governance in NHS Scotland. The document draws on best practice to ensure all health boards continuously assess and improve their corporate governance systems.
135. A self-assessment tool was issued by the Scottish Government to allow boards to assess themselves against the Blueprint and was sent to all NHS Scotland board members, who were invited to complete and return by 1 March 2019.
136. The results of the survey were then fed back to the board, collated and distributed in a briefing pack to the Board members in advance of a Board workshop on 21 March 2019. At the workshop, the Board members considered each of the five key functions of governance set out in the Blueprint, namely; Setting the Direction, Holding to Account, Assessing Risk, Engaging Stakeholders, and Influencing Culture.
137. The self-assessment process identified several areas of strength including:
- Financial governance – 100% of respondents agreed that the board safeguards and accounts for public money to ensure resources are used in accordance with Best Value principles exceptionally well or well;
 - The committee structure and system of assurance – in our view, NHS Lothian's system of assurance is particularly strong; and
 - Recent developments in risk management – 91% of respondents agreed the board had

considered and agreed the organisation's risk tolerance exceptionally well or well.

138. While no significant weaknesses were identified, the process did highlight three broad themes where opportunities for continuous improvement exist. These were:
- Sharpening the activities of strategic planning, performance management, and risk management, and improving the linkages between them;
 - Strengthening leadership at all levels, and prioritising leadership resource in key areas;
 - Improving the involvement, engagement and consultation with stakeholders.
139. The results from the self-assessment, including a high level action plan to take forward the three continuous improvement themes, were submitted to the Scottish Government on 29 April 2019.
140. Management will develop a detailed action plan during 2019/20. In addition, the board plans to undertake a paired learning exercise with an NHS Trust in England, which will give opportunities to learn from another organisation.
141. The self-assessment exercise is one part of a programme of work the board has been taking forward to improve its system of governance. Throughout 2018/19, the board has been reviewing its approach to risk management, the role and operation of the Strategic Planning Committee, how to make integration work, as well as the significant programme of work undertaken in relation to the 4 hour emergency access standard (as detailed above).
142. We have confirmed that the board followed the self-assessment process prescribed by the Scottish Government and we have reviewed the survey results. The conclusions drawn from the self-assessment and the workshop are not inconsistent with our own views of the board's governance arrangements. During 2019/20, we will follow progress in developing and implementing the detailed action plan arising from the self-assessment.



7. Value for money

Value for money is concerned with using resources effectively and continually improving services. In this section we report on our audit work as it relates to the board's own reporting of its performance.



An established and appropriate performance management framework is in place at NHS Lothian with improvements being continually made in relation to performance reporting.

Performance has marginally improved on last year, however there has been a deterioration in performance in key waiting times targets. Improvement plans are in place to return performance to target levels.



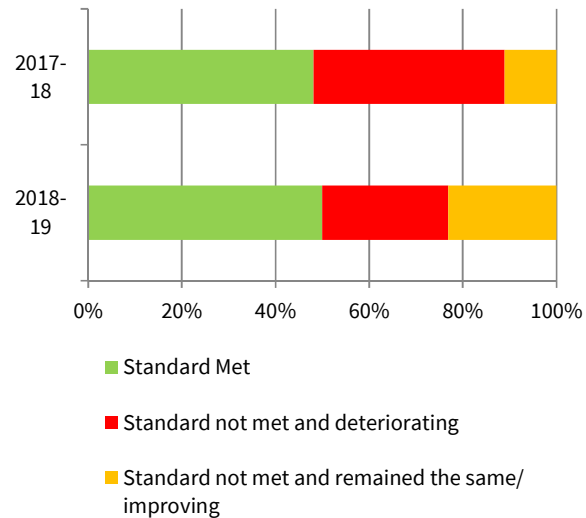
Performance framework

143. The board has a well-established performance management framework in place. Since 2016-17 the Board has delegated scrutiny of performance indicators to relevant committees. A range of 36 indicators are considered by Committees and the Board, including key nationally reported operational plan targets and quality indicators.
144. A summary Quality and Performance Improvement Report, with supporting data pack, is considered at each Board meeting. This report is also one of the key mechanisms the Board uses to report to the public on performance during the financial year.
145. In 2017/18, we noted that the board was considering improvements to the performance reports, including providing Board members with access to a performance dashboard. We considered there to be scope to review the context and coverage of the indicators to better reflect the complexity and priorities of the board and ensure alignment to the Board's strategic priorities. We noted that limited use is made of contextual information, for example to describe the importance of indicators and, where relevant, the reasons for deteriorating performance and priorities for action.
146. During 2018/19, the Chief Quality Officer advised opportunities to consider new ways of presenting data would be considered and that Non Executive Board members' views would be sought through an online survey monkey tool to help identify areas of further improvement.
147. Feedback gathered was used to inform a revised Quality and Performance Improvement report. This resulted in a lighter reporting approach being adopted. The board continues to assess the best means of reporting performance data and is considering working with partners such as Healthcare Improvement Scotland to improve the presentation of performance data.
- Prior Year Action Plan Point 3*
148. The April 2019 performance report highlights that the scrutiny committees have taken no or limited assurance from 53% of relevant indicators. It is therefore difficult for the Board to have overall assurance on the indicators as a complete suite, and the plans and financial implications for improvement.

Performance during 2018-19

149. The board uses the Annual Report and Accounts to report on performance against 29 key indicators included within the Operational Plan. Of the 26 indicators where targets were set the board achieved only 50% in 2018/19 (compared to 48% in 2017-18).

Exhibit 9: The relative performance reported in the Annual Report has improved during 2018-19

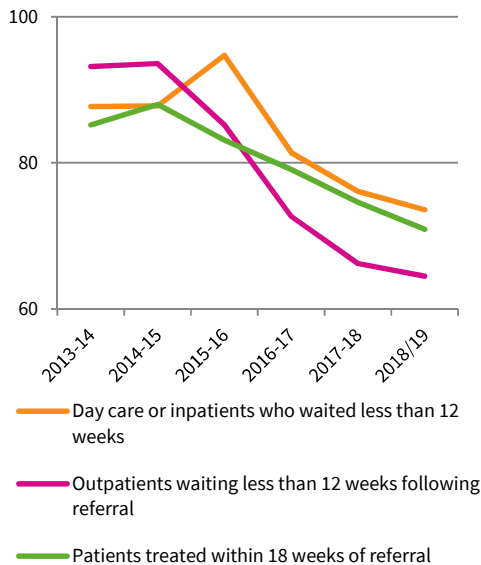


Source: NHS Lothian Annual Report and Accounts

150. The board acknowledged the challenges associated with a number of targets for scheduled care within the Operational plan, particularly in light of the financial position.
151. A number of areas have deteriorated since 2017-18:
- Rate of SAB (staphylococcus aureus bacteremia (including MRSA)) cases was 0.30 per 1,000 acute occupied bed days (target: 0.24, 2017-18: 0.29)
 - Only 79.3% of patients referred with suspicion of cancer received treatment within 62 days (target: 95%, 2017-18: 85.9%)
 - 73.6% of inpatient and day cases covered under the Treatment Time Guarantee were seen within 12 weeks (Target: 100%, 2017/18: 76.10%)
 - 64.4% of outpatients were treated within 12 weeks (Target: 95%, 2017/18: 66.2%)



Exhibit 10: Waiting time performance has significantly deteriorated in recent years, partly as a result of financial decisions



Source: NHS Lothian Annual Report/ISD

152. NHS Lothian continues to face challenges in meeting waiting times performance targets. The 2019/20 Operational Plan provides an outline of the improvement plans in place to address these areas of poor performance and a forecast of when NHS Lothian hopes to be able to meet the targets.

Quality strategy

153. One of the board's key strategies for delivering continuous improvement and for meeting the scale of the financial challenge is a focus on the Quality Management System.
154. The Chief Quality Officer leads a Clinical Quality Academy to build and support the understanding, capability and capacity of NHS Lothian staff in aspects of quality planning, improvement and control of processes relating to health and care.
155. Individual clinicians and teams are enabled and empowered to test new approaches to deliver improvements in patient outcomes, patient experiences and use of resources.
156. The programmes currently focus on improving outcomes in mental health, stroke, disease, cancer, outpatient endoscopy and hip fractures. NHS Lothian reports that, as a result of the delivery model, significant sustained improvements have been achieved, alongside a high level of staff engagement. The programme has a dedicated website to report on achievements and share good practice and knowledge.

157. The Quality Strategy 2018-2023 was approved by the Board in June 2018. The Strategy describes a five-year journey to transform the way NHS Lothian manages change and how continuous improvement can be embedded in such a way that it becomes everyone's business as usual.
158. The Strategy is aligned to existing strategic and operational plans and recognises the role that quality improvement can have in making the board more financially sustainable. It also recognises that, due to the financial challenges facing NHS Lothian, a funding gap exists in delivering quality improvement activities.
159. Included within the Strategy are a number of milestones to be achieved to support delivery. These milestones are particularly focused on the early years of the Strategy. Through review of papers of the Sustainability and Value Group and discussions with staff, we understand that significant progress has been made in delivering the milestones assigned to 2018/19; however no update has yet been presented to the Board on progress in delivering quality improvement activities.

Action Plan Point 3

Sustainability and Value Group

160. The Sustainability and Value Group, chaired by the Director of Finance, provides a relatively new forum to link improvement and financial recovery plans. While the group does not have a delegated budget, Business Units are invited to present service redesign or improvement plans for consideration by the group.
161. The group provides an oversight role for these plans and also makes decisions on the prioritisation of resource support for programme delivery. A key function of the group is to scrutinise delivery of the programme against original proposals, particularly based on return on investment assessments.
162. Our review of the Sustainability and Value Group's papers and minutes has concluded that it provides a mechanism for clear focus on improvement activity. In the context of increasing financial challenges, it is recognised by the Board that the group will play an increasingly important role in the oversight and scrutiny of financial recovery plans. We also concur with recent plans to develop the role of this relative new group, in terms of further clarifying its operating framework and in more explicit reporting of project performance to better enable scrutiny and challenge by the group.



Focused work on the Royal Hospital for Children and Young People, Department of Clinical Neurosciences and Child and Adolescent Mental Health Services project - settlement agreement

Summary

163. As part of our audit in 2018/19 Audit Scotland asked us to carry out a high level review of the arrangements around the settlement agreement between NHS Lothian and the contractor, IHS Lothian Ltd (IHSL) considering project governance and value for money. The board has provided evidence of detailed evaluation of the qualitative and quantitative options available to it before proceeding with the settlement agreement option. All the options reasonably available to NHS Lothian came with some adverse impact, whether financial or non-financial, including impact on service redesign.

Background and context

164. Ensuring effective project governance and securing value for money are crucial aspects of any hospital development project. The Royal Hospital for Children and Young People, Department of Clinical Neurosciences and Child and Adolescent Mental Health Services project (“the project”) is a high profile, strategically important development for NHS Lothian as it modernises, redesigns and integrates its services. The Outline Business Case was approved in 2012 by the Board and Scottish Government, with the Full Business Case and addendum approved by both bodies in April 2015.

165. The project has faced a number of challenges and delays, with construction issues impairing the original project plan and timetable. These have since been resolved and the facility was handed over to NHS Lothian in February 2019. Towards the end of the build stage, a £11.6m payment was agreed from NHS Lothian to IHSL to facilitate resolution of a number of issues but primarily the “Three Key Outstanding Technical Matters”. Broadly, these three matters relate to a drainage solution, heater batteries, and void fire detectors. This payment is in addition to the £150m construction cost as at Financial Close and £80m of enabling and equipment works outwith the agreement with IHSL.

Dispute issues and resolution process

166. In September 2017, a paper was submitted to the Board seeking approval to pursue the Dispute Resolution Process (DRP). This represented the culmination of a series of technical and contractual disputes throughout 2017 - over and above what would generally be expected on such a project - which could not be resolved through the established relationship management arrangements. There was a prolonged period of negotiation and preparation for the DRP in advance of October 2017, involving professional advisors, obtaining technical opinions, formal discussions with IHSL, and a meeting mediated by the Scottish Futures Trust.
167. NHS Lothian had identified a number of issues that it believed were not compliant with the original contractual requirements and raised concerns over what it felt would be a significant adverse impact on patients, staff and visitors.
168. The Board negotiated with IHSL a potential framework solution to overcome the points of dispute and assist in the completion of the facility. The Board’s Finance and Resources Committee was tasked by the Board with governance oversight, and it gave its support to the principle of a settlement agreement at its meeting in May 2018. The Settlement Agreement was jointly drafted by NHS Lothian and IHSL, setting out all the remaining actions to complete the facility in return for an £11.6m payment. The Agreement was signed with Board and Scottish Government approval.
169. Detailed evaluation was undertaken by NHS Lothian of the qualitative and quantitative options available to it before proceeding with the settlement agreement option. This included a range of professional advice (including legal, contractual and technical construction advice), extensive analysis and resources committed at senior levels – both executive and non-executive – to appraise the options available and weigh up the pros and cons of different scenarios. The issue was discussed regularly at various management meetings and by the Board and its sub-committees.

Underlying considerations and factors

170. NHS Lothian has consistently maintained its position that the issues experienced were materially non-compliant with the original specifications and raised concerns over the facilities for patients, visitors and staff (relating to aspects such as function, safety, adequacy and future capacity). However, legal and contractual expert opinion did not give the board sufficient confidence that the



likely benefits of pursuing resolution through legal redress in the courts outweighed the qualitative and quantitative implications of such a route. There were also differences of opinion between NHS Lothian and contractor external experts.

171. The priority of providing a safe and robust facility was in evidence throughout the board's approach to the resolution of the dispute. Professional advice on technical standards, legal and commercial matters was taken throughout the process and includes ongoing involvement from advisors in infection control; fire, health and Safety; and facilities engineering.

Government was consulted and ultimately supported the supplemental business case for the Settlement Agreement. This drew on the various legal, commercial and technical advice received from external experts throughout the process. There has been continuity of advisors throughout the project, to support cumulative knowledge and expertise.

173. On a number of occasions, where significant construction lessons had been learnt from other buildings or where other problems had been identified that may impact the project, the project team engaged with IHSL to seek formal assurances over these key issues. For example, given recent issues experienced at Queen Elizabeth University Hospital in Glasgow, NHS Lothian requested assurances regarding the cladding on the new hospital.

Further governance observations and wider context

172. The Board was formally briefed on both progress of negotiations and the Settlement Agreement itself by the Finance and Resources Committee in both public and private sessions. The Scottish



Facility completion and way forward

174. The facility was certified (under the NPD contract) as complete on 22 February 2019. The original contracted completion date was 5 July 2017. The post completion works identified in the Settlement Agreement are underway alongside the Board's commissioning programme. Migration of services will commence on 5 July 2019 with fully operational services planned for 15 July 2019.
175. As with all major estates developments, NHS Lothian will be undertaking a post-project evaluation. Given our high level review of aspects of the settlement agreement and the considerable time, resources and complexity involved in resolving the disputes with IHSL, we recommend that this evaluation includes an element specifically focused on the whole-project contracting, monitoring/timetabling and related "lessons-learned". This should go beyond what may have otherwise been standard on more straightforward projects which have gone closer to plan. The key outcomes should be shared within NHS Lothian and with other NHS bodies in Scotland and other public bodies (as appropriate) to help with cumulative understanding of the issues arising, and to help with both preventative and reactive measures to mitigate the likelihood and impact in future projects.

Action Plan Point 4

8. Appendices



Appendix 1: Respective responsibilities of the Board and the Auditor

Responsibility for the preparation of the annual report and accounts

It is the responsibility of the Board and the Chief Executive, as Accountable Officer, to prepare financial statements in accordance with the National Health Service (Scotland) Act 1978 and directions made thereunder.

In preparing the annual report and accounts, the Board and the Chief Executive, as Accountable Officer are required to:

- apply on a consistent basis the accounting policies and standards approved for the NHS Scotland by Scottish Ministers;
- make judgements and estimates on a reasonable basis;
- state whether applicable accounting standards as set out in the Financial Reporting Manual have not been followed where the effect of the departure is material;
- prepare the accounts on a going concern basis unless it is inappropriate to presume that the Board will continue to operate; and
- ensure the regularity of expenditure and income.

Board members are also responsible for:

- keeping proper accounting records which are up to date; and
- taking reasonable steps for the prevention and detection of fraud and other irregularities.

Auditor responsibilities

We audit the annual report and accounts and give an opinion on whether:

- they give a true and fair view in accordance with the National Health Service (Scotland) Act 1978 and directions made thereunder by the Scottish Ministers of the state of the board's affairs as at 31 March 2019 and of its net expenditure for the year then ended;
- they have been properly prepared in accordance with IFRSs as adopted by the European Union, as interpreted and adapted by the 2018/19 FReM ;
- they have been prepared in accordance with the requirements of the National Health Service (Scotland) Act 1978 and directions made thereunder by the Scottish Ministers;
- in all material respects the expenditure and income in the financial statements were incurred or applied in accordance with any applicable enactments and guidance issued by the Scottish Ministers;
- the auditable part of the Remuneration and Staff Report has been properly prepared in accordance with the National Health Service (Scotland) Act 1978 and directions made thereunder by the Scottish Ministers; and
- the information given in the Performance Report for the financial year for which the financial statements are prepared is consistent with the financial statements and that report has been prepared in accordance with the National Health Service (Scotland) Act 1978 and directions made thereunder by the Scottish Ministers; and
- the information given in the Governance Statement for the financial year for which the financial statements are prepared is consistent with the financial statements and that report has been prepared in accordance with the National Health Service (Scotland) Act 1978 and directions made thereunder by the Scottish Ministers.

We are also required to report, if in our opinion:

- adequate accounting records have not been kept; or
- the annual accounts and the part of the Remuneration and Staff Report to be audited are not in agreement with accounting records; or
- we have not received all the information and explanations we require for our audit; or
- there has been a failure to achieve a prescribed financial objective.



Wider scope of audit

The special accountabilities that attach to the conduct of public business, and the use of public money, mean that public sector audits must be planned and undertaken from a wider perspective than in the private sector. This means providing assurance, not only on the financial statements, but providing audit judgements and conclusions on the appropriateness, effectiveness and impact of corporate governance and performance management arrangements and financial sustainability.

The Code of Audit Practice frames a significant part of our wider scope responsibilities in terms of four audit dimensions: financial sustainability; financial management; governance and transparency; and value for money.

Independence

International Standard on Auditing (UK) 260 "Communication with those charged with governance" requires us to communicate on a timely basis all facts and matters that may have a bearing on our independence.

Confirmation of independence

We confirm that we have complied with the FRC's Revised Ethical Standard (June 2016).

In addition to our work on the board we are also responsible for the review of the abstract of receipts and payments of patients' private funds. The non-audit fee for this work in 2018/19 is expected to be around £7,200. In line with Audit Scotland planning guidance, approval was obtained from the Scott-Moncrieff ethics partner and Audit Scotland before commencing this non-audit work.

In our professional judgement, the audit process is independent and our objectivity has not been compromised in any way. In particular there are and have been no relationships between Scott-Moncrieff and the board, its Board members and senior management that may reasonably be thought to bear on our objectivity and independence.



Appendix 2: Action plan

Our action plan details the weaknesses and opportunities for improvement that we have identified during our audit.

Action plan grading structure

The recommendations have been rated to help the Board assess the significance of the issues and prioritise the actions required.

The rating structure is summarised as follows:

Grade	Explanation
Grade 5	Very high risk exposure - Major concerns requiring immediate attention.
Grade 4	High risk exposure - Material observations requiring management attention.
Grade 3	Moderate risk exposure - Significant observations requiring management attention.
Grade 2	Limited risk exposure - Minor observations requiring management attention
Grade 1	Efficiency / housekeeping point.



Current year action plan

Action plan point	Issue & recommendation	Management comments
<p>1. Research and Development Income</p> <p>Rating</p> <p>Grade 2</p> <p>Paragraph Ref</p> <p>20</p>	<p>Issue</p> <p>NHS Lothian is not recognising R&D income in line with achieved contract milestones, but is instead recognising income in relation to expenditure incurred. This is not in line with revenue accounting requirements as R&D surpluses and deficits are not accounted for.</p> <p>Risk</p> <p>Non-compliance with accounting standards and inaccurate reporting of R&D financial performance.</p> <p>Recommendation</p> <p>Management should revise the current approach to recognising research and development income, to ensure it is compliant with IFRS 15.</p>	<p>Responsible officer: Director of Finance</p> <p>Implementation date: 30 November 2019</p> <p>A review of R & D income and how it is recognised in the Board's accounts will be taken forward during 2019/20. This will include ensuring that the Boards' direct and indirect costs are appropriately calculated and reimbursed and that the link between milestones and receipt of income is formalised.</p>

Action plan point	Issue & recommendation	Management comments
<p>2. Waiting Times - next steps</p> <p>Rating</p> <p>Grade 3</p> <p>Paragraph Ref</p> <p>125</p>	<p>Issue</p> <p>Following the whistleblowing concerns raised in October 2017 and subsequent investigations, a programme plan was developed with progress being reported through both the Audit and Risk Committee and the Board.</p> <p>As the programme continues to develop, there will soon be a requirement to move the activities to business as usual. At present, it is not clear how this transition will occur or the likely timeframe.</p> <p>Risk</p> <p>Without a clear plan for transition to business as usual the programme may either lose momentum or move away from its original point of focus, resulting in improvements not being sustained or the board failing to demonstrate progress in addressing the recommendations.</p> <p>Recommendation</p> <p>We encourage the board to agree a timetable and action plan to move the Waiting Times programme to business as usual, using a SMART methodology.</p>	<p>Responsible officer: Deputy Chief Executive</p> <p>Implementation date: 31 October 2019</p> <p>We recognise the risks highlighted by our External Auditors and agree with their recommendation. We will establish a proposed critical path for transitioning this improvement/Assurance programme to 'Business as usual' and will present the proposed critical path for this objective to ARC for approval in October 2019</p>



Action plan point	Issue & recommendation	Management comments
<p>3. Quality Strategy Progress Reporting</p> <p>Rating</p> <p>Grade 3</p> <p>Paragraph Ref</p> <p>159</p>	<p>Issue</p> <p>NHS Lothian approved the Quality Strategy in June 2018, including a number of milestones to be achieved during 2018/19.</p> <p>To date, a progress update has not been presented to the Board or Committees.</p> <p>Risk</p> <p>Without a clear reporting framework for the Quality Strategy, the Board may not take prompt recovery actions where progress is not made and there may be a failure to deliver against the Quality Strategy.</p> <p>Recommendation</p> <p>NHS Lothian should prepare an annual report documenting progress against the key milestones outlined within the Quality Strategy. This should be reported to the Board.</p>	<p>Responsible officer: Chief Quality Officer</p> <p>Implementation date: 31 October 2019</p> <p>A 2018-19 annual review of progress against aims of the strategy is being prepared as we finish the first year of implementation. The review will be submitted to key Board Subcommittees (F&R, HCG and Staff Governance) in Q2-3 of 20 19-20 and for consideration by the whole Board in October 2019. Quarterly highlight reports will be produced thereafter for CMT and shared with Board and Subcommittee as requested. Annual reviews will be produced for Q3 of each subsequent Financial Year covering the 2018-23 period.</p>

Action plan point	Issue & recommendation	Management comments
<p>4. RHSCYP</p> <p>Rating</p> <p>Grade 3</p> <p>Paragraph Ref</p> <p>175</p>	<p>Issue</p> <p>In line with best practice, NHS Lothian anticipates undertaking a post project evaluation to reflect on the RHSCYP project. However, this may not include specific and detailed focus on the whole-project contracting and delivery issues.</p> <p>Risk</p> <p>The post project evaluation may not deliver maximum value and best-inform future projects if it does not take appropriate cognisance of the contract dispute issues on this project.</p> <p>Recommendation</p> <p>The post project evaluation should include an element specifically focused on the whole-project contracting, monitoring/timetabling and related “lessons-learned”. This should go beyond what may have otherwise been standard on more straightforward projects which have gone closer to plan. The key outcomes should be shared within NHS Lothian and with other NHS bodies in Scotland (as appropriate) to help with cumulative understanding of the issues arising, and to help with both preventative and reactive measures to mitigate the likelihood and impact in future projects.</p>	<p>Responsible officer: Director of Finance</p> <p>Implementation date: 31 March 2020</p> <p>The Board welcomes the recommendation to include the settlement agreement within a robust post project evaluation (PPE) process (separate from an ‘occupancy review’, which will take place shortly after occupancy of the facility). Steps are already underway to ensure sufficient resource, skills and knowledge are in place.</p> <p>The Board will look to include other NHS bodies, as well as Government agencies (eg SFT) and external parties in the PPE to ensure a full range of views and experiences, with the key outcomes shared as appropriate.</p>



Follow up of prior year recommendations

Of the three recommendations raised in our 2017/18 annual audit report, we note that one has been implemented and two have been partially implemented. Details are given below.

1. Financial Sustainability

Initial rating	Issue & recommendation	Management comments
Grade 3	<p>Observation</p> <p>The Board has made significant progress in 2017-18 to develop a framework to deliver financial sustainability, including regional and national planning. There are currently 22 work streams NHS Lothian is involved in to address the board's savings gap. However there is currently limited information presented to committee on specific projects and no breakdown of how the total savings, within each work stream, will be achieved and therefore how this supports NHS Lothian's financial position.</p> <p>Recommendation</p> <p>NHS Lothian should ensure that the Board is presented with clear plans and options for where savings will be achieved.</p>	<p>NHS Lothian will continue to provide information to its committees on the achievement of savings against plan.</p> <p>As the Sustainability and Value programme is part of Lothian's financial strategy, a more formal process for ensuring a robust prioritisation of savings opportunities will be developed.</p> <p>Action owner: Director of Finance</p> <p>Due Date: December 2018</p>
Current status	Audit update	Management response
Partially Completed	<p>Work continues to refine the financial strategy and delivery approach. While a high level overview of savings planned and achieved is presented to both the Finance and Resources Committee and the Board, there remains limited detail on the specific savings programmes and the impact that these may have.</p> <p>The board has indicated that the Sustainability and Value Group will have an enhanced role in monitoring and challenging financial recovery plans during 2019/20.</p>	<p>The Sustainability & Value Group has commissioned an overview of all the programmes and projects of work that are likely to contribute to sustainability and value. This will form the agenda for the Sustainability & Value Group over 2019/20. In addition, the Sustainability & Value Group will require business units to provide regular updates on other opportunities for programmes and/or projects that will contribute to this agenda. The Implementation Date is ongoing.</p> <p>Responsible officer: Director of Finance</p> <p>Implementation date: Ongoing</p>



2. Financial Monitoring

Initial rating	Issue & recommendation	Management comments
Grade 2	<p>Observation The NHS Financial framework that the board operates under is complex and reporting on this in a way that is clear and understandable is a challenge.</p> <p>Recommendation We believe that there is scope to further clarify financial monitoring reports by:</p> <ul style="list-style-type: none"> • Providing greater explanation and analysis of flexibility • Removing reference to legacy efficiency savings gaps to allow Board members to focus on in-year performance. 	<p>NHS Lothian has agreed to remove legacy LRP gaps following discussion with the F&R committee.</p> <p>The presentation of financial flexibility information will be discussed with F&R Committee.</p> <p>Action owner: Director of Finance</p> <p>Due date: December 2018</p>

Current status	Audit update	Management response
Complete	<p>Review of financial monitoring reports during 2018/19 has confirmed that reference to legacy LRP has been removed. References to financial flexibility remain within financial monitoring reports however greater explanation has been included.</p> <p>The outcome of the Finance and Resource Committee's self-assessment is an Action Plan for the Committee and includes development of online induction and training material for all Board members, including on financial matters. The aim will be to support members in providing appropriate scrutiny of financial issues through a greater understanding of NHS Scotland financial terminology and issues. We will monitor progress on this during our 2019/20 audit.</p>	N/A



3. Performance Reporting

Initial rating	Issue & recommendation	Management comments
Grade 3	<p>Observation</p> <p>The Board is presented with a Quality and Performance Improvement Report, with supporting data pack, at each Board meeting. While we acknowledge that this report reasonably focuses on the key targets that the board will be assessed on, we believe that there is scope to develop performance reporting to consider the achievement of other corporate objectives.</p> <p>Recommendation</p> <p>The board should review performance reporting arrangements to ensure that reports provide a balanced and comprehensive commentary across each of the organisation's priorities, including, for example, improvement work and efficiency savings.</p>	<p>As part of its next review of content in Quality and Performance Improvement NHS Lothian has committed to conducting a comprehensive review of the report specifically including the views of key users on format and content to reflect the broader organisational priorities informed by the recommendations arising from the Scottish Parliament's Health and Sports Committee consideration of Scrutiny of NHS Health Boards.</p> <p>Action owner: Chief Quality Officer</p> <p>Due date: 31 March 2019</p>

Current status	Audit update	Management response
Partially Completed	<p>Feedback was gathered from non-executive Board members and was used to inform a revised Quality and Performance Improvement report. This resulted in a lighter reporting approach being adopted. The Board continues to assess the best means of reporting performance data and is considering working with partners such as Healthcare Improvement Scotland to improve the presentation of performance data.</p>	<p>External scoping is concluding, and a new system will be tested during Q3 2019-20 will be embedded before 2020</p> <p>Responsible officer: Chief Quality Officer</p> <p>Implementation date: 31 December 2019</p>



Appendix 3: Unadjusted errors

We identified the following potential adjustments to the financial statements during our audit. We have discussed these with management and have agreed that they will not be reflected in the financial statements on the basis of immaterial impact.

Unadjusted difference	SoCNE		Balance Sheet	
	DR £m	CR £m	DR £m	CR £m
Other receivables			1.06	
Prepayments				1.06
<i>Being the transfer of receivables wrongly categories between disclosure lines</i>				
Expenditure	1.04*			
Provisions				1.04
<i>Being NHS Lothian's share of the national CNORIS adjustment. This reflects NHS Lothian having to take a pro-rata share of miscalculations made by other NHS boards in relation to their periodic payment orders to settle clinical and medical negligence claims. We found no issues with NHS Lothian's own approach in this area.</i>				
<i>*(Note that SGHSCD has indicated that offsetting AME funding is available to NHS Lothian, such that the impact on RRL would be fully offset should NHS Lothian have chosen to process this adjustment)</i>				
Net impact on income / expenditure	-			

From: Corr A (Andrew) on behalf of Cabinet Secretary for Health and Sport
Sent: 06 August 2019 17:09
To: Roche R (Rowena); Cabinet Secretary for Health and Sport
Cc: Hutchison D (David); McLaughlin C (Christine); DG Health & Social Care
Subject: FW: AUDIT SCOTLAND REPORT - publishing 1pm today
Attachments: AAR_18-19_NHSLO.pdf

Importance: High

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Printed for DG

Rowena,

As discussed – can you answer the following in the briefing that you send up tonight.

Why did the Cab Sec not know about this before now? There has been absolutely no mention of it at IMTs or briefings and yet it was being flagged by opposition parties yesterday and featured in the media bids she did - with nothing about it in the briefing for this bids?

Thanks,
 Andy

From: Aitken L (Louise) [REDACTED]
Sent: 06 August 2019 12:51
To: Cabinet Secretary for Health and Sport [REDACTED]
Cc: Leitch J (Jason) [REDACTED]; Calderwood C (Catherine) [REDACTED]; Smith G (Gregor) [REDACTED]; McQueen F (Fiona) [REDACTED]; Summers Y (Yvonne) [REDACTED]; McLaughlin C (Christine) [REDACTED]; Wilson S (Stuart) (HLTH) [REDACTED]; Lea-Ross S (Stephen) [REDACTED]; Gilbert A E (Anna) [REDACTED]; Crowe B (Barbara) [REDACTED]; Rogers S (Shirley) [REDACTED]; News Desk [REDACTED]; Communications Healthier [REDACTED]; Klein G (Gerard) [REDACTED]; Roche R (Rowena) [REDACTED]; Morrison A (Alan) [REDACTED]; Black A (Alasdair) [REDACTED]; Knight S (Stephanie) [REDACTED]; Grieve B (Bethany) [REDACTED]; McCallum R (Richard) [REDACTED]; Neill S (Sean) [REDACTED]; > McAllister C (Colin) [REDACTED]; Ingebrigtsen R (Ross) [REDACTED]; Minister for Public Health, Sport and Wellbeing [REDACTED]; Minister for Mental Health [REDACTED]; Klein G (Gerard) [REDACTED]
Subject: URGENT - AUDIT SCOTLAND REPORT - publishing 1pm today
Importance: High

Hi Andy,
 Cc'ing Ministers for awareness.

Please see the email below we have received from Audit Scotland comms. Aware Malcolm is on leave this this may not have reached SG colleagues as outline below.

They will issue the attached annual audit report to media at 1pm today.

Grateful if you could make Cab Sec aware.

Policy colleagues, we will start getting media approaches on this shortly which will require policy views / info.

NHS L have also just been made aware. We are contacting them now to get info on handling.

Thank you
Louise

Louise Aitken

Senior Media Manager | Health Communications | [REDACTED]

The Scottish Government | www.gov.scot

Hi team,

As discussed on the phone just now. This note should be going out to media before 1pm today. I'll let you know if that changes.

Report attached.

Our controller of audit was in touch with Malcolm Wright late this morning to let him know.

Patrick

Royal Hospital for Children and Young People

In light of the ongoing public interest in the new Royal Hospital for Children and Young People, Audit Scotland is today (6 August) publishing the Annual Audit Report (AAR) on NHS Lothian.

Pars 163 to 175 of the report cover a high level review of the arrangements around the settlement agreement between NHS Lothian and the contractor, IHS Lothian Ltd, and consider project governance and value for money. The Auditor General for Scotland asked Scott Moncrieff, the external auditors of NHS Lothian, to carry out the review to provide assurance in this area.

The report – as with all health AARs – was issued to NHS Lothian's board and the Auditor General at the end of June in line with the deadline for NHS audits, and would normally be published by Audit Scotland in September. This gap between the completion of the AAR and publication gives the Auditor General time to consider whether to bring any issues to the attention of Parliament through an accompanying [Section 22 report](#).

However, given the high levels of interest in the new children's hospital, the Auditor General is making the report available now.

Caroline Gardner, Auditor General for Scotland, said: "We have continued to monitor events since the annual audit report was issued and will be taking a close interest in the NHS safety review's findings and KPMG's report on the governance of the project."

ENDS

Notes to editor:

- The review work by Scott Moncrieff was conducted earlier this year and the auditors were not aware of the subsequent issues that arose at the children's hospital in early July.

Cabinet Secretary for Health and Sport**EDINBURGH CHILDREN'S HOSPITAL - UPDATE****Purpose**

1. To provide an update on the current situation regarding the new Edinburgh Children's Hospital.

Priority

2. Routine.

Background

3. Following previous summaries of the issues currently facing the opening of the new hospital, this note provides a further update on the current actions being taken to resolve the various issues at the new hospital.

Operational Impact and Support

4. In the past week, the NHS Lothian Children's Hospital Helpline received 5 calls (including 1 wrong number). This compares to 3 and 15 calls in the previous two weeks. The helpline will remain open until you are satisfied that it is no longer required. Services impacted by the postponed move to the new building have moved to business as usual for August onwards. All appointments for August onwards are being communicated and managed through the Board's normal processes.

Technical Fix – Critical Care Ventilation

5. Following a number of technical workshops on the critical care ventilation, there is now a common high level understanding of a possible solution. NHS Lothian are working through potential engagement terms with IHSL. Multiplex have confirmed that their designer, TUV SUD, will have a representative at the ventilation design development meetings. This is in advance of any Board Change being issued.

6. NHS Lothian had considered bringing in an outside designer but their lawyers had advised that it would not be in their interest to do so. In the current situation, the Board would be in a position to step in and undertake remedial works because of a risk of the ability of the board to provide the relevant Board Services being prejudiced to a material degree. However, there would be various issues around this approach including the interface between the old and new designer and contractor, issues with warranties, commercial issues, timing issues, liability for defects and paymech issues. In all circumstances, such an approach is not necessarily attractive and should not be undertaken lightly.

Other Ventilation Issues

7. A Ventilation Design Group has been established with membership drawn from IHSL, NHS Lothian and support from HFS. This was formed principally to develop the revised design for critical care ventilation. The group has identified 7 key points that require specific management by the group: (1) very limited extract in theatre corridors; (2) excessive flexible ductwork in theatre ceilings; (3) scrub extract grilles; (4) back up arrangements appear to be very complex and as such likely to be challenging in practice; (5) cabling and cable connectors inside air handling units (AHU); (6) some motors running at over 95% speed; (7) the use of pressure control sensors downstream of AHU but upstream of ultra clean ventilation (UCV) canopy theatres.

8. The group meets twice weekly to discuss the detail behind each of the 7 key points, and the development and implementation of solutions, to progress work and to oversee any design development. These will be discussed at the oversight board meeting tomorrow (8 August) to understand whether these are part of the critical path to migration. It is our understanding at this time that there are fixes available for these issues but we will clarify this following tomorrow's meeting.

Phased Migration

9. An initial assessment has concluded that DCN could move independently of children's services. Any decision on a partial migration will be dependent on understanding the works required to address clinical care and to ensure these do not impinge on DCN at any time and will be informed by clinical and operational considerations.

Cabinet Secretary for Health and Sport**External Review – NHS National Services Scotland (NSS)**

10. NSS sent 130 questions to NHS Lothian on phase 1 of the review – ventilation, water and drainage. A meeting has been arranged with NHS Lothian on 7 August to discuss areas where their responses were incomplete. There is an increased requirement for support at NHS Greater Glasgow & Clyde therefore the project team may not have capacity to progress with phases 2 and 3 as planned and this has been reported as an amber risk. We are still expecting an interim position on phase 1 in the third week of August and a final report in early September.

KPMG Audit of Governance

11. KPMG continue their follow up interviews which are focussing on answering key questions: was there a change to ventilation requirements or a lack of clarity on ventilation specifications from the outset; is the guidance clear; what did the independent testing test against in October; was there adequate contingency planning? Preliminary findings indicate that the information from all parties is providing a consistent and not conflicting picture, the right people appear to have been involved at the right times in the project but there was lack of clarity on ventilation requirement from the outset. Due to the complexity of the follow up on these key areas the initial draft of KPMG's findings is expected early week commencing 12 August (rather than by 9 August as previously indicated). The finalised report is still expected the following week as planned.

Oversight Group

12. The Oversight Board will meet for the first time tomorrow to review progress with the five key issues that they will be considering (phased occupation, critical care technical solution, migration, commercial arrangements and contract management). A readout will be provided after the meeting.

Annual Audit Report

13. The NHS Lothian 2018/19 Annual Audit Report was published on 6 August, approximately 2 months ahead of the usual publication date and briefing on this has been provided. In light of the ongoing public interest in the RHCYP, the Auditor General took the decision to publish the Report early. The Report confirms that the Board's annual accounts received an unqualified audit opinion. In addition, the report sets out findings from the high level review of governance arrangements of the settlement agreement, along with findings on financial sustainability, financial management, governance and transparency and value for money.

Non-profit distributing initiative (NPD)

14. The NPD model of private financing was developed by Scottish Futures Trust (SFT) as an alternative to the traditional private finance model. It has been designed to: enhance stakeholder involvement in the management of projects; cap the profits for the private sector, ensure value for money. The NPD structure consists of the Authority (in this case NHS Lothian), the Project Company (IHSL), lenders, the building contractor (Multiplex) and the service provider (Bouygues).

15. NPD is a 'not-for-profit' model. Contractors and lenders are expected to earn a normal market rate of return as in any other form of privately-financed public private project (PPP) deal. This model aims to eliminate uncapped equity returns associated with the traditional PFI model and limit these returns to a reasonable rate set in competition. Operational surpluses generated by the Project Company are reinvested in the public sector.

Claims by Architect – Mr Menzies

16. Media reports suggest that a senior architect, Robert Menzies, was involved in the design of the new hospital and raised concerns at the time in this capacity. Mr Menzies was a member of a bidding team that was unsuccessful and the design was developed from that time. NHS Lothian have no visibility of any communications or dialogue within the bidding teams or how the bidding teams managed their time and resources during the timeframe laid out for the procurement stage. The project team are prioritising resolving current issues which are not connected with the quotes from Mr Menzies. NHS Lothian are working to verify claims by Mr Menzies that he was in dialogue with the Board – advice will be provided on this as soon as it becomes available.

Cabinet Secretary for Health and Sport**Media Reports – ‘Extra £90 million’**

17. Various media reports today (7 August) claim that the RHCYP will cost an ‘extra £90 million’, comprising the £11.6 million settlement agreement plus £80 million enabling costs. These reports are inaccurate and misleading and communications are working to address this as part of the proactive comment that is being prepared to address recent coverage of RHCYP. The Annual Audit Report published yesterday (6 August) notes that there was ‘£80 million of enabling and equipment works outwith the agreement with IHSL’ and this is the amount that has been picked up incorrectly. The £80 million relates to capital enabling costs which were approved in the business case (which is publicly available on the Board’s website) and were never part of the NPD contract. These are not new or unexpected costs and it is standard for such costs not to form part of the NDP contract. The only additional payment since this full business case is the £11.6m settlement agreement, approved by the Scottish Government.

Media Reports – ‘Union warns Edinburgh’s £150 million hospital may never open’

18. Staff at NHS Lothian are understood to be upset at claims in the media that the hospital may be torn down or never open. NHS Lothian are working to reassure staff but to make you aware for future staff engagement.

Claim by Tam Waterson - Involvement of SFT on project Board and knowledge of drainage issues

19. Unison official Tam Waterson has claimed that there were three members of SFT on the programme board from day one, therefore Scottish Government must have been aware there were issues with the drainage. It is a condition of Scottish Government funding support that all projects in the revenue funded programme are, in addition to any existing projects approvals processes, externally validated by SFT. There was only one member of SFT on the programme board.

NHS Lothian Board Meeting Summary

20. Key points from the Board meeting today (7 August) are as follows. Further detail is included as an Annex to this paper.

- It was noted that NHS Lothian is confident that the delay will not impact the sale of the old Sick Kids Hospital.
- NHS Lothian are assessing resource requirements to support the management of the project; and the wider requirement to resource the delivery of complex builds such as these hospitals and there is a need for technical support. HFS and HPF are looking into the how this support is developed. The Chief Executive also noted the support provided as part of the Board’s Escalation.
- When asked who was at fault, the Chair outlined that this was not the correct place for this discussion.
- The Chair noted he felt that the timing of the escalation was inappropriate and it was his view that this escalation could have occurred 6 months sooner due the Board’s performance.

Summary

21. You are invited to note the current position and various issues being raised in the media. Further updates will be provided on a weekly basis going forward unless there are any significant developments which require an immediate note.

Barbara Crowe, Health Finance
7 August 2019

More detailed notes from the NHS Lothian board meeting

The Chair noted the Board's disappointment of the delay

The Director of Finance gave a brief summary of her paper submitted to the board. It was noted that NHS Lothian is confident that the delay will not impact the sale of the Sick Kids Hospital.

The Chief Executive stated that they will not be moving until the critical care matter is resolved and that the DCN staff are very keen to move when they get the green light and they are currently receiving critical care support from the main hospital.

In terms for resource implications, a member asked the impact on both the Capital and Revenue resources and asked if there was a systematic approach. The Director of Finance noted that NHS Lothian are looking into the resource requirements to support the management of the project. The Chief Executive noted that with the Escalation of the Board, there will be a performance package to support this.

A member asked about future proofing and how to safeguard against these issues occurring in the future. The Director of Finance noted that in terms of lessons learnt, there is also a wider requirement to resource the delivery of complex builds, such as these hospitals and there is a need for technical support. The relationship between the quality of the building and infection control issues requires these expertise and this is being development with HFS and HPF [work is currently underway with HFS and HPF, looking in the provision of the support in the [Centre of Excellence].

A member noted the pace in which the project has been progressed, including the investigations taking place and asked how is the Board being kept up to date? The Chair outlined that in order to keep the Board updated there needs to be both informal and formal conversations and this was the reasoning that the non-executives of the Board have been attending a weekly meeting to provide these updates.

A member asked how NHS Lothian were learning lessons from elsewhere and whether the framework was robust. And another member noted it was useful that the Board are trying to allocate blame but understand how this had occurred. The Director of Finance said there was a useful workshop that enabled them to investigate what had happened. Another member asked who was at fault, The Chair outlined that this was not the correct place for this discussion.

A board member noted that NHS GG&C has had a similar learning experience and it is "very well Scottish Government telling us how to respond" but lessons learned need to be communicated. The Medical Director said that HFS are taking this into account.

A member asked whether they would have an opportunity to see the review. The Director of Finance advised that the report was commissioned by the Cabinet Secretary but they would expect NHS Lothian to be sighted on it prior to the publication and The Chief Executive also noted that they would expect HFS to be sighted too.

An on the matter of escalation, the Chair noted he felt that the timing of the escalation was inappropriate and possibly should have occurred 6 months prior to this.

GOVERNANCE OVERSIGHT BOARD**COMMERCIAL POSITION AND CONTRACT MANAGEMENT POSITION PAPER****1. Overview**

- 1.1. This paper sets out recommendations as to the overall commercial approach to be taken to the resolution of current construction and operational issues and contract management in the pre-occupation period. This paper has been developed by the Board in discussion with SFT who are supportive of the line taken.
- 1.2. The paper covers two principal areas that require to be resolved:
 - potential default by IHSL and/or Bouygues as a result of the significant Deductions being applied following failures by IHSL to comply with the Services Specification; and
 - the procurement mode to facilitate rectification of the ventilation air change rate in critical care and any other works that require to be undertaken prior to occupation.
- 1.3. These two areas are considered to be closely interlinked and any way forward should be agreed holistically and in the context of an overall action plan/programme that takes the project to a steady state position post-occupation.
- 1.4. It should be noted whilst the broad principles set out in this paper have been discussed with IHSL, the detailed recommendations set out here have not been agreed with IHSL and it may prove difficult or impossible to reach a commercial resolution which is mutually acceptable. This paper seeks the approval of the Oversight Board to progress negotiations along the lines described in principle, with the outcome of the negotiations to be brought before the Group for ratification once agreed with IHSL.
- 1.5. Support from HFS in the interim period should be procured to support the contract management process.

2. Recommendations

- 2.1. This paper carries the following recommendations:
 - That the Board/Scottish Government should seek to work with IHSL to resolve the current issues and reach a steady state operational phase with IHSL and Bouygues as ProjectCo and Service Provider.
 - The above would entail actively taking steps to avoid the situation whereby the project would fall into default and potential termination.
 - In return for agreeing an acceptable accommodation with IHSL regarding procurement of the ventilation air change rate in critical care, the Board should temporarily undertake not to exercise its rights pursuant to the Project Agreement that would trigger the issue of Warning Notices or of ProjectCo or Service Provider default as a result of Deductions applied pursuant to the Payment Mechanism, and work with IHSL to agree the form that such an undertaking would take. The Board would not waive their rights to apply Deductions.

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- The Board should procure works required to rectify the ventilation air change rate in critical care and any other works identified as being required pre-occupation as a result of the ongoing review via IHSL, by way of a fast-track 'Supplemental Agreement' approach rather than via the Change Protocol set out in the Project Agreement. The Board and its advisors should work with IHSL to develop a form of agreement that would be acceptable to both parties. The Board should procure works required to rectify the ventilation issues and any other issues identified from the ongoing review work via IHSL.
- The above recommendations should take place in the context of an overall action plan or programme such that the Board's agreement to suspend the Warning Notice/Default regime is dependent on delivery of agreed milestones and targets, notably in resolution of ventilation issues. The above recommendations should take place in the context of an overall action plan or programme such that the Board's agreement to suspend the Warning Notice/Default regime is dependent on delivery of agreed milestones and targets, notably in resolution of the ventilation air change rates in critical care.

3. Current Position on Warning Notices and Potential Default

- 3.1. In May 2019, a total of £34,613 of deductions were made, equalling 0.21% of the ASP. This triggered the Warning Notice threshold under the Project Agreement and the Board elected to serve a Warning Notice on 27 June.
- 3.2. In June 2019, deductions equalled £152,610, equalling 0.962% of the ASP. This triggered the Warning Notice threshold again and a notice was issued on 23 July.
- 3.3. It is understood that IHSL similarly served Warning Notices on the Service Provider pursuant to the Services Contract.
- 3.4. The June deduction level was also the first breach of the 0.411% threshold pursuant to clause 40.1.8 of the Project Agreement (as well as default under the CTA and default by the Service Provider), thus contributing towards default triggers.
- 3.5. It should be noted that these Deductions are accruing primarily as a result of defects in the construction works which IHSL's contractor, Multiplex, has primary responsibility to resolve rather than the Service Provider. There are provisions in the interface agreement between IHSL and the Building Contractor and Service Provider to address allocation of responsibility and liability for these Deductions and rectification of Defects.
- 3.6. A further Warning Notice for July would trigger Service Provider Default pursuant to the Services Contract. It is highly likely that the Warning Notice threshold will be breached once again in July. If a third Warning Notice is issued by the Board to IHSL and IHSL similarly issue a Warning Notice to Bouygues then the Service Provider default trigger under the Services Contract will be breached. Accordingly, this would entitle IHSL to terminate the Service Provider notwithstanding that, as outlined above, primary responsibility for the Deductions which are accruing rests with IHSL's Building Contractor rather than the Service Provider.
- 3.7. A month of Deductions at the level seen in June would also result in ProjectCo being very close to breaching ProjectCo default thresholds under the Project Agreement.

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3.8. Therefore, unless the Board reaches an agreement with IHSL on the management and application of these thresholds, it is likely that a default situation will occur, at least at Service Provider level. This will have the potential effect of disincentivising IHSL to work towards a solution and place Bouygues in a very difficult situation that is not of their making.

4. Potential Solutions to Treatment of Warning Notices and Default Triggers

4.1. If no action is taken by the Board, the likely consequence would be ProjectCo default and potentially termination of the Project Agreement. The Board does not consider this to be the correct approach in the current circumstances where the Board's key objective is to ensure that patients can occupy the hospital as soon as possible for clinical purposes, even if on a partial basis until the critical care ventilation works are completed.

Recommendation – that the Board should pursue resolution of issues, move to a steady state with IHSL, and seek to avoid termination.

4.2. Several options have been put forward by and discussed with IHSL in relation to Warning Notices and Default triggers, with the objective of avoiding default, including the retrospective application of a bedding in period, discounting deductions arising from construction defects and suppression of deductions to below the thresholds. These have been discounted at this stage,

4.3. The option to suspension of the Board's rights to issue warning notices or apply default thresholds is considered by the Board to be the preferred approach. It potentially leaves Bouygues in a difficult position if IHSL do not provide similar assurance to them. However, the Board could seek to insist upon this in their discussions with IHSL. Whilst (like other approaches) this option temporarily removes a key measure by which performance is measured, it is the simplest to implement and would remove the risk to both IHSL and Bouygues of triggering termination whilst the parties are working towards an agreed solution. The Board would insist upon the agreement permitting the Board to issue notices if circumstances change or new issues come to light.

Recommendation – that Option 2 be pursued, and agreement sought with IHSL for a way forward during the transitional phase whereby Warning Notice and Default triggers are suspended while leaving the payment mechanism operational in other respects.

5. Procurement of Ventilation and Other Works

Board Step In Versus IHSL Procurement

5.1. The Board is entitled to step in and undertake remedial works pursuant to the PA in certain circumstances, including a risk of the ability of the Board to provide the relevant Board Services being prejudiced to a material degree, this circumstance being the most relevant to the current situation.

5.2. On the basis that the Required Action is being undertaken not because of a failure by IHSL, IHSL are relieved from obligations to provide Services relative to the Required Action. Consequently, there would be no reduction to IHSL's service payments; and The Board must

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indemnify IHSL for any Direct Losses it suffers while the Required Action is being undertaken.

5.3. In addition to the issues identified above, there will also be:

- Interface issues: a new designer and contractor undertaking these works will cause issues regarding potential clashes, issues regarding warranties and issues re liability for defects amongst other things;
- Commercial issues: it will be significantly more expensive for the Board to undertake these works as opposed to IHSL and their supply chain;
- Timing issues: having an alternative contractor undertake the works will inevitably take significantly longer given they will need to familiarise themselves with the project; and
- Payment mechanism issues: potential issues regarding the operation and maintenance of the new plant and liability therefor may arise.

5.4. In all the circumstances, such an approach is not necessarily attractive and should not be undertaken lightly. Overall, it is considered preferable for IHSL to be commissioned to undertake the work provided appropriate commercial terms can be agreed.

Recommendation – it is recommended that procurement of works should be undertaken via IHSL and not via a Board step-in.

IHSL Procurement

5.5. IHSL and their supply-chain are seeking a clear and clean instruction from NHS to proceed with the required amendments to the Critical Care ventilation, backed up by an obligation on NHS to pay for the design, installation and any additional FM/lifecycle costs. Further, IHSL have stated (although it may be we can test this with them) that they do not wish to proceed with any amendments to the critical care ventilation where the Board is reserving its rights in respect of any alleged contractual breach with respect to critical care ventilation. Indeed, IHSL's position is that they wish a full waiver from the Board of all rights and remedies that may be available to them in relation to the critical care ventilation. If accepted, this is a very significant concession on the part of the Board. Investigations are still ongoing into the circumstances surrounding the change to the air change rates in critical care. Accordingly, whilst the Board may be prepared to cash flow the additional ventilation works required in critical care at this stage, where possible, the Board would wish to retain their right to potentially pursue IHSL and their supply chain for recovery of those costs incurred if it transpires in due course that liability sits with IHSL and their supply chain. That position would only be preserved by the Board if the ventilation works are instructed under a reservation of rights.

5.6. IHSL received a draft Board Change on the 26th July 2019 with respect to Critical Care Ventilation, proposing a High Value Change as set out within Project Agreement Schedule 16 (Change Protocol). The High Value Change process is, by its nature, prescriptive and iterative and will take time to administer. Given the need to implement the design and installation of the amendments to the Critical Care ventilation as quickly as possible,

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options to follow a 'fast-track' process have been examined alongside the default Change Protocol process.

- 5.7. Various options have been considered, including use of the High Value Change process set out in the Project Agreement, an amended version of this process combined with a Supplemental Agreement to enact it, or progression directly to a Supplemental Agreement.
- 5.8. The recommended option is that, rather than issue a High Value Change notice, the parties would move straight to the conclusion of an advance works agreement and Project Agreement Supplemental Agreement (both of which are the likely outcomes of the proposed change in any event) as well as the necessary Construction Contract and Services Contract supplemental agreements and ancillary documentation. This has the advantage of speed of delivery plus the advantage of avoiding the complexities associated with the full Change Protocol. However, programme and cost certainty and transparency are potentially compromised by adopting this option. Detailed commercial discussions require to be undertaken to ascertain whether these concerns can be appropriately addressed.
- 5.9. IHSL have provided a draft heads of terms for a Supplemental Agreement. However, the current draft contains a number of terms that would not be acceptable to the Board. Development of any heads of terms, or of a Supplemental Agreement, would need to adopt the key attributes of the Change Protocol that cover transparency, timescale, governance and cost control. Such an Agreement would need to become part of the Project Agreement and maintain its integrity. It is anticipated that agreeing acceptable commercial terms which manage the Board's exposure to costs, time slippage and other risks may take some time and that needs to be weighed against the urgency of advancing the design of the works as swiftly as possible. In order to best protect the Board's position it is therefore proposed that we seek to agree a staged process for the procurement of the critical care ventilation works with IHSL as follows:-
 - Stage 1: Procurement of the design work for an agreed (if possible) capped fee to include all design work and associated management fees;
 - Stage 2: Procurement of the construction works (which could also include any other works which are identified as being necessary as a result of the ongoing reviews) based upon an agreed contractual regime which mirrors to the extent possible the risk profile set out in the Change Procedure but minimises the time consuming processes.

Recommendation – the Board should progress procurement of the works via Supplemental Agreement as outlined above and engage with IHSL immediately to conclude agreement of a Settlement Agreement that will take matters forward adopting the two stages set out above.

6. Next Steps

- 6.1. The intention overall is to achieve a steady state as soon as possible after which Warning Notices would cease to be an issue given a good level of normal performance.
- 6.2. Any undertaking not to give a Warning Notice for a period of time would need to be caveated so that the Board could issue Warning Notices, and rely on those that have been given to date, if its expectations are not met (for example in relation to the ventilation works) or circumstances change, in particular if other matters come to light from HFS's

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investigations. We would propose to discuss this with IHSL and seek to work up a robust framework which ensures IHSL and their supply chain are incentivised to meet the requirements of the Project Agreement whilst giving them some comfort about the use of default triggers.

- 6.3. We continue to work on the basis that the critical care ventilation works can be instructed as a Change, or another mechanic achieving the same aim, and in particular that the new specification will be fully operative for the purposes of the Project Agreement, including the payment mechanism, within a reasonable timescale. Preferably, this would be achieved adopting the two stage process outlined above.
- 6.4. To allow this process to continue, it will be necessary to remove the major obstacle presented by the threat of Default facing IHSL and/or Bouygues. These issues are clearly linked and any programme or action plan should incorporate both, making agreement of one dependent on the other.
- 6.5. The commercial approach would be designed to facilitate the Board's overall objectives and should address, among other things, the consequences if the remedial works are not completed within agreed timescales or to the requisite quality as well as the extent of and methodology for retesting and recommissioning the affected systems and areas.
- 6.6. A workshop to develop the framework is proposed involving the Board, its advisors and SFT. As a precursor to this, if the principles set out in this paper are agreed, they could be discussed informally with IHSL to test their reaction and appetite for following the proposed route.
- 6.7. In the meantime, resource from HFS is available to the Board to support the development of a contract management framework and provide assistance during the transitional phase, resource that we propose to access on the basis set out by HFS in its proposal.

Recommendation – that the overall recommendations set out in this paper be approached holistically with IHSL as part of an overall package underlying an agreed programme to take the project through to full steady-state operations.

07/08/2019

NHS Lothian

Board Meeting
7 August 2019

Director of Finance

Update on Royal Hospital for Children and Young people, the Department of Clinical Neurosciences and Child and Adolescent Mental Health Services**1 Purpose of the Report**

The purpose of this report is to update Board members on the delay to the opening of the Royal Hospital for Children and Young people, the Department of Clinical Neurosciences, and Child and Adolescent Mental Health services. In particular, this covers the reviews underway and NHS Lothian's response to the work required to address all the associated issues.

2 Recommendations

Board members are asked to consider and note the update.

3 Discussion of Key Issues**Background**

- 3.1 Board members are aware that following the late identification of a problem with Ventilation in the Critical Care of the new hospital, a decision was made to delay the opening of the Royal hospital for Children and Young people, the Department of Clinical Neurosciences and Child and Mental Health Services at the Little France Campus. This problem was identified by IOM, a specialist Ventilation company, brought in by NHS Lothian to carry out checks on the ventilation in augmented clinical care areas. This work was delayed because of the ongoing construction work impeding access to the key areas. As a consequence of their findings we have instructed IOM to carry out further ventilation checks in all clinical areas and in a further sample of general areas to gain additional assurance that the required standards are met.
- 3.2 Following the announcement of the delay, NHS Lothian established its own internal Incident Management team, led by the Director of Finance. This team has been meeting twice a week and will continue to meet regularly until a clearer programme of work is established which takes the hospital to a revised opening date. The initial focus of the meetings has been overseeing patient and staff communication, the review of ventilation and the plans for rectification, and given the pause in occupation any opportunities to alter or amend the water infrastructure to take account of the facts learned from the Queen Elizabeth Hospital and Dumfries and Galloway Royal Infirmary. In addition, both Facilities and Infection control teams are planning for anticipated new standards in water safety which will require a Board change, as well as giving urgent consideration to how water safety will be maintained during this period. More recently, there has been discussion on migration plans, and planning for engagement with IHSL and Multiplex.
- 3.3 In order to provide co-ordinated advice to the Cabinet Secretary for Health and Sport, an Oversight Board has been established to seek assurance from NHS Lothian that according to its due diligence and governance, the facility is ready to open; and from NHS National Services Scotland that its agreed diligence has been successfully completed.

- 3.4 To support the work of the Oversight Board, two reviews have been commissioned by Scottish Government with the Director of Health Finance as the Lead Director. The first is by KPMG to review the events leading up to the decision to delay the move, the professional and technical advice given to the Board in relation to derogations and the governance arrangements for the project. The second is a technical review by Health Facilities Scotland (HFS) and Health Protection Scotland (HPS) to verify that all aspects of the building design and build meet the appropriate standards. This work will be undertaken in partnership with IHSL who own the building and Multiplex the contractor, whose contract is with IHSL, and its supply chain.
- 3.5 Both these reviews are underway with a number of internal interviews already completed by KPMG and a number with external partners including Scottish Futures Trust, IHSL, and our legal and technical advisers. In addition, KPMG have been provided with the high-level review undertaken by Scott Moncrieff on Audit Scotland's behalf around the Settlement Agreement between NHSL and IHSL considering project governance and value for money. This concluded that the Board had provided evidence of detailed evaluation of the qualitative and quantitative options available to it before proceeding with the Settlement Agreement option. It also noted that all the options reasonably available to NHS Lothian came with some adverse impact.
- 3.6 In terms of the HFS/HPS commission, the project team have made available a wide range of information including the overall Project Agreement with IHSL (as amended by the Settlement Agreement). Both HFS and HPS have participated in a number of technical workshops with a further two planned on the 5th and 7th August. The immediate priorities for the Commission are the ventilation, water, and drainage systems and evaluation will include advice from HFS/HPS' independent experts. This phase is anticipated to be complete by early September. However, their scope includes all critical systems and the timeline for this is not known at this stage, nor how it will interface with any phased migration agreed once the outcome of the initial phase is concluded.

Current Position on Rectification

- 3.7 Following a number of technical workshops on the Critical Care ventilation, all parties have a common (high level) understanding of the solution for this. This now requires engagement from Multiplex's designers to further develop the technical design in relation to the introduction of a second air-handling unit, this being dependent on the agreement of the most effective means of managing its implementation. At the time of writing, a Board Change request has been issued in draft form to IHSL, following the change process as set out in the Project Agreement. The Board and IHSL are assessing how best contractually to deliver a response to this request in order to minimise delay. However, the timeline for rectification will only be known once the design is complete. Over and above this, there are several other ventilation issues identified by IOM but not deemed critical to opening. The Board is currently working with IHSL, Multiplex and HFS/HPS to agree if change is required and where responsibility lies for this.
- 3.8 It should be noted that until the HFS/HPS review of ventilation is complete, as well as the Board's commissioned IOM review, it is not possible to assess whether any other works will be required.

Programme/Occupation

- 3.9 Recognising that changes required for critical care are only relevant for Children's services the Chief Officer (Acute) has been looking at whether a partial migration might be possible. The initial assessment has focussed on DCN services and concluded that services could move independently of Children's services. Any decision on a partial migration will however be dependent on understanding the works required to address critical care and to ensure that this does not impinge on DCN at anytime. Without a timeline for this, it is not possible to conclude this work.

Communication with staff and patients

- 3.10 Board members were advised on the action taken to brief patients and staff in the immediate period after the announcement of the delay. This included the establishment of a helpline, hosted by NHS 24 and still live, contact with all patients booked for Outpatients and diagnostics in date order, a general letter for patients and families, a new campaign on the radio and a media release with key messages for patients and their families. In relation to the site, a Senior Paediatric nurse and doctor were available at the RIE Emergency department and transport and on-site support for redirection was established.
- 3.11 In parallel with the issue of the Board paper, it is proposed that the update to the Board will form the basis for a further communication with staff.

4. Key Risks

- 4.1 There is a risk that there are further critical system issues requiring rectification which will impact on the timeline for occupation. In addition, there is a risk that IHSL will require extended engagement with their funders on changes required.

5. Risk Register

- 5.1 The delay to the Project and the lack of certainty on the timeline for occupation will be added to the NHS Board risk register.
- 5.2 Once the programmes are established, there may well be a need for wider staff engagement and consultation and indeed potentially for public and patient engagement in relation to service delivery but this will be determined by each programme. Any such work may also require an impact assessment to be carried out. Where any changes are deemed to be significant in service terms the Scottish Health Council and any other bodies would be involved.

6. Resource Implications

- 6.1 There will be capital and revenue implications associated with the delay and rectification. The quantification of these implications is currently being assessed and will be reported to the Finance & Resources Committee.

Susan Goldsmith
 Director of Finance
 1 August 2019

NHS Lothian

Board
7 August 2019

Medical Director

NHS Lothian Corporate Risk Register**1 Purpose of the Report**

- 1.1 The purpose of this report is to set out NHS Lothian's Corporate Risk Register for assurance.

Any member wishing additional information should contact the Executive Lead in the advance of the meeting.

2 Recommendations

The Board is recommended to:

- 2.1 Accept a new risk on the Corporate Risk Register associated with the delay in providing clinical care for the Royal Hospital for Children & Young People (RHCYP) and Department of Clinical Neurosciences (DCN) on the Royal Infirmary of Edinburgh campus.
- 2.2 Accept a new risk on the Corporate Risk Register associated with the delivery of NHS Lothian's Level 3 Recovery Plans to the agreed timescales which is covered in detail in the paper NHS Board Performance Escalation Framework agenda item 5.
- 2.3 Accept the new Brexit risk has received moderate assurance from the July 2019 Healthcare Governance Committee (HCG).
- 2.4 Note the HCG has agreed to embed a set of questions into the Risk Register papers to improve identification and response to risk to quality of care.
- 2.5 Accept that a range of workshops and one-to-one meetings have taken place in preparation for moving to the new risk template by September 2019 and in response to internal audit recommendations.

3 Discussion of Key Issues

- 3.1 As part of our systematic review process, the risk registers are updated on Datix on a quarterly basis at a corporate and an operational level. Risks are given an individual score out of 25; based on the 5 by 5 Australian/New Zealand risk scoring matrix used; 1 being the lowest level and 25 being the highest. The low, medium, high and very

high scoring system currently used, is based on the same risk scoring matrix, remains unchanged (see Appendix 2 for corporate risks).

3.2 There are currently 15 risks in total in Quarter 1; the 8 risks at Very High 20 are set out below.

1. The scale or quality of the Board's services is reduced in the future due to failure to respond to the financial challenge
2. Patient Safety in Royal Infirmary of Edinburgh Accident & Emergency Department
3. Achieving the 4-Hour Emergency Care standard
4. Timely Discharge of Inpatients
5. General Practice Sustainability
6. Access to Treatment (organisational risk)
7. Access to Treatment (patient risk)
8. Brexit

3.2.1 The Board is fully sighted on the risk associated to the delay in providing clinical care for children and DCN patients that results from the delay to the move into the new RHCYP/DCN building on the Little France campus. The Board is asked to accept this risk onto the Corporate Risk Register which is described below:-

Risk Description (4813)

There is a risk to patient safety, experience and outcome of care plus financial impact, due to the delay in providing clinical care for RHCYP and DCN patients on the Royal Infirmary of Edinburgh campus.

Committee Assurance

Finance & Resources Committee will be the primary committee for assurance, with Healthcare Governance Committee having oversight of clinical impact. The clinical consequences of the delayed move as part of this risk was discussed at the July 2019 HCG.

Grading – Very High 20

Immediate plans to mitigate the risk are in place. This risk cannot, however, be fully mitigated as a number of controls are outwith NHS Lothian, hence escalation to the Corporate Risk Register and level of grading.

3.2.2 In response to NHS Lothian being escalated to Level 3 by the Director General Health & Social Care and Chief Executive of NHS Scotland, it is recommended that a new risk is added to the Corporate Risk Register while acknowledging that a number of the areas highlighted for improvement are currently identified as separate items on the Corporate Risk Register. The paper titled NHS Board Performance Escalation Framework: NHS Lothian recovery plan (Agenda item 5) sets out in detail the six challenging service areas that require further improvement as part of NHS Lothian's recovery plan associated milestones and risks. The description of the new risk is as follows.

Risk Description (4820)

There is a risk that the Board does not deliver NHS Lothian's Level 3 Recovery Plans in the agreed timescale impacting on patient experience and outcome of care.

The controls to mitigate this risk are set out in the more detailed paper along with associated risks.

- 3.2.3 The Board and Governance committees of the Board need to assure themselves that adequate improvement plans are in place to attend to the corporate risks pertinent to the committee. These plans are set out in papers presented to the Board and the relevant governance committees. Governance Committees continue to seek assurance on risks pertinent to the committee and level of assurance along with a summary of risks and grading is set out below in Table 1.
- 3.2.4 With the dissolution of the Acute Hospitals Committee in January 2019, HCG has taken on responsibility to provide assurance to the Board for two additional risks which are the Access to Treatment risks at a Patient and Organisational level and Waste Management with a focus on the impact of these risks to person-centred, safe and effective care. These will be considered at the November 2019 HCG as part of the reporting on the Quality of Care in acute services.
- 3.2.5 The HCG considered the new Brexit risk in July 2019 and accepted moderate assurance. The new Waste Management risk will be considered at the Health & Safety Committee in August 2019.
- 3.2.6 The HCG Committee's annual report feedback (2018-19), identified the requirement to build members' capability to scrutinise effectively papers being presented to the Committee. This is important in order to ensure the committee works effectively and efficiently given the scale of its remit. A paper has been compiled building on the NHS Lothian Quality Map and service review template, plus a number of documents set out below:-
- Improvement Focused Governance (<https://www.gov.scot/publications/improvement-focused-governance-non-executive-directors-need-know/>)
 - What NHS Non-Executive Directors can expect from induction (<https://org.nhslothian.scot/LothianNHSBoard/handbook/Pages/default.aspx>)
 - Being Effective: what Non-Executive directors need to know (<https://www.gov.scot/publications/being-effective-nhs-non-executive-directors-need-know/pages/2/>)
- 3.2.7 This paper included questions concerning risks to quality of care and focuses on remedial actions to address key risks to quality, acknowledging that actions should also focus on learning and celebrating successes. Questions asked following presentations or papers are not limited to those below, but this focus will support HCG in addressing its substantial agenda.

Key Questions

- What are the key risks related to quality and how are they quantified. What information (data) is available to assess the risks
- For all actions identified, they should answer the following questions:
 - How will you know that the action agreed has been implemented?

- How will you know if the action has had any impact when it is implemented? (How will it be measured?)
- Is the action strong enough to lead the change required?
- Who is accountable for the delivery, monitoring and reporting of the progress and improvement against the actions agreed?
- Is it clear how actions will support person-centred, safe, effective care?

3.2.8 The HCG agreed in July 2019 to embed into the Key Risks section (Section 4 in this Board paper) to prompt those writing the paper to review risks explicitly with regard to quality and the associated outcomes in order to inform assurance.

3.2.9 Links to each risk in Appendix 1 have been embedded in the below table (please click on individual Datix risk number in the table).

Table 1

Datix ID	Risk Title	Committee Assurance Review Date	Initial Risk Level	Jul-Sep 2018	Oct-Dec 2018	Jan-Mar 2019	Apr-June 2019
3600	The scale or quality of the Board's services is reduced in the future due to failure to respond to the financial challenge. Update provided July 2019	<u>Finance & Resources Committee (F&R)</u> November 2018 - F&R agreed to change the assurance level from limited to moderate, though the risk remains Very High due to long-term financial challenges. May 2019 – F&R considered Financial Plan – limited resources due to reliance on non-recurring funding.	High 12	Very High 20	Very High 20	Very High 20	Very High 20
3203	Unscheduled Care: 4 hour Performance – Organisational Risk. Update provided July 2019	<u>Healthcare Governance Committee (HCG)</u> October 2018 Acute Services Committee continued to accept limited assurance. HCG Jan 2019 update accepted moderate assurance re plan in place to improve 4 hour performance and safety at RIE. Plan subject to external scrutiny.	High 10	Very High 20	Very High 20	Very High 20	Very High 20
4688	There is a risk to patient safety and outcome of care due to unreliable, untimely triage/assessment and treatment, and overcrowding leading to increased likelihood of patient harm at the Royal Infirmary of Edinburgh. Update provided July 2019	<u>HCG Committee</u> Healthcare Governance considered plans in place to mitigate risk to safe, effective, person-centred care in March 2019 – Moderate assurance Audit & Risk Committee –November 2018 – Moderate assurance Plan also subject to external scrutiny.			Very High 20	Very High 20	Very High 20
3726	Timely Discharge of Inpatients (Previously Unscheduled Care: Delayed Discharge). Update provided July 2019	<u>HCG Committee</u> November 2018 HCG continued to accept limited assurance.	Very High 20	Very High 20	Very High 20	Very High 20	Very High 20
3829	GP Sustainability.	<u>HCG Committee</u> November 2018 HCG continued to	Very	Very	Very	Very	Very

Datix ID	Risk Title	Committee Assurance Review Date	Initial Risk Level	Jul-Sep 2018	Oct-Dec 2018	Jan-Mar 2019	Apr-June 2019
	Update provided July 2019	accept limited assurance, with some evidence of improved stability with 'in hours' General Practice but increasing instability in 'out of hours' Action plan for 'out of hours' to report back to HCG in May 2019. July 2019 – HCG accepted limited assurance on demonstrating impact on sustainability. Report back in September 2019	High 20	High 20	High 20	High 20	High 20
3211	Access to Treatment – Organisation Risk. Update provided July 2019	<u>Acute Hospitals Committee</u> October 2018 AHC continued to accept limited assurance. The Committee was impressed with the work in progress but also disappointed that performance remained of concern with the volume of patients waiting over 12 weeks. Recognition that systems of control were in place was accepted. To be examined by HCG in November 2019.	High 12	Very High 20	Very High 20	Very High 20	Very High 20
4191	Access to Treatment Risk – Patient. Update provided July 2019	<u>Healthcare Governance Committee</u> January 2019 HCG – moderate assurance. To be considered by November 2019 HCG.	Very High 20	Very High 20	Very High 20	Very High 20	Very High 20
4693	Brexit Updated provided July 2019	Template complete. July 2019 HCG accepted moderate assurance.	Very High 20			Very High 20	Very High 20
4694	Waste Management	Template in development. Risk to be examined at Health & Safety Committee in August 2019.	High 15			High 15	High 15
3454	Management of Complaints and Feedback. Update provided July 2019	<u>HCG Committee</u> March 2019 HCG continued to accept moderate assurance. Reviewed at every second HCG meeting. July 2019 HCG accepted moderate assurance.	High 12	High 16	High 16	High 16	High 16
3527	Medical Workforce Sustainability. Will be updated based on committee feedback.	<u>Staff Governance Committee</u> October 2018 meeting continued to accept moderate assurance. Moderate Assurance March 2019. Paper going to July 2019 committee.	High 16	High 16	High 16	High 16	High 16
3189	Facilities Fit for Purpose Update provided July 2019	<u>Finance & Resources Committee</u> F&R January 2018 - moderate assurance received.	High 15	High 16	High 16	High 16	High 16
3455	Management of Violence & Aggression. (Reported at H&S Committee).	<u>Staff Governance Committee</u> Staff Governance considered in October 2018 and accepted limited	Med 9	High 15	High 15	High 15	High 15

Datix ID	Risk Title	Committee Assurance Review Date	Initial Risk Level	Jul-Sep 2018	Oct-Dec 2018	Jan-Mar 2019	Apr-June 2019
	Update provided July 2019	assurance due to access to training and lone working processes. Moderate Assurance March 2019. Paper going to Health & Safety Committee August 2019.					
3328	Roadways/ Traffic Management (Risk placed back on the Corporate Risk Register December 2015) (Reported at H&S Committee). Update provided July 2019	<u>Staff Governance Committee</u> Update provided January 2019 Staff Governance Committee, January 2019 continued to accept moderate assurance. Paper going to July 2019 committee.	High 12	High 12	High 12	High 12	High 12
1076	Healthcare Associated Infection Update provided July 2019	<u>HCG Committee</u> March 2019 - overall moderate assurance. Reviewed at every HCG meeting. July 2019 – moderate assurance. Standing item on HCG agenda.	High 12	Med 9	Med 9	Med 9	Med 9
3828	Nursing Workforce – Safe Staffing Levels. Update provided July 2019	<u>Staff Governance Committee</u> Staff Governance considered a paper on this risk in October 2018 and continue to accept moderate assurance This risk will be regularly reviewed particularly with respect to District nursing. Moderate Assurance March 2019. A paper is going to Staff Governance July 2019.	High 12	Med 9	Med 9	Med 9	Med 9

3.3 Strategic Risk Framework

3.3.1 Management and assurance committees of the Board are required to ensure that all NHS Lothian plans and controls to mitigate corporate risks have considered the following:-

- New models of Health & Social Care risk
- How the plans seek to improve and innovate
- Mechanisms for collaborative and joint working
- Engagement with the public and patients.

3.4 Strengthening NHS Lothian's Risk Management System

3.4.1 The A&RC considered the outcome of the testing of a new corporate risk register template which sought to demonstrate the relationship between risks on the corporate

risk register; associated strategic plans and, by adding measures to illustrate the adequacy of controls, resulting in a more whole-system approach to risk management in collaboration with Internal Audit. The Board approved the A&RC recommendation to adopt this template. Workshops with handlers and owners are in place to provide the rationale for the template, to focus on improving the description of controls and enhance understanding of NHS Lothian risk management systems in line with Internal Audit recommendations. This will be completed by September 2019, which is in line with to Internal Audit recommendations.

4 Key Risks

- 4.1 The risk register process fails to identify, control or escalate risks that could have a significant impact on NHS Lothian.

5 Risk Register

- 5.1 Not applicable.

6 Impact on Health Inequalities

- 6.1 The findings of the Equality Diversity Impact Assessment are that although the production of the Corporate Risk Register updates, do not have any direct impact on health inequalities, each of the component risk areas within the document contain elements of the processes established to deliver NHS Lothian's corporate objectives in this area.

7 Duty to Inform, Engage and Consult People who use our Services

- 7.1 This paper does not consider developing, planning and/or designing services, policies and strategies, with the exception of the Risk Management Policy and Procedure which required stakeholder engagement (see para 3.5).


8 Resource Implications

- 8.1 The resource implications are directly related to the actions required against each risk.

Jo Bennett

Associate Director for Quality Improvement & Safety

17 July 2019



List of Appendices

Appendix 1: Summary of Corporate Risk Register

Corporate Risk Register

ID	NHS Lothian Corporate Objectives	Title	Description	Controls in place	Updates/Actions	Adequacy of controls	Risk level (current)	Risk level (Target)	Risk Owner	Risk Handler	Assurance
3600	3: Secure Value & Financial Sustainability	The scale or quality of the Board's services is reduced in the future due to failure to respond to the financial challenge.	<p>There is a risk that the Board does not systematically and robustly respond to the financial challenge to achieve its strategic plan.</p> <p>This could be due to a combination of: uncertainty about the level of resource availability in future years, the known demographic pressure which brings major potential service costs and increasing costs of new treatment options, e.g. new drugs, leading to a reduction in the scale or quality of services.</p> <p>NOTE: During the last few years, NHS Lothian has been reliant on non-recurring efficiency savings, which has exacerbated the requirement to implement plans which produce recurring savings.</p>	<p>The Board has established a financial governance framework and systems of financial control. Finance and Resources Committee provides oversight and assurance to the Board.</p> <p>Quarterly review meetings take place, where acute services COO, site/service directors in acute, REAS and joint directors in Primary Care are required to update the Director of Finance on their current financial position including achieve delivery of efficiency schemes.</p> <p>Rationale for Adequacy of Control: A combination of uncertainty about the level of resource availability in future years combined with known demographic pressure which brings major potential service costs, requires a significant service redesign response. The extent of this is not yet known, nor tested.</p>	<p>Risk reviewed for period April to June 2019</p> <p>Risk Grade/Rating remains Very High 20</p> <p><u>Update 28 June 2019</u></p> <p><u>The 2018/19 Annual Accounts, were signed by NHS Lothian Board on Wednesday 26 June and these accounts reflected the position that NHS Lothian had achieved its financial targets.</u></p> <p><u>The 22 May 2019 Finance & Resources Committee noted that the 2019/20 Financial Plan previously considered by the Committee had been discussed and approved at the NHS Lothian Board meeting with a £26m gap and limited assurance that NHS Lothian is able to deliver a balanced plan at this stage. The position is dependent on the use of non recurrent funding to mitigate the recurring gap of £44m.</u></p> <p><u>The 1st quarter financial forecast exercise is currently in progress and will be reported to the Board in September.</u></p> <p><u>Risk levels remain as previously.</u></p>	Inadequate; control is not designed to manage the risk and further controls & measures required to manage the risk	Very High 20	Medium 6	Director of Finance	Deputy Director of Finance	Finance & Resource Committee

ID	NHS Lothian Corporate Objectives	Title	Description	Controls in place	Updates / Actions	Adequacy of controls	Risk level (current)	Risk level (Target)	Risk Owner	Risk Handler	Assurance
3203	2: Improve patient pathways and shift the balance of care	Unscheduled Care: 4 hour Performance	<p>There is a risk that NHS Lothian will fail to meet the 4 hour performance target for unscheduled care which could mean that patients fail to receive appropriate care, due to volume and complexity of patients, staffing, lack and availability of beds, lack of flow leading to a delay to first assessment, a delay in diagnosis and therefore in treatment for patients and a reputational risk for the organisation.</p>	<p>A range of governance controls are in place for Unscheduled Care notably:</p> <p>Board Monthly NHS Lothian Board oversee performance and the strategic direction for Unscheduled Care across the NHS Lothian Board area.</p> <p><u>The view from the External Support Team and Academy and SG Is that the concerns raised throughout the Academy Report had now been fully addressed with a significant programme of activity underway to improve patient experience and performance through the planned test of changes. This marks the conclusion of any formal liaison with the External Support Team in relation to the Review</u></p> <p><u>The Audit & Risk Committee has had overall responsibility for assurance of delivery of the plan on behalf of the Board. In addition, all actions within the plan have an identified governance committee as accountable owner. Each of the relevant committees - Healthcare Governance Committee, Information Governance Committee and Staff Governance Committee has sought assurance throughout the year.</u></p> <p>A number of performance metrics are considered and reviewed weekly, including:</p> <ul style="list-style-type: none"> - 4 hour Emergency Care Standard and performance against trajectory - 8 and 12 hour breaches - Safety - Attendance and admissions - Delayed Discharge (see Corporate Risk ID 3726) - Boarding of Patients - Length of Stay (LOS) - Cancellation of Elective Procedures - Finance - Adherence to national guidance/ recommendations (what Scottish Government expect for the money received) 	<p>Risk Reviewed for period April to June 2019</p> <p>Risk reviewed and approved by Acute Services Committee in November 2017 accepted Moderate Assurance.</p> <p>Risk and Controls reviewed July 2019. Risk Grade/Rating remains Very High/20.</p> <p>Royal Infirmary of Edinburgh</p> <ul style="list-style-type: none"> • <u>The clinical model for the RIE front door is progressing, and a range of estimates regarding required physical capacity at the front door have been collated, based on current ways of working and projected future attendances. The highest estimates are also based on patients being accommodated within a clinical cubicle for their entire length of stay. Work is now required to challenge and validate the model and proposed footprint, and establish related revenue costs. A piece of work involving H&SCP colleagues in looking at existing and potential future alternatives to ED for some attendees is planned for late July/early August, and visits to EDs in London are planned for August 2nd, to compare patient pathways, practice, staffing models and design.</u> <p>Western General Hospital</p> <ul style="list-style-type: none"> • <u>Edinburgh Health and Social Care Partnership (EHSCP) are supporting the loss of 26 beds at the end of September 2019 within the Western General Hospital. Achieving a reduction in the bed base depends on achieving a significant reduction in MoE length of stay. EHSCP recognise that this is the opportunity to change the model of how EHSCP delivers care through a 'home first' approach where ongoing assessment takes place at home or in a homely setting out with a hospital.</u> <p>St John's Hospital</p> <ul style="list-style-type: none"> • <u>The Front Door Redesign at SJH is taking a phased approach. Phase one focuses on the ED footprint and phase two on Ambulatory Care and MAU. SJH ED redesign was progressed to 22nd May F&RC. The Committee approved the capital case of the Standard Business Case and provided clarity regarding the revenue implications. The Business Case for the Front Door Redesign at St John's was approved at the Integrated Board Meeting on Wednesday 26 June 2019</u> 	Adequate but partially effective; control is properly designed but not being implemented properly	Very High 20	Low 1	Deputy Chief Executive	Chief Officer (Acute Services NHSL) / Chief Officer (W/Lothian IJB)	Healthcare Governance Committee

ID	NHS Lothian Corporate Objectives	Title	Description	Controls in place	Updates/Actions	Adequacy of controls	Risk level (current)	Risk level (Target)	Risk Owner	Risk Handler	Assurance
3726	2: Improve patient pathways and shift the balance of care	Timely Discharges of Inpatients	<p>There is a risk that patients are not being discharged in a timely manner resulting in sub optimal patient flow impacting on poor patient, staff experience and outcome of care.</p>	<p>A range of management/governance controls are in place for Unscheduled Care notably:</p> <p>NHS Lothian Board (bi-monthly) oversee performance and the strategic direction for Delayed Discharges across the Lothian Board area.</p> <p>The bi-monthly Healthcare Governance meeting as well as formal SMT and SMG meetings.</p> <p>NHS Lothian's Winter Planning Project Board is now established as the NHS Lothian Unscheduled Care Committee in collaboration with the Integrated Joint Boards</p> <p>Integrated Joint Boards will report via the Deputy Chief Executive to Scottish Government on the delivery of key targets which include Delayed Discharges and actions in response to performance.</p> <p>Delayed discharges are examined and addressed through a range of mechanisms by IJBs which include:</p> <ul style="list-style-type: none"> Performance Management. Each Partnership has a trajectory relating to DD performance and these are reported through the Deputy Chief Executive Oversight of specific programmes established to mitigate this risk for example Edinburgh Flow Board and/or Strategic Plan Programme Board (East Lothian) 	<p>Risk reviewed for period April to June 2019 Reviewed by HCG and continued to accept limited assurance. Update July 2019 Risk Grade/Rating remains Very High/20</p> <p>Action to help tackle DD across NHS Lothian include:</p> <ul style="list-style-type: none"> Criteria-led discharge pilots Locality-based services/discharge hubs developed to support pulling patients out Evidence-based dynamic discharge at each adult site LoS programmes at RIE/WGH Flow Centre live in West Lothian to expedite transfer issues <p>Midlothian</p> <ul style="list-style-type: none"> <u>New DC2A team operational from mid March in Midlothian. Focus will be to pull out early from Medicine and Orthopaedic wards. 100 Patients supported over 4 months, saving circa 500 bed days.</u> <u>Revision of DD planning process. Staff actively track patients from ED/AMU to plan DC, with all Midlothian (over 65) patients receiving Information pack on admission.</u> <u>Carer academy in place. To recruit new carers</u> <u>Clinical model review in place</u> <u>Frailty data analysis now being progressed into models of care</u> <u>SG TEC funding to design a frailty pathway utilising technology</u> <u>RIE Front door redesign pathway development</u> <u>Resilience dashboard to pull health and social care data together to inform operational decision making in times of system heat</u> <u>Midlothian Flow manager post now substantial</u> <u>Midlothian Flow hub capacity increased.</u> <u>5 additional step down beds in MCH</u> <u>Daily discharge planning huddles continue</u> <p>East Lothian</p> <ul style="list-style-type: none"> Continue to hold Multi-site huddle at 8am each day to review all patients delayed. Those identified for discharge, making sure their discharge is on target. Anyone admitted overnight in secondary care - pulled out with discharge to assess or Hospital at Home <p>Edinburgh <u>Edinburgh Health and Social Care Partnership has had Home First – Discharge to Assess signed off by the Executive Management Team to support early discharge and ongoing assessment. They have also had Home First Navigators signed off to work with the Western General Site to focus on people being supported out of the hospital earlier and preventing delayed discharges. Winter bids are currently being considered to support extend the Home First Navigator to the Flow centre to support maintaining people at home who are known to services or could be assessed in their own environment as an alternative to a hospital setting. The current delays remain a challenge with a surge recorded prior to the holiday period. Providers have been challenges with annual leave cover which is impact in on the number of packages waiting in hospital. This should resolve promptly. From a care home perspective –there is capacity however the process of people is a challenge when batching by acute hospitals still is ongoing. This means that it is difficult to allocated to a</u></p>	Adequate but partially effective; control is properly designed but not being implemented properly	Very High 20	Low 1	Deputy Chief Executive	Chief Officer West Lothian H&SCP/Chief Operating Officer (Acting)	Healthcare Governance Committee

social worker in a timely way. This has been raised through the Unscheduled Care committee.

West Lothian

Continues to progress the 4 main workstreams under the delayed discharge improvement plan:

- Optimising flow - focussing on prevention of admission as well as flow through the system.
- Integrated Discharge Hub which is having a positive impact on team working and proactive management of patients from admission through to discharge
- Successfully recruited additional staff to fully implement discharge to assess model
- Intermediate Care review commenced to determine the best option and capacity required for West Lothian

The new Care at Home providers are taking on new clients, this together with proactive management of unmet needs and building relationship with all providers to establish capacity and match demand has had a positive impact on delays with a sustained improvement

The New Care at Home framework has been developed and is in the procurement phase with planned implementation in September 2019

One large care provider is in difficulty and we are working proactively with them and the other providers in the market to stabilise care provision.

ID	NHS Lothian Corporate Objectives	Title	Description	Controls in place	Updates	Adequacy of controls	Risk level (current)	Risk level (Target)	Risk Owner	Risk Handler	Assurance
3829	3. Improve Quality, Safety and Experience Across the Organisation	GP Workforce Sustainability	<p>There is a risk that the Board will be unable to meet its duty to provide access to primary medical services in and out of hours for its population due to increasing population with multiple needs combined with difficulties in recruiting and retaining general practitioners, other staff and premises difficulties (e.g. leases). This may affect:</p> <ul style="list-style-type: none"> Ability of practices to continue to deliver their GMS contract in hours; Ability of practices to accept new patients (restricted lists); Patients not being able to register with the practice of their choice; Patient satisfaction with access to practices; Ability to cover planned or unplanned absence from practice; Ability of LUCS to safely staff rotas with doctors and nurses leading to short notice closure of bases and difficulties in meeting performance targets for appointments and visits; other parts of the health and social care system e.g. secondary care, referrals, costs. <p>As a result of these pressures practices may choose to return their GMS contracts to the NHS Board who may in turn not be able to either secure a new 17j practice or successfully fill practice vacancies or recruit sufficient medical staff to run the practice under 2c (direct provision) arrangements.</p> <p>Practices can be affected by changes or instability at very short notice.</p> <p>Instability in one practice can quickly lead to additional pressure on neighbouring practices.</p>	<p>Governance and performance monitoring</p> <ul style="list-style-type: none"> Regular updates reported to Healthcare Governance Committee on sustainability of general practice in and out of hours. NHS Lothian Board Strategic plan. HSCP Primary Care Transformation and Primary Care Improvement Plans. Reports to Board and Strategic Planning Committee. Establishment of the implementation structure for the new GMS contract – GMS Oversight Group - which will oversee implementation of local plans and measure associated improvement across NHS Lothian. The risk is highlighted on all HSCP risk registers with local controls and actions in place. <p>Core prevention and detection controls</p> <ul style="list-style-type: none"> PCCO maintain a list of restrictions to identify potential and actual pressures on the system which is shared with HSCPs and taken to the Primary Care Joint Management Group (PCJMG). PCJMG review the position monthly with practices experiencing most difficulties by way of reports from Partnerships to ensure a consistent approach across the HSCPs and advise on contractual implications. Ability to assign patients to alternative practices through Practitioner Services Division (PSD). “Buddy practices” through business continuity arrangements can assist with cover for short-term difficulties. Regular out of hours updates at PCJMG. <p>Rationale for Adequacy of Controls - remains inadequate as HSCP transformational plans are only in 2nd year and PCIF funding is relatively static until 2020/21. Some elements of plans are still at developmental stage and GP retention and recruitment is a national issue (see Medical workforce risk. Risk grading therefore remains very high/20).</p>	<p><u>Risk reviewed for period April to June 2019</u></p> <p>Update: July 2019</p> <p>Following review risk remains Very High 20. No change to HSCP levels of risk for primary care sustainability.</p> <p>Healthcare Governance Committee Papers November 2018, January 2019, May 2019 and July 2019 provided some evidence of improved stability in in hours general practice but increasing instability in out of hours. Difficulties in staffing St Johns out of hours base have continued.</p> <p>Based on implementation period of new GMS contract, improvement in primary care sustainability is a process that will take three to four years.</p> <p>Healthcare Governance Committee has requested detailed paper on risk level and criteria for September 2019 meeting.</p> <p>Scottish Government investment in contract implementation over 4 years 18/19 to 21/22) for Lothian = c24m plus NHSL investment of £5m.</p> <p>Scottish Government investment of £0.74m in 18/19 for transformation and stability in out of hours.</p> <p>6 areas in the new contract being implemented: Vaccination Transformation Pharmacotherapy CTACS Urgent Care New Professional Roles Link Workers</p> <p>There has been progress in individual HSCPs and across Lothian in these areas. Some examples: CTACS pilot has begun. Significant increase in pharmacists in primary care. Agreement on Pharmacy Technicians. Removal of 0-5 immunisations from practices. CWIC service in Musselburgh. Mental Health Hubs in West Lothian. CPNs in primary Care in Edinburgh. MSK physios in primary care in Midlothian.</p> <p>National programme on premises loans and leases being implemented in Lothian. All 18/19 loan applications will be approved and 7 leases are now being considered to be taken over by NHS Lothian.</p> <p>All HSCPs have developed revised Primary Care Improvement</p>	Inadequate; control is not designed to properly manage the risk and further controls and measures are required	Very High 20	High 16	Medical Director	Director of Primary Care	Healthcare Governance Committee

			<p>LUCS will continue to have difficulties maintaining safe staffing at all 5 bases <u>and may have to restrict base opening hours at short notice or on a planned basis.</u></p>		<p>Plans and these have been approved. However PCIF funding only rises 20% from 2018/19 to 2019/20. So limited capacity for increases in support to practices.</p> <p>National oversight group on out of hours set up. In Lothian Urgent Care Resource Hub Board set up and operational sustainability meetings established.</p> <p>Action plan for out of hours across Lothian to be delivered in <u>September 2019.</u></p>				
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ID	NHS Lothian Corporate Objectives	Title	Description	Controls in place	Updates / Actions	Adequacy of controls	Risk level (current)	Risk level (Target)	Risk Owner	Risk Handler	Assurance
3211	2. Improve patient pathways and shift the balance of care	Access to Treatment Risk – Organisation Risk (Previously Achievement of National Waiting Times)	There is a risk that NHS Lothian will fail to achieve waiting times targets for inpatient / day case and outpatient appointments, including the overall Referral To Treatment target, due to a combination of demand significantly exceeding capacity for specific specialties and suboptimal use of available capacity, resulting in compromised patient safety and potential reputational damage. Bowel screening Service pressure is a new addition to this register. Due to a change in the test that took place in October 2017 this service has seen its numbers requiring urgent scope rise each month and has now doubled. All Health Boards across Scotland are experiencing the same pressure.	<p>Governance & performance monitoring</p> <ul style="list-style-type: none"> Weekly Acute Services Senior Management Group (SMG) meeting Monthly Acute Services Senior Management Team meeting- monthly outturn and forecast position Performance reporting at Corporate Management Team (CMT) NHS Lothian Board Performance Reporting Performance Reporting and Assurance to Acute Hospital Committee Monthly access and Governance Committee, to ensure compliance with Board SOPs relating to waiting times. <p>Core prevention and detection controls</p> <ul style="list-style-type: none"> Establishment of the Delivering for Patients Group to monitor performance and work with individual specialties to delivery efficiency improvements against key performance indicators on a quarterly basis Scope for improvement identified with recommendations made to specialties e.g. target of 10% DNA rate; theatre session used target of 81 %, cancellation rate 8.9%; for every 10 PAs recommendation of 6 DCCs directly attributed to clinic or theatre. Increase in staffing in Bowel screening to carry out pre-assessment .Increased number of bowel screening sessions to meet increased demand and reduce length of wait effective from 1 June 2019. <p>Rational for adequacy of controls Some controls are in place and additional controls currently being designed and as such, overall control is inadequate. Controls and actions are now being reviewed quarterly at Acute SMT to ensure any areas of concern are highlighted and actioned. Risk remains high while demand continues to exceed available capacity.</p>	<p>Risk Reviewed for period April to June 2019 Reviewed by AHC in Oct 2018 and accepted moderate assurance that the performance expected as assessed with the resources available would be met, but limited assurance that the Scottish Government target for waiting times would be met. The AHC has now been de-commissioned.</p> <p>An update was provided to HGC in March 2019, within the Risk Register Report, as follows ‘October 2018 AHC continued to accept limited assurance. The Committee was impressed with the work in progress but also disappointed that performance remained of concern with the volume of patients waiting over 12 week. Recognition that systems of control were in place was accepted.’</p> <p>March 2019 HGC meeting minutes noted that <i>all</i> Corporate Risk Register descriptions have been agreed and that work is progressing to document the controls and associated measures. The risk was presented to the Board for approval in April 2019.</p> <p>Update July 2019 No updates to Risk status at HGC held on 9/7/2019.</p> <p>Risk remains V High, all actions remain ongoing in addition</p> <ul style="list-style-type: none"> <u>Cancer funding Bids generated to continue funding for staff in Bowel Screening Team.</u> <u>Adverts in national Journal for Nurse Endoscopist</u> <u>Funding secured for trainee Nurse Endoscopists x2</u> <u>Expected endoscopy list benefit from GI consultant x2 posts funded through GI sustainability work.</u> <u>ELCH Endoscopy facilities open 9 September providing 2 rooms (14 additional sessions) dependant on recruitment of operators.</u> <p>Ongoing Actions</p> <ul style="list-style-type: none"> Weekly Acute SMG monitors TTG, out-patient, long waits, cancer performance, theatre performance and recovery options on a weekly basis, with monthly deep dives into theatre and cancer performance. Monthly Acute SMT has sight of Access & Governance minutes, to monitor ongoing actions and escalate as appropriate. Performance is also reported to, and monitored by, Acute CMT. Performance is also monitored by the Board using the Quality & Performance report, which is also reviewed at Acute SMT. <p>Additional Actions</p> <ul style="list-style-type: none"> The national Waiting Times Improvement Plan (WTIP) published in October 2018 outlines the Scottish Government’s approach to delivering improved performance against key access standards. A Lothian WTIP Programme Board has been established and the programme structure 	Inadequate – control not designed to properly manage risk: further controls required	Very High 20	Rare 1	Deputy Chief Executive	Chief Officer Acute Services	Acute Services Committee

				<p>is aligned to the national framework which identifies three key themes in relation to the WTIP: clinical efficiency and effectiveness, new models of care and developing additional capacity. As part of this programme, in 2018/19 Lothian received £2.7m in additional funding to reduce waiting times. In 2019/20 an additional £16.5m of non-recurrent funding has been confirmed by Scottish Government to improve access performance. There is also a further £5m of non-recurrent funding from NHS Lothian. Service trajectories developed for 2019/20. Service based sustainability plans, aligned to national themes, and are being developed to manage backlog as well as any recurring gap between demand and capacity.</p> <ul style="list-style-type: none"> • Implementation of a Theatres Improvement Programme – a significant programme with multiple work streams (Pre-assessment, HSDU, Booking and Scheduling, Workforce) to improve theatre efficiency. • Establishment of an Outpatient Programme Board that focuses on demand management, clinic optimisation and modernisation. • Service improvement work was being supported by the DfP quarterly reviews, which in turn were supported by more regular meetings with service management teams and clinicians to develop and implement improvement ideas, and to facilitate links to the Outpatients and Theatre improvement programmes. Running action notes were kept at each service meeting, and regularly reviewed by service management teams and the DfP core group. This first set of meetings has concluded but a second set is under review and it or a suitable replacement will be undertaken soon, with the intention of covering additional specialties. • Scottish Government have also engaged the North of England Commissioning Support Unit to undertake a deep dive, short focussed piece of primarily focussed on 12 week TTG performance for five specialties : Orthopaedics, Urology, Colorectal, General Surgery and Vascular. <p>Risk Grade/Rating remains Very High/20</p>			
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ID	NHS Lothian Corporate Objectives	Title	Description	Controls in place	Updates / Actions	Adequacy of controls	Risk level (current)	Risk level (Target)	Risk Owner	Risk Handler	Assurance
4191	2. Improve patient pathways and shift the balance of care	Access to Treatment Risk - Patient	There is a risk that patients will wait longer than described in the relevant national standard due to demand exceeding capacity for in-patient / day case, outpatient services, 31 and 62 day cancer standards and diagnostic procedures within specific specialities.	<ul style="list-style-type: none"> • Clinical risk matrix developed and used to direct resources • Service developed trajectories, that are used to monitor performance, early indications of pressures, and opportunities to improve efficiencies/productivity. • A re-invigorated Delivering for Patients (DFP) programme provides a framework for learning and sharing good practice through a programme of quarterly reviews. • New referrals are clinically triaged, a process which categorises patients as Urgent Suspicion of Cancer (USOC), Urgent or Routine. Within each of these categories, patients are triaged into the most appropriate sub-specialty queue, each of which is associated with a different level of clinical risk. Long wait surveillance endoscopies are also clinically triaged to identify any patients that require expedition. • Bowel screening Service pressure is a new addition to this register. Due to a change in the test that took place in October 2017 this service has seen its numbers requiring urgent scope rise each month and has now doubled. All Health Boards across Scotland are experiencing the same pressure Clinical risk is identified in two dimensions: 1) the probability that due to length of wait the patient's condition deteriorates; 2) the probability that due to the length of wait significant diagnosis is delayed. Increase in staffing in Bowel screening to carry out pre-assessment. Increased number of bowel screening slots to meet increased demand, effective 1 June 2019. <u>Please also see July update.</u> • A revised communications strategy has been established to ensure that both patients and referrers are appropriately informed of the length of waits. • If the patient's condition changes, referrals can be escalated by the GP by re-referring under a higher category of urgency. There is an expectation that the GP would communicate this to the patient at the time of re-referral. • Specific controls are in place for patients referred with a suspicion of cancer. Trackers are employed to follow patients through their cancer pathways, with reporting tools and processes in place which trigger action to investigate / escalate if patients are highlighted as potentially breaching their 31-day 	<p>Risk Reviewed for period April to June 2019</p> <p>Reviewed by HCG in March 2019 March 2019 HGC meeting minutes note that <i>all</i> Corporate Risk Register descriptions have been agreed and that work is progressing to document the controls and associated measures. The risk was presented to the Board for approval in April 2019.</p> <p>Update July 2019</p> <p>No updates to Risk status at HGC held on 9/7/2019.</p> <p>Risk remains V High, all actions remain ongoing in addition</p> <ul style="list-style-type: none"> • <u>Cancer funding Bids generated to continue funding for staff in Bowel Screening Team.</u> • <u>Adverts in national Journal for Nurse Endoscopist</u> • <u>Funding secured for trainee Nurse Endoscopists x2</u> • <u>Expected endoscopy list benefit from GI consultant x2 posts funded through GI sustainability work.</u> • <u>ELCH Endoscopy facilities open 9 September providing 2 rooms (14 additional sessions) dependant on recruitment of operators.</u> <p><u>Ongoing Actions</u></p> <ul style="list-style-type: none"> • DFP quarterly reviews for Specialities on the Clinical Risk Matrix had been supported by more regular meetings with service management teams and clinicians to develop and implement improvement ideas, and to facilitate links to the Outpatients and Theatre improvement programmes. Running action notes were kept at each service meeting, and regularly reviewed by service management teams and the DFP core group. The first set of meetings has concluded but a second set is under review and it or a suitable replacement will be undertaken soon, with the intention of covering additional specialities. • Significant redesign and improvement work is being undertaken through the Outpatient Programme Board and through the Theatre Improvement Programme Board, to help mitigate some of the increasing waiting time pressures and clinical risks. • Revised communications strategy includes an "added to outpatient waiting list" letter, which informs patients that their referral has been received, and that some service waits are above the 12-week standard. Current waiting times are also published on <i>RefHelp</i>, making them available to GPs at the time of referral. It has been agreed (March 2017) that a link to <i>RefHelp</i> waiting time information will be included in letters to patients, allowing them to check service waiting times regularly. There has also been the implementation of 	Inadequate – control not designed to properly manage risk: further controls required	Very High 20	Medium 4	Deputy Chief Executive	Chief Officer Acute Services	Acute Services Committee

				<p>and / or 62-day targets. Trackers undergo ongoing training, and have access to clear escalation guidance on how to deal with (potential) breachers.</p> <p>Rationale for adequacy of controls Some controls are in place and additional controls currently being designed and as such, overall control is inadequate. Controls and actions are now being reviewed quarterly at Acute CMG to ensure any areas of concern are highlighted and actioned. Risk remains high while demand continues to exceed available capacity.</p>	<p>a Keep in Touch initiative (Dec 2017) which is a co-ordinated process whereby all long wait patients are called or lettered by a member of clerical staff. This process has clinical endorsement. This is to ensure they are aware they are still on the list and will receive an appointment at the earliest opportunity. This also allows any patients who feel their symptoms are worsening to be escalated for clinical review to the CSM. It also results in greater efficiencies as patients often advise they no longer require or have had a procedure already and so are removed from the list. This then allows a slot to be used for another patient.</p> <ul style="list-style-type: none"> • Keep In Touch is continuing with a focus on the longest waits for outpatient and endoscopy with the aim to contact every long waiting patient. • Information on the projected length of wait throughout a patient's pathway is communicated clearly to patients at clinical appointments throughout their cancer journey. <p>Additional Actions</p> <ul style="list-style-type: none"> • The national Waiting Times Improvement Plan (WTIP) published in October 2018 outlines the Scottish Government's approach to delivering improved performance against key access standards. A Lothian WTIP Programme Board has been established and the programme structure is aligned to the national framework which identifies three key themes in relation to the WTIP: clinical efficiency and effectiveness, new models of care and developing additional capacity. As part of this programme, in 2018/19 Lothian received £2.7m in additional funding to reduce waiting times. In 2019/20 an additional £16.5m of non-recurrent funding has been confirmed by Scottish Government to improve access performance. There is also a further £5m of non-recurrent funding from NHS Lothian. Service based sustainability plans, aligned to national themes, are being developed to manage backlog as well as any recurring gap between demand and capacity. • Scottish Government have also engaged the North of England Commissioning Support Unit to undertake a deep dive, short focussed piece of primarily focussed on 12 week TTG performance for five specialties : Orthopaedics, Urology, Colorectal, General Surgery and Vascular. • Cancer tracking resource and processes have been strengthened • Non recurring additional capacity in place for a number of high risk services to reduce length of wait and associated clinical risk • The Executive Medical Director and Chief Officer for Acute Services have developed a clinical risk matrix for specialties under waiting time pressures. This then ensures that prioritisation of additional resource is given to specialties where long waits will be of greatest clinical risk to the patient. <p>Risk is very high while demand exceeds available capacity and as such Risk Grade/Rating as at July 2019 is Very High/20</p>				
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Corporate Objective	Risk Description	Linked Key Risk	Controls	Key Measures	Updates
<p>Improve Quality, Safety & Patient Experience</p>	<p>The consequences of Brexit are expected to be substantial and far reaching, although specific impacts will depend on the type of agreement (if any) reached between UKG and EU. There has been exhaustive discussion of this in the media and some guidance has been provided by government, however the future remains opaque in many areas.</p> <p>There is a risk that patient experience and outcome care may be compromised due to uncertainty relating to Brexit.</p> <p>The areas that require close observation and require risk assessment and mitigation identified include:-</p> <ul style="list-style-type: none"> • Workforce; • Supply of medicines and vaccines; • Supply of medical devices and clinical consumables; • Supply of non-clinical consumables, goods and services. 	<ul style="list-style-type: none"> • Finance Risk (3600) • Medical Workforce Sustainability (3527) • Nursing Workforce (3828) <p>Associated Strategic Plans</p> <ul style="list-style-type: none"> • National Plan • NHS Lothian Financial Plan <p>Assurance Committees</p> <ul style="list-style-type: none"> • Healthcare Governance Committee – July 2019 Accepted Moderate Assurance <p>Grading</p> <ul style="list-style-type: none"> • Very High 20, due to level of uncertainty and reliability on national planning <p>Adequacy of Controls</p> <p>Inadequate control due to uncertainty at local and national level including the political agenda which impacts on the ability to manage the risk at a local and national level.</p>	<ul style="list-style-type: none"> • A system in place to impact assess the key risks, including likelihood/consequences, informed by specialists in the areas of Pharmacy, Procurement and Workforce. This intelligence informs plans to mitigate the risk and includes application of RAG grading and identification of variation as a way to prevent and detect the risk • The local system above informs national planning including any emerging issues locally and nationally that require a response with a requirement to national requirements • The Strategic Brexit Management Group considers the assessment and response to risks identified through national and local impact assessment groups:- <ul style="list-style-type: none"> ○ The group has determined priorities and agrees actions based on default strategic objectives for major incidents:- <ul style="list-style-type: none"> • Save lives and restore health • Safeguarding staff, patients and public • Minimise impact on normal services ○ Group also considers Scottish Government correspondence and impact on local, regional and national services ○ Group includes senior managers and specialist advisers and meets fortnightly, and is chaired by the Deputy Chief Executive. Members are routinely included in regional and national work to inform risk mitigation ○ The group is agile and can meet quickly to respond to emerging issues along with more planned responses to management of risks ○ Based on intelligence to inform contingency planning for key areas such as Pharmacy and Procurement which is being managed nationally. 	<ul style="list-style-type: none"> • Availability of medicines numbers and shortages • Procurement data • Workforce data from impact assessments <p>The data/intelligence will be presented to the pertinent governance committee when providing assurance on the management of this risk.</p>	<p>July 2019</p> <p>Paper taken to HCG in July 2019 and moderate assurance accepted.</p>

ID	NHS Lothian Corporate Objectives	Title	Description	Controls in place	Updates / Actions	Adequacy of controls	Risk level (current)	Risk level (Target)	Risk Owner	Risk Handler	Assurance
3454	3. Improve Quality, Safety and Experience Across the Organisation	Management of Complaints and Feedback	<p>There is a risk that learning from complaints and feedback is not effective due to lack of reliable implementation of processes (for management of complaints and feedback) leading to the quality of patient experience being compromised and adverse effect on public confidence and expectation of our services.</p> <p>It is also acknowledged that a number of other corporate risks impact on risk of the organisation being complained about i.e. waiting too long at ED, cancelled or waiting too long for an operation or time to see a GP.</p>	<p><u>Governance and performance monitoring</u></p> <ul style="list-style-type: none"> Routine reporting of complaints and patient experience to Board meetings as required Regular reports to the Healthcare Governance Committee - complaints and patient experience reports. Additional reports are submitted to the Audit and Risk Committee Monthly quality and performance reporting arrangements include complaints and patient experience Internal Audit 'Management of Complaints & Feedback'. <p><u>Core prevention and detection</u></p> <ul style="list-style-type: none"> The complaints improvement project board, chaired by the Executive Nurse Director oversees implementation of the new complaints handling model for management and learning from complaints as part of a wider improvement project to improve patient experience Feedback and improvement quality assurance working group meets monthly, chaired by Non-executive Director and is overseeing implementation of the SPSP action plan Corporate Management Team and Executive Nurse Directors group review and respond to weekly/monthly reports <p>Complaints management information available on DATIX dashboard at all levels enabling management teams to monitor and take appropriate action. Weekly performance reports on complaints shared with clinical teams.</p> <p>Patient experience data is fed back on a monthly basis at service and site level to inform improvement planning and is available via Tableau Dashboard.</p> <p>Rationale for inadequate controls: Governance processes and improvement plans are in place but yet to be fully implemented.</p>	<p>Risk Reviewed for period April – June 2019</p> <p>Update July 2019</p> <ul style="list-style-type: none"> Complaints Improvement Project Board in place chaired by the Executive Nurse Director and a refreshed membership was agreed. Full Business Case was approved by CMT for investment into the PET team. New job descriptions for all posts in the team have been through the Job Evaluation process. Organisational change process will then be enacted. A number of teams across the organisation are assisting with complaints data collection to support the new CHP. Feedback & Improvement Quality Assurance Working Group chaired by Non Executive oversaw the completion of SPSO action plan. Reviewed its terms of reference and agreed to meet again in 6 months. Now with a focus on learning from complaints. Bi-annual meetings with the new Ombudsman agreed. Combined complaints and patient experience report continues. Internal Audit review of complaints completed. All recommendations now completed. Introducing a Quality Assurance process, tested with SIJ and RHSC & Maternity. Ongoing support, training and awareness-raising within services to increase confidence and capability in managing complaints, 3 dates for SPSO Training on Investigation Skills completed and well received. Additional session to support staff through a SPSO case completed and well received. Focus on the use of Investigation Templates and encouraging staff to access the Complaints Toolkit on the intranet Session led by Non Executive Director for all AMDs & CDs – Being Complained About following publication of Glasgow University Research. NHS Lothian's uphold rate for SPSO annual statistics is 58% which is much improved over the last 3 years. Work ongoing to support the complaints and feedback systems within the 2 prisons encouraging early resolution / Stage 1. Services are being supported to test a range of approaches including Care Opinion, Tell us 10 Things and Care Assurance Standards Tell us Ten things questionnaire has been aligned with "5 must dos with me" and is being tested in 3 acute sites with adults and an amended version with children and young people <p>Risk Grade / Rating is High / 16</p> <p>Rationale for this – moderate assurance given at March 2019 HCG committees. SPSO cases - 60 (01.04.19)</p> <p>Complaints Improvement Project Board in place. Blended approach to patient feedback (TTT, Care Opinion & CAS)</p>	Inadequate: control is not designed to manage the risk and further controls & measures required to manage the risk	High 16	Medium 6	Executive Director Nursing, Midwifery & AHPs	Head of Patient Experience	Healthcare Governance Committee

Corporate Objective	Risk Description	Linked Risks	Controls	Key Measures	Updates
Improve the quality and safety of healthcare	<p>4688</p> <p>There is a risk to patient safety and outcome of care due to unreliable, timely triage/assessment and treatment/discharge, and overcrowding leading to increased likelihood of patient harm at the Royal Infirmary of Edinburgh.</p>	<ul style="list-style-type: none"> • Finance • Complaints management • Management of Deteriorating Patients • Facilities fit for purpose <p>Associated Plans</p> <ul style="list-style-type: none"> • Lothian Hospitals Plan <p>Assurance Committees</p> <ul style="list-style-type: none"> • Healthcare Governance considered plans in place to mitigate risk to safe, effective, person-centred care in March 2019 – Moderate assurance • Audit & Risk Committee – 17th November 2018 – Moderate assurance <p>Grading</p> <ul style="list-style-type: none"> • The grading of this risk is 15 High based on Committee assurance levels plus current reliability of timely triage, assessment and treatment/discharge 	<p>The Audit & Risk Committee has had overall responsibility for assurance of delivery of the plan on behalf of the Board. In addition, all actions within the plan have an identified governance committee as accountable owner. Each of the relevant committees - Healthcare Governance Committee, Information Governance Committee and Staff Governance Committee has sought assurance throughout the year.</p> <p>External review team.</p> <p>Operational leadership, strategic advice and guidance for the delivery of the Programme plan is provided through the Programme Delivery Group (PDG), chaired by the Chief Executive <u>and these meetings have been committed to March 2020.</u></p>	<ul style="list-style-type: none"> • Time to triage • Time to first assessment • Percentage of patients treated, discharged, or admitted within 4-hours of attendance, with a standard of 95% • Staff experience • Significant Adverse Events • Complaints • Volume of Emergency Department (ED) attendances & admissions • Occupancy Rates • 8- and 12-hour breaches • Length of Stay (LOS) • Cancellation of elective procedures 	<p>July 2019</p> <p><u>Royal Infirmary of Edinburgh</u></p> <ul style="list-style-type: none"> • Minor Injuries Unit – continued education and training for staff • New clinical model introduced on Monday 17th June with the department split into 'pods' to better manage the flow of patients, reduce the number of handovers for patients and mitigate patient safety concerns. The dedicated triage role continues in this function with more of a focus on redirection of patients also. Qualitative and quantitative feedback are both positive since implementing this new way of working. • Bespoke QI coaching for ED staff to undertake their own projects. • Safety Pauses continue are positive within the department • Last Touch Point held 13th June 2019. External Review Group and Academy content and indicated a close on the matters raised. • Learning and improvement work being implemented at St John's Hospital and Western General Hospital. <p><u>The view from the External Support Team and Academy and SG is that the concerns raised throughout the Academy Report had now been fully addressed with a significant programme of activity underway to improve patient experience and performance through the planned test of changes. This marks the conclusion of any formal liaison with the External Support Team in relation to the Review</u></p>

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1076	3. Improve Quality, Safety and Experience	Healthcare Associated Infection	<p>There is a risk of patients developing an infection as a consequence of healthcare interventions because of inadequate implementation of HAI prevention and control measures leading to potential increased morbidity and mortality and further treatment requirements, including potential extended stay in hospital.</p> <p>There is also a risk of patients developing an infection linked to the built environment. This includes organisms associated with water safety such as Pseudomonas aeruginosa, and environmental contaminants associated with dust and moulds such as Aspergillus and Lichtheimia corymbisera</p>	<p>Governance, Performance Monitoring & Assurance:</p> <ul style="list-style-type: none"> •The NHS Lothian Infection Committee (LICC) reports to the Board through Healthcare Governance Committee. Reports and minutes are also shared with Lothian Infection Control Advisory Committee (LICAC). •Acute Hospitals Sites and Health & Social Care Partnerships have responsibility for local monitoring/reporting of HAI issues and performance. These local committees report directly to the LICC •Key performance and assurance data is shared and discussed extensively within the organisation at local clinical and senior management meetings •Local Delivery Plan performance data is submitted to Health Protection Scotland. National benchmarking reports are published quarterly. These data are used to inform local improvement. •HAI Level 2 Quality indicator data is available on Discovery (level 1) dashboard providing access and oversight to clinical and senior management teams of NHS Lothian performance against other Boards and NHS Scotland performance. •All Clostridioides (formerly Clostridium) difficile infections and Staphylococcus aureus bacteraemia (SAB) are reviewed monthly to identify themes and key areas for improvement. The outcomes of this are reported monthly at the Acute Clinical Management Team meetings. •SAE reviews are requested for all CDI and SAB related deaths and supported by the IPCT where required. <p>Education & Training:</p> <ul style="list-style-type: none"> •The revised HAI Education Strategy was approved at LICC in July 2018. This is available on the Intranet and has been disseminated through clinical management teams. •A range of e-learning modules which complement mandatory education & training are available on LearnPro/TURAS. The HAI strategy guides staff in selection of these appropriate to role. •The IPCT education delivery plan details other topic and organism specific face to face training available to supplement mandatory requirements. This is open to NHS and H&SC staff. •Ad hoc education and training is provided in response to outbreaks/incidents as required/requested. •Line managers can monitor compliance with mandatory infection prevention and control education through Tableau. <p>Policy, practice & audit:</p> <ul style="list-style-type: none"> •Clinical teams undertake local SICPs audits to provide assurance of compliance and identify areas for further local improvement. The data is collated and available in QIDS. •The IPCT undertake a planned risk based programme of audit. Outcomes are shared with the local clinical and site management team and other key stakeholders including facilities to inform remedial action and improvement work through their local action plans. •A comprehensive range of policies, guidelines and procedures and patient information leaflets are available via the NHS Lothian intranet to supplement national policy and guidance. Quick reference guides are provided. •All outbreaks, incidents and data exceedance are investigated by the IPCT. Where needed, a Problem Assessment Group (PAG) or Incident Management Team (IMT) is convened to further investigate and manage any significant event or outbreak. •Formal debrief meetings are undertaken following IMT to identify wider system needs and share learning. These are reported to the Local ICC and LICAC •The infection services undertake multidisciplinary ward rounds to review complex patients with transmissible infections twice weekly on RIE, WGH and SJH sites. RHSC has a weekly ITU ward round. <p>Surveillance:</p> <ul style="list-style-type: none"> •IT systems are in place to allow IPCNs to monitor incidence, trends and patterns of infection incidence within their geographical region. Set thresholds for further actions exist for some key infections (e.g. > 2 cases of CDI in 28 days). The IPCT support local teams in further review and improvement in response to data exceedance. 	<p>Risk reviewed for period April – June 2019</p> <p>Risk, Controls measures have been updated and actions reviewed.</p> <p><u>The main area of concern currently is related to HAI SCRIBE and environmental issues. We are working in collaboration with Facilities Team to address the issues</u></p> <p>Action plan reviewed and additional actions for SAB updated</p> <p>New actions for the water safety risk identified from recent IMT has been added. Responsibility has been assigned to George Curley as Director of Facilities</p> <p>Risk reviewed to include water borne organisms and environmental contaminants</p> <p>Data submission was completed as for Quarter 2 July –Sept 2018. With the appointment a Data analyst to the team progress to establish reporting HAI through Tableaux Dashboards has recommenced. Blood Culture Contamination Rates will be the first workbook to go live in dashboards from 1st April 2019. Plans will then progress to develop other HAI reports within tableaux dashboards</p> <p>Additional action for compliance with Clinical Risk assessment added.</p> <p>Risk Grade/Rating remains Medium 9 based on the current performance for LDP</p> <p>Risk owned by HAI Executive Lead. This role transferred from the Executive Medical Director to the Executive Nurse Director in April 2018. Risk owner updated as Prof Alex McMahon.</p> <p>Current reporting and governance arrangements for HSCP's are being reviewed. HSCP infection control committee have now met and approved terms of reference.</p> <p>NHS Lothian deferred data collection and submission for mandatory colorectal and major vascular surgical site infection surveillance (commencing April 2017) pending the approval of funding for 2 WTE surveillance nurses. Both posts have successfully been appointed and data submission is anticipated for Quarter 2 July –Sept 2018. Progress in moving to reporting HAI through Tableaux Dashboards has stalled due to resource/ workload issues within informatics teams.</p> <p>LDP targets for CDI were met (and exceeded) to end 2017. LDP targets for SAB were not met to end 2017, but remain within control limits and are not statistically different to other Boards performance</p> <p>The new NES SICEP (Standard Infection Control Education Pathway)</p>	Adequate but partially effective;	Medium 9	Medium 6	Nurse Director	Head of Infection Control	Healthcare Governance

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				<ul style="list-style-type: none"> •Mandatory surgical site surveillance is undertaken in compliance with DL 205(19) for Caesarean section, Hip arthroplasty, colorectal and major vascular surgeries. Where Skin and Soft tissue Infection (SSI) or alert organism surveillance indicates a data exceedance there are processes in place for investigation. <u>Work is ongoing to move reports to Tableaux dashboards.</u> •Enhanced surveillance is carried out for all SAB, CDI and E. Coli bacteraemia (ECB) cases. There is also Multidrug Resistant Organism (MDRO) screening & associated key performance indicator for MRSA and CPE. <p>Antimicrobial Stewardship:</p> <ul style="list-style-type: none"> •The Antimicrobial Management Team reviews and develops Antimicrobial Prescribing Guidelines. These are available on the intranet, and through the Microguide app. •The AMT provides oversight of antimicrobial use, compliance with guidelines and report findings to clinical teams to help drive improvement. AMT provide regular reports to Acute Clinical Management Group. <p>Decontamination:</p> <ul style="list-style-type: none"> •Facilities are responsible for strategic and operational aspects of the decontamination of reusable medical devices. •Strategic direction is provided through the Decontamination Project Board, chaired by the Director of Public Health, which consider capital projects and wider strategic objectives. •Performance monitoring and quality improvement/assurance is provided through the Decontamination Quality Group and is chaired by Service Director, Facilities. •The decontamination lead provides subject matter expertise and support to clinical teams, and provides regular reports to updates to Lothian ICC and LICAC. Business continuity and contingency risks associated with a person dependent post remains a significant risk. •The physical condition of the HSDU environment is significantly degraded, and is struggling to deliver capacity within the existing HSDU to maintain levels of provision for service demands. <p>Built Environment:</p> <ul style="list-style-type: none"> •Many aging buildings do not meet current building standards and some areas are continuing to decline. Maintenance work is prioritised based on risk pending capital planning & approval for refurbishment or re-provision, recognising that within the economic climate, some areas that are considered no longer fit for purpose may remain in use and would pose an HAI risk. •IPCT work in collaboration with clinical, capital and facilities teams to implement national standards and guidance in new builds, refurbishments and maintenance programmes, following the mandatory Healthcare Associated Infection System for Controlling Risk in the Built Environment (HAI SCRIBE) process. •<u>There have been issues identified within the new RHCYP and DCN built environment and this has delayed the planned transfer or services. This is being managed through a separate executive led working group.</u> •<u>There is a requirement to ensure water safety monitoring in Augmented Care areas. Estates water safety group have been asked to progress implementation of the water flushing and water testing. Progress is to be reported through the sites ICC and PLICC including any exception reports for results.</u> •Facilities to ensure high standards of cleaning is maintained and environmental dust kept to a minimum. •Hydrogen Peroxide Vapour decontamination of areas identified requiring enhanced intervention following outbreaks and incidents. •<u>There is a need to increase implementation/use of HAI SCRIBE control measures for all works.</u> 	<p>which replaces the Cleanliness Champion Programme has been reviewed in conjunction with NHS Lothian Education and other key stakeholders.</p> <p>It has been agreed that the complexity of the programme and volume of content would increase the risk of non-compliance with mandatory education. Local scenario based educational resources which map to the NES learning outcomes are now in development with ambition to launch Summer 2018.</p> <p>SICPs compliance >90% reported for NHS Lothian. Potential for improvement to existing audit tools and processes identified. Work to revise this will commence Summer 2018 with support from HPS and Senior Management.</p>						

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3527	3. Improve Quality, Safety and Experience Across the Organisation	Medical Workforce Sustainability	<p>There is a risk that the availability of medical staffing will not be adequate to provide a safe and sustainable service to all patients because of the inability to recruit and increase in activity resulting in the diverting of available staff to urgent and emergency care.</p> <p>Service sustainability risks are particularly high within Paediatrics, Emergency Medicine and Obstetrics & Gynaecology. Achievement of TTGs is at risk due to medical workforce supply risks within Anaesthetics, Geriatrics and Ophthalmology</p>	<p><u>Governance & Performing Monitoring</u></p> <ul style="list-style-type: none"> A report is taken to the Staff Governance Committee when required, providing an update of the actions taken to minimise medical workforce risks in order to support service sustainability and address capacity issues within priority areas. A Lothian Workforce Planning & Development Board has been established to coordinate work within all professional groups including the medical workforce. <p><u>Core prevention and detection controls</u></p> <ul style="list-style-type: none"> Medical workforce risk assessment tool is available and implemented across all specialties. The assessments are fed back to local Clinical Directors and their Clinical Management Teams. They use these to inform their own service/workforce plans to minimise risk. For the risks that require a Board or Regional response the findings are fed back to the SEAT Regional Medical Workforce Group and feed into the national medical workforce planning processes co-ordinated by NES/SG. <p>An update paper was taken to the Staff Governance Committee in October 18 providing a detailed up date and the current risk rating was supported. There was moderate assurance that all reasonable steps are being taken to address the risks.</p>	<p>Risk Reviewed for period April to June 2019</p> <p><u>July 2019</u> <u>Paper going to the Staff Governance Committee week beginning 29th July 2019.</u></p> <p>October 2017 Staff Governance Committee accepted moderate assurance.</p> <p>March 2019 Update</p> <p>In Oct 2018 to March 2019 54 posts out of 105 were unfilled due to either no applications or non appointable candidates. The main specialties affected were Acute Medicine, 3 posts, General Practice 7 posts, and Psychiatry General Adult – 9 posts. Of the unfilled posts 30% were locum posts which reflects the relative unattractiveness of locum posts where there are substantive positions available.</p> <p>Within psychiatry there have been poor training programme fill rates across Scotland with the exception of the SE region. As a consequence it is likely that recruitment will becoming increasingly challenging nationally. The challenges in Lothian in filling consultant posts have thus far related to St John's hospital, there are however difficulties beginning in other areas. Lothian is participating in a Scottish Government lead international pilot campaign for 15 posts and is currently underway.</p> <p>Waiting Times Improvement Plan (WTIP) and Short Stay Elective Centre (SSEC)</p> <p>Workforce requirements are currently being further scoped for the development of the WTIP and SSEC plan. There will be a need for substantial increases within the Anaesthetic and Surgical workforce across Scotland which has not been factored into national training programmes in recent years and as such it will be challenging to fill posts and thereby achieve the required reductions in waiting times. Plans will then be reviewed against the known supply pipelines to assess risk. There is therefore potential for increasing level of risk over the next 2/3 years.</p> <p>Change in pension tax regulations</p> <p>The impact of changes in pension tax regulations is increasingly impacting on the consultant workforce throughout the UK. This may lead to</p>	Adequate but partially effective; control is properly designed but not being implemented properly	High 16	Low 2	Medical Director	Head of Workforce Planning	Staff Governance Committee

				<p>consultants seeking to drop extra programmed activities and/or move to reduced working hours. Whilst this is a potentially serious challenge it is not yet clear, locally work is underway to commission external expert advice to understand the complexities and their impact for individuals to inform a risk assessment of the consultant workforce.</p> <p>Recruitment with the exception of the areas identified does not represent a generalised problem with recruitment for trained grade doctors. The overall level of risk has not however changed substantially since the last update, however for the reasons above this position may change in coming months.</p> <p>Risk Grade/Rating remains High/16</p>				
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ID	NHS Lothian Corporate Objectives	Title	Description	Controls in place	Updates/Actions	Adequacy of controls	Risk level (current)	Risk level (Target)	Risk Owner	Risk Handler	Assurance
3189	5. Achieve Greater Financial Sustainability and Value	Facilities Fit for Purpose	<p>There is a risk that NHS Lothian is unable to deliver an efficient healthcare service because of unsuitable accommodation and clinical environments leading to potential delays in patient care and threatening patient and staff safety.</p>	<p>A stringent Governance Process and structure for reporting of Backlog Maintenance (BLM) has been implemented as follows:</p> <ul style="list-style-type: none"> Property & Asset Management Strategy (PAMS) Group Capital Steering Group Lothian Capital Investment Group (LCIG) Finance & Resources Committee Scottish Government through the annual Property & Asset Management Strategy <p>To ensure accurate reporting the Board has implemented the following controls:</p> <ul style="list-style-type: none"> Ensure that 20% of the Board's estate is surveyed annually for physical condition and statutory compliance by the surveyors appointed by Scottish Government. Review the outcome of surveys with the Operational Hard FM Managers and review and assess risks in accordance with the operational use of the properties to ensure priorities are addressed. Recurring capital funding approved of £2.5m to undertake priority works (high and significant areas) Capital Investment Plan which addresses refurbishment and re-provision of premises, linked to the Estate Rationalisation Programme includes the termination of leases and disposal of properties no longer fit for purpose. The Procurement Framework has been implemented that allows issues identified to be rectified without the need for lengthy tendering exercises 	<p>Risk Reviewed for period – April– June 2019</p> <p><u>Updated July 2019</u></p> <p>Finance & Resources reviewed in Jan 2018 accepted moderate assurance.</p> <p>Action undertaken 2018/19</p> <ul style="list-style-type: none"> <u>Review of Risks and programme of works resulted in BLM exposure as of May 2019 was £44.5m which includes a 3.71% inflationary uplift. This is a 4% reduction from last year. The EAMS system is currently being reviewed and updated.</u> <u>The split between clinical and non clinical was noted as:</u> <ul style="list-style-type: none"> Clinical 39.4m Non clinical accommodation – 5.1m <u>A three year Backlog Maintenance Programme of works was agreed at the May LCIG. The works includes statutory compliance – fire precautions, electrical testing, asbestos management, water quality, mechanical and electrical upgrades and fabric repairs.</u> <u>Although the revenue funded premises (PFI/Hub and NPJ) are not included in the BLM exposure funding has been included in the programme for statutory compliance works and also flooring and redecoration works for the Hub contract.</u> <u>The disposal programme has reduced the BLM exposure – disposal of Corstorphine and Murraypark.</u> <u>The Royal Victoria Hospital buildings have now been demolition (with the exception of the listed buildings) The demolition programme will progress this financial year with proposed demolitions on the REH and AAH.</u> <p>An update was presented to The F&R Committee. The following conclusions were noted:</p> <ul style="list-style-type: none"> The committee agreed to support the current programme of works proposed this financial year and to support the proposal that the Facilities Directorate set up a multi-disciplinary group as described. The Committee agreed to take significant assurance that Management have calculated the BLM in line with NHS Scotland's requirements and BLM remained a priority for Facilities and that high priority items are being undertaken within the funding currently allocated. This aligns with the Board's commitment to prioritise patient safety in particular. Furthermore the Committee agreed to accept the limited assurance that the Board can achieve an adequate reduction in the high and significant risks within BLM with the current level of funding by 2020 (the Scottish Government's objective). <p>Risk Grade/Rating remains High 16</p>	Adequate but partially effective; control is properly designed but not being implemented properly	High 16	Medium 4	Deputy Chief Executive	Director of Operations - Facilities	Finance & Resources Committee

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3455	2: Improve the quality and safety of health care	Management of Violence & Aggression	<p>There is a risk of Corporate Prosecution by HSE under the Corporate Homicide Act or the H&S at Work Act Section 2, 3 and 33 or any relevant H&S regulations. If the risk from violence and aggression adverse events are not adequately controlled. Highest risk would be under H&S at Work Act Section 2 and 3. If we harm our staff (2) or visitors to our sites (3). There is also a statutory requirement to provide an absolute duty of care regarding NHS Lothian staff safety and well being.</p>	<p>Staff Governance Committee (SGC) is taking oversight of this agenda. A report with an action plan was taken during 2018 and the Committee has asked for regular updates on progress.</p> <p>The has supported the proposal that local Health and Safety Committees in each service area should have oversight of this work and where required should elevate to the Pan Lothian Health and Safety Committee.</p>	<p><u>Risk reviewed for period April to June 2019.</u></p> <p><u>Reviewed by group in March 2019 and accepted moderate assurance.</u></p> <p>Staff Governance considered this risk in October 2018 and accepted limited assurance due to access to training and lone working alarms. <u>This is still ongoing in July 2019.</u></p> <p>A review was commissioned by the Executive Lead. The review focused on a number of areas including safety alarms and the procurement of these; training and education and the use of the purple pack as well as reporting and governance at service level.</p> <p>A number of improvements have been made to the purple pack, the reporting through H&S committees, access to training as well as the procurement team taking on the procurement of the alert systems. Two members of the V&A training team have also undergone quality improvement training in order to support services to look improvement ideas.</p> <p>Issue remain however that there is still a high DNA rate at the training programmes and some staff are not activating their alarm systems. <u>This is still ongoing in July 2019</u></p> <p>A further progress report will go to the Staff Governance Committee following the August 2019 NHS Lothian Board H&S Committee.</p> <p>July 2019 Update: Risk Grade/Rating remains High/15 whilst improvement work is being tested and implemented.</p>	Adequate but partially effective; control is properly designed but not being implemented properly	High 15	Medium 6	Director Nursing, Midwifery and AHP's	Head of Health & Safety	Staff Governance Committee

ID	NHS Lothian Corporate Objectives	Title	Description	Controls in place	Updates / Actions	Adequacy of controls	Risk level (current)	Risk level (Target)	Risk Owner	Risk Handler	Assurance
3828	3. Improve Quality, Safety and Experience Across the Organisation	Nurse Workforce – Safe Staffing Levels	There is a risk that safe nurse staffing levels are not maintained as a consequence of additional activity, patient acuity and / or inability to recruit to specific posts, the subsequently high use of supplementary staffing to counteract shortfalls potentially leading to compromise of safe patient care impacting on length of stay and patient experience.	<p>Governance & Performance Monitoring</p> <ul style="list-style-type: none"> Two Nursing and Midwifery Workforce meetings are being held (one for in patient areas and one for community nursing) alternate months. These provide a delivery function and monitor progress against agreed actions. The governance arrangements are through the Safe Staffing Group which reports to Staff Governance Committee Professional governance is through monthly review at the Nurse Directors Committee with Associate Nurse Directors & Chief Nurses. <p>Core Prevention and Detection Controls</p> <ul style="list-style-type: none"> Recruitment Group, Safe Staffing and Nursing Workforce Groups to plan requirements <u>Local Workforce Governance meetings are being held fortnightly to review staffing metrics and outcome</u> The agency embargo remains with every use of agency subject to scrutiny by a senior nurse. Recruitment meetings to oversee the implementation of the recruitment plan are being held monthly Use of tools to ensure safe staffing levels: <ul style="list-style-type: none"> A calendar to ensure the annual use of the nationally accredited workload and workforce tools is in place to ascertain required establishment levels eRostering and SafeCare Live tools are being rolled out to all nursing and midwifery teams, community teams and departments to provide real time information for local decision making around the deployment of the available staffing. Datix reports are escalated on a weekly basis for reports of staffing issues/shortages these are reviewed by the senior management team at the PSEAG. The supplementary staffing and rostering detail is annotated with this information to provide context and enable risk to be understood. Tableau Dashboard in place provides data overview of staffing at all levels. Tableau Dashboard for eRostering KPIs Detailed analysis of staffing demand and supply, together with SAE and complaints data at ward level in acute sites to enable senior managers to pinpoint 	<p>Risk Reviewed for period April to June 2019</p> <p>Last reviewed at Staff Governance Committee October 2018 accepted Moderate Assurance</p> <p><u>UPDATE – July 2019</u> <u>The establishment gap has been consistently over the target of 5% since January 2019 and is currently 5.7% However the establishment gap has been consistently under 6% since September 2016 suggesting a much steadier state Board wide.</u></p> <p><u>A paper for the Staff Governance on 31 July 2019 is proposing a reduction in risk level from a medium 9 to a medium 6. As the establishment gap has been consistently under 6% across the organisation since Sept 2016</u></p> <p><u>ACTIONS</u> <u>The 2019 run of the NMWWP tools is underway with preparation time, a focussed training plan, revised data capture, risk assessment and prioritisation tool.</u></p> <p><u>Tests of change around shift patterns are being used as recruitment incentives.</u></p> <p><u>5 areas establishments are to be enhanced to demonstrate the impact of revising the staffing levels on patient outcomes</u></p> <p><u>A Nursing Outcomes group has been convened to measure, improve and assure the quality of care being delivered as an end to end process</u></p> <p><u>Weekly stats (provisional and unadjusted) are being provided to operational units for local monitoring meetings</u></p> <p><u>Planning is in place for recruitment to a second cohort of Return to Practice with a programme planned to commence in February 2020 .</u></p> <p>Continuing Actions</p> <p>The MA programme is established and taking 3 cohorts into nursing vacancies each year.</p>	Satisfactory; controls adequately designed to manage risk and working as intended	Medium 9	Low 2	Executive Director Nursing, Midwifery & AHPs	Deputy Director – Corporate Nursing & Business Support	Healthcare Governance Committee

				<p>actions to areas of greatest need.</p>	<p>The stress and distress work is being rolled out, one SCN has been seconded from her REH role to support other areas to implement the concept with a view to reducing the use of supplementary staffing for 1:1 specialising and improving the patient experience.</p> <p>The use of SafeCare live will play a pivotal part to the delivery against the Health and Care Staffing Scotland legislation .</p> <p>The eRostering and SafeCare live tools roll out is almost complete with over 10 000 nursing staff, on 459 rosters actively using eRostering.</p> <p>Trend KPIs have been produced and circulated to CNMgrs/ Service managers every 4 weeks, and the dashboard has been developed to provide easily accessible data customised to the clinical area.</p> <p>Risk Grade/Rating remains : Medium 9</p>				
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ID	NHS Lothian Corporate Objectives	Title	Description	Controls in place	Updates/Actions	Adequacy of controls	Risk level (current)	Risk level (Target)	Risk Owner	Risk Handler	Assurance
3328	3. Improve Quality, Safety and Experience Across the Organisation	Roadways / Traffic Management	There is a risk of injury to staff, patients and the public from ineffective traffic management as a result of inappropriate segregation across NHS Lothian sites leading to loss of life or significant injury	<p>A stringent Governance Process and structure for reporting has been implemented as follows:</p> <ul style="list-style-type: none"> ○ Site specific Traffic Management Groups ○ Reported in Facilities H&S quarterly reports ○ Reported to Health & Safety Corporate group via Facilities Health & Safety Group ○ Reported to Staff Governance via Health & Safety Committee <ul style="list-style-type: none"> ● Escalation process in place through the Governance process should congestion become an issue on any site. Governance process is - Local Traffic Management Groups to Facilities Quarterly Reports, Facilities Health & Safety Group (also reported to Facilities Heads of Service) Overarching Health & safety Group ● Traffic surveys have been conducted across all hospital sites, and action plans have been prepared and subject to regular review ● The commission of Independent expert reviews of road infrastructures on high traffic high inpatient sites <ul style="list-style-type: none"> ● Action plans have been developed across all sites by the Local Site Traffic Management Groups and high risk items approved subject to funding. ● Additional dedicated car park personnel in high volume traffic sites has been implemented ● A policy for reversing has been implemented across all sites, which includes – all NHS L vehicles have been fitted with reversing cameras and audible alarms, no reversing unless with the assistance of Banksman ● Risk assessments and procedures are developed and regularly reviewed where risks have been identified, and a more task specific process has been developed. ● Work Place Transport Policy available and reviewed within agreed timescales. 	<p>Risk reviewed for period April – June 2019</p> <p>Reviewed and approved at October 2017 Staff Governance Committee - accepted moderate assurance.</p> <p><u>Update – July 2019</u></p> <p>The Pan Lothian TM Plan is being updated monthly and tabled quarterly at each Heads of Service Meeting. This details the risks, controls and further actions required at each site.</p> <p><u>Works required for the TRO for the REH and AAH have now been completed.</u></p> <p>The following high priority works (identified through the Traffic Management Group) were completed at the WGH::</p> <ul style="list-style-type: none"> ● Improvements to pedestrian crossings at the Clock Tower, D Block ● Repairs and road lining ● Additional car parking spaces in car park 1 ● Provision of cycle shelters <p>Works to undertake the following at St Johns is currently being tendered and works are due to commence:</p> <ul style="list-style-type: none"> ● Installation of foot paths at Estates and at the main entrance ● Traffic Management controls at the boiler house ● Temporary car park for the Mobile Endoscopy Unit <p><u>The 2019/20 Backlog Maintenance allocation have now been approved and funding has been approved to undertake traffic management improvements in the the Edinburgh Community premises..</u></p> <p>Traffic Management works at Whitburn HC have been stopped until land ownership issues have been resolved. Traffic Management works at Liberton, PAEP and MCH have been completed.</p> <p>The Goodison Structural and Civil Engineers Report is now available which provides recommendations on improvements required to the road network required to accommodate RHSC/DCN coming on site. This report highlights further road traffic concerns on the network. Discussions with consort have been helpful and now have agreement to the market for procurement of solutions for the five areas of concern</p> <p>Risk grade/rating remains unchanged - High/12</p>	Inadequate: control is not designed to manage the risk and further controls & measures required to manage the risk	High 12	Medium 8	Deputy Chief Executive	Director of Operations - Facilities	Staff Governance Committee

From: Morrison A (Alan)
Sent: 24 February 2021 13:22
To: McCallum R (Richard)
Subject: *** NHS Lothian RHCYP Oversight Board_ToR (A25383738)
Attachments: ___ NHS Lothian RHCYP Oversight Board_ToR.docx

Morrison, Alan A (U415280) has sent you a copy of "*** NHS Lothian RHCYP Oversight Board_ToR" (A25383738) v1.3 from Objective.

**Oversight Board:
NHS Lothian Royal Hospital for Children and Young
People, Department of Clinical Neurosciences and
Child and Adolescent Mental Health Services**

Terms of Reference

Date Published: July 2019
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Key Information:

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Approvals: *This document requires the following signed approvals:*

Name	Title	Date	Version
Malcolm Wright	Director General and NHSScotland Chief Executive		
Ms Freeman	Cabinet Secretary		

Distribution:

This document has been distributed to:

Name:	Date of Issue:	Version:

<p>1. Name of the Board</p>
<p>Oversight Board: NHS Lothian Royal Hospital for Sick Children, Department of Clinical Neurosciences and Child and Adolescent Mental Health Services</p>
<p>2. Background</p>
<p>Following the decision to halt the planned move to the new Hospital facilities on 9 July an Oversight Board is being established to provide advice to ministers on the readiness of the facility to open and on the migration of services to the new facility.</p> <p>On Tuesday 2 July, NHS Lothian alerted the Scottish Government to an issue with the ventilation system at the Royal Hospital for Children and Young People (RHCYP) in Edinburgh.</p> <p>The Cabinet Secretary was not satisfied that the issue could be resolved within the very short timeframe available before services were to move to the new hospital, and required further assurance on all aspects of compliance with standards across the new hospital. For this reason, the planned move was halted in the interests of patient safety.</p> <p>Work has been initiated to identify the solution needed to ensure the ventilation in the critical care unit in the new site meets the required clinical and safety standards. Scottish Government has commissioned NHS National Services Scotland (NSS) to undertake a detailed assessment of all buildings systems in the new hospital which could impact safe operation for patients and staff, recognising how infection prevention must always be embedded within the design, planning, construction and commissioning activities of all new and refurbished healthcare facilities. This work will be phased, with assessment of water, ventilation and drainage systems prioritised, including the proposed fix for the ventilation unit. This will determine the timeframe for migration of services to the new hospital and a full report is anticipated in September.</p> <p>In order to provide co-ordinated advice to ministers, an Oversight Board is being established which will seek assurance from NHS Lothian that according to its due diligence and governance, the facility is ready to open; and from NHS NSS that its agreed diligence has been successfully completed.</p>
<p>3. Scope of work</p>
<p>The Oversight Board will provide advice in relation to:</p> <ul style="list-style-type: none"> • Advice on phased occupation; • Advice on the proposed solution for ventilation in critical care areas and on any other areas that require rectification works; • Advice on facility and operational readiness to migrate; • Gain information and give advice to NHS Lothian about commercial arrangements with IHSL for completion of works; • The approach to NPD contract management • Identification of areas that could be done differently in future

4. Membership

The Board membership will be:

Christine McLaughlin, Chief Finance Officer, Scottish Government
 Catherine Calderwood, Chief Medical Officer, Scottish Government
 Prof Fiona McQueen, Chief Nursing Officer, Scottish Government
 Susan Goldsmith, Director of Finance, NHS Lothian
 Tracey Gillies, Executive Medical Director, NHS Lothian
 Prof Alex McMahon, Nurse Director, NHS Lothian
 Peter Reekie, Chief Executive, Scottish Futures Trust
 Colin Sinclair, Chief Executive, NHS National Services Scotland
 Alex Joyce, representative from NHS Lothian Joint Staff Side (deputy Gordon Archibald)

Attending the Board to provide advice and assurance will be:

Mary Morgan, Senior programme Director
 Brian Currie, Project Director, NHS Lothian
 Judith Mackay, Director of Communications, NHS Lothian
 Prof Jacqui Reilly, HAI executive lead for NHS National Services Scotland and SRO for centre of excellence work
 Gordon James, Health Facilities Scotland, NHS National Services Scotland
 IHSL would be in attendance on an 'as required' basis

5. Governance

The Board will provide advice to the Cabinet Secretary

6. Meetings

The Board will commence their work in August 2019 and will meet frequently for the first 3 months as appropriate and will agree a plan of work which will determine future meetings. The first meeting will take place on Thursday 8 August 2019.

7. Outputs

The Board will provide advice to the Cabinet Secretary on the decisions set out in the scope

OVERSIGHT BOARD

NHS Lothian Royal Hospital for Children and Young People, Department of Clinical Neurosciences and Child and Adolescent Mental Health Services

Minutes of the meeting of the Oversight Board held at 15.30 on Thursday 8 August 2019 in Meeting Room 8, Waverley Gate, 2-4 Waterloo Place, Edinburgh, EH1 3EG.

Present: Ms C. McLaughlin, Chief Finance Officer, Scottish Government (chair); Ms T. Gillies, Medical Director, NHS Lothian; Ms S. Goldsmith, Director of Finance, NHS Lothian; Professor A. McMahon, Nurse Director, NHS Lothian; Ms D. Murray, Deputy Chief Nursing Officer, Scottish Government; Mr P. Reekie, Chief Executive, Scottish Futures Trust (present items 1, 2 and 6); Mr C. Sinclair, Chief Executive, NHS National Services Scotland.

In Attendance: Mr I. Graham, Director of Capital Planning and Projects, NHS Lothian (on behalf of Mr Currie); Mr G. James, Director of Facilities, Health Facilities Scotland; Ms B. Pillath, Committee Administrator (minutes); Professor J. Reilly, Lead Consultant, Infection Prevention and Control, Health Protection Scotland.

Apologies: Dr C. Calderwood, Chief Medical Officer, Scottish Government; Mr B. Currie, Project Director, NHS Lothian; Professor F. McQueen, Chief Nursing Officer, Scottish Government; Dr G. Smith, Deputy Chief Medical Officer, Scottish Government.

The Chair welcomed members to the meeting and members introduced themselves.

1. Draft Terms of Reference, for approval

- 1.1 The draft terms of reference had been previously circulated. It was clarified that Professor Reilly was included in the list of attendees to the Board rather than Health Protection Scotland input.
- 1.2 It was agreed that the role of the Board would primarily be to advise the Cabinet Secretary on rather than co-ordinate programmes of activities, but if there was a requirement for co-ordination then this would not be excluded.
- 1.3 It was clarified that this was not the forum for discussion of the KPMG report, which was a separate piece of work which is reporting to the Cabinet Secretary.
- 1.4 The Board consisted of decision making members and attendees to give technical advice and guidance. 3 members were NHS Lothian and 3 Scottish Government. Other advisors would be invited to meetings as required.
- 1.5 It was agreed to add to the Terms of Reference that the group could identify areas that could be done differently in the future. **CMcL**
- 1.6 It was agreed that the statement in the section on 'scope of work' about commercial agreements would be revised to make it clear that the role of this group was to gain

understanding and give advice to NHS Lothian about commercial arrangements rather than make decisions about the contract. **CMcL**

1.7 Members approved the draft terms of reference with the changes outlined.

2. Ventilation Solutions

2.1 Mr Graham presented the previously circulated paper regarding ventilation in the critical care area. Members agreed in principle that if a technical solution was designed that would allow 10 air changes per hour in the required rooms in the critical care area, which complied with the relevant SHTM standard, and was properly implemented, then the critical care area would be fit for use.

2.2 Further clarification was needed for Health Facilities Scotland with the specific rooms to be included in this specification marked out on the plan. The plans would be sent to HFS and Mr James would share them with the engineering team; this would be prioritised. Some work was also still to be done between IHSL and NHS Lothian.

IG / GJ

2.3 It was noted that within the critical care area there were single rooms and four bedded rooms which were included in the specifications, and the term 'isolation rooms' should not be used to avoid confusion.

2.4 Regarding the specification and design process it was clarified that NHS Lothian would sign off the specifications for design with input from Health Protection Scotland, Health Facilities Scotland, and the Scottish Government via this Board, and then engage with IHSL on the design which would later be agreed. There had been discussion with IHSL on the contents of the paper presented, but no formal submission of the specifications.

2.5 Mr Graham tabled a paper listing actions against issues identified in relation to ventilation in the hospital; excluding critical care and general ward areas, and progress against these. This list was being considered in detail by the NHS Lothian Incident Management Team.

2.6 There was a need to understand all the issues that needed to be resolved before the hospital could be opened, the timescale for these, and clarification as to which areas were compliance issues and which were instruction issues. For those which were agreed to be compliance issues IHSL must resolve, and those which were issues with the instructions, if agreed, NHS Lothian must fund the resolution.

2.7 If any areas of non-compliance were agreed to be satisfactory then justification and mitigating actions must be described.

2.8 It needed to be considered whether the current process of identifying areas of non-compliance picked up issues not identified by previous processes. It was noted that the IOM inspection report did produce a list of snagging issues which NHS Lothian was working through.

- 2.9 The report on whether the general ward ventilation of four air changes per hour was compliant would be available the following week.
- 2.10 There needed to be agreement that all ventilation work was on the list, agreement with HFS and HPS on solutions, compliance and any non-compliance mitigating actions, and then the programme of work would start. Once this stage had been reached the timescale for opening could be estimated based on the longest programme of work. There also needed to be identification of which work must be done before moving into the hospital and what could be done after the move.
IG / GJ
- 2.11 It was expected that work on the solution to general ventilation problems would run at the same time as the design for the critical care ventilation so that once general work was completed a decision could be made as to whether the DCN area could be occupied while paediatric critical care work was carried out.
- 2.12 It was noted that timescales would be difficult to judge as it was possible that at the testing stage after remedial works had taken place it may be found that further work was required.
- 3.13 There was an 8 week lead in time for clinical commissioning which could not be started until the other issues had been resolved, but the preference was that DCN would move earlier if safe, due to the problems with the current DCN accommodation at the Western General Hospital.
- 2.14 It was agreed that at future meetings of this group areas from the ventilation action tracker that had been signed off by NHS Lothian with agreement from HFS and HPS, as well as areas which were not going to plan.
SG

3. Water and Drainage System

- 3.1 Professor McMahon gave a verbal update. Two workshops had been held on 29 July and 7 August 2019 to consider the reports on water quality and any failures with the tank and supply plant. Based on microbiology sampling so far completed there were no concerns and it was agreed that the water system was in compliance with the relevant SHTM standard. Next steps for maintaining water quality while the hospital was empty and when it was occupied were agreed. A report on the outcome of the workshops would be discussed at the IMT meeting on 12 August 2019 and then at the next meeting of the Board.
AMcM
- 3.2 It was noted that further tests by HFS had been done which had found fungal organisms in some areas. More detail was needed as to which organisms were found where and what standard this applied to. Professor Reilly advised that there should be a separation between evidence based standards, and practices which were the result of incidents elsewhere where learning was not yet evidence based. This analysis was needed before determination of whether there was a risk and whether this would affect the opening of the hospital.
- 3.3 There was no update on drainage at this time. It was noted that water systems above ground should be referred to as 'plumbing' and those below ground as 'drainage'.

4. Validation

- 4.1 Mr James presented the previously circulated paper outlining HPS and HFS validation activity taking place. It was noted that validation activity focused on areas where resolution was required; the majority of areas were satisfactory. The final report on this phase of testing was due to be completed by 2 September 2019.
- 4.2 There was discussion about phase 4 of the validation which was fire and electrical safety and medical gases. It was agreed that information giving assurance on which areas were satisfactory would allow focus on those areas that needed to be checked. HFS were ready to start the fire inspection but this would require resources from Lothian for finding information. It was agreed that an initial meeting with the national fire officer and the Lothian fire officers would be arranged to find out what assurance gaps there were.
- 4.3 A report on current progress with fire safety would be brought to the next meeting. Reports on progress with electrical safety and medical gasses would be brought to future meetings. **GJ**

5. Programme / Occupation

- 5.1 There was no discussion on this item at this stage, except to state that an 8 week lead in for clinical commissioning was needed for each area to be moved in, and that there was a preference to move DCN to the new hospital first.
- 5.2 Ms McLaughlin would discuss with Mr Graham the broad timelines for update to the Cabinet Secretary. **IG / CMcL**

6. Commercial Position and Contract Management

- 6.1 Ms Goldsmith presented the previously circulated paper which outlined the options for engagement with IHSL and the legal advice received by NHS Lothian.
- 6.2 Mr Reekie advised that if it was agreed that the critical care work was separate and NHS Lothian accepted responsibility to pay for this then this should be moved forward as soon as possible while negotiations took place to determine which of the other issues were NHS Lothian's or IHSL's responsibility, as this would take some time.
- 6.3 It was agreed that IHSL's performance issues would be used as part of the cost negotiation, but that breaking the contract would not be the best means of getting the hospital opened as soon as possible. It was agreed that warnings could be issued which would give NHS Lothian rights to terminate the contract which they would decide not to act on.
- 6.4 It was agreed that a formal agreement between IHSL and NHS Lothian needed to be negotiated and agreed for the resolution works.

7. Communications

7.1 It was proposed that a communication be produced fortnightly to update on the progress of the Board and that it would be given to all NHS Lothian staff to demonstrate that NHS Lothian, National Services Scotland and the Scottish Government were coming together to track progress.

7.2 The NHS Lothian Director of Communications would be invited to join this group.

SG

8. Date of Next Meeting

8.1 The next meeting of this group would take place at **8.00 am** on **Thursday 22 August 2019** in **Meeting Room 5**, fifth floor, Waverley Gate.

8.2 Further meetings would take place each Thursday at 8.00 am.

NHS Lothian – RHCYP & DCN Oversight Board



Meeting date	8 August 2019
Title	Critical Care Ventilation – proposed technical specification
Responsible Director	Susan Goldsmith
Report Author	Iain Graham

Purpose of the Report

This report is presented to the Committee for:

Decision	x	Discussion	x	Awareness	
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This report aligns to the following strategic contexts:

Government Policy/Directive		IJB Strategy / Direction		Legal Requirement	
Board Strategy		Annual Operational Plan		Corporate Objective	
Local Policy		Operational Issue		Other	x

This report aligns to the following quality ambition(s):

Person Centred		Safe	x	Effective	
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SBAR Report

Situation

The key decision point for delaying the operational transfer of services in July 2019 was the assessment of ventilation serving Critical Care within the RHCYP component of the new facility by the Board's independent commissioning and validation engineer. Since that time, work has been underway to identify a potential solution to the issues identified. This work has been carried out with IHSL and their supply chain; with HPS and HFS supporting the Board's project team.

Background

The assessment identified that the air changes per hour (ACH) were below the standard for critical care accommodation set in national health guidance, Scottish Health Technical Memorandum 03-01 (SHTM 03). This guidance also covers other environmental conditions relevant to the ventilation system, etc.

Following preliminary dialogue with IHSL and Multiplex, around the time of the proposed transfer, an option to improve the ventilation system in critical care was outlined. However, no engineering designers from their supply chain has been involved directly to date.

This outline has been developed over the last few weeks but with limited designer input as they have only been represented at meetings recently.

Assessment

Clinical services – the engagement with clinical stakeholders has been through the project team and management lines. The outlined proposal has been accepted by the Critical Care lead clinician and management; this has been issued to HFS for guidance feedback.

Infection Control / Microbiology – NHS Lothian lead Microbiology Consultant, Infection Protection and Control leads and Health Protection Scotland have been involved.

Legal and commercial – implementation of an appropriate contract mechanism to ensure works are carried out in a cost effective and compliant manner. A draft "Board Change" has been prepared; but

without inclusion of any other works that may result from the technical and governance reviews. The reservation of legal positions has not been proposed as part of the draft Board change.

Recommendation

The proposed Board Change for agreement of the Oversight Board is:

In accordance with Schedule Part 16 (Change Protocol), the Board requires Project Co to:

Design, Supply and Install a ventilation system or systems capable of delivering **10 air changes/hour at +10pa** as per SHTM 03-01, Appendix 1, Table A1 to the following rooms:

1-B1-065 including 1-B1-022, 1-B1-069, 1-B1-066 and 1-B1-071 which are all open to 1-B1-065

1-B1-075

1-B1-063

1-B1-037

1-B1-031

1-B1-021

1-B1-020

1-B1-019

1-B1-009

All environmental requirements for all spaces served by these systems shall be met – including but not limited to, temperature, lighting levels, noise, and humidity. These should be consistent to the agreed parameters throughout the facility adjusted as appropriate to meet the specific clinical and operational needs for the space.

The system installation, finishes and maintenance regime shall be in accordance with SHTM 03-01 requirements, together with clinical and operational constraints identified below:

All works to be carried out and monitored after and with reference to a collaborative full Stage 3 HAI SCRIBE assessment being approved by NHS Lothian.

The fire strategy and systems agreed for the facility will be maintained throughout the works and operational period. The works will integrate with these systems and all other building management systems.

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.

The layouts etc will be agreed with the Project Director (and in turn the clinical service and related stakeholders) as part of the design development which will include input from the Board and all appropriate stakeholders.

Impacts

Quality / Patient Care

Improvement on current installation.

Workforce

As reported separately regarding the delayed occupation of the facility and subject to the timeframe for the delivery and commissioning for the works.

Financial

Initial estimate £1.8m project cost allowance.

Risk Assessment and Management

To be developed

Equality and Diversity, including Health Inequalities

Not applicable for this report.

Has an equality and diversity impact assessment (EQIA) been completed?

No

Communication, Consultation, Involvement and Engagement

The following have been consulted before the Committee meeting:

Stakeholder / Group Name	Date(s)
Project team, Infection Prevention & Control and Microbiology and engagement with HPS / HFS as part of the review programme	

Route to the Committee

This business case has been previously considered by the following groups as part of its development. The groups have either supported the content, or their feedback has informed the development of the content presented in this report.

Committee/Group/Meeting	Meeting date
None	

List of Appendices

The following appendices are included with this paper

Appendix No	Document title
None	

From: Mackenzie, Janice [REDACTED]
Sent: 08 August 2019 14:20
To: STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND)
Cc: Guthrie Lindsay (NHS LOTHIAN); Henderson Ronnie (NHS LOTHIAN); Reducing-Risk-Hce (NHS NATIONAL SERVICES SCOTLAND); [REDACTED]; RANKIN, Annette (NHS NATIONAL SERVICES SCOTLAND); [REDACTED]; MCLAUGHLAN, Edward (NHS NATIONAL SERVICES SCOTLAND); Inverarity Donald (NHS LOTHIAN); Currie Brian (NHS LOTHIAN)
Subject: RE: 2019-08-07 RHCYP & DCN Information required
Attachments: Timeline Summary.xlsx

Hi Ian

The Project Team had pulled together a timeline to demonstrate IPCN involvement in the Project that may be of use to you which I have attached which was shared with KPMG and Lindsay

Once you have had a chance to review and if you want any of the evidence listed let me know.

Kind regards

Janice

PLEASE NOTE MY TELEPHONE NUMBER HAS CHANGED TO [REDACTED]

Janice MacKenzie
Clinical Director
RHSC + DCN - Little France Project Team

[REDACTED]



www.nhslothian.scot.nhs.uk/proudhistorienewchapters

From: Guthrie, Lindsay
Sent: 07 August 2019 17:42
To: 'STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND)'; Mackenzie, Janice; Inverarity, Donald; Currie, Brian; Graham, Iain; Henderson, Ronnie; MCLAUGHLAN, Edward (NHS NATIONAL SERVICES SCOTLAND); Reducing-Risk-Hce (NHS NATIONAL SERVICES SCOTLAND); RANKIN, Annette (NHS NATIONAL SERVICES SCOTLAND); Goldsmith, Susan
Subject: RE: 2019-08-07 RHCYP & DCN Information required

Hi Ian

Can I clarify what you would like provided for:

- Item 38 NHS L IPC team records – what type of records?
- Item 123 Confirm the level of involvement of NHS L Infection Control at the following stages of the project:(ACR, Project Agreement, Side Agreement, Handover,) we discussed with Annette I can provide minutes showing attendance of IPCT at various meetings during construction, not sure if you want anything specific in relation to decision making? I have attached as an example, SCRIBE for external works and a stage 3 Scribe. As discussed, we were not involved in the settlement agreement or handover. Part 4 of HAI Scribe was begun in May 2019, but not completed pending receipt of satisfactory water and ventilation functionality/sampling from commissioning
- Item 44 – draft HAI Scribe for vent proposal attached

Regards

Lindsay

From: STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND) [REDACTED]

Sent: 07 August 2019 09:30

To: Mackenzie, Janice; Guthrie, Lindsay; Inverarity, Donald; Currie, Brian; Graham, Iain; Henderson, Ronnie; MCLAUGHLAN, Edward (NHS NATIONAL SERVICES SCOTLAND); Reducing-Risk-Hce (NHS NATIONAL SERVICES SCOTLAND); RANKIN, Annette (NHS NATIONAL SERVICES SCOTLAND); STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND); Goldsmith, Susan

Subject: 2019-08-07 RHCYP & DCN Information required

Colleagues

On behalf of Eddie, Annette and myself I would like to thank you for your time on Monday and your help resolving a substantial amount of the missing information.

I have updated the tracker based on our discussions and to allow ease of focus I have highlighted in yellow the items to be resolved. I note that the majority of these will require a response from IHSL.

Regards

Ian

Ian Storrar BSc CEng FCIBSE FIHEEM MIET

Head of Engineering - Health Facilities Scotland
Procurement, Commissioning and Facilities

NHS National Services Scotland



www.hfs.scot.nhs.uk

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Date/s	Topic	Comments	Evidence
Competitive Dialogue (Procurement & Dialogue - competitive dialogue sub folder)			
06/06/13	Linen shutes	Proposal to incorporate linen shutes in design	1. Email from Head of IPC re linen shutes
06/06/13	Shared disposal holds	Proposal from 2 bidders to cohort disposal holds at lift cores	2. Email from Head of IPC re disposal holds and lift strategy
05/07/13	Sensor taps	Clarifications sent to all bidders: <i>NHSL has reviewed its position with regard to sensor taps in clinical areas and has decided that they should not be used. The equipment schedule will not be altered for this item but sensor taps should be substituted with alternative compatible lever taps in all areas.</i>	3. RHSC DCN CD Submission Clarifications 231213 Sheet: ITPD Clarifications; Line: 128
17/06/13	AEDET review of 3 bidders proposals in competitive dialogue	Attended by J Richards, Infection Control Representative.	4.1 Example invitation to workshop 4.2 AEDET agenda example 4.3 AEDET Participants Briefing 4.4 AEDET Scoring Guidnace 4.5 AEDET Additional participants briefing 4.6 Bidder A AEDET scoresheet for Competitive Dialogue June 2013 4.7 AEDET questions bidder A 4.8 Bidder B AEDET scoresheet for Competitive Dialogue June 2013 4.9 Bidder C AEDET scoresheet for Competitive Dialogue June 2013 4.10 AEDET questions bidder C
18/07/13	WHB in 4-bed rooms	In response to a proposal from IHSL to increase the number of WHBs in 4-bed room, NHSL, with Infection Control, confirmed 1 WHB in a 4-bed room is sufficient.	5. Email and attachment confirming NHSL position
29/07/13	FM Lifts	Clarification sent to all Bidders: <i>NHSL have confirmed with Head of Infection Control that there is not a requirement to have separate Clean & Dirty FM lifts. Bidders should consider this in the context of their strategy for managing the segregation of clean and dirty flows.</i>	3. RHSC DCN CD Submission Clarifications 231213 Sheet: ITPD Clarifications; Line: 94 7. Emails with Head of IPCT July 2013

06/10/13	Doors to en-suite bathrooms	<p>From bidder 01/10/13: <i>IHSL presented a proposal to NHSL at dialogue meeting five to utilise a solution of a double door to en suite bathrooms (in lieu of the bi folded option). This received tacit support from NHS FM, however it was noted that the NHS also need to consider other issues including obtaining infection control input.</i></p> <p><i>Could NHS please confirm if this proposal is acceptable.</i></p> <p><i>Response: NHSL can confirm that they will accept this door design providing it will meet the functionality requirements for the room.</i></p>	<p>3. RHSC DCN CD Submission Clarifications 231213 Sheet: Bidder B; Line: 63</p>
Evaluation of tenders (Procurement & Dialogue -Evaluation of Tenders)			
Sept 2013- March 2014	Tender Evaluation	Invitation for ICPT representation on evaluation of Draft tenders, confirmation of J Richards, and preparations for submission and evaluation.	<ol style="list-style-type: none"> 1. Email confirmation of IPCT representation 19/09/13 2. Email re evaluation preparations 3. Draft Final Tender Evaluation Briefing 081013 4.1 RHSC DCN Dialogue Plan and Evaluation Manual 4.2 Appendix A Final Tender Evaluation Responsibilities Table 140113 4.3 Final Tender Evaluation Calendar 4.4 Supplementary Guide to Final Tender Evaluation 5. Notification of arrival of tenders 6. Email re specific areas for IPCT awareness
05/03/14	Appointment of Preferred Bidder	F&R Committee paper reporting procurement process and engagement, including IPCT.	7. RHSC + DCN Procurement report to 5 March 2014 F+R
Preferred Bidder (Procurement & Dialogue - preferred bidder sub-folder)			
07/07/14	IPCT Policy	Request for IPCT Policies for reference in NPD contract	1. Request for IPCT policies for inclusion in NPD contract

09/09/14	Design developments / derogations	IPCN involvement in design queries following appointment of preferred bidder and dialogue with service reps as part of User Group meetings	<ol style="list-style-type: none"> 2. Email to IPCT about proposed derogations by IHSL 090914 3. IPCT response to design change proposal in Drop-in Centre 220515 4. Email asking for IPCT review of the bidders' design proposals 180914 5 & 11. Email re need for 2nd sink in Clean Utility 6. Type of worktop in pantries 7. Need for Slop Hoppers in Dirty Utility & advice from HPS 8. IPCN response re Plastics Dressing Clinic 9. Infection Control queries 10. Query need for WHB in CAMHS bedrooms 11. IPCN response to a number of queries
26/01/15	Construction launch		. Invitation to construction launch meeting 260115
IPC TimeLine (sub folders)			
March 2014 - end July 2014	Design User Group meetings	Detailed design meetings with Service leads and IPCN to review Departmental design. Design leads were sent a summary document of basic principles to be considered in relation to Infection Control that was first developed in 2008, updated in 2011 and reviewed in 2014.	<ol style="list-style-type: none"> 1-3. Timetables 4. Information for Design Service Leads 5. example of signed off drawing by clinical lead 6. email from IPCN re design review 7. Summary Document Basic Principles Infection Control 8. Example of an email from IPCN in response to queries raised at User Group meetings
12/05/14	Confirmation regarding		
13/01/15	HAI Scribe Stage 3	Review undertaken with IHSL, Project Team & IPCT	<ol style="list-style-type: none"> 1. Completed HAI Scribe Stage 3 2. Attendees & Signatures
01/01/15	Isolation room pressures	Email correspondence between IPCN and HFS re Isolation Room pressures	<ol style="list-style-type: none"> 1. Email chain
April & Sept 2015	Change Requests - Management of Patients with Ebola/MERSCoV within ED	IPCT fully involved in design requirements	<ol style="list-style-type: none"> 1. Proposal for change signed by General Manager 2. NHSL Change Request 003 to IHSL 3. Marked Up Drawing 4. NHSL Change Request 014 5. email confirming output between ED consultant and IPCN 6. email from IPCT re arrangements in new build 7. email re guidance on treating Ebola in ED

Apr 2015 - Dec 2016	Production Groups	14 Production Groups covering every department. Lead/s for every department reviewed and attended design meetings. IPCN & FM Lead sent every design pack (equipment layout 1:50, c-sheets, reflected ceiling plan, equipment list & mounting heights) to review and provided comments and had opportunity to attend the design meetings. IPCN selected which meetings to attend	<ol style="list-style-type: none"> 1. Examples of IPCN Comment Sheets 2. Examples of Signed off Drawings by IPCN
23/04/15	bucket sink specification	IPCN confirmation of type required	2 (Query folder) - email from IPCN
01/08/15	RHSC&DCN schedule Part 6 section 5 RDD (revH)- A45	confirmation of full involvement from IPCN	1 (generic folder). email
17th Aug - 4th September 2015	Mock Up Rooms	review of layout for 5 types of rooms by staff, advisory services (eg M+H, IPCT) patients and families. Comments received were used to influence final design layouts	<ol style="list-style-type: none"> 1. timetable for attendance 2. summary of attendees 3. collated comments 4. feedback report for Programme Board
31/08/2015 & Feb 2016 July 17 Dec 16-Jan 17	Advice from HSS re Curtains & Blinds Window blinds consultation with IPCN prior to finalisation	IPCN sought advice on subject matter as part of ongoing discussions IPCT advice sought regarding blinds Emails between IPCN and Commissioning Manager	1.-5. Emails
01/12/15	clarification of wash handbasin types	IPCN seeking assurance that pipework would be concealed at wash handbasins. Sought advice from HFS and confirmation sought from MPX	8. (query folder) - email confirmation from MPX that pipework/ valves would be behind IPS
14/1/16 to present	RHSC & DCN Operational Commissioning Group meetings	Meetings held monthly. IPCN part of the group and attended meetings	<ol style="list-style-type: none"> 1. Meeting Notes 14.1.16 2. Terms of Reference 3. Meeting Notes 3.3.17 4. Meeting Notes 3.5.18 5. Meeting Notes 7.2.19
Feb 2016 to present	RHSC Operational Commissioning Group meetings	Meetings held monthly. Local IPCN invited to the meeting and was sent the notes	<ol style="list-style-type: none"> 1. Meeting Notes 24.3.16 2. Terms of Reference 3. Group membership 4. Meeting Notes 27.9.18 5. Meeting Notes 22.2.19
Feb 2016 to present	DCN Operational Commissioning Group meetings	Meetings held monthly. Local IPCN invited to the meeting and was sent the notes	<ol style="list-style-type: none"> 1. Meeting note Oct 2016 2. Attendance list
15/09/16	Theatre ventilation	Email correspondence regarding air changes in theatres	14 (Query Folder) - Email from Consultant Microbiologist

26/01/16	bin specification	specification updated following review at mock up rooms	1 & 13. (Query folder) - email to reviewers including IPCN
22/2 2016	Board Change 056 Install Hepa Filters in all Isolation Rooms	Following discussion and consultation with IPCT - change submitted	1. BCN 056 - Install Hepa Filters 2. Email chain from IPCT Sept 2015
April - June 2016	sanitary ware workshops and meetings	IPCN attended meetings to review range of sanitaryware and selection of products. Emails from IPCN	1-7. workshop meeting notes 8 - 9. Email from IPCN re type of sink 10. Email from IPCN re Arjo Bath
27/06/16	Output from meeting with IPCN & Commissioning Manager	Meeting to discuss a number of queries	5. (Query folder) Email
22/7/2016	stage 3 HAI scribe for knock through to RIE	HAI scribe developed with affected Services and IPCN	1. process for completion of SCRIBE 2.- 4. SCRIBE 5. MPX RAMS 6. monitoring air quality during works
Aug - Nov 16	Ventilation Meetings re Isolation Rooms	IPCN attended meetings held by MPX	1-4 Meeting Notes
01/09/16	Air Changes in CT Rooms	IPCN and HFS advice re the requirements for these rooms as MPX disputing	1-6 Emails between IPCN, HFS & Project Team
01/11/16	Backboard for gel dispensers	IPCN to confirm type of backboard	3. (query folder). email
01/01/17	selection of Arjo bath for assisted bathrooms	IPCN sought on revised specification	7. (query folder) email
09/12/17 to Dec 2017	Office Commodity Group	IPCN involved in non-clinical furniture specifications and selection of items	1. Examples of note of meeting
Jan to Dec 2017	Commodity group inclusion for clinical furniture	IPCN involved in clinical furniture selection and specification development groups	1. Example of invite and catalogue for items
01/02/17	Vinyl Chairs cleaning specification	IPCN involved in non-clinical furniture selection	1. Email trail re vinyl chairs
March to Nov 2017	MRI design meetings	IPCN involved in meetings and workshops	1-7 meeting and workshop notes
13/01/17	Board Change 104 to change type of sinks in Utility Rooms & addition of one sink	Following request and discussion with IPCN Board Change submitted	1. BCN 104 - Changes of Utility Sinks 2. Email from IPCN 3. email from IPCN
23/02/17	meeting between project team reps and lead Haem onc Consultant, Senior Charge Nurse, Consultant Microbiologist and IPCN to explore preferred ventilation settings in non-isolation rooms	no note of meeting taken but agreed position to support management of patients within inpatient and daycare unit	1. email confirming meeting arrangements

09/03/17	SBAR re decontamination of scopes	written by IPCN in consultation with key staff from Service teams	1. SBAR
April 17 - Nov 18	Room Review Programme to review each department	Final checklist developed in conjunction with IPCN which was used by all those who were undertaking room reviews. IPCN sent programme of reviews and advised of availability to attend and undertook reviews jointly with Project Team member/s	1. room review checklist 2. room review timetable 270819 v2 3. room review timetable v9 4. example of weekly room review update for w/c 240918 5. example of room review output record 6. debonding of vinyl email
01/07/17	4 bedded ventilation risk assessment	risk assessment undertaken in consultation with CMT and IPCN in relation to the need to cohort patients	1. risk assessment 5/7/17 2. Wallace Whittle marked up schedule 2017 3. email confirming involvement of CMT (General Manager, Associate Medical Director, Associate Nurse Director, Deputy Associate Nurse Director, CNM) 4. email to IPCN
27/07/17	ED body viewing room	advice regarding furniture in ED body viewing room	9. (query folder) - email
Sept - Oct 2017	Request for Shower Unit within DCN Theatre Reception area	advice sought from IPCN regarding cleaning of OT chairs Service wished to purchase	18. (query folder) - email
01/10/17	advice request re proposal to OP use intra-op MRI	Emails between IPCN and IPCT	6. (query folder) email to Commissioning lead
27th Nov 2017	extract grilles	confirmation of extract grille cover type	10 & 15. (query folder) email
06/12/17	specification for OT chairs	advice sought from IPCN regarding cleaning of OT chairs Service wished to purchase	4. (query folder) - emails
25-29th January 2018	4 bedded ventilation risk assessment	review of July 17 RA as part of ongoing discussions regarding proposed settlement agreement. Revised RA following agreement with CMT shared with IPCN	1. email of 25/1 to Children's CMT reps General Manager, Associate Medical Director, Associate Nurse Director, Deputy Associate Nurse Director) requesting meeting to review July 17 RA following another planned meeting 2. RA 30 Jan 2018
01/05/18	Timing of Migration Period	Information from IPCN regarding the number of RSV cases in last 2 years for consideration by CMT in relation to the month of the moves	1. Email chain
June - July 18	Water Damage following Burst Pipe	Joint inspection with IHSL of areas affected and SBAR completed	1. SBAR 2-3. Emails from IPCN

01/07/18	Stage 3 HAI scribe for Pharmacy PTS	HAI scribe developed with affected Services and IPCN	1. HAI process 2.-3.HAI SCRIBE 4- 23 emails
16/11/18	heater battery in isolation rooms Risk Assessment	discussed with IPCN and CMT reps	1. RA 161118
08/11/18	Isolation Room Settings	Query to IPCN regarding range for alarm setting	2 +3 Email to IPCN
Nov - Dec 2018	Internal & External Sump Drainage	Risk assessments and Impact and Business Continuity Plans for both internal and external sump. Discussions with IPCNs regarding assessment and potential contingency plans	1. Risk assessment External Sump 2. Impact & Business Continuity Plan External Sump 3. Risk assessment Internal Sump 4. Impact & Business Continuity Plan Internal Sump
01/05/19	HAI Scribe Stage 4	Three audits undertaken :- - Inpt Wards & PICU - OPD & Therapy Depts - Theatres & Imaging Currently in draft and not fully signed off as IPCT were awaiting water sampling results Draft audits were sent to IHSL to action and Operational Change submitted to IHSL	1-3 draft audits 4. Operational Change 036
March - May 2019	Theatre air sampling	query about SHTM-03-01 Part A Ventilation validation to IPCT	1-4 . email up to 23/5/19 5. email from IPCT re format for validation report validation
25/01/19	Room review final checks	Email from IPCN to organise date and time	16. (query folder) - Email.
04/04/19	Zip Hydrotaps	Responding to query from IPCN	17 (query folder) - Email.
08/04/19	Queries from IPCN	Email with queries from IPCN and response from Project Team	15 (query folder) - Email.
01/05/19	HAI Scribe stage 3 for RIE connection	Completed documentation	1-3 HAI Scribe 4 HAI Scribe process 5 interface with doors 6. email re meeting 7. email confirming works to be undertaken 8. feedback from IPCN re works 9. IPCN request for additional personnel inclusions in meetings

Art and Therapeutic Design Programme (IPC Timeline - ATD sub folder)			
Dec 2015-July 2016	Art and Therapeutic design programme	Process for consulting IPCN and FM colleagues on the design development of charity-funded enhancements, including furniture, toys, materials, outside spaces. Emails on management of IPCT and FM input into the design process, and notes of a meeting set up at IPCT request with HFS colleagues. Examples of the consultation on <i>specific</i> ATD projects are in the two rows below.	<ol style="list-style-type: none"> 1. Seeking IPCT advice for ATD projects re national cleaning specification 221215 2. Programme of IPCT consultation for ATD advice Feb-Mar 2016 3. Inviting HFS review 050516 4. Agenda HFS meeting on ATD 250716 5. Approved notes of HFS meeting on ATD 250716
Dec 2015 - Apr 2017	ATD 7.1 RHCYP waiting and play areas	Various correspondance - requests for info, feedback on design stages, responses from design team	<ol style="list-style-type: none"> 1. Request for info on beanbags Dec 2015 2. IPCT comments Jan 2016 3. Feedback and further questions to IPCT Feb 2016 4. Request for info on beanbags April 2016 5. ATD design team responses to IPCT and FM feedback on designs Dec 2016 6. 7.1 Design review
Feb 2016 - Apr 2018	ATD 7.2 DCN waiting areas	Various correspondance - requests for info, feedback on design stages, responses from design team	<ol style="list-style-type: none"> 1. Request for IPCT comments 2015 2. Invitation to review sample furniture June 2016 3. ATD design team responses to IPCT and FM feedback on designs Dec 2016 4. 7.2 Design review log including IPCT Dec 2016 5. Design detail April 2018

From: Crowe B (Barbara)
Sent: 09 August 2019 14:42
To: Cabinet Secretary for Health and Sport
Cc: McLaughlin C (Christine); Calderwood C (Catherine); Murray D (Diane); Aitken L (Louise); Smith G (Gregor); Rogers S (Shirley); Wright M (Malcolm); DG Health & Social Care; Chief Medical Officer; Hart S (Suzanne); Morrison A (Alan); Roche R (Rowena); Connaghan J (John) (Health); McCallum R (Richard); Black A (Alasdair)
Subject: Briefing for First Minister on RHCYP
Attachments: Health Finance and Infrastructure - Edinburgh Children's Hospital - First Minister - 9 August 2019.docx

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Printed for DG

Please find attached an update note from the Cabinet Secretary to the First Minister on the RHCYP.

Regards,

Barbara

Barbara Crowe
Health Finance and Infrastructure Team
Directorate for Health Finance
Scottish Government



First Minister**EDINBURGH CHILDREN'S HOSPITAL - UPDATE****Purpose**

1. Following my note of 19 July, please find an update on the current situation in respect of the Royal Hospital for Children and Young People (RHCYP) and Department of Clinical Neurosciences (DCN).

Priority

2. High.

Background

3. In earlier briefings, I had provided a summary of the issues currently facing the opening of the new hospital and this note provides a further update on the operational impact and support provided to patients along with current actions being taken to resolve the technical issues at the new hospital.

Operational Impact

4. In the week to 4 August, the NHS Lothian Children's Hospital Helpline received 5 calls (including 1 wrong number). This compares to 3 and 15 calls in the previous two weeks. The helpline will remain open until I am satisfied that it is no longer required. Services impacted by the postponed move to the new building have moved to business as usual for August onwards. All appointments for August onwards are being communicated and managed through the Board's normal processes.

Oversight Board

5. An Oversight Board was set up to oversee all components required to be in place to allow the new hospital to open and the phasing of migration. The Oversight Board met for the first time on Thursday 8 August where it reviewed ventilation issues in detail. The main ventilation issue relates to critical care. A specification to produce a design that complies with technical standards was agreed in principle by all members of the Board. This will now be developed in more detail and shared with IHSL. The contractual nature of the request from NHS Lothian remains under consideration and a meeting will be held between NHS Lothian and IHSL next week to begin negotiation.

6. There are 7 other ventilation issues (1) very limited extract in theatre corridors; (2) excessive flexible ductwork in theatre ceilings; (3) scrub extract grilles; (4) back up arrangements appear to be very complex and as such likely to be challenging in practice; (5) cabling and cable connectors inside air handling units (AHU); (6) some motors running at over 95% speed; (7) the use of pressure control sensors downstream of AHU but upstream of ultra clean ventilation (UCV) canopy theatres. A ventilation working group is assessing each of these. At this point in time our working assumption is that each of these issues will be resolved within the same timeframe as the critical care ventilation

7. There is a key decision point in relation to the 7 other ventilation issues regarding whether these will impact on the ability to undertake a phased occupation of the building. An assessment of this point is expected at the next Oversight Board meeting on 22 August.

8. The Oversight Board asked NSS to consider the three components of the second phase of validation – fire, electrics and medical gases – and the extent to which assurance can be provided through inspections in order to take a risk based approach to review. It was agreed that fire officers from NSS and NHS Lothian will meet to review fire safety and report back to the next meeting.

9. The Oversight Board agreed in principle to issuing a communication on a fortnightly basis which would be used as a means of updating staff and patients on progress.

KPMG Audit of Governance

10. The finalised report is expected in the week beginning 19 August as originally planned. However, to allow factual accuracy validation, I expect to have a draft next week.

Audit Scotland Annual Report

11. The NHS Lothian 2018/19 Annual Audit Report was published on 6 August, approximately 2 months ahead of the usual publication date and briefing on this has been provided. In light of the ongoing

First Minister

public interest in the RHCYP, the Auditor General took the decision to publish the Report early. The Report confirms that the Board's annual accounts received an unqualified audit opinion. In addition, the report sets out findings from the high level review of governance arrangements of the settlement agreement, along with findings on financial sustainability, financial management, governance and transparency and value for money.

Media and Communications

12. Communications from NHS Lothian continue to be cleared by the Scottish Government prior to issue. The Health Communications team have responded to various media reports on issues including suggestions that a senior architect, Robert Menzies, was involved in the design of the new hospital and raised concerns at the time, the use and value of using NPD, and inaccurate and misleading claims that the RHCYP will cost an 'extra £90 million'.

13. Staff at NHS Lothian are understood to be upset at claims in the media that the hospital may be torn down or never open and NHS Lothian are working to reassure staff. There have also been claims that SG has sought to exclude the trades unions and I am meeting with the NHS Lothian Joint Staff Side Committee on Tuesday 13 August.

14. A communication will be issued from the Oversight Board on a fortnightly basis.

Parliamentary Business

15. I will make a statement to Parliament on its return and this has been scheduled for 3 September pending bureau approval.

Conclusion

16. I remain focussed on ensuring that we address all these issues as quickly as possible and I will continue to provide updates as progress is made.

Cabinet Secretary for Health and Sport
9 August 2019

From: Aitken L (Louise)
Sent: 09 August 2019 18:15
To: Cabinet Secretary for Health and Sport
Cc: McAllister C (Colin); McLaughlin C (Christine); Rogers S (Shirley); Roche R (Rowena); Ingebrigtsen R (Ross); Leitch J (Jason); Calderwood C (Catherine); Smith G (Gregor); McQueen F (Fiona); Summers Y (Yvonne); Wilson S (Stuart) (HLTH); Lea-Ross S (Stephen); Gilbert A E (Anna); Crowe B (Barbara); Communications Healthier; Klein G (Gerard); Morrison A (Alan); Black A (Alasdair); McCallum R (Richard); Neill S (Sean); Connaghan J (John) (Health); Lunt A (Aislinn); News Desk; Campbell J (Jeanette) (Special Adviser); Smith L (Lucy)(Communications); Bannon A (Alan); Mcnicoll K (Kristen); Rafferty D (Donna); Communications Duty Box
Subject: Duty: UPDATED LINES FOR CAB SEC CONSIDERATION: SUNDAY HERALD - NHS Lothian

Thank you Jack, I'll send on now and will share with NSS / NHS L for info.

Adding duty comms colleagues/spads to the copylist – the below lines and this copylist will be helpful if we are approached on Sick Kids over the weekend.

Louise

Louise Aitken

Senior Media Manager | Health Communications | [REDACTED]

The Scottish Government | www.gov.scot

From: Downie J (Jack) [REDACTED] **On Behalf Of** Cabinet Secretary for Health and Sport
Sent: 09 August 2019 17:31
To: Aitken L (Louise) [REDACTED]; Cabinet Secretary for Health and Sport [REDACTED]
Cc: McAllister C (Colin) [REDACTED]; McLaughlin C (Christine) [REDACTED]
Rogers S (Shirley) [REDACTED]; Roche R (Rowena) [REDACTED]; Ingebrigtsen R (Ross) [REDACTED]
[REDACTED]; Leitch J (Jason) [REDACTED]; Calderwood C (Catherine) [REDACTED]
[REDACTED]; Smith G (Gregor) [REDACTED]; McQueen F (Fiona) [REDACTED]
[REDACTED]; Summers Y (Yvonne) [REDACTED]; Wilson S (Stuart) (HLTH) [REDACTED]
[REDACTED]; Lea-Ross S (Stephen) [REDACTED]; Gilbert A E (Anna) [REDACTED]
[REDACTED]; Crowe B (Barbara) [REDACTED]; Communications Healthier [REDACTED]
[REDACTED]; Klein G (Gerard) [REDACTED]; Morrison A (Alan) [REDACTED]
[REDACTED]; Black A (Alasdair) [REDACTED]; McCallum R (Richard) [REDACTED]
[REDACTED]; Neill S (Sean) [REDACTED]; Connaghan J (John) (Health) [REDACTED]
[REDACTED]; Lunt A (Aislinn) [REDACTED]; News Desk [REDACTED]
Subject: RE: UPDATED LINES:FOR CAB SEC CONSIDERATION: SUNDAY HERALD - NHS Lothian

Louise,

The updated answers on Q1 & 6 are fine however the Cabinet Secretary has tweaked (in purple) Q3 slightly as 'shared' could easily be shared with media and not the SG. With that change, Ms Freeman is content.

Many thanks,
Jack

From: Aitken L (Louise) [REDACTED]
Sent: 09 August 2019 15:28

To: Cabinet Secretary for Health and Sport [REDACTED]
Cc: McAllister C (Colin) [REDACTED]; McLaughlin C (Christine) [REDACTED];
 Rogers S (Shirley) [REDACTED]; Roche R (Rowena) [REDACTED]; Ingebrigtsen R (Ross)
 [REDACTED]; Leitch J (Jason) [REDACTED]; Calderwood C (Catherine)
 [REDACTED]; Smith G (Gregor) [REDACTED]; McQueen F (Fiona)
 [REDACTED]; Summers Y (Yvonne) [REDACTED]; Wilson S (Stuart) (HLTH)
 [REDACTED]; Lea-Ross S (Stephen) [REDACTED]; Gilbert A E (Anna)
 [REDACTED]; Crowe B (Barbara) [REDACTED]; Communications Healthier
 [REDACTED]; Klein G (Gerard) [REDACTED]; Morrison A (Alan)
 [REDACTED]; Black A (Alasdair) [REDACTED]; McCallum R (Richard)
 [REDACTED]; Neill S (Sean) [REDACTED]; Connaghan J (John) (Health)
 [REDACTED]; Lunt A (Aislinn) [REDACTED]; News Desk [REDACTED]

Subject: UPDATED LINES:FOR CAB SEC CONSIDERATION: SUNDAY HERALD - NHS LOTHIAN

Hi Jack,

Please see below with amends in red following feedback from Ms Freeman.

Grateful if you could put to Cab Sec for consideration.

Thank you
 Louise

Louise Aitken

Senior Media Manager | Health Communications [REDACTED]

The Scottish Government | www.gov.scot

1. Can you give a guarantee that the Sick Kids hospital will open in either 2019 or 2020?

It wouldn't be fair to the staff or patients affected by this delay **for me, or anyone else, to give guarantees before we have the facts from the reviews I ordered in July. Anything at this stage is purely speculation.**

That timetable of work I set out last month, when issues with the ventilation in critical care came to light, is on track. Work by Health Protection Scotland and Health Facilities Scotland is well underway and will give me the information I need to base any future decision about a timetable for the move to the new site.

I expect to have a report on this in September and I have provided my personal assurance that when I have information on the next steps for the phased move, staff and patients will be the first **to know the facts.**

2. Do you believe that NHS Lothian did not provide you with accurate information about the hospital's ventilation and drainage at a sufficiently early stage?

I've asked KPMG, who are also now on site, to independently review the governance arrangements for the new children's hospital to establish the factors that led to the delay.

3. Is it possible that part of the building may have to be pulled down, in order to make the necessary changes?

There are no plans to pull down the building **and there is no evidence to support this claim. As I have already said, if there is evidence to support such an assertion, then it should be brought to the Scottish Government. shared.**

Recent headlines about the future of the new hospital have caused distress to staff who have worked hard to make the move to the new site and I want to reassure them that they will be the first to know the timetable for the move to the new site.

HPS and HFS are currently undertaking a detailed assessment of compliance of all building systems. This work will determine the timeframe for services moving to the new hospital and I am expecting a full report in September.

4. Do you have confidence in Tim Davison's abilities to continue as CEO in the long term?

We know that the entire senior leadership team in Lothian is working hard to resolve these matters. We will continue to work with the team to provide support where appropriate and to ensure that they have the capacity they need to both deliver continued standards of high quality patient care and plan for the safe transfer of services to the new site.

5. Is it the case that the SG now approves NHS Lothian's media statements? If so, why was this decision made?

On issues of joint interest, it's routine for the Scottish Government and health boards to share media response.

6. Do you accept that, in light of the Sick Kids hospital row, the SFT method of funding is no longer fit for purpose?

The funding model is not what led to the issues which emerged on 2 July and my decision to delay the move to the new site. As I have said, KPMG are independently reviewing the governance arrangements for the new children's hospital to establish the factors that led to the delay.

From: Downie J (Jack) [REDACTED] **On Behalf Of** Cabinet Secretary for Health and Sport
Sent: 09 August 2019 12:18
To: Aitken L (Louise) [REDACTED]; Cabinet Secretary for Health and Sport [REDACTED]
Cc: McAllister C (Colin) [REDACTED]; McLaughlin C (Christine) [REDACTED];
 Rogers S (Shirley) [REDACTED]; Roche R (Rowena) [REDACTED]; Ingebrigtsen R (Ross) [REDACTED];
 [REDACTED]; Leitch J (Jason) [REDACTED]; Calderwood C (Catherine) [REDACTED];
 [REDACTED]; Smith G (Gregor) [REDACTED]; McQueen F (Fiona) [REDACTED];
 Summers Y (Yvonne) [REDACTED]; Wilson S (Stuart) (HLTH) [REDACTED];
 [REDACTED]; Lea-Ross S (Stephen) [REDACTED]; Gilbert A E (Anna) [REDACTED];
 [REDACTED]; Crowe B (Barbara) [REDACTED]; Communications Healthier [REDACTED];
 [REDACTED]; Klein G (Gerard) [REDACTED]; Morrison A (Alan) [REDACTED];
 [REDACTED]; Black A (Alasdair) [REDACTED]; McCallum R (Richard) [REDACTED];
 [REDACTED]; Neill S (Sean) [REDACTED]; Connaghan J (John) (Health) [REDACTED];
 [REDACTED]; Lunt A (Aislinn) [REDACTED] News Desk [REDACTED]

Subject: RE: FOR CAB SEC CONSIDERATION: SUNDAY HERALD - NHS Lothian

Louise,

As discussed, the Cabinet Secretary has considered the answers. I have included her comments in red below. Q2, 4 and 5 are fine as they are.

Thanks,

Jack

From: Aitken L (Louise) [REDACTED]
Sent: 09 August 2019 11:25
To: Cabinet Secretary for Health and Sport [REDACTED]
Cc: McAllister C (Colin) [REDACTED]; McLaughlin C (Christine) [REDACTED];
 Rogers S (Shirley) [REDACTED]; Roche R (Rowena) [REDACTED]; Ingebrigtsen R (Ross)
 [REDACTED]; Leitch J (Jason) [REDACTED]; Calderwood C (Catherine)
 [REDACTED]; Smith G (Gregor) [REDACTED]; McQueen F (Fiona)
 [REDACTED]; Summers Y (Yvonne) [REDACTED]; Wilson S (Stuart) (HLTH)
 [REDACTED]; Lea-Ross S (Stephen) [REDACTED]; Gilbert A E (Anna)
 [REDACTED]; Crowe B (Barbara) [REDACTED]; Communications Healthier
 [REDACTED]; Klein G (Gerard) [REDACTED]; Morrison A (Alan)
 [REDACTED]; Black A (Alasdair) [REDACTED]; McCallum R (Richard)
 [REDACTED]; Neill S (Sean) [REDACTED]; Connaghan J (John) (Health)
 [REDACTED]; Lunt A (Aislinn) [REDACTED]; News Desk [REDACTED]

Subject: FOR CAB SEC CONSIDERATION: SUNDAY HERALD - NHS Lothian

Hi Andy,

As discussed, Paul Hutcheon for the Sunday Herald has sent on six questions for Cab Sec on the RHCYP delay.

Comms, policy and spads have drafted the below responses as a starter.

Grateful if you could put to Cab Sec.

Paul has advised he would like these back by COP today, if possible.

Thank you
 Louise

Louise Aitken

Senior Media Manager | Health Communications | [REDACTED]

The Scottish Government | www.gov.scot

1. Can you give a guarantee that the Sick Kids hospital will open in either 2019 or 2020?

It wouldn't be fair to the staff or patients affected by this delay to give guarantees before I have the facts.

As I have said, the timetable of work I set out in July, when issues with the ventilation in critical care came to light, remains on track. Work by Health Protection Scotland and Health Facilities Scotland is now well underway and will give me the information I need to base any future decision about a timetable for the move to the new site.

I expect to have a report on this in September and I have provided my personal assurance that when I have information on the next steps for the phased move, staff and patients will be the first to know.

Can we strengthen and tighten so we are crystal clear on what she has said and that we are on track to deliver that. Consequently in advance of the review information neither she nor anyone else can give guarantees and speculation by anyone is simply that.

2. Do you believe that NHS Lothian did not provide you with accurate information about the hospital's ventilation and drainage at a sufficiently early stage?

I've asked KPMG, who are also now on site, to independently review the governance arrangements for the new children's hospital to establish the factors that led to the delay.

3. Is it possible that part of the building may have to be pulled down, in order to make the necessary changes?

There are no plans to pull down the building.

As I have said previously, recent headlines about the future of the new hospital have caused distress to staff who have worked hard to make the move to the new site and I want to reassure them that they will be the first to know the timetable for the move to the new site.

Work is on track and HPS and HFS are currently undertaking a detailed assessment of compliance of all building systems which could impact on the safety of patients and staff at the new site. This will be phased, with assessment of water, ventilation and drainage systems prioritised, including the proposed fix for the ventilation unit. This work will determine the timeframe for services moving to the new hospital and I am expecting a full report in September.

This should be firmer. There is no evidence been given to us to support this. It is entirely speculative therefore and she has already said if there is evidence to support such an assertion, then it should be shared.

4. Do you have confidence in Tim Davison's abilities to continue as CEO in the long term?

We know that the entire senior leadership team in Lothian is working hard to resolve these matters. We will continue to work with the team to provide support where appropriate and to ensure that they have the capacity they need to both deliver continued standards of high quality patient care and plan for the safe transfer of services to the new site.

5. Is it the case that the SG now approves NHS Lothian's media statements? If so, why was this decision made?

On issues of joint interest, it's routine for the Scottish Government and health boards to share media response.

6. Do you accept that, in light of the Sick Kids hospital row, the SFT method of funding is no longer fit for purpose?

The KPMG review will provide us with an assessment of the reasons for the delay.

The Scottish Futures Trust has delivered almost £1 billion in savings and benefits since being established.

The funding model is not what led to the issues which emerged on 2 July and led the decision. We need to try to kill off notion that the undoing model is at fault.

From: Henderson, Ronnie
Sent: 12 August 2019 14:37
To: Henderson, Ronnie; Currie, Brian; Curley, George; Inverarity, Donald; Guthrie, Lindsay; 'STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND)'; 'RANKIN, Annette (NHS NATIONAL SERVICES SCOTLAND)'; [REDACTED]; 'John Rayner'; [REDACTED]; 'Craig Simpson'; 'David Wilson'; 'GORDON, David'; 'Southwell, Ross';
Cc: Mackenzie, Janice; 'Jamie Minhinnick'; 'Paul Jameson'
Subject: RE: Vent Meeting 02/8/19
Attachments: IOM Issues Log 09 08 19 updated by MPX NHSL 09 08 19.xlsx; Ventilation Meeting Minutes - 190809.docx

All,

Please see attached note of meeting and updated issues log from 9th August.

Regards

Ronnie

Ronnie Henderson
Commissioning Manager Hard FM
RHSC & DCN - Little France
NHS Lothian

[REDACTED]

From: Henderson, Ronnie
Sent: 08 August 2019 16:54
To: Henderson, Ronnie; Currie, Brian; Curley, George; Inverarity, Donald; Guthrie, Lindsay; 'STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND)'; 'RANKIN, Annette (NHS NATIONAL SERVICES SCOTLAND)'; [REDACTED]; 'John Rayner'; [REDACTED]; 'Craig Simpson'; 'David Wilson'; 'GORDON, David'; 'Southwell, Ross'; [REDACTED]
Cc: Mackenzie, Janice; 'Jamie Minhinnick'; 'Paul Jameson'
Subject: RE: Vent Meeting 02/8/19

All,

Please see attached note of meeting and updated issues log from 06/08.

Regards

Ronnie

Ronnie Henderson
Commissioning Manager Hard FM

RHSC & DCN - Little France
NHS Lothian

[REDACTED]

[REDACTED]

From: Henderson, Ronnie
Sent: 06 August 2019 08:29
To: Henderson, Ronnie; Currie, Brian; Curley, George; Inverarity, Donald; Guthrie, Lindsay; 'STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND)'; 'RANKIN, Annette (NHS NATIONAL SERVICES SCOTLAND)'; [REDACTED]; 'John Rayner'; [REDACTED]; 'Craig Simpson'; 'David Wilson'; 'GORDON, David'; 'Southwell, Ross'; [REDACTED]
Cc: Mackenzie, Janice; 'Jamie Minhinnick'; 'Paul Jameson'
Subject: RE: Vent Meeting 02/8/19

All,

Please see attached note of meeting and updated issues log.

Regards

Ronnie

Ronnie Henderson
Commissioning Manager Hard FM
RHSC & DCN - Little France
NHS Lothian

RHSC & DCN Site Office

[REDACTED]

[REDACTED]

From: Henderson, Ronnie
Sent: 01 August 2019 11:37
To: Henderson, Ronnie; Currie, Brian; Curley, George; Inverarity, Donald; Guthrie, Lindsay; 'STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND)'; 'RANKIN, Annette (NHS NATIONAL SERVICES SCOTLAND)'; [REDACTED]; 'John Rayner'; [REDACTED]; 'Craig Simpson'; 'David Wilson'; 'GORDON, David'; 'Southwell, Ross'
Cc: Mackenzie, Janice; 'Jamie Minhinnick'; 'Paul Jameson'
Subject: RE: Vent Meeting 23/7/19

All,

Please see attached note of vent meeting on 30th July and updated issues log.

Regards

Ronnie

Ronnie Henderson
Commissioning Manager Hard FM
RHSC & DCN - Little France
NHS Lothian

[REDACTED]

[REDACTED]

From: Henderson, Ronnie
Sent: 29 July 2019 12:12
To: Henderson, Ronnie; Currie, Brian; Curley, George; Inverarity, Donald; Guthrie, Lindsay; 'STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND)'; 'RANKIN, Annette (NHS NATIONAL SERVICES SCOTLAND)'; [REDACTED] 'John Rayner'; [REDACTED]'; 'Craig Simpson'; 'David Wilson'; 'GORDON, David'
Cc: Mackenzie, Janice; 'Jamie Minhinnick'; 'Paul Jameson'
Subject: RE: Vent Meeting 23/7/19

All,

Please see attached updated issues log and note of vent meeting held on 26th July.

Regards

Ronnie

Ronnie Henderson
Commissioning Manager Hard FM
RHSC & DCN - Little France
NHS Lothian

[REDACTED]

[REDACTED]

From: Henderson, Ronnie
Sent: 24 July 2019 15:32
To: Currie, Brian; Curley, George; Inverarity, Donald; Guthrie, Lindsay; 'STORRAR, Ian (NHS NATIONAL SERVICES SCOTLAND)'; 'RANKIN, Annette (NHS NATIONAL SERVICES SCOTLAND)'; [REDACTED]'; 'John Rayner'; [REDACTED]'; 'Craig Simpson'; 'David Wilson'; 'GORDON, David'
Cc: Mackenzie, Janice; Jamie Minhinnick; 'Paul Jameson'
Subject: Vent Meeting 23/7/19

All,

Please see below and attached for notes of yesterday's ventilation meeting and attached updated issues log/tracker where I have updated MPX's comments with NHSL comments in blue.

Attendees were – Wallace Weir (WW) IHSL, Ian Brodie (IB) Mott Macdonald, Colin Macrae (CM) Mott Macdonald, Donald Inverarity (DI) NHSL, Lindsay Guthrie (LG) NHSL, George Curley (GC) NHSL, Brian Currie (BC) NHSL, Ronnie Henderson (RH) NHSL, Craig Simpson (CS) IHSL, David Wilson (DW) MPX, David Gordon (DG) Bouygues, and dialling in – Ian Storrar (IS) HFS, Annette Rankin (AR) HPS, John Rayner (JR) Turner PES, NHSL AE.

The discussion points were as follows:

1. Critical Care Ventilation – HFS still awaiting info from TUV-Sud prior to forming an opinion on current design. IS to speak to Eddie McLaughlan to clarify what information is outstanding. BC confirmed that board are progressing on the basis of 10 ac/h and +10pa. Further discussion to take place at Steering Group meeting in the afternoon including options for designer.
2. IOM Report – The report was discussed at length with items on the issues log (attached) updated to include those on the full report. Issues log was further updated with current info and actions attributed to the various parties. Update and actions on the main body of the report are as follows:
 - Page 5 Room 3-C1.1-040 – Checked by H & V, IOM to confirm acceptable. *Post Meeting Note – IOM confirm this is now compliant.* DI & LG to visit location to understand clinical impact if future issues arise.
 - Page 6 Critical Care being dealt with through redesign however the 4 isolation rooms should be unaffected. MPX to recheck these 4 rooms.
 - Page 7 Recovery areas, MPX have rechecked design values – RH to get room volumes and readings from IOM. MPX to investigate once info received.
3. Other Areas Ventilation – RH confirmed that testing of non critical ventilation systems was ongoing and will update IPCT with results.

Please let me know if any of my updates are incorrect or if I have missed anything.

Regards

Ronnie

Ronnie Henderson
Commissioning Manager Hard FM
RHSC & DCN - Little France
NHS Lothian



No	Area	Item	Issue	Update Comment 08/07/19 - Ronnie Henderson, NHSL project team, 08/07/19	Multiplex (inc TUV-Sud / Mercury) Comments 12/07/19 & 17/07/19, 23/07/19, 26/07/19, 30/07/19, 02/08/19, 06/08/19, 09/08/19 - Red, NHSL Blue.	ACTION	NHSL	MPX	BYES	Closed	Dual	Due Date
1	General	Swirl diffusers have been widely used in the development.	Not normally used in critical areas like theatres as they can be difficult to measure accurately with balometers and they can impact on wound site velocity	These diffusers are compliant with SHTM 03-01	<p>Splitter used in balometer to ensure accurate readings -Grille selected are intended to provide minimal jetting at operating table height. - ACTION - Evidence to be provided that swirl diffuser air flow does not impact on wound site - TUV-Sud. TUV-Sud to confirm that grilles comply with SHTM 03-01, part A, particularly but not exclusively clause 5.68. MPX to confirm that grilles installed are as designed</p> <p>TUV Comment 26/07/19 - Air flow simulation issued The simulation demonstrates that the air flow patterns and velocities are in compliance with the requirements of SHTM 03-01 page 63, Section titled Diffuser and Grille Selection and Sizing.</p> <p>We would also note that they are also in accordance with CIBSE Guide B page 2-51, para 2.4.2.3 Grilles installed are as per design specification</p> <p>ACTION - NHSL /HFS to review - 26/07/19 NHSL - RH to forward to DI & LG 05/08/19 - RH stated response does not represent actual installation can this be reviewed 09/08/19 Update - RH confirmed with Paul KJameson of IOM that wound site testing was carried out and all passed. This item can be closed</p>	NHSL / HFS/MPX	1	1				Closed 1 09/08/19
2	Preparation	Some areas are not completed and ready for handover. Eg ceiling tiles still missing		CT & Fluoroscopy only areas still affected due to Turnkey works	Turnkey areas not Multiplex IOM still to test	NHSL	1					23-Aug
3	Theatres	Very limited extract in theatre corridors. Corridors are not at 0 absolute pressure and do not meet required 7 ach/hr (SHTM03-01 part A appendix 2 Table A2)	No escape for surplus air. Could impact on open door protection. Pressure in corridors is pushing fire doors open	To be reviewed by IPCT, All pressure Cascades are compliant	<p>Pressure cascade is designed to flow from theatres through ancillary rooms out to corridor (reference point / pressure)Corridors designed to be positive pressure to the adjacent departments and circulation areas and are in excess of 7ac/h out flow. Noting that the dirty Utility extract draws air from the corridor contributing to the air change rate.</p> <p>ACTION - Confirmation / evidence that 7ac/h are being achieved and that contaminated air is not discharging to hospital corridor.</p> <p>23/07/19 MPX stated that adjustments had been made, MPX to confirm if this is now compliant with requirement for 7 ac/h and 0 pressure.</p> <p>26/07/19 NHSL - MPX commented that they may add more extract to corridors.</p> <p>02/08/19 MPX - Additional extract will be required. two options being reviewed, one with additional extract fans in plantroom, second being adding additional branch duct to theatre extract. Final solution to be advised w/c12/08.</p>	MPX / Tuv-Sud		1				30-Sep
4	Theatres	Issues with doors, door actuators, closers and interlocking to DU's		Repairs now completed, confirmed verbally by Chris Wilson of Multiplex	Doors checked and completed - CLOSED	all parties to monitor						1
5	Theatres	Some prep rooms do not meet required air supply volumes. (theatres 35, 31, 32, 33 and 38)	Should be 100l/s for SPS room.	Resolved during validation process, verbally confirmed by Paul Jameson of IOM	SHTM 03-01 100l/s is based on a rooms size, where rooms are slightly smaller, flowrates calculated accordingly. Flow rate calculated on basis of achieving 10ac/h - THE 32 and 33 100l/s all others 90l/s. To avoid lengthy debate all Prep room design volumes increased to a minimum of 100l/s - CLOSED							1
6	Theatres	Most theatres do not properly control temperature	There are a number of faulty control valves on plant/heater batteries	Faulty valves and actuators replaced, confirmed by David Wilson of Multiplex	Faulty heating actuators / valves replaced. CLOSED							1
7	Theatres	Concerns about open door protection (eg theatre 34)	Theatre supply 1171, LLE365, scrub 73. Leaves 733 for open door vs required 750.	Resolved during validation process, verbally confirmed by Paul Jameson of IOM	Open door protection design was completed in conjunction with the pressure stabiliser specialist. Recorded flowrates noted (particularly theatre supply)looks lower than design and previously commissioned? All Theatres now checked and open door protection criteria achieved -CLOSED							1

No	Area	Item	Issue	Update Comment 08/07/19 - Ronnie Henderson, NHSL project team, 08/07/19	Multiplex (inc TUV-Sud / Mercury) Comments 12/07/19 & 17/07/19, 23/07/19, 26/07/19, 30/07/19, 02/08/19, 06/08/19, 09/08/19 - Red, NHSL Blue.	ACTION	NHSL	MPX	BYES	Closed	Dual	Due Date
8	Theatres	UCV clean zone not marked in flooring - not tape but alternative coloured zone or lines in flooring.	Para 7.108 of SHTM 03-01 part A and Para 6.26 of HBN 26 which states 'In theatres with ultra-clean ventilation the floor area enclosed by the hood should be marked with lines or a contrasting coloured area of flooring'.	Completed, confirmed by Multiplex and witnessed by NHS Lothian	Floors now marked - CLOSED					1		
9	Theatres	Some fabric issues in theatres (eg holes to fill and under benching gaps to fill)		Completed, confirmed by Multiplex	Area previously reviewed with NHSL - Works carried out by others- CLOSED					1		
10	Theatres	Theatre 33 - 4 cells fail 0.2 test at 0.17m/s. Filter screen may have been adapted	Re-commission UCV - may need HEPA filters as pressure drop is 170pa vs typical 100/110 for clean filters	Resolved during validation process, verbally confirmed by Paul Jameson of IOM, MAT confirm that filter change threshold is 240pa	System passed as part of original commissioning - Re-checked and adjusted where required. Filter dirty condition approximately 240Pa- CLOSED					1		
11	Theatres	It is understood that extract grilles in DU are supplied one from each theatre.	Systems will need to be interlocked so both theatres are running when any one is in use.	Theatre Staff understand that theatres work as a pair	As per original design. 26/07/19 MPX - Confirmation that interlock between the two AHU is operational and demonstrate to IOM - Proposed Completion - 02/08/19. 02/08/19 MPX - Interlocks now operational and to be demonstrated to IOM - Request to check utility room pressure cascade with on THE operational and one in setback to be carried out 05/08/19 06/08/19 - Pressure cascade can still be achieved on setback - Forward results - IOM to check	MPX / Mercury /IOM	1	1				23-Aug
12	Theatres	Dirty utility extract rates do not meet requirements in some theatres. Should be 410l/s.	Theatres 30, 36, 37, 33, 38.	Resolved during validation process, verbally confirmed by Paul Jameson of IOM	Flowrates calculated base on achieving > 20ac/h and pressure cascade. To avoid lengthy debate all Prep room design volumes increased to a minimum of 410l/s - CLOSED					1		
13	Theatres	issues on some theatre light stems, covers missing, not well fitted and cabling exposed		Ongoing AV works under control of NHSL	By others NHSL to confirm AV works complete - Note AV works are group 1 works, board is progressing for expediency.	NHSL	1					23-Aug
14	Theatres	Individual grilles in conventional theatres not balanced which can impact on air flows at patient wound site.	BSRIA Guide AG 3/89.3 Table 1 page 10 requires them to be within 10% of lowest grille reading.	Resolved during validation process, verbally confirmed by Paul Jameson of IOM	Reviewed and adjusted where required - CLOSED					1		
15	Theatres	Noise slightly high in UCV theatres	measurements 3.5 dbA above requirements. We would expect new facilities to meet the SHTM standard.	Resolved during validation process, verbally confirmed by Paul Jameson of IOM. One location slightly high +2dba	Previously measured and within limits (UCV commissioning reports). Refer to item on THE38 re faulty fan to be replaced Comment 26/07/19 Theatre 36 & 38 affected - Theatre 36 fan replaced, Theatre 38 fan adjusted, MPX to monitor - IOM to review 09/08/19 RH discussed with IOM can now be closed	IOM/MPX	1	1				Closed 1 09/08/19
16	Theatres	UCV hepa filter pressure drops relatively high (140-170 pa) compared with expected 100/110 pa for new filters		Resolved during validation process, verbally confirmed by Paul Jameson of IOM, MAT confirm that filter change threshold is 240pa	No issue. Filter dirty condition approximately 240Pa - review by Bouygues regarding replacement MPX to confirm lifecycle of filters with MAT & Bouygues - Comment 26/07/19 - Clean filters 110-140Pa air flow dependant current filters range between 120-156Pa. MAT confirmed that filters were currently good and part of their 6 monthly Checks. Confirmation email sent re pressure and life cycle - CLOSED					1		
17	Theatres	Hepa filter screens on UCV are distorted in places		Resolved during validation process, verbally confirmed by Paul Jameson of IOM	Any remedial works required carried out - CLOSED					1		
18	Theatres	Excessive flexible ductwork in theatre ceilings	Flexible connections greater than 1m and not fire rated to BS8313		NHSL to advise loactions. MPX to provide Confirmation that flexible connections comply with BS8313. Theatre 35 flex to be altered - To be rectified w/c 29/07. 02/08/19 MPX - Material ordered and will be installed 06/08/19 06/08/19 MPX - Fire certificates issued for ducts 06/08/19 MPX to confirm replacement of duct 09/08/19 MPX - Part complete, await 1 x 90 bend due 13/08/19	NHSL /Mercury	1	1			1	23-Aug
19	Theatres	Theatre 38 UCV	Faulty UCV quadrant fan needs to be replaced		MAT attending on 25th July to replace the fan - THE36 to be looked at also - Comment 26/07/19 THE 36 fan replaced, THE 38 fan adjusted and currently ok - CLOSED					1		
20	Theatres	Theatre volumes incorrectly calculated	Scrub room not included in room volume		Now included - CLOSED					1		

No	Area	Item	Issue	Update Comment 08/07/19 - Ronnie Henderson, NHSL project team, 08/07/19	Multiplex (inc TUV-Sud / Mercury) Comments 12/07/19 & 17/07/19, 23/07/19, 26/07/19, 30/07/19, 02/08/19, 06/08/19, 09/08/19 - Red, NHSL Blue.	ACTION	NHSL	MPX	BYES	Closed	Dual	Due Date
21	Theatres	Theatre Supply ductwork design	The design of ductwork to theatre is sub optimal. In some case the four ducts serving the UCV canopies are off different ducts from plant areas and the link in points for anesthetic and prep rooms are not well located. The is likely to leave UCV to be vulnerable to the quadrants going out of balance. It is an out of balance design		Comments noted. Can be monitored during annual verification - HFS to review. RH to provide drawings to HFS. 06/08/19 drawings available on Aconex	HFS/NHSL	1					Closed
22	Theatres	Scrub Extract Grilles	The extract grilles in the scrub area should have been located at low level to encourage a suitable clean air path and route for aerosols created to be away from users reducing the risk of aerosol from becoming airborne around the theatre suite		All operating theatres were designed with a high level grille as per RDD issued schematics.. Pressure stabilisers were considered but due to not all scrubs having a wall adjacent to the corridor a consistant approach was taken with the mechanical extract. Grilles were designed to be located at high level as this was deemed best to remove moisture laden air. TUV-Sud to confirm that the high level mechanical extract is equivelent to a Low Level passive vent such as stabiliser??. TUV Sud response 26/07/19 - SHTM03-01 A clause A4-27 details that open bay areas (such as scrub) has no requirement for additional ventilation, as noted extract was added to assist with removal of moisture ladden air - HFS to review.	HFS	1					23-Aug
23	Theatres	Anesthetic Room grilles	The supply grilles are relatively close to the low level extract which can short circuit the clear airflow path across the patient in the room		The supply terminal has been located high level and extract at low level adjacent to the gas outlets to ensure staff are in a clean air flow path. HFS to review.	HFS	1					23-Aug
24	Theatres	Access to VCDs	There are some volume control dampers in theatres which are not accessible for adjustment (e.g. THE 34 - the two grilles neraest to the anesthetic / prep wall. Proper access needed.		Access to VCDs available via hatches and removable light fittings. MPX to check examples listed and confirm accessibility - w/c 29/07/19 02/08/19 MPX - Bracket moved to allow access to VCD when light fitting is removed. - CLOSED	MPX/ Mercury					1	
25	Isolation rooms	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.	Para 2.37 of HBN 04-01 states that ideally each isolation suite should have its own dedicated supply and extract system	Construction of footprint did not provide sufficient space for individual AHU's for each isolation room (19 total). All parties aware of this solution at an early stage. Solution is compliant with design for a high building	As previously agreed. HFS to review	HFS	1					23-Aug
26	Isolation rooms	Some isolation rooms not achieving the required 10 ach/hr	Min running at 5 ach and some just under 10	Resolved during validation process, verbally confirmed by Paul Jameson of IOM	All rooms previously commissioned / validated and signed off (06/06/19). All rooms re-checked and compliant (note some Fans were found to be off when investigated? 4 rooms on level 1 to be re-checked. Comment 26/07/19 - MPX checked rooms and are as commissioned - to be demonstrated to IOM 29/07/19 Comment 30/07/19 - Demonstrated to IOM 29/07/19	IOM	1					13/08/2019
27	Isolation rooms	Back up arrangements appear to be very complex and as such likely to be challenging in future		SOP in place to operate changeover required during periods of maintenance to enable continued ventilation supply to isolation rooms	As per Isolation room functionality report. - To be demonstrated, MPX to confirm. 02/08/19 MPX- AHU04-08 and AHU04-09 now proved in manual mode. 2 additional control modules to be added (CSFD control) to make fully automatic to be completed w/c 12/08/19. Currently reviewing issues with 04-06 and 04-07 maintainace bypass	MPX / TUV Sud					1	23-Aug
28	HDU's	Only achieving 3-4 ach/hr vs required 10	NHS have apparently agreed this??	Relates to current critical care ventilation issue, work ongoing to provide design solution	As per design. Currently reviewing with NHSL team	All	1	1			1	Ongoing

No	Area	Item	Issue	Update Comment 08/07/19 - Ronnie Henderson, NHSL project team, 08/07/19	Multiplex (inc TUV-Sud / Mercury) Comments 12/07/19 & 17/07/19, 23/07/19, 26/07/19, 30/07/19, 02/08/19, 06/08/19, 09/08/19 - Red, NHSL Blue.	ACTION	NHSL	MPX	BYES	Closed	Dual	Due Date	
29	AHUs	cabling inside AHU also cable connectors inside AHU, potential for electrical faults to cause as source of fire within the airstream. Potential for smoke/fume to enter clinical areas. Cables and connectors will be difficult to clean and soapy water used to clean AHU internals may impact on connections	Similar situation was found at an NHS hospital in the NorthEast 2016 all wiring had to be removed from AHUs before handover to Trust	Confirmed verbally with Paul Jameson of IOM this does not affect safe operation. IHSL to submit a plan for rectification without interruption to theatre activities other than during planned downtime	The connectors are made from a Polyamide PA6.6 which is resistant to biogenic elements. The material is self-extinguishing. Note that the AHU is also fitted with in duct mounted smoke detector. In the event of smoke being detected the AHU will shut down and the associated CSFD close to prevent the spread of smoke and fire into the theatre. HFS to review. Mercury to issue data sheets on cabling to confirm smoke and fire rating. MPX to confirm IP rating of internal fittings and equipment. MPX to confirm AHU's are SHTM 03-01 compliant Comment 26/07/19 - AHU inspected and current cabling bypassing pre-filter, to be rectified. Verification of SHTM 03-01 compliance still outstanding. 30/7 Manufacturer and agent to visit next week. 02/08/19 MPX - manufacture attending site to review 07/08/19 09/08/19 MPX - Meeting and site inspection held 07/08/19. AHU log to be produced and issued by NHSL. MPX/Mercury to review and respond / issue proposals.	HFS / MPX / Mercury / NHSL	1	1			1	30-Sep	
30	AHU's	Filter pleat orientation incorrect on top row of final filters	Should be vertical	These are observations and were passed to IHSL for action (by Hard FM) immediately upon receipt	Filters checked and adjusted as required - Bouygues to confirm. 26/07/19 - Close once confirmed.	Bouygues			1			23-Aug	
31	AHU's	Pre filters showing signs of bypass			Filters checked and adjusted as required - Bouygues to confirm.	Bouygues			1			23-Aug	
32	AHU's	Magnahelic gauges not marked for clean and dirty limits			All filters monitored by BMS and will alarm when dirty. -Gauges to be labelled clean / dirty as SHTM03-01 clause 4.120. 26/07/19 - Labels ordered.	MPX / Mercury		1				23-Aug	
33	AHU's	Insufficient access for cleaning (eg inlets) and access hatches are too small for cleaning/maintenance			Ducts and AHUs have been successful cleaned on two previous occasions with no access issues. Particular attention to be paid to the inlet ductwork (louvre to AHU) some units have no hatch other are very small. Comment 26/07/19 - hatches to be installed in AHU02-13, AHU04-01, AHU04-07 and AHU04-08 Comment 30/07/19 - Access hatches to be fitted 06/08/19 09/08/19 - MPX Hatches now fitted. IOM to inspect	IOM		1				23-Aug	
34	AHU's	Some duct traverse test points are not plugged									1		
35	AHU's	Surplus drip tray in AHU (?humidifier removed?). Tray drain is not blanked off			Specification call for empty space for 'future humidifier c/w drip tray' Caps ordered for drains and will be fitted. MPX to confirm when complete. Comment 02/08/19 - Caps due 09/08/19 09/08/19 MPX - Caps fitted - IOM to check 09/08/19 RH discussed with IOM can now be closed.	IOM		1					Closed 09/08/19
36	AHU's	Cooling coil drip tray area not easy to clean. Cooling coil baffles cannot be easily removed due to cable installation			Drip tray is fully removable and droplet eliminator is fully removable - CLOSED						1		
37	AHU's	Trap arrangements incorrect. No suitable air gaps and traps dirty and incorrectly installed			Traps installed as per manufactures guidance and sized in relation to AHU pressure designs. Dirty traps to be reviewed. HFS to review on site. 06/08/19 reviewed - insufficient air gap MPX to address	MPX		1				1	23-Aug
38	AHU's	Magnahelic gauge scale too wide	1-500pa whereas 1-250 reflects likely filter pressure drops		Gauges give a clear indication of pressure. The BMS all gives the required information as well. CLOSED						1		
39	AHU's	Motorised dampers take a long time to open and close which impacts on the speed of auto-changeover	No spring return fitted so may not close in the event of power failure.		Not aware of any requirement for these dampers to be spring closed? - CLOSED						1		
40	AHU's	Plant labelling incorrect and shows incorrect areas served.	Temporary labelling installed. Needs to be permanent.	Only incorrect item on permanent label was Theatre number (original number) - temp labels added, new labels awaited. MPX to confirm when permanent labels fitted. Comment 26/07/19 - Now ordered.	MPX / Mercury		1					23-Aug	
41	AHU's	Branch ducts not generally marked up to show areas served		Please confirm requirements? NHSL to confirm with IOM. 09/08/19 Update - 2 branches per theatre to be labelled up to show areas served	NHSL	1						23-Aug	

No	Area	Item	Issue	Update Comment 08/07/19 - Ronnie Henderson, NHSL project team, 08/07/19	Multiplex (inc TUV-Sud / Mercury) Comments 12/07/19 & 17/07/19, 23/07/19, 26/07/19, 30/07/19, 02/08/19, 06/08/19, 09/08/19 - Red, NHSL Blue.	ACTION	NHSL	MPX	BYES	Closed	Dual	Due Date
42	AHU's	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.			Previously tested and operational - please identify relevant AHUs to allow any faults to be rectified. NHSL to confirm with IOM 09/08/19 Update - IOM's concern is that AHU's appear to be difficult to control on manual setting local to AHU. MPX to confirm restart arrangements and manual operation. Confirm restart operations after Generator Test	MPX	1					23-Aug
43	AHU's	Some motors running at over 95% speed so there is limited scope for system to overcome dirty filter pressure drop and maintain system performance			Still enough capacity to overcome dirty filters. - Review of all fan speeds as commissioned detailing remaining capacity to overcome dirty filters. 26/07/19 - Aiming to complete by 09/08/19 09/08/19 MPX - Work progressing with 70% of AHUs checked (no issues) remaining being checked thereafter report to be issued.	MPX / Mercury		1				23-Aug
44	AHU's	Inspection Light	Theatre 32 inspection lights do not operate when the unit is isolated		To be checked by MPX. Comment 26/07/19 - For safety reasons the main isolator isolates all power to the AHU including internal inspection lights. During maintenance the AHU can be switched off and the motors isolated / locked off locally allowing the lights to stay operational - IOM to comment - CLOSED	IOM					1	
45	AHUs	Maintenance Access to AHUS	Limited maintenance access to some part of the AHUs As they are regularly located side by side in pairs. 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 time.		Sufficient access is provided to maintain AHUS. All access for maintenance is from one side. Fans and motors can be removed and replaced as has been previousl completed on some units. Bouygues to review and comment. Comment 26/07/19 - AHU04-07 Extract has some potential restrictions. MPX/MER to review and rectify. Comment 30/07/19 - to be complete by 02/08/19 02/08/19 - Restriction removed and maintenance access acheived - CLOSED	MPX / Mercury					1	
46	AHUs	Thermal Wheels	We have concerns regarding the use of thermal wheels on theatre systems. The high rotational speeds will overcome the relatively small purge section and transfer extract air to supply air path. The manufacturer should attend site and confirm that they are installed and operating correctly		The Thermal wheels are part of the AHU which has been installed by the manufacturer. Operation has been checked by controls specialist. Schneider to confirm that the thermal wheel have all been checked and are running at the correct speed and that there is no carry over of extract air into supply air. 26/07/19 - NHSL IOM to check once MPX confirm purge section is not compromised. Comment 30/07/19 - Thermal wheel set between 6-12rpm as manufacturers recommendations. IOM to confirm if they experienced issues at 12rpm speed 06/08/19 MPX -Schneider / Qnis to carry out a re-check and record.by 13/08/19	IOM / MPX	1	1			1	23-Aug
47	AHUs	Angio & MRI AHUs	Unable to located main test points		Angio AHU (AHU02-18) has a main set of test holes within plantroom. AHU serving MRI (AHU02-20) has a test point serving majority of system but due to duct configuration a main test point was unachievable. AHU volume flowrate derived from pitot traverse (serving majority of system) plus summation of grille volume flowrates not captured by traverse. - CLOSED						1	
48	BMS	Communication problems between BMS and AHU (eg theatre 33)		These are observations and were passed to IHSL (for Hard FM) on receipt for action	Fault rectified - communication now available - CLOSED						1	
49	BMS	It is not clear if critical plant will operate in stand alone mode in the event of issues with BMS or comms			Units can be switched to hand should there be a catastrophic failure of BMS. - CLOSED						1	
50	BMS	AHU Pressure Controls	The use of pressure control sensors downstream of AHU but upstream of UCV canopy has been shown at other hospitals to cause fluctuating or hunting airflows within UCV canopy. The use of air flow sensors appears to have be more stable		Can be monitored. Trend logs to be issued and reviewed. Review to include identifying sensor location. 02/08/19 MPX - Trend logs now downloaded an being colated - to be issued by 07/08/19 09/08/19 MPX - Trend logs started again as generally the THE AHUs were in setback mode so no meaningful results. All AHU put on occupied mode and further logs will be down loadede and issued w/c 12/08/19	MPX / Mercury / Schneider		1				13-Aug

No	Area	item	Issue	Update Comment 08/07/19 - Ronnie Henderson, NHSL project team, 08/07/19	Multiplex (inc TUV-Sud / Mercury) Comments 12/07/19 & 17/07/19, 23/07/19, 26/07/19, 30/07/19, 02/08/19, 06/08/19, 09/08/19 - Red, NHSL Blue.	ACTION	NHSL	MPX	BYES	Closed	Dual	Due Date
51	BMS	UCV and Theatre Surgeons panel alarms	When the UCV was operational in THE 39 but the AHU was not running there was no alarm on the Surgeons panel. Similarly in THE 34 the surgeons panel indicated healthy when the AHU was not running		Connectivity to be checked between Surgeons panels and BMS. MPX to confirm and evidence operating correctly. Comment 26/07/19 - Plant alarms checked and are replicated on Surgeons panel with the exceptioin of when the AHU is locally switched off. Fault to be rectified by 31/07/19 02/08/19 MPX - rectified and checked. to be demoed to IOM 05/08/19	IOM	1					16-Aug
52	BMS	Plant control	The plant dose not appear to benefit from close control. THE 35 air volumes are eratic and give differing readings at different times. Several Theatres do not achieve close temperature control (THE 34 and 35 had heater batteries operational and coling coils open to reduce heat?		To be monitored. Trend logs to be issued and reviewed. 02/08/19 MPX - Trend logs now downloaded an being colated - to be issued by 07/08/19 09/08/19 MPX - Trend logs started again as generally the THE AHUs were in setback although some issues were identified with valves passing allowing - now being reviewed and addressed.	MPX / Mercury / Schneider		1				16-Aug
53	Surgeons Panel	Angio procedures room	There is no user indicator panel in the angio procedures room which allows the user to control the plant or indicates if there is a plant failure		The Angio room controls are as per design. NHSL to review requirements and confirm.	NHSL	1					23-Aug
54	Recovery Room Ventilation	Air change rates below requirement (15ac/h)			All commissioning information checked and all rooms were previously achieving design flowrates values based on 15ac/h. Please forward measured grille volumes and room volumes. IOM to provide. 02/08/19 MPX - AHU02-08 S&E and AHU02-20 S completed and demoed to IOM. AHU 02-20E completed and to be demoed to IOM 05/08/19	IOM	1					16-Aug
							21	15	2	23	7	

Project title Royal Hospital of Sick Children

Subject Ventilation Meeting Minutes

Location NHSL Project Office, Clinical Management Suite, [Royal Hospital of Sick Children HCYP](#), Edinburgh

Date and time of meeting 09/08/2019 10:00

Recorded by: RS

Circulation: Via Email

Attendees

Name	Initials	Company/organisation
Billy Loudon	BL	Currie & Brown
Graeme Salmon	GS	Integrated Health Solution Lothain (IHSL)
Lindsay Guthrie	LG	Infection Control Lead (NHSL)
Donald Inverarity	DI	Consultant Microbiologist (NHSL)
David Wilson	DW	Multiplex (MPX)
Ronnie Henderson	RH	National Health Service Lothain (NHSL)
Wallace Weir	WW	Integrated Health Solution Lothain (IHSL)
Ross Southwell	RS	Mott MacDonald
Ian Brodie	IB	Mott MacDonald
George Curley	GC	National Health Service Lothain (NHSL)

Apologies

Name	Initials	Company/organisation
Brian Currie	BC	National Health Service Lothain (NHSL)
Ken Hall	KH	Multiplex (MPX)
Ian Storrar	IS	Health Facilities Scotland (HFS)
Colin Macrae	CM	Mott MacDonald

Item	Text	Action
1.	<p>Remedial Works/Ventilation Board Change</p> <p>WW stated that there is a review of the outcome of the steering group meeting scheduled yesterday was to commence for today at 3pm. WW confirmed that an answer regarding acceptance of the board change is to be received this afternoon. DW said asked that the technical questions points that were mentioned in the previous meeting should be kept for progressed if possible until further discussions for when TUVSUD can commence their full design (see below).</p> <p><u>Ventilation Meeting Minutes 02/08/19:</u> DW had been engaging technically with TUV-Sud. These discussions were around the following:</p> <ul style="list-style-type: none"> - Preliminary discussion about power – Will there be a need for dual supplies for the new AHU - Are pressure stabilisers are needed in all rooms? 2-1 no. rooms that have doors at both sides of each floor. How is the pressure regime maintained when both doors are open? - Openable windows – Looking at these to be locked and shutoff. - AHU – heating and cooling – Looking into a heat pump arrangement - AHU - Looking at acoustic outputs of the external condenser, potentially pushing them over to the energy centre. - Looking at different ceiling types (DW stated his preference would be plasterboard ceiling). 	IHSL

- ~~Isolation rooms~~— Would air permeability tests need to be carried out in these rooms?
- Any expectations on pressure gauges (visual ~~meter~~indication required?).
- Neonatal – single room that opens to 3 bed cot – treat the whole area as 10 Pa? RH stated he had indicated this on walk around.

NHSL

DW asked if there was any update regarding allowing a site visit to the Royal Infirmary Ward 2:15 – There was confirmation from all members to arrange a meeting for Monday 12th August (in the morning).

2.

Ventilation Issues Log

Ventilation issues log had been updated by NHSL to show indicative dates on issues and these were noted as all provided updates.

Please refer to ventilation issues log for more updates.

DW did comment on previous minutes to change the following:
 LG asked if there was any issues with the log. RH stated issue regarding drainage from the AHU. In general drainage was suitable but in some situations they did not appear to provide ~~15mm~~ ~~50~~ ~~15mm~~ gap at the bottom of the condensate pipe. RH stated some of the traps were dirty. DG noted this.

3.

Any other Business

General ventilation – RH stated that there were checks today with IOM/H&V/HFS at 11:30am today to come to a consensus on measurement methodology and to confirm the method of testing. DW stated they completed ventilation fixes to level 2 & 3 since IOM has issued preliminary results. Typical issues where fire dampers shut, CSFD, VCD and other minor setpoint changes. DW did note that ~~there will all the issues regarding to~~ the ventilation will be identified on each AHU regarding the type and location for any issues. From current testing DW stated that there is no evidence to show that the system is not performing as expected. GC stated that there was a reference about positive pressure to the corridor when you opened the door. DW stated that MPX are trying to get back to design and these issues ~~may go away~~ be resolved. GC stated there was previous times there was conflict with IOM and H&V. DW did say there was a lot of items that need to be resolved and thus the reason for the meeting today at 11:30am. GC/LG/DI would like to see results when this has been closed out.

IHSL/MPX

RH did state that IOM have picked up AHUs where 2 fans are in operation. To confirm with BYES if there is a spare for every instance where this is the case.

BYES

DI mentioned that HFS talked about microbiological sampling in previous meetings and wanted to know if any progress had been ~~made~~ done. RH stated he is unaware of ~~doesn't know the~~ progress on this issue and ~~to see will wait to see~~ recommendations from HFS ~~that the report shows~~. RH asked ~~if if they sort the issues with the AHU's and not mentioned into the report, is there a requirement to carry out testing~~. WW did say he agreed with LG when she previously said that there would be no baseline to test. LG stated that all that is required is that the system complies with the engineering standards. GC stated maybe a smoke test could be done to set a benchmark now and after the works was complete. LG asked if the microbiological tests from the operating theatres show any concerns. RH stated it was a PASS. LG said that ~~on this basis~~, there may not be a need for additional tests ~~required~~. GC did say ~~there~~ we should go above and beyond to do tests. RH/LG mentioned that there is no reference ~~point for this~~. GC stated that ~~we would expect that the manufacture certificate to confirm this~~. GC stated that ~~there is some issues with Glasgow we should check here but LG stated that there may be differences between the 2 sites~~. LG did say that expert opinion of HFS is the one that should be followed ~~in~~ in these situations.

HFS

LG noted DI and herself will be on holiday next week. ~~Elham Khatamzas and Portera Kalima~~ will be attending in their absence. GC also noted he will be off next week but he will be available by phone. RH asked ~~is if it was time to consider~~ ~~not sensible about~~ having these meetings 2 times a week. LG ~~said~~ suggested

NHSL

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~~asking to ask~~ IMT. DW ~~said~~suggested once the critical care design begins one of these meetings could convert to a ~~will be doing a workshop~~, leaving the other for general ventilation matters, all agreed but to monitor ongoing, ~~to separate these out and keep 2 days a week.~~

Date of Next Meeting

Tuesday 13th August 2019 @ 10:00 Warlow

RHCYP / DCN – Remedial works and reports matrix v.3.0

<u>Ref</u>	<u>Issue</u>	<u>IOM ref</u>	<u>Sub issues/ items</u>	<u>Position reported to IMT</u>	<u>Next Steps / action owner</u>	<u>Commercial impact</u>	<u>Close out: Planned/ Actual</u>
V1	Air Handling Units (AHU) - Confirm AHU comply with the requirements of SHTM 03-01, including fan change, filter bypass, air leakage etc.	29 P	Cabling inside AHU	Identified by IOM as a potential fire / smoke risk and difficult to clean. Site inspections including HFS / HPS, IPC etc, identified potential air bypass of filters via poor fitting and cable position.	7/8/19 site meeting including manufacturer, supplier and fitter – Actions arising: NHSL / IOM – schedule SHTM 03-01 against line items; MPX – will create a benchmark AHU for validation by NHSL / HFS / HPS (and BYES); Including moving inverters out of the unit (to reduce heat / fire risk), validate thermal wheel spillage / controls, sheathing all cables, proving seals and accessibility. Additional schedule of AHU items requiring attention against SHTM issued to IHSL 8/8/19. MPX to respond with a rectification proposal, timeline indeterminate.	7/8/19 – Definition of compliance against betterment to be confirmed (NHSL / HFS) Mercury very defensive, particularly against BYES seeking improvements for maintenance etc. Not all components fire rated but assured that power to internal parts, cables, etc. would trip if overheating or shorting. Potential remedial works (following benchmarking) will result in a programme of work- TBC. Alternative of replacing all AHU would probably require DRP at least as significant redesign required. 9/8/19 – IHSL / MPX (Callum Tuckett) keen to see detail of non compliance items as MPX, supplier and manufacture still adamant that AHU compliant as signed off by IT. Indications are that MPX will rectify at their expense – remains to be confirmed.	MPX continue to be pressed for prog. Some 2 -3 months duration likely.
		30	Filter orientation		Filters checked and adjusted as required - Bouygues to confirm.	Addressed by BYES	TBC
		31	Evidence of airflow bypassing		Filters checked and adjusted as required - Bouygues to confirm.	See V1	See V1

<u>Ref</u>	<u>Issue</u>	<u>IOM ref</u>	<u>Sub issues/ items</u>	<u>Position reported to IMT</u>	<u>Next Steps / action owner</u>	<u>Commercial impact</u>	<u>Close out: Planned/ Actual</u>
			filters		See V1 for assurance steps		
		32	Magnahelic gauges not marked for clean and dirty limits		See V1 - @ 7/8/19 26/07/19 - Labels ordered.	See V1	See V1
		34	CLOSED				
		35	Surplus drip tray not blanked off		Caps ordered for drains and will be fitted. MPX to confirm when complete.	See V1	<i>Caps due 9/8/19</i>
		36	CLOSED				
		37	Incorrect trap arrangements		See V1 - @ 7/8/19	See V1	See V1
		38	CLOSED				
		39	CLOSED				
		40	Plant labelling incorrect		See V1 - @ 7/8/19	See V1	See V1
		41	Branch ducts not generally marked up		See V1 - @ 7/8/19	See V1	See V1
		42	Auto change over to be tested (see also 27)		See V1 - @ 7/8/19	See V1	See V1
		43 P	SOME motors running at over 95% speed – maintenance & service issues flow from that		MPX - Review of all fan speeds as commissioned detailing remaining capacity to overcome dirty filters. 26/07/19 - Aiming to complete by 09/08/19	With IHSL to confirm compliance / meet guidance. 9/8/19 – ventilation / IOM meeting: review ongoing	MPX – 23/8/19
		44	CLOSED				
		45	Maintenance	CLOSED	Restriction removed and		02/08/19

<u>Ref</u>	<u>Issue</u>	<u>IOM ref</u>	<u>Sub issues/ items</u>	<u>Position reported to IMT</u>	<u>Next Steps / action owner</u>	<u>Commercial impact</u>	<u>Close out: Planned / Actual</u>
			access to AHUs		maintenance access achieved - CLOSED		
		46	Thermal wheels		See V1 - @ 7/8/19	See V1	See V1
		50P And 52	AHU Pressure controls and Plant Controls (both BMS)	The use of pressure control sensors downstream of AHU but upstream of UCV canopy has been shown at other hospitals to cause fluctuating or hunting airflows within UCV canopy.	02/08/19 MPX - Trend logs now downloaded and being collated - to be issued by 07/08/19 9/8/19 – IHSL advised that back with MPX as Trend logs had not been set correctly.	None anticipated	13/08/19
		51	Ultra Clean Ventilation and Theatre Surgeons panel alarms	When the UCV was operational in THE 39 but the AHU was not running there was no alarm on the Surgeons panel. Similarly in THE 34 the surgeons panel indicated healthy when the AHU was not running	02/08/19 MPX - rectified and checked. to be demoed to IOM 05/08/19		5/8/19
V2	External doors to plant rooms	n/a		To be reported @ 6/8/19	NSS report that - Ensure that excessive gaps are removed and appropriate anti vermin measures are applied to all the doors and screens.	Should be a helpdesk reportable item (i.e. no commercial impact)	
V3	Air intake location – Air intakes are sited in the well below the helipad but	n/a			NSS report that - Demonstrate the effect of helicopter landing on air flows through measurement or modelling.	Assuming modelling supports the installation, no commercial impact. If changes to be made, may require Board change.	Sept 2019?

<u>Ref</u>	<u>Issue</u>	<u>IOM ref</u>	<u>Sub issues/ items</u>	<u>Position reported to IMT</u>	<u>Next Steps / action owner</u>	<u>Commercial impact</u>	<u>Close out: Planned / Actual</u>
	information has not been provided on the impact of downdraft on air flows and pressures or entrainment of contaminants.				NHSL - Site live test to be coordinated with engineering / validation support (September 2019?) – Live test supported by AOB 8/8/19 Modelling undertaken by MPX to be demonstrated. NHSL to demonstrate protocols (note live site validation required)	(note: Site live test etc required for PA validation following PCo change.)	
V4	Ventilation (Isolation rooms and the areas containing them) Isolation rooms are not served by a single ventilation system for each room as recommended in SHPN4 Supplement 1. The arrangement provided where ventilation systems serve an area of the building including contained	25	Resilience of systems, protocols and potential impact to be proven and agreed by all parties.	Construction of footprint did not provide sufficient space for individual AHU's for each isolation room (19 total). <i>All parties aware of this solution at an early stage</i> [statement to be verified]. Solution is compliant with design for a high building	7/8/19 - IHSL to be advised to: Prove that bypass connections to adjacent ventilation systems will allow safe operation of both areas and / or explain service provision strategy for loss of each area including isolation rooms. IOM have witnessed and all ok (confirmation numbers to be provided by IOM to NHSL)	Operational compromises and protocols, assuming the systems are proven to be resilient, will be required – alternative is to instruct additional units as Board change but noting insufficient space allowed for additional units.	TBC

<u>Ref</u>	<u>Issue</u>	<u>IOM ref</u>	<u>Sub issues/ items</u>	<u>Position reported to IMT</u>	<u>Next Steps / action owner</u>	<u>Commercial impact</u>	<u>Close out:</u> <u>Planned / Actual</u>
	isolation rooms has not yet been proven in the event of failure of an air handling unit and the implications for service impact are not yet understood.						
	Isolation rooms	26	Some isolation rooms not achieving 10 ach		29/7/19 - Demonstration of meeting design requirements to be verified by IOM / NHSL	None if verified; commercial issues may arise if validation fails.	29/7/19
V5	Ventilation Theatres - The ability of the single high level extract of linear scrub rooms should be demonstrated or additional low level ventilation provided.	22 P		Per MPX - All operating theatres were designed with a high level grille as per RDD issued schematics. mechanical extract. Grilles were designed to be located at high level as this was deemed best to remove moisture laden air.	NSS report that - Show that mixing and extract in scrub rooms effectively prevents contaminants being dispersed into theatres or provide additional extract. TUV Sud response 26/07/19 - SHTM03-01 A clause A4-27 details that open bay areas (such as scrub) has no requirement for additional ventilation, as noted extract was added to assist with removal of moisture laden air - HFS reviewed (& update to be passed to IHSL - RH).	None if verified; commercial issues may arise if validation fails.	23/8/19

<u>Ref</u>	<u>Issue</u>	<u>IOM ref</u>	<u>Sub issues/ items</u>	<u>Position reported to IMT</u>	<u>Next Steps / action owner</u>	<u>Commercial impact</u>	<u>Close out: Planned/ Actual</u>
V6	Ventilation Theatres - Anaesthetic rooms 31 and 34 do not demonstrate a clean air flow path to reduce exposure of staff to gasses.	23			Move ceiling supply to opposite side of room from extract. In room 30, move supply away from door.		
V7	Ventilation Theatres - Theatre utility rooms Extract ventilation means theatres have to be used in pairs and taking a theatre out of service reduces extract in utility room too low.	11		MPX - As per original design. 26/07/19 MPX - Confirmation that interlock between the two AHU is operational and demonstrate to IOM - Proposed Completion - 02/08/19. 02/08/19 MPX - Interlocks now operational and to be demonstrated to IOM	NSS report that - Add supplementary extract ventilation to allow for one theatre being out of service or demonstrate resilience following the loss of a pair of theatres. IOM Requested to MPX check utility room pressure cascade with one Theatre operational and one in setback	MPX position is that this is compliant – therefore Board change would be required for any changes.	Testing / demonstration 5/8/19
V8	Ventilation Theatres - Theatre corridor extract and pressure differentials do not comply with requirements.	3 P		Pressure cascade is designed to flow from theatres through ancillary rooms out to corridor (reference point / pressure)Corridors designed to be positive pressure to the adjacent	NSS report that - Modify theatre corridor ventilation to comply and test and commission. 02/08/19 MPX - Additional extract will be required. two options being reviewed, one with additional extract fans in plantroom, second being	MPX appear to be progressing changes without commercial challenge.	Final design solution to be advised w/c 12/08. Work programme to follow. 30/9/19

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				departments and circulation areas and are in excess of 7ac/h out flow. Noting that the dirty Utility extract draws air from the corridor contributing to the air change rate. ACTION - Confirmation / evidence that 7ac/h are being achieved and that contaminated air is not discharging to hospital corridor. 23/07/19 MPX stated that adjustments had been made, MPX to confirm if this is now compliant with requirement for 7 ac/h and 0 pressure.	adding additional branch duct to theatre extract.		
V9	Ventilation Theatres - Provision for maintenance without unnecessarily affecting service appears poor.	33	Insufficient access arrangements into the AHU		For each area, the Board should have the maintenance and failure contingencies mapped and agreement of clinical colleagues for the expected impact on room availability. NHSL (Project team) and BYES to compile / demonstrate protocols	IHSL (MPX) have identified previous cleaning without problems. BYES position appears to be looking for improvements. MPX fitting additional access hatches.	Access hatches – MPX – w/c 9/8/19 Protocols – BYES / NHSL - TBC
n/a	Isolation rooms ventilation – back up	27	Back up arrangement appears very	Some remedial works completed.	MPX Currently reviewing issues with 04-06 and 04-07 maintenance bypass	Should be none	w/e 23/08/19

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			complex		Still outstanding		
V10	Ventilation Theatres - Fire dampers in some locations cannot be adequately tested as duct access has not been provided. Also, locations of fire dampers and fire rated ductwork has been questioned.	n/a			NSS report that - Provide access so all fire dampers can be readily visually inspected to verify operation. Review fire damper provision and fire rated ductwork and confirm appropriate provision.	Should be none, to comply with guidance.	
V11	Ventilation Theatres? - On inspection the ventilation systems throughout the building had clearly not been snagged and were not ready for validation or operation.	n/a			NSS report that - A full snagging of the ventilation systems should be undertaken and rectification put in place. E.G. air handling unit leaks, filter bypass, dust in AHUs and ductwork, missing duct access, fire stopping, fire dampers. 8/8/19 – AOB advised by NSS that background to such quotes would be provided to NHSL to explain context of opinion.		
		18	Excessive flexible ductwork in theatre		Theatre 35 flex to be altered - MPX - Material ordered and will be installed 06/08/19 Outstanding – identification of	None – defect / failure to meet guidance	23/8/19

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			ceilings		any other areas. action? 9/8/19 – IHSL advised that engineer turned up on site with wrong fittings. <i>MPX – to be instructed by IHSL to do full survey</i>		
W1	Critical care	n/a	Pseudomonas found in taps, in critical care areas		All taps (not just TMT/TMV) to be disinfected and retested. Follow guidance. Replace tap strainers and cartridges in CCU TMT taps. Showers require to be disinfected. Implementation plan required.	<i>9/8/19 - See attached draft change instruction 084</i>	
W2	Non critical care	n/a	Swarf and biofilm found in tap strainers.		Replace tap strainers in all areas.		
W3	Showers (all areas)		Shower hose lengths do not comply with Scottish Water bye laws and guidance.		Shorted hose length or retaining ring to ensure that head cannot reach WC or drain Disinfect hose and drain after rectification.		
W4	Water (general)		Testing has found widespread fungal		The water system should be disinfected and re-tested.	<i>9/8/19 - See attached draft change instruction 086</i>	

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			contamination				
W5	Water (general)		Legionella risk assessment.		<p>The Legionella Risk assessment Feb 2019 identified a range of actions. The Action Tracker does not demonstrate that the issued raised have been resolved or a timeline provided for resolution.</p> <p>The risk assessment is too heavily focussed on Legionella and not taking into account other organisms in line with patient type.</p> <p>There is no categorisation of patient type anywhere in what we have been provided and consideration to susceptibility.</p>		
W6	Water (general)		Designated roles and responsibility.		<p>It has not been demonstrated that there are authorised persons or competent persons for the water services as defined in SHTM 00 and SHTM 04-01. In addition, a responsibility matrix and interface to NHSL water management group is required.</p> <p>The current Responsible Person has not been appointed in writing and uncertain as to whether received RP training.</p>		

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					Additionally, has no previous experience of healthcare.		
W7	Water (general)		Water tanks		The Raw Water and Filtrate water tanks are interconnected at the drain. These must be separated.		
W8	Water (general)		Expansion vessels should be checked for susceptibility to bacterial growth.		Bladder from expansion vessels to be inspected.	Change order anticipated	
W9	Water (general)		Hot and cold water temperatures / Flushing.		There was an issue with raised cold water temperatures during the boiler outage – this requires investigation.		
W10	Water (general)		Filtration Plants		From work done at Glasgow microbiological Growth potential was identified as part of the Backwash cycle. Suggest Chlorine dioxide addition to backwash water tank to aid microbiological and biofilm development on filters.		
W11	Water (general)		ZIP & HYDRO Units		These were found to be contaminated and are required to be disinfected and tested to demonstrate safe water delivery.		
D1	Drainage /		Sinks drains		Initial testing indicates that	9/8/19 - See attached draft change	

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	plumbing				these are not significantly contaminated, however they need to be disinfected periodically prior to and post occupancy to maintain their condition. Suggest utilising the Hysan methodology being employed at QEUH and RCH Glasgow.	instruction 085	
D2	Drainage / plumbing		Bottle traps		There would appear to be an inconsistency of installation and potential of back-feed from trap to drain. This requires review		
D3	Drainage / plumbing		Trough Sinks		The drains in trough sinks have been identified as high risk potential. This requires review and treatment strategy considered.		
D4	Drainage / plumbing		Pumped Drainage		The Rainwater drainage system presents the potential for flooding on pump failure and requires review		
E1	Electrical		Not inspected yet due to priority put on water, ventilation and drainage.				
F1	Fire		Not inspected				

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			yet due to priority put on water, ventilation and drainage.				
G1	Medical Gases		Not inspected yet due to priority put on water, ventilation and drainage.				
n/a	DESIGN DEVELOPMENT and NEW WORKS – raising the air change rate and improving pressure regime for CRITICAL CARE	28			<p>Agree Board Change technical specification – NHSL (BC) with input from HFS / HPS 8/8/19 – agreed in principle at AOB*; subject to more details being provided to NSS (IG) *SEE ATTACHED REPORT & supporting information.</p> <p>Fast Track Board Change Request Process to be adopted as agreed with IHSL on 13/8/19. Letter of intent being drafted to enable design to progress (SG). If agreeable to MPX, further letter of intent to be drafted to enable AHU to be</p>	<p>Consider the mechanisms for Board change, particularly:</p> <ol style="list-style-type: none"> 1. Reserving rights to pursue (e.g. negligence, etc) 2. Indemnity to IHSL and supply chain 3. VfM tests 4. Step in / alternative procurement routes. <p>9/8/18 – MPX indicated that basis of draft board change would be sufficient to keep TUV SUD engaged for design phase.</p> <p>Plan A – Use Board Change and letter of intent to allow MPX/TUV SUD to design. Plan B – Use Board Change to instruct IHSL to procure alternative</p>	<p>TBC by IHSL but shortest prog as Plan A likely to be 24 weeks from any agreement of letter of intent. Plans B + C considerably longer.</p>

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					<p>ordered once system designed (SG). MPX will not accept an "agreement to agree" and are seeking a waiver from the Board to any right to pursue MPX for any alleged non compliance in respect of ac/hr in relation to CC single bed and four bedded rooms.</p> <p>Above draft documents to be tabled at OSG on 22/08/19 (SG).</p>	<p>designer should wording on letter of intent not be agreeable to MPX. Plan C – Board exercise their "step in" rights.</p> <p>Board to consider temporary waiver to not exercise their rights to terminate the PA on a rolling review basis (SG).</p>	
n/a	Confirmation of compliance for general single rooms and 4 bedded bays - air change rates		6 Air Changes per hour, mixed mode v 4 ACH supply	At OAB 8/8/19 – NSS advised that they were working through analysis;	Update to be reported to next OAB	Not defined at present	TBC

Notes:

This matrix will be updated to reflect relevant Guidance (eg SHTM 03-01) against line items. Also to include relevant approvals given.

- Cross referencing of IOM Ventilation report to SHTM 03-01 clauses being undertaken by IOM / NHSL (RH) to support clarification with IHSL (MPX, Mercury and AHU plant manufacturers and suppliers. Many line items are picked up in general statements in the SHTM, rather than as specific item definitions; for example, potential difficulties for maintenance have an impact on clinical service delivery if prolonged down time is encountered, but have TO DATE been accepted by BYES as fit for purpose – 7/8/19
- Actions to be translated into a programme for monitoring and interdependencies including prioritisation.
- Commercial approach and position to be developed as individual task clarified.
- Verification of IT approvals, against issues being found, to be undertaken based on the review outputs.
- Items highlighted are seen as priority / long lead time elements

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- f. Operational management implications will need consideration – for example, issues identified on this list could / should be logged on the helpdesk and deductions under the payment mechanism will flow (to BYES through IHSL).
- g. Items 1 & 15 from previous IOM schedule (Use of swirl diffusers and noise slightly high in UCV theatres) have been closed at Ventilation meeting 9/8/19.



Bundle 7
Documentation relating to
the Cabinet Secretary's decisions
Volume 2 (of 3)