

**Bundle of documents for Oral hearings
commencing from 13 May 2025 in relation
to the Queen Elizabeth University Hospital
and the Royal Hospital for Children,
Glasgow**

**Bundle 43 - Volume 1
Procurement, Contract, Design and
Construction,
Miscellaneous Documents**

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Table of Contents

1.	A51667165	Critical Care Representatives & Design Team Meeting Notes - 03 May 2007	Page 8
2.	A51667197	Haemato-Oncology Group Meeting Notes - 31 May 2007	Page 11
3.	A51667198	Haemato-Oncology Operational Policy Meeting Notes - 14 August 2008	Page 13
4.	A51666715	Email chain - Myra Campbell and John Hood - Ventilation - Haemato-onc ward new South Glasgow Hospital - 15 to 22 August 2008	Page 15
5.	A51667220	Ward User Group Meeting - 08 October 2008	Page 16
6.	A51667127	Emergency Complex Users Meeting - 03 December 2008	Page 20
7.	A51667230	Ward User Group Meeting Notes - 04 December 2008	Page 23
8.	A51667167	Critical Care User Group Meeting Notes with Revised Schedule of Accommodation attached - 11 February 2009	Page 26
9.	A51667218	Ward User Group Meeting Notes - 04 March 2009	Page 31
10.	A51667206	Theatre User Group Meeting Notes - 09 March 2009	Page 33
11.	A48699205	New South Glasgow Hospitals - Potential Value Engineering Items - 28 July 2009	Page 35
12.	A51666699	NSGH - Nominated Representatives - Design Stage to October 2009	Page 37

13.	A51652786	Laing O'Rourke / DSSR Questions for NSGH Post Bid Feedback Session with NHS GG&C - 10th November 2009	Page 41
14.	A51667241	NSGH - Nominated Representatives - 17 December 2009	Page 48
15.	A51667181	NSGH - Nominated User Group Representatives - January 2010 onwards	Page 56
16.	A51666752	Role of User Group Leads - 19 January 2010	Page 60
17.	A51667076	1:200 Renal Wards & Renal Dialysis User Group Meeting - 21 January 2010	Page 63
18.	A51666876	Haemato-Oncology User Group Meeting - 04 February 2010	Page 67
19.	A51667057	1:200 Haemato-oncology User Group Meeting – 04 February 2010	Page 69
20.	A34099838	South Glasgow New Hospital - RDS Development Process - Draft - 12 March 2010	Page 73
21.	A51667033	1:200 Critical Care User Group Attendance - 19 March 2010	Page 91
22.	A51667654	PICU User Group Meeting - 24 March 2010	Page 94
23.	A51666761	User Group Membership & Leads - April 2010	Page 96
24.	A35422276	Acute Services Strategy Board Executive Sub-Group - Terms of Reference and Membership - 20 April 2010	Page 98
25.	A51667056	1:200 Haemato-oncology User Group Meeting - 07 May 2010	Page 99
26.	A51667816	Email from Anna Brown to Mairi Macleod and Allyson Hirst - 1:200 of Schiehallion Ward Markedup Dwg & Post UGM3 Signoff Dwg - 17 May 2010	Page 102
26.1		NA-xx-02-PL-252-402_07	Page 103
26.2		2010-05-17 NCH UGM3 Schiehallion 02 Markup	Page 104

27.	A51666992	Generic ward user group attendance sheet - 14 June 2010	Page 105
28.	A51666973	1:50 Critical Care User Group Meeting Attendance – 24 June 2010	Page 106
29.	A36939817	Engineering Services Specification - Mechanical Commissioning - July 2010	Page 107
30.	A51666998	1:50 Generic Ward User Group Meeting Attendance – 16 August 2010	Page 111
31.	A51666994	1:50 Haemato-oncology User Group Meeting Attendance - 16 August 2010	Page 112
32.	A52288069	New South Glasgow Hospitals - Potential Value Engineering Items - 21 September 2010	Page 113
33.	A34099833	New South Glasgow Hospitals Project - 1:50 Protocol Document - 28 February 2011	Page 115
34.	A51666749	User Group Membership by Department - March/September 2011	Page 123
35.	A51666976	1:50 Critical Care User Group Meeting Attendance – 24 March 2011	Page 126
36.	A36939827	New Southern General Hospital Low Carbon Tracker - 07 June 2011	Page 127
37.	A51667000	1:50 Generic Ward User Group Meeting Attendance – 30 June 2011	Page 210
38.	A51666747	User Group Membership, Leads and Meeting Dates for 1:50 Sign-off Stage - July 2011	Page 211
39.	A51667006	1:50 Generic Ward User Group Meeting Attendance – 27 July 2011	Page 216
40.	A39093577	EW 038 - Carbon Filters - A&C Hospitals - 09 August 2011	Page 217

41.	A39093632	EW 040 - A&C Hospitals - Omission of Carbon Filters - 16 November 2011	Page 218
42.	A51783761	PMI 126 - A&C Hospitals - Omission of Carbon Filters - 21 November 2011	Page 219
43.	A32949444	Contractors Method Statement Appraisal Sheet - Pre Commission, Test & Balance supply & Extract Ventilation - 21 April 2012	Page 220
44.	A51784116	PMI 157 - Adult and Childrens Hospital - Carbon filters - 26 April 2012	Page 229
45.	A51784218	PMI 172 - Ward Tower Ventilation - 21 June 2012	Page 230
46.	A33795369	New South Glasgow Hospital Project - Installation of Taps - 27 July 2012	Page 231
47.	A49259626	Email chain - HPS, Jackie Stewart, Ian Powrie, and David Hall - Taps - Risk of Pseudomonas aeruginosa - 31 July to 06 August 2012	Page 234
48.	A33622921	Supervisor's Notification of Defect - Pipe uncapped - October 2012	Page 241
49.	A33085160	Supervisor's Communication General Matters/Other Instructions (CI 13.1) - 16 May 2013	Page 243
50.	A39094851	PMI 231 attachment - 08 July 2013	Page 245
51.	A33085277	Weekly Interface with BMCE Report - 16 August 2013	Page 246
52.	A35422025	Acute Services Strategy Board - Change Control Process - November 2013	Page 265
53.	A51784363	PMI 259 - Mechanical Ventilation - NSGH-04-HOW-03 Pentamidine Treatment Room - 11 December 2013	Page 268
54.	A42854799	Contractors Method Statement Appraisal Sheet - Sterilisation of Water Services/DHW/TMV Temp Checks - 09 June 2014	Page 269

55.	A51784464	PMI 312 - Adult & Children's Hospital - Cold water storage tanks - 17 November 2014	Page 297
56.	A51853315	CE 068 - Adult & Children's Hospitals - Cold water storage tank lid supports - 10 December 2014	Page 299
57.	A32954551	Commissioning Report - Plantroom 121 - 06 January 2015	Page 301
58.	A51784494	PMI 322 - LTHW - 07 January 2015	Page 317
59.	A32939106	Commissioning Results - 25 January 2015	Page 318
60.	A51853320	CE 074 - LTHW System - 17 February 2015	Page 319
61.	A32955124	Commissioning Results - May to July 2015	Page 321
62.	A51853425	CE 147 - Haemato Oncology Ward L4B - Air permeability tests - 17 September 2015	Page 322
63.	A34467204	Email chain - Sinead Rogan, David Wilson and Jerry Sullivan - Level 4 B - 22 to 29 September 2015	Page 324
64.	A51853438	CE 159 - QUEH Ward 4B - Additional works associated with upgrade of ward - 26 November 2015	Page 329
65.	A51853454	CE 173 - Adult Hospital - Ward 4B/Haemato-oncology Ward - Alteration to Board - 29 April 2016	Page 331
66.	A33084759	QUEH - Isolation Rooms Meeting Minute - 31 May 2016	Page 333
67.	A51853545	CE 217 - Flushing to LTHW Network - 10 July 2017	Page 336
68.	A51666884	Haemato-Oncology User Group Terms of Reference - Undated	Page 338
69.	A51667951	Role of User Group Leads - Undated	Page 339
70.	A51667238	Ward User Group Terms of Reference - Undated	Page 343
71.	A51666797	Critical Care User Group Terms of Reference - Undated	Page 344

72.	A51666954	Renal User Group Terms of Reference - Undated	Page 345
73.	A51666758	1:50 Drawing Review Adult User Group Membership - Undated	Page 347
74.	A34099834	1:200 & 1:50 Design Process - Undated	Page 351
75.	A33622927	Supervisor's Notification of Defect - Ductwork not capped - Undated	Page 356

CRITICAL CARE REPRESENTATIVES & DESIGN TEAM MEETING HELD ON 3rd MAY, 2007

P R E S E N T

Heather Griffin	Project Manager, New South Glasgow Hospitals
Shirley Stubbs	Directions Consultancy
Ian Stewart	
Gregor Imrie	Consultant Anaesthetist, SGH
Marian Hodge	
Maria McDonald	
Mo Al Haddad	

Purpose of Meeting

To review 3 different options for the configuration of Critical Care. The different options were:-

- Option A - ICU and all HDU beds on one floor. (First floor - links into neuro institute. CCU, staff offices and changing facilities on second floor.
- Option B - All Critical Care beds on one floor, some CCU and HDU beds separated from ICU and HDU beds by the hot link corridor (link from maternity to neurosciences). Theatres all on second floor. Radiology remains on first and second floor in current position.
- Option C - All Critical Care beds on one floor - ICU HDU, CCU, offices and wrapped round the outside of the building to maximise daylight. Radiology moved from outside to middle of building. Theatres re-located to second floor - theatres therefore all on one floor.

Please find option A, B and C attached.

Key Requirements for Critical Care Users

During the meeting the following were raised as user requirements:-

1. Flexibility of beds
2. Ease of staff management around department
3. Ease of patient transfers between ITU/HDU and CCU

4. Trying to facilitate staff integration, important that staff facilities are together so staff can meet.

Summary of Outcome of the Meeting

Although Option A considered to be viable the preferred option is C which houses Critical Care on a single floor wrapped round the edge of the building maximising natural light into the unit. Option B was dismissed on grounds of limited light into the unit.

It was agreed that for the purpose of OBC submission the PSC would proceed with the current layouts (i.e. 2 floors) but that the architects design report which accompanies the PSC drawings will include option C, (one floor option) and give a clear statement that option C, all critical beds on one floor is the preferred option for Critical Care users.

The single floor requirement will be built into the Clinical Output Specification (COS) which, is a key criterion on which the bidder's designs are judged - i.e. their design must meet the specifications given in the COS.

- Meeting was called to review 3 options devised by Avanti (see hard copy) in response to comments made by users on 18 April regarding critical care provision over two floors.
- Option B was discarded as not viable (access to daylight etc.)
- The preferred option chosen by users was option C despite the following issues being pointed out to them:
 - ▶ The dislocation of the Stroke Ward
 - ▶ The dislocation of interventional radiology from the operating theatre suite
 - ▶ The dislocation of coronary care from the ED and interventional radiology
 - ▶ The reduced flexibility resulting from the amalgamation e.g. the ability to separate clean elective surgical patients from other patient groups.
 - ▶ The problems associated with expansion of radiology and critical care, should this become necessary
 - ▶ The significant floor area of the accommodation and associated journey times
 - ▶ That design had to reflect the needs of the hospital as a whole and not a series of stand-alone departments/specialities

- It was agreed that for the purpose of the OBC submission Option A would be submitted with an addendum to the design plan document detailing the preferred option C.
- Concerns were voiced that storage allocation was inadequate also. It was agreed that staff would visit new CCA accommodation at the Royal and possibly Edinburgh.
- Heather Griffin and SS agreed that DC would carry out a strengths and weaknesses exercise on all the options so far tabled, including the original 1:200 drawing as it was felt that the case for a single floor v split over two floors has not been made.

In the meantime the Project Team/Design Team will meet with other user groups affected by Critical Care move to one floor; this includes theatres, interventional radiology and stroke. Meeting also to be held with CCU reps.

Small sub group to be set up with Marian Hodge, Eleanor and Marion McDonald plus Project Team rep to look at equipment storage requirements.

- Dr Imrie submitted a document detailing his views on where the SoA fails to follow HBN guidance. It was agreed that Directions would respond to this.
- It was agreed that a robust audit trail was essential for all parties and that timely minutes should be issued. Access to the minutes of other groups e.g. theatres would be appreciated by the users.
- The need to start considering operational policies, care models and new ways of working was emphasised to users.

NHS GREATER GLASGOW & CLYDE NEW SOUTH GLASGOW HOSPITAL

New South Glasgow Hospital Notes from Meeting with Haemato-oncology Group Held on Thursday, 31st May 2007

PRESENT

Jonathan Best, John Stewart, Stuart Rodger, Margaret McLucas, Julian Little, Sandy Sharp, Myra Campbell, Margaret Kelly, Carole King, Shirley Stubbs, Heather Griffin

OUTCOME

- Update of project given including discussion of detailed design layouts, wards and entrance hall. It was noted that these detailed designs are an example of how the new hospital might look but that bidders may produce alternative more innovative designs.

RENAL

- Reviewed Schedule of Accommodation for renal - no comments. Attendees will review with other members of the team and feedback by next Wednesday at the latest.
- Renal have 4 wards. In the current design layout these are positioned on a single floor with dedicated shared ward support in close location to Critical Care.
- 80 Renal beds are planned with dedicated spaces for haemodialysis and day care.
- 100% Renal beds are single with en-suite - feedback is that may not necessarily require all the en-suites - can be reviewed at next stage of the project. All rooms conform to current guidance.
- Need 24 hour access to the dialysis unit. Ideally would like dedicated parking for dialysis patients with covered access to the dialysis unit.
- Requested information about the location of the paediatric out-patient dialysis service - this is currently located in within the children's ward area.

Haemato-Oncology

- Haemato-oncology services need to be located near Critical Care - position of haemato-oncology ward given in the ward stacking diagram thought to be acceptable.

- The haemato-oncology ward contains 100% single rooms 8 with gowning lobbies at 8m², this sizing conforms to the guidelines.
- Haemato-oncology require three treatment rooms, one of which should have an associated preparation area.
- Spacing for food preparation thought to be acceptable to allow staff to deal with the special diet food.
- The day case zone will not require a staff base.
- The pathway for aphoresis needs to be determined but thought additional space will not be required.
- Drug preparation will be undertaken in the clean utility room.
- Each shared ward support cluster contains a medicines management room.
- Aseptic unit is currently located within the Children's ward stack. The management of cytotoxic drugs will require input to the pharmacy planning process. Haemato-oncology will require a weekend and public holiday service.
- Office space will be on site but not within the new build.
- Overall Schedule of Accommodation considered acceptable by user reps.

NEXT STEPS

The next stage in the project will be for each specialty to consider how their service will be delivered within the new hospital, what sort of care model is appropriate, the patient pathway and the key criteria which must be met e.g. dedicated parking for dialysis patients, 24 hour access etc. The above information will be developed into a Clinical Output Specification which will be used by the PFI bidders to inform their design.

The Project Team are producing a template Clinical Output Speciation and will arrange a further meeting once this is available to commence the process of developing a Clinical Output Specification.

OPERATIONAL POLICY MEETING:14th August 2008

HAEMATO-ONCOLOGY - NEW SOUTH GLASGOW HOSPITAL

Present

Myra Campbell	Service Manager Haemato-Oncology
Heather Griffin	Project Team
Frances Wrath	Project Team

Outcome

Reviewed Schedule of Accommodation:

- Confirmed 14 Inpatient Beds and 4 Day Beds (schedule being revised to reflect this).
- Confirmed that there are 3 Treatment Rooms located on the ward. One provided for intrathecal chemotherapy (government requirement). Note the Pentamidine treatment room needs to be negatively pressurised.
- A Significant number of the rooms will require positive pressure. Myra to ask John Hood for further details.
- Currently 8 Gowning Lobbies – are these all needed? MC to make enquiries.

Outpatient And Daycase Activity

Currently reviewing services, plan for efficiencies in outpatients therefore reducing activity (especially in returns). May also amalgamate some clinics into the ACH.

The anticoagulant clinic is currently held in the laboratory. Currently have 0.8 WTE of a Band 6 Nurse who is retiring soon, salary will move across to ACH. Separate anticoagulant nurses will come across to SGH to undertake the anticoagulant clinics.

Projections for outpatient activity in 2014 is taking place centrally through the Planning Department, however as numerous movements are planned between the Victoria and SGH sites will need advice and input from MC in developing projections.

Action - HG to follow up .

Day Area Within The Ward

MC perceives this as an open plan area located at the front of the ward to reduce day traffic into the inpatient areas. Day area should have natural light (*NB natural light and good patient views is one of the key criteria for the ward design*).

Points From Last Minutes

- Location of Haemato-oncology should be within easy travel time of Critical Care. As before, position given in the draft ward stacking diagram thought to be acceptable.
- MC to feedback re aspirations around food preparation.
- Aphoresis was previously mentioned as a possibility (thought not to require additional space). MC to investigate whether or not Aphoresis is planned for New South.

Operational Policy

Format discussed, similar to ACH. Sections of the Operational Policy developed by MC for Beatson Oncology Centre can be used.

Require patient floors for Inpatients, Daycases and Outpatients.

Action – MC to draft Operational Policy and return to HG prior to the commencement of the Design Team on 1st September.

From: Hood, John
Sent: 22 August 2008 17:47
To: Campbell, Myra
Cc: Griffin, Heather
Subject: RE: Ventilation - Haem-onc ward new South Glasgow Hospital

Importance: High

Myra,

Sorry major problems with GRI email system all this week and about to go down at any minute. Essentially if Haem Onc at new SGH to have patients like B7 Beatson - must be same - ie no opening windows, no chilled beams. Space sealed and ventilated - positive pressure to rest of hospital and all highly filtered air > 90%, probably best HEPA with adequate nos of positive pressure sealed HEPA filtered side rooms for neutropenic patients - as in Beatson. Especially important if building work likely to continue on site after unit is opened..

Hope this suffices.

Kindest regards

John

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

From: Campbell, Myra
Sent: 15 August 2008 13:35
To: Hood, John
Cc: Griffin, Heather
Subject: Ventilation - Haem-onc ward new South Glasgow Hospital

Hi John ,

As I mentioned this morning Heather would appreciate guidance on appropriate ventilation for the Haem-onc ward in the new build.

There seems to be a strong possibility that in the main the building will be as ' green ' as possible with opening windows so we are keen that to state from the outset what is most suitable for the Haemato-oncology ward .

Thank you once again for your advice.

Myra Campbell
Clinical Service Manager / Lead Nurse
Haemato-Oncology
Beatson WoSCC, Level 4
Gartnavel General Hospital
1053 Great Western Road
Glasgow
G12 0YN



New South Glasgow Hospital

Ward User Meeting - 8 October 2008
(Held In the Seminar Room, Clock Tower Building, Southern General)

Present:

Andy Anderson	HLM Architects
Iain Buchan	Buchan + Associates (Health Planners)
Morag Busby	Ward Sister, Orthopaedics
Rory Farrelly	Director of Nursing
Heather Griffin	Project Manager
Margaret Kelly	Ward Sister (Oncology)
Nancy O'Brien	Ward Sister, Medical
John Stuart	Head of Nursing, Regional Services
Norman Sutherland	Buchan + Associates (Health Planners) (Chair)

Purpose of the meeting

- 1) To further develop understanding of the “generic ward” component of the new SGH facility and in particular the principles that underpin this.
- 2) To explore how these wards will function
- 3) To share lessons learned from those site visits undertaken and
- 4) to support the refinement of a Clinical Output Specification that will help to convey our requirements to those who will design the facility

Introduction/Progress to Date

Update on the project given including plans for the Southern Campus, position of the New adult and children's hospitals and labs, timetable and user input required.

It was stressed that information at this time remained “high-level”, with areas being identified as blocks of colour only, in order to understand access, adjacency and similar operational issues.

Now that the Outline Business Case has been approved by the Government this next phase of the work will now add more detailed analysis of actual requirements and develop an Operational Policy document that will convey to architects how the wards must operate and their relation to the rest of the hospital.

The function of the Ward User Group is to over see the development of the Ward Operational Policy and explore some of the potential ward design and layouts at high level.

Discussion

The discussion was framed around a range of topics (shown below) with a number of key points/principles being agreed:

Background to the generic ward concept/cluster model

- Wards at the New South Glasgow Hospital will be developed using a “cluster model” where a group of wards will share common support areas including teaching, changing, food re-generation, therapies, etc

- Wards will be, as far as possible, designed within the same footprint and to the same basic plan in order to support future flexibility and the optimal delivery of services.
- All wards within the adult hospital will be 100% single rooms with dedicated en-suite facilities
- Wards must support the way that care will be delivered in the future whilst being flexible enough to support further developments that will inevitably happen through time

The design challenge: Reconciling travel distances, patient observation issues, natural light considerations and site constraints

- The issues of travel distances for staff, their ability to observe patients in their rooms, getting natural light into rooms and ensuring that the building developed fits onto the site available are all inter related. E.g. Locating an en-suite on the ward corridor side of a room will reduce the area available for observation, locating it on an outside wall will reduce the amount of natural light, locating en-suites between rooms will increase the distance between rooms, etc
- Visibility into and out of rooms was highlighted by the Ward User Group as the most important issue for clinical staff.
- Visibility was described as not just about staff being able to observe patients but also about patients being able to see staff. Design could be used to support an increased visibility of nursing staff, e.g. location of stores areas at the ends of wards as seen in the Hexham site visit, although this would also increase travel distances
- What is being moved by staff must also be a careful consideration as some “loads”, e.g. dirty linen should not be carried any further than is absolutely necessary
- Careful location/configuration of multiple nursing stations could also support this aim
- Concern was raised about the move to single rooms as the current Nightingale wards give the ability to see all patients from almost anywhere in the ward. Discussion took place about the evidence base available demonstrating that single room accommodation does not require additional resources to nurse. It was also highlighted that Technology, such as telemetry or other observational support tools could help to address these concerns. Finally the experience of the Hexham Hospital staff who had been able to move from Nightingale to 100% single rooms with no additional staff was discussed.
- Natural light/brightness was highlighted as extremely important; one of the hospitals visited was identified as a very poor example in this regard.

Exceptions to the generic ward principle

- Some clinical (bedded) areas will be unable to operate within the generic ward model and where this is the case these will be identified as exceptions e.g. Critical Care

Feedback from the Site Visits

- Three sites were visited – these being Hexham General Hospital, GJNH and Queens Hospital in Romford.
- Those elements highlighted by the User Group as positive were are listed below:
 - Good patient visibility
 - Feeling of spaciousness
 - Lots of natural light

- Brightness
- Calming warm environment with curves, shapes and colour with soft up lighting giving a pleasant non clinical environment
- Good sized patient rooms
- Overhead hoists
- Short travel distances to dirty utility

There were a number of elements seen during the visits which were highlighted as undesirable these were as follows:

- Poor visibility of patients from nurses station
- Low natural light
- Ward areas feeling squashed, tight and dark
- Poor layout of facilities within the ward area

En-suite provision

- The move to 100% single rooms means that every room will have its own en-suite, consisting of a shower, wash hand basin (WHB) and toilet (WC)
- Within a 28 bedded ward 6 of these en-suite facilities would be larger in order to facilitate the support/assistance of two nurses to wash/use the WC
- An alternative model could see larger doors into en-suites that allow space to be “borrowed” from bedroom areas used to effectively create double assist en-suites in some/all rooms for less space requirements. (See <http://estatesknowledge.dh.gov.uk/hbn4/content/testing.asp> for a video demonstrating this model in use)
- Whatever method of en-suite provision is agreed, patient privacy and dignity to be maintained
- In the experience of those present assisted bathrooms are not used currently and tend therefore to be given over for storage. Agreed therefore that an assisted bathroom is not required on each ward – could be better used for something else such as a store room. Possibly may need one assisted bathroom per floor of 4 wards – would this be used?

Isolation room provision

- The original generic ward specification identified a requirement for two “isolation rooms” per ward – or more if these could be easily created.
- There is no advantage in special rooms with ante-rooms/lobbies in the absence of specialist ventilation. Single rooms with en-suites could still be used to isolate the majority of patients in the absence of specialist ventilation
- Infection Control to review actual isolation room requirements
- Were isolation rooms to be confirmed (by infection control) as being required these would amount to circa 4 rooms per floor, i.e. one per ward, located as close to each other as possible and vertically adjacent to those rooms on joining floors in order to minimise infrastructure (pipe-work, ducting requirements, etc)

Social space

- Socialisation is an important consideration within this ward configuration as concerns have been expressed from public/ patient groups around the perceived isolation of single room accommodation
- Requirement therefore to provide opportunities for socialisation through the ward design – possibly through the creation of more informal “meeting spaces” e.g. off main corridors, possibly making use of the excellent views that the ward block will have (Group’s experience is that the traditional ward day rooms are not used for socialisation)
- Other, more operational options around supporting socialisation will also need to be considered on a ward by ward basis, depending on individual patient needs

Tracking hoists

- Thought by the Group that tracking hoists should be provided routinely in those rooms equipped with double-assist en-suites (6 per ward). Some wards eg orthopaedics will have a high requirement for ceiling hoists.
- Tracking hoists should allow the patient to be moved from bed to WC, WHB and shower in order to use these facilities with ease
- Room design should facilitate the simplest tracking route possible to achieve this, thereby minimising patient movement as well as design and maintenance costs
- In those specialties where more tracking hoists may be required these additional requirements would have to be specified on a ward by ward basis although the same basic principles would apply

Next Steps

A follow-up meeting to be held November 7th 8.30am to 11am at Hillington Project Offices to further progress the development of the Ward Operational Policy.

NOTES FROM EMERGENCY COMPLEX USERS MEETING

Wednesday, 3 December 2008
Hillington Project Office

PRESENT:

Greg Jones	Rhona Robertson
Ann Ross	Pamela Joannidis
Wesley Stuart	Harry Smith (HLM)
Stephen Gallacher	Iain Buchan
George Welch	Norman Sutherland
Michelle Boyd	Heather Griffin

Apologies: Colin Walker

PURPOSE OF MEETING:

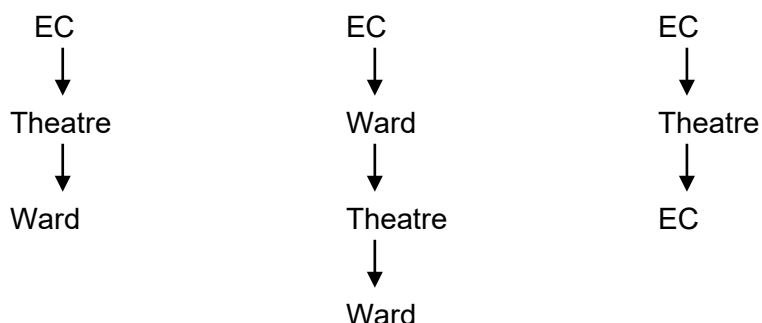
- Review patient journey
- Look at control room
- Review S of A

1) REVIEW OF PATIENT JOURNEY

- Reviewed a number of surgical based patient journeys as presented by WS.

a) Patient Journey No 1

- Question about how much the patient is worked up in ED? Thought minimal before they are moved into EC.
- Discussion about whether or not the patient, who will be due for discharge the next day, goes from the theatre to surgical ward or back to EC as the LOS is so short. 3 possible routes identified as follows:



From an infection point of view the patient less moves the better. On the other hand, the patient returning to EC may clog up EC.

b) Patient Journey No 2

68 year old patient vomiting blood. Where does the surgeon pick up the care? Thought this would be in AAU. The surgeon should not see the patient in ED. The only reason the surgeon would go into ED is if the patient is too ill to move, as the moment staff are split, the advantage of front loading staff in EC is lost. The patient would be kept in ED if it is thought that they will be discharged in 4 hours. Role of ED is diagnosis and stabilisation. As soon as ED staff make the decision to admit, the patient is passed through to ED.

c) Patient Journey No 3

76 year old patient with ruptured aneurysm. The surgeon would go to ED in those circumstances.

2) REVIEW OF SCHEDULE OF ACCOMMODATION

a) Control Room

- Need to have one central control area to keep track of the patient flow in and out of the EC areas (control area would include staff involved in unscheduled care, bed management and hospital at night). Hospital at Night staff handover will take place in the Control Room.
- Need an electronic display board giving information on each patient, where they are located, how long they have been in, and flag up time issues.
- The central control area would be where GP phone calls are taken, advice given and patient directed and then tracked. This area would also deal with phone calls from relatives, organise the outpatient clinics and discharge complex, and generate the immediate discharge summaries.
- Each of the clinical pods would be responsible for their own area but the central control area would have administrative overview. **Action: SG, DR, MB to speak to bed management team and senior secretarial administrator.**

b) Acute Receiving Cluster

- Rooms within this do not need ensuite, patients will be here 2 – 6 hours, facilities will include 2 showers, 2 assisted toilets and 2 ordinary toilets.
- Will need adequate trolley and wheelchair storage.
- Number of dirty utilities – PJ to advise maximum distance for dirty items to travel.
- Office accommodation – need central room for 5 or 6 doctors plus nurses to work.

c) **Acute Cluster**

- Need central area for all the telemetry to be displayed, may have up to 24 monitors.
- Need facility for making confidential phone calls – could use Interview Room.

d) **General Receiving Cluster**

- Need 2 clean utilities; as although 48 beds the throughput is much higher.
- Need 2 dirty utilities.
- Need general office with workbenches to allow staff to interface. AHP's need access to this office.
- AHP need to have access to each of the clusters in Schedule of Accommodation. Have Anne Ross to review schedule and feedback comments to HG.

3) **OTHER ISSUES**

- Blood fridges – HG to liaise with Jane Gibb but from previous discussions likely to be one shared blood fridge for A&E and EC, and one fridge for theatres.
- Re-label DME/Rehabilitation Cluster as Complex Needs Cluster.
- Isolation Rooms, information re negative or positive pressure capability requested by David Raeside, Iain Buchan to liaise with M&E Engineers and feedback to David.
- I.T. - Malcolm Gordon to develop I.T. Section for the Operational Policy.

NOTES FROM WARD USERS GROUP HELD ON 4TH DECEMBER 2008

PRESENT: Rory Farrelly, Pamela Joanidis, Ann Galbraith,
Helena Jackson Boyd, Neil Wallbrick, Norman Sutherland,
Andy Anderson, David Hall, Morag Busby, Margaret Kelly,
Heather Griffin

APOLOGIES: Rob Bolton-Jones, Liz Burleigh

PURPOSE OF THE MEETING WAS TO

- a) Review the Operational Policy
- b) Review the Schedule of Accommodation
- c) Review possible Ward Layout Options

OUTCOME

Operational Policy – points made as follows:

- Observation - Need to be explicit in Operational Policy that 'visibility' also includes the patient being able to see the nurse.
- Sub Section 7.1.4 - Need to include the beverage assessment area within one of the ward support clusters within the ward tower block.
- The view of Health Records (Val Greenlees is the User Group lead) is that patients will be booked in at the main reception within the main public concourse - **Action** – ask Marilyn Horne, Medical Records along to the next Ward Users Meeting.

Schedule of Accommodation

- The Schedule of Accommodation was reviewed, this includes 28 single rooms per ward.
- Revisions from the previous schedules are that :
 - the treatment rooms have been removed (agreed that all the treatments would take place within the patient's own room).
 - Shared Storage Space - Note this space may be pooled on a floor by floor basis.
 - IT - Need some thought to a mobile computer. Discussed a generic multi-functional device e.g. the patient entertainment system could possibly be used as a PC. Helena Jackson-Boyd felt this was doubtful as the quality that would be provided by the entertainment system would be poor. Another possibility would be a mobile device either hand held or PCs on trolleys, however there would need to be somewhere to power these up and keep them secure. It should be noted that some of the generic specialties are likely to have 3 or 4 ward rounds going on at any one time and therefore 3 or 4 mobile devices would be required. Hand held devices could have docking facilities in each of the rooms. ACH has

Tablet Technology -This is compatible with Infection Control, there is however resistance amongst users in using the tablet technology.

- Irrespective of the IT technology used it was agreed that touch down spaces should be available in the ward.
- Assisted bathrooms have been removed.
- Changing Rooms - Given the new guidance around uniforms FM are reviewing the amount of changing space available on the New South Glasgow Hospital.
- Seminar Rooms - Request for telemedicine and video conferencing facilities within some of the seminar rooms. Also a request that some of the rooms are sub-dividable.
- Small Equipment Store - 7.5m² per ward. The plan is that there is a central equipment store for the majority of equipment. Once used the equipment will be cleaned and put into the central store.
- There will be a lockable area for each patients' medicines in each of the rooms.
- There may be a possibility of having local stores for each patient in each room however on further discussion, it was agreed that the local storage would be minimised to avoid wastage. For example, if the patient is discovered to have MRSA then all stores and local storage would need to be thrown out. The productive ward in Bolton was raised as an example of how well designed storage and location will help in ensuring efficient use of time for example nurses are not spending time searching for various items. Need to highlight this issue in the Operational Policy.

Sizing of the rooms.

The rooms which form part of the ward pilot in Hillingdon were 19m², the Scottish guidance note gives the rooms size at 16.5m². The New South Glasgow Hospital will be based on the Scottish guidance.

Two or more touch down bases are planned for the ward along with a dedicated ward receptionist.

Action - Norman Sutherland to review Schedules of Accommodation in light of this meeting and circulate for comment by 18th December.

Action - Andy Anderson to develop options for ward layout for review at the next Ward Users Meeting on 23rd January at 9.00am - 11.00 at Hillington.

IT aspects

- Plan for the wards to be paper light rather than paperless. Helena Jackson-Boyd and Neil Wallbrick gave a presentation regarding the IT aspects within the ambulatory care hospitals. Main points were -
 - There will be wireless coverage throughout the hospital and also the system will be capable of tracking (equipment). The tracking system could also feasibly track patients.
 - The Patient Management System will have a bed management module included and this will allow pre-booking of beds. The module will show the bed stack, which beds are occupied and which beds are free.

- It will be possible to book rooms through the IT system.
- Helena Jackson-Boyd to develop a document to highlight the IT strategy for the new hospitals – **Action** HG to set up meeting with Helena Jackson-Boyd to discuss.

NEW SOUTH GLASGOW HOSPITAL PROJECT

CRITICAL CARE USER GROUP MEETING

11th February 2009

PRESENT: David Raeside, Marion MacDonald, Gregor Imrie, Jacqueline Adams, Sandy Binning, Norman Sutherland, David Hall, Andy Anderson, Heather Griffin

APOLOGIES: David Murdoch, George Welch, Alan Davidson, Jackie Campbell, Eleanor Deacon, Mo Al-haddad

OUTCOME

- Following comments at the previous meeting the Schedule of Accommodation was revised. The revised Schedule of Accommodation was discussed and accepted by the Group (attached at the bottom).
- The CCU bed number is 20 as a result of modelling undertaken by Service Manager/Planning – considered to be worse case scenario, under review.
- Discussions around the Critical Care Unit are based upon the assumption that activity at the GJNH and neuro Institute will remain in situ.
- A discussion took place with the architect regarding the relative co-locations of the component parts within each of the areas - CCU, HDU and ICU.

OUTPUT

GENERAL POINTS

- Beds to be organised in pods of 10 beds.
- Need as much patient visibility as possible from the nurse bases.
- Some staff WCs to be located into clinical area.
- Some of the storage areas to be dispersed to decrease travel times.
- Relatives' rooms - preference is for these to be near enough to the clinical area that there is no long corridor to walk but not on top of the clinical area.
- Require vacuum tube access for each of the pods including CCU.
- Don't need nitrous oxide and scavenging point at each bed head

CCU

- In CCU - all telemetry to link to the staff base. Want the telemetry monitoring facility to be visible to staff if they are in patient rooms.
- Need ability for patients to undergo pacing within the bedroom - implications for radiation protection.
- Need to be able to located mobile equipment so it is easily accessed by all the rooms.

NEW SOUTH GLASGOW HOSPITAL PROJECT

HDU / ICU

- HDU/ICU beds arranged in pods of 10. One pod to be dedicated for post surgery (location of the pod may rotate).
- 10 isolation rooms identified for HDU/ICU, 6 of these located in the HDU with en-suite.
- Shared toilet facilities in the HDU area to be grouped in the middle.
- Those HDU rooms with en-suites will be used for fitter patients and therefore can be further away from the nurse base.
- Pharmacy medicines room to be close to ICU.
- Require 30 beds in ICU/HDU with 30 power sockets and less for the remaining beds

Revised Schedule of Accommodation as discussed – pages attached below.

NEW SOUTH GLASGOW HOSPITAL PROJECT

South Glasgow Hospital

Critical Care Facility

Features shared Critical Care Entrance and Admin Areas

This version modified to reflect a single functioning CCF with adjacent CCU

Further modified to reflect Draft SHPN 57 Guidance

Updated following user group meeting 16 Jan 2009

ICU	20 beds	(2 "pods" of 10)
HDU (Med & Surgical)	39 beds	(4 "pods" 3 of 10, 1 of 9)
CCU	20 beds	(2 "pods" of 10)

ADAPTED FROM SHPN 27 and HBN 57C3

NB - Dialysis plumbing to 1 ITU & 1 CCU b

CRITICAL CARE: GLOBALLY SHARED FACILITIES

Combined Entrance/Reception/Administration Facilities				
Combined entrance	1			
Visitors Foyer	1			
Visitors waiting area:	1	100.0	100.0	
Visitors wc: Disabled/ wheelchair user	3	4.5	13.5	
Telephone area: single booth; low height	0	2.0		Project Decision - not required
Reception desk/office: 8 places	1	40.0	40.0	
Sub-Total			153.5	

Family Support and Communication Area				
Relatives room	6	14.0	84.0	Overnight accomm is in Accom Centre (not part of this project) To be capable of supporting relatives needs throughout the facility (May be split into 2 groups)
Relatives wc: Disabled/ wheelchair user	2	4.5	9.0	To be adjacent to relative areas
Sub-Total			93.0	

Office Area				
Clinical directors office: / Manager 1 place (CCF)	1	14.0	14.0	
Clinical directors office: / Manager 1 place (CCU)	1	14.0	14.0	
Managers office: 2 place	3	13.0	39.0	(1 2 place office for CCU staff)
Consultant Offices - 2 person rooms	7	13.0	91.0	
Clinical staff office/IT resource room: 4 places	4	24.0	96.0	
Outreach office: 4 places	1	18.0	18.0	
Seminar/training room: 40 - 45 places	1	60.0	60.0	
Teaching & research office 2 places, teaching and research staff	3	13.0	39.0	
Meeting room/interview/relatives room (8 person)	1	16.0	16.0	This room will provide a dual staff/relative function as required
Sub-Total			387.0	

Staff facilities				
Staff Lounge (including pantry area)	1	140.0	140.0	(Now including 12 m2 from patient pantry and an additional 10m2 to address staff concerns)
Staff changing facilities 60 places	1	30.0	30.0	M / F split to be confirmed
Staff changing facilities 160 places	1	70.0	70.0	M / F split to be confirmed
Staff shower	6	2.5	15.0	
Staff wc & wash: Ambulant user	15	2.0	30.0	
WC / Shower / Change - Disabled	2	4.5	9.0	
On call office/bedroom	0	13.0		WTD - but see Office / Rest in ITU
Sub-Total			294.0	

Total Net				
Planning	5%		46.4	
Engineering	3%		27.8	
Circulation	25%		243.5	
Total (CCF Shared Areas)			1245.2	

NEW SOUTH GLASGOW HOSPITAL PROJECT

CRITICAL CARE: ICU/HDU (Medical & Surgical) AREAS

Description	Qty	Unit Area m²	Total Area m²	Notes
Clinical areas				
Critical care bed area: single room; Isolation (access via gowning lobby)	10	26.0	260.0	2 beds in each of 5 "pods" (including both ICU "pods")
Gowning lobby: single bedroom	10	7.0	70.0	2 beds in each of 5 "pods" (including both ICU "pods")
Single Room/Equivalent bed space	49	26.0	1274.0	May be actual fully formed rooms or equivalent spaces with retractable screens & glazed panels capable of achieving the same
Patients en-suite with chamfered shower as per HBN 00-02	6	4.5	27.0	En-suite to the 6 single rooms with isolation lobbies in HDU "pods"
Shower / WC - Assisted	6	7.0	42.0	Aligned to 4 HDU "pods"
Staff Resource Room	3	11.0	33.0	1 per 2 "pods"
Staff Office / Rest	1	12.0	12.0	Associated with the 2 ICU "pods" (Doubles as overnight accommodation)
Staff WC	6	2.0	12.0	1 per "pod"
Staff Meeting / Interview	3	16.0	48.0	1 per 2 "pods"
Communications / Staff Base	6	11.0	66.0	1 per "pod"
Sub-Total			1844.0	
Utility/clinical area support facilities				
Clean utility (including blood bank area)	3	20.0	60.0	1 each between 2 "pods"
Status laboratory	3	8.5	25.5	1 each between 2 "pods"
Dirty utility with urine testing	5	12.0	60.0	1 each per "pod"
Dirty Utility with urine testing/equipment cleaning	1	18.0	18.0	Aligned to remaining "pod" which should be in ICU
Pharmacy Support Area	1	18.0	18.0	Specific Client Request Supported By Pharmacy
Disposal hold	3	15.0	45.0	1 each between 2 "pods"
Housekeepers (cleaners) room	3	7.0	21.0	1 each between 2 "pods"
Patients pantry & Regeneration Area	2	12.0	24.0	Aligned to 4 HDU "pods"
Patients assisted bathroom, wc & wash (Stretcher hoist)	1	16.0	16.0	Located such that it can be used by the whole CCF (including CCU) as required
Sub-Total			287.5	
Storage/holding facilities				
Bulk supplies store	1	95.0	95.0	Based on "Just in Time" supplies delivery
Clinical equipment store	1	130.0	130.0	Based on equipment being wall/ceiling mounted as far as possible
Equipment Service Room	2	24.0	48.0	
Linen bay/store	6	4.0	24.0	1 each per "pod"
Furniture store	1	85.0	85.0	
Ready use medical gas cylinders store	3	4.0	12.0	1 per 2 "pods"
Mobile imaging equipment bay (x-ray & Ultrasound) with image intensifiers	4	8.0	32.0	1 each per ICU "pod", 1 between 2 HDU "pods"
Cardiac arrest/emergency trolley bay	6	1.0	6.0	1 each per "pod"
Sub-Total			432.0	
Engineering facilities				
Switchgear cupboard	3	2.0	6.0	
Battery/UPS room	3	9.0	27.0	
Sub-Total			33.0	
Total net			2596.5	
Planning	5%		129.8	
Engineering	3%		77.9	
Circulation	30%		817.9	
Total (ICU/HDU Areas)			3622.1	

NEW SOUTH GLASGOW HOSPITAL PROJECT

CRITICAL CARE: CCU AREAS

Clinical areas					
Coronary care bed area: single room	20	20.0	400.0		
Patients en-suite with chamfered shower as per HBN 00-02	20	4.5	90		
Gowning lobby: single bedroom					
Staff Resource Room	1	11.0	11.0		
Staff Meeting / Interview	1	16.0	16.0		
Staff WC	2	2.0	4.0		
Communications / Staff Base	2	8.0	16.0		
Sub-Total			537.0		
Utility/clinical area support facilities					
Clean utility / Prep	1	17.0	17.0		
Clean utility / Store	1	14.0	14.0		
Status laboratory	1	8.5	8.5		
Dirty utility with urine testing	1	12.0	12.0		
Patient Trolley Parking	0	4.0			
Disposal hold	1	10.0	10.0		
Housekeepers (cleaners) room	1	7.0	7.0		
Patients pantry & Regeneration Area	1	12.0	12.0		
Patients assisted bathroom, wc & wash (Stretcher hoist)	0	16.0			
Sub-Total			80.5		
Storage/holding facilities					
Bulk supplies store	1	18.0	18.0		
Clinical equipment store	1	20.0	20.0		
Equipment service room	0				see shared facilities
Linen bay/store	2	4.0	8.0		
Furniture store					see equip store
Ready use medical gas cylinders store	1	4.0	4.0		
Mobile imaging equipment bay (x-ray & Ultrasound) with image intensifiers	1	8.0	8.0		
Cardiac arrest/emergency trolley bay	2	1.0	2.0		
Sub-Total			60.0		
Engineering facilities					
Switchgear cupboard	1	2.0	2.0		
Battery/UPS room	1	9.0	9.0		
Sub-Total			11.0		
Total net			688.5		
Planning	5%		34.4		
Engineering	3%		20.7		
Circulation	30%		216.9		
Total (CCU Areas)			960.5		
TOTAL OVERALL CRITICAL CARE FACILITY			5827.7		

**NOTES FROM WARD USER GROUP
HELD ON 4TH MARCH 2009**

PRESENT: Rory Farrelly, Annette Rankin, Linda Robertson, Morag Busby, Anne Galbraith. Rob Boulton-James, David Hall, Andy Anderson, Norman Sutherland

POINTS

- Schedule of Accommodation and COS agreed by the Group
- Heads of Nursing comments received summarised by Project Manager and agreed by Group - have been added to the COS
- Seminar rooms in clusters - looking for potential to split these rooms - acoustic separation may be an issue
- Bulk stores in core support on 2 floors - discussion re stores being JIT and also the opportunity to store in each room

Comments re 1:200 Plans

- The triangle design allows flexibility between 2 wards.
- Need clear signage at ground floor level to make sure visitors go to the correct ward triangle stack. Patients will go to the main admissions reception desk and be directed up to the ward. Ward receptions should be near the entry point - main issue is who is going to man the reception desk - would it be better to have 1 reception between 2 wards?
- FM and patient route have relatively short cross over. FM in at front of ward and dirty FM out at end of the ward. Need 2 FM lifts, one clean and one dirty. Less risk if dirty FM is in a sealed container. Annette Rankin has concerns that 2 FM lifts may not be enough if one down however architect reassures that aggregate of lifts is sufficient but the division between FM, patient/staff and visitors will be important.
- Disposal hold - central disposal plus one to the end of each of the wards

Support Areas

- Dirty utility should be closer to the ward
- Resus trolley should be central
- Support accommodation needs to be in the middle but accessible from both sides
- Nurses touch down need to be better spaced out

- Move clinical supply and drug store to the central area
- Socialisation space should be informal
- Medical office - change name to 2 hot desks
- Need to be able to access IT points from all areas to facilitate ward rounds - need mobile PC screens if patient TV screen is not high enough definition for PACs
- Need to be able to access notes from each room and touch down spaces - need a PACs screen at each touch down
- Need secure entrance onto ward - need a few buzz-in areas about the ward i.e. a remote system
- Ward corridors confirmed by architect as being wide enough for 2 normal beds to pass or 1 bariatric bed to travel down

**Notes from Theatre User Group Meeting
held on Monday, 9th March 2009,
at 1.30pm in Consultant's Lounge, Level 3,
Neurosciences Building, SGH**

PRESENT:

Annette Rankin	(AR)	Infection Control Adviser
John Crawford	(JC)	Consultant
Regina O'Conner	(RO)	Consultant
Anne Traquair Smith	(ATS)	CSM
Ann Malloy	(AM)	Lead Nurse
George Welsh	(GW)	Consultant
David Hall	(DH)	Technical Adviser, Currie & Brown
Norman Sutherland	(NS)	Healthcare Planner, Buchan Associates
Jo Dorling	(JD)	Architect, HLM
Heather Griffin	(HG)	Project Manager, New South Adult Hospital

POINTS:

- General discussion – Schedule of Accommodation [SOA] and Clinical Output Specification [COS] (given corrections below for COS), accepted by group, moved on to discuss the 1:200 plans presented by JD
- Remove “Trolley Wash” sentence from COS – will be somewhere else in hospital
- Model for expansion of Theatre capacity will be expansion from current 2 sessions during day into the evening
- Page 11, Section 7.2 – the Reception Area in AODOS will also control the inpatient flow – inpatients may wait in bottom area of Recovery prior to going into Theatres
- As AODOS patients using Recovery 1st thing in morning need to move x1 toilet from AODOS into Recovery for them – locate at the bottom end of Recovery
- Discussion re Prep Room – the Prep Room will not be used for prepping – i.e. will use this room for storing the trays for the day, not laying them out
- Sharing Prep Room between Theatres therefore need Prep Room to have 2 door access – AR happy with this
- Staff Base in Recovery split into 4 – also Clean Utility, at moment x1 for whole of Recovery – better to split Clean Utility into 4 and call it Staff Base/Prep i.e. a Staff Base with a Prep Area at the back – forms a storage facility
- The Disposal Hold at 4m² will hold rubbish bags – need Disposal Hold more on periphery of area

- FM lifts – must be sized to take x2 TSSU trolleys
- Bulk Store at 160m² – may have to split bit more between Theatres
- JIT delivery – aiming for capacity to store 1 weeks storage
- The Theatres at 55m² are large, will be able to store in here plus store equipment from ceiling
- FM Clean & Dirty Route established as a one way system – AR happy with this

NEW SOUTH GLASGOW HOSPITALS POTENTIAL VALUE ENGINEERING ITEMS

	Item	Description	Reference	Impact
1	Hospital Estates Heating	Energy centre boiler plant is sized to cater for retained estate and future developments.	ERs	The linking of this boiler capacity to the rest of the hospital site will require extensive heating mains and heat exchange stations to be provided at all load points. Omit boiler capacity serving Retained Estate and Future Developments including gas supply and oil storage capacity
2	Reserve Capacity	A requirement for 25% reserve capacity is in excess of industry standard of 10%	ERs	There is a likelihood that over-sizing the plant will reduce efficiency and increase energy consumption. Selected areas subject to probable change could still be included
3	Oil storage	Current allowance for oil storage results in 1.5M litres of oil. This includes 30% for retained estate systems and boiler capacity as noted in (1) above		Oil has a limited 'shelf' life and will need to be either used or recycled which will impact on revenue cost and carbon footprint
4	Pressurisation Units	Pressurisation units are duplicated on primary heating and chilled water systems.	ERs	No impact. Plants are divided into A & B and pumps and vessels provided as N+1 for resilience
5	Treatment area ventilation	Define better 'Treatment areas' as this can affect air change rates	-	Current areas interpreted as treatment spaces, e.g Renal Dialysis, are provided with 10 air changes per hour in line with SHTM 03-01
6	Ward Air Change Rate	Reduce primary fresh air rate from 4 to 2½ air changes (revert to bid proposal)	RFI Log	Neither 4 or 2½ complies with SHTM

	Item	Description	Reference	Impact
7	Temperature	Increase maximum space temperature from 26°C to 28°C to match SHTM requirements		Reduction in plant capacity and energy usage
8	Fire strategy	Review requirement to provided smoke operated dampers in all sub-compartment walls	SHTM 05-01	Consider if requirement can be relaxed for certain areas. Revert back to HTM 81 requirements
9	Water Storage	Reduce level of water storage from 24 hour to 12 hour	SHTM?	Duplicate external mains from separate networks serve tanks. Reduced risk of legionella. Reduced size of basement tank room
10	Visible renewables	Omit requirement for visible on-site renewables	ERs	Technology available inefficient (small wind turbines) and unlikely to deliver carbon savings. Transfer cost into substantial off-site wind power
11	Chillers	Omit N+1 requirement for chillers	ERs	Unusual to provide N+1 on hospitals. In the event of chiller failure shed cooling load via BMS on non-essential plant. Only likely to be an issue for limited periods of summer
12	Electrical Distribution	Reduce extent of dual distribution	ERs	ERs require dual distribution throughout regardless of department. There is scope to reduce this in less critical areas
13	UPS	Reduce battery autonomy to Theatres	ERs/SHTM 06-01	2 hour autonomy battery to Theatres can be reduced to 1 hour in line with SHTM 06-01
14	Switchgear	Change form of switchgear for sub boards	ERs	Currently Form 4 Type 6 for all switchgear. Reduce to Form 4 Type 2 for sub switchboards

NEW SOUTH GLASGOW HOSPITAL (ADULT) PROJECT

Nominated Representatives – Design Stage, to Oct 2009

Note: Those names in **bold red font** are confirmed members for this stage

DIRECTORATE	AREA	REPRESENTATIVES	
SURGERY & ANAESTHETICS	Critical Care	Gregor Imrie Eleanor Deacon Mohammed Al-Haddad Sandy Binning Alan Davidson Iain Thomson Liz Thomson	George Welch Jacquie Campbell Marion MacDonald Jacqueline Adams Anice Gillespie David Raeside Annette Rankin (Infection Control)
	Endoscopy	Derek Gillen Rebecca Reid	Rob Boulton-Jones
	Theatres	Neil Smart John Crawford George Welch Annette Rankin (Infection Control)	Ann Traquair Smith Ann Malloy Regina O'Connor Jacquie Campbell
	Vascular	George Welch Gill Donnelly	
	ENT & Audiology	Mary Cunningham	
	General Surgery	Graham Sutherland Laura Young	
	Orthopedics	Katie Cuthbertson	Susan Groom
	Ophthalmology	Mary Cunningham	
	Urology	Frances McLinden	
	General Outpatients	Karen Loudon June Ramsey	Laura Young Janis Hughes
EMERGENCY CARE & MEDICAL SERVICES	Cardiology	Alan Hunter Rosemary Brogan	Jacqueline Adams David Murdoch

DIRECTORATE	AREA	REPRESENTATIVES	
	Rheumatology	Cath McFarlane Susan Fraser	Heather McVey
	Gastroenterology	Alan Hunter Peter Mills	Rob Boulton-Jones
	Respiratory	Cath McFarlane Roger Carter Heather McVey	Joseph Sarvesvaran Scott Davidson
	Out of Hours	Norman Gaw Rhona Robertson	Heather McVey
	Dermatology	Stewart Kyle David Bilsland	Susan Holmes Angela Drummond Melanie McColgan
	AAU & Emergency Complex	Rhona Robertson Phil Munro Wesley Stuart George Welch Cieran McKiernan Michelle Boyd Debbie Ambridge Annette Rankin (Infection Control) Colin Walker Ed Spilg Matthew Walters <u>Copied in</u> Jason Long Alistair Ireland David Stuart	Heather McVey Greg Jones Jonny Gordon Malcolm Gordon Scott Hepburn Stephen Gallacher Ann Ross (AHP) Patrick Grant Susan Daisley David Raeside Tracey Baird
	Medical Day Unit	Cath McFarlane Alan Hunter Stephen Banham Stephen Gallacher Robbie Lindsay Peter Mills	Anne McKay David Anderson Natasha Brown Susan Fraser Heather McVey Rob Boulton-Jones

DIRECTORATE	AREA	REPRESENTATIVES	
	Cardiac Rehab	Fiona McCluskey	Rosemary Brogan
	Endocrinology	Stephen Gallacher Cath McFarlane	Andrew Gallagher
REGIONAL SERVICES	Renal Inpatient	Julia Little Margaret McLucas Marjorie Johns	Stuart Rodger Caroline Sinclair Janis Hughes
	Renal Dialysis Unit	As above	
	Haemato-oncology	Myra Campbell	
DIAGNOSTICS	Anti-coag Service	Anne Marie Etherington	Jane Gibb
	Labs Services in new hospitals - joint	Jane Gibb	
	Main Imaging Dept & Nuclear Medicine	Aileen MacLennan Rachel Connor Winnie Miller Alice Nicol Lynn Ross Iain Robertson, John Foster	Andrew Watt Cathy Muir Barrie Condon Margaret Sherwood Andy Brennan
REHABILITATION & ASSESSMENT	Discharge Lounge	Dot Jardine Patricia McGinley	
	Spiritual Care	Blair Robertson	
	Outpatient Rehabilitation & Therapy Facilities	Anne Galbraith	Richard Hassell
	Stroke, Care of Elderly	Anne Harkness	
	Wards	Rory Farrelly John Stuart Linda Robertson Anne Galbraith Rob Boulton-Jones Catherine Nivison	Morag Busby Margaret Kelly Annette Rankin Pamela Jonannidis Helena Jackson Boyd
	Health Records	Mairi Dick June Gillen	

DIRECTORATE	AREA	REPRESENTATIVES	
		Val Greenlees	
	Entrance Hall	Val Greenlees	Ronnie Clinton
	Psychiatric Liaison Service	Adam Burnel	
	Infection Control	Tom Walsh Penelope Redding Clare Mitchell	Pamela Joannidis Annette Rankin

Laing O'Rourke / DSSR Questions for NSGH Post Bid Feedback Session with NHS GG&C 10th November 2009

Item 23 – Fire Engineering

“Wrong reference to building Standards”.

We stated 2007, you state 2004? Please explain.

“Atrium design has this work been carried out by a qualified Fire Engineer or Building Services Engineer?”

Yes, by ARUP fire engineering. Were we scored down because of the evaluators doubt? This was confirmed in TC5.

Item 26 – Main Incoming Utilities

“Incoming utilities as ER's with request for MPG rather than SGN proposed LPG. Updated quotation required for gas to suit retained estate loads.”

Have we been marked down for this element?

MPG rather than LPG seemed like a more sensible approach (and indeed an enhancement on the exemplar therefore worth more than 6 marks) given the required gas inlet pressures for CHP/Boilers, the avoidance of reliance on gas boosters, and would have allowed greater flexibility on allowable pressure drops and for future expansion capacity on the rest of the campus. The time required for a new quotation on the gas would not have created a programme issue as all quotes rec'd by the Board will have expired in any case and will need re-quoted.

Item 27 – Water Services Strategy

“No provision of temperature control to specialist areas water supplies.”

The temperature control system for HDU etc was a later requirement and although not shown on drawings, was covered elsewhere in costs and text sections of bid submission and subsequent Post-Bid clarifications confirmed as being provided. Have we been marked down for this despite the clarification confirming that it would be provided?

“Multiple pipework types proposed for water services.”

Multiple pipework materials reflects the different locations and applications of the different water systems (underground, large bore, medium bore and small bore/specialist systems), and all are compliant material selections approved under SHTN 2.

On this basis can the Board explain why the mark was scored so low and considered poor, as we believe that we have offered a compliant solution?

Item 28 – Heating Design Strategy

“Two port control proposed in lieu of three port”

The use of 3 port valving is against the low energy design principles briefed, as well as contrary to comments made by the Board’s advisors during the bid process. Use of 3 port for any sizeable hydraulic system, never mind one with a major/remote energy centre is not common. 2 port valving and variable speed pumps offer considerable energy and life cycle savings.

“LTHW proposed in lieu of MTHW”

The use of a CHP integrated heating system with 90Deg recovered heat means that LPHW is the better option. We demonstrated that pipe sizing was not an issue, and mitigated increased pumping power by using both legs of the ring main to significantly reduce ring main pressure drops. LPHW also offers the Board significant WLC savings (CAPEX and OPEX) in terms of spares, training, insurances and distribution heat losses. An LPHW distribution system also offers significant benefits in terms of integrating the retained estate which is directly run off LPHW de-centralised systems at present.

“Single CHP plant will have capacity but economic run will be controlled by base load (duplicate units in Exemplar scheme)”

We had demonstrated via other actual healthcare projects that the initial electrical base load was sensible and would be tracked closely, allowing for an element of turndown where necessary. Incorporating the existing base electrical load would also have contributed towards a high utilization of the CHP Scheme. Duplicate units do not guarantee higher utilization, infact, they would be offline more often than a correctly sized single set, with the general rule being select a single unit and work it hard. We had also committed to a full review of the final CHP sizing as part of the detailed design.

On the basis of all of the above, can the Board explain why this was not considered an improvement on the exemplar, i.e. mark of 7 (not 4 - poor) expected based on explanation of scoring system?

Item 29 – Ventilation & Air Treatment Design Strategy

“Reliance on all air system to avoid wards overheating”

Reasons for avoiding natural ventilation are documented in our bid submission and natural vent was not well rec’d by the Board’s Advisors during the Dialogue period. All-Air would be the only option when the new enhanced SHTM air change rates have to be adopted. A chilled beam system cannot be easily integrated with the enhanced air change rates stated in the new draft documents (this is from direct experience of having designed multiple hospitals across the UK using chilled beams). The “non-cooled” all-air option was also considered the low carbon first option, but flexible enough to deal with future increases in external climate (with the retrofitting of trimmer batteries from a free cooling chiller system if required).

“Two port control proposed in lieu of three port”

Two port comments as above.

“No carbon filters in AHU’s”

The carbon filter issue was again to limit energy use if not required, and still allow the fitting of the filters where required. This would have provided a best balance on low energy and maintenance costs, especially as the source of odour is far away from the vent inlets and in the process of being mitigated by SW.

“Combined foul and general extract utilised in lieu of separate systems”

The combined clean and dirty extract option was provided in order to maximize heat recovery, and to minimize smoke damper CAPEX and OPEX. It is also an SHTM/HTM compliant design solution, as clarified in TC5.

On the basis of the above can the Board explain the reasoning for the low score offered for this element – we would expect at least a 6 based on exemplar equivalent, if not better? Also there was no recognition of the room by room ventilation parameters clarity offered for the entire facility in the form of the Environmental Conditions Matrix.

Item 30 – Mains & Sub-Mains Distribution Design Strategy

“Relies on CHP to meet Emergency back up supply (this is problematic and no indication of how technical issues will be overcome)”

The ER's suggested/encouraged this as a potential solution (App M&E2 – 6.1) and it is a SHTM/HTM compliant solution. It is also one that we had looked at closely prior to offering and we have the technical knowledge of HV and CHP between CHt and DSSR to implement this. We did not see this as problematic. It is also incorrect that the emergency back-up provision “relies” on CHP. Full generation capacity is offered separately, with the “option” of using CHP. The Board is also procuring additional generation within the 33kV substation installation.

Can the Board explain why this has been scored down if the ERs requests this and if it's HTM compliant?

Item 31 – Lighting Design Strategy

“Lighting control to be developed at next stage”

The above statement was incorrect. No adverse comments were made and a 6 (adequate) was scored here. Can the Board explain why this has been scored as such when so much more information was provided than was requested in terms of room by room lighting control strategies and lux levels for the entire facility in the form of the Environmental Conditions Matrix and supported by DSSR calcs to prove energy efficiency?

Item 32 – Lift Engineering Design Strategy

“Podium lifts rated at 1m/s could be up-rated to 1.6m/s”

The statement above is not relevant as travel times were demonstrated via calculation as being compliant at the lower speed. No other adverse comments were made. Can the Board explain why this has been scored as a 6 (adequate) when significant additional information was provided via detailed Lift Traffic Analyses and energy efficiency enhancements in the form of regenerative lift drives allowed for in the Tower Lifts and off-peak load cycling?

Item 33 – Communication Design Strategy

“Reduced Board rack allowance in main equipment Rooms.”

“Passive element only provided for LAN”

First statement is incorrect (26 vs 28 in “typical” MER as referred to in ER 8.3.6) and the second statement is a re-confirmation of the ER provisions of ER 8.3.5 and 8.3.6 - Can the Board explain why this has been scored down if the provision is as per the ERs and exemplar compliant?

Item 34 – Protective Systems Design Strategy

“Sprinkler heads not fitted in ceiling voids.”

“No detection in ceiling voids other than those with medical gases (This would require stringent adherence to other elements of the SHTM and may not be practical)”

The above comments are listed as if they were non-compliance issues (and therefore marked down), but the proposals are as per SHTM/Firecode in terms of void detection etc, and in line with the fire strategy fire engineered approach that scored a 7 in a previous section. Can the Board explain this inconsistency in approach to marking, and why an SHTM/Firecode and ER compliant scheme is not acceptable?

“Wet Sprinklers proposed in lieu of pre-action system)”

Pre-action sprinkler system – this can not be a fast response system over 14 storeys and would therefore be non-compliant in terms of sprinkler head response times. Anti-legionellae requirements (if this is the fear of a wet system) would be a far lower risk than the risk of failure of a sprinkler system due to a sudden and immediate charge and change in pressure from a dry to wet system when required to operate in anger. Can the Board confirm if we have been marked down for this element, when pre-action sprinklers were only to be “considered”? Also, included as part of a fire engineered solution that was marked as a 7 elsewhere.

Item 35 – Medical Gases Design Strategy

“Only one new VIE installation proposed, with existing VIE at Maternity proposed as second installation.....”

“Location of VIE installation at rear of CMB does not meet ER requirements”

We are of the opinion that our offer complies with the wording of ER 8.2.20. Only 2 VIE specifically requested, with tie-in to the existing infrastructure network. It was not explicit that 2 “new” VIEs were required. There were also several opportunities during the logistics and dialogue meetings to clarify that 2 were required if this was the case. The proposed location would have allowed a resilient ring to be formed with VIE’s at polar opposites from main/future load centres, with an upgraded Maternity VIE and the new VIE location close to roads infrastructure and in a least developable part of land next to 2 new car parks. This would not have been a cost-driven spec reduction as the main cost would be the Board supplied VIE, therefore no reason not to offer an optimal solution if clarity had been provided.

Even allowing for any misunderstanding (and easy resolution) of the above, scoring as a 3 (poor) when all other elements of the medical gases design were to a high standard seems harsh. Can the Board explain the scoring mechanism for this element?

Item 37 – Plant Room Design Strategy

Disagree with criticism of Energy Centre not being big enough. Similar to exemplar and includes all items of kit, and also takes cognisance of boundary and existing services issues on site.

“Chillers may require to be de-rated as air intake is directly adjacent to the generator extract.”

Comment on chiller capacity de-rating not relevant for expected duration of generator use and also due to the efflux velocities and expected air temperatures at the generator discharges. Would also have been easily resolvable with additional screening if required at detailed design stage.

“Ventilation plant rooms appear very tight.”

The statement that vent plantrooms are tight is contradicted elsewhere where the marker suggests that plantroom percentages are high (in terms of %GIFA). This results in a double mark-down for 2 elements of comment that contradict each other? Can the Board explain the reasoning behind this? Also, LOR/CHT have 3D modelled the plantrooms based on actual plant sizes in order to be comfortable with the plant areas and configurations.

“Kitchen located above endoscopy and decontamination”

Were we marked down on this and if so why?

Item 39 – Helipad M&E Services

The score for this element is 6 – adequate/ER compliant, however significant improvements over the exemplar were made in terms of a well developed scheme locating the helipad away from openable windows, providing good access from the central lift cores, reducing noise pollution, avoiding chillers at rooftop level and locating air intakes well away from the helipad. Additional low carbon innovation was also offered via a warm/heated slab option in colder weather in order to prevent freezing and ice formation on the helipad surface, which would enhance the overall safety of the scheme.

Can the Board explain if these elements have been taken into account in the scoring, and why only 6 points were awarded?

Item 40 – Maintenance and Major Plant Replacement

“MRI replacement as proposed is extremely problematic and requires to be developed”

3 of the 4 MRI's would be replaced by movement through the ground floor. The fourth MRI will be replaced as per our drawings through a section of roof. Do not therefore agree with the criticism.

Please clarify basis of score as all other points noted are seen as positive comments, with a significant amount of work having gone into the

development of the plant replacement strategy and therefore a 5 seems harsh, especially as this is an M&E section and does not cover hospital equipment. The MRI location element would already have been marked down elsewhere. No cognisance has been made of the significant exemplar improvements and risk mitigation in terms of avoiding rooftop chillers (and helicopter led plant moves) and designing all rooftop plantroom plant to be removeable via lifts. We would expect this to be marked as 6 or 7 based on the exemplar comparison.

Item 41 – Sustainable Design Statement

“Statements and demonstration are erratic in quality. Waste and recycling statements are of good quality and supported, most other items are not addressed or supported with clarity.”

Can the Board provide further elaboration on this statement and explain how a complaint design can be scored as low as a 4? Several points had to be made in limited number of words, and we covered all relevant aspects, with the assistance of a flow diagram, tables, sketches and appendices where appropriate. We also provided additional dynamic “test simulations” on a departmental basis over and above the requirements of the ERs as agreed during the dialogue period. This was used to demonstrate an understanding of the process and to show how the energy and carbon assessments would be taken forward at detailed design stage.

“Bid assessment indicates an adjusted operational Carbon Output of 95kg/CO2/m sq. p.a...when area is recalculated in accordance with SHTM 07 - 02: EnCO2de - making energy work in healthcare (published. April 2006), guidance.”

As far as we are aware the area adjustment in Encode is provided as part of a “heated volume” calculation methodology for the purposes of providing an “energy benchmark”, and not for a carbon benchmark measured in sqm. We have used this correctly in the energy calcs provided – (refer to heated volume calculation within the bid submission), but not in any carbon calcs. We also ignored any benefit from counting the heated volume/effective floor area of the internal atrium as this would distort the figures unfairly in our favour. Also, when reporting at this early design stage we did not use the dynamic results based on departmental NCMs as these were considered overly optimistic, choosing to respond on the traditional method, but commit to developing a full dynamic model at the relevant stage.

Can the Board explain this comment and whether we have been marked down on this basis? The mark seems harsh considering full ER compliance on carbon and energy targets and the detailed process followed.

Item 42 – BREEAM Scoring Schedule

“Bidder has asserted with minimal qualification that their design would achieve BREEAM Excellent.”

“Minor variance from exemplar.”

This is another example where a better than ER/Exemplar compliant offer was made and only a 6 was scored. Can the Board confirm the basis for this?

Item 43 – Energy Strategy

***“Bidder asserted that they would better mandatory NHS energy targets”
“SPP6/PAN84 compliance will be achieved.”***

Can the Board explain how a complaint design can be scored as low as a 4? It was accepted via the dialogue process that for the bid stage this type of assessment would be “work in progress”, and it was intimated by the Board’s Advisors that a “statement of intent” was required, showing the process followed and an understanding of the main issues. Full demonstration of where we had got to and how, was provided, with assurances that this would be further developed at detailed design stage, as well as a commitment to meet the Board’s energy and carbon targets

“Projected energy costs are high, building has a notably high anticipated energy demand.”

Can the Board explain the basis of this statement – no “costs” were provided as part of the bid response? On what basis is there a notably high anticipated energy demand? We have benchmarked our assessment against other similar hospital projects and found the values to be in order. The non-CHP figure presented for comparison is the only published figure that could be construed as high, however this is produced in the context of a base calculation for comparison with the improvement values once LZCs are adopted.

“Single large CHP may affect load utilisation ability and push up CO2 output during periods of downtime such as major maintenance or replacement.”

Can the Board explain the basis of this statement and whether we have been marked down for this? We have stated the predicted downtime within the calculations as less than 8% per annum, and factored this into the calcs. There is also no basis for single rather than double CHP adversely affecting load utilization as the key factor is the actual sizing and selection of the CHP unit itself.

DIRECTORATE	AREA	REPRESENTATIVES	
SURGERY & ANAESTHETICS	Critical Care	Gregor Imrie Iain MacDonald Jacquie Campbell	Marion MacDonald Sandy Binning Alan Davidson George Welch
	AAU - Surgical Reps	Ann Wilson Barry Sillers Cammy Howie	Lesley Meikle Wesley Stuart
	Endoscopy	Ann Wilson Barry Sillers Derek Gillen	Rebecca Reid Rob Boulton-Jones (medical gastro rep)
	Theatres	Ann Malloy Ann Traquair Smith Jacquie Campbell	John Crawford Nick Pace George Welch David Simpson
	Vascular	Barry Sillers George Welch	Gill Donnelly Wesley Stuart
	ENT & Audiology	Barry Sillers Fiona Rogan Mary Cunningham Mary McEwan	Michelle Ward or Gillian Sweeney Shona Monaghan Trish McDonnell
	General Surgery	Barry Sillers Graham Sutherland	Laura Young Lesley Meikle
	Orthopedics	Alan Smith or Ruth McIntyre Barry Sillers Diane Wink Dominic Meek	Drew Shaw Jason Roberts Margaret Kerr Mary Morrison Susan Groom

DIRECTORATE	AREA	REPRESENTATIVES	
SURGERY & ANAESTHETICS (Cont'd)	Ophthalmology	Barry Sillers Charles Diaper Etta Cochrane Fiona Rogan Iain Bryce John Murdoch Jonathan Waugh	Jane Fielding Rachel McKay Mary Cunningham Sharon MacCormack Susan Groom Trish McDonnell
	Urology	Ann Wilson Barry Sillers Frances McLinden	Graham Conn Michael Fraser
	General Outpatients	Ann Wilson Barry Sillers Diane Wink Janis Hughes	June Ramsey Karen Loudon Laura Young
	Wards (includes stroke /DME)	Brenda Byron Catherine Nivison Colin Cuthbertson (Pharmacy) Fiona McCluskey Gill Donnelly John Stuart Karen Connelly	Linda Robertson Morag Busby Maureen White (Pharmacy) Rob Boulton-Jones Infection control rep

DIRECTORATE	AREA	REPRESENTATIVES	
EMERGENCY CARE & MEDICAL SERVICES	Cardiology (ICCU, Cardiac Rehab and Cardiac outpatients)	Alan Hunter Colin Berry David Murdoch Heather McVey	Jacqueline Adams Liz Thomson Rosemary Brogan
	Cardiology out patients including rehab	Alan Hunter David Murdoch Heather McVey	Lynn Scott - Rehab Margaret Grey Rosemary Brogan
	AAU (Medical reps)	David Raeside Debbie Ambridge Greg Jones Heather McVey	Jacqueline Nicol Karen McKay Michelle Boyd Scott Muir
	MH DU	Andy Kernihan David Raeside Heather McVey	Karen McKay Michelle Boyd Scott Muir
	ED	Gerry Wright Heather McVey Johnny Gordon Mhairi Lloyd	Michelle Boyd Pat Grant Phil Munro
	Rheumatology	Anice Gilliespie Cath McFarlane Heather McVey	John Larkin Susan Fraser
	Gastroenterology	Alan Hunter Anice Gilliespie Heather McVey	Peter Mills Rob Boulton-Jones
	Respiratory	Cath McFarlane Heather McVey Joseph Sarvesvaran	Scott Davidson Roger Carter (resp Lab)
	Out of Hours	Heather McVey Joan Barr	Norman Gaw Michelle Boyd
	Dermatology	Heather McVey	Stewart Kyle

DIRECTORATE	AREA	REPRESENTATIVES	
		Joyce Leman Melanie McColgan	Susan Holmes
	Medical Day Unit	Andy Gallagher Anice Gillespie Cath McFarlane Heather McVey Jo Sarvesvaren	Rob Boulton-Jones Robbie Lindsay Susan Fraser Nurse rep (name to be confirmed)
	Endocrinology	Andy Gallagher Anice Gillespie Cath McFarlane	Heather McVey Stephen Gallacher
	Wards (includes stroke /DME)	Brenda Byron Catherine Nivison Colin Cuthbertson (Pharmacy) Fiona McCluskey Gill Donnelly John Stuart Karen Connelly	Linda Robertson Morag Busby Maureen White (Pharmacy) Rob Boulton-Jones Infection control rep

DIRECTORATE	AREA	REPRESENTATIVES	
REGIONAL SERVICES	Renal Inpatient & Renal Dialysis	Bill Fiskin Chris Deighan Ippi Brown Julia Little	Margaret McLucas Marjorie Johns Stuart Campbell
	Haemato-oncology	Ann Parker David Dunlop Gary Jenkins	Marjorie Johns Myra Campbell Sandy Sharp

DIRECTORATE	AREA	REPRESENTATIVES	
DIAGNOSTICS	Adult Main Imaging Dept – 1 st and 2 nd Floor	Aileen MacLennan Andy Brenan Barrie Condon Cathy Muir Iain Robertson	John Foster Lynn Ross Mike Gronski Stuart Sloss Winnie Miller

DIRECTORATE	AREA	REPRESENTATIVES	
REHABILITATION & ASSESSMENT	Discharge Lounge	Dot Jardine	
	Spiritual Care	Blair Robertson	
	Outpatient Rehabilitation & Therapy Facilities	Richard Hassell	
	AHP/ADL Areas	Catherine Nivison (link to Ann Ross re AAU Area)	
	AAU Area	Angela Campbell Ann Ross Ed Spilg	Graeme McPhee Matthew Walters Tracey Baird
	Wards (includes stroke /DME)	Brenda Byron Catherine Nivison Colin Cuthbertson (Pharmacy) Fiona McCluskey Gill Donnelly John Stuart Karen Connelly	Linda Robertson Morag Busby Maureen White (Pharmacy) Rob Boulton-Jones Infection control rep (name to be confirmed)

DIRECTORATE	AREA	REPRESENTATIVES	
FACILITIES MANAGEMENT	Decontamination (Adult Shared)	Mary Anne Kane Alan Stewart Hugh McDerment Infection Control	Karen Connelly Ian Powrie Heather Griffin
	FM Facilities (Adult & Children's) - Group 1	Karen Connelly Heather Griffin David MacDonald	Mary Anne Kane Mairi Macleod Infection Control
	FM Facilities (Adult & Children's) - Group 2	Karen Connelly Heather Griffin David MacDonald	Mary Anne Kane Mairi Macleod Infection Control

NEW SOUTH GLASGOW HOSPITAL (ADULT) PROJECT

Nominated Representatives – January 2010 - Onwards

DIRECTORATE	AREA	REPRESENTATIVES	
SURGERY & ANAESTHETICS	Critical Care	Gregor Imrie Eleanor Deacon Mohammed Al-Haddad Sandy Binning Alan Davidson Iain Thomson	George Welch Jacquie Campbell Marion MacDonald Jacqueline Adams Barry Sillers
	Endoscopy	Derek Gillen Rebecca Reid	Rob Boulton-Jones (medical gastro rep) Barry Sillers
	Theatres	Neil Smart John Crawford George Welch Nick Pace Michelle Carr	Ann Traquair Smith Ann Malloy Regina O'Connor Jacquie Campbell Barry Sillers Seonaid Halliday David Simpson Ortho (TBC)
	Vascular	George Welch Gill Donnelly	Barry Sillers Wesley Stuart
	ENT & Audiology	Mary Cunningham Fiona Rogan Isy Edison Michelle Ward	Barry Sillers Trish McDonnell Sharon Monaghan Gillian Sweeney
	General Surgery	Graham Sutherland Laura Young	Barry Sillers Lesley Meikle
	Orthopedics	Alan Smith Ruth McInture Diane Wink	Barry Sillers Drew Shaw Dominic Meek Jason Roberts

DIRECTORATE	AREA	REPRESENTATIVES	
	Ophthalmology	Mary Cunningham Fiona Rogan Trish McDonnell Sharon MacCormack Margaret Gray Betty Walker Charles Diaper	Barry Sillers Jane Fielding Rachel McKay Jonathan Waugh Etta Cochrane Iain Bryce
	Urology	Frances McLinden	Barry Sillers Graham Conn
	General Outpatients	Karen Loudon June Ramsey Diane Wink	Laura Young Janis Hughes Barry Sillers
EMERGENCY CARE & MEDICAL SERVICES	Cardiology	Colin Berry Jacqueline Adams Liz Thomson	David Murdoch Rosemary Brogan
	Rheumatology	Cath McFarlane Susan Fraser	Heather McVey
	Gastroenterology	Alan Hunter Peter Mills	Rob Boulton-Jones
	Respiratory	Cath McFarlane Roger Carter Heather McVey	Joseph Sarvesvaran Scott Davidson
	Out of Hours	Norman Gaw Rhona Robertson	Heather McVey
	Dermatology	Stewart Kyle David Bilsland	Susan Holmes Angela Drummond Melanie McColgan
	AAU & Emergency Complex	Wesley Stuart George Welch Cammie Howie Sandy Binning Susan Groom Barry Sillers	Lesley Meikle Ann Wilson Ian Findlay Laura Young Gregor Imrie Diane Wink

DIRECTORATE	AREA	REPRESENTATIVES	
			Michael Kelly
	Medical Day Unit	Cath McFarlane Alan Hunter Stephen Banham Stephen Gallacher Robbie Lindsay Peter Mills	Anne McKay David Anderson Natasha Brown Susan Fraser Heather McVey Rob Boulton-Jones
	Cardiac Rehab		
	Endocrinology		
REGIONAL SERVICES	Renal Inpatient & Renal Dialysis	Julia Little Margaret McLucas Marjorie Johns	Chris Deighan Stuart Campbell Bill Fiskin
	Haemato-oncology	Myra Campbell David Dunlop	Gary Jenkins Ann Parker
DIAGNOSTICS	Anti-coag Service		
	Labs Services in new hospitals - joint		
	Main Imaging Dept & Nuclear Medicine	Aileen MacLennan Winnie Miller Lynn Ross Iain Robertson,	Cathy Muir Barrie Condon Mike Gronskie
REHABILITATION & ASSESSMENT	Discharge Lounge	Dot Jardine	
	Spiritual Care	Blair Robertson	
	Outpatient Rehabilitation & Therapy Facilities	Anne Galbraith	Richard Hassell
	Stroke, Care of Elderly	Anne Harkness	
	Wards	Rory Farrelly John Stuart Linda Robertson Anne Galbraith Rob Boulton-Jones	Morag Busby Margaret Kelly Annette Rankin Pamela Jonannidis Helena Jackson Boyd

DIRECTORATE	AREA	REPRESENTATIVES	
		Catherine Nivison	
	Health Records	Mairi Dick June Gillen	
	Entrance Hall	Val Greenlees	Ronnie Clinton
	Psychiatric Liaison Service	Adam Burnel	
	Infection Control	Tom Walsh Penelope Redding Clare Mitchell	Pamela Joannidis Annette Rankin

ROLE OF USER GROUP LEADS

1. There will be approximately 2 to 3 meetings between January to May 2010 to discuss and sign off the 1:200 detailed departmental layouts and, following this, 2 to 3 meetings to discuss the detailed requirements of each room (1:50s). Hard copies of drawing(s) will be issued by the Project Team to each Group Lead (electronic copies to other members), seven days before each User Group meeting.
2. Group Leads may wish to hold pre-meeting ensuring that users are familiar with the design plans and have had the opportunity to discuss and reach consensus in terms of thoughts around the design.
3. The Lead will be responsible for:-
 - Attending each of the design user group meetings
 - Ensuring that Directorate priorities are reflected in the design
 - Keeping their Director and other Directorate staff apprised of the outcome of the meetings and status of the design process.
 - Signing on behalf of the Directorate the 'Design Acceptance Procedure Form' at the end of each meeting (see section entitled 'Procedure for Sign off' below for more detail)

The Project Team will take instruction from the Lead where there are differences in opinion between user group representatives.

4. Each User Group meeting with the contractor will be facilitated and led by the Project Team and will include reps from Infection Control and Facilities Management.
5. There will be a formal process for the sign off of the 1:200s and 1:50s. It should be highlighted that the Schedules of Accommodation are now set and cannot be changed unless in exceptional circumstances and requires to be supported by the Project Executive Board Sub-Group.
6. The timescale for all stages of the design are tight and any delays in developing the design due to the Board's inability to meet the dates may result in financial penalties.

Procedure for Sign Off

The User Group meeting discussion will lead to:-

- [1] Accepting the Design Team proposals;
- [2] Making some changes with no impact on cost or other departments;
- [3] Making changes with an impact on other departments and/or cost.

If the User Group decision is that [1] or [2] above are the agreed status then the design process can move on to the next planned meeting or the group decide that the design is concluded and can be signed off. A Design Acceptance Procedure Form will be signed to acknowledge the status. (See Appendix 1)

If in exceptional circumstances the group agree the status is [3] then the following procedures will be implemented:

- Group Lead will discuss the issues immediately with their Director providing them with the reasoning behind the proposed change(s).
- The Directors must be presented with all appropriate information including initial sketch and a high level cost of the proposed change to enable them to decide whether or not to initially accept or reject the changes.
- If Director decides the change(s) is not required or not worth further work then this will be relayed to the Design Team via the Adult or Children's Project Manager. This must be relayed to the design Team within 7 days of the User Meeting.
- If the Director agrees that the change(s) submitted should be considered for implementation then he/she must make a case to the New South Glasgow Hospital and Laboratories Executive Board Sub-Group. Details of the proposal including design and financial implications will be provided by the Project Director. (This group will meet weekly and consider only exceptional circumstances which cause a change to the project and incur additional capital or revenue costs).

The Director must provide the Executive Sub-Group with detailed reasoning and information for requesting change(s) which have an impact on the cost of the project.

The Executive Sub-Group will have the final say on the decision. The Project Director will communicate the decision to the Design Team within 21 days of the User Group meeting to enable the Design Team to conclude their work for the next set of meetings.

DESIGN ACCEPTANCE PROCEDURE FORM

NEW SOUTH GLASGOW HOSPITALS & LABORATORY PROJECT DESIGN ACCEPTANCE PROCEDURE			
Building:		Issued by:	
Subject:		Date issued:	
Aspect for Review:		Date return:	
DESIGN REVIEW HISTORY			
	Level of Approval	Approval Date	Remarks
Design Review 1			
Design Review 2			
Design Review 3			
BOARD RESPONSE			
Level of Approval <input style="width: 50px; height: 20px;" type="text"/>			
Information referred to: _____ _____ _____			
Detailed comment: _____ _____ _____ _____ _____ _____ _____ _____ _____ _____			
<small>Approval Levels: A= No comment. B= Proceed subject to comments. C= Resubmit with amendments. D=Rejected.</small>			
BOARD ACCEPTANCE SIGN OFF			
User Group Lead: _____		Date: _____	
Design Manager: _____		Date: _____	
Project Manager: _____		Date: _____	

Architects have
the signed 1:200 with
changes indicated, will
copy &
send to
Project Team

New South Glasgow Hospitals (NSGH) Project

Adult Hospital

Clinical User Group Meeting: No. 1 (1:200 Stage)

Department: Renal Wards & Renal Dialysis User Group

Date of Meeting: Thursday 21st January, 2010

Time: 12.30pm - 5.00pm

Attendance Sheet

Name	Organisation / Role	Attendance
Julia Little	NHS Greater Glasgow & Clyde	
Isabel (Ippy) Brown	NHS Greater Glasgow & Clyde	
Stewart Campbell	NHS Greater Glasgow & Clyde	
Chris Deighan	NHS Greater Glasgow & Clyde	
Bill Fiske	NHS Greater Glasgow & Clyde	
Marjorie Johns	NHS Greater Glasgow & Clyde	
Margaret McLucas	NHS Greater Glasgow & Clyde	
Heather Griffin	NHS Greater Glasgow & Clyde	
Karen Connelly	NHS Greater Glasgow & Clyde	
Frances Wrath	NHS Greater Glasgow & Clyde	
Fiona McCluskey	NHS Greater Glasgow & Clyde	

Hugh M. Mermott
T. Sullivan
M. Drake

NHS GG & C
MORTIMER ASSOCIATES
— u —

Scott McCallum

Tribal

Paul Britton

Tribal

Bill McGaughey

Doug Smith

David Bower

BROOKFIELD

CHRIS DEIGHAN

NHS GG & C

JULIA LITTLE

NHS GG & C

IPPY BROWN

NHS GG & C

Pamela Joannidis

NHS GG & C
Infection Control

Stewart Campbell GG & C

NEW SOUTH GLASGOW HOSPITALS & LABORATORY PROJECT DESIGN ACCEPTANCE PROCEDURE

Building:	Issued by:
Subject:	Date issued:
Aspect for Review:	Date return:

DESIGN REVIEW HISTORY

	Level of Approval	Approval Date	Remarks
Design Review 1	C	21/1/2010	
Design Review 2			
Design Review 3			

BOARD RESPONSE

Level of Approval

Information referred to:

Detailed comment:

Approval Levels: A= No comment. B= Proceed subject to comments. C= Resubmit with amendments. D=Rejected.

BOARD ACCEPTANCE SIGN OFF

User Group Lead:

Date:

21/1/2010

Design Manager:

Date:

21/01/2010

Project Manager:

Date:

21/1/2010

DESIGN ACCEPTANCE PROCEDURE FORM

ACTION POINTS

RENAL INPATIENTS & DAY UNIT

- Need better association of Day Assessment + Treatment area with the surgical beds
- Need a better association of the Inpatient analysis station with the patient lift core
- Relocate Quiet sitting space away from department entrance to quiet area (not in between procedure room + Assessment area)
- Minor procedures room as close as possible to surgical area
- Locate the following within the clean utility
 - Controlled drug cupboard/clinical store
 - Clinical supplies trolley
- Locate food trolley bay adjacent to parking
- Dirty utility / sluice test (in one of 22x bed wards) is missing from drawing; clean utility also missing.
- Provide a better distribution of mobile equipment store and Equipment store in 16x bed unit
- NA to test whether 4x Inpatient beds can be functionally accommodated within the Inpatient Analysis area (open plan).
- Relocates room in High acuity area: redistribute Relocates rooms across department (assuming no impact on existing functionality/cost).
- Only 2x waiting lobbies in High Acuity area (revise drawing)
- 2x fold-down boxes are required in the High Acuity area; achieve this by redistributing the existing fold down boxes evenly
- Staff base allocation in High acuity ward is acceptable

- ✓ Treatment rooms do not require mechanical ventilation for infection control
- ✓ (confirm that visits not required for dialysis HepB patients)
- ✓ Redlocate scheduled staff base area as follows: (at 6m²)
 - 3 x 8 station bays: a 2 person workstation required in each bay!
 - 1 x 2 person staff base (6m²) provided to observe the 6 x single rooms (with proximity of ~~the~~ single rooms)
- ✓ CAPD rooms to be located together, separate from haemodialysis area at beginning of ward
- ✓ Seminar room needs to be easily accessible from dept entrance
- ✓ Locate patient changing close to entrance.
- ✓ Combine following rooms into one area:
 - REN 002
 - REN 003 (x2)
 - REN 007
 - REN 042
- ✓ REN 104 ready use: agreed that this is a bay (not a room); locate in low traffic area adjacent to clinical physics area
- ✓ C/E rooms to be located adjacent to CAPD rooms
- ✓ Colorate Interview rooms with C/E + CAPD rooms.
 - Colocate staff offices between CAPD/consult exam areas and haemodialysis area (as per below).

Flow CARD \rightarrow Treatment \rightarrow offices \rightarrow Hemodialysis
+ (rooms \rightarrow boys)
C/E

21/1/2020

2, 1, 1, 1, ④

21/1/2010

DESIGN ACCEPTANCE PROCEDURE FORM

Haemato-Oncology User Group Meeting – 4th February 2010

ACTION POINTS

1. Currently Haemato-Oncology has 14 inpatient beds and 4 day beds planned for the New South Glasgow Hospital. Director to alert COO within 7 days of potential change (10th Feb 2010).

2. Potential options for Haemato-Oncology are:

	<u>Inpatient Beds</u>	<u>Day Beds</u>
Option 1	10	0
Option 2	7	0
Option 3 *	0	0

* Under this option Haematology would be absorbed into current medicine beds and day activity to ACH.

14 inpatient beds and 4 day beds is no longer an option.

3. High level review of Schedule of Accommodation
 - > Remove Assisted Bathroom
 - > Remove Reception
 - > Amalgamate Drug Cupboard into Clean Utility
 - > Linen and Clinical Supplies Trolley to be co-located beside Clean Utility
 - > Equipment Store Area for review once bed numbers identified
 - > No options include Day Case – therefore, Day Case Zone (78m²) can be removed
 - > Ventilation – Options 1 & 2 – require Hepa Filtered and no opening windows, reliance on mechanical ventilation throughout
 - > One Treatment Room negatively pressurised as before
 - > Ensure digital pressure monitoring outside patient bedrooms

- > Disposal Hold at entrance to Ward (still inside the Ward)
- > Directorate to confirm which option within 2 weeks of this meeting (i.e. by 18 February 2010)

Copy

New South Glasgow Hospitals (NSGH) Project

Adult Hospital

Clinical User Group Meeting: No. 1 (1:200 Stage 2)

Department: Haemato-oncology User Group

Date of Meeting: Thursday 4th February, 2010

Time: 9.00am - 1.00pm

Attendance Sheet

Name	Organisation / Role	Attendance
Gary Jenkins	NHS Greater Glasgow & Clyde	
Myra Campbell	NHS Greater Glasgow & Clyde	
David Dunlop	NHS Greater Glasgow & Clyde	
Marjorie Johns	NHS Greater Glasgow & Clyde	
Anne Parker	NHS Greater Glasgow & Clyde	
Sandy Sharp	NHS Greater Glasgow & Clyde	
Rosemary Twohig	NHS Greater Glasgow & Clyde	
HEATHER GRATHIN	PROJECT MANAGER	
FIONA MACLEAN	NHSGGK	
MYRA CAMPBELL	IT	
FIONA MCCLOSKEY	SENIOR NURSE ADVISOR	
Neil Evans	Nightingale Assoc.	
Frances Walk	Project Team	

NEW SOUTH GLASGOW HOSPITALS & LABORATORY PROJECT DESIGN ACCEPTANCE PROCEDURE

Building: New South Glasgow Hosp Issued by:

Subject: Haemato-oncology Date issued:

Aspect for Review: Date returned:

DESIGN REVIEW HISTORY

	Level of Approval	Approval Date	Remarks
Design Review 1	C.		
Design Review 2			
Design Review 3			

BOARD RESPONSE

Level of Approval

Information referred to: _____

Detailed comment: _____

Approval Levels: A = No comment. B = Proceed to comments. C = Resubmit with amendments. D = Rejected.

BOARD ACCEPTANCE SIGN OFF

User Group Lead:		Date: <u>04 Feb 2010</u>
Design Manager:		Date: <u>4/2/2010</u>
Project Manager:		Date: <u>4/2/2010</u>

DESIGN ACCEPTANCE FORM

ACTION POINTS

1. Director to alert COO within 7 days of potential change.

2. Potential options are:-

	INPAT BEDS	DAY BEDS
option 1	10	0
option 2	7	0
option 3	0	0

under this option haematology would be absorbed into current medicine beds & day activity to ACH.


14 inpatient beds and 4 day beds is no longer an option.

3. High level review of Schedule of Accommodation

- Remove Assisted Bathroom
- Remove Reception
- Amalgamate Drug Cupboard into Clean Utility
- Linen + Clin. Supplies Trolleys to be colocated beside CU
- Equipment Store area for review once bed nos. identified
- No options include Day Case \therefore Day Case Zone (78m²) can be removed

4. Ventilation - Options 1 & 2 - require \longrightarrow PTO

- ~~to be~~ Hepa filtered & no opening windows, reliance on mechanical ventilation throughout
- One treatment room negatively pressured.
- Ensure digital pressure monitoring outside patient bedrooms
- Disposal hold, at entrance to ward (still inside the ward)
- Directorate to confirm which option within 2 weeks of this meeting (18 February 2010)

 2/2/2010

South Glasgow New Hospital – RDS Development Process - DRAFT

12th March 2010

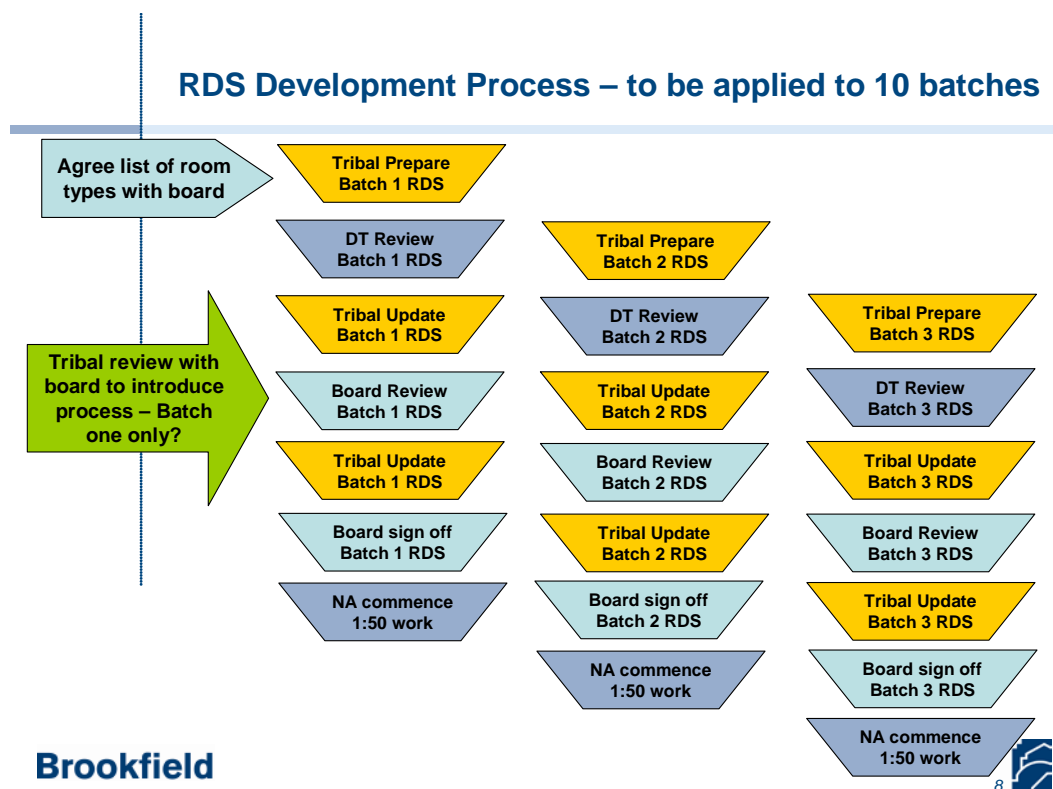
Base Information

- Contract Schedule of Accommodation (SoA) with Board mark up
- Submitted bid SoA with room identifiers
- ADB Room Data Sheet (RDS) database from Board used for equipment list development
- Nightingale Associates (NA) Room Standardisation and Equipment Assemblies proposals

RDS Development Actions to date

- Tribal have reviewed contract SoA and ADB database and identified in excess of 1300 room types linked to over 700 room codes. This review identified:
 - Inconsistent use of ADB codes discovered
 - Codes used for seemingly very different room types
 - Different codes used for apparently similar room types
 - Previous version of ADB used – several codes no longer exist in updated latest version which means necessary technical compliance may be compromised
- Tribal have reviewed standardisation approach with NA and created assemblies in ADB to support development of RDS that fit with design development at 1:50 scale
- Tribal have used information from Clinical Output Specifications and SoA and Nightingales draft standardisation proposals to allocate ADB codes from current most up to date version of ADB
- This has resulted in approximately 490 room types / ADB codes being identified that appear to cover all rooms needed across both hospitals
- Tribal have created room data sheets for an initial batch of rooms (ward areas and support) and these have been reviewed with the Board and confirmed as an acceptable start point for RDS development.
- Tribal have identified and reviewed with NA batching of rooms for RDS development. Proposed batches provided as appendix one.
- Proposed process and timescale drafted by Tribal for RDS development to feed into 1:50 design development

Proposed PRD Development Process



- We have currently identified all 10 batches – review of these batches may allow for further standardisation and allow batches to be reduced in number.
- Batches:
 - 1 – Adult's Inpatient and support
 - 2 - Children's Inpatient and support
 - 3 - Common Rooms
 - 4 - Common Rooms
 - 5 - Adult Rooms Types per Department
 - 6 - Adult Rooms Types per Department
 - 7 - Adult Rooms Types per Department
 - 8 - Children's Rooms Types per Department
 - 9 - Children's Rooms Types per Department
 - 10 - Children's Rooms Types per Department

Proposed RDS Development Timescale – completion dates (D/M) all 2010

Batch	1	2	3	4	5	6	7	8	9	10
Tribal Issue	15/2	15/2	15/3	15/3	29/3	6/4	12/4	27/4	4/5	10/5
DT Review	22/2	22/2	23/3	23/3	6/4	12/4	19/4	4/5	10/5	17/5
Issue to Board	11/3	11/3	29/3	29/3	12/4	19/4	27/4	10/5	17/5	24/5
Board Review	15-19/3	15-19/3	12/4-13/4	12/4-13/4	12/4-19/4	19/4-27/4	27/04-4/5	10/5-17/5	17/5-24/5	24/5-31/5
Tribal re issue to NA	26/3	26/3	19/4	19/4	27/4	4/5	10/5	24/5	28/5	4/6
NA Issue 1:50 RT drawings and updated RDS to Board	6/4 (1A) 13/4	23/4	7/5	7/5	14/5	21/5	28/5	04/06	11/06	18/06
Board Review/UGM 1	20/4 (1A) & May	25/05 (1C) & May	May	May	June	June	June	June or Aug	June or Aug	June or Aug
NA Issue (7xdays before UGM 2)	tbc	tbc	tbc	tbc	tbc	tbc	tbc	tbc	tbc	tbc
UGM 2	June	June	June	June	Aug	Aug	Aug	Sep	Sep	Sep
FBC sign off	July	July	July	July	Sept	Sept	Sept	Oct	Oct	Oct

Key dates:

- 12/13-04-10, GI and FW to review the list of common rooms.
- 20-04-10, 9:00 – 12:30, Round 3 of 1:200 meeting to be used as UGM 1 for review of Batch 1A rooms as well.
- 25-05-10, 9:00 – 12:30, Round 3 of 1:200 meetings to be used for review of Batch 1C rooms as well.

Equipment Lists

- A full draft equipment list will not be available until all RDS are completed and loaded onto codebook in late June / early July, from which point NA will be managing 1:50 / RDS development process.
- However, sample equipment lists can be created for completed batches or by specified room lists as the project develops.
- This paper to be issued to members of medical planning group and to be updated to reflect discussions on 10th of March following that meeting.

Appendix One – Draft RDS Batches

ADB	List of Rooms	12/3/2010
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Project:	SG01GI	South Glasgow v01 gi
Department:	001	BATCH 1

Code	Description	Area (m ²)
B0305A	Single-bed room: HBN 04-01	19.00
B0308A	Single-bed room: isolation: HBN 04-01	19.00
B1602B	Single bedroom, isolation: Critical care	26.00
B2417B	Recovery bay: post anaesthetic, 1 place	13.50
	Bed space	
C0235B	Consulting/examination room: single-sided couch access - HBN 00-03	12.00
C0237B	Consulting/examination room: double-sided couch access - HBN 00-03	16.00
C0302B	Assessment room: A&E	16.00
D1401A	Sitting room with play area: relatives	12.00
G0103B	Parking bay: resuscitation trolley	1.00
G0118B	Linen bay: exchange trolley	4.00
G0129A	Parking bay: wheelchair	1.50
G0180B	Parking bay - HBN 00-03	2.00
G0405B	Exit/parking bay: theatre, 1 bed/trolley	12.00
G0406A	Exit/parking bay: shared between 2 theatres, 2 beds	21.50
G0507A	Lobby: ventilated (isolation suite)	4.00
	Entrance lobby for barrier nursing	
G0510A	Lobby to isolation room - HBN 04-01	5.00
H0515B	Seminar, training room: 15 person	27.50
J0205B	Reception: 1 staff	4.00
J0232B	Reception: 2 person - HBN 00-03	11.00
J1135B	Waiting area: 10 person including 3 wheelchair user	19.50
	Rehabilitation	
K0101CA	Switchgear cupboard	1.00
M0202B	Office nursing: 1 staff	9.00
	Location board, safe	
M0218A	Office: 1 staff	16.00
M0225A	Office: 6 staff	27.50
M0251B	Office: 1 person - HBN 00-03	8.00
M0252B	Office: 2 person - HBN 00-03	12.00
M0704A	Interview, counselling room: 5 person	9.00
	With desk	
M0724A	Interview room: 4 places (including 1 wheelchair place) - HBN 00-03	8.00
N0108A	Operating theatre: laminar flow	55.00
	No room layout	
N0216B	Scrub-up and gowning room: 3 places	11.00
N0305A	Anaesthetic room	19.00
	With patient trolley and ceiling hoist	
P0627B	Ward pantry - HBN 04-01	12.00
T0151B	Touchdown base - HBN 00-03	2.00
T0211B	Staff communication base: 2 places - HBN 00-03	11.00
T0535B	Clean utility room - HBN 00-03	16.00
T0538A	Clean utility room: without controlled drugs cupboard - HBN 00-03	8.00
V0534B	Staff changing room: 15 places	10.00
	Slimline lockers, coat rail, shoe rack	
V0725A	Changing room: semi-ambulant - HBN 00-02	2.00
V0922B	WC: independent wheelchair - HBN 00-02	4.50
V1010B	WC: ambulant - HBN 00-02	2.00
V1121B	WC: semi-ambulant - HBN 00-02	2.50
V1321B	Shower room: ambulant - HBN 00-02	2.50
V1323A	Shower room: semi-ambulant: standing use - HBN 00-02	5.00
V1635B	Shower room: assisted - HBN 00-02	8.00
V1645B	Shower room: en-suite: chamfered - HBN 00-02	4.50
W0205A	Store: emergency drugs	5.50
	Primary services	

ADB	List of Rooms	12/3/2010
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Project:	SG01GI	South Glasgow v01 gi
Department:	001	BATCH 1

Code	Description	Area (m²)
W1531A	Store: equipment	12.00
W1555B	Store: general and stationery	6.00
W1585B	Store: general	12.00
W1602A	Store: linen	3.50
X0145A	Treatment room: double-sided couch access - HBN 00-03	16.00
X0251A	Treatment cubicle: dialysis, 1 patient With bed	10.50
X0252A	Isolation treatment room: dialysis, 1 patient	13.50
Y0412A	Dirty utility: urine test With pass-through hatch	8.00
Y0420A	Dirty utility: serving 1 theatre or cath. lab.	12.00
Y0431B	Dirty utility room - HBN 00-03	8.00
Y0642B	Disposal hold: 1700 litres - HBN 00-03	8.00
Y1510B	Cleaners room - HBN 00-03	8.00

ADB	List of Rooms	12/3/2010
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Project:	SG01GI	South Glasgow v01 gi
Department:	002	BATCH 2

Code	Description	Area (m ²)
B1802C	Single bedroom: Children/young people, with relatives overnight stay	15.00
B1805C	Single bedroom, isolation: Children/young people, with relatives overnight stay	15.00
B2011C	Multi-bed room: Children/young peoples day care, 4 beds	66.00
C0225C	Consulting, examination, treatment room: all-round couch access. Door and half	16.00
C0304C	Assessment room: Paediatric, A&E	16.00
C1010B	Consulting, examination room: Ophthalmology	13.00
C1112B	Consulting, examination, fitting room: Orthotics	14.00
C1401B	Physical measurement bay	3.50
E0125B	Imaging room: conventional, general x-ray	30.00
	With mobile examination lamp	
	No room layout	
G0142B	Parking bay: mobile x-ray, ultrasound unit	5.00
G0510B	Lobby to isolation room - HBN 04-01	5.00
H0530C	Seminar, training, library room: 5 person	14.00
J0103C	Entrance draught lobby	6.00
J0130B	Entrance lobby: controlled access	0.00
J1201B	Waiting area: 10 person including 1 wheelchair user	16.50
J1251B	Waiting area: 5 places (including 1 wheelchair place)	9.00
J1306B	Waiting area: 10 person including 1 wheelchair user	16.50
M0254B	Office: 4 person - HBN 00-03	24.00
M0529B	Office: supervisor	12.50
M0712B	Interview, counselling, quiet room: 5 person	9.00
M0727B	Interview room: 7 places (including 1 wheelchair place) - HBN 00-03	12.00
M1011C	Office: 6 staff	36.00
M1012B	Office: 3 staff	18.00
N0106B	Operating theatre: general	55.00
	No room layout	
N0316C	Anaesthetic room: bed space	19.00
P0808B	Vending machine - HBN 00-03	3.00
Q0304C	Assessment, interview and treatment room	10.00
S0012B	Infant feeding room - HBN 00-03	6.00
T0526B	Preparation room	12.00
V0703B	Patient changing cubicle: ambulant person	2.00
V0704B	Patient changing cubicle: independent wheelchair accessible	4.00
V0717B	Patient changing cubicle: wheelchair accessible, 2 door access	4.50
V1221C	WC: assisted - HBN 00-02	7.50
V1406B	WC and handrinse: specimen; wheelchair accessible With pass-through hatch	4.50
V1643C	Shower room: en-suite - HBN 00-02	5.00
V1736B	Bathroom: assisted - HBN 00-02	15.00
W1584C	Store: clinical equipment	16.00
W1594C	Store: linen	6.00
X0147B	Treatment room: all-round couch access - HBN 00-03	16.00
X0242C	Treatment room: A&E, multi-functional	16.00
Y0315C	Dirty utility: bedpan disposal Radiology	9.00
Y0331C	Dirty utility room: bedpan processing - HBN 00-03	12.00
Y0510B	Utility: footwear washing	4.00
Y0646B	Disposal hold: 3000 litres - HBN 00-03	12.00

ADB	List of Rooms	12/3/2010
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Project:	SG01GI	South Glasgow v01 gi
Department:	003	BATCH 3, 4

Code	Description	Area (m ²)
C0514B	Examination room: audiometric test	51.00
	Sound field testing, multi-occupancy booth and control area	
C0522B	Examination/physical therapy room - HBN 00-03	12.00
C0706B	Investigation room: resting electrocardiography (ECG) bed access	16.00
	All-round couch access	
C0710B	Investigation room: stress echocardiography	16.50
	All-round couch access	
C1013B	Consulting, examination room: Orthoptic	18.50
C1408B	Venepuncture room: 1 place	8.00
D0403B	Rest, dining room: 20 staff	25.00
	With emergency call lamp	
D0421B	Rest, dining room: 40 staff	50.00
	No room layout	
E0113B	Imaging room: Ultrasound, general	16.00
	With reporting workstation	
E0601B	Scanner room: Computed Tomography (CT)	36.00
	Modified, Room layout in preparation	
E0604B	Control room: serving CT room	16.00
	No room layout	
E0815B	Scanner room: open Magnetic Resonance Imaging (MRI)	50.00
	No room layout	
E0819B	Technical equipment room: serving open MRI	16.00
	No room layout	
G0119B	Parking bay: 6 wheelchairs	4.00
G0128B	Parking bay: 3 accident trolleys, 3 wheelchairs	12.00
G0712B	Telephone booth: wheelchair accessible	2.00
G0805B	Shop space with store	23.00
H0104B	Conference/meeting room: 10 person	20.00
H0336B	Library, study room: 10 person	30.00
H0339B	Library, study room: 5 person	20.00
H0517B	Seminar, training room: 30 person	55.00
H1127B	Information centre: 5 person	15.00
H1313B	Group room: meeting: 16 places (including 1 wheelchair place) - HBN 00-03	32.00
H1335B	Group room: meeting: 7 places (including 1 wheelchair place) - HBN 00-03	16.00
J0212B	Reception: 3 staff	13.00
J0415B	Reception and records office: 4 staff	18.00
J0420B	Reception and office: 4 staff	27.00
J0609B	Reception, administration office and communication base: 2 staff	13.00
	No room layout	
J0611B	Reception and office: 4 staff	20.00
J1126B	Waiting area: 50 person including 4 wheelchair user	81.00
J1152B	Waiting area: 20 places (including 2 wheelchair places) - HBN 00-03	33.00
J1311B	Waiting area: 3 person	4.50
J1410B	Waiting play area: 10 children	18.00
K0107B	UPS room/data computer hub room	9.00
K0109B	Battery, UPS room	9.00
K0901B	Machine room: technician equipment room	16.00
	No room layout	
K1002B	Security room: CCTV control	16.00
	No room layout	
L0508B	Blood bank: out-of-hours bay	5.00
	No room layout	
L1305B	Near patient testing/status laboratory	8.50
L1612B	Body viewing/bier room	10.00
M0114B	Office records: 2 staff	14.00

ADB	List of Rooms	12/3/2010
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Project:	SG01GI	South Glasgow v01 gi
Department:	003	BATCH 3, 4

Code	Description	Area (m²)
M0228B	Office: 10 staff	43.50
M0326B	Office technical and data review	12.00
M0330B	Office/meeting room: 10 places (including 2 workstations) - HBN 00-03	16.00
M0530B	Office: station officer	11.00
	Ambulance stations	
M0604B	Office and rest: 1 staff, 5 person rest area	15.00
M0606B	Office and rest: 1 staff, 6 person rest area (voluntary workers)	14.00
M0724B	Interview room: 4 places (including 1 wheelchair place) - HBN 00-03	8.00
M1015B	Office: 5 staff	30.00
M1026B	Office: 2 staff	15.00
	Safe, cash point hatch	
M1707B	Duty room: 2 porters	5.00
P0625B	Pantry/refreshment area - HBN 00-03	8.00
P0627B	Ward pantry - HBN 04-01	12.00
P0802B	Refreshment area: snack bar, servery and preparation	23.00
P0811B	Drinking water dispenser - HBN 00-03	0.50
T0211B	Staff communication base: 2 places - HBN 00-03	11.00
V0546B	Staff changing room: 60 places	30.00
	Slimline lockers, coat rail, shoe rack	
V0626B	Locker bay: 4 small lockers	0.50
V0628B	Locker bay: staff/patients	2.00
V0653B	Locker bay: 12 small lockers - HBN 00-03	1.50
V1131B	Nappy changing room - HBN 00-02	5.00
V1631B	Shower room: independent wheelchair - HBN 00-02	7.00
W0254B	Store: satellite pharmacy	6.00
	Surgical procedure	
W0532B	Store: sterile supplies	9.00
W1210B	Store: exercise equipment, activity area	6.00
W1215B	Store: exercise equipment, therapy treatment cubicles	6.00
W1303B	Store: major incident equipment	6.00
W1313B	Store: ready to use medical gas cylinders	9.00
X0222B	Treatment cubicles: Physiotherapy, 10 patients	100.00
X0240B	Major treatment/minor surgery room	17.50
	With resuscitation trolley	
X0312B	Activity area: Physiotherapy, 5 patients	50.00
X0318B	Activity area/gymnasium: Physiotherapy, 15 patients	100.00
Z0809B	Preparation and store: Radiopharmaceuticals	20.00
	No room layout	

ADB	List of Rooms	12/3/2010
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Project:	SG01GI	South Glasgow v01 gi
Department:	004	BATCH 5, 6, 7

Code	Description	Area (m ²)
B0607A	Multi-bed room: Day care, 4 beds	40.00
B0616A	Multi-bed room: Cardiac day care, 4 beds	66.00
C0505A	Examination room: hearing assessment, visual testing, Neonatal	9.50
C0510A	Assessment room with visual acuity facility, child	12.50
C0701A	Investigation room: stress electrocardiography (ECG)	12.00
C0706A	Investigation room: resting electrocardiography (ECG) bed access All-round couch access	16.00
C0709A	Investigation room: tilt electrocardiography (ECG)	16.00
C1011A	Consulting, examination bay: Ophthalmology	13.00
C1104A	Training room, office: Peritoneal Dialysis (PD)	16.50
C1402A	Physical measurement area: Renal	8.00
D0114A	Recreation room: 20 staff	44.50
D0455A	Rest, dining room with beverage, snack preparation bay: 30 staff With emergency call lamp	43.00
D0815A	Playroom: 10 children	30.00
D1135A	Discharge lounge: patients, visitors	54.00
D1504A	On-call overnight stay room	13.00
E0141A	Imaging room: Mammography No room layout	15.00
E0305A	Imaging room: remote fluoroscopy, barium No room layout	39.00
E0311A	Imaging room: fluoroscopy, vascular, angiography No room layout	45.00
E0527A	Processing, viewing room: serving 2 imaging rooms Computed Radiography unit (CR) No room layout	21.00
E0531A	Reporting room: 1 workstation PACS No room layout	10.00
E0536A	Imaging review room: 2 workstations No room layout	12.00
E0538A	Imaging review room: 4 workstations No room layout	16.00
E0608A	Control room: serving 2 CT rooms No room layout	24.00
E0713A	Imaging room: Gamma Camera multi detector with stress facility Radionuclide	36.00
E0714A	Imaging room: Gamma Camera multi detector SPECT Radionuclide	36.00
E0802A	Technical equipment room: serving MRI close bore	20.00
F0308A	Servery serving central dining room	10.00
F0310A	Servery serving cafe	14.00
F0410A	Cafe area: 20 places	35.00
F0612A	Restaurant: 60 places With emergency call. Central dining room	89.50
G0101A	Parking bay: mobile 2 x-ray units	5.00
G0114A	Parking bay: 2 patient trolleys, 8 wheelchairs	10.50
G0130A	Parking bay: 3 wheelchairs	2.00
G0132A	Parking bay: 1 patient trolley, 4 wheelchairs	5.00
G0143A	Parking bay: mobile x-ray, image intensifier, ultrasound unit	8.00
G0149A	Parking bay: equipment, general	5.00
G0180A	Parking bay - HBN 00-03	2.00
G0512A	Equipment service room lobby Maternity	6.00

ADB	List of Rooms	12/3/2010
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Project:	SG01GI	South Glasgow v01 gi
Department:	004	BATCH 5, 6, 7

Code	Description	Area (m ²)
G0514A	Renal dialysis workshop lobby: equipment ready for use	6.00
	Satellite dialysis	
G0705A	Public telephone: single booth, accessible	2.00
G0710A	Telephone booth	1.50
G0712A	Telephone booth: wheelchair accessible	2.00
H0513A	Seminar, training room: 20 person	37.50
H0520A	Seminar room: 15 person	27.50
H1102A	Group support room: 20 person	40.00
	Multi-purpose use	
H1127A	Information centre: 5 person	15.00
J0102A	Entrance lobby	4.00
	Neonatal unit	
J0107A	Main entrance draught lobby	11.00
J0108A	Main entrance draught lobby	20.00
J0115A	Concourse/Foyer	40.00
J0206A	Reception: 2 staff	10.00
J0207A	Reception: 3 staff	14.50
	Including 2 case-notes trolleys	
J0232A	Reception: 2 person - HBN 00-03	11.00
J0413A	Reception and records office: 2 staff	11.00
J0420A	Reception and office: 4 staff	27.00
J0421A	Reception and office: 5 staff	33.00
J0422A	Reception and office: 6 staff	39.00
J1106A	Waiting area: 70 person including 5 wheelchair user	111.50
J1110A	Waiting area: 15 person including 2 wheelchair user	25.50
J1111A	Waiting area: 30 person including 3 wheelchair user	49.50
J1112A	Waiting area: 40 person including 4 wheelchair user	66.00
J1123A	Waiting area: 45 person including 4 wheelchair user	73.50
J1231A	Waiting bay: 1 patient trolley/bed place	4.50
J1232A	Waiting bay: 2 patients trolley/bed place	8.50
K0116A	UPS room	4.00
	Uninterrupted Power Supply	
K0608A	Plant room: water treatment serving 18 dialysis stations	15.00
L0320A	Media preparation laboratory	10.50
	No room layout	
L0605A	Specialised laboratory: cell culture	31.50
	No room layout	
L0701A	Laboratory: TEM sample preparation	10.50
	No room layout	
L0810A	Biopsy assessment area: Histopathology	10.00
	No room layout	
L1803A	Service room: equipment	21.00
M0115A	Office: 3 staff	18.00
	2 additional chairs	
M0221A	Office: 1 staff, open plan	6.00
M0222A	Office: 1 staff, open plan	5.50
M0409A	Printer/photocopier room	8.00
M0606A	Office and rest: 1 staff, 6 person rest area (voluntary workers)	14.00
M0713A	Interview/meeting room: 6 person	14.00
	Emergency call lamp	
M1033A	Office records and store: 1 staff	12.00
M1034A	Office records and store: 3 staff	34.50
M1713A	Duty room: 6 porters	10.00
P0606A	Pantry: cook-chill/hot trolleys, serving up to 24 person	12.00
	Emergency call lamp	

ADB	List of Rooms	12/3/2010
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Project:	SG01GI	South Glasgow v01 gi
Department:	004	BATCH 5, 6, 7

Code	Description	Area (m ²)
P0810A	Refreshment: drinking water dispenser	0.50
Q0122A	Activities of daily living: bedroom with living assessment Ceiling hoist	18.00
Q0123A	Activities of daily living: bath, shower, WC With hoists	13.00
Q0124A	Activities of daily living: bathroom With hoists	13.00
Q0507A	Light activity area: Occupational therapy, 10 patients LHRC	41.00
R1041A	Inspection, assembly, packing (IAP) room: 2 workstations Served 2 single washer/disinfectors No room layout	54.00
R1047A	Inspection, assembly, packing (IAP) room: 30 workstations with automated handling system Served 7 multi chamber washer/disinfectors, automated handling system No room layout	254.00
S0062A	Special room: distressed/disturbed patient	11.00
T0126A	Staff base and clean utility bay: 2 staff With controlled drugs cupboard. Recovery pre-discharge No room layout	11.00
T0211A	Staff communication base: 2 places - HBN 00-03	11.00
T0316A	Supplies base	10.00
T0516A	Clean utility: barium preparation	5.50
T0528A	Preparation room	20.00
V0218A	Staff changing room including boot change: 40 places Lockers, coat rail, racks No room layout	30.00
V0409A	Staff changing room with cubicle and handwash, 10 places Slimline lockers, shoe lockers, coat rail	14.00
V0410A	Staff changing room with cubicle and handwash, 20 places Slimline lockers, shoe lockers, coat rail	18.00
V0411A	Staff changing room with cubicle and handwash, 30 places Slimline lockers, shoe lockers, coat rail	20.00
V0417A	Staff changing room with handwash, 10 places Lockers	11.50
V0510A	Staff changing room: 5 places	5.00
V0527A	Staff changing room: 10 places Slimline lockers, coat rail	8.00
V0532A	Staff changing room: 10 places Slimline lockers, coat rail, shoe rack	8.00
V0536A	Staff changing room: 20 places Slimline lockers, coat rail, shoe rack	11.50
V0546A	Staff changing room: 60 places Slimline lockers, coat rail, shoe rack	30.00
V0554A	Staff communal changing room: 20 lockers - HBN 00-02	20.00
V0702A	Patient changing room: wheelchair accessible, 1 person 2 door access	6.00
V0723A	Patient changing room: 15 places Slimline lockers, coat rail	15.00
V0922A	WC: independent wheelchair - HBN 00-02	4.50
V0923A	WC: independent wheelchair/semi-ambulant - HBN 00-02	5.50
V1010A	WC: ambulant - HBN 00-02	2.00
V1321A	Shower room: ambulant - HBN 00-02	2.50
V1638A	Shower room: trolley access - HBN 00-02	13.00
V1727A	Bathroom with bidet: semi-ambulant - HBN 00-02	7.50

ADB	List of Rooms	12/3/2010
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Project:	SG01GI	South Glasgow v01 gi
Department:	004	BATCH 5, 6, 7

Code	Description	Area (m ²)
W0108A	Store: equipment, local to theatre	1.00
W0113A	Store: clinical equipment	39.00
W0115A	Store: bulk supplies	80.00
W0116A	Store: bulk supplies	100.00
W0118A	Store: Clean flexible endoscopes	6.00
W0120A	Store: catheters and sterile packs	12.00
W0121A	Store: catheters and sterile packs	6.00
W0127A	Store: perfusion equipment, supplies	24.00
W0214A	Goods reception and unpacking area	18.00
	Pharmacy support services, Purchase & distribution	
W0220A	Store: general	100.50
	Pharmacy support services, Purchase and distribution	
W0235A	Store: finished products, sterile	88.50
	Pharmacy support services	
W0247A	Store: unlicensed drugs	9.00
W0534A	Store: sterile supplies	15.00
W0650A	Blood bank refrigerator bay	3.00
W0704A	Store: general and linen	3.00
W1123A	Store: bulk supplies, medical and surgical	18.00
W1127A	Store: equipment and renal consumables	15.00
W1132A	Store: furniture, equipment and disposables	36.00
W1212A	Store: materials and equipment	9.00
	Occupational therapy	
W1236A	Store: orthotics supply and fitting	25.00
W1310A	Store: splint, crutch	2.00
W1321A	Store: equipment and supplies	36.00
W1424A	Store: equipment	18.00
W1428A	Store: linen and clothing back-up	9.00
W1453A	Store: clinical equipment	48.00
W1510A	Store: stationery and document	11.00
W1514A	Store: plaster equipment	6.00
W1519A	Store: ambulance equipment	6.00
W1587A	Store: general	6.00
W1591A	Store: linen	3.00
X0102A	Treatment room: Physiotherapy UVL, 1 patient	12.00
X0113A	Treatment room: Physiotherapy, 1 patient	12.00
X0210A	Treatment room: chiropody/podiatry, 1 patient	15.00
X0215A	Treatment room: Ophthalmology, laser	15.50
X0219A	Treatment room: Urodynamic	22.50
X0221A	Treatment room: Endoscopy	22.00
X0224A	Preparation and splint fitting room: 1 patient	19.00
X0238A	Resuscitation room: 5 places	143.00
X0244A	Treatment room: A&E, head and neck	16.00
X0245A	Treatment room: A&E, gynaecology/genitourinary colposcopy	16.00
X0250A	Treatment cubicle: dialysis, 1 patient	10.00
	With reclining chair	
X0251A	Treatment cubicle: dialysis, 1 patient	10.50
	With bed	
X0255A	Treatment room: Continuous ambulatory peritoneal dialysis, 1 patient	16.50
X0313A	Activity area: Physiotherapy, 10 patients	80.00
X0319A	Activity area/gymnasium: Physiotherapy, 20 patients	120.00
X1012A	Control area: serving catheter laboratory	16.00
	No room layout	

ADB	List of Rooms	12/3/2010
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Project:	SG01GI	South Glasgow v01 gi
Department:	004	BATCH 5, 6, 7

Code	Description	Area (m ²)
X1020A	Minor cardiac procedures room With resuscitation trolley Room layout in preparation	28.00
X1026A	Control room: serving neuroangiography No room layout	16.00
X1805A	Ante-room preparation and simulator Radiotherapy No room layout	16.50
X1807A	Control room serving CT simulator room No room layout	20.00
Y0302A	Dirty utility: bedpan disposal, urine test With 1 sani chair	12.00
Y0311A	Dirty utility: bedpan disposal, urine test With pass-through hatch. With suction bottle washer/disinfector, A&E	12.00
Y0405A	Dirty utility	6.00
Y0411A	Dirty utility: urine test With pass-through hatch	12.00
Y0418A	Cleansing, disinfection and store: endoscope, suction bottle, autoclave	19.00

ADB	List of Rooms	12/3/2010
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Project:	SG01GI	South Glasgow v01 gi
Department:	005	BATCH 8, 9, 10

Code	Description	Area (m ²)
B1811C	Single bedroom: Children/young people day care	14.50
B2406C	Recovery room: ECT, 6 trolleys	33.50
B2409C	Recovery room: post-anaesthetic, 4 places	38.50
C0107C	Consulting, interview room: Mental Illness	10.50
C0222C	Consulting, examination: with echocardiograph	16.50
	All-round couch access	
C0230C	Consulting/examination room: multidisciplinary	20.00
C0513C	Examination room: vestibular test	17.00
C0704C	Investigation room: resting electrocardiography (ECG)	10.00
C0711C	Investigation room: echocardiography	16.50
	All-round couch access	
C0904C	Consulting, treatment room: Dental	18.00
	With dental tube X-ray Dental surgery	
C1025C	Photography room: fluorescein angiography	23.50
	Ophthalmic	
C1401C	Physical measurement bay	3.50
D0201C	Rest room with beverage, snack preparation bay: 10 staff	18.00
	With 10 small lockers	
D0205C	Rest room with beverage, snack preparation bay: 5 staff	11.00
D0206C	Rest room with beverage, snack preparation bay: 10 staff	18.00
D0407C	Rest, dining room: 35 staff	46.00
	With emergency call lamp	
D0607C	Dining room: 15 patients	20.00
D0612C	Dining room: 20 patients	27.00
	Older people	
D0815C	Playroom: 10 children	30.00
D1116C	Lounge with beverage area: 10 patients	20.00
	Vending machines	
D1133C	Discharge lounge: 8 places	20.00
	No room layout	
D1310C	Relatives overnight stay - HBN 00-03	12.00
D1402C	Sitting room: 15 visitors	20.00
D1405C	Sitting room: 5 relatives	10.00
E0120C	Imaging room: Ultrasound, interventional	27.00
E0136C	Image control/reporting room	7.00
E0151C	Imaging room: Bone Mineral Densitometry (BMD)	18.00
E0206C	Darkroom: processing, viewing area, 2 processors	12.00
	Bench top	
	No room layout	
E0312C	Control room: serving fluoroscopy	16.00
	No room layout	
E0501C	Imaging reporting room: 2 workstations	16.00
	No room layout	
E0523C	Daylight processing, viewing area	5.00
	Small format film	
E0529C	Processing, viewing room: serving 3/4 imaging rooms	40.00
	Computed Radiography unit (CR)	
	No room layout	
E0534C	Reporting room: 4 workstations	16.00
	PACS	
	No room layout	
E0702C	Waiting 'hot' room: post-injection, 7 patients	25.00
	Radionuclide	
E0811C	Control room: serving 2 MRI rooms	24.00
	No room layout	

ADB	List of Rooms	12/3/2010
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Project:	SG01GI	South Glasgow v01 gi
Department:	005	BATCH 8, 9, 10

Code	Description	Area (m ²)
E0817C	Control room: serving open MRI Room layout in preparation	16.00
G0104C	Parking bay: resuscitation trolley and cylinder trolley	2.00
G0108C	Parking bay: shopping, prams, pushchairs	6.00
G0125C	Lead aprons bay	0.50
G0133C	Parking bay: 2 patient trolleys, 4 wheelchairs	5.00
G0139C	Parking bay: ultrasound unit	1.00
G0826C	Dispenser bay: car park ticket	10.00
G0905C	Ambulance parking bay	0.00
H0514C	Seminar, training room: 10 person	20.00
H0516C	Seminar, training room: 25 person	45.50
H1130C	Information centre with beverage bay: 5 person	18.00
J0130C	Entrance lobby: controlled access	0.00
J0135C	Foyer: visitors	0.00
J0152C	Main entrance foyer	0.00
J0221C	Enquiry/information desk: 1 staff	4.00
J0419C	Reception/staff base: 4 staff including case-notes trolleys Maternity	17.50
J0610C	Reception, administration office and communication base: 4 staff	24.00
J1106C	Waiting area: 70 person including 5 wheelchair user	111.50
J1206C	Waiting area: 3 person including 1 wheelchair user	6.00
J1224C	Waiting, transfer, parking area: MRI trolley, 2 MRI wheelchairs	5.00
J1233C	Waiting bay: 3 patients trolley/bed place	13.00
J1304C	Waiting room: relatives, visitors, 5 person	11.00
J1403C	Waiting play area: 5 children	13.00
J1410C	Waiting play area: 10 children	18.00
J1415C	Creche facilities	24.00
J1422C	Waiting play area: 5 young people	13.00
K0101AC	Switchgear cupboard	2.00
K0101C	Switchgear room	4.00
K0303C	Maintenance: workshop Radiology	11.00
K0336C	Workshop: prosthetics repairs, adjustment Orthotics	24.00
K0378C	Workshop: renal dialysis equipment Wet, dry area	12.00
K0906C	Modified room layout in preparation Service room: generator and image computer equipment Angiography No room layout	16.00
L0315C	Laboratory: primary analysis: 3 workstations - HBN 12-01A	16.00
L1205C	Specialised laboratory: Dental processing With daylight processor	13.00
L1308C	Near patient testing room - HBN 00-03	8.00
L1602C	Medical observation area, 6 - 8 person Mortuary	8.00
L1806C	Workshop: hearing aid repair	8.00
M0306C	Office: medical reporting, 1 staff Surgeon	10.50
M0307C	Office: medical reporting, 2 staff	13.50
M0410C	Photocopying/printing room	6.00
M0709C	Interview/counselling/advisory room: 4 person 2 door access	9.00
M1017C	Office and reception: 2 staff With observation panel	16.50

ADB	List of Rooms	12/3/2010
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Project:	SG01GI	South Glasgow v01 gi
Department:	005	BATCH 8, 9, 10

Code	Description	Area (m ²)
N0111C	Operating theatre with ultra clean ventilation canopy (UCV) Cardiac/Cardiothoracic Room layout in preparation	63.00
P0703C	Beverage, snack preparation bay	6.00
P1005C	Store: human milk bank and feeds preparation	9.00
Q0114C	Activities of daily living: kitchen With staff emergency call. Mental Illness	20.00
Q0120C	Activities of daily living: kitchen	22.00
Q0504C	Light activity area: Occupational therapy, 10 patients Rehabilitation	70.00
Q0508C	General activities area: Occupational therapy/recreational With staff emergency call	15.00
Q0519C	Hydrotherapy pool hall	92.50
Q0521C	Hydrotherapy: laundry, utility room	10.00
S0029C	Sitting and body viewing room with beverage bay: 8 person	16.00
T0202C	Staff communication base, enclosed: 2 staff	11.00
T0203C	Staff communication base, enclosed: 3 staff	15.00
T0513C	Clean utility with blood bank	17.00
T0540C	Medicine store/preparation room - HBN 00-03	8.00
V0218C	Staff changing room including boot change: 40 places Lockers, coat rail, racks No room layout	30.00
V0416C	Staff changing room with handwash, 5 places 2 door access. Lockers	8.50
V0419C	Staff changing room with handwash, 20 places Lockers, coat rail	18.00
V0515C	Staff changing room: 50 places	25.00
V0517C	Staff changing room: 30 places	16.00
V0530C	Staff changing room: 5 places Slimline lockers, coat rail, shoe rack	5.50
V0706C	Patient changing cubicles: 6 places 1 cubicle ambulant, 1 cubicle wheelchair accessible, 6 lockers	11.00
V0716C	Patient changing cubicle: ambulant person 2 door access	2.50
V0726C	Changing room: independent wheelchair - HBN 00-02	4.50
V0922C	WC: independent wheelchair - HBN 00-02	4.50
V1115C	Nappy change room with WC, hand rinse and wash, single-sided table access Child/adult wheelchair accessible	9.00
V1715C	Bath, WC and wash: en-suite, wheelchair accessible Domestic type, with unbreakable mirror	7.00
V1726C	Bathroom: semi-ambulant - HBN 00-02	6.00
V1917C	Shower, WC and wash: en-suite, wheelchair accessible, radiation protective No room layout	8.00
W0118C	Store: Clean flexible endoscopes	6.00
W0122C	Store: catheters and sterile packs	9.00
W0128C	Store: bulk supplies No room layout	20.00
W0129C	Store: bulk supplies No room layout	30.00
W0608C	Store: sealed radioactive source Medical Physics No room layout	6.00
W0613C	Store: study casts/records - HBN 12-01B	22.00
W0655C	External store: gas cylinders	0.00
W1150C	Store: bulk fluid	0.00

ADB	List of Rooms	12/3/2010
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Project:	SG01GI	South Glasgow v01 gi
Department:	005	BATCH 8, 9, 10

Code	Description	Area (m ²)
W1227C	Store: equipment, hydrotherapy pool and cleaning Modified room layout in preparation	7.00
W1408C	Store: clothing back-up	6.00
W1429C	Store: furniture	20.00
W1461C	Store: patients clothing	4.00
W1507C	Store: stationery	3.00
W1516C	Store: clinical supplies	6.00
W1556C	Store: general and stationery	9.00
X0237C	Resuscitation room: 4 places	116.00
X0266C	Plaster room - HBN 00-03	16.00
X0705C	Observation and recording room: child assessment and therapy Assessment room	11.00
X1011C	Laboratory: catheter; biplane Room layout in preparation	50.00
X1501C	Chemotherapy treatment room: 1 patient	12.00
X2051C	Radiotherapy treatment room: unsealed radioactive source (Iodine bedroom and lobby). No room layout	28.00
Y0410C	Dirty utility: serving maternity theatre	10.00
Y0421C	Dirty utility: serving 2 theatres	14.00
Y0507C	Utility/laundry room	8.00
Z0605C	Laboratory workshop: Quality control Support services	10.00

Adult Hospital

Department: Critical Care User Group

Time: 9.00am - 12.30pm

Attendance Sheet

[illegible]

NEW SOUTH GLASGOW HOSPITALS & LABORATORY PROJECT DESIGN ACCEPTANCE PROCEDURE

Building:

Issued by:

Subject: Critical Care

Date issued:

Aspect for Review:

Date returned:

DESIGN REVIEW HISTORY

	Level of Approval	Approval Date	Remarks
Design Review 1			
Design Review 2	C		
Design Review 3			

BOARD RESPONSE

Level of Approval

Information referred to: _____

Detailed comment: _____

Approval Levels: A = No comment. B = Proceed to comments. C = Resubmit with amendments. D = Rejected.

BOARD ACCEPTANCE SIGN OFF

User Group Lead: _____ Date: 14/2/10

Design Manager: _____ Date: _____

Project Manager: _____ Date: 18/3/2010

DESIGN ACCEPTANCE FORM

ACTION POINTS

1. Retain 1 large staff lounge
2. Maximise use of natural light for staff lounge
3. Equipment service room to be 1 large room
4. Review locations of store rooms within whole department
5. Review location of relatives rooms ~~in~~ ^{adjacent staff lounge} line with general revision of staff support layout and spread through department
6. Increase size of 1 clean utility in ICU by deleting 1 assisted shower
7. Group small offices into management suite
8. Reconfigure clean utility and staff wc's
9. Swap staff resource and dirty utility
10. Move blood bank and pharmacy move to ~~periphery~~ ^{off-centre} of department
11. Incorporate "St Vincent" model for CCU

DESIGN ACCEPTANCE PROCEDURE FORM

ACTION POINTS

24th March 2010~~4th February 2010~~PICUTHEATRES

1. 4 Person Office to be swapped with 2 Person Office and to be relocated within clinical area.
2. Clinical Base Area to be created at riser, (at entrance to clinical area) with small Waiting Area and Staff Base – Interview Room and Waiting to be combined into 1 enclosed room.
3. Critical Care Bed Area at entrance to be redesigned to have 2 rooms opposite the other 2 rooms (remaining small corridor, as per architect's drawing).
4. Architect to redesign groups of 4 bed bays to remove through route between clusters, as per notes on drawing, with a Staff Base serving 2 clusters.
5. Lobbies from 2 Isolation Rooms to be reallocated to the Central Staff Base. This leaves 4 Isolation Rooms with lobbies and 2 Single Bedrooms.
6. 4 Bed Clusters to be drawn as enclosed spaces with no solid/glazed partitions between beds (i.e. 4 bed bay).
7. X-Ray Room to be relocated.
8. Support Accommodation to be split between the 2 clusters.
9. Medicine Management and Status Lab to be located between the 2 clusters.
10. Relative Interview Room, next to Staff Rest, to be relocated between the clusters.
11. Milk Store to be relocated to a more central location.
12. ECMO Room to be co-located with Equipment Service room.
13. Seminar Room to be relocated next to Staff Rest/Dining.
14. Staff Office and Restroom not to be located next to main corridor.

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15. Theatre and PICU Equipment Service Rooms to be merged to create one room adjacent to the atrium void and corridor. Area is required to create a drop-off area in Theatres (8m²).

16. ECMO Room to be renamed ECLS/Haemo-filtration.

17. Touchdown Bays to be located at the end of 4 Bed Bays.

- Two Person Office to be relocated within the clinical area. Location of sleep studies bed to be discussed with user group
- Separate patient flows between pre-op assessment and theatre receiving and also post-op patients
- Day surgery patients can use same entrance as pre-op assessment
- Co-locate patients with pre-med and in-patients in holding area separate from day surgery patients include isolation facilities
- Separate AODSO surgery patient entrance from in-patients
- Identify theatres for use as out of hours emergency use. The second cardiac theatre is suitable for emergency general everyday and with one other theatre use for CPOD surgery
- Make maximum use of natural light where available
- Parent flows back from anaesthetic to waiting to be reviewed preventing route through first stage recovery
- Staff rooms moved away from play and adolescent areas
- User group to form 3 sub-groups for pre-meeting discussion
- Locate recovery more centrally
- Second cardiac theatre to be renamed general surgery
- 23 hour unit re-labelled as 23 hour/general surgery. Comments from group to be sent to Mairi for onward transmission to Nightingales and Tribal as one was available to speak to design.

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New South Glasgow Adult Hospital Project
User Group Membership & Leads

User Group	Director	Group Members Group Leads are shown in bold	DATE OF 1st MEETING			DATE OF 2nd MEETING			DATE OF 3rd MEETING		
			Day	Date	Time Allowed	Day	Date	Time Allowed	Day	Date	Time Allowed
Generic Wards	Rory Farrelly	John Stuart, Fiona McCluskey, Morag Busby, Brenda Byrom, Colin Cuthbertson, Gill Donnelly, Catherine Nivison, Linda Robertson, Maureen White, Rob Boulton-Jones, Sophia (Theresa) Boyle, Audrey Thompson	Wednesday	20th Jan	9.00am - 12.30pm	Monday	08 March 2010	2.30pm - 5.00pm Lecture Theatre, Neuro Building, SGH	Tuesday	20 April 2010	9.00am - 12.30pm Jubilee Court
Stroke		JohnStuart, Janice Elliott, Pamela Joannidis	Wednesday	20th Jan	follow on from above	Monday	08 March 2010	11.00am - 1.00pm St Andrews House	Tuesday	20 April 2010	12.30pm - 2.00pm Jubilee Court
Rehab Outpatients and ADL Areas	Anne Harkness	Richard Hassell & Catherine Nivison	Wednesday	20th Jan	2.30pm start	Monday	08 March 2010	9.00am - 10.30am St Andrews House	Tuesday	20 April 2010	2.30pm - 4.00pm Jubilee Court
Renal Wards and Renal Dialysis	Jonathan Best	Julia Little, Isabel (Ippy) Brown, Stewart Campbell, Chris Deighan, Bill Fiskien, Marjorie Johns, Margaret McLucas	Thursday	21st Jan	12.30pm - 5.00pm	Wednesday	10 March 2010	9.00am - 1.00pm Jubilee Court	Thursday	22 April 2010	9.00am - 1.00pm Jubilee Court
Main Entrance & Public Areas (includes FM, spiritual care area, health promotion/information, discharge lounge, medical records)	Anne Harkness, Alex McIntyre	Elaine Burt, Claire Curtis, Dot Jardine, Michelle Kirkwood, Blair Robertson, Karen Connelly, Marilyn Horne, Dan Harley, Mairi Dick	Friday	22nd Jan	9.00am - 5.00pm	Tuesday	09 March 2010	9.30am - 12.30pm Training Room 1, Mgmt Annex, SGH	Wednesday	21 April 2010	9.00am - 11.00am Jubilee Court
Main Imaging Dept	Aileen MacLennan	Aileen MacLennan, Andy Brennan, Barrie Condon, John Foster, Mike Gronski, Winnie Miller, Cathy Muir, Iain Robertson, Lynn Ross, Stuart Sloss	Monday	25th Jan	9.00am - 5.00pm	Monday	15 March 2010	9.00am - 5.00pm Jubilee Court	Tuesday	27 April 2010	9.00am - 5.00pm Conf Room, Clock Tower, SGH
Dermatology	Grant Archibald	Melanie McColgan, Stewart Kyle, Joyce Leman, Heather McVey, Susan Holmes, David Bilsland, Felicity Campbell, Angela Drummond, Lorraine McGrath, Claire Fitzsimons	Tuesday	23rd Feb	5.30pm start @ Project Office, St Andrews House	Monday	29 March 2010	5pm start St Andrews House	Friday	07 May 2010	1.30pm - 4.00pm Jubilee Court
General Outpatients	Jim Crombie	Ann Wilson, Janis Hughes, Karen Loudon, June Ramsay, Barry Sillers, Diane Wink (Morag Busby), Laura Young, Marilyn Horne, Mairi Dick, Heather McVey	Tuesday	26th Jan	12.30pm - 5.00pm	Thursday	11 March 2010	9.00am - 12.00pm Jubilee Court	Friday	23 April 2010	9.00am - Noon Jubilee Court
Theatres	Jim Crombie	Jacquie Campbell, John Crawford, Ann Malloy, Nick Pace, Barry Sillers, David Simpson, Ann Traquair Smith, Grant Urquhart, George Welch, David Sutton, Audrey Thompson, Andy Brennan	Wednesday	27th Jan	12.30pm - 5.00pm	Thursday	11 March 2010	1.30pm - 5.00pm Jubilee Court	Friday	23 April 2010	1.30pm - 5.00pm Jubilee Court
Acute Assessment Unit (AAU)	Grant Archibald, Jim Crombie, Aileen MacLennan, Anne Harkness, Jonathan Best	Ann Wilson, Debbie, Ambridge, Tracey Baird, Kate Benson, Michelle Boyd, Angela Campbell, Cameron Howie, Marjorie Johns, Greg Jones, Graeme MacPhee, Karen McKay, Heather McVey, Lesley Meikle, Scott Muir, Jacqueline Nicol, David Raeside, Ann Ross, Barry Sillers, Wesley Stuart, Matthew Walters, Ed Spilg, Aileen MacLennan, Iain Robertson, Mike Gronski, Winnie Miller, Lynn Ross, Cathy Muir, Marilyn Horne, Mairi Dick, Joyce Brown, David Stewart	Friday	29th Jan	9.00am - 3.00pm	Friday	12 March 2010	9.00am - 3.00pm QMH Lecture Theatre	Monday	26 April 2010	9.00am - 1.00pm QMH Lecture Theatre
Medical Day Unit	Grant Archibald	Cath McFarlane, Rob Boulton-Jones, Susan Fraser, Andrew Gallagher, Anice Gillespie, Robbie Lindsay, Heather McVey, Joseph Sarvesvaran, Harry Suzuki, Margaret Arnott	Monday	1st Feb	9.00am - 12.30pm	Tuesday	16 March 2010	9.00am - Noon Jubilee Court	Wednesday	28 April 2010	9.00am - Noon Jubilee Court

Critical Care	Jim Crombie, Grant Archibald	Jacquie Campbell , Sandy Binning, Michelle Boyd , Alan Davidson, Eleanor Deacon, Stephen Gallacher, Gregor Imrie, Andrew Kernohan, Marion MacDonald, Karen McKay, Heather McVey, Scott Muir, David Raeside, Barry Sillers, Iain Thomson, George Welch, Liz Thomson, David Sutton	Monday	1st Feb	1.00pm - 5.00pm	Friday	19 March 2010	9.00am - 12.30pm Jubilee Court	Thursday	22 April 2010	2.00pm - 4.30pm Jubilee Court
Emergency Department	Grant Archibald	Michelle Boyd , Jonny Gordon, Patrick Grant, Mhairi Lloyd, Heather McVey, Phil Munro, Gerry Wright, Mike Gronski, Cathy Muir, Mairi Dick, Marilyn Horne, Joyce Brown	Tuesday	2nd Feb	9.00am - 12.30pm	Thursday	18 March 2010	9.00am - 12.30pm Jubilee Court	Thursday	29 April 2010	1.30pm - 5.00pm Jubilee Court
CCU	Grant Archibald	Alan Hunter , Jacqueline Adams, Rosemary Brogan, Colin Berry, Heather McVey, David Murdoch, Liz Thomson	Tuesday	2nd Feb	2.00pm - 5.00pm	Wednesday	17 March 2010	9.00am - 12.30pm with Cardiac Outpatients & Rehab User Group Jubilee Court	Tuesday	04 May 2010	1.30pm - 5.00pm with Cardiac Outpatients & Rehab User Group Jubilee Court
Endoscopy	Jim Crombie, Grant Archibald	Ann Wilson , Kevin Blyth, Rob Boulton-Jones, Derek Gillen, Cath McFarlane , Rebecca Reid, Barry Sillers, Alan Stewart	Wednesday	3rd Feb	Noon - 3.00pm	Friday	19 March 2010	1.30am - 5.00pm Jubilee Court	Tuesday	04 May 2010	9.00am - Noon Jubilee Court
Urology	Jim Crombie	Ann Wilson , Graeme Conn, Michael Fraser, Frances McLinden, Barry Sillers, Grenville Oades, (Khurram Mir attending obo Graeme)	Wednesday	3rd Feb	3.30pm - 4.30pm	Thursday	18 March 2010	5.00pm St Andrews House	Wednesday	28 April 2010	1.30pm - 3.00pm Jubilee Court
Diabetes	Grant Archibald	Cath McFarlane , Stephen Gallacher, Andrew Gallagher, Anice Gillespie, Heather McVey	Wednesday	3rd Feb	5.00pm start	Friday	12 March 2010	3.30pm onwards St Andrews House	Thursday	22 April 2010	5pm start St Andrews House
Haemato-oncology	Jonathan Best	Gary Jenkins , Myra Campbell, David Dunlop, Marjorie Johns, Anne Parker, Sandy Sharp, Rosemary Twohig	Thursday	4th Feb	9.00am - 1.00pm	Thursday	25 March 2010	2.00pm - 5.00pm Jubilee Court	Friday	07 May 2010	9.00am - 12.30pm Jubilee Court
ENT	Jim Crombie	Susan Groom , Mary Cunningham, Barry Sillers, Fiona Rogan, Mary McEwan, Michelle Ward, Shona Monaghan, Trish McDonnell	Friday	5th Feb	8.30am - 10.00am	Wednesday	17 March 2010	2.30pm - 3.15pm Jubilee Court	Thursday	06 May 2010	11.00am - 11.45am Jubilee Court
Ophthalmology	Jim Crombie	Susan Groom , Mary Cunningham, Barry Sillers, Charles Diaper, Etta Cochrane, Fiona Rogan, Iain Bryce, John Murdoch, Jonathan Waugh, Jane Fielding, Rachel McKay, Sharon MacCormack, Trish McDonnell	Friday	5th Feb	10.15am - 11.45am	Wednesday	17 March 2010	3.30pm - 5.00pm Jubilee Court	Wednesday	28 April 2010	4.00pm - 5.30pm St Andrews House
Orthopaedics	Jim Crombie	Susan Groom , Mary Cunningham, Alan Smith, Barry Sillers, Diane Wink, Dominic Meek, Drew Shaw, Jason Roberts, Margaret Kerr, Mary Morrison	Friday	5th Feb	Noon - 1.30pm	Wednesday	17 March 2010	1.30pm - 2.30pm Jubilee Court	Thursday	06 May 2010	Noon - 1.00pm Jubilee Court
Cardiology Outpatients & Rehab	Grant Archibald	Alan Hunter , Rosemary Brogan, Margaret Gray, Heather McVey, David Murdoch, Lynne Scott	Friday	5th Feb	2.15am - 3.45pm	Wednesday	17 March 2010	9.00am - 12.30pm with CCU User Group Jubilee Court	Tuesday	04 May 2010	1.30pm - 5.00pm with CCU User Group Jubilee Court
Facilities Management - Decontamination (Adult & Children shared)	Alex McIntyre	Mary Anne Kane , Alan Stewart, Hugh McDerment, Karen Connelly, Ian Powrie, Heather Griffin, Mairi Macleod, Infection Control Advisor	Monday	8th Feb	9.00am - Noon	Monday	22 March 2010	9.00am - 5.00pm Jubilee Court	Wednesday	05 May 2010	9.00am -noon Jubilee Court
FM Facilities (Adult & Children)	Alex McIntyre	Mary Anne Kane , Mairi Macleod, Karen Connelly, Heather Griffin, David MacDonald, Infection Control Advisor	Tuesday	9th Feb	9.00am - 3.00pm	Monday	22 March 2010	9.00am - 5.00pm Jubilee Court	Wednesday	05 May 2010	9.00am - noon Jubilee Court - combined meeting with above group

PROJECT TEAM GROUP INVITED TO ALL MEETINGS - Heather Griffin (Project Manager), Stephen Gallacher (Clinical Lead), Fiona McCluskey (Nurse Advisor), Karen Connelly (FM), Frances Wrath (Capital/Estates), Infection Control Advisor + David Bower (Brookfield), Emma White (Nightingales)

NEW SOUTH GLASGOW HOSPITALS AND LABORATORY PROJECT**ACUTE SERVICES STRATEGY BOARD EXECUTIVE SUB-GROUP****Terms of Reference and Membership**Terms of Reference

- Exercise delegated authority to make decisions on project issues to maintain programme
- Exercise delegated authority to commit funding for new or additional works associated with project • Receive reports from Acute Directors and Project Director on changes being proposed with financial implications
- Keep Acute Services Strategy Board informed of all issues and decisions taken regarding the project
- This group has delegated authority in line with Boards SFI's which has an agreed delegated limit for the Acute Service Review Executive Board and the Project Manager.
- The Scheme of Delegation appropriate to this project is advised as follows - Project Manager approve expenditure up to £10,000 - Project Director approve expenditure up to £100,000 - Acute Services Strategy Board and Executive Sub-Group approve expenditure up to £1.5M - Performance Review Group approves expenditure over £1.5M

Membership

Robert Calderwood (Chair)	Chief Executive – NHS GG&C
Alan McCubbin	Head of Finance – Capital & Planning
Alan Seabourne	Project Director
Brian Cowan (as required)	Medical Director
Jane Grant	Chief Operating Officer
Peter Gallagher	Finance Director – Acute Services Division
Rosslyn Crocket (as required)	Board Nurse Director
In attendance:	Relevant Director

Frequency

The Acute Services Strategy Board Executive Sub-group will meet on a weekly basis.

New South Glasgow Hospitals (NSGH) Project

Adult Hospital

Clinical User Group Meeting: No. 3 (1:200 Stage 3)

Department: Haemato-oncology User Group

Date of Meeting: Friday 7th May, 2010

Time: 9.00am - 12.30pm

Attendance Sheet

[illegible]

NEW SOUTH GLASGOW HOSPITALS & LABORATORY PROJECT DESIGN ACCEPTANCE PROCEDURE

Building:	Issued by:
Subject: HAEMATO - ONCOLOGY	Date issued:
Aspect for Review:	Date returned:

DESIGN REVIEW HISTORY			
	Level of Approval	Approval Date	Remarks
Design Review 1			
Design Review 2			
Design Review 3		7/5/2010	

BOARD RESPONSE	
Level of Approval <input type="checkbox"/>	1:200 SIGN OFF
Information referred to:	(No action points)
Detailed comment:	
Approval Levels: A = No comment. B = Proceed to comments. C = Resubmit with amendments. D = Rejected.	

User Group Lead: <u>Hamish Stewart - General Manager</u>	Date: <u>07/05/10</u>
Design Manager: <u>[REDACTED]</u>	Date: <u>7/5/2010</u>
Project Manager: <u>[REDACTED]</u>	Date: <u>7/5/2010</u>
Infection Control Lead: <u>[REDACTED]</u>	Date: <u>7/5/2010</u>
FM Lead: <u>[REDACTED]</u>	Date: <u>7/5/2010</u>

From: [Anna Brown](#)
To: [Macleod, Mairi](#); [Hirst, Allyson](#)
Cc: [Emma White](#); [Bill McGaugie](#); [Gillian Kirkness](#); [David Bower](#); [Darren Smith](#); [Paul Britton](#); [John Young](#); [Steve Pardy](#); [Carla Queiroz](#); [David McLeish](#); [Jonathan Hendrick](#)
Subject: NSGH Childrens - Markedup Dwg & Post UGM3 Signoff Dwg for Schiehallion Ward
Date: 22 June 2010 17:53:51
Attachments: [NA-xx-02-PL-252-402_07.pdf](#)
[2010-05-17 NCH UGM3 Schiehallion 02 Markup.pdf](#)

Dear Mairi & Allyson,

For your record and distribution, please find attached the revised drawings for the Childrens Department following the sign off during **User Group Meetings 3** on 17/05/2010 for:

Childrens – Schiehallion Ward

NA-xx-02-PL-252-402_07.pdf

Please also find attached the marked up drawing for this department during the same 1:200 **User Group Meeting 3** for your record & distribution:

2010-05-17 NCH UGM3 Schiehallion 02 Markup.pdf

If you have any queries please don't hesitate to contact us.

Regards,

Anna Brown
NIGHTINGALE ASSOCIATES
87-91 Newman Street | London | W1T 3EY



W: www.nightingaleassociates.com

Nightingale Architects Ltd. Part of the IBI Group of firms. Registered office: 87-91 Newman Street, London W1T 3EY.
Company registered in England and Wales No.4440612

Notes:
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• Do not modify any element of this drawing.
• Use drawing only for purpose(s) issued.

Designer Identification of Hazard/Risk

KEY

NCH SCHIEHALLION WARD

NCH TEENAGER CANCER TRUST

NCH THEATRES - ANAESTHETIC DEPARTMENT FACILITIES

NCH DAY CASE UNIT

NCH SHARED FM SUPPORT

Rev	Date	Drw	Revision Notes	Chk	App
07	22/06/10	GO	Revised post UGM 3 for record	JH	X
06	10/05/10	GO	Sign-Off drawing	JH	X
05	06/05/10	GO	Day Case revised for User Group Meeting 3	JH	X
04	29/03/10	GO	Schiehallion Ward revised for User Group Meeting 3	JH	X
03	23/03/10	GO	Schiehallion Ward and Day Case revised for User Group Meeting 2	JH	X
02	21/03/10	GO	Schiehallion Ward and Day Case revised for User Group Meeting 2	JH	X
01	10/02/10	GO	Issued for User Group Meeting 1	JH	X



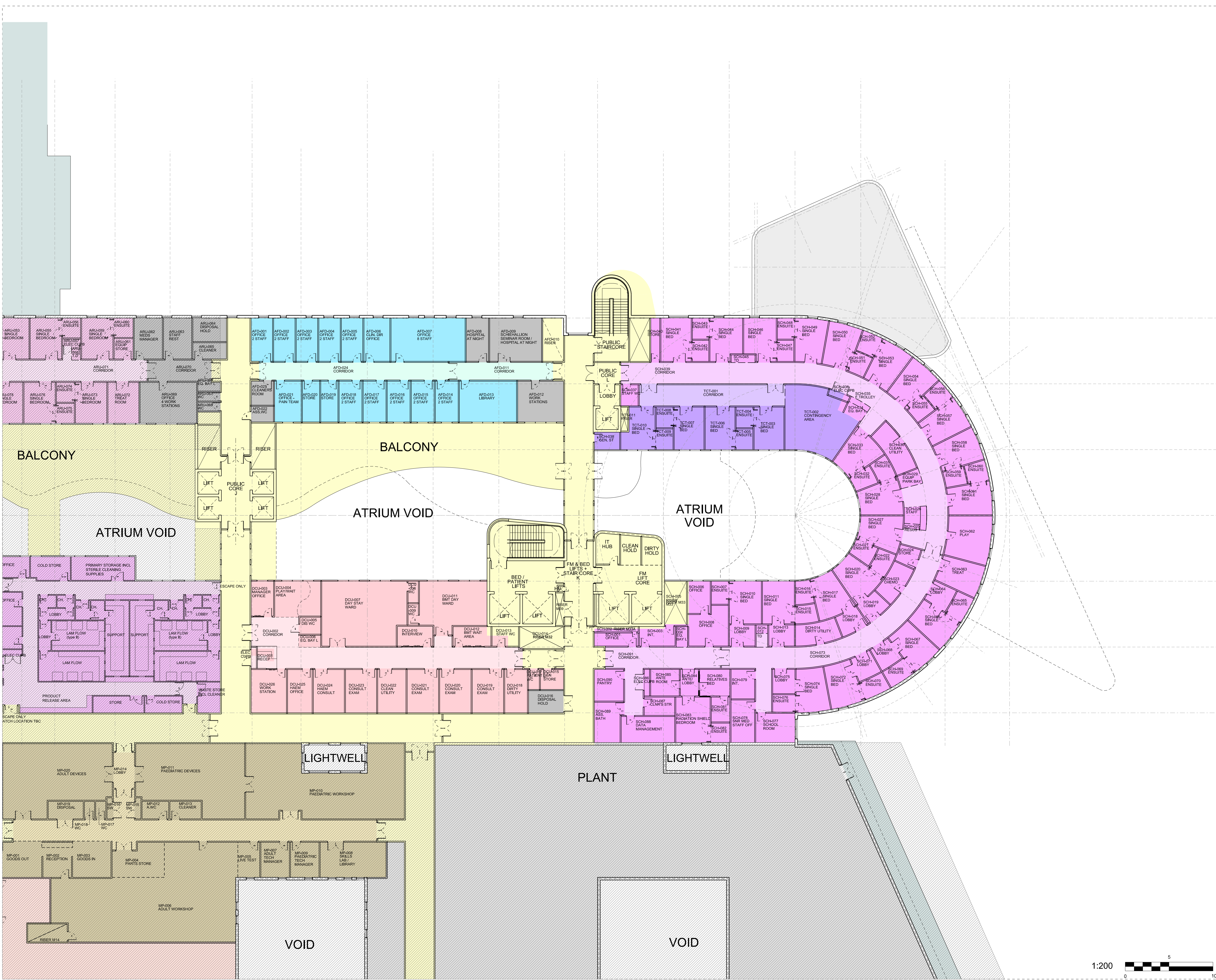
Client

Contractor

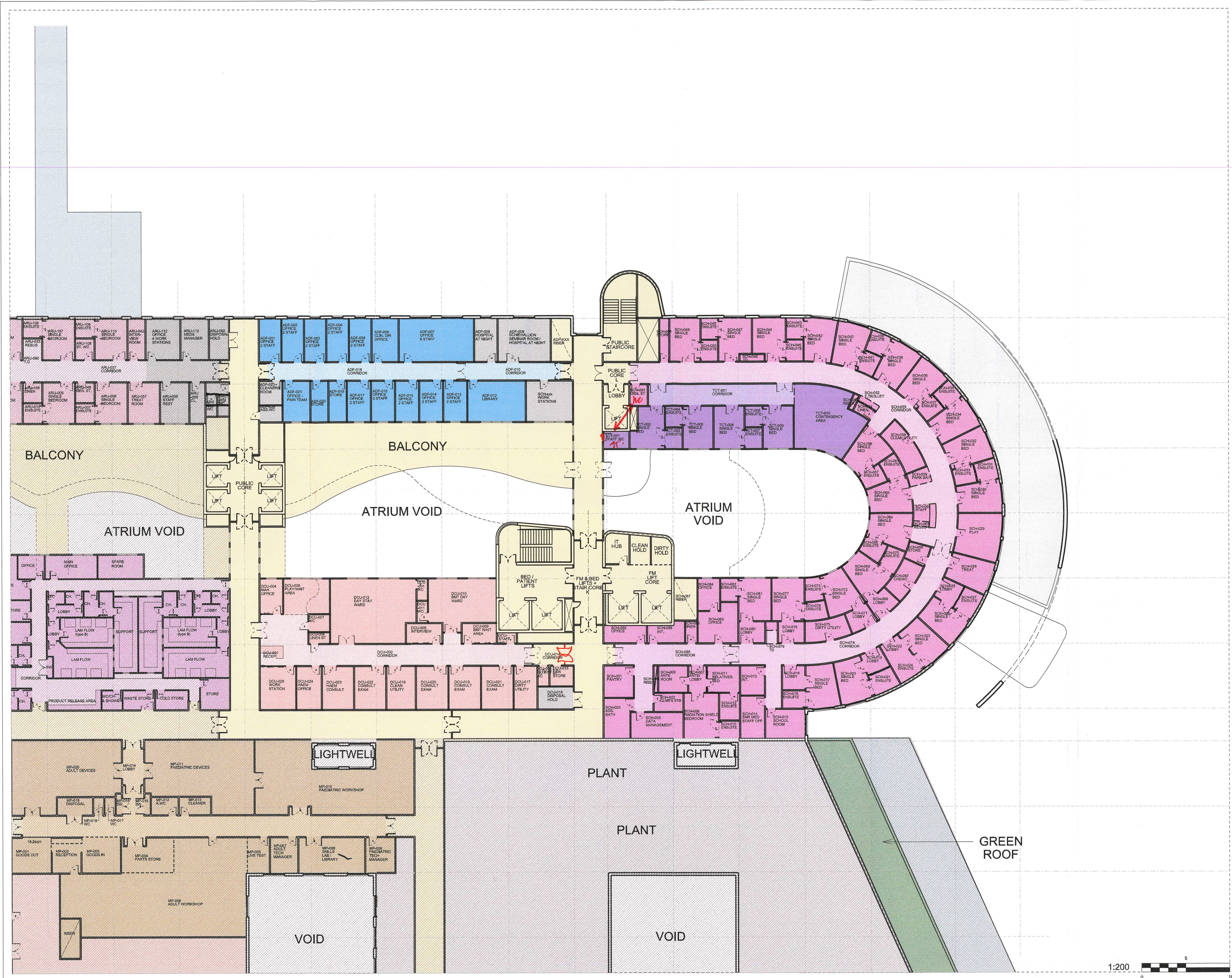
Brookfield

NIGHTINGALE architects
associates■■■■■
87-91 Newmarket Street
London
W1T 3EY
Tel: 0207 079 9900
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Project			
NEW SOUTH GLASGOW HOSPITALS (NSGH) PROJECT			
Drawing Title			
SECOND FLOOR PLAN NCH SCHIEHALLION WARD / DAY CASE UNIT / THEATRES AND ANAESTHETICS SERVICE OFFICES			
Job No	Drawn	Checked	Approved
09080	GO	JH	JH
Status	Date	Scale	Rev
Preliminary	02/09/09	A1 1:200	07
Drawing No			
Origin	Zone	Level	Type
NA	XX	02	PL
Content			
252 402			



1:200



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- Do not modify any element of this drawing.
- Use drawing only for purpose(s) issued.

Designer Identification of Hazard/Risk

KEY

	NCH SCHIEHALLION WARD
	NCH TEENAGER CANCER TRUST
	NCH THEATRES - ANAESTHETIC DEPARTMENT FACILITIES
	NCH DAY CASE UNIT
	NCH SHARED FM SUPPORT

Rev	Date	Drw	Revision Notes	Chk	App
06	10/05/10	GO	Day Case revised for User Group Meeting 3	JH	X
05	06/05/10	GO	Schiehallion Ward revised for User Group Meeting 3	JH	X
04	29/03/10	GO	Schiehallion Ward amended from comments of User Group Meeting 2	JH	X
03	23/03/10	GO	Schiehallion Ward and Day Case revised for User Group Meeting 2	JH	X
02	21/03/10	GO	Revised for User Group Meeting 2	JH	X
01	10/02/10	GO	Issued for User Group Meeting 1	JH	X

**NCH SCHIEHALLION
+ DAY CASE**
V4 M3 17.05.10

Client

NHS
Greater Glasgow and Clyde

Contractor

Brookfield

NIGHTINGALE architects
associates

87-91 Newman Street
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www.nightingaleassociates.com

Project

NEW SOUTH GLASGOW HOSPITALS
(NSGH) PROJECT

Drawing Title

SECOND FLOOR PLAN
NCH SCHIEHALLION WARD / DAY CASE UNIT /
THEATRES AND ANAESTHETICS
SERVICE OFFICES

Job No 09080	Drawn GO	Checked JH	Approved JH
Status Preliminary	Date 02/09/09	Scale A1 1:200	Rev 06
Drawing No NA 02	Zone XX	Level PL	Content 252 402

1:200

0 5 10

2

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2

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New South Glasgow Hospitals (NSGH) Project

Adult Hospital

Clinical User Group Meeting:

Department: Critical Care Users Group

Date of Meeting: 24th June, 2010

Time: 9:00am - 5:00pm

Attendance Sheet

[illegible]

Jacqui Campbell (present part) GM
Graham Harris Architect

Y50 MECHANICAL COMMISSIONING

EXECUTION

- The sub-contractor shall employ an independent commissioning engineer. The Commissioning Engineer shall be responsible for fully managing the commissioning process for the Electrical and Mechanical, Public Health, Medical Gases, Life Safety and communications Installations and shall carry out all necessary liaison with other Contractors and specialist installers and compile the operation and maintenance manuals. The sub-contractor shall Pressure test all systems to this specification, the SHTMs, TR/20 and the Institute of Hospital Engineers Guidance to Engineering Commissioning. The system shall not be insulated until pressure testing of the pipework is complete. The sub-contractor shall NOT use the system Pumps for flushing any of the pipework systems.
- The sub-contractor shall ensure that the system has adequate connections to enable the correct flushing of the systems.
- The sub-contractor shall ensure the system is in a suitable condition for flushing to commence. e.g. removal of control valves. Strainers and stool pieces to be in place.
- The building services systems shall be commissioned by the Commissioning Engineer to meet the objectives of Part L of the Building regulations.
- Commissioning shall be completed in accordance with CIBSE commissioning Codes, BSRIA guide 2/89.3 and SHTMs
- Remedial and defect work to the systems shall be completed and all polarity testing, phase sequence testing, loop impedance testing shall have been carried out before commissioning commences. The gas service shall be tested and commissioned to Scottish Gas regulations and SHTMs. All work shall be carried out by a suitable qualified Gas Engineer. Copies of the Engineers registration certificate shall be attached to the test certificates.
- The sub-contractor shall issue a commissioning programme to all parties for review Four weeks before the planed commencement of commissioning. this shall include a method statement.
- Progressive static testing will be witnessed by site Engineer(s). Sufficient notice of testing shall be afforded to the site Engineer to enable them to be present.
- Evidence will be required from the commissioning Engineer that all services have been commissioned and are operating correctly.
- Room cooling capacities shall be tested on a department by department basis by introduction of temporary heat loads to prove the system design capabilities.
- This shall be carried out as part of the contract works.
- The sub-contractor shall also carry out seasonal commissioning as detailed in BREEAM Guidance, to ensure full system performance i.e. Main cooling plant operation in the summer and heating plant in the winter. All Checks and measurements of commissioning records shall be recorded in writing by the commissioning engineer as commissioning proceeds, together with appropriate comments.

610 COMMISSIONING PROGRAMME

- Generally: Submit before commissioning commences.

ENGINEERING SERVICES
SPECIFICATION

New South Glasgow Hospitals

- Notice (minimum): To be agreed with the Contractor.
- Commissioning manager: Submit details.

615 PERFORMANCE TESTING PROGRAMME

- Generally: Submit before performance testing commences.
 - Notice (minimum): 1 week.
- Performance testing manager: Submit details.

COMPLETION

O& M documentation shall be issued at least three months before completion of any part of the contract.

The contents and format shall be agreed with the Contractor. . The document shall be issued as a hardcopy (5 No.) and on disc.

The documentation shall include for (5 No.) set's of record drawings and a disc containing same.

The drawings on the disc shall be saved in a In a format as specified by the Client.

The sub-contractor shall provide instruction to the clients engineers and maintenance staff in the safe operation of all systems and items of equipment for an adequate and reasonable period of time based on the Manufactures recommendations and best practice.

The sub-contractor shall provide adequate and qualified staff in order to carry out their maintenance and repairs during the defects liability period.

910 COMMISSIONING OF HOT AND COLD WATER SUPPLY SYSTEMS

- Commissioning: In accordance with BS 6700, BSRIA AG 2/89 and CIBSE Commissioning code W.
- Notice (minimum): 1 week.
- Equipment: Check and adjust operation of equipment, controls and safety devices.
- Outlets: Check operation of outlets for satisfactory rate of flow and temperature.

930 COMMISSIONING OF WATER HEATING SYSTEMS

- Commissioning: In accordance with BSRIA AG 2/89 and CIBSE Commissioning code W.
- Variable flow systems: In accordance with CIBSE Knowledge Services Commissioning variable flow pipework systems.
- Notice (minimum): 1 week.

940 COMMISSIONING OF BOILER PLANT

- Commissioning: In accordance with CIBSE Commissioning code B.
- Notice (minimum): 1 week.

950 COMMISSIONING OF CHILLED WATER SYSTEMS

- Commissioning: In accordance with BSRIA AG 2/89 and CIBSE Commissioning code W.
- Variable flow systems: In accordance with CIBSE Knowledge Services Commissioning variable flow pipework systems.
- Notice (minimum): 1 week.

ENGINEERING SERVICES
SPECIFICATION

New South Glasgow Hospitals

960 COMMISSIONING OF REFRIGERATING SYSTEMS

- Commissioning: In accordance with CIBSE Commissioning code R.
- Notice (minimum): 1 week.

970 COMMISSIONING OF AIR DISTRIBUTION SYSTEMS

- Commissioning: in accordance with BSRIA AG 3/89 and CIBSE Commissioning code A .
- Notice (minimum): 1 week .

980 COMMISSIONING OF CENTRAL CONTROLS AND BUILDING MANAGEMENT SYSTEMS

- Commissioning: In accordance with CIBSE Commissioning code C.
- Notice (minimum): 1 week.

985A PERFORMANCE TESTING

- General: Demonstrate the performance of the installations.
 - Guaranteed efficiency: Tolerances defined in this specification and schedules.
 - Environmental tests: Carry out environmental testing. If necessary, use artificial loads to simulate operating conditions.
 - Recorders: Supply and maintain portable seven day space temperature and relative humidity recorders, complete with charts.
 - Number of recorders: To be agreed with the Contractor.
- Reports: Submit.

990 INSPECTION AND TEST RECORDS

- Records for water systems: In accordance with BSRIA AG 2/89.
- Records for air systems: In accordance with BSRIA AG 3/89.
- Record sheets: Submit.
 - Number of copies: 3 .

995 DEMONSTRATIONS

- Running of plant: Run, maintain and supervise the installations under normal working conditions.
 - Duration: 4 weeks.
- Instruction: Instruct and demonstrate the purpose, function and operation of the installations.

996 SEASONAL COMMISSIONING

Seasonal commissioning of plant and systems shall be undertaken over the first 24 month period in accordance with the requirements of the BREEAM Assessment.

Measurement and recording of criteria for thermal comfort (temperature and humidity where applicable), ventilation rates and effectiveness, lighting levels and controls, etc shall be carried out at three monthly intervals.

A representative from the Hospital shall also give subjective feedback for consideration in the monitoring process.

ENGINEERING SERVICES
SPECIFICATION

New South Glasgow Hospitals

New South Glasgow Hospitals (NSGH) Project

Adult Hospital

Clinical User Group Meeting:

Department: HAE MATO ONCOLOGY WARD

Date of Meeting: 10/8/10.

Time: 2.50 - 4pm

Attendance Sheet

[illegible]

NEW SOUTH GLASGOW HOSPITALS POTENTIAL VALUE ENGINEERING ITEMS

Commentary on Urgent (Red) Items

Item 2: Reserve Capacity

At present all air handling units incorporate a design reserve margin of 25% above the net design value, as requested by the ER's Clause 8.1.3.2 and 8.1.25.1 with the exception of Operating Theatre plant which incorporates the usual industry margin of 10%.

It is proposed to reduce to 25% design reserve on plant to the industry norm of 10%. An exception to this would be, for instance Diagnostic Imaging, which due to the regular upgrades and medical advances could be seen as an area of increase in loads in the future.

The Design Reserve is also built into riser ductwork which could be reduced, but the 10% Design Reserve currently included in floor ductwork capacity would remain.

Pipework installations, heating and chilled water, incorporate the design reserve capacity by virtue of the increased air volumes in the ventilation plant. Some reduction in pipe size would follow along with pump duty, plate exchangers and ultimately boiler and chiller duties.

Item 5: Treatment Area Ventilation (Renal Dialysis)

The Renal Dialysis treatment area is currently served by ventilation at a rate of 10 air changes per hour, to comply with the definition of treatment areas as described in SHTM03-01 Table A1.

However, the area is more of an OPD type application with no invasive activities occurring as would be anticipated in a traditional treatment room, such that 10 air changes appears excessive and is energy inefficient.

In order to maintain environmental conditions it is suggested that a chilled beam installation be provided to maintain the temperature between 21°C and 26°C.

Ventilation air would be provided to the active chilled beams at a rate of 25 litres per second per patient treatment space which would be sufficient for the patient, a carer and an allowance for staff. This equals to approximately 2½ air changes per hour.

Item 9: Water Storage

At present sufficient water storage is provided for the hospitals to cover a 24 hour period (700m³). However, it is considered that high water storage quantities can lead to an increased risk of legionella, particularly if demand is less than anticipated.

An alternative, which has been used in many recent healthcare projects is to store the peak 12 hours of usage (approximately 500m³).

The tanks are arranged as multiple units to avoid a single point of failure and also allow the supply to be maintained during routine tank maintenance.

The hospital is served from two independent Scottish Water networks, each having the capacity to meet the full demand, such that in the event of one supply failing the second supply can still maintain the

service.

In the very unlikely event that both utility supplies were lost water could be brought to the hospital in tankers and fed into the main storage tanks. A means of providing a connection to a tank fill point would need to be provided.

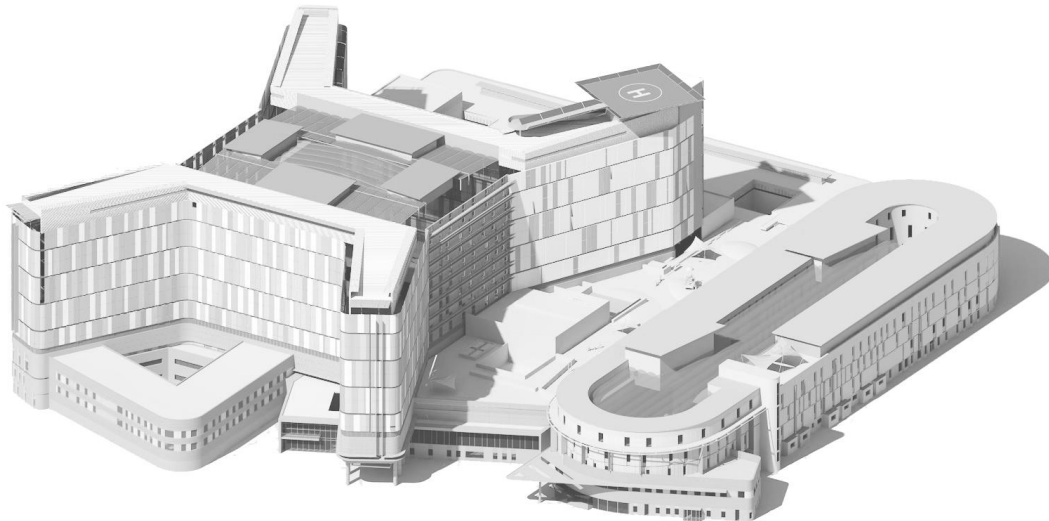
Item 10: Visible Renewables

To meet the ER requirement to provide 0.5% of the hospital's CO₂ emissions by a visible renewable source equates to approximately 100,000 kWh per annum.

Wind turbine manufacturers have recently significantly down-graded their turbine outputs for urban locations based on empirical data to about 2,000 kWh per annum for each turbine.

Therefore, this would mean that about 50 units would be needed on the site which is impractical and with a cost in excess of £2,500,000 does not represent good value for money.

It is proposed that the requirement is withdrawn, and four turbines are placed at the Energy Centre as a purely visible statement. Alternatively, the wind turbines could be completely removed and replaced by some form of public awareness display that will give the project its desired public awareness and sustainable energy visibility and promotion.



New South Glasgow Hospitals Project

1:50 Protocol Document

02	28/02/11	NHS / NA / BCL agreed comments added	ew	
01	14/01/11	BCL and Hospital Design Group review comments added.	elw	
00	10/01/11	Draft issue for Hospital Design Group Review	elw	
Rev	Issue Date	Revision Note	By	Chk

New South Glasgow Hospitals (NSGH) Project

Reference Documents

This should be read in conjunction with the following documents;

1. NA-SH-010_rev05_NSUGH 1-50 UGM Tracking Schedule&Programme_07-01-2011
2. NSUGH&NCH 1-50 User Group Meetings Timetable rev04_07-01-2011.xls
3. Fully Loaded Pre-UGM dates_rev 02.xls
4. NSUGH_Pre-UGM Activity Chart.xls
5. NA-SH-400-101_Assigned Room Types Schedule_101118 (Board Comments 110107).xls
6. 101018_NSUGH Standardisation Document.xls
7. 1:200 & 1:50 Design Process (Design Acceptance Procedure Document)
8. 1:50 Change Control Schedule
9. 1:50 Room Elevation Schedule

In addition, reference will be required during the Pre-UGM Reviews to the following;

1. 1:50 Room Type Drawings (Appendix K stamped/signed set)
2. 1:200 Department Plans (Appendix K stamped/signed set)
3. Equipment Union Schedule
NA-SH-400-002
4. Codebook Equipment Library
NA-SH-400-001
5. Standard Fixing Height Drawings
NA-xx-xx-SC-400-001
NA-xx-xx-SC-400-002
6. Equipment List (Appendix K version)

1:50 Department Design Stage

Current Status

All 1:50 Room Types were reviewed in Clinical User Meetings and the drawings were updated and issued for FBC/Appendix K. The NSGH Board have signed-off each Room Type with an agreed Drawing Status (A, B, C, D). The required amendments have been incorporated and Room Templates created and added to the NSGH Project Codebook Database. The Room Templates are currently being copied to the multiple locations that they occur in the building based on revision 01 of the Assigned Room Type Schedule (NA-SH-400-101), and adjustments are being made to take into account the different room specific characteristics. Fully loaded 1:50 Department Drawings are being produced in the sequence indicated on the latest version of the 1:50 UGM Tracking Schedule & Programme (NA-SH-010). Elevations for all key rooms as identified in the room elevation schedule (item 9 reference document) are to be available for UGMs and sign off will be subject to the provision of this information. The elevations will detail group 1 and 2 equipment and their service outlets plus the services for other equipment that the board have identified. Group 3 equipment can be shown indicatively to size and load as advised by the board. Where elevations in rooms as identified above are not available for sign off of the plan they will be subject to subsequent provision of elevations. As no reflected ceiling plans are to be provided at this stage, any change required by the development to the ceiling plans will be considered to be design development rather than change unless any proposed change by the users results in increased quantum of ceiling mounted equipment or service. The NHS are to provide a zone (depicted on the 1:50 loaded drawings) within which clinical equipment is to be provided. Movement of the equipment outwith the zone is agreed as a change.

An updated Equipment List reflecting the amended room templates is currently being generated and will be issued week commencing 7th February 2011. This will provide a more accurate baseline from which to measure any change resulting from the Pre-User Group process.

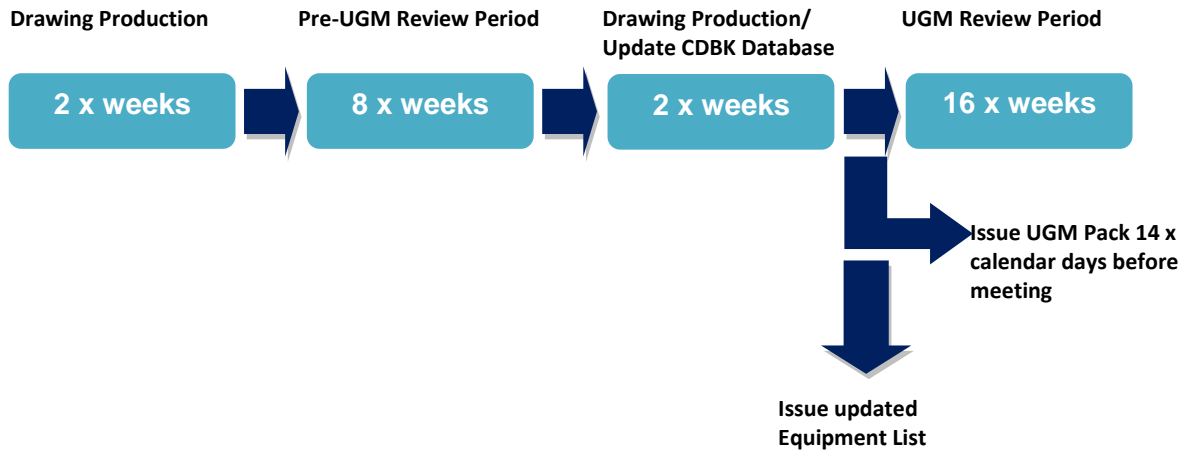
Programme ref NA (insert doc num) Checking / sign off Programme

The preparation for the first departments commenced at the end of 2010. From January 2011 the main 28xweek 1:50 Programme commences with a 2xweek drawing production/preparatory period prior to the start of the 8xweek pre-user group meeting review period. All fully loaded 1:50 Department Drawings will be reviewed in this period.

There is then a provision of 2xweeks to allow all equipment related comments to be incorporated in the drawings/Database prior to the production of an updated Project Equipment List. This will allow an equipment cost check to take place before the UGMs which represents the agreed design development of the Project Equipment.

The User Group Meeting Review will then commence and all departments will be agreed and signed-off during the agreed 16xweek period.

Overall Timeline:



Pre-User Group Meeting (UGM) Review Period

In order to develop the design co-ordination and drawing comments a structured Pre-UGM Review Period has been agreed. This is an 8xweek process and accommodates a 7xday rolling programme for each of the 8xdepartment batches.

Meeting Attendees;

NHS (including Currie & Brown)

NA

BCL

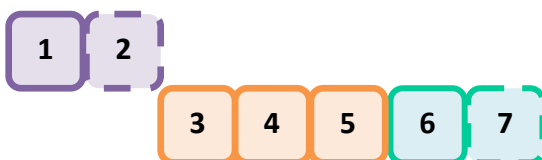
ZBP/Mercury

WSP (depending on extent of structural comments received at Pre-UGM 1)

Drawing Issue

The Pre-UGM issue pack will consist of a draft copy (rev 01) of the A0 fully loaded 1:50 Department Drawings. All updated 1:50 Room Types will also be available for reference prior to the commencement of the first NHS Board Review. Reference should also be made to the Room Type Assignment Schedule to understand the ADB briefing code origin of each room.

Typical Pre-UGM Review (Time in working days)



Drawing Issue and printing



NHS Board Review



Pre-UGM Review Workshop

There are a number of key issues which need to be reviewed and agreed during the Pre-UGM Period. An Activity Checklist has been set-up, which aims to address items under the following headings;

1. Room Assignment Review
2. Equipment Review
3. M&E Design Review
4. Structural Design Review
5. External Envelope Review

Not all items will be fully resolved during this period, however it is anticipated that we will be able to highlight the progress of the design development, and the status prior to Pre-UGM and UGM issue. Additionally, in order to ensure that this design process meets the construction requirements, there are a number of key issues which must be agreed during the Pre-UGM review.

Pre-UGM Activity Checklist

1. Room Type Assignment Review

<i>Lead</i>	<i>Activity Checklist</i>
NHS / NA	<ol style="list-style-type: none"> 1. Check correct Room Type Assignment applied to each room by Department 2. Note amendments required on relevant Department drawing and NA-SH-400-101 Assigned Room Types Schedule 3. Review NA amendments applied during fully-loaded process and confirm

2. Equipment Review

<i>Lead</i>	<i>Activity Checklist</i>
NHS / C&B	<ol style="list-style-type: none"> 1. Confirm Equipment amendments required to meet agreed FBC/Appendix K and note to each relevant room by Department drawing and RDS 2. Confirm any additional Equipment amendments required and note to each relevant room by Department drawing and RDS 3. Review NSGHP Standardisation Document and note any further general equipment requirements

3. M&E Design Review

<i>Lead</i>	<i>Activity Checklist</i>
NA/ ZBP / MER	<ol style="list-style-type: none"> 1. Review Stage 3 development of M&E design including risers and cupboards and agree final locations 2. Review Generic Ward Tower service penetrations and agree preferred solution 3. Review indicative locations of RWP's, including box-out detail and note required amendments/comments 4. M&E (ZBP & MER) to provide comments as required to each room by Department on equipment servicing requirements. 5. M&E (ZBP & MER) to note design queries/clarifications required from NHS as required to each room by Department. 6. Note any general M&E requirements to NSGHP Standardisation Document

4. Structural Design Review

<i>Lead</i>	<i>Activity Checklist</i>
NA/ WSP	<ol style="list-style-type: none"> 1. Review Stage 3 development of structural design and agree final 'worst-case' column sizes and locations, including allowance for applied dry-lining finish 2. Review and agree final shear wall locations, including allowance for applied dry-lining finish 3. Review and agree movement joint locations 4. Demonstrate concrete slab penetration strategy, review structural restrictions, ER restrictions, design flexibility and agree preferred solution

5. External Envelope Review

<i>Lead</i>	<i>Activity Checklist</i>
NA	<ol style="list-style-type: none"> 1. Review FBC/Appendix K comments on NA Glazing Strategy 2. Demonstrate by Room Type external wall section details and build up including current window size and height assumptions 3. Agree any amendments to co-ordinate elevations with clinical requirements and agree final window locations/size

User Group Meeting (UGM) Review Period ref NA (insert doc num) Checking / sign off Programme

There is an overall **16xweek** time allocation to complete a full set of User Reviews and achieve sign-off/approval for both the Adult and Children's Hospitals. Time has been allocated for each department review based on the NHS Board's requirements. It is anticipated that the majority of drawings will achieve a sign-off (status A/B) during the UGM Review. Some drawings (status C/D) may require a follow-up meeting which will be managed by the NHS Board which may require attendance by the BCL Team. (BCL to be advised of meetings so they can determine if attendance is required). The department drawing status will be noted on the NSGH 1-50 UGM Tracking Schedule and reviewed/agreed at the end of each UGM and formally re-issued at the end of each UGM week. Status C/D drawings will be prioritised for update to allow a re-submission review during the 16xweek time period. These additional reviews will take place during the float days and the sixteenth/ final week.

The UGM Issue Pack will consist of the fully loaded 1:50 Department Drawings and the Department RDS as noted on the 1:50 UGM Tracking Schedule. Each Department pack (drawings and RDS) will be issued on Aconex to the agreed distribution list **14 x Calendar Days** (as a minimum) prior to the agreed UGM date to allow the NHS Board to distribute internally. An outlook email will be issued following each Aconex issue to ensure that all parties are aware that a UGM Issue Pack is ready for downloading/printing and distribution. Note that these drawings are A0 size (the RDS are A4) and 1:50 key plans will be made available to assist in orientation within the building. Drawings and RDS are to be signed off by the NHS ideally at the UGM, or before the expiry of 14 calendar days of the respective UGM if no significant changes (A or B status). Alterations being pursued that prevent sign off (C or D status) are to be made by NA within 14 days of the notification of the issues which must be scanned to NA within 24hrs after the user group meeting. Where applicable if user groups need to be reconvened to sign off, the meeting shall take place within 7 days of the re-issued drawings. In any event the long stop date as shown on the 1:50 checking /sign off programme shall not be passed without sign off being achieved.

Post Sign-Off

The dated/stamped/signed drawings will represent the agreed department 1:50 layouts. During the detailed design co-ordination leading to the release of construction status drawings further iteration/revisions of these drawings will be required. Any item constituting a significant change from this design will be re-submitted to the NHS Board under the agreed RDD process to ensure that this change is re-approved prior to construction. During the construction stage amendments may be required due to site conditions; any significant change will again require comment and approval from the NHS Board.

Definition of Design Change and Design Development – Pre UGM Stage

This period of time is where all parties can discuss and agree the majority of items in the Activity Checklists and make the necessary adjustments to the design to ensure the fully loaded 1:50 Department Drawings represent the ER's and clinical brief. In general, changes to the 1:200 department plans submitted and agreed for Appendix K/FBC will not be encouraged. However, it is recognised that in order to achieve clinical functionality and the optimal equipment layout that movement to doors, walls, equipment, sanitaryware, drainage and sometimes room locations will be required to room types copied into non-standard room shapes. This may also be required to accommodate the design development and co-ordination of structure, M&E or to improve the construction buildability.

Definition of Design Change – UGM Stage

At this Design Stage, the following examples would be considered a Change, will be logged on the 1:50 Change Control Schedule and subject to the Change Process Protocol. Any change to the agreed 1:200 drawings including but not limited to;

- Movement of structural column locations
- Movement of structural shear walls
- Changes to structural loading design assumptions
- Changes to structural slab recesses
- Changes to M&E Risers
- Changes to M&E Cupboards
- Changes to window sizes and locations
- Movement of partitions associated with drainage
- Movement of sanitaryware locations (and any associated drainage requirements)
- Moving and removing rooms

- Changes in scope from the Employer's Requirements
- Changes to Room Types which may lead to subsequent amendments to environmental or service loads
- Additional doors, glazed screens etc
- Additional nurse bases/touchdown bases
- Additional access control requirements

Definition of Design Development – UGM Stage

The following statement covers what changes are considered to be acceptable design development during the 1:50 User Meetings and are not subject to the Change Process Protocol;

Movement of equipment as shown in the 1:50 room types, within the appropriate space as denoted on the 1:200, unless the equipment has a service provision when there is a change in location, size, or quantum, in which case this is a change.

All other changes, whether instigated by the NHS Board or the BCL Team will be tracked on the 1:50 Change Control Schedule to ensure these are recorded, understood and agreed.

**NEW SOUTH GLASGOW ADULT HOSPITAL
USER GROUP MEMBERSHIP
(MARCH 2011 / SEPT 2011)**

<u>Group Title</u>	<u>Most recent e-mails went to:</u>	<u>cc'd to recent emails</u>
AAU	Ambridge, Debbie; Boyd, Michelle; Donnelly, Gill; Howie, Cameron; Jones, Greg; McVey, Heather; Meikle, Lesley; Muir, Scott; Nicol, Jacqueline; Raeside, David; Ross, Lynn; Sillers, Barry; Stuart, Wesley; Sunderland, Graham; Wilson, Ann; Young, Laura; Ross, Ann; Campbell, Angela	McFadyen, Susan
Cardiology Outpatients & Cardiac Rehab	Brogan, Rosemary; Gray, Margaret; Hunter, Alan; Mckenna, Myra; McVey, Heather; Murdoch, David; Scott, Lynne	McGarrity, John
Coronary Care	Adams, Jacqueline; Brogan, Rosemary; Hunter, Alan; Lindsay, Martin; McVey, Heather; Murdoch, David; Thomson, Liz	
Critical Care	Boyd, Michelle; Groom, Susan; Davidson, Alan; Gallacher, Stephen; Imrie, Gregor; Kernohan, Andrew; MacDonald, Marion; Muir, Scott; Thomson, Iain; Thomson, Liz	Binning, Sandy; Deacon, Eleanor; Forrest, Ruth; McKay, Karen; McVey, Heather; Raeside, David; Sillers, Barry; Welch, George
Dermatology	Campbell, Felicity; Fitzsimons, Clare; Jury, Catherine; May, Clare; McColgan, Melanie; McGrath, Lorraine; McVey, Heather; Milligan, Alex; Milligan, Alex; Naysmith, Lisa; Porter, Martin; Ross, Dianne; Tillman, David	
ED	Boyd, Michelle; Brennan, Andy; Brown, Joyce; Dick, Mairi; Gordon, Jonny; Grant, Patrick; Gronski, Mike; Horne, Marilyn; Lloyd, Mhairi; Muir, Cathy; Munro, Phil; Wright, Gerry; Ambridge, Debbie	McVey, Heather

Endoscopy	Blyth, Kevin; Boulton-Jones, Robert; Brannan, Heather; Gillen, Derek; McFadyen, Susan; McFarlane, Cath; Ramsay, Irene; Reid, Rebecca; Sillers, Barry; Wilson, Ann; Brennan, Andy	
Pre-Assessment & General Outpatient Clinics	Horne, Marilyn; Hughes, Janis; Loudon, Karen; Ramsay, June; Sillers, Barry; Wilson, Ann; Young, Laura	McGarrity, John; Dick, Mairi; McVey, Heather
Diabetes/Endocrine	Boal, Ann; Gallacher, Stephen; Gallagher, Andrew; Gillespie, Anice; McFarlane, Cath; McVey, Heather; Wylie, David	John McGarrity
ENT	Cunningham, Mary; Groom, Susan; Hitchings, Anne; Kennedy, Alison; Lauder, Forbes; McDonnell, Trish; Robertson, Alasdair; Rogan, Fiona; Sillers, Barry	
Ophthalmology	Bryce, Iain; Cowan, Lisa; Cunningham, Mary; Diaper, Charles; Groom, Susan; McCormick, Sharon; McDonnell, Trish; McKay, Rachel; Rogan, Fiona; Shields, Lorraine; Sillers, Barry	
Orthopaedics	Blair, Linda; Groom, Susan; Kerr, Margaret; McIntyre, Ruth; Meek, Dominic; Morrison, Mary; Sillers, Barry; Wink, Diane	John McGarrity
Haemato-oncology	Campbell, Myra; Dunlop, David; Jenkins, Gary; Johns, Marjorie; Maclean, Fiona; Parker, Anne; Sharp, Sandy; Twohig, Rosemary	
Imaging	Ross, Lynn; Miller, Winnie; Sinclair, Anne Marie; Crawford, Grace; Foley, Derek; Bell, Chris; Muir, Cathy; Mooney, Bernie; Urquhart, Grant; McGugan, Karen; Brennan, Andy; McDonald Elizabeth; Bowman, Claire	
Main Entrance/Public Areas	Burt, Elaine; Curtis, Claire; Dick, Mairi; Harley, Dan; Horne, Marilyn; Jardine, Dot; Kirkwood, Michelle; Robertson, Blair	
Respiratory Lab / Investigations	Anderson, David; Blyth, Kevin; Carter, Roger; Gillespie, Anice; Lynas, Patricia; McFarlane, Cath; McVey, Heather; Mustafa, Nargis	McGarrity, John
MDU	Arnott, Margaret; Boulton-Jones, Robert; Brown, Natasha; Fraser, Susan; Gillespie, Anice; Lindsay, Robbie; McFarlane, Cath; McVey, Heather; Sarvesvaran, Joseph	McGarrity, John

Rehab & Therapies	Elliott, Janice; Nivison, Catherine	Hassell, Richard
Renal	Brown, Isabel; Campbell, Stewart; Deighan, Chris; Fiskin, Bill; Johns, Marjorie; Little, Julia; McLucas, Margaret	
Stroke	Elliott, Janice	Stuart, John
Theatres	Groom, Susan; Crawford, John; Simpson, David; Traquair Smith, Ann; Urquhart, Grant	Pace, Nick; Sillers, Barry; Welch, George
Urology	Conn, Graeme; Fraser, Michael; McLinden, Frances; Oades, Grenville; Sillers, Barry; Wilson Ann	
Wards	Boulton-Jones, Robert; Busby, Morag; Byrom, Brenda; Donnelly, Gill; Nivison, Catherine; Robertson, Linda; Stuart, John; White, Maureen; Cunningham, Mary	McGarrrity, John

New South Glasgow Hospitals (NSGH) Project

Adult Hospital

Clinical User Group Meeting: **CRITICAL CARE USER GROUP MEETING**
 Department:
 Date of Meeting: **DAY 1 - 24/3/2011**
 Time:

Attendance Sheet

Name	Organisation / Role	Designation	Signature
HEATHER GRIFFIN	NHS GGC	PROJECT MANAGER	
MARIE GRIFFIN	"	INFORMATION MANAGER	
STEFAN GRIFFIN	"	AND	
FIONA McEWAN	NHS GGC	SENIOR NURSE ADVISOR	
JACKIE STEWART	"	INFECTION CONTR	
JACQUIE CAMPBELL	"	GM - TACC	
MARION MACDONALD	"	COM	
MARTIN TERRACE	NHS	LEAD TECH CC	
JOHN MC GARRITY	"	CLINICAL PHYSICS	
KEN HALL	BROOKFIELD	MTC MANAGER	
ROSLAND PHILLIPS	NA	ARCHITECT	
GREGOR ILMES	NHS	ITV CONSULTANT	
CARLA RUINA	NA	ARCHITECT. / SSF	
BARRY SILLERS	NHS GGC	PLANNING MGR	
Michelle Boyd	NHS - ECMS	GENERAL NURSE	
CRAG HARRISON	NHS ECMS	PHYSICIAN	
IAN HARRISON	NHS Critical Care	Lead Nurse	
GEORGE WELCH	NHS	Clinical Director	
3.30pm Pharmacy Lm.			
JOHN FORREST	NHS GGC	Lead Clin Pharmacist	

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SEVENTH CONTRACT ISSUE meeting of 1/6/11 General information and Documents – to be read in conjunction with Appendix M&E4 and Section 10.00 of ERs								
FORWARD MEETING SCHEDULE								
	19/1/11	16/2/11	16/3/11	6/4/11	4/5/11	1/6/11	6/7/11	10/8/11,
MEETING PURPOSE	Meeting rescheduled from 8/12/10 – update on model and facade issues	Model and facade issues	Model and facade issues/ vent review	Model and facade issues/ vent review General Tracker update	Close off all stage 2 issues +lighting General Tracker update	Energy Centre review General Tracker update	Equipping review 1 – procurement package presentation BM	BMS General Tracker update Forward dates – agenda to be agreed 7/9/11, 5/10/11, 2/11/11, 7/12/11
ATTENDEES				As previous meetings	As previous meetings + lighting designer	As previous meetings	As previous meetings + Board procurement	As previous meetings +BMS
Circulation Brookfield Multiplex Ken Hall Darren Pike, Darren Smith Currie & Brown David Hall Glasgow NHS Board Shiona Frew, Peter Moir, Alan Seabourne Mercury Engineering (Ireland) Robert O'Donovan Nightingale Associates : John Wiggett ZBP Guy Willis Robb, Steve Pardy								

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SECTION 1 EARLY DESIGN ISSUES							
ISSUE/ REFERENCE COMPLETED NOT COMPLETE	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by
FOR RECORD OF SECTION 1 COMPLETED ITEMS SEE ISSUE 3. OUTSTANDING ISSUES ONLY RECORDED FOLLOWING							
Involve operational energy manager		NHS GGC	Consult and involve operational energy manager in process		Invite to meetings periodically – Ian Powrie, Trust Energy manager and/or site energy manager BCL will use a	To be invited to future meetings - dates to be discussed and agreed - carried forward to next stage	
Site wide energy strategy		NHS GGC	Whole site energy strategy – need to have master plan for energy use on retained as well as new development and optimise plant selection in new energy centre.	Jan 2011	Commission study from energy specialist Establish a clear trail of calculations and modelling to highlight basis.	Strategy with Board – any actions required to be advised	
User operational requirements		NHSG GC				Confirmed that there is to be a master environmental conditions sheet and	

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SECTION 1 EARLY DESIGN ISSUES							
						that ADB sheets will not contain environmental information. Provide sheet for review by Ecoteric – carried forward to next stage	
Audits	Low carbon Audits	BCL	Appendix K information to be submitted to auditor for comment	Prior to FBC	See appendix K review documents	Responses appended – individual issues now added to next stage tracker	
						Carbon filtration to be decided – see next stage tracker	
	Facade development	BCL/NA	Provide optimisation study looking at daylighting/ shading /extent of glazing/ summertime temperature/ room height/ opening types/ ventilation options.	Urgent – for FBC	Facade study has been provided but fails to meets ER requirements as summarised in review. Major issue with U values of cladding identified	Presentation of proposed U values from 4/5/11 refers. (hard copy in file) option 3B now adopted and is current design, and confirmation given that the building control are comfortable that the solution will meet Building Warrant requirements	BCL/NA

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SECTION 1 EARLY DESIGN ISSUES							
	Systems development – ventilation	BCL/ ZBP	Options studies on proposed ventilation and energy supply strategies, integrating supply and demand side.	Urgent – for FBC	Basic ventilation rate to wards – status quo of 4 ac/hr now implemented	Non e	
	Wind studies	BCL/NA	Commission studies on wind effects to determine optimum cladding and detailing for air tightness, wind effects at entrances and avoidance or pollutants being drawn into air intakes	Early design stage	See wind study review. Issues identified are wind speeds to entrances and in atria, design of external planting to break up air flow and design of intakes/exhausts on upper floors	Needs to be followed up at next stage with respect to entrances and atria – ERs 0.2m/s across entrances to be achieved – carried forward to next stage	
Energy Model		BCL/ZBP	Provide sketch scheme energy models based on options considered at FBC	Urgent – for FBC	See ZBP stage 2 energy report and Ecoteric response	Detail items carried forward to next stage	BCL/ZBP
The above studies and options must be summarised into a stage report with all key decisions recorded and whole life cost and carbon model optimised. The energy model must at this stage show compliance with design target and development towards operational target. The report must be audited and corrective action taken before proceeding to next stage							

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SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
BUILDING SERVICES SYSTEMS								
General Systems	Energy sub metering	ZBP/W SP/ NHS GC	Agree and record logical cost and ownership centres, site strategy for metering and monitoring and then provide drawings indicating appropriate departmental meters. Check BREEAM requirements met	30/4/11	Metering strategy drawing and performance specification – develop through meetings with site and trust energy Manager. Structured discussion document to be prepared. Metering strategy agreed at log stage to be provided to Ecoteric	Meeting still to be arranged	NHSGGC/Ecoteric/B M. ZBP to provide highlighted item	3
	Choice of internal design conditions	ZBP/W SP	Have all internal design temperatures and humidities been specified with agreed	30/4/11	Schedule of summer and winter design internal conditions and humidities – see action from section	Provided and reviewed – attached with highlighted areas to be discussed at meeting of 1-6-11	BM	3

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SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOLSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
			tolerances to ensure lowest energy consumption and avoidance of reheat? See also ADB sheets section		1			
Ventilation Issues from review	Choice of filtration	ZBP	Have filter clean and dirty resistances been specified to optimise energy cost versus filter cost Similarly , the final filter should be selected to provide low initial resistance – 85Pa and final resistance of 2x initial. There is evidence that F9 is a better standard for human health and	4/5/11	Sample calculations – see AHU review	Report from Camfill Farr dated 13/5/11 refers. Combined filtration show major energy and life cycle advantage over separate filtrations as well as an improvement in air quality. Specification exceeds the SHTM, The ZBP updated vent review is not in line with this report and the two need to be reconciled Two stage combined	Specify combined filtration to all plant? Confirm which plants would be single stage plus G4 and which two stage. Please confirm filter spec for theatre plant	2

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SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
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			reduces ductwork cleaning and resistance			filtration is also considered as the arrestance is even better but energy advantage is not as good. Specification of this option is well beyond SHTM requirements.		
			Can carbon filters be omitted or bypassed? Note that F7 required to protect not G4 as currently scheduled.	30/4/11	WLC for no filtration, full filtration, part filtration to be prepared for Board. Must include labour and cost of pre filtration and carbon filtration changes and future price risk.	Savings paper still awaited – agreed that partial option should include theatres/ITU/CCU/isola tion rooms/aseptic suite/kitchen Revised vent report does not include this	ZBP	1
			Overall, have Eurovent EN13053 energy ratings been specified		yes			

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SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
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			- should be at least B rated					
	Isolation rooms	ZBP	Shut down/set back when not in use, with room ready indication	30/4/11	Agreement to do this is still needed. Appendix K Vent review refers. Problem is air distribution which may be resolved. Report from ZBP received. <u>Post meeting note:</u> <u>Belfast Trust have a number of isolation rooms using very high efficiency direct drive fans and magnahelic pressure indication.</u> <u>They are happy to let any of our team visit - I have seen these fans and</u>		ZBP/NHSGGC	1

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SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
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					<u>would strongly recommend further evaluation</u>			
			Is fan to be sized for future HEPA – if so, how does this affect efficiency and would it be better to accept a future fan change if very inefficient selection likely?		Fan change suggested as a strategy – to be agreed with wider design team	Units to be sized without HEPA and belt and pulley change if filter added- most efficient solution at handover		
	Zoning	ZBP	Daytime only areas served from 24 hour plant - e.g. children's wards	30/4/11 for mark ups	Zoning mark up needed	All adult wards 24 hours. Lift lobbies and stairs not on ward plant. Going forward, each department to be marked up with plant zone and occupancy hours and agreed with board prior to detail design. carry forward to next stage		2
			Set back to theatres		Confirmed as			

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
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					included to all but emergency. Review detailed design at next stage .			
			Set back to other areas		awaiting confirmation of ability to set back areas in radiology and children's departments		C&B	2
	System zones	ZBP	Drawings, schematics and system description indicating how different heating and cooling requirements (time /temp/gains) can be controlled separately	30/5/11	See vent review. Needs final resolution. Will be discussed at BMS meeting and	Need to review when environmental mark ups available	ZBP/BM/Ecoteric	3
	Direct drive motor /belt		Strategy for each type of AHU –	4/5/11	See air handling unit review.	Notes from vent review • EC fans not	ZBP	1

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
	drive/ motors in airstream		provide a typical comparison of the energy implications of a direct driven/belt driven/in airstream /not in airstream		Aerofoil fans preferred. Direct drive does not show major advantage over belt drive on smaller plant although needs to be checked on final fan selections and long term performance may be better as direct drive. Also need to consider larger plant where outcome may be different . <u>Post meeting note – direct drive fans available up to 2500Pa for smaller duties seen in Belfast hospital –</u>	considered – this was discussed at last meeting <ul style="list-style-type: none"> • Could also consider twin fan applications • Conclusions appear to be based on capital cost not long term performance - Acknowledges that belt drive likely to perform worse in the long run • Appears to be based on a single supplier 		

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
					<u>needs to be considered urgently before decision taken to go for belt drive – look at http://ebmpapst.co.uk</u>			
	Fresh air rates	ZBP/W SP	Confirmation of HTM 03-01 compliance Check BREEAM requirements have been met	End stage D prior to FBC	Include in design statement with sample compliance calculations	4 ac/hr in bedroom has been agreed. Elsewhere as ERs	Ventilation	
	Air conditioning avoidance	ZBP	Can full air-conditioning be avoided to <ul style="list-style-type: none"> • Circulation/ stairs and lift lobbies • stores 	End stage D prior to FBC	Need to ensure adequate fresh air to control temperature to these areas. ZBP to look at control with fresh air in detail design		ZBP	3

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
			Regenerations kitchens - design and heat recovery still to be considered. Mechanical and electrical designs and layout of areas needed	4/5/11	Need to ensure heat gain in area does not impose undue load on air conditioning and preferably that the areas are served from uncooled dedicated ventilation plant – layout of area and equipment required to assess	To be discussed at RDD meetings	BM	2
			IT hubs and server – consider avoidance of mechanical cooling – schematics and positions of areas needed.	4/5/11	Need to look at economics of running chilled water to these areas and if carbon savings can be made by natural cooling	Confirmed that these are to be served from chilled water but dry cooler now incorporated	ZBP	2
			Atrium and FM core	30/4/11	Workshop to review ventilation		ZBP/Ecoteric	2

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
					strategy to atrium due to take place on 20/4/11. Need to consider options for natural ventilation to bridge link , using solar warmed air for intakes and night cooling to bridge link Noted that there is an issue with restricted louvre area – please share the details of this – important that heat gain from atrium on upper floors does not add extra load to cooling plant			
	Heat recovery	ZBP	Heat recovery strategy to be produced	End stage D	See vent review.	Opportunities generally taken except as noted		

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
			demonstrating opportunities and viability.	prior to FBC		below		
			Confirm ethos for thermal wheel/Plate heat exchanger selection	8/4/11	Check re risk on ward plant (in patient) – this was determined in the ERs	65% thermal wheel efficiency, 55% PHX, thermal wheels used where no risk of cross contamination.		
	VSD		How is VSD configured?	20/4/11	consider along with zoning issues			3
					all air plant - potential for savings not viable as mostly internal			
			VSDs- performance spec to consider efficiency and losses – what is best and worst on market and suppliers to be chosen	8/4/11	Agreed to add to performance schedules	ZBP to issue when completed		

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
			on WLC					
	Dampers in air handling units		Are these for maintenance only? If so are these necessary as motorised – isolation plates decrease airstream resistance – for discussion	8/4/11	To be discussed 8/4/11	Dampers on inlet modulate.		
	Air handling unit spare capacity		Have we now confirmed that the motors and fans are not to be oversized		Confirmed - AHU face velocity to be reduced to 1.0m/s to allow for increase to 1.25m/s. Fans and motors not oversized			

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
			Coli design – compare pressure drops between manufacturers which can vary considerably for the same performance		Agreed to be on performance schedules			
			Overall what is target SFP _v ?		Agreed to be on performance schedules			
			Confirm High efficiency motors will be specified throughout.		Agreed to be on performance schedules			
			What are economics for heat reclaim from dirty extract?		Proposal would have yielded significant carbon savings but not			

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
					acceptable to HFS. Issue closed			
Heating and cooling review	Mains and insulation		Consider heat transfer between the chilled and heating mains – how will heat gain in the ducts and corridors be controlled and how far will the mains be separated ?		Pipe in pipe mains have been specified for heating and chilled mains. Basement valve room is ventilated. Maximum temperature – 30C estimated	Maximum temperature – 30C estimated		
	Mains and insulation		What is thermal insulation thickness - heating and chilled – need to undertake calculation - base on present energy cost and present + 10% and 25% – see ERs		ZBP require clarification - Relevant ERs - Heat gains to chilled water mains must be calculated and minimized when calculating running loads. Externally run unshaded	ZBP to supply heat loss and heat gain annual energy demand from heating and chilled water mains as a function of total energy input per month to estimate % losses	ZBP	1

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
					<p>mains or mains run adjacent to hot services in unventilated spaces will not be considered acceptable.</p> <p>Designers are expected to calculate and specify economic thickness of insulation and continuity of vapour barriers to all chilled services.</p>			
	Mains and insulation		What is water velocity in mains and has an evaluation of energy cost for pumping versus pipe size been			Pipe sizing parameters are 100-200Pa for mains 1-2m/s velocity but as mains are duplicated , will be half.		

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOLSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATIO N ONLY REQUIRED	SUB ISSUES	ISSUE OWNE R	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRE D	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
			undertaken - suggest this is done for the primary mains at least as WLC may indicate a pipe size change.					
	Mains and insulation		Noted that there are two sets of mains presumably for resilience. If each of these are sized at 100% demand, is there any mileage in running one set live and isolating the other set at the valve room to reduce losses particularly in summer? It would also reduced pumping			Not operationally acceptable to change this		

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOLSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
			loads,					
	Heating to ensuites		I thought that heating had been taken out of the en suites as the heat pick up from supply air extracted via the ensuites would be sufficient to offset heat loss. How is temperature in ensuite controlled?			Heating remains due to losses through cladding. Each radiant panel has individual TRV – location to be advised		
	Heating load		475 w/m2 heating load seems very high – can we discuss?		Resolved –refers to radiant panel output			
	Valves		Noted that the control valves to MTHW/LTHW heat exchangers are 2 port,			3 ports are there to provide minimum flow as determined by pump manufacturer. The amount of minimum		

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOLSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
			but why are the valves to the HWS 3 port – VSDs to pumps will control pump speed when demand light, particularly in summer when there is no heating load.			flow varies across manufacturers from 15%-40% - to be incorporated into performance schedule		
	Chilled water temperatures		Given that all the chilled water goes through heat exchangers other than the computer room, are we sure the distribution temperatures are the most economical – what are the economics of either running the computer		ZBP comment that The chilled water temperatures are scheduled to outside conditions to reduce energy input. See:ZBP-XX-XX-SP-660-403/ 6-12 used for peak design. chilled water temperature is scheduled to	See energy centre review – please supply presentation as record. Dry cooler now provides free cooling	ZBP	2

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOLSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATIO N ONLY REQUIRED	SUB ISSUES	ISSUE OWNE R	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRE D	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
			rooms off higher temp CHW or off natural cooling systems or even separate plant? The lower the distribution temperature, the higher the mains gains.		increase when external temperature drops.			
New issue	Chilled water – use for dehumidificatio n		Queried which air plants run at lower chilled water temperatures for dehumidification	6/7/11	Check environmental matrix re humidity limits	Environmental matrix does not state any humidities – use humidity control only where required by SHTM or as high limit to critical areas?	Ecoteric	
	Seasonal shut down of chilled water		Related to the above, if only computer rooms require cooling in winter, the pumping energy resulting from	30/4/11	ZBP comment that cooling will be required all year round (considering imaging and other	See above		2

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOLSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
			pumping CHW during this season could outweigh the carbon saved by using the absorption cooling – I think we need to look at this in more detail		large equipment, internal rooms etc).Separate plant involves more capital cost.- it may well but what are the long term costs of operating chilled water mains in winter? Need to evaluate when loads more defined			
	Chilled water pumping		Chilled water pumping generally – is there a point at which, when the pressure rises / external temperature drops/most valves <10% open that the			No because of process loads and internal areas		

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOLSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
			pumps turn off?					
	Chilled beams circuit		Chilled beam circuit – does this have automated off mode?			Yes this will be scheduled		
	CHW distribution		What is the rational for the various secondary chilled water circuits and can they be rationalised to reduce the amount of mains?		ZBP comment this is due to spatial restrictions – please expand answer	Secondary circuits are provided for resilience – on proviso that secondary resistances are minimised		
	Fan/pump speeds		Statement regarding criteria for specifying VSD's and plant schedules indicating where specified – provide schematics	End stage D prior to FBC	See heating /cooling review. To be followed up at meeting of 8/4/11	To be kept under review with control strategy at next stage		

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOLSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATIO N ONLY REQUIRED	SUB ISSUES	ISSUE OWNE R	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRE D	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
			and design details for evaluation					
New issue	Total chiller loads		Ensure chiller loads are correct		As a cross check on chiller capacity , worth a simple cross check of room loads + air loads – this will ensure double counting has not occurred		ZBP	
	PLATE HEAT EXCHANGERS		Confirm these are sequenced to avoid high losses at part load			Not sequenced but run at 50% at full duty therefore low pressure loss. insulated to lessen standing loss		
	HEATING AND COOLING PUMPS		High Efficiency motors are not specified – these are required in ERs		ZBP confirmed included	Include in plant schedules		
BMS Issues	Local controls	ZBP	Develop strategy for local controls. Check BREEAM requirements	To be resolved at worksho	To be reviewed with BMS strategy	Move to next stage		

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOLSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATIO N ONLY REQUIRED	SUB ISSUES	ISSUE OWNE R	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRE D	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
				p august				
			Where AHUS serve rooms with varying heat gain, how is individual room temperature control achieved		To be reviewed with BMS strategy	Move to next stage		
	Wasteful heating /cooling		Reheat arrangements – can room temp sensors reschedule off coil to prevent wasteful reheat?		To be reviewed with BMS strategy	Move to next stage		
			Are cooling and main reheat coils in ahu interlocked to prevent simultaneous operation?		To be reviewed with BMS strategy	Move to next stage		
			How is simultaneous heating and cooling		ZBP comment that this does not occur.	Move to next stage		

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
			prevented (in rooms)		Where heating and cooling chilled beams are provided the unit controls the space temperature. Where radiant panels and FCU's are provided then there is a dead zone in temperature to avoid heating and cooling simultaneously			
			Is supplementary heating or cooling proposed in spaces served?	30/4/11	It was agreed that this was hard to follow across the various drawings issued to date. A	To be shown on environmental drawings – will evolve into detail design at next stage	ZBP	1

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
					marked up set of drawings is to be prepared which demonstrates the control heating cooling and ventilation strategy to each space – this can be colour coded and initially cover the 5 designed departments	Environmental drawings still awaited		
	Zoning		Is there zoning of the VT heating in terms of 12/24 hour circuits – if areas are not used for 24 hours how is heating turned off when the area is not in use – same applies to			ZBP confirm – single circuits with zone valves and optimum start/stop/frost protection. Chilled beam circuit and fan coil circuits to have zone valves		

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOLSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
			chilled water.					
			Similarly, where there are distributed fan coil units, what is the control for intermittently used areas?		ZBP confirm but detail to be discussed	Fan coils will be time controlled individually. Fan coils to have EC fans		
Lighting Issues	High efficacy internal lighting	Mercury	Overall, the choice of fittings does not appear to have been made with regard to maximum efficiency of lighting- there are a number of instances where more connected load is specified than is necessary. See lighting review for further detail and examples	4/5/11	The review highlights areas where energy savings are possible and these typical areas are reproducible throughout the development. The ERs in respect to lighting energy efficiency have not been met and attention is needed	See detailed review in this section. Much improved from appendix K submission and now generally meeting ERs. Some residual issues as noted below	Mercury	1

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
					in the detailed design. To be reviewed at meeting of 4/5/11			
	DEER	Mercury	DEER calculations need to be undertaken in accordance with the NHS guidance and the ERs to demonstrate that A rated fittings have been specified.	4/5/11	Submit DEER calculations	DEER calculations part of Whitecroft presentation – supply copy for record. Indicated DEER A rating is being achieved to all but specialist areas.	BM	1
	Lighting power density	Mercury	Figures not known		Reported that the average power density for lighting is now 10.5w/m ² , this compares well to recent scheme at Barts which achieved 12.5w/m ² , Discussed if this could be reduced	Supply confirmation for the record. ZBP to confirm that power density equates to model assumptions.	BM/ZBP	

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
					further but lighting designers felt that this would require significant increase in LED which is not within cost plan. Noted that LED is included to staff bases, MRI, X ray/touchdown area			
	Lighting control corridors	Mercury	Ward corridor presence/absence detection	4/5/11	Consider automated dimming to reduced levels	Lighting reduces to 25% for night time under nurse control – agreed at design meeting.		
	Ward daylight linking	Mercury	Confirm if included and how these will work in conjunction with blinds	4/5/11	Detailed proposals awaited. DALI system believed to be included	Confirmed that DALI is included throughout entire development but the mode of daylight linking to bedrooms is still to be resolved. Post meeting note – please confirm the	Mercury/BM	1

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOLSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATIO N ONLY REQUIRED	SUB ISSUES	ISSUE OWNE R	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRE D	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
						operational cost of HF gear replacement - does the intelligence reside in the gear and require recommissioning each time gear is replaced?		
	Utility areas	Mercury	Presence detection has been incorporated to the pantries and kitchen but not the clean and dirty utilities or disposal hold	4/5/11	Considerable savings could be made by using lighting control to these areas. Safety considerations would be much the same for a ward kitchen as for a utility area. Note that PIR shown for utility areas on acute assessment ward	Presence detection to all intermittent core areas.	BM	
	Public toilets	Mercury	Whitecroft queried blue lighting as		Confirmed at design meeting as	Issue closed		

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
			inefficient		required for public safety to prevent intravenous drug use			
	Corridor lighting	Mercury	Appendix K review highlighted inefficiency of linear/downlight solution		Revised design standardises in asymmetric linear.	Queried at design meeting if lighting design was to be differentiated between street and sub corridors for way finding reasons but this was not felt to be necessary. Agreed to proposed design. Agreed that presence detection of negligible benefit to ward corridors.		
	Lamp types and colour rendering	Mercury	Query on lamp types proposed		Confirmed that Philips Eco lamps to be used throughout, standardising on 26W	Agreed and welcomed. Exceptions noted for areas requiring RA90 for patient observation (theatres/recovery/high dependency) RA85		

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
						elsewhere with the Eco lamps		
	Bedhead lighting	Mercury	Options proposed for type integrated with trunking or wall mounted		BM prefer trunking integrated type for ease of installation however as light is lower, light distribution is worse and increase lamp power needed- from 39W to 54W -38% increase, across 1000 beds, if used for 4 hours per day this equates to 21900 kwh/annum, 0.06kgCO ₂ /m ² annum	Preferred solution is wall mounted – needs to be resolved as soon as possible. Please confirm the height that trunking would need to be mounted to enable lighting to be integrated and confirm with users that if this is higher than normal that this is operationally suitable.	BM	1
	Wall zone calculation	Mercury	Inclusion of 0.5m wall zone in uniformity calculation		For most rooms, inclusion makes no difference – for some inclusion	Need to agree if wall zone should or should not be included – Capita will verify	Capita/C&B	3

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
					adds fittings and therefore energy use	lighting - opinion sought		
	High efficacy external lighting		Schedule of design illuminances, proposed light fittings and schedule of lumens per cct watt achieved (typical per area acceptable).	4/5/11	Review not yet undertaken - awaiting external lighting proposals		BM	3
	Security lighting controls		Description of operation of proposed lighting controls and drawings indicating where each type of control is used. Strategy for low energy lighting required for evaluation. Check BREEAM requirements	4/5/11	As above		ZBP/Gillespies	3

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOLSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATIO N ONLY REQUIRED	SUB ISSUES	ISSUE OWNE R	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRE D	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
Electrical systems	LOW VOLTAGE DISTRIBUTION		No mention is made of optimising cable sizing for energy losses – the ERs require: “Cable installations should be specified according to the guidance of British Standard 7450:199120, equivalent to IEC 1059:1991, 'Economic Optimisation of Power Cable Size', which gives useful guidance on the optimum costing of cable installations.		ZBP are aware of this requirement and confirm that it has been included in the design - Supply sample calculations demonstrating compliance with BS.		ZBP	2
	UNINTERRUPTIBLE POWER		The specification should state that the UPS system is to be		ZBP comment that Mercury will need to confirm their	Monitor at selection		

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOLSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATIO N ONLY REQUIRED	SUB ISSUES	ISSUE OWNE R	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRE D	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
	SUPPLIES		selected from products on the ETL list and comparable systems should be compared by means of whole life cost as there can be 3% variance in energy consumed between the best and worst equipment . VFI type preferred for this reason. See CT leaflet ECA778 UPS for more detail		intended supplier. However all the major suppliers are on the list. ECA778 refers to VFI as 'on-line- this is included in this document under clause 310 of V44. Double conversion shown on schematics drawing number ZBP-XX-XX-SC-539-002 and 003. WLC still needed for comparable suppliers/			
New issue	Voltage optimisation	BM	Consider optimum tapped voltages on					

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
ISSUE/ REFERENCE COMPLETED NOT COMPLETE INFORMATION ONLY REQUIRED	SUB ISSUES	ISSUE OWNER	ACTION/QUERY/ISSUE	DATE OR DESIGN STAGE REQUIRED	ACTION TAKEN / ONGOING ISSUES	RECORD OF MEETINGS AND COMPLETED ACTION	Action by	PRIORITY
			transformers and what savings can be made over standard					
New issue	Monitored Power factor correction	BM	Confirm this is included					
Energy Centre	Renewables. Central energy supply and Combined heat and power (CHP)	ZBP	Business case to be provided if necessary. Provide confirmation that recommended measures identified in feasibility are now implemented in the design.	End stage D prior to FBC	Provide schematics and confirmation of funding	CHP included. Small scale wind turbines confirmed as not included		
	Borehole water			1/6/11	Potential uses are Atrium underfloor heating, food disposal system, thermal store?	Information required re borehole to assess – see mail of 18/5/11	ZBP/BM/Ecoteric	1

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
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					Some visual display could be incorporated. PV cladding to chimney			
	Grant funding	BCL	Grant funding applied for and in place	End stage D prior to FBC	Funding applications and confirmation	Grant funding not applied for but some tariff advantage may be possible – will be incorporated in borehole/PV feasibility		
	Bio gas/ alternative fuels	NHSGG C	Continue feasibility investigation on use of biogas and negotiations with Sustainable Glasgow	1/6/11	Decide if there is likely to be any impact on the design - any progress?	Nothing currently included. Biogas not in current planning phases at Sustainable Glasgow.	Ecoteric	2
	Boiler efficiency		No boiler efficiency has been specified. There are options for economisers which vary from 3.5%-7% energy reclaimed from the exhaust – the		Confirm and specify. Needs to be consistent with stage 2 energy report	90% basic efficiency confirmed. Confirm economiser selections and boiler selection on WLC at next stage .		

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
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			highest option commercially available needs to be selected here and boilers/economisers selected should be on the ETL list					
	Boiler controls		Boiler controls are not comprehensively specified - is there O2 trim control? VSD to fans ? digital combustion controls? Boiler and burner management systems?	1/6/11	O2 trim included. To be discussed at energy centre review	Agreed that boiler selection would be based on WLC and that technical evaluation would be shared with client team before procurement decisions are made – please provide when available		2
	Burner specification		Consider also specification for burner power consumption – this can vary considerably between	1/6/11	To be discussed at energy centre review	As above		2

New Southern General Hospital Low Carbon Tracker

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			manufacturers particularly on low NOx applications					
			What will be burner turndown ratio? And how will cycling be prevented?	1/6/11	To be discussed at energy centre review	As above		2
Hot water			How will controls ensure peak efficiency when operating two or more boilers - consider unequal sharing of the load so that the combined load operates at peak efficiency	End stage D prior to FBC	System schematics –reviewed at meeting of 8/4/11. Consider omission of standby calorifier – reduces standing losses – reduces legionella risk	Confirmed that standby calorifier has been omitted	ZBP / escalate to design meeting	2
New issues	CHP quality Index		This should be calculated and stated				ZBP	
OVERALL BUILDING ISSUES								

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
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Fabric	U values	NA	Schedule of U values. Look in particular at overall frame and glass U values for curtain walling.	6/4/11	Awaiting outcome of facade review and subsequent discussions	U values reviewed and confirmed –option 3B confirmed and compliance with Building warrant expected. All other U values acceptable.	BM/NA	1
	U values in stage 2 energy report	NA	See modelling report for detail		Overall the data is raw and it is impossible to work out the U value to any particular area. This needs some refinement	Report confirms and ok	BM/NA	1
	Glazing light transmittance	NA	Consider high performance glazing with similar solar transmission but better light transmission than described in facade report	6/4/11	As above	Please confirm solution in current design	BM/NA	1
	North facade	NA	Consider enhanced	6/4/11	Confirm if being			2

New Southern General Hospital Low Carbon Tracker

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			insulation to this facade		considered and outcome		BM/NA	
	Entrances		The areas of concern identified on the south east and south west corners contain entrances – the effect of wind speeds up to 20m/s could have a profound effect on the functionality, design and comfort of the atria and entrance lobbies as well as the energy use		Needs to comply with ERs 0.2m/s across entrances – advise how this will be achieved. m	Escalated to design group	BM/NA	1
	Air permeability	BCL	Confirmation of air permeability and the standards to which the building will be designed AND tested	End stage D prior to FBC	Air permeability confirmed at design stage Clarification 005 as 5m3/hr/m2@50Pa.	Confirmed and agreed		
Modelling	Net CO2 emission	BCL	Detailed model to be produced based on	End stage D	Model produced. See model review.	See below		

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOLSPITALS								
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			stage D design. Corrective action if needed to be undertaken before scheme proceeds	prior to FBC	Outstanding actions listed below			
		BCL	Output from energy calculation, along with schedule of input data and occupancy/usage/inte rnal gain defaults Must produce model and comparison with both design and operational targets	End stage D prior to FBC	Model produced. See model review. Outstanding actions listed below I	See below		
	General Assumptions on which the model is based as listed in stage 2 model report		See modelling report for detail	1-6-11	Needs revising and amending in stage 2 report (purple section)	Revised report received. Ecoteric to undertake final review for next meeting – highlighted revisions awaited	ZBP/ Ecoteric	2

New Southern General Hospital Low Carbon Tracker

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	Dynamic modelling		See modelling report for detail		Needs revising and amending in stage 3 report – resolution and clarification of response needed. ZBP report that discussions have been held with IES and that they are now reviewing their proposals – will be further reviewed at meeting with IES. Will close out when addendum received	Queries sent to BM to raise with IES	BM	1
	Model result		See modelling report for detail		Summary calculation required- not yet provided	As above		2
	Weather file		See modelling report for detail		Addendum awaited	As above		2
	Degree days		See modelling report for detail		Revise carbon model and confirm	As above		1

New Southern General Hospital Low Carbon Tracker

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					base temperature – not yet provided			
	Total estimated load		See modelling report for detail		Report gives incorrect totals	As above		3
	Lighting diversities		See modelling report for detail		ZBP have reviewed the lighting and made some adjustments, both up and down. Diversity has been removed but included within the W/m2 load (same overall figure). Still not transparent – agreed to use just connected load and UF for model	As above		2
	General detail IES modelling queries		See modelling report for detail	10/5/11	Meeting with IES and CT/Ecoteric to be arranged to discuss	IES wish to charge for meeting – BM to challenge – queries issued	BM	2

New Southern General Hospital Low Carbon Tracker

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	Historic data to check carbon model		See modelling report for detail	4/5/11	Data from Peterborough awaited especially electrical		BM	1
	Pumps		Whether energy modelled reflects control proposals as UF of 25% used but minimum duty is 40% - response needs clarification – to be discussed at meeting of 8/4/11		ZBP respond that Multiple pumps are provided cascading to suit the load. UF of 0.25 relates to one A&B pump running at low demand. No account has been taken for further speed reduction below this	Ok as stated		
	CHP		Incorrect load figures used in model		ZBP respond that This should be 1000kW for each of the three building models. This will only have a minor effect on the BER	Ok as stated		

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
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					and will not affect the result			
	External temperatures				ZBP respond that This should be 30oC as the ERs. Does not affect results	Ok as stated		
	lifts				ZBP respond that BM are to obtain up to date lift energy use from Schindler.	ZBP report that this has been obtained and does not affect results . actual data will be included in stage 3 report		
	Key target efficiencies		See modelling report for detail	30/4/11	Please prepare a schedule of major items procurement with target efficiencies and provide sample tender returns incorporating		ZBP/BM	1

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOLSPITALS								
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					whole life costs etc. for agreement.			
	Diversities and usage factors for lighting and small power		See modelling report for detail	18/4/11	Addendum awaited	Discussed at meeting of 8/4/11 and agreed to revise connected loads in line with Peterborough and omit diversification factor	ZBP	2
	Model results		Asset rating of 36 (B) for the England & Wales EPC, which is better than the maximum requirement of 40 for BREEAM Excellent. The model achieved a rating of 40 (C) for the Scottish EPC. Building's energy consumption at 40 GJ/100m ³ /year against NHS target of	18/4/11	<u>Reconfirm kg/CO₂ /m²/annum as a result of above changes.</u> Confirm what needs to change to meet Scottish B EPC rating	Revised report indicates that 79kgCO ₂ /m ² /annum, all other targets and in particular Scottish EPC B will be achieved but will be monitored in next phase – move to next phase tracker		1

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOLSPITALS								
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			55 Building's energy consumption at 40 GJ/100m3/year CO2 emissions at 80 kg CO2/m2/year.					
	Risks		As highlighted – accuracy of air/fabric heating calculations EPC rating as 6.2 above U value to tower cladding as detailed elsewhere – this may yet prove to be more significant in terms of energy consumption Failure to procure equipment to efficiencies assumed Scottish B EPC rating		Monitor through design stage	Check through next stage		
Operational energy monitoring	Matrix of responsibilities and actions in	C&B	Draft matrix has been issued		comments and agreement awaited		BM/C&B	1

New Southern General Hospital Low Carbon Tracker

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	the operational phase							
	System assumptions, efficiencies and conflicts		See modelling report for detail Sections 17-18		Check and revise. Feed back into model results			3
WLC	Whole life cost model	BCL	Update model and check that cost plan includes for lowest whole life cost and carbon design. Check BREEAM requirements have been met	End stage D prior to FBC	WLC re air handling has been produced. Has overall WLC model been updated and based on latest energy and FM model ?	Needs updating and areas adjusted	BM/Doig +Smith	2
ADB	ADB Sheets	BCL/N HSGG C	Create master set of ADB sheets embracing low carbon objectives and ensure these are used on all ADB sheets generated for the	End stage D prior to FBC	Debate on maximum internal temperature. Temperature set in ERs at 26C to drive a solution where cooling was included but there	Now on master environmental sheet but review with BMS		

New Southern General Hospital Low Carbon Tracker

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			project with a definition sheet		may be flexibility in set points and humidity to allow for lower carbon in use. Need to review master environmental condition sheets.			
INTERNAL ENVIRONMENT								
Daylighting and Glare	Daylighting	ZBP/W SP	Provide daylighting calculations	4/5/11	As above	Action as section 1	ZBP/NA	2
	Glare control	ZBP/W SP	Check that design avoids lights on blinds down issues	4/5/11	As above	To be carried over to next stage		
NON SYSTEM RELATED ENERGY ISSUES								
Equipment	Energy consuming equipment	BCL	Create a generic schedule of energy consuming equipment and including realistic assessments of energy consumption and heat	1/6/11	Schedule including energy consumption and heat emissions	To be considered at meeting in July– action all, procurement adviser to be invited	NHSGGC	2

New Southern General Hospital Low Carbon Tracker

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			emission to the space					
		BCL	Formulate procedures and documents for procuring energy efficient equipment and get agreement from client on process and timetable. Check BREEAM requirements have been met for Ene 15 which requires procurement on WLC and carbon issues	6/7/11	Provide schedule of new equipment and specifications, which should incorporate whole life costing element including assessment of energy consumption.	Generic schedule received for review	Ecoteric	1
IT	PUE		Is target PUE of 1.6 likely to be achieved?	4/5/11	Supply initial calculations , arrange to meet with IT		C&B/BM	1
LABS								
General	Opportunities for energy saving	BCL	Are there any remaining opportunities for energy/carbon saving	TBA	Undertake joint review – Ecoteric/BCL?		NHSGGC/Ecoteric	2

New Southern General Hospital Low Carbon Tracker

SECTION 2 STAGE C-D DESIGN to FBC MAIN and CHILDRENS HOSPITALS								
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			- e.g. equipping, controls ?					
At the end of the design stage leading to FBC, all the above issues should have been addressed and a design statement prepared. The low carbon auditor will need to have seen all above listed detail, commented on the issues and be able to confirm to the Carbon Trust and the Board that the design meets the objectives in the employers requirements and targets.								

New Southern General Hospital Low Carbon Tracker

SECTION 3 FBC APPROVAL TO END OF DESIGN PHASE MAIN and CHILDRENS – not yet commenced						
ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUSTANDING ACTIONS
General systems options	Energy sub metering	ZBP/W SP/ NHSG GC	Check BREEAM requirements met. Specification for BMS/AMT to be provided	FBC approval to end stage E	Agree detail of how metering will monitor and report	
	Choice of filtration	ZBP	Have filter clean and dirty resistances been specified to optimise energy cost versus filter cost	FBC approval to end stage E	Sample technical schedules from suppliers	
	System zones	ZBP	Drawings, schematics and system description indicating how different heating and cooling requirements (time /temp/gains) can be controlled separately Detailed drawing sample checking	FBC approval to end stage E	Final Schematics and detail drawings auditors comments	
	Local controls	ZBP	Develop strategy for local controls. Check BREEAM requirements, Provide descriptions of operation for each system	FBC approval to end stage E	Descriptions of operation and auditors comments	
	Heat	ZBP	Heat recovery strategy to be	FBC approval	Sample of Detail	

New Southern General Hospital Low Carbon Tracker

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	recovery		produced demonstrating opportunities and viability.	to end stage E	drawings and Schematics and auditors comments	
	High efficacy internal lighting	ZBP	Schedule of design illuminance, proposed light fittings and schedule of lumens per cc watt achieved (typical per area acceptable). Strategy for low energy lighting required for evaluation	FBC approval to end stage E	Provide final detail if changed from previous stage	
	Lighting control	ZBP	Description of operation of proposed lighting controls and drawings indicating where each type of control is used. Strategy for low energy lighting required for evaluation. Check BREEAM requirements	FBC approval to end stage E	Sample final design drawings and auditors comments	
	High efficacy external lighting	ZBP	Schedule of design illuminances, proposed light fittings and schedule of lumens per cct watt achieved (typical per area acceptable).	FBC approval to end stage E	Provide final detail if changed from previous stage	
	Security lighting controls	ZBP	Description of operation of proposed lighting controls and drawings indicating where each type of control is used. Strategy for low energy lighting required for evaluation. Check	FBC approval to end stage E	As above	

New Southern General Hospital Low Carbon Tracker

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			BREEAM requirements			
	Fan/pump speeds	ZBP	Statement regarding criteria for specifying VSD's and plant schedules indicating where specified	FBC approval to end stage E	Provide confirmation of specification	
	Fan and pump selection	ZBP	Provide confirmation of fan a pump efficiencies – demonstrating use of HE motors and most efficient fan configuration.	FBC approval to end stage E	Provide indicative fan and pump schedules and details	
	Fan and pump WLC	ZBP	Demonstrate that selections made on best WL carbon performance	FBC approval to end stage E	Provide WL carbon calcs	
	Renewables. Central energy supply and Combined heat and power (CHP)	ZBP	Provide confirmation that recommended measures identified in feasibility are now implemented in the design.	FBC approval to end stage E	Provide detailed drawings	
	Grant funding	BCL	Grant funding applied for and in place	FBC approval to end stage E	Funding applications and confirmation if not available at previous stage	
	Building energy management	ZBP	Detailed BMS specifications, proposals for head end and maintenance and training	FBC approval to end stage E	Provide confirmation of arrangement and	

New Southern General Hospital Low Carbon Tracker

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	systems (BMS)		contracts in place		acceptability to Board end users	
	Heat recovery	ZBP	Schedule of heat recovery devices	FBC approval to end stage E	Provide sample detailed heat recovery efficiencies	
	Hot water efficiency	ZBP	Confirmation that systems with best carbon profile/WLC have been specified	FBC approval to end stage E	final schematics and sample detailed drawings	
OVERALL BUILDING ISSUE						
Fabric	U values	BCL	No further action at this stage unless there are changes			
	Air permeability	BCL	No further action at this stage unless there are changes			
Modelling	Net CO2 emission	BCL	Updated model to be produced based on final design. Corrective action if needed to be undertaken before scheme proceeds	FBC approval to end stage E	Model and interpretative report confirming design objectives have been met or corrective action needed if not.	
	Model results		Asset rating of 36 (B) for the England & Wales EPC, which is better than the maximum requirement of 40 for BREEAM Excellent. The model achieved a rating of 40 (C)	18/4/11	Reconfirm kg/CO2 /m2/annum as a result of above changes.	Revised report indicates that Scottish EPC B will be achieved but will be monitored

New Southern General Hospital Low Carbon Tracker

SECTION 3 FBC APPROVAL TO END OF DESIGN PHASE MAIN and CHILDRENS – not yet commenced						
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			for the Scottish EPC. Building's energy consumption at 40 GJ/100m3/year against NHS target of 55 Building's energy consumption at 40 GJ/100m3/year CO2 emissions at 80 kg CO2/m2/year.		Confirm what needs to change to meet Scottish B EPC rating	in next phase – move to next phase tracker
		BCL	Updated model and comparison with both design and operational targets	FBC approval to end stage E	Update full design model at this stage and update operational model with detailed equipping consumption	
WLC	Whole life cost model	BCL	Update model and check that cost plan includes for lowest whole life cost and carbon design. Check BREEAM requirements have been met	FBC approval to end stage E	Update detail of WLC cost exercise in relation to major systems	
ADB	ADB Sheets	BCL/N HSGG C	Check ADB sheets before sign off	FBC approval to end stage E	Confirm all ADBs meet low carbon objectives before sign off. Provide representative cross section for record purposes.	
INTERNAL ENVIRONMENT						
Facade	Passive	ZBP/WSP	No further action at this stage unless			

New Southern General Hospital Low Carbon Tracker

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	ventilation and facade engineering		there are changes			
Ventilation	Fresh air rates	ZBP/WSP	No further action at this stage unless there are changes			
Acoustics	Acoustics	ZBP/WSP	No further action at this stage unless there are changes			
Daylighting and glare	Daylighting	ZBP/WSP	No further action at this stage unless there are changes			
	Glare control	ZBP/WSP	No further action at this stage unless there are changes			
Internal areas		BCL	No further action at this stage unless there are changes			
NON SYSTEM RELATED ENERGY ISSUES						
Equipment	Energy consuming equipment	BCL	Generic schedule should now be replaced by actual equipping schedule and variances affecting design resolved	FBC approval to end stage E	Schedule including energy consumption and heat emissions	
		BCL	Provide tender and selections documentation confirming equipment has been selected on WLC and carbon considerations as well as performance	FBC approval to end stage E	Provide selection infomation	
Whole site energy strategy	Renewables	ZBP	No further action at this stage unless there are changes			
	Implementation of site/building energy strategy		No further action at this stage unless there are changes			
At the end of the detail design phase, all the above issues should have been addressed and any outstanding items						

New Southern General Hospital Low Carbon Tracker

SECTION 3 FBC APPROVAL TO END OF DESIGN PHASE MAIN and CHILDRENS – not yet commenced						
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from earlier phases cleared. The low carbon auditor will need to have seen all above listed detail, commented on the issues and be able to confirm to the Carbon Trust and the Board that the design meets the objectives in the employers requirements and targets.						

SECTION 4 CONSTRUCTION PHASE MAIN and CHILDRENS HOSPITALS						
ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUSTANDING ACTIONS
BUILDING SERVICES SYSTEMS						
General systems options	Energy sub metering	ZBP/WS P/ NHSGG C	No further action at this stage unless there are changes			
	Choice of filtration	ZBP	No further action at this stage unless there are changes			
	System zones	ZBP	No further action at this stage unless			

New Southern General Hospital Low Carbon Tracker

SECTION 4 CONSTRUCTION PHASE MAIN and CHILDRENS HOSPITALS						
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BUILDING SERVICES SYSTEMS						
			there are changes			
	Local controls	ZBP	No further action at this stage unless there are changes			
	Heat recovery	ZBP	No further action at this stage unless there are changes			
	High efficacy internal lighting	ZBP	No further action at this stage unless there are changes			
	Lighting control	ZBP	No further action at this stage unless there are changes			
	High efficacy external lighting	ZBP	No further action at this stage unless there are changes			
	Security lighting controls	ZBP	No further action at this stage unless there are changes			
	Fan/pump speeds	ZBP	No further action at this stage unless there are changes			
	Fan and pump selection	ZBP	No further action at this stage unless there are changes			
	Fan and pump WLC	ZBP	No further action at this stage unless there are changes			
	Renewables. Central energy supply and Combined heat and power (CHP)	ZBP	No further action at this stage unless there are changes			
	Grant funding	ZBP	No further action at this stage unless			

New Southern General Hospital Low Carbon Tracker

SECTION 4 CONSTRUCTION PHASE MAIN and CHILDRENS HOSPITALS						
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BUILDING SERVICES SYSTEMS						
			there are changes			
	Building energy management systems (BMS)	ZBP	No further action at this stage unless there are changes			
	Heat recovery	ZBP	No further action at this stage unless there are changes			
	Hot water efficiency	ZBP	No further action at this stage unless there are changes			
OVERALL BUILDING ISSUES						
Fabric	U values	NHSGG C clerk of works	Check insulation continuity through construction period	Up to building weather tight		Site report
	Air permeability	NHSGG C clerk of works	Checking integrity of building sealing	Up to building weather tight		Site report
Modelling	Net CO2 emission	BCL	Prepare as built model	Before practical completion		Final EPC
		BCL	Prepare final operational model	Before practical completion		Update operational model at this stage including any known changes in operational policy, operating hours
WLC	Whole life cost model	BCL	No further action at this stage unless there are changes			
ADB	ADB Sheets	BCL/NH SGGC	No further action at this stage unless there are changes			
INTERNAL ENVIRONMENT						

New Southern General Hospital Low Carbon Tracker

SECTION 4 CONSTRUCTION PHASE MAIN and CHILDRENS HOSPITALS						
ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUSTANDING ACTIONS
BUILDING SERVICES SYSTEMS						
Facade	Passive ventilation and façade engineering	ZBP/WS P	No further action at this stage unless there are changes			
Ventilation	Fresh air rates	ZBP/WS P	No further action at this stage unless there are changes			
Acoustics	Acoustics	ZBP/WS P	No further action at this stage unless there are changes			
Daylighting and Glare	Daylighting	ZBP/WS P	No further action at this stage unless there are changes			
	Glare control	ZBP/WS P	No further action at this stage unless there are changes			
Internal areas		BCL	No further action at this stage unless there are changes			
NON SYSTEM RELATED ENERGY ISSUES						
Equipment	Energy consuming equipment	BCL	Generic schedule should now be replaced by actual equipping schedule and variances affecting design resolved	FBC approval to end stage E		Complete any outstanding actions from previous section
		BCL	Provide tender and selections documentation confirming equipment has been selected on WLC and carbon considerations as well as performance.	FBC approval to end stage E		Complete any outstanding actions from previous section
Whole site energy strategy	Renewables	ZBP	No further action at this stage unless there are changes			
	Implementation		No further action at this stage unless			

New Southern General Hospital Low Carbon Tracker

SECTION 4 CONSTRUCTION PHASE MAIN and CHILDRENS HOSPITALS						
ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUSTANDING ACTIONS
BUILDING SERVICES SYSTEMS						
	of site /building energy strategy		there are changes			
At the end of the construction phase, all the above issues should have been addressed and any outstanding items from earlier phases cleared. The low carbon auditor will need to have seen all above listed detail, commented on the issues and be able to confirm to the Carbon Trust and the Board that the design meets the objectives in the employers requirements and targets.						

SECTION 5 COMMISSIONING PHASES MAIN and CHILDRENS HOSPITALS						
ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUSTANDING ACTIONS
BUILDING SERVICES SYSTEMS						

New Southern General Hospital Low Carbon Tracker

SECTION 5 COMMISSIONING PHASES MAIN and CHILDRENS HOSPITALS						
ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUSTANDING ACTIONS
General systems options	Energy sub metering	ZBP/WS P/ NHS GG C	Metering should now be set up and all software installed. Users trained and reporting systems installed	Prior to handover	Signed off report sheets and written method of operation, all points which will need to be measured for operational energy reporting set up and agreed. All cost and function areas set up and agreed. Users fully familiar with the system and able to derive reports.	
	Choice of filtration	ZBP	No further action at this stage unless there are changes	Prior to handover		
	System zones	ZBP	Systems zones set up and proved to operate without simultaneous heating and cooling	Prior to handover	Report sheets and written method of operation, time and temperature and	

New Southern General Hospital Low Carbon Tracker

SECTION 5 COMMISSIONING PHASES MAIN and CHILDRENS HOSPITALS						
ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUSTANDING ACTIONS
					settings recorded for each zone.	
	Local controls	ZBP	Operation of local controls checked and representative sample of rooms checked under load conditions	Prior to handover	Report sheets and written method of operation, time and temperature and settings recorded for each zone.	
	Heat recovery	ZBP	Performance testing	Prior to handover	All heat recovery to be tested to prove rated performance is achieved in situ – test sheets	
	High efficacy internal lighting	ZBP	No further action at this stage unless there are changes			
	Lighting control	ZBP	Lighting control proved to operate under varying daylight conditions, occupancy sensing proved and operational.	Prior to handover	Report sheets and written mode of operation, end users trained	
	High efficacy external lighting	ZBP	No further action at this stage unless there are changes	Prior to handover		
	Security lighting	ZBP	No further action at this stage unless	Prior to		

New Southern General Hospital Low Carbon Tracker

SECTION 5 COMMISSIONING PHASES MAIN and CHILDRENS HOSPITALS						
ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUSTANDING ACTIONS
	controls		there are changes	handover		
	Fan/pump speeds	ZBP	Inverter and speed control set up and proved under varying load conditions	Prior to handover	Report sheets and written method of operation, inverter settings recorded for each system	
	Fan and pump selection	ZBP	No further action at this stage unless there are changes	Prior to handover		
	Fan and pump WLC	ZBP	No further action at this stage unless there are changes	Prior to handover		
	Renewables. Central energy supply and Combined heat and power (CHP)	ZBP	Central plant and renewable energy systems commissioned and under maintenance contract . performance testing proves operation and carbon savings to be achieved.	Prior to handover		
	Grant funding	BPL	No further action at this stage unless there are changes			
	Boigas/ alternative fuels		Conclusion and timescale for any future installation	Prior to handover	Need to provide statement of intent or outcome of negotiations	
	Building energy management systems (BMS)	ZBP	Commissioning to be undertaken which optimises energy performance, sets up exception reporting for systems left in hand or disconnected and graphical	Prior to handover	Report sheets and demonstration to auditor	

New Southern General Hospital Low Carbon Tracker

SECTION 5 COMMISSIONING PHASES MAIN and CHILDRENS HOSPITALS						
ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUSTANDING ACTIONS
			interfaces fully set up and commissioned. Systems proved under load. BREEAM requirements have been met re man 1			
	Hot water efficiency	ZBP	No further action at this stage unless there are changes			
OVERALL BUILDING ISSUES						
Fabric	U values	NHSGG C clerk of works	No further action			
	Air permeability	NHSGG C clerk of works	Airtightness testing	Prior to handover	Site report	
Modelling	Net CO2 emission	BCL	No further action			
WLC	Whole life cost model	BCL	No further action			
ADB	ADB sheets	BCL/NH SGGC	No further action			
INTERNAL ENVIRONMENT						
Facade	Passive ventilation and façade engineering	BCL	No further action			
Ventilation	Fresh air rates	ZBP/WS P	Commissioning to demonstrate that air systems have been set up to correct flow rates and that systems are optimised for required ventilation rates	Prior to handover	Report sheets and proof of operation under load	

New Southern General Hospital Low Carbon Tracker

SECTION 5 COMMISSIONING PHASES MAIN and CHILDRENS HOSPITALS						
ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUSTANDING ACTIONS
			and free cooling.			
Acoustics	Acoustics	ZBP/WS P	Acoustic testing undertaken			
Daylighting and Glare	Daylighting	ZBP/WS P	No further action			
	Glare control	ZBP/WS P	No further action			
Internal areas		BCL	No further action			
NON SYSTEM RELATED ENERGY ISSUES						
Equipment	Energy consuming equipment	NHSGGC	Energy consuming equipment set up to optimum performance	FBC approval to end stage E	Manufacturer's set up of major items to be witnessed and evgaluated	
Whole site energy strategy	Renewable	ZBP	No further action at this stage unless there are changes			
	Implementation of site/building energy strategy		No further action at this stage unless there are changes			
At the end of the commissioning phase, all the above issues should have been addressed and any outstanding items from earlier phases cleared. The low carbon auditor will need to have seen all above listed reports, commented on the issues and be able to confirm to the Carbon Trust and the Board that the completed building meets the objectives in the employers requirements and targets.						

New Southern General Hospital Low Carbon Tracker

SECTION 6 OPERATIONAL PHASE MAIN and CHILDRENS HOPITALS						
Note ! where joint responsibility noted, this shall generally be BCL in contractual defects phase and undertaken where excess or unexpected energy use has been noted and NHSGGC beyond this phase						
ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUTSTANDING ACTIONS
ALL SYSTEMS						
General Issues	Energy sub metering	ZBP/WS P	Metering should now be set up and all software installed. Users trained and reporting systems installed	First 3 years of operat	ace	
	audits	NHSGG C	6 monthly audit procedure set up to monitor progress and reconcile any difficulties	First 3 years of operation	Audit report	
	Appointments	BCL	Suitably qualified and experienced energy specialist as specified (e.g. CIBSE Low Carbon Consultant, Carbon Trust registered consultant, chartered member of the Energy Institute, all with knowledge and experience of operational energy use in large acute hospitals allocated to the project for the three years and beyond until targets are met and remedial action completed, with sufficient time allocation to	First 3 years of operation	Confirm appointment and hours allocated to scheme. Provide progress reports	

New Southern General Hospital Low Carbon Tracker

SECTION 6 OPERATIONAL PHASE MAIN and CHILDRENS HOPITALS						
Note ! where joint responsibility noted, this shall generally be BCL in contractual defects phase and undertaken where excess or unexpected energy use has been noted and NHSGGC beyond this phase						
ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUSTANDING ACTIONS
			undertake the identified actions, working in conjunction with the Boards own energy manager			
	Remedial actions	BCL	If remedial actions identified, prepare method statement and timescale for action	First 3 years of operation	Action plan	
	Heat recovery	BCL/NH SGGC	Performance testing	First 3 years of operation /Life of building	Periodic check that operation is satisfactory	
	external lighting	BCL/NH SGGC	External lighting not on during day	First 3 years of operation /Life of building	Periodic check that operation is satisfactory	
	Fan/pump speeds	BCL/NH SGGC	Inverter and speed control set up and proved under varying load conditions	First 3 years of operation /Life of building	Periodic check that operation is satisfactory	
	Renewables. Central energy supply and Combined heat and power (CHP)	BCL/NH SGGC	Central plant and renewable energy systems commissioned and under maintenance contract . performance testing proves operation and carbon savings to be achieved.	First 3 years of operation /Life of building	Periodic check that operation and performance is satisfactory	
	Grant funding	NHSGG	Monitor funds for any further	First 3 years of	Annual check	

New Southern General Hospital Low Carbon Tracker

SECTION 6 OPERATIONAL PHASE MAIN and CHILDRENS HOPITALS						
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ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUTSTANDING ACTIONS
		C	opportunities e.g. PV	operation /Life of building		
	Biogas/ alternative fuels	NHSGG C	Conclusion and timescale for any future installation	TBA	Need to provide statement of intent or outcome of negotiations	
	Hot water efficiency	BCL/NH SGGC	Performance testing	Life of building	Periodic check that operation is satisfactory	
Fabric	U values	BCL	Thermography to ensure integrity of insulation	First 3 years of operation	Recommended if any empirical evidence of bridging/condensati on	
Modelling	Net CO2 emission	NHSGG C	Periodically update operational model as circumstances change	every 5 years	Update to reflect heated area and any major operational changes	
Lighting	Lighting controls	BCL/NH SGGC	Monitor departmental use monthly through exception reporting via BMS – i.e. any department which uses +10% of monthly target. Note target needs to be set related to proportion of internal	First 3 years of operation	Interaction with department to identify usage patterns, check	

New Southern General Hospital Low Carbon Tracker

SECTION 6 OPERATIONAL PHASE MAIN and CHILDRENS HOPITALS						
Note ! where joint responsibility noted, this shall generally be BCL in contractual defects phase and undertaken where excess or unexpected energy use has been noted and NHSGGC beyond this phase						
ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUSTANDING ACTIONS
			and daylight rooms and available daylight hours.		on correct operation of lighting controls and any occupant action to disable them. If cause isolated at higher hours of usage, uplift target	
	Behaviour and operating hours	NHSGG C	As above	First 3 years of operation	As above	
Small power	Clinical need	NHSGG C	Monitor departmental use monthly through exception reporting via BMS – i.e. any department which uses +10% of monthly target. Target set by adding up all connected equipment and applying diversity factors	First 3 years of operation	Interaction with department to identify usage patterns and connected equipment. If found to be necessary, target can be uplifted.	
	Rating of new purchased	NHSGG C	As above	First 3 years of operation /Life	Ensure equipment purchased has low	

New Southern General Hospital Low Carbon Tracker

SECTION 6 OPERATIONAL PHASE MAIN and CHILDRENS HOPITALS						
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ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUSTANDING ACTIONS
	equipment			of building	energy use, record any new equipment and notify energy manager. Implement purchasing policy	
	behaviour	NHSGG C	As above	First 3 years of operation /Life of building	Interaction with department to identify usage patterns and connected equipment. If found to be necessary, target can be amended	
Heating	External conditions	BCL/NH SGGC	Record profile through BMS. Set target based on 20 year average weather file and projected occupancy	First 3 years of operation /Life of building	No action unless energy use exceeds + 10% . Undertake weather normalisation by agreed method if +10%	

New Southern General Hospital Low Carbon Tracker

SECTION 6 OPERATIONAL PHASE MAIN and CHILDRENS HOPITALS						
Note ! where joint responsibility noted, this shall generally be BCL in contractual defects phase and undertaken where excess or unexpected energy use has been noted and NHSGGC beyond this phase						
ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUSTANDING ACTIONS
					energy use of heating energy over target detected.	
	Controls and zoning	BCL/NH SGGC	Metering - Monitor departmental or zone use monthly through exception reporting via BMS – i.e. any department or zone which uses +10% of monthly target.	First 3 years of operation /Life of building	Check controls operation. Check for simultaneous heating and cooling. Check that set points have not been altered outside allowable tolerance.	
	Maintenance and behaviour	BCL/NHS GGC	As above	First 3 years of operation/Life of building	Check that set points have not been altered outside allowable tolerance. Interact with department to check windows not opened in peak heating season to relieve overheating	

New Southern General Hospital Low Carbon Tracker

SECTION 6 OPERATIONAL PHASE MAIN and CHILDRENS HOPITALS						
Note ! where joint responsibility noted, this shall generally be BCL in contractual defects phase and undertaken where excess or unexpected energy use has been noted and NHSGGC beyond this phase						
ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUSTANDING ACTIONS
					etc. If cause isolated at higher hours of usage, uplift target	
cooling	External conditions	BCL/NH SGGC	Record profile through BMS. Set target based on 20 year average weather file and projected occupancy.	First 3 years of operation /Life of building	No action unless energy overall exceeds + 10%. Undertake weather normalisation by agreed method if +10% energy use of cooling energy over target detected.	
	Controls and zoning	BCL/NH SGGC	As above	First 3 years of operation /Life of building	Check that window and blinds are as designed and blinds/shading use is as intended. If all other explanations for excess use have	

New Southern General Hospital Low Carbon Tracker

SECTION 6 OPERATIONAL PHASE MAIN and CHILDRENS HOPITALS						
Note ! where joint responsibility noted, this shall generally be BCL in contractual defects phase and undertaken where excess or unexpected energy use has been noted and NHSGGC beyond this phase						
ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUSTANDING ACTIONS
					been eliminated, independent consultant to undertake further analysis, calculation and detailed room monitoring via BMS of room conditions and recommended remedial action	
	Internal gains	BCL/NH SGGC	As above	First 3 years of operation /Life of building	Interact with department to monitor and record occupancy levels. Correlate with equipment usage and lighting usage. If significant variance in expected occupancy	

New Southern General Hospital Low Carbon Tracker

SECTION 6 OPERATIONAL PHASE MAIN and CHILDRENS HOPITALS						
Note ! where joint responsibility noted, this shall generally be BCL in contractual defects phase and undertaken where excess or unexpected energy use has been noted and NHSGGC beyond this phase						
ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUTSTANDING ACTIONS
					level, hours of use and /or equipment use is agreed cause, uplift target.	
HWS	demand	BCL/NH	Metering - Monitor departmental use monthly through exception reporting via BMS – i.e. any department or zone which uses +10% of monthly target	First 3 years of operation/ Life of building	Interact with department to establish water use patterns. Ensure no avoidable waste or leakage. If usage reasonable, uplift target	
Central plant and distribution	Plant and system selection and efficiency	BCL/NH SGGC	Metering – monitor plant and system efficiencies monthly through exception reporting via BMS – i.e. any plant item deviating by 5% of design quoted efficiency or overall change in system distribution losses against target of +10%	First 3 years of operation /Life of building	Check plant conditions and if necessary employ specialist independent consultant to undertake detailed logging. Undertake remedial action	

New Southern General Hospital Low Carbon Tracker

SECTION 6 OPERATIONAL PHASE MAIN and CHILDRENS HOPITALS						
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ISSUE/ REFERENCE	SUB ISSUES	ISSUE OWNER	EVIDENCE AND/OR ACTION REQUIRED	DATE OR DESIGN STAGE REQUIRED	OUTCOME, DATE COMPLETED NOT COMPLETE	RECORD OF MEETINGS AND OUTSTANDING ACTIONS
					recommended by specialist	
	Controls and zoning	BCL/NH SGGC	As above	First 3 years of operation /Life of building	Check controls operation, Check that set points have not been altered outside allowable tolerance. Check for deviation from commissioned values. If no apparent cause action as above	
	maintenance	NHSGG C		Life of building	physical checks for hand operation, leakage, closed vales, breakdown of insulation	
At the end of each of the first three years of the operational phase, all the above issues should have been addressed and any outstanding items from earlier phases cleared. The low carbon auditor will need to have seen all above listed reports, commented on the issues and be able to confirm to the Carbon Trust and the Board that the completed building meets the objectives in the employers requirements and targets.						

New South Glasgow Hospitals (NSGH) Project

Adult Hospital

Clinical User Group Meeting:

Department:

Date of Meeting:

Time:

WARD USER MEETING
Attendance Sheet 30th JUNE 2011

Attendance Sheet

[illegible]

New South Glasgow Adult Hospital Project

User Group Membership & Leads for 1:50 Sign Off Stage : March - July 2011

USER GROUP	GROUP LEAD(S) shaded yellow	USER GROUP membership re-confirmed by group lead(s) Jan 2011 shaded pink		Meeting date ONLY emailed to group	Date of meeting & venue sent to group	
Critical Care	Jacquie Campbell	Sandy Binning	Alan Davidson	Y	Thursday, 24th March	Friday, 25th March
	Michelle Boyd	Eleanor Deacon	Stephen Gallacher		9 - 5	9 - 12.30
		Gregor Imrie	Andrew Kernohan		Board Room	Brookfield Conf Rm
		Marion MacDonald	Karen McKay			
		Heather McVey	Scott Muir			
		David Raeside	Barry Sillers			
		Iain Thomson	George Welch			
		Liz Thomson	David Sutton			
		Mark Quinn	Ruth Forrest			
CCU	Alan Hunter	Jacqueline Adams	Rosemary Brogan	Y	Friday, 25th March	
		Heather McVey	David Murdoch		1 - 5	
		Liz Thomson	Mitchell Lindsay		Brookfield Conf Rm	
Theatres	Jacquie Campbell	John Crawford	Ann Malloy	Y	Monday, 28th March	Tuesday, 29th March
		Nick Pace	Barry Sillers		9 - 5	9 - 5
		David Simpson	Ann Traquair Smith		Board Room	Meeting Rm 1
		Grant Urquhart	George Welch			
	Retired	David Sutton	Audrey Thompson			
		Andy Brennan	Alison Anderson			
		Ruth Forrest	Alan Girvan			
Acute Assessment Unit (AAU)	Ann Wilson	Debbie Ambridge	Stuart Bunton	Y	Thursday, 31st March	
	Michelle Boyd	Gill Donnelly	Susan McFadyen (cc to emails)		9 - 5	
		Scott Muir	Jacqueline Nicol		Board Room	
		Laura Young	Cameron Howie			
		Lesley Meikle	Wesley Stuart			
		David Raeside	Greg Jones			
		Barry Sillers	Graham Sunderland			
		Ann Ross	Angela Campbell			
		Heather McVey	Lynn Ross			
Emergency Department	Michelle Boyd	Jonny Gordon	Patrick Grant	Y	Friday, 1st April	
		Mhairi Lloyd	Heather McVey		9 - 5	
		Phil Munro	Gerry Wright		Brookfield Conf Room	
		Mike Gronski	Cathy Muir			
		Mairi Dick	Marilyn Horne			
		Joyce Brown	Andy Brennan			

USER GROUP	GROUP LEAD(S) shaded yellow	USER GROUP membership re-confirmed by group lead(s) Jan 2011 shaded pink		Meeting date ONLY emailed to group	Date of meeting & venue sent to group	
		Alan White	Debbie Ambridge			
Main Imaging Dept	Aileen MacLennan	John Crawford (added by HG)	Cathy Muir		Tuesday, 26th April	Wednesday, 27th April
		Rachel Connor	Barrie Condon		9 - 5	9 - 5
		Grace Crawford	Derek Foley		Meeting Room 1	Board Room
	[group membership rec'd from W Miller]	Mike Gronski	Iain Robertson			
		Claire Bowman	Anne Marie Sinclair			
		Chris Bell	Caroline Handley			
		Bernie Mooney	Grant Urquhart			
		Douglas Aitken	Betty McVean			
		Paul Duffy	Karen McGugan			
		Andrew Downie	Colin Campbell			
		Jean Wright	Lynn Ross			
		Winnie Miller	Marion Inglis			
		Jacquie Campbell (added by HG)	Elizabeth Macdonald			
Renal Wards and Renal Dialysis	Julia Little	Isabel (Ippy) Brown	Stewart Campbell	Y	Thursday, 12th May	Friday, 13th May
		Chris Deighan	Bill Fiske		9 - 5	9 - 12.30
		Marjorie Johns	Margaret McLucas		Board Room	Board Room
Medical Day Unit	Cath McFarlane	Rob Boulton-Jones	Susan Fraser	Y	Monday, 16th May	
		Anice Gillespie	Robbie Lindsay		9 - 12.30	
		Heather McVey	Joseph Sarvesvaran		Board Room	
		Margaret Arnott	Natasha Brown			
OPD Pre-Assessment Unit	Ann Wilson	Marilyn Horne	Janis Hughes		Monday, 16th May	
		Karen Loudon	June Ramsay		13.30 - 5.00	
		Barry Sillers	Laura Young		Board Room	
Stroke Ward	John Stuart	Janice Elliott	Gillian Alexander	Y	Tuesday, 17th May	
		Yvonne Currie	June Lawrie		9 - 5	
		Claire Stewart			Board Room	
Main Entrance & Public Areas (includes FM, spiritual care area, health promotion/information, discharge, lounge, medical records)	Elaine Burt	Claire Curtis	Dot Jardine	Y	Thursday, 19th May	Friday, 20th May
		Michelle Kirkwood	Blair Robertson		9 - 5	9 - 12.30
		Marilyn Horne	Dan Harley		Board Room	Board Room
		Mairi Dick				
Staff Change/Hotel Services/Staff Accommodation/Health Records/Staff Facilities					Monday, 23rd May	
					9 - 5	
					Board Room	

				Meeting date ONLY emailed to group		
USER GROUP	GROUP LEAD(S) shaded yellow	USER GROUP membership re-confirmed by group lead(s) Jan 2011 shaded pink			Date of meeting & <u>venue</u> sent to group	
Dermatology	Melanie McColgan	Stewart Kyle	Joyce Leman	Y	Thursday, 26th May 9 - 5 Board Room	
		Heather McVey	Susan Holmes			
		David Bilsland (cc to emails)	Felicity Campbell			
		Angela Drummond	Lorraine McGrath			
		Claire Fitzsimons (or Clare May)	Catherine Jury			
		Alex Milligan	Diane Ross			
		Lisa Naysmith (Martin Porter)	David Tillman			

USER GROUP	GROUP LEAD(S) shaded yellow	USER GROUP membership re-confirmed by group lead(s) Jan 2011 shaded pink		Meeting date ONLY emailed to group	Date of meeting & venue sent to group
Haemato-oncology	Gary Jenkins	Myra Campbell	David Dunlop	Y	Friday, 27th May
		Marjorie Johns	Anne Parker		9 - 5
		Sandy Sharp	Rosemary Twohig		Board Room
		Fiona Maclean			
Rehab Outpatients and ADL Areas	Richard Hassell	Catherine Nivison	Janice Elliott	Y	Tuesday, 31st May
					9 - 5
					Board Room
Endoscopy	Ann Wilson	Kevin Blyth	Rob Boulton-Jones	Y	Wednesday, 8th June
	Cath McFarlane	Derek Gillen	Rebecca Reid		9 - 12.30
		Barry Sillers	Alan Stewart		Board Room
		Irene Ramsay	Susan McFadyen		
		Heather Brannan			
General Outpatients	Ann Wilson	Janis Hughes	Karen Loudon		Friday, 10th June
		June Ramsay	Barry Sillers		9 - 12.30
		Diane Wink (Morag Busby)	Laura Young		Board Room
		Marilyn Horne	Mairi Dick cc only		
		Heather McVey cc only			
Cardiac O/p & Cardiac Rehab	Alan Hunter	Rosemary Brogan	Margaret Gray		Friday, 10th June
		Heather McVey	David Murdoch		1.30 - 3.30
		Lynne Scott	Myra McKenna		Board Room
		Elaine Walls			
Respiratory Lab / Investigations	Cath McFarlane	Heather McVey	Kevin Blyth		Friday, 10th June
		Anice Gillespie	Dave Anderson		3.45 - 5.00
		Roger Carter	Patricia Lynas		Board Room
		Nargis Mustafa			
Ophthalmology	Susan Groom	Iain Bryce	MacCormick, Sharon		Monday, 13th June
		Lisa Cowan	Trish McDonnell		9 - 12.30
		Mary Cunningham	Rachel McKay		Board Room
		Charles Diaper	Fiona Rogan		
		Lorraine Shields	Barry Sillers		
Urology	Ann Wilson	Graeme Conn	Michael Fraser		Monday, 13th June
		Frances McLinden	Grenville Oades		1.30 - 3
		Barry Sillers			Board Room

USER GROUP	GROUP LEAD(S) shaded yellow	USER GROUP membership re-confirmed by group lead(s) Jan 2011 shaded pink		Meeting date ONLY emailed to group	Date of meeting & venue sent to group	
ENT	Susan Groom	Mary Cunningham	Anne Hitchings		Monday, 13th June 3.30 - 5 Board Room	
		Alison Kennedy	Forbes Lauder			
		Trish McDonnell	Alasdair Robertson			
		Fiona Rogan	Barry Sillers			
Diabetes	Cath McFarlane	Stephen Gallacher	Andrew Gallagher		Tuesday, 14th June 9 - 10.30 Board Room	
		Anice Gillespie	Heather McVey			
		Janice Quinn (has moved post - he has passed details to David Wylie)	Ann Boal			
Orthopaedics	Susan Groom	Barry Sillers	Diane Wink		Tuesday, 14th June 11 - 1 Board Room	
		Linda Blair	Ruth McIntyre			
		Dominic Meek	Margaret Kerr			
		Mary Morrison				
Generic Wards	John Stuart	Rob Boulton-Jones	Gill Donnelly	Y	Thursday, 30th June 9 - 5 Board Room	Friday, 1st July 9 - 5 Board Room
		Morag Busby	Catherine Nivison			
		Mary Cunningham	Maureen White			
		Linda Robertson	Theresa (Sophia) Boyle			
		Janice Elliott	Brenda Byrom			
		Golin Cuthbertson				

New South Glasgow Hospitals (NSGH) Project

Adult Hospital

Clinical User Group Meeting: INTERNAL WARD USER
Department: GROUP MEETING.
Date of Meeting: 27th JULY 2011
Time: Attendance Sheet

[illegible]



New Southern General Hospitals

Early Warnings #10495

Status: Closed

Notification

Raised By

GGC01.NSGLP.sfrew on 9 Aug 2011

Raised To

BCL01

Title

NHS EW 038 - Carbon Filters - A&C Hospitals

Probability

Even Chance

Risk Score

12

Potential Solutions

N/A

Description

The Board advise that they do not want carbon filters installed in the new A & C Hospitals. The Board however wish to retain the option to have carbon filters installed into the Air Handling Units.

Suggested Response

Agreed at EW meeting on 17/11 that EW to be closed as superceded by PMI 126

Date Closed

17 Nov 2011



New Southern General Hospitals

Early Warnings #11379

Status: Closed

Notification

Raised By

GGC01.NSGLP.sfrew on 16 Nov 2011

Raised To

BCL01

Title

NHS EW 040 - A&C Hospitals - Omission of Carbon Filters

Probability

Even Chance

Risk Score

12

Potential Solutions

N/A

Description

The Board advise that they do not want carbon filters installed to the A&C Hospitals. (Cross reference EW 036). The Board wish to understand the cost saving of a) not fitting carbon filters to Air Handling Units which allow for the Carbon Filters to be

Suggested Response

The Early Warning was cancelled by the NHS Team.

Date Closed

17 Nov 2011

New Southern General Hospitals

Project Management Instruction Report

Notify

ID	659	Notified by	GGC01.sfrew on 21/11/2011 11:44:52
Notified to	BCL01-Brookfield Construction Limited	Date notified	21/11/2011
Date response required	05/12/2011		
Title	PMI/General/126 - A&C Hospitals - Omission of Carbon Filters		
Description	The Board advise that they do not want carbon filters installed to the A&C Hospitals. (Cross reference EW 036). The Board wish to understand the cost saving of a) not fitting carbon filters to Air Handling Units which allow for the Carbon Filters to be retro-fitted and b) omission of carbon filters completely and fitting of air handling units which do not require carbon filters nor have the infrastructure for retro-fitting carbon filters.		
Instruction	The Board advise that they do not want carbon filters installed to the A&C Hospitals. (Cross reference EW 036). The Board wish to understand the cost saving of a) not fitting carbon filters to Air Handling Units which allow for the Carbon Filters to be retro-fitted and b) omission of carbon filters completely and fitting of air handling units which do not require carbon filters nor have the infrastructure for retro-fitting carbon filters.		
Status	None	Cancel PMI	None

Meeting

Documents

Notes

Contractors Method Statement Appraisal Sheet

PROJECT: NSGH		ACTIVITY:
CONTRACTOR: Mercury / H&V Commissioning		M & E
DOCUMENT	Ref No	: 0037-MS-MER-GB-10008-000
	Title	: Pre Commission, Test & Balance supply & Extract Ventilation.
LEAD REVIEWER		: Sinead Rogan

Content	N/A	Yes	No	Comments
1 Scope of Works				
Sequence and Method of Work – Step by Step		X		
Location of work		X		
Co-ordination between trades		X		
Temporary works – Excavations, scaffolds, form work etc	X			
Description of tools to be used		X		
Access equipment detailed – MEWPS, Podiums, Towers etc.		X		
Means of lifting and fixing location	X			
Barrier and signage required		X		
Reference drawings	X			
Specific Site Instructions relevant to activity eg. codes of practice		X		
Permits to work referenced – Hot works, Excavation etc.	X			
Temporary Works	X			
2 Risk Assessment				
Is the risk assessment site / task specific (Not Generic)		X		
Does the risk assessment follow the HSE guidance 5 steps to risk assessment?		X		
PPE – Mandatory & Task specific		X		
Manual Handling Risk Assessment		X		
Complete RA/s for task included in method statement		X		
Specific training (eg MEWP, confined spaces, PASMA)		X		
3 Supervision				
Nominated supervisor / MEWP Coordinator		X		
Training requirements		X		
Nominated supervisor for method statement briefing		X		

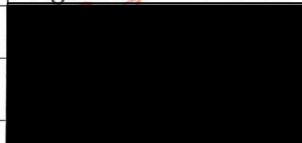
Template Details		Uncontrolled when printed		
Date	21/4/12	Author	IA	Page 1 of 2
A52399188		Rev	00	

Contractors Method Statement Appraisal Sheet

Content	N/A	Yes	No	Comments
4 Supporting Documentation				
Relevant specifications - BS, pressures, sizes, lengths etc	X			
Calculations	X			
5 Health, Safety and Environmental				
Identify hazards and risks - HAVS, falls, fall of materials, noise, manual handling etc		X		
All relevant assessments referenced, listed and attached to the method statement.		X		
Details of control measures chosen – Hierarchy of controls taken into consideration.		X		
All relevant COSHH assessment & MSDS listed and attached		X		
Material security and storage		X		
Material transportation - Manual Handling Assessment		X		
Disposal methods – General / special waste		X		
Environmental – spill control, emergency procedures etc	X			
Environmental neighbours – Noise, vibration, dust etc	X			
6 Training Requirements				
Specific training - IPAF, PASMA, CPCS, CISRS etc		X		
Key personnel requirements - HVAC, gas safe etc	X			
7 Emergency Requirements				
Fire requirements (ie. exit routes, placement of extinguishers)		X		
Accident procedures		X		
Emergency evacuation – general, rescue arrangements.		X		
Emergency evacuation special requirements ie. confined spaces		X		
First aiders named		X		
Out of hours working – Supervision, first aid etc.		X		
Environmental – spill kits, method of disposal, Segregation, plant nappies etc.	X			

Submission to Brookfield Multiplex

This method statement has been reviewed and deemed to be at an “A” status.

	Name	Signature	Date
Contractors Package / Project Manager	Sinead Rogan		04/04/13
Contractors H&S Manager / Senior Manager	Noelle Sheridan		04/04/13
Specialist – Temporary works, appointed person, MEWPs Coordinator etc.			

Template Details		Uncontrolled when printed	
Date	21/4/12	Author	IA
		Rev	00

**METHOD STATEMENT No. 1173 for
H&V Commissioning Services Ltd**

SYSTEM: Supply & Extract Ventilation as detailed within Section 11
PROJECT: New Southern General Hospital – Adult & Childrens Hospital

I have read and fully understand the risk assessments and method statement for the following work to be carried out, and that I must adhere to the control measures and safe methods contained therein.

[illegible]

Method Statement Sign Off Status

H&V Commissioning Services Ltd	CLIENT NAME: Mercury Engineering Ltd
Signed	Signed
Date	Date
Method Statement Status.	
Method Statement Status Legend A. Ok to proceed with works. B. Ok to proceed with works taking into account any comments given by our client. C. Rejected, and to be re submitted with changes based on comments received.	

Document Index

Section 1	Scope of Works	Section 13	Emergency Arrangements
Section 2	Sequence of Operations	Section 14	Communications
Section 3	Hazard Identification / Risk Assessment	Section 15	Personnel Protective Equipment
Section 4	Preventative & Protective Measures	Section 16	Power
Section 5	Training Information & Instruction	Section 17	Lighting
Section 6	Supervision & Resources	Section 18	Working Platforms
Section 7	Materials	Section 19	Excavations
Section 8	Plant & Equipment	Section 20	Fire
Section 9	Access / Egress	Section 21	Information & Inspection
Section 10	Environmental & Waste Management	Section 22	Monitoring
Section 11	Technical Information	Appendix 1	Risk Assessment
Section 12	Third Party Protection		

**METHOD STATEMENT No. 1173 for
H&V Commissioning Services Ltd**

Section 1. Scope Of Works

To pre commission, test and balance the Supply & Extract ventilation systems installed as part of our client's mechanical Services installation. All works carried out in line with current Chartered Institute of Building Services Engineers (CIBSE) guidelines and in accordance with the National guidelines set out by the Commissioning Specialists Association. (CSA)

Section 2. Sequence Of Operations

Pre Commissioning Activity

Pre commissioning of each system will take place to ensure that all items of plant and equipment are installed in line with the manufacturers and design engineer's requirements. A pre commissioning sheet will be utilised for each system and in the event that systems are not statically complete a punch list will be issued to our client for their actions. The punch list will be in the form of an engineers daily report which shall be issued by the H&V Commissioning Engineer.

Pre Commissioning activities will be carried out are shown below.

AIR SYSTEMS PRE COMMISSIONING SHEET		✓	X	N/A
1.	Check AHU/fan for damage and that all the components are secure			
2.	Check the transit straps have been removed, if applicable			
3.	Check pulleys are secure, tight, aligned and belts are correctly tensioned, if applicable			
4.	Check with the controls engineer that the system is available to run and that plant rotation is correct			
5.	Check all ductwork/air terminals are fitted and that air regulating dampers are open			
6.	Check louvres are fitted and clear from obstructions, if applicable			
7.	Check fire dampers are open, if applicable			
8.	Check the motor overloads are suitable and set			
9.	Check VAV or CAV boxes are installed correctly and ready for use.			
10.	Check the floor plenums are complete, if applicable			
11.	Complete commissioning test sheets.			

Upon the Pre- Commissioning being completed to a standard that is acceptable to the commissioning manager the next phase will be setting the plant to work.

Setting to Work

Setting to work of the systems will take place upon completion of the pre-commissioning phase of the works. The setting to work process will involve the Automatic controls contractor who shall provide assistance in energising all required plant and equipment.

All drive motor running currents will be measured at start up and after one hour to ensure that the running currents do not exceed the motor full load current as shown on the motor data plate.

In the event that there is a problem with the drive motor running current the plant will be isolated and a punch list type report shall be issued to our client for action accordingly.

Upon the drive motor running currents being within the acceptable tolerances the next phase of the commissioning shall take place.

**METHOD STATEMENT No. 1173 for
H&V Commissioning Services Ltd**

Testing & Balancing

A main Pitot traverse or a series of Pitot traverses shall be taken with the systems running at full speed to determine the plant total airflows. The static pressures across the plant shall be recorded for record purposes at this stage. All test holes drilled shall have test plugs and stickers fitted for future reference.

Upon the plant producing in excess of design airflow (more than 120%) the air volume shall be regulated by means of the Variable Speed Drive Mechanisms or by use of a main volume control damper as applicable. (In the event that the plant is not producing the design air volume a punch list type report shall be submitted to our client accordingly which shall include a pressure profile across the plant items and system)

An initial reading shall be recorded at each air terminal using suitably selected instruments depending on the terminal type; this is done to identify the system index terminal. Pitot traverses shall be taken at various locations and used to create correction factors as required for the various air terminals on the systems. For open-ends/bellmouths an anemometer reading/scan will be carried out and a test hole to prove the free area. For grilles/diffusers a Balometer will be used and again a test hole will be taken to prove Balometer accuracy/factor. On smaller grilles (in toilets etc) a face velocity at the grille will be taken and will again this will be backed-up by a test hole to prove the grille factor. A pressure will be recorded at the Chilled Beam and related to manufacturers pressure/volume conversion chart. A selection of Chilled Beams will also be traversed to prove the Chilled Beam volumes.

Within Theatre's, Isolation Rooms and any other Pressure regime requirement areas, a set of pressures will be recorded in the 1st instance to establish the profile, we will then discuss the best way forward to achieve required pressures should they be out with spec as it could be reducing Extract or increasing Supply, the Design Team will advise the next stage.

The balancing of the system takes place by regulating all terminal volume control dampers and subsequent sub branch volume control dampers, ensuring that the index % flow does not exceed that of any other terminal device. Any sub branch that has a sub branch volume control damper shall also have an index circuit, as per the national standards agreed with CIBSE/CSA

When the balancing phase is complete a full scan of each terminal shall take place to record the final flow rates, all flow rates shall be recorded onto a terminal balance test sheet, example as shown below. Final Pitot traverses shall be taken to prove total air volumes and air volumes to prove terminal correction factors. All plant pressures shall be retaken along with all plant speeds and drive motor running currents and all VCD's will be marked and locked in their regulated position.

Example Terminal Balance Test Sheet

Grille Ref ,Size & Area			Design Data		Test Data			
N ^o	Size (mm)	Free Area (m ²)	Volume (m ³ /s)	Velocity (m/s)	Initial Velocity (m/s)	Final Velocity (m/s)	Volume (m ³ /s)	% Design
SG1	200x200	0.038	0.0700	1.8400	2.8	2.0	0.07600	109
SG2	400x300	0.0855	0.1800	2.1000	1.800	2.100	0.1800	100
SG3	300x300	0.08	0.2000	2.500	2.700	2.700	0.0800	100
SG4	200Ø	0.0251	0.0566	2.2500	3.000	2.400	0.0602	106

**METHOD STATEMENT No. 1173 for
H&V Commissioning Services Ltd**

Witnessing / Sign off & Handover

Complete all hand written test sheets and provide to Mercury for comment. If Mercury have any comments, these must be rectified within 24hrs to allow submittal to Brookfield Multiplex Commissioning Manager (BM.CM) to allow comment / witness arrangements. When Mercury are satisfied then the completed hand written test sheets will be passed to BM.CM for any comments. If BM.CM has any comments, these must be rectified within 24hrs to allow witness arrangements. When a suitable time and date has been arranged, the Commissioning Specialist must be fully prepared for the witnessing party, i.e. all AHU's, Fans operational and set to desired values as per the test sheets, all instrumentation at desired location and all relevant test sheets at hand.

The percentage of the system witnessed will be dictated by the witnessing team until they are satisfied.

When the witnessing team are satisfied, the Commissioning Specialist must have their witnessing sheet signed off by all relevant parties. The completed and signed off test sheets must be copied and provided to MCM, these will then be forwarded to BM.CM.

The Commissioning Specialist must then have their test sheets typed up. The typed test sheets should be sent to MCM no later than one week from sign off.

If MCM have comments, these must be rectified within 24hrs to allow submittal to BM.CM to allow comment.

The Commissioning Specialist must complete their tracker to show the completion and successful sign off and pass updated tracker to MCM.

Section 3. Hazard Identification / Risk Assessment

The works are non hazardous to the operatives or third parties.

Refer to RA at the rear of this MS for further information.

Section 4. Preventative & Protective Measures

No special preventative or protective measures are required during the Pre Commissioning, adjustment or airflow testing process.

Section 5. Training Information & Instruction

No special training or instruction is required during the installation process.

All engineers and trainees who are employed by H&V Commissioning Services Ltd take part in the companies in house continual professional development programme and all engineers are graded in line with the Commissioning Specialists Association.

H&V Commissioning Services Ltd will only accept any instruction from our client during the Pre Commissioning, adjustment or airflow testing process, no instruction from any third party will be taken without agreement being confirmed by our client.

Section 6. Supervision & Resources
On Site Manager: Chris Shearer

The operatives undertaking this work are fully trained and require minimal supervision; however, our Chris Shearer will be overseeing all works and liaising with Mercury. The works will normally be carried out in a team of an engineer and trainee. This may increase due to programme constraints. Any increase in resource will be dictated to us by Mercury accordingly.

Section 7. Materials

Not Applicable

**METHOD STATEMENT No. 1173 for
H&V Commissioning Services Ltd**

Section 8. Plant & Equipment

Hand Tools.

Calibrated Anemometer

Calibrated Micromanometer

Calibrated Balometer

Calibrated Tachometer and Amprobe. All Cal Certs will be issued to BMCE CM prior to any Commissioning works

Podium access will be used where feasible and step ladders will be used as a last resort and a permit will be obtained if required. Our access to heights requirements is normally 20 – 30 seconds in duration and a suitable method statement/risk assessment will be provided to qualify same.

Section 9. Access / Egress

Access to the site will be via routes set out and detailed within the site induction and other marked routes to which all engineers will be given prior to working on site.

If keys or access passes are required, authorised persons may sign these out from the relevant contractor. These keys/passes will be returned before leaving site.

Section 10. Environmental & Waste Management

There are no hazardous materials or substances used during the works.

Section 11. Technical Information

List of systems that this method statement is applicable to is shown below. All design data and technical information is as per the services consultant's equipment schedules which are available through our client.

Plantroom 21 Systems will be Commissioned as per the Commissioning Programme and a weekly tracker will be provided to Mercury advising exact status of each individual system as per the Commissioning Programme.

Plantrooms 31, 32, 33, 22, 121, 122, 123, 124 & 41 will be commissioned as per Plantroom 21 strategy with regards to Commissioning Programme Tracker document.

Section 12. Third Party Protection

All works carried out shall take into account others working within the same area and neighbouring areas with regard to noise, dust and emissions.

Third parties shall be fully informed of the works being carried out.

Section 13. Emergency Arrangements

Our client shall be advised in the event of any emergency, all procedures shall be in accordance with the site induction.

Section 14. Communications

Mobile Phone Usage

The use of mobile phones will be restricted whilst the works are taking place.

**METHOD STATEMENT No. 1173 for
H&V Commissioning Services Ltd**

Section 15. Personnel Protective Equipment

The work is non hazardous and standard PPE is required.

Hard Hat (with chin strap)
Safety Footwear
Hi-Viz Jacket
Safety Glasses & Safety Gloves

Section 16. Power

No temporary power is required for the works.

Section 17. Lighting

Temporary lighting is not a requirement as Commissioning works is generally in completed area's, however, if required task lighting shall be utilised.

Section 18. Working Platforms

Podium access will be used where feasible and step ladders will be used as a last resort and a permit will be obtained if required. Our access to heights requirements is normally 20 – 30 seconds in duration and a suitable method statement/risk assessment will be provided to qualify same.

All operatives are trained in the safe use of step ladders and podium access equipment.

Section 19. Excavations

Not Applicable

Section 20. Fire

In result of the fire alarms system being activated operatives should leave the building via the nearest available exit and make our way to the Fire Assembly point, as identified in the site induction.

Do not leave the Fire Assembly point until instructed to do so

Section 21. Information & Inspection

Complete all hand written test sheets and provide to Mercury for comment. If Mercury have any comments, these must be rectified within 24hrs to allow submittal to Brookfield Multiplex Commissioning Manager (BM.CM) to allow comment / witness arrangements. When Mercury are satisfied then the completed hand written test sheets will be passed to BM.CM for any comments. If BM.CM has any comments, these must be rectified within 24hrs to allow witness arrangements. When a suitable time and date has been arranged, the Commissioning Specialist must be fully prepared for the witnessing party, i.e. all AHU's, Fans operational and set to desired values as per the test sheets, all instrumentation at desired location and all relevant test sheets at hand.

The percentage of the system witnessed will be dictated by the witnessing team until they are satisfied. When the witnessing team are satisfied, the Commissioning Specialist must have their witnessing sheet signed off by all relevant parties. The completed and signed off test sheets must be copied and provided to MCM, these will then be forwarded to BM.CM.

The Commissioning Specialist must then have their test sheets typed up. The typed test sheets should be sent to MCM no later than one week from sign off.

If MCM have comments, these must be rectified within 24hrs to allow submittal to BM.CM to allow comment.

The Commissioning Specialist must complete their tracker to show the completion and successful sign off and pass updated tracker to MCM.

Section 22. Monitoring

Monitoring of the works will be by our client as and when they deem necessary

**METHOD STATEMENT No. 1173 for
H&V Commissioning Services Ltd**

Appendix 1

Risk Assessments and Assessment Matrix

Listed below are the tasks and associated risks for the works associated with the above method statement.

Activity	Risk	Measures Taken to Reduce Risk	Likelihood	Severity	Risk Score	Further Action Required
Using Battery Drills	Eye Injury	The use of safety glasses will reduce the risk of injury	1	5	5	No
Working from Podiums & Step Ladders	Falls from Heights of approx 2m	Step ladders will only be used when all other forms of access have been considered by the Supervisor and have been deemed not practical. Permits will be obtained for steps prior to use on site.	1	5	5	No
Recording Plant Speeds	Moving parts/Physical Injury	Two man operation, no loose clothing and operatives are fully trained to carry out the works	1	5	5	No
Recording Motor Running Currents	Electric Shock	Two man operation. All plant to be isolated prior to clamp meter being used on any phase. Operatives are fully trained to carry out the works.	1	5	5	No
Manual Handling	Physical Injury	No instrument or commissioning activity involves the manual handling of any equipment over 5kg	1	5	5	No

Likelihood

5					
4					
3					
2					
1					
	1	2	3	4	5

Severity

Risk Score 1-5. Acceptable no further action required.

Risk Score 6-9. Further actions should be taken as far as reasonably particle to reduce the risk score further.

Risk Score 10 or above. Not acceptable. Works not to proceed until measures are in place to reduce the risk score.



New Southern General Hospitals

Project Manager Instruction #945

Status: Accepted

Notification

Raised By

GGC01.NSGLP.pmoir on 26 Apr 2012 5:07PM

Raised To

BCL01

Response Required By

10 May 2012 12:00AM

Title

PMI 157 ADULT & CHILDRENS HOSPITAL - CARBON FILTERS

Description

The Board confirm the deletion of carbon filters.

Instruction

Delete provision and installation of carbon filters and filter support infrastructure for the Adult and Children's Hospitals. All associated air handling equipment should be re-sized to suit and this may include fan motor size. Please provide associated cost saving.



New Southern General Hospitals

Project Manager Instruction #1106

Status: Accepted

Notification

Raised By

GGC01.NSGLP.sfrew on 21 Jun 2012 5:12PM

Raised To

BCL01

Response Required By

5 Jul 2012 12:00AM

Title

PMI 172 - Ward Tower Ventilation

Description

The Board confirm that following detailed review thermal wheels can be installed in the Adult Ward tower ventilation in lieu of plate heat exchangers to secure the energy reduction benefits identified.

Instruction

As above

New South Glasgow Hospital Project
Installation of Taps
27th July 2012

1. Introduction

The purpose of this paper is to present a short review on the proposed taps for installation within the New South Glasgow Hospitals. The paper explores functionality, maintenance and infection a control issues and the outcome of a small benchmarking exercise with NHS Fife and NHS Lanarkshire.

2. Horne Optitherm Tap

The tap is designed with a dual lever arrangement which allows the tap to be operated by using the thumb then turned off using the elbow or upper forearm. There is a thermostatic mixer valve (TMV) integral to the tap with cold water bypass (cold water tap). Key components such as strainers or the thermostatic cartridge can be accessed without moving the tap or any panelling to allow maintenance programmes to be carried out. This differs from the standard design of other hospital taps which require the need to remove IPS panels to access components for maintenance purposes which in turn can interrupt clinical activity.

Testing and sampling for micro-biological analysis can be carried out in situ with the use of the manufacturers 'Flushing kit'. The manufacturer recommends the use of 'Thermal Disinfection' of the tap instead of chemical disinfection, commonly used for other taps within NHS G&C, as they believe chemical disinfection will degrade the components inside the Optitherm tap.

Clinical Functionality

It is proposed to install the Horne Optitherm thermostatic tap for clinical use within both the adult and childrens hospitals at all clinical wash hand basins and scrub sinks. The design of the dual lever arrangement allows the tap to be operated by using the thumb then turned off using the elbow or upper forearm. There appear to be no issues in relation to performing a clinical hand wash or full surgical scrub.

Benchmarking

The Horne Optitherm tap has been installed in Monklands Hospital Lanarkshire and in the Vale of Leven Theatre Suite. Both sites have given positive feedback in terms of clinical usability, infection control & domestic cleaning. No maintenance issues were reported. The ICN from Vale of Leven (Alison Edwardson) provided information direct from the company who have recommended thermal disinfection of the taps instead of chemical disinfection which is currently used for other taps. Monklands have reported that this has not been an issue in practice. Other positives raised by the infection control team were; despite frequent splashing the taps showed no signs of corroding or losing surface plating. This is important as once the tap starts to corrode or loses the plating it requires to be replaced as adequate cleaning cannot be achieved. The internal mechanism is 'nurse proof' and over tightening of the tap is not a problem, which has proved to be an issue causing leaking taps in other tap designs within NHS G&C. Maintenance is straightforward, especially as the TMV is easily accessible and removing the IPS panel is unnecessary therefore disruption in the clinical area is minimal. Richard Fox (Senior Infection Control Nurse) at Monklands did however advise that we accept the training sessions offered by the company to train staff on the use of the taps as the design is different from what we currently use.

3. Armitage Shanks Disabled Basin Tap

Armitage shanks taps have been installed over many years in a number of areas across NHSGG&C. The current style of tap has been installed within the public areas of the new laboratory building and meets relevant SHTM guidance.

Benchmarking

The tap has been installed in the New Victoria Hospital in Kirkcaldy. Following routine water monitoring which found unacceptable levels of *Pseudomonas*, chemical disinfection of the taps went ahead and afterwards around 200 taps started to 'scream'. The users and patients complained that the noise was intolerable. Currently the estates team are now in the process of taking the taps apart and lubricating them. NHS Fife have also advised hard pipe to all the taps as some had flexi tubing feeding the tap and it is thought that bio film build up is easier there than hard pipe. NHS Fife infection control colleagues have informed that were certain hypotheses for the *pseudomonas* problem.

- taps were not stored properly and were fitted contaminated
- taps were contaminated during the fitting process
- the machining of the tap components were sub standard in the batch fitted in the admissions area (these taps are elsewhere in the hospital and are not 'screaming').

The NHS Fife ICN recently attended a national decontamination meeting and met a colleague from Portlaoine who has been involved in the investigation into the *Pseudomonas* outbreaks in the neonatal units in Ireland. Apparently the bio film was so thick it looked like pus lining the pipe work and tap lumens. One of the problems he highlighted was that the nozzle/exit where the water comes out has a component that manages the flow of the water. Therefore the water comes straight down the middle and does not flush the whole nozzle which could result in bio film build up. This would be addressed in NHSGG&C within the policy for regular flushing of taps to reduce the risk of pipe work system contamination.

4. Markwick Sensor Tap

Markwick manual taps are currently installed in a number of clinical areas in NHSGG&C. There are ongoing issues with internal component replacement which is not relevant in the sensor tap.

5. Infection Control

Infection control reviewed the taps with reference to the recently published guidance from HFS, HPS and *Pseudomonas aeruginosa* and Water (Scotland) Group '*Guidance for neonatal units (NNUs) (levels 1,2 & 3), adult and paediatric intensive care units (ICUs) in Scotland to minimise the risk of Pseudomonas aeruginosa infection from water*' (Draft 5). From an infection control viewpoint it combines guidance that dovetails with the currently existing documents – SHTM 04-01, CEL 02(2012) and the control of legionella advice.

The document breaks the guidance into 6 Critical Control Point (CCPs).

1. The Hospital Water Delivery System

Taps can be contaminated from a contaminated or poor quality water supply. The New South Glasgow Hospital has filters on the supply thus improving the quality of the water. Taps that sit at dead legs will be avoided as the end of line in wards and departments will be rooms such as dirty utilities and toilets which are frequently used.

2. Flushing taps to reduce the risk of pipe work system contamination

GG&C currently has in place a policy of regular flushing of wash hand basins and sinks. This would be expected practice regardless of tap type. It is highlighted in the guidance that taps should have integral thermostatic control and that thermostatic mixer valves be located closer to the outlet. The proposed Horne Optitherm tap meets these criteria.

It is accepted that the pre-handover programme will incorporate regular flushing of the water system by the contractors.

3. Preventing direct water usage colonising/infecting vulnerable patients and

4. Preventing indirect contact with *Pseudomonas aeruginosa* from colonising/infecting patients.

This is guidance directly aimed at nursing care and will not be expanded upon in this paper.

5. Preparedness for Clinical Incidents and Earliest possible detection.

Should there be a clinical incident, patient care procedures would be reviewed and the water maintenance programme/water safety plan checked.

It is accepted that staff will comply with the policies and procedures set by GG&C and that a robust maintenance programme for the build will be kept current and available for review if required.

6. Prompt investigation and control measure application for any clinical incidents.

The ICT and estates/facilities are expected to work together and meet on a regular basis to ensure the water safety plan is adhered to. Part of the safety plan is to install the appropriate taps. The taps under review would meet the criteria.

6. Summary

TAP	INSTALLATION	POINTS TO CONSIDER
Horne Optitherm	Clinical wash hand basins Scrub sinks Pantry wash hand basin	Thermal disinfection is recommended by the manufacturer. Chemical disinfection not recommended - will degrade internal components within the tap.
Markwick Sensor Tap	Public areas ? Staff toilets & staff change	Nil noted
Armitage Shanks disabled basin tap	Patients en-suites Assisted bathrooms	'Screaming' taps following chemical disinfection. Likely to be related to manufacturing, storage or installation issues.
Need to consider the type of tap for equipment wash up sink, discard sink in clean utility, & treatment sinks in dermatology.		

From: [David Hall](#)
To: [Powrie Ian \(NHS GREATER GLASGOW & CLYDE\)](#); [Barmannroy, Jackie](#)
Cc: [Seabourne, Alan](#); [Mccluskey Fiona \(NHS GREATER GLASGOW & CLYDE\)](#); [Moir, Peter \(NHS GREATER GLASGOW & CLYDE\)](#)
Subject: Re: Consultation: Guidance to minimise the risk of Pseudomonas aeruginosa infection from water
Date: 06 August 2012 10:34:16

Jackie,

I have already met with Ian this morning. Happy to run through with yourself,

David Hall
 Director
 Currie & Brown UK Limited

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

From: "Stewart, Jackie"

To: David Hall

Cc: Alan Seabourne

Cc: Fiona McCluskey

To: Ian Powrie

Cc: Peter Moir

Sent: 06/08/2012 09:44:41

Subject: RE: Consultation: Guidance to minimise the risk of Pseudomonas aeruginosa infection from water

Morning,

Can I suggest that I come along - if nothing else to get your comments for feedback? I need to get these to Sandra McNamee by Thursday.

Kind regards,

Jackie.

From: Powrie, Ian
 Sent: 03 August 2012 17:19
 To: 'David Hall'

Cc: Seabourne, Alan; McCluskey, Fiona; Stewart, Jackie; Moir, Peter

Subject: RE: Consultation: Guidance to minimise the risk of Pseudomonas aeruginosa infection from water

Thanks David

I would be happy to meet to review these issues later my aim here is to ensure that we have the correct information to apply chemical disinfectants appropriately & correctly with no risk to what will be a substantial number of devices in a complex distribution system.

Regards

Ian

I.Powrie

NSGH Technical Liaison

From: David Hall

Sent: 03 August 2012 16:58

To: Powrie, Ian

Cc: Seabourne, Alan; McCluskey, Fiona; Stewart, Jackie; Moir, Peter

Subject: RE: Consultation: Guidance to minimise the risk of Pseudomonas aeruginosa infection from water

Ian,

Horne have provided a response on this matter and I will happily go through this with you and if necessary we can get Brookfield to arrange a further meeting , however Angus Horne has stated "There are no materials or components in any of our products which makes them peculiarly susceptible to chemical damage".

He goes on to state that in isolated cases where damage has occurred " I think that what has really happened is that chemicals which have traditionally been used in the food production process sector have been offered as pipework sanitizing chemicals but insufficient consideration has been given to the fact that the materials of which a domestic water system is typically composed are substantially different from those found in process applications."

he goes on to say

"However I would not wish to cause any undue alarm on this point and would suggest that it is a risk easily managed and controlled once understood. Domestic pipework systems in healthcare applications are widely, if not universally, occasionally exposed to chemical disinfectants and the correct use of the appropriate chemical should pose no risk whatsoever. "

Regards

David

David B Hall
FCIOB MAPM
Director

Currie & Brown UK Limited
Scotland Hub
Building 3,
2 Parklands Avenue
Maxim Office Park
Eurocentral
Lanarkshire
ML1 4 WQ

Web: www.curriebrown.com
(<http://www.curriebrown.com/>)

Please follow the following link for details:

<http://www.curriebrown.com/scotlandhub>

Registered in England and Wales
Currie & Brown UK Limited
Company No 1300409
Registered office: Dashwood House
69 Old Broad Street
London EC2M 1QS
>>> "Powrie, Ian"
Thanks David

I am comfortable with this, however do Horne have and standard operating procedure to follow to meet what they have termed the "correct processes & concentration of product"? Particularly relating to chlorine, chlorine dioxide & silver peroxide products commonly used within the NHS? if so how does Horne's recommended processes & concentrations compare with the manufacturers recommendations for effective disinfection, using these products?

If not do Horne accept the manufacturers recommended processes & concentrations for the above products as being correct?

I think it would be desirable to obtain from Horne details of a list of products they deem safe for use with the Opti-therm and what they deem

to be the correct processes & concentration of each of these products?

We will need clarity over this to ensure

1. That these processes and concentrations will provide effective disinfection.
2. That both the installer and NHS GG&C work within these limits during commissioning and for future shock dosing of systems requiring disinfection once operational.

Regards

Ian

I. Powrie

NSGH Technical Liaison

From: David Hall
Sent: 03 August 2012 14:49
To: Powrie, Ian
Cc: Seabourne, Alan; McCluskey, Fiona; Stewart, Jackie; Moir, Peter
Subject: RE: Consultation: Guidance to minimise the risk of Pseudomonas aeruginosa infection from water

Ian,

Horne have confirmed, and evidenced, that point of use filters can be fitted to the Optitherm tap and it is recommended that these are for maximum 14 day use.

They have further confirmed that the tap can be chemically disinfected subject to the correct processes and concentration of product. Their tap is has shown no greater degradation than other parts of systems where incorrect treatment has been undertaken.

In relation to the combined flow conditioner and regulator, which is not an aerator, they do not recommend its omission on a risk assessed

basis.

On the basis of this information Alan is instructiCurrie & Brown UK Limited
Scotland Hub
Building 3,
2 Parklands Avenue
Maxim Office Park
Eurocentral
Lanarkshire
ML1 4 WQ

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69 Old Broad Street
London EC2M 1QS
>>> "Powrie, Ian"
Thanks Jackie

A further point for consideration arising from this section 6.2, of this draft guidance "Point-of-use filters"

Although "Routine use of point-of-use filters is not recommended. Point-of-use filters are not a primary preventative measure, or, a primary control measure. They may be considered if there is a recognised clinical incident and the role of water in the incident is yet to be identified. Therefore any new taps in NNUs and ICUs should be capable of including a point-of-use filter"

We should establish if the taps that are proposed for use in these area's are capable of including point of use filters, if not we should comment in the consultation process that the current state of the art tap sets do not allow for this proposed feature?

Regards

Ian

I.Powrie

NSGH Technical Liaison

From: Stewart, Jackie
Sent: 31 July 2012 16:44
To: McCluskey, Fiona; Seabourne, Alan; Powrie, Ian
Cc: Moir, Peter; 'David Hall'
Subject: FW: Consultation: Guidance to minimise the risk of Pseudomonas aeruginosa infection from water
Importance: High

Hi,

Just opened this email. The document we were discussing is now up for comment.

Kind regards,

Jackie.

From: HPSInfectionControl (NATIONAL SERVICES SCOTLAND)
[mailto:NSS.HPSInfectionControl@nhs.net]
Sent: 31 July 2012 16:25
To: Gallacher, Alan; brian.douglas _____; Binnie Conrad (NHS FORTH VALLEY); Browning David (NHS LANARKSHIRE); Stewart Donald (NHS WESTERN ISLES); Green Eric (NHS HIGHLAND); Bain Ernie (NHS Lothian); Arkley Gary (NHS BORDERS); Bryden Ian (NHS DUMFRIES & GALLOWAY); McBeath John (NHS SHETLAND); Walker Kenneth (NHS GRAMPIAN); Mather Ged (NHS BORDERS); Johnstone Alistair (NHS DUMFRIES & GALLOWAY);

Gerry Cox [redacted] Bennett David (NHS TAYSIDE); Powrie, Ian; McKenzie Alastair (NHS HIGHLAND); O'Brien Geraldine (NATIONAL SERVICES SCOTLAND); Reilly Jacqui (NATIONAL SERVICES SCOTLAND); Reilly Johanna (NATIONAL SERVICES SCOTLAND); Harley Kate (NATIONAL SERVICES SCOTLAND); Kelly Louise (NATIONAL SERVICES SCOTLAND); Donaghy Martin (NATIONAL SERVICES SCOTLAND); Burns John (NHS Ayrshire & Arran); Campbell Calum (NHS Borders); Ace Jeff (NHS Dumfries & Galloway); Wilson John (NHS Fife); Mackenzie Fiona (NHS Forth Valley); Carey Richard (NHS Grampian); Calderwood, Robert; Mead Elaine (NHS Highland); Ross Ian (NHS Lanarkshire); Executive Chief (NHS Lothian); Cowan Cathie (NHS Orkney);
 'ralph.roberts [redacted] ; Marr Gerry (NHS TAYSID); jill.young [redacted] Turner John (NHS 24); ced [redacted] Crichton Ian (NATIONAL SERVICES SCOTLAND); malcolm.wright [redacted] Elliot Frances (HEALTHCARE IMPROVEMENT SCOTLAND); Howie Pauline (SCOTTISH AMBULANCE SERVICE); robert.masterton [redacted] ; evelyn.fleck [redacted] Borland Hazel (NHS Dumfries & Galloway); Birnie Gordon (NHS Fife); Wallace AnneMaree (NHS Forth Valley); Dijkhuizen Roelf (NHS Grampian); Armstrong, Jennifer; May Heidi (NHS Highland); Graham Alison (NHS Lanarkshire); alison.mccallum [redacted] Walker Rhoda (NHS Orkney); Carolan Kathleen (NHS Shetland); Hobson Nigel (NHS Western Isles); Milloy Stephen (STATE HOSPITALS BOARD FOR SCOTLAND); Chaib Shona (GOLDEN JUBILEE HOSPITAL); Howie Pauline (SCOTTISH AMBULANCE SERVICE);
 ; Robert.Parry [redacted] ; eunice.mui [redacted] Subject: Consultation: Guidance to minimise the risk of Pseudomonas aeruginosa infection from water
 Importance: High

Dear Colleagues

Please find attached consultation draft: Guidance for neonatal units (NNUs) (levels 1, 2 & 3), adult and paediatric intensive care units (ICUs) in Scotland to minimise the risk of Pseudomonas aeruginosa infection from water.

We would appreciate if you could read the attached SBAR prior to reviewing the document and return any comments, using the consultation form provided, no later than Wednesday 15th August.

We look forward to receiving your feedback, if you require any additional information please don't hesitate to contact us.

Kind regards,

Infection Control Team

Health Protection Scotland

To ensure all enquiries are responded to promptly and efficiently the Infection Control Team at HPS operates a central enquiry service.

Please clearly describe the question(s) you require answered as well as the timescale for response.

To send an enquiry to the Infection Control Team please:

✉ email Infection Control Team enquiries to
NSS.HPSInfectionControl@nhs.net

(phone +44 (0)141 300 1175

*mail Infection Control Team

HAI & IC Group

NHS National Services Scotland

Health Protection Scotland

4th Floor

Meridian Court

5 Cadogan Street

Glasgow

G2 6QE

Direct Dial: [REDACTED]

HPS Infection Control Team Remit

By providing expert infection control advice, guidance and support we aim to identify, develop and encourage best practice in order to contribute to the improvement of HAI outcomes and Health Protection in Scotland.

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SUPERVISOR'S NOTIFICATION OF DEFECT (CI 42.2)		Stage 3 A&C		CAPITA SYMONDS	
Short Description				Date	
Defect will prevent the Employer making use of the work	Yes	<input type="checkbox"/>		Instruction No.	
		<input type="checkbox"/>			
	No	<input checked="" type="checkbox"/>			
		<input type="checkbox"/>			
To: Contractor: Brookfield Multiplex construction Europe					
Project Office Address: Project Office, Hardgate Road, Govan, Glasgow Scotland United Kingdom G51 4SX					
1. Dear Sir NOTIFICATION OF DEFECT <div style="display: flex; justify-content: space-between;"> <div> <p>The following Defect has been found :-</p> <p>Circa 600mm diameter pipe uncapped.</p> </div> <div> <p>Location of Defect:</p> <p>Level 1, Zone D</p> <p>Corridor space adjacent to CCW-292 Riser</p> </div> </div>					
Notification					
Signed		Supervisor		Date:	
On inspection the correction to the above Defect is: <ul style="list-style-type: none"> Accepted not accepted because: 					
Detail of further Defect					
Correction of Defect					
Signed		Supervisor		Date:	
Distribution: Alan Keeley, Peter Moir, Alasdair Fernie, Anthony Fogarty, David Hall.					



Contractors Response

SUPERVISOR'S COMMUNICATION GENERAL MATTERS / OTHER INSTRUCTIONS (CI 13.1)

NB This communication is not notification of a compensation event

Short Description: It would appear that the air handling unit 21AHU16 supply duct transition does not comply with HVAC DW144 clause 11.6 & 11.7

Location: First Floor
Plantroom 21

Adult Children's Hospital and Energy Centre

Instruction No 121

To:

Contractor's Agent:

Contractor:
Brookfield Construction (UK) Ltd

Project Office Address
Site Office, Ground Floor,
Construction Site,
Off Hardgate Road,
Glasgow G51 4SX

It would appear that the air handling unit 21AHU16 supply duct transition does not comply with HVAC DW144 clause 11.6 & 11.7 resulting in high pressure loss.

Please confirm the design philosophy in relation to this observation and any proposed remedial measures.

Supervisor

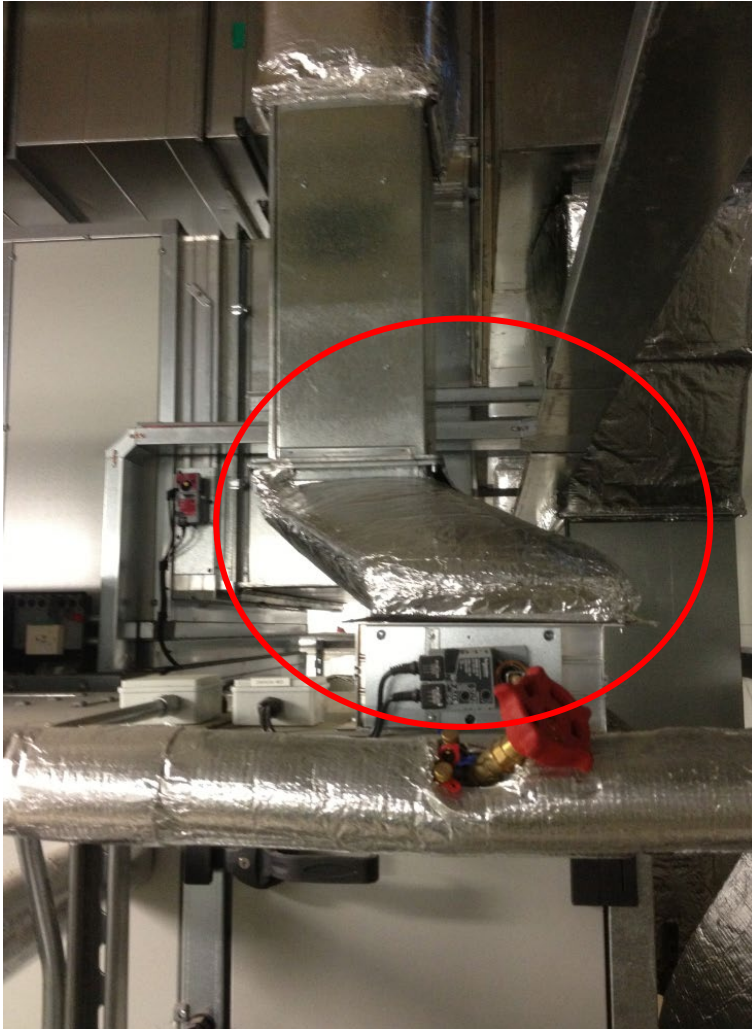
Date 16th May 2013

Distribution: Alan Keeley Brookfield Construction (UK) Ltd, Peter Moir, NHS Greater Glasgow and Clyde, David Hall Currie and Brown (UK) Ltd

Contractor's Response to Supervisor's Communication / Defect / Testing / Commissioning Comments

Subcontractor informed that ductwork is not in compliance to drawing/specification and will be replaced.

David Dickie- QA Mgr 24/07/13



NEW SOUTH GLASGOW HOSPITALS

PROJECT MANAGERS INSTRUCTION No. 231

The Employers' Requirements state the following in relation to commissioning and handover:

6.8.1 It is envisaged that the contractor will appoint an Independent Commissioning Engineer to manage/programme/collate all M&E Testing & Commissioning processes, all as detailed in Appendix M, M&E3 Section 5 of the Employers Requirements.

M&E3 5.2 Commissioning Engineer

An Independent Commissioning Engineer shall be appointed by the contractor.

The commissioning Engineer shall be responsible for fully managing the commissioning process for the electrical and mechanical, public health, medical gases, life safety and communications installations and shall carry out all necessary liaison with other contractors and specialist installers and compile the operation and maintenance manuals.

Brookfield have intimated that the commissioning engineer role will be undertaken by a BMCE member of staff, rather than an independent commissioning engineer. The Board acknowledge the request for a change to the ER requirement in relation the "independence" of the engineer on the basis that the current BMCE staff have a detailed knowledge of the complex installations and are best placed to undertake the role.

The scope of the role, as outlined in M&E3 Section 5.0 remains unaltered and any change to the proposed individual, David Wilson, should be agreed in advance with the Board's Project Manager.

8th July 2013.

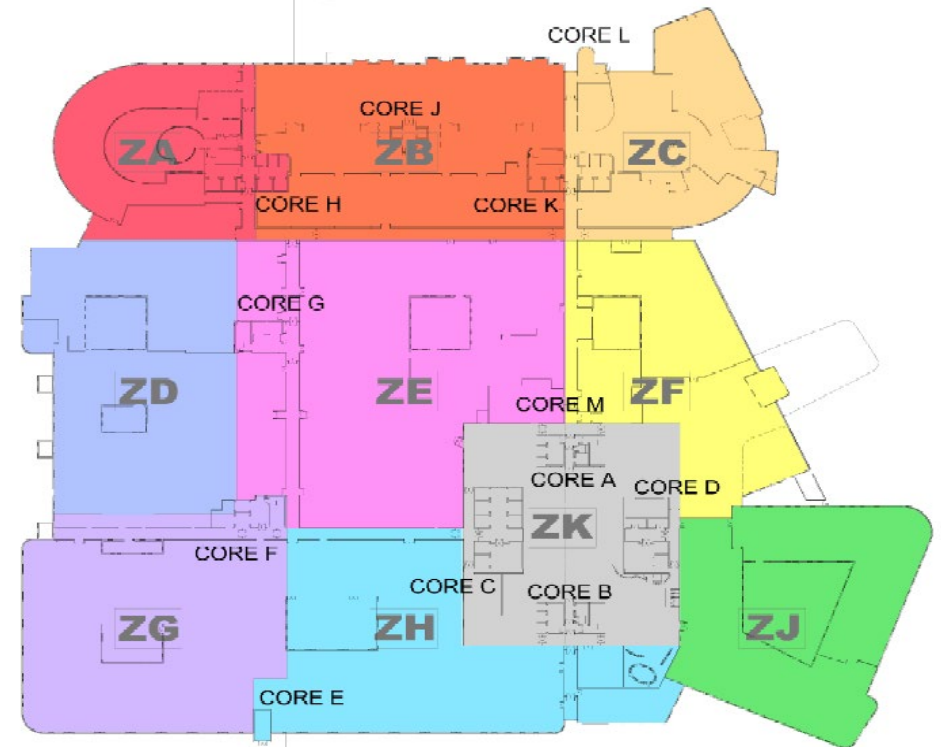
WEEKLY INTERFACE WITH BMCE REPORT

Client: NHS Greater Glasgow & Clyde		
Project: New South Glasgow Hospital		Job No: CS/044672-01-01
Type of Visit: Site Inspections, testing and witnessing.		
Week ending; 16 th August 2013		
Major Activities Noted:		
Ref	Title	Test Date
1	In attendance during fire alarm loop test in 0.527. Loop 65 tested satisfactory.	13.08.13
2		
3		
4		
5		
Comments		

Work Inspected During Visit:

Main Building	A	B	C	D	E	F	G	H	J	K
Level B					X				X	
Level G	X							X		
Level 1	X	X	X	X	X				X	
Level 2	X	X	X						X	
Level 3	X	X	X	X	X	X	X	X		
Level 4	X	X	X	X	X	X		X	X	
Level 5					X	X		X	X	
Level 6										
Level 7										
Level 8										
Level 9										
Level 10										
Level 11										
Level 12										

Energy Centre	
Level G	X
Level 1	X
Level 2	X
Roof	



Zone A – Levels 0,1,2,3 & Roof

Zone B – Levels 0,1,2,3 & Roof

Zone C – Levels 0,1,2,3 & Roof

Zone D – Levels -1,0,1,2,3,4 & Roof

Zone E – Levels -1,0,1,2,3,4 & Roof


Zone F – Levels -1,0,1,2,3,4,5,6,7,8,9,1,11,12 & Roof.

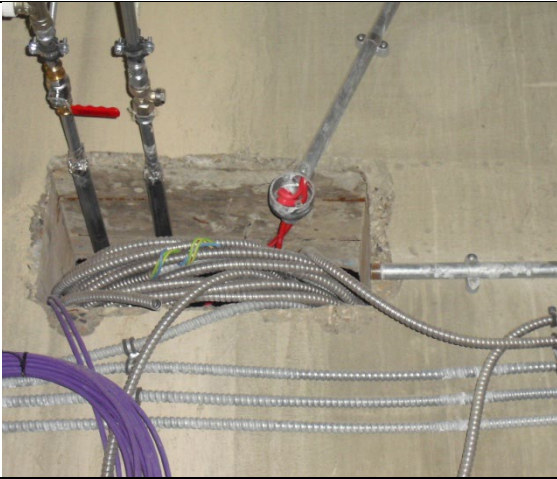

Zone G – Levels -1, 0,1,2,3 & Roof.



Zone H – Levels -1,0,1,2,3,4,5,6,7,8,9,10,11,12 & Roof.



Zone J – Levels -1,0,1,2 & Roof.

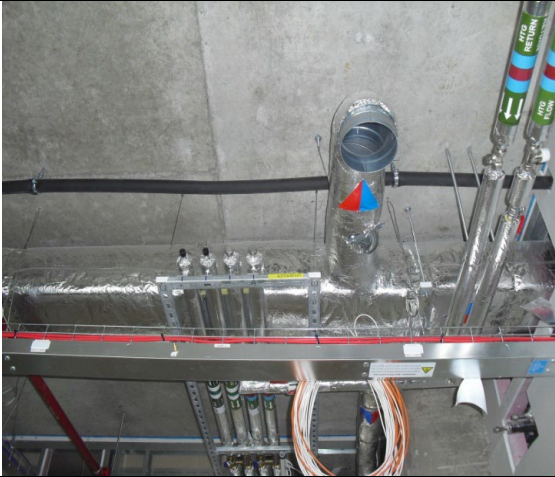

Zone K – Level 0

Ref	Level / Zone	Comment	Photographs	BMCE COMMENTS
0.0	All Zones, all floors	Quality issues which are being regularly observed in several areas i.e. <ol style="list-style-type: none"> 1. Pipework being left open ended without protection. 2. Ductwork being left open ended without protection. 3. Spacing for electrical trunking / basket tray not consistent. 4. Storage of ductwork prior to installation not protected. 5. Equipment etc. leaning against plant within plant rooms. 6. Protective covers for medical gas outlets not being fitted. 7. Remote TRV capillaries left trailing on floors and not coiled up and secured, ready for final connection. 		
1.0	Core A Staircase Levels 1 & 2	Fire alarm FP cable forced into back entry conduit box causing stress to cables. Confirm cables are installed satisfactory and that bushes have been fitted to conduits.		

Ref	Level / Zone	Comment	Photographs	BMCE COMMENTS
				
2.0	L4 ZE	Unprotected pipe ends within room HOW 023. Confirm when pipes are protected.		



Ref	Level / Zone	Comment	Photographs	BMCE COMMENTS
3.0	L4 Z Riser T4	IV lever handles appear they will clash with any future pipework installed into plugged ends. Confirm there will be no obstruction.		
4.0	L4 Z	Grippler supporting electrical trunking / tray is installed at 45 degree angle in non standard manner. Confirm this is approved by manufacturer.		



5.0	L4ZH	Electrical tray / trunking inadequately supported in RENW 112. Confirm when both trunking and ductwork are independently supported.		
6.0	L4 ZJ	Sprinkler pipe installed at an angle in RENW 252. Why was pipework not installed at right angles as normal practice?		



7.0		Unprotected ductwork in		
8.0	L3 ZC	Sprinkler pipe clashing with VCD in room GW3 – 004 which may prevent accurate commissioning. Confirm when obstruction cleared.		

9.0	L4 ZJ	<p>Damaged waste pipe in Medicine ward A. (RENWA 084)</p>	
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10.0	L3ZDG	Damaged isolator on PR 33 06 EF 02. Confirm when isolator repaired / replaced.		
11.0	L4 ZC (Roof)	Ductwork damaged in riser M36. Confirm when ductwork repaired / replaced.		



12.0	L4 ZC (Roof)	Pipework unprotected in riser M36. Confirm when ductwork repaired / replaced.		
13.0	L4 Z	Broken conduit box in RENW 133 en suite. Confirm when conduit box replaced.		


14.0	ECL2	Inverter back plates not fitted. Confirm when back plates are installed.			
15.0	L3ZG	Open ends in PR 31.			



16.0	L4 ZE	Ductwork inspection hatch installed in middle of partition. Confirm when inspection hatch fully accessible.		
17.0	L2/ZDG	Plant room 21. Isolation ductwork hatch. Does this need a double seal?		

				
--	--	--	--	--

				
--	--	--	--	--

19.0	L2/ZD	<p>Plant room 21. Isolation ductwork flexible connections. Multiple types of connection used, all secured with single jubilee clip at either end. Do these provide an adequate seal against air leakage (especially to spiral ductwork)?</p> <p>Please confirm if fire integrity is maintained with all types of flexible connection used?</p>	 	
------	-------	--	--	--

				
20.0	L3 ZD&G	Waste pipes uninsulated in external soffit area. Confirm if insulation is required.		

				
21.0	L5 Riser T12	Damaged pipework within riser T12. Confirm when pipework is repaired.		

22.0	L5 ZJ	Open end of fire rated ductwork showing paper labels inside duct. Confirm that all labels and	
------	-------	---	---

23.0	L3 PR31	Materials / pallets leaning against AHU's 31 AHU 27 and HU54 within plantroom 31 which could cause damage. Confirm when practice has ceased.		
------	------------	---	---	--

Signature: Douglas Wilson

Date: 16th August 2013

**Acute Services Strategy Board
November 2013**

Project Director – New South Glasgow Hospitals Development

Change Control Process

The following tables provide an update of the changes that have been assessed and approved by the Acute Services Strategy Board through the projects change control process and an indication of pending changes that are being reviewed prior to formal approval.

1.1 Compensation Event which were previously issued

The table below summarises the previously issued Compensation Events

Table 1

Item	Stage 1 costs (inc O/H, Profit & VAT)	Stage 3 costs (inc O/H, Profit & VAT)	Total costs (inc O/H, Profit & VAT)	Variation
Compensation Events No's 01 - 042	£1,317,228.19	£8,844,667.33	£10,161,895.52	-

The costs stated have been shown at the relevant rate of VAT.

1.2 New Compensation Events

The table below lists other changes which have been concluded since the previous report (September 2013).

Table 2

Item	CE No	Date completed	Status	Total costs (inc O/H, Profit & VAT)	Variation
Changes to NSGH level 4 due to clinical requirement to increase the number of beds available for use by haemato-oncology (hepa filtration).	043	02/10/2013	Concluded	£682,801.79	£157,198.21
Group 5 Equipment Insurance	044	23/09/2013	Concluded	£67,302.00 *	-
			Total	£750,103.79	

* Funded from Equipment Budget

1.3 Movement since last ASSB report (September 2013)

The table below shows the cost movement since the previous ASSB report.

Table 3

	Total costs/savings (inc O/H, Profit & VAT)
Compensation Event value at September 2013	£11,001,895.52
Compensation Event value at November 2013	£10,911,999.31
Movement since September 2013	- <u>£89,896.21</u>

1.4 Compensation Event Classification

The table below provides an overview of the costs associated with those Compensation Events which are not related to the accepted contract scope of works.

Table 4

	Total costs/savings (inc O/H, Profit & VAT)
Compensation Events related to accepted contract scope of works	- £1,838,104.48
Compensation Events related to NHS GG&C Clinical Brief changes	£682,801.79
Compensation Events related to events outwith NHS Control - Inflation	£12,000,000.00
Compensation Events related to events for insurances – Group 5 equipment	£67,302.00
Total	£10,911,999.31

1.5 Compensation Events being charged to other funding

The table below provides a list of Compensation Events and their associated costs which are being charged to other funding.

Table 5

Compensation Event	Funding being charged to	Amount
Carpark 0 – Interface Works	NHSGGC Core Capital Plan	£31,896.00
Pneumatic tube installation	NHSGGC Core Capital Plan	£79,531.00
Installation of sky ceilings to specific rooms within the NCH.	Yorkhill Children's Charity	£150,081.45
Changes to data, power, lighting and structural supports within the main atrium outpatient areas to enable the fitment of distraction therapy equipment	Yorkhill Children's Charity	£30,101.08

1.6 Defined Cost Update

92% of Contract Works tendered and contracts awarded
2% of Contract Works tendered and awaiting formal contract award
3% of Contract works currently at tender stage
3% of Contract Works remain to be procured

Based on BMCL current cost projections and risk estimates, the estimated outturn final cost to the Board is estimated to be in the range of £582M - £584M. This is within the revised Target Price incorporating all Compensation Events of approximately £584M.

Car Park 1 estimated outturn is around target price level of £11.4M.

New Southern General Hospitals

Project Management Instruction Report

Notify

ID 2351 **Notified by** GGC01.sfrew on 11/12/2013 10:25:54

Notified to BCL01-Brookfield Construction Limited **Date notified** 11/12/2013

Date response required 25/12/2013

Title PMI 259 - Mechanical Ventilation – NSGH-04-HOW-03 Pentamidine Treatment Room

Description Following identification of conflicting information within the Works Information, the Board wish to clarify that the requirement for a negatively pressured treatment room as set out in the attached "Update on the Isolation Rooms for the New South Glasgow (Adult)Hospital issued during dialogue takes precedence over the room data sheet, which states a balanced regime.
The current ventilation layout indicates both supply and extract at 125 litres/sec and the Board requests adjustment to deliver the negative pressure required.

Instruction As above

Status None **Cancel PMI** None

Meeting

Documents

Created by GGC01.NSGLP.sfrew **Created on** 11/12/2013
Type Project Related Documents **File name** NSGACL Adult Isolation Rooms_iss1_rev.pdf
Description Update of Isolation Rooms as issued at bid stage

Notes

**Brookfield
MULTIPLEX**

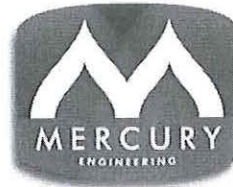
Document Review and Sign-Off
Project Reference
Rev

PROJECT: NSGH		ACTIVITY:	
CONTRACTOR: Mercury		<i>MeE</i>	
DOCUMENT	Ref No	: 0037-MS-MER-GB10008-186 Rev 02	
	Title	: Sterilisation of Water Services / DHW / TMV Temp Checks	
LEAD REVIEWER		: Russell Johnson 06.06.14 09:00am	

Document Reviewed for the following Aspects (tick as appropriate)	YES	NO
Purpose/Extent of application.		<input checked="" type="checkbox"/>
Controlling Documents (e.g. drawings, specification, etc.).	<input checked="" type="checkbox"/>	
Quality Plan including Organogram and references to project specifications.		<input checked="" type="checkbox"/>
Inspection and Test Criteria (including associated responsibilities).		<input checked="" type="checkbox"/>
Special Procedures / Processes (e.g. control of welding, fabrication, coatings etc.).		<input checked="" type="checkbox"/>
EHS - Safety Controls	<input checked="" type="checkbox"/>	
- COSHH	<input checked="" type="checkbox"/>	
- Risk Assessment(s)	<input checked="" type="checkbox"/>	
Resources. a) Plant; b) Labour; c) Supervision (including associated responsibilities).	<input checked="" type="checkbox"/>	
Environmental Management Plan (incl. Aspects Register, SWMP etc)		<input checked="" type="checkbox"/>
Delivery, handling, storage and protection.	<input checked="" type="checkbox"/>	
Quality Records/Plan (e.g. checklists, as-built drawings).		<input checked="" type="checkbox"/>

Date Received:		06.06.14		Date for Return:		20/6/14	
Distribution for Review:		End Date for Review		Comments		Initials	
<i>R Johnson</i>		<i>6/6/14</i>		<i>OK</i>			
<i>D Wilson</i>		<i>06/06/14</i>		<i>No further comment</i>			
<i>I Armstrong</i>		<i>9/6/14</i>					
General Comment							
<i>All previous comment & Actions addressed</i>							
				Date Returned to Contractor			
Signed				Status	A - Acceptable B - Acceptable as marked, revise document and reissue C - Unacceptable, resubmit.		
Dated	<i>09/06/14</i>						

05/06/14



0037-MS-MER-GB10008-186(02)

**METHOD STATEMENT FOR
Sterilisation of Water
Services/DHW/TMV Temp Checks**

H&V Commissioning Services Ltd

NEW SOUTH GLASGOW HOSPITAL

Contractors Method Statement Appraisal Sheet

PROJECT: NSGH		ACTIVITY:
CONTRACTOR: Mercury / H+V Commissioning		M & E
DOCUMENT	Ref No	: 0037-MS-MER-GB-10008-186
	Title	: Sterilisation of Water Services/DHW/TMV Temp Checks
LEAD REVIEWER		: Jack Whittam

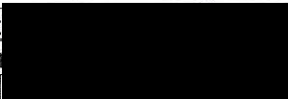
Content	N/A	Yes	No	Comments
1 Scope of Works				
Sequence and Method of Work – Step by Step		X		
Location of work		X		
Co-ordination between trades		X		
Temporary works – Excavations, scaffolds, form work etc	X			
Description of tools to be used		X		
Access equipment detailed – MEWPS, Podiums, Towers etc.	X			
Means of lifting and fixing location	X			
Barrier and signage required		X		
Reference drawings	X			
Specific Site Instructions relevant to activity eg. codes of practice		X		
Permits to work referenced – Hot works, Excavation etc.	X			
Temporary Works	X			
2 Risk Assessment				
Is the risk assessment site / task specific (Not Generic)		X		
Does the risk assessment follow the HSE guidance 5 steps to risk assessment?		X		
PPE – Mandatory & Task specific		X		
Manual Handling Risk Assessment	X			
Complete RA/s for task included in method statement		X		
Specific training (eg MEWP, confined spaces, PASMA)	X			
3 Supervision				
Nominated supervisor / MEWP Coordinator		X		
Training requirements		X		
Nominated supervisor for method statement briefing		X		

Template Details		Uncontrolled when printed		
Date	21/4/12	Author	IA	Page 1 of 2
		Rev	00	



Contractors Method Statement Appraisal Sheet

Content	N/A	Yes	No	Comments
4 Supporting Documentation				
Relevant specifications - BS, pressures, sizes, lengths etc		X		
Calculations	X			
5 Health, Safety and Environmental				
Identify hazards and risks - HAVS, falls, fall of materials, noise, manual handling etc		X		
All relevant assessments referenced, listed and attached to the method statement.		X		
Details of control measures chosen – Hierarchy of controls taken into consideration.		X		
All relevant COSHH assessment & MSDS listed and attached		X		
Material security and storage		X		
Material transportation - Manual Handling Assessment	X			
Disposal methods – General / special waste		X		
Environmental – spill control, emergency procedures etc		X		
Environmental neighbours – Noise, vibration, dust etc	X			
6 Training Requirements				
Specific training - IPAF, PASMA, CPCs, CISRS etc	X			
Key personnel requirements - HVAC, gas safe etc		X		
7 Emergency Requirements				
Fire requirements (ie. exit routes, placement of extinguishers)		X		
Accident procedures		X		
Emergency evacuation – general, rescue arrangements.		X		
Emergency evacuation special requirements ie. confined spaces		X		
First aiders named		X		
Out of hours working – Supervision, first aid etc.	X			
Environmental – spill kits, method of disposal, Segregation, plant nappies etc.		X		

<u>Submission to Brookfield Multi</u>			Status.
This method statement has been reviewed and deemed			
	Name		Date
Contractors Package / Project Manager	J Whittam		05/06/14
Contractors H&S Manager / Senior Manager	Robert Baird		05/06/14
Specialist – Temporary works, appointed person, MEWPs Coordinator etc.			

Template Details		Uncontrolled when printed	
Date	21/4/12	Author	IA
		Rev	00

**METHOD STATEMENT No. 1425 REVISION 1 for
H&V Commissioning Services Ltd**

**NEW SOUTHERN GENERAL HOSPITAL A&C's –
SYSTEMS: Domestic Water Services DHW Return Temp Checks / TMV's & Sterilisation**

I have read and fully understand the risk assessments and method statement for the following work to be carried out, and that I must adhere to the control measures and safe methods contained therein.

Print Name	Signature	Date

Method Statement Sign Off Status

H&V Commissioning Services Ltd	Client: Mercury Engineering Services Ltd
Signed	Signed
Date	Date
Method Statement Status.	
Method Statement Status Legend A. Ok to proceed with works. B. Ok to proceed with works taking into account any comments given by our client. C. Rejected, and to be re submitted with changes based on comments received.	

Document Index

Section 1	Scope of Works	Section 13	Emergency Arrangements
Section 2	Sequence of Operations	Section 14	Communications
Section 3	Hazard Identification / Risk Assessment	Section 15	Personnel Protective Equipment
Section 4	Preventative & Protective Measures	Section 16	Power
Section 5	Training Information & Instruction	Section 17	Lighting
Section 6	Supervision & Resources	Section 18	Working Platforms
Section 7	Materials	Section 19	Excavations
Section 8	Plant & Equipment	Section 20	Fire
Section 9	Access / Egress	Section 21	Information & Inspection
Section 10	Environmental & Waste Management	Section 22	Monitoring
Section 11	Technical Information	Appendix 1	Risk Assessment
Section 12	Third Party Protection	Appendix 2	Sanosil Super 25 COSHH Safety & Data Sheets
		Appendix 3	Sterilisation Completion Certificate

05/06/2014

A52399188

**METHOD STATEMENT No. 1425 REVISION 1 for
H&V Commissioning Services Ltd**

Section 1. Scope Of Works

Scope of Works:-

The sterilisation of the incoming cold, hot and mixed water distribution services supplies serving the areas/sections listed below;

DHW Return Temp Checks, TMV & Cold Water Temp Checks	All Outlets as per Drgs listed
MAINS COLD WATER SUPPLY SERVICES;	To Raw Water Storage Tank(s)
TANKED COLD/HOT DISTRIBUTED WATER SERVICES;	To Filtered Tanks, Cold, Hot and Mixer Outlets

In accordance with:

SPECIFICATION	SOURCE OF REQUIREMENT	VERIFIED AGAINST SPECIFICATION REQUIREMENT
BS 8558	H&V Commissioning Services Quotation	Yes
STHM 04-01	H&V Commissioning Services Ltd	Yes

Agreed Sterilising Medium:-

Hydrogen Peroxide (Sanosil Super 25) @ 150 ppm

COSHH Data and Safety sheets are attached to this method statement

Water Services Sterilisation Acceptance Parameters:-

Total Coliforms	0 (Zero) per 100ml
E.coli	0 (Zero) per 100ml
TVC @37 Degrees Celsius	Minimum achievable
TVC @22 Degrees Celsius	Minimum achievable

If these values are not achieved following sampling and independent laboratory analysis, the sterilisation process must be repeated.

**METHOD STATEMENT No. 1425 REVISION 1 for
H&V Commissioning Services Ltd**

Associated Drawings (Construction/As Installed):-

Title	Drawing Number
WATER SERVICES SCHEMATIC	ZBP XX XX SC 500 001
WATER SERVICES SCHEMATIC P21	ZBP XX XX SC 500 021
WATER SERVICES SCHEMATIC P22	ZBP XX XX SC 500 022
WATER SERVICES SCHEMATIC P31	ZBP XX XX SC 500 031
WATER SERVICES SCHEMATIC P32	ZBP XX XX SC 500 032
WATER SERVICES SCHEMATIC P33	ZBP XX XX SC 500 033
WATER SERVICES SCHEMATIC P41	ZBP XX XX SC 500 041
 <u>PLANTROOM 21</u>	
DOMESTIC WATER SERVICES	ZBP ZD 00 PL 500 004
DOMESTIC WATER SERVICES	ZBP ZG 00 PL 500 007
DOMESTIC WATER SERVICES	ZBP ZG 01 PL 500 014
DOMESTIC WATER SERVICES	ZBP ZG 01 PL 500 017
 <u>PLANTROOM 22</u>	
DOMESTIC WATER SERVICES	ZBP ZJ 00 PL 500 009
DOMESTIC WATER SERVICES	ZBP ZE 00 PL 500 005
DOMESTIC WATER SERVICES	ZBP ZK 00 PL 500 010
DOMESTIC WATER SERVICES	ZBP ZF 00 PL 500 006
DOMESTIC WATER SERVICES	ZBP ZE 01 PL 500 015
DOMESTIC WATER SERVICES	ZBP ZJ 01 PL 500 019
DOMESTIC WATER SERVICES	ZBP ZF 01 PL 500 016
DOMESTIC WATER SERVICES	ZBP ZK 01 PL 500 020
DOMESTIC WATER SERVICES	ZBP ZF 02 PL 500 026
DOMESTIC WATER SERVICES	ZBP ZG 02 PL 500 027
DOMESTIC WATER SERVICES	ZBP ZK 02 PL 500 030
DOMESTIC WATER SERVICES	ZBP ZE 02 PL 500 025
DOMESTIC WATER SERVICES	ZBP ZH 02 PL 500 028
DOMESTIC WATER SERVICES	ZBP ZJ 02 PL 500 029
 <u>PLANTROOM 31</u>	
DOMESTIC WATER SERVICES	ZBP ZH 00 PL 500 008
DOMESTIC WATER SERVICES	ZBP ZH 01 PL 500 018
DOMESTIC WATER SERVICES	ZBP ZD 02 PL 500 024
DOMESTIC WATER SERVICES	ZBP ZH 02 PL 500 028
DOMESTIC WATER SERVICES	ZBP ZK 03 PL 500 040
DOMESTIC WATER SERVICES	ZBP ZH 04 PL 500 048
DOMESTIC WATER SERVICES	ZBP ZE 04 PL 500 045
DOMESTIC WATER SERVICES	ZBP ZK 04 PL 500 050
DOMESTIC WATER SERVICES	ZBP ZE XX PL 500 055
DOMESTIC WATER SERVICES	ZBP ZH XX PL 500 058
 <u>PLANTROOM 32</u>	
DOMESTIC WATER SERVICES	ZBP ZK 03 PL 500 040
DOMESTIC WATER SERVICES	ZBP ZF XX PL 500 056
 <u>PLANTROOM 33</u>	
DOMESTIC WATER SERVICES	ZBP ZJ 03 PL 500 049
DOMESTIC WATER SERVICES	ZBP ZJ XX PL 500 059

05/06/2014

A52399188

**METHOD STATEMENT No. 1425 REVISION 1 for
H&V Commissioning Services Ltd**

PLANTROOM 41

DOMESTIC WATER SERVICES	ZBP FM B1 PL 500 061
DOMESTIC WATER SERVICES	ZBP ZA 00 PL 500 001
DOMESTIC WATER SERVICES	ZBP ZB 00 PL 500 002
DOMESTIC WATER SERVICES	ZBP ZC 00 PL 500 003
DOMESTIC WATER SERVICES	ZBP ZA 01 PL 500 011
DOMESTIC WATER SERVICES	ZBP ZB 01 PL 500 012
DOMESTIC WATER SERVICES	ZBP ZC 01 PL 500 013
DOMESTIC WATER SERVICES	ZBP ZA 02 PL 500 021
DOMESTIC WATER SERVICES	ZBP ZC 02 PL 500 023
DOMESTIC WATER SERVICES	ZBP ZB 02 PL 500 022
DOMESTIC WATER SERVICES	ZBP ZA 03 PL 500 031
DOMESTIC WATER SERVICES	ZBP ZB 03 PL 500 032
DOMESTIC WATER SERVICES	ZBP ZC 03 PL 500 033
DOMESTIC WATER SERVICES	ZBP ZC 04 PL 500 043

Personnel:-

H&V Commissioning Services Ltd	-
Title	Details
Site Manager	Chris Shearer - [REDACTED]
Site Supervisor	Gary Weir - [REDACTED]
Lead Engineer	Ronnie McInnes - [REDACTED]
Assistant Engineer	Barry Gibb - [REDACTED]

Duration of Works:-

H&V Commissioning Services Ltd	-	Refer to Mercury Commissioning Programme
--------------------------------	---	--

Section 1. Pre Sterilisation Works

DHW Return Temperature Checks, TMV & Cold Water Temperature Checks

- Mercury to confirm they have carried out their checks by running all Cold Water through Cold outlets, running Hot through all Hot Outlets / Mixers, and confirming there is heat on all Returns.
- Record temperatures at Calorifiers – Flow 60oC, Return >50°C and Cold Water Temperature and incoming points to building.
- H&V Commissioning to carry out Thermal Checks at all Multifix Valves with a calibrated touch probe, these Temperatures have to be $\geq 55^{\circ}\text{C}$, they are also fitted with a built in gauge will be recorded.
- H&V Commissioning to carry out Thermal Checks at all Multitherm Valves with a calibrated touch probe, these Temperatures have to be $\geq 55^{\circ}\text{C}$.
- All Cold Tap Temperatures will be tested to ensure these are $\leq 20^{\circ}\text{C}$ within 2 mins
- When all Temperatures have been deemed as acceptable the TMV checks will follow
- All Hot Tap Temperatures tested without TMV's will be checked to ensure Temperatures are $\geq 55^{\circ}\text{C}$. Within ≤ 1 minute.
- All Taps with TMV's shall be tested where bidets shall be $38^{\circ}\text{C} \pm 1^{\circ}\text{C}$, Wash Hand Basins shall be $41^{\circ}\text{C} \pm 1^{\circ}\text{C}$, Baths shall be $43^{\circ}\text{C} \pm 1^{\circ}\text{C}$, Showers shall be $41^{\circ}\text{C} + 1^{\circ}\text{C}$.
- During the TMV checks all anti-scalds will be tested.
- All results as detailed above will be recorded with relevant H&V Commissioning Test Sheets.
- BM / Capita will be provided relevant test sheets and a witness will be carried out until they are satisfied.

05/06/2014

A52399188

**METHOD STATEMENT No. 1425 REVISION 1 for
H&V Commissioning Services Ltd**

Section 2. Sterilisation Works

Sterilisation Pre-Requisites (General):-

- The Contractor will be given advance notice of commencement of works by H & V Commissioning Services, to allow sufficient measures to be taken to advise other site operatives as to the nature of the works.
- The Contractor will be advised prior to works commencing of all H & V Commissioning Services site specific requirements to ensure the works are fully carried out in accordance with the given specifications as noted above.
- H & V Commissioning Services personnel must be allowed access to all the water outlets and related plant areas during the sterilisation period, the Contractor will provide full and uninterrupted access to the entire domestic water system and related facilities for the duration of works.
- Confirmation is required that all drains have been fully tested and are 'live' prior to sterilisation works being carried out.
- The hot water systems hydraulic and temperature balancing checks have been completed and accepted. Heating of the hot water systems should be off and system COLD during the works.
- Samples will be taken in accordance with the agreed Microbiological Sample Schedule, (LOCATIONS TO BE AGREED)
- The manufacturer of the Mains Filtration plant facility has confirmed that the agreed sterilising medium, Hydrogen Peroxide (Sanosil Super 25) up to a concentration of 150ppm, can be passed through the Mains Filtration equipment, and no filters have been installed.
- Heating and Chilled Water services pressurisation units, humidifiers and break tanks have been manually locked off and operation of those systems is maintained (if required) manually by the contractor, by prior notice to H&V Commissioning Services.
- H & V Commissioning Services will have current mains cold water domestic water external and internal system layout drawings which will be highlighted and utilised by H & V Commissioning Services Senior Engineer for use during the works.
- The witnessing authority (client or client representative) has been informed by the contractor of the testing procedure, parameters etc and is available to attend on witnessing and record documentation completion.

Preparation:-

Requirements at all Stages;

H & V Commissioning Services will ensure that all the designated operatives will have fully walked and surveyed the installation to which they will be assigned, prior to commencing the sterilisation procedure.

All other site contractors operatives will have been made aware by the contractor of the nature and hazards associated with sterilisation procedure and signage posted to that effect (Signage will be posted at the ingress, egress and entrances onto all floors advising that there is a flush and sterilisation of the cold and hot water services installation being carried out to all cold, hot and mixer service outlets).

Signage will comprise; (sample attached to this method statement) ✓

**"DO NOT USE HOT OR COLD WATER OUTLETS (TAPS, WC'S etc),
FLUSHING AND STERILISATION IN PROGRESS"**



Sterilisation In Progress

***Do NOT Use Hot or Cold Water Outlets
(Taps, WC's etc) Flushing & Sterilisation
in Progress.***

***In case of any queries, please contact our engineer
on the number below:-***

Engineer: Chris Shearer

Mobile No:



**METHOD STATEMENT No. 1425 REVISION 1 for
H&V Commissioning Services Ltd**

All H & V Commissioning Services flushing/sterilisation stage and final records will require to be witnessed, and signed by the Contractor or the End Users representative for verification, acceptance and record purposes.

A sterilisation completion certificate will be issued by H&V Commissioning Services, followed in due course, by the certification of independent laboratories results of water samples analysis when available, usually 7-14 days from sampling (sample attached to this method statement).

The final test certification will include all of these documents, and microbiological sample schedule.

Commencement:-

Stage 1

Mains Cold Water Supply to Raw Water Tank(s);

1. The incoming cold water service main from Govan Rd & Hardgate Rd feeding the Raw Water Storage Tanks and Trade Cold Water Service Tank (TCW) will be sterilised by means of pumped injection of Hydrogen Peroxide (Sanosil Super 25) utilizing installed drain cock/s as located at the point of isolation from the external mains, internal to the building (or other agreed location).
2. The Hydrogen Peroxide (Sanosil Super 25) will be pumped into the cold water service main distribution pipework via the drain cock at the mains incomer until a solution of circa 150ppm is proved using the Sanosil strips at the Raw Water Storage Tank inlet.
3. Once it has been proved that the Sanosil Super 25 is present throughout the mains cold water service pipework, the Raw Water Storage Tank(s) and TCW Tank inlets at a solution of circa 150ppm, the treated pipework will be left for the designated contact time, usually a minimum of one hour.
4. After the designated contact time or one hour has elapsed, all tank inlets will be retested to ensure the reserve of (Sanosil Super 25) has not fallen below 150ppm.
5. If the reserve has fallen below 150ppm the above process will require to be repeated until successful.
6. All tests will be recorded and witnessed accordingly by the client or client representative.
7. Fresh Mains cold water will then be drawn through the distribution pipework to each tank until proved that there is no (Sanosil Super 25) present.
8. Raw Water & TCW Tank Outlets will be tested using sanosil test strips and confirmed free from traces of Sanosil Super 25.
9. The system will then be returned to normal service.
10. All 'warning' signs and notices will then be removed from the stage area.
11. H&V Commissioning Services Ltd will carry out water sampling at locations/quantities as agreed to prove the potability of the water. The analysis of these samples will be carried out by an independent UKAS Accredited Laboratory. Sampling will be carried out in accordance with the Microbiological Schedule (attached to this method statement). ✓
12. All test, stage and sample records will be compiled and presented to the contractor for his records.

05/06/2014

A52399188

**METHOD STATEMENT No. 1425 REVISION 1 for
H&V Commissioning Services Ltd**

Stage 2

Raw Water Tank(s) to Filtered Water Tank(s);

1. H & V Commissioning Services personnel will have identified the raw cold water storage tank(s) to be used to provide a reservoir for the Sanosil Super 25 for this stage:-

The raw water tank(s) will have been cleaned by the contractor prior to commencement. H & V Commissioning Services personnel will inspect and verify cleanliness of the tanks prior to sterilisation.

2. Prior to commencement of the sterilisation works, all valves and drain points (permanent and temporary) will be physically traced/identified by the contractor on all pipework and outlets to ensure that any temporary hoses and fittings that may be required to facilitate the drawing through of the Sanosil Super 25, are readily available for use in the sterilisation and sampling process.
3. The raw water tank(s) will be filled to capacity and a measured amount of agreed Sanosil Super 25) will be added into both compartments of the raw water storage tank(s), to ensure a mix of circa 150ppm of is present throughout.
4. One compartment of the tank(s) will be isolated (at outlet) and the available compartment of the tank will be used with the inlet isolated, to avoid dilution of the chemical strength through tank make up. H & V Commissioning Services personnel will visually monitor the tank level and swap the tank(s) sections over to ensure continuity of treated water via the filtration plant/booster pump sets to the filtered water tank(s).
5. The Sanosil Super 25 will be drawn through the filtration plant and all of the connecting pipework, through to the main filtered water tank(s) ensuring that circa 150ppm is achieved at each tank outlet to the filtered water tank(s).
6. Once it has been proved that (Sanosil Super 25) is present throughout the treated pipework and raw water tank(s) at a solution of circa 150ppm, the treated pipework will be left for the designated contact time, usually a minimum of one hour.
7. After the designated contact time or one hour has elapsed, tank and outlets will be retested to ensure the reserve of the agreed sterilising medium has not fallen below 150ppm.
8. If the reserve has fallen below 150ppm the above process will require to be repeated until successful.
9. Fresh mains cold water will then be drawn through the distribution pipework to each tank until proved that there is Sanosil Super 25 present and recorded on the required individual outlet point log sheets.
10. Filtered water Tank Outlets will be tested using test strips to ensure the system is free from traces of Sanosil Super 25..
11. H&V Commissioning Services Ltd will carry out water sampling at locations/quantities as agreed to prove the potability of the water. The analysis of these samples will be carried out by an independent UKAS Accredited Laboratory.
12. Fresh mains cold water will then be drawn through the distribution pipework to each raw water tank compartment, which will be drained, refilled and flushed until proved that there is no agreed sterilising medium present and recorded on the required individual outlet point log sheet.

**METHOD STATEMENT No. 1425 REVISION 1 for
H&V Commissioning Services Ltd**

Stage 2 (Cont'd)

Raw Water Tank(s) to Filtered Water Tank(s);

13. Outlets will be tested using agreed sterilising medium test strips and confirmed using field test kit to ensure system free from traces of agreed sterilising medium.
14. H&V Commissioning Services Ltd will carry out water sampling at locations/quantities as agreed to prove the potability of the water. The analysis of these samples will be carried out by an independent UKAS Accredited Laboratory. Sampling will be carried out in accordance with the Microbiological Schedule (attached to this method statement). ✓

Stage 3

Filtered Water Tank(s) to Cold, Hot and Mixer Outlets Served;

Please note the below strategy will be carried out for each Plantroom independently (PR21, 31, 22, 41, 32 & 33) Exact sequence to be agreed, however, this won't change the strategy.

1. Boosted cold water service distribution pipework from filtered water tank(s) – One side of the tank(s) will be isolated (at outlet) and the available side of the tank will be used with the inlet isolated, to avoid dilution of the chemical strength through tank make up. H & V Commissioning Services personnel will visually monitor the tank level and swap the tank(s) sections over to ensure continuity of treated water via the booster pump sets to site services.
2. One section of the filtered water tank will be treated to circa 150ppm Sanosil Super 25 for use as a reservoir to sterilize the outlets served throughout the facility. Treated water at circa 150ppm from the filtered water tanks will be drawn through to all outlets via the booster sets, including the agreed sentinel outlets, until circa 150ppm agreed sterilising medium solution has been detected at each, proved by test strips and recorded on the required individual outlet point log sheets of those outlets.
3. Once it has been proved by test strips that Sanosil Super 25 is present throughout the boosted cold water service main and hot water services distribution pipework and outlets served thereby, at a solution of circa 150ppm, the treated pipework will be left for the designated contact time, usually a minimum of one hour.
4. After the designated contact time or one hour has elapsed, outlets will be retested to ensure the reserve of the agreed sterilising medium has not fallen below 150ppm.
5. Due to the extent of the system distribution within the building and the large number of outlets present, the contact time will in effect be more than one Hour.
6. After the one hour has lapsed, a representative number of outlets and the sentinel outlets will be tested to ensure the Sanosil Super 25 has not fallen below 150ppm. This to be witnessed at outlets at various extremities of the system by the client or client representative at each outlet.
7. If the reserve has fallen below 150ppm the above process will require to be repeated until it is successful
8. All tests will be recorded and witnessed accordingly by the client or client representative.
9. The filtered water tank(s) will then be fully drained, refilled and flushed until free from traces of Sanosil Super 25

05/06/2014

A52399188

**METHOD STATEMENT No. 1425 REVISION 1 for
H&V Commissioning Services Ltd**

10. The filtered water tank(s) will then be refilled to capacity using fresh boosted mains supply water. All pipework, cold and hot water outlets will then be run off until free from traces Sanosil Super 25). This will be checked at a representative number of outlets and the sentinel outlets using agreed test strips.
11. H&V Commissioning Services Ltd will carry out water sampling at locations/quantities as agreed to prove the potability of the water. This analysis will be carried out by an independent UKAS Accredited Laboratory.
12. The mains cold water, boosted cold water and hot water systems will then be returned to normal service.
13. All 'warning' signs and notices will then be removed from the stage areas.
14. All test, stage and sample records will be compiled and presented to the contractor for his records.

Post Sterilisation:-

Maintenance of the mains water supply, tanks, boosted cold and hot systems water quality is extremely important following the completion of the sterilisation procedure.

The temperature and throughput/turnover of system both hot and cold systems water content must be maintained on a frequent and regular basis and within recommended parameters at all times up to and beyond final handover.

It is expected that all tanks, pump equipment, taps and outlets will require to be operated on a 24/7 basis from completion of sterilisation by the contractor and by the building operator following handover.

The outlet point log sheets incorporate facility to continue the maintenance verification process before, during and after sterilization.

Failure to carry out and log such procedures after any 7 day period has elapsed, may necessitate repetition of the sterilization process in whole or in part.

Maintenance of this routine is necessary for safe operation of the water services installation and statutory legionella risk assessment parameters – this is the responsibility of Mercury until final handover and the building operator thereafter.

Final samples to be taken from each system (Hot and Cold) prior to project handover.

Section 2. Sequence Of Operations

REFER TO DETAIL WITHIN SCOPE OF WORKS ABOVE

Section 3. Hazard Identification / Risk Assessment

The works are non hazardous to the operatives or third parties.

Refer to Risk Assessment at the rear of this Method Statement for further information.

Section 4. Preventative & Protective Measures

Adequate Ventilation in agreed sterilising medium reservoir and handling areas.

No further special measures are required during the works

05/06/2014

A52399188

**METHOD STATEMENT No. 1425 REVISION 1 for
H&V Commissioning Services Ltd**

Section 5. Training Information & Instruction

No additional training or instruction is required during the works.

Section 6. Supervision & Resources

The operatives undertaking this work are fully trained and require no supervision. The works will normally be carried out in a team of an engineer and trainee.

Section 7. Materials

Agreed Sterilising Medium – Hydrogen Peroxide (Sanosil Super 25). Empty containers to be removed from site for safe disposal by H&V Commissioning Services Ltd.

Section 8. Plant & Equipment

Hand Tools such as stilsons, shifting spanners etc.

Section 9. Access / Egress

Access to the site will be via routes set out and detailed within the site induction and other marked routes to which all engineers will be given prior to working on site.
If keys or access passes are required, authorised persons may sign these out from the relevant contractor. These keys/passes will be returned before leaving site.

Section 10. Environmental & Waste Management

All chemicals used will be done so in line with the supplier's material safety data sheets, as attached. Empty containers removed by H & V Commissioning Services Ltd for safe disposal.

Section 11. Technical Information

List of systems that this method statement is applicable to is given within Section 1 Scope of Works.
All design data and technical information is as per the services consultant's equipment schedules which are available through **Mercury Engineering**.

Section 12. Third Party Protection

All works carried out shall take into account others working within the same area and neighbouring areas with regard to noise, dust and emissions.

Third parties shall be fully informed of the works being carried out.

Section 13. Emergency Arrangements

Mercury Engineering shall be advised in the event of any emergency, all procedures shall be in accordance with the site induction.

Section 14. Communications

Mobile Phone Usage

The use of mobile phones will be as per current site requirements.

05/06/2014

A52399188

**METHOD STATEMENT No. 1425 REVISION 1 for
H&V Commissioning Services Ltd**

Section 15. Personnel Protective Equipment

The work is non hazardous and standard PPE is required.

Hard Hat
Safety Footwear
Hi-Viz Jacket
Safety Glasses
Safety Goggles (Whilst handling agreed sterilising medium)
Safety Gloves

Section 16. Power

No temporary power is required for the works.

Section 17. Lighting

Temporary lighting to be used where required and permanent light to be used when available. If task lighting is required it shall be 110v and supplied by **Mercury Engineering**.

Section 18. Working Platforms

Step ladders shall be used for the works as and when required – expected usage - infrequently.

Section 19. Excavations

Not Applicable

Section 20. Fire

In result of the fire alarms system being activated operatives should leave the building via the nearest available exit and make our way to the Fire Assembly point, as identified in the site induction.

Do not leave the Fire Assembly point until instructed to do so.

Section 21. Information & Inspection

A request for witnessing the progressive sterilisation of systems shall be made to **Mercury Engineering** by use of the engineers daily report sheets.

Witnessing shall take place at a time convenient to the appointed representative as appropriate and inline with the works programme.

Witnessing shall be undertaken with tests being shown as dictated by the above personnel and each element/system shall be witnessed tested up to a maximum of 20% as per the H&V Commissioning Services Ltd quotation terms and conditions.

Section 22. Monitoring

Monitoring of the works will be by **Mercury Engineering** as and when they deem necessary.

05/06/2014

A52399188

**METHOD STATEMENT No. 1425 REVISION 1 for
H&V Commissioning Services Ltd**

Appendix 1

Risk Assessments and Assessment Matrix

Listed below are the tasks and associated risks for the works associated with the above method statement.

Activity	Risk	Measures Taken to Reduce Risk	Likelihood	Severity	Risk Score	Further Action Required
Manual Handling	Physical Injury	The chemical drums will be transported using a mechanical handling device to reduce the risk of injury.	1	5	5	No
Chemical Use	Skin Irritation	Suitable work clothing and protective equipment to be used during chemical handling stages.	1	5	5	No
Fall from Height using step ladders	Physical Injury	Persons are trained in used and only to be used for short durations, less than 5 mins per use.	1	5	5	No

Likelihood

5					
4					
3					
2					
1					
	1	2	3	4	5

Severity

Risk Score 1-5. Acceptable no further action required.

Risk Score 6-9. Further actions should be taken as far as reasonably particle to reduce the risk score further.

Risk Score 10 or above. Not acceptable. Works not to proceed until measures are in place to reduce the risk score.

05/06/2014

**METHOD STATEMENT No. 1425 REVISION 1 for
H&V Commissioning Services Ltd**

Appendix 2 –

Sanosil Super 25 COSHH Safety & Data Sheets

05/06/2014







A52399188

CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH INFORMATION

COSHH ASSESSMENT No 004/S25 - ISSUE 01 – 01 JANUARY 2012

Trade Name	SANOSIL SUPER25
Chemical Description/Name	Hydrogen Peroxide
Product Use in Construction	Industrial Sterilising Agent – Domestic Water Services Systems
Appearance	Colourless Liquid
How product is used/Application	50ppm diluted into Domestic Water Services Systems
Hazard Classification	Causes Burns

CLASSIFICATION

							
Corrosive	Harmful to Environment	Explosive	Flammable	Harmful Irritant	Harmful Toxic	Poison	Oxidising
Y	Y	N	N	Y	Y	N	Y

GENERAL HEALTH SAFETY AND ENVIRONMENTAL CONTROLS

STORAGE	Store in suitable closed containers away from extremes of temperature.			
PPE REQUIREMENTS	Gloves – Goggles – Suitable Protective Clothing			
PRECAUTIONS DURING USE	Avoid contact with eyes, skin and clothing. Do not ingest. Wash thoroughly after handling			
HEALTH RISKS/FIRST AID	Contact with EYES	Bathe the eye with running water for at least 15 minutes.		
	Contact with SKIN	Remove all contaminated clothing and footwear unless bonded to skin. Drench affected area with cool water for at least 10 minutes until all traces of product have gone. Seek medical attention if there are any signs of burns or poisoning.		
	IF SWALLOWED, If INHALED	Ensure breathing is normal, apply artificial respiration if necessary. If unconscious and breathing is normal, place casualty in recovery position. If conscious, ensure casualty sits or lies down. If breathing becomes bubbly, make the casualty sit and provide oxygen if available. Drink water. Do not induce vomiting. Transfer to hospital as soon as possible.		
ENVIRONMENT	SPILLAGES	If safe to do so, mark out the contaminated area to warn unauthorised personnel. Turn leaking containers leak side up. Prevent the spillage from entering drains or rivers using bunding. Absorb with sand and remove. Wash Area with large amounts of water.		
TRANSPORT	ADR/RID Class: UN 2014	PG II	Labelling 5.1+ 8	Shipping Name: Hydrogen Peroxide, Aqueous Solution
FIRE FIGHTING MEASURES	In case of fire remove affected personnel from exposure if safe to do so. Fire Fighting Materials -Carbon Dioxide, Alcohol or Polymer Foam, Dry Chemical Powder			
MEDICAL ADVICE	Always seek medical in case of any accident			
ADDITIONAL INFORMATION	Risk Phrases; R8: Contact with combustible material will cause fire R34: Causes Burns			
EMERGENCY CONTACT	01563 821991			
SUPPLIER	H & V Commissioning Services Ltd Tel 01563 821991			

SAFETY DATA SHEET

SANOSIL SUPER 25

Page: 1

Compilation date: 26/01/2012

Revision No: 1

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: SANOSIL SUPER 25

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of substance / mixture: Broad spectrum sanitiser.

1.3. Details of the supplier of the safety data sheet

Company name: H & V Commissioning Services

16 Barrmill Road

Galston

Ayrshire

KA4 8HH

Tel: [REDACTED]

Fax: [REDACTED]

Email: Karen@[REDACTED]

1.4. Emergency telephone number

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CHIP: C: R34; Xi: R37

Most important adverse effects: Causes burns. Irritating to respiratory system.

Classification under CLP: This product has no classification under CLP.

2.2. Label elements

Label elements under CHIP:

Hazard symbols: Corrosive.



Risk phrases: R34: Causes burns.

R37: Irritating to respiratory system.

Safety phrases: S24/25: Avoid contact with skin and eyes.

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39: Wear suitable protective clothing, gloves and eye / face protection.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

[cont...]

SAFETY DATA SHEET

SANOSIL SUPER 25

Page: 2

2.3. Other hazards

PBT: This substance is not identified as a PBT substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

HYDROGEN PEROXIDE SOLUTION

EINECS	CAS	CHIP Classification	CLP Classification	Percent
231-765-0	7722-84-1	-: R5; O: R8; Xn: R20/22; C: R35	Ox. Liq. 1: H271; Acute Tox. 4: H332; Acute Tox. 4: H302; Skin Corr. 1A: H314	30-50%

Contains: Contains Silver ions 0.08% stabilised in Hydrogen Peroxide 50%.

Section 4: First aid measures

4.1. Description of first aid measures

- Skin contact:** Remove all contaminated clothes and footwear immediately unless stuck to skin.
Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Transfer to hospital if there are burns or symptoms of poisoning.
- Eye contact:** Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.
- Ingestion:** Wash out mouth with water. Do not induce vomiting. Give 1 cup of water to drink every 10 minutes. If unconscious, check for breathing and apply artificial respiration if necessary. If unconscious and breathing is OK, place in the recovery position. Transfer to hospital as soon as possible.
- Inhalation:** Remove casualty from exposure ensuring one's own safety whilst doing so. If unconscious and breathing is OK, place in the recovery position. If conscious, ensure the casualty sits or lies down. If breathing becomes bubbly, have the casualty sit and provide oxygen if available. Transfer to hospital as soon as possible.

4.2. Most important symptoms and effects, both acute and delayed

- Skin contact:** Blistering may occur. Progressive ulceration will occur if treatment is not immediate.
- Eye contact:** Corneal burns may occur. May cause permanent damage.
- Ingestion:** Corrosive burns may appear around the lips. Blood may be vomited. There may be bleeding from the mouth or nose.
- Inhalation:** There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

4.3. Indication of any immediate medical attention and special treatment needed

Immediate / special treatment: Eye bathing equipment should be available on the premises.

[cont...]

SAFETY DATA SHEET

SANOSIL SUPER 25

Page: 3

Section 5: Fire-fighting measures**5.1. Extinguishing media**

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Corrosive. In combustion emits toxic fumes.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Personal precautions: Notify the police and fire brigade immediately. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Do not attempt to take action without suitable protective clothing - see section 8 of SDS. Turn leaking containers leak-side up to prevent the escape of liquid.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Clean-up should be dealt with only by qualified personnel familiar with the specific substance. Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

Section 7: Handling and storage**7.1. Precautions for safe handling**

Handling requirements: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, well ventilated area. Keep container tightly closed.

7.3. Specific end use(s)

Specific end use(s): No data available.

[cont...]

SAFETY DATA SHEET

SANOSIL SUPER 25

Page: 4

Section 8: Exposure controls/personal protection

8.1. Control parameters

Hazardous ingredients:

HYDROGEN PEROXIDE SOLUTION...100%

Workplace exposure limits:

Respirable dust

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	1.4 mg/m ³	2.8 mg/m ³	-	-

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area.

Respiratory protection: No specific recommendations, but respiratory protection may be required under exceptional circumstances. Self-contained breathing apparatus must be available in case of emergency.

Hand protection: Impermeable gloves.

Eye protection: Tightly fitting safety goggles. Ensure eye bath is to hand.

Skin protection: Impermeable protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Colourless

Oxidising: Oxidising (by EC criteria)

Boiling point/range°C: 115

Melting point/range°C: -52

Relative density: 1.20 -1.22

pH: 1-4

9.2. Other information

Other information: Not applicable.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.

Decomposition may occur on exposure to conditions or materials listed below.

[cont...]

SAFETY DATA SHEET

SANOSIL SUPER 25

Page: 5

10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values:

Route	Species	Test	Value	Units
SKN	RBT	LD50	>5000	mg/kg
ORL	RAT	LD50	415	mg/kg
VAPOURS	RAT	4H LC50	>0.17	gm/kg
IPR	RAT	LDLO	100	mg/kg
ORL	MUS	LD50	1312	mg/kg

Relevant effects for mixture:

Effect	Route	Basis
Irritation	INH	Hazardous: calculated
Corrosivity	OPT INH DRM	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: Blistering may occur. Progressive ulceration will occur if treatment is not immediate.

Eye contact: Corneal burns may occur. May cause permanent damage.

Ingestion: Corrosive burns may appear around the lips. Blood may be vomited. There may be bleeding from the mouth or nose.

Inhalation: There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values:

Species	Test	Value	Units
---------	------	-------	-------

[cont...]

SAFETY DATA SHEET
SANOSIL SUPER 25

Page: 6

Daphnia magna	48H EC50	2.4-7.7	mg/l
RAINBOW TROUT (Oncorhynchus mykiss)	96H LC50	31.3	mg/l
FISH	96H LC50	70.3	mg/l

12.2. Persistence and degradability

Persistence and degradability: Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: Readily absorbed into soil.

12.5. Results of PBT and vPvB assessment

PBT identification: This substance is not identified as a PBT substance.

12.6. Other adverse effects

Other adverse effects: Negligible ecotoxicity.

Section 13: Disposal considerations**13.1. Waste treatment methods**

Disposal operations: Disposal should be carried out by licenced contractors.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information**14.1. UN number**

UN number: UN2014

14.2. UN proper shipping name

Shipping name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION

14.3. Transport hazard class(es)

Transport class: 5.1 (8)

14.4. Packing group**14.5. Environmental hazards**

Environmentally hazardous: No

Marine pollutant: No

14.6. Special precautions for user

Special precautions: No special precautions.

Tunnel code: E

Transport category: 2

[cont...]

SAFETY DATA SHEET

SANOSIL SUPER 25

Page: 7

Section 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.2. Chemical Safety Assessment**

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information**Other information**

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and 3: H271: May cause fire or explosion; strong oxidiser.

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H332: Harmful if inhaled.

R5: Heating may cause an explosion.

R8: Contact with combustible material may cause fire.

R20/22: Harmful by inhalation and if swallowed.

R34: Causes burns.

R35: Causes severe burns.

R37: Irritating to respiratory system.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

[final page]

METHOD STATEMENT No. 1425 REVISION 1 for
H&V Commissioning Services Ltd

Appendix 3 – Sterilisation Completion Certificate

05/06/2014

A52399188

H & V COMMISSIONING WATER TREATMENT SPECIALISTS



DOMESTIC WATER SERVICES STERILISATION CERTIFICATE

Project:	
Client:	
System:	
Engineer:	

Sterilisation Conditions

Method Employed	
Contact Time	
Sterilisation Agent Used	
PH Range	

Remarks:

Lab Sample Results:

Sample Ref:	TVC's @22 Degrees	TVC's @ 37 Degrees	E - Coli	Total Coliforms	Date

Signed on behalf of H & V

Date:

Killnowe Office
16 Barrmill Road,
Galston KA4 8HH

TEL: 01563 821991

FAX: 01563 822220

Web: www.handv.co.ukEmail: talk2us@handv.co.uk



New Southern General Hospitals

Project Manager Instruction #3104

Status: Accepted

Notification

Raised By

GGC01.NSGLP.pmoir on 17 Nov 2014 9:23AM

Raised To

BCL01

Response Required By

1 Dec 2014 12:00AM

Title

PMI 312 - ADULT & CHILDREN'S HOSPITAL - COLD WATER STORAGE TANKS

Description

Please replace the installed hollow lid supports with solid supports.

Instruction

In cold water storage tanks, you are instructed to replace the hollow lid supports currently installed with solid supports to comply with recommendations DoH/HFS Alert Ref:EFA/2013/004 issued on 19th November 2013 and by doing so, greatly reduce the likelihood of the growth of Pseudomonas within the tanks.

Documents

Document Name

PMI 312 - ADULT & CHILDREN'S HOSPITAL - COLD WATER STORAGE TANKS.pdf

Description

BMCE Cost

File Type

application/pdf

Uploaded

On 27 Nov 2014 by BCL01.NSGLP.jbailey

Document Name

PMI 312 - Mercury.pdf

Description

Back up - Mercury Quote

File Type

application/pdf

Uploaded

On 27 Nov 2014 by BCL01.NSGLP.jbailey

Document Name

Decca Quotation - PMI 312.pdf

Description

A52399188

File Type

application/pdf

Uploaded

On 27 Nov 2014 by BCL01.NSGLP.jbailey

Document Name

PMI 312 Revised BMCE Quote.pdf

Description

Revised BMCE Quote 28/11/2014

File Type

application/pdf

Uploaded

On 28 Nov 2014 by BCL01.NSGLP.jbailey



New Southern General Hospitals

Compensation Event #13835

Status: Closed

Notification

Notified By

GGC01.NSGLP.pmoir on 10 Dec 2014

Notified To

BCL01

Proposed Compensation Event?

No

Under Dispute?

No

Type

60.1(1)-Change to the Works Information

Title

CE 068 ADULT & CHILDREN'S HOSPITALS - COLD WATER STORAGE TANK LID SUPPORTS

Description

In cold water storage tanks, you are instructed to replace the hollow lid supports currently installed with solid supports to comply with recommendations DoH/HFS Alert Ref:EFA/2013/004 issued on 19th November 2013 and by doing so, greatly reduce the likelihood of the growth of Pseudomonas within the tanks.

Linked to Early Warning

20424 - NHS EW 051 - Cold Water Storage Tanks - HFS Estates & Facilities Alert (EFA/2013/004)

Reply By

31 Dec 2014

Decision

Request to submit quotation

Quotation Request Assumptions

Agreed price including OH&P is £31,896.00 ex VAT.

Quotation #1

Proposed Cost

£31896.00

Accepted Programme affected?

No

Delay to the Completion Date?

No

Delay to a Key Date?

No

Alteration to Accepted Programme?

A52399188

No

Quote Response Assumption

Page 300

N/A

Quotation Submitted By

on

Reply By

29 Dec 2014

Outcome

An acceptance of a quotation

Outcome Comments

N/A

Assessment / Implementation

Proposed Changes to Price

£31896.00

Proposed Changes to Completion Date

N/A

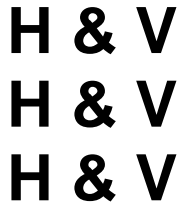
PM Agreed Changes to Price

£31896.00

PM Agreed Changes to Completion Date

Assessment Made By

on 14 Jan 2015

**Commissioning Services Ltd**

EST: 1975

Kilknowe Office,
16 Barrmill Road,
Galston,
Ayrshire, KA48HH.
TEL N°. 01563 821991
FAX N°. 01563 822220
E-Mail: talk2us@handv.co.uk

CONTRACT: NSGH, ADULT & CHILDRENS HOSPITAL – PLANTROOM 121
SYSTEM: 121 - AHU 03 SUPPLY (8TH TO 11TH FLOOR WARDS)
WITNESSING OF TESTING AND BALANCING

	Client Representative / Commissioning Manager	Client
Witnessed By:	Julie Miller	
Representing:	Brookfield Multiplex	
Signature:		
Date:	19/1/15	
Witnessed By:		
Representing:		
Signature:		
Date:		

Remarks:

Date: 6/1/15

Engineer: Ross Parker

Sheet 1 of 16

**Commissioning Services Ltd**

EST: 1975

Kilknowe Office,
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CONTRACT: NSGH, ADULT & CHILDRENS HOSPITAL – PLANTROOM 121

SYSTEM: 121 – AHU 03 SUPPLY (8TH TO 11TH FLOOR WARDS)

AIR SYSTEMS PRE COMMISSIONING SHEET		✓	X	N/A
1.	Check AHU for damage and that all the components are secure	✓		
2.	Check the transit straps have been removed, if applicable	✓		
3.	Check pulleys are secure, tight, aligned and belts are correctly tensioned, if applicable	✓		
4.	Check with the controls engineer that the system is available to run and that plant rotation is correct	✓		
5.	Check all ductwork/air terminals are fitted and that air regulating dampers are open	✓		
6.	Check louvres are fitted and clear from obstructions, if applicable	✓		
7.	Check fire dampers are open, if applicable	✓		
8.	Check the motor overloads are suitable and set			✓
9.	Check VAV or CAV boxes are installed correctly and ready for use.			✓
10.	Check the floor plenums are complete, if applicable			✓
11.	Complete commissioning test sheets.	✓		

COMMENTS

**Commissioning Services Ltd**

EST: 1975

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16 Barrmill Road,
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CONTRACT: NSGH, ADULT & CHILDRENS HOSPITAL – PLANTROOM 121**AHU TEST SHEET****SYSTEM: 121 – AHU 03 SUPPLY (8TH TO 11TH FLOOR WARDS)**

AHU									
AHU Manufacturer		Barkell		Fan Size		450			
Fan Manufacturer		Comefri		AHU Serial No		OP1 B305 8029			
Fan Type		Centrifugal		AHU Model N°.		TZAF 450 RFF			
		Design		Test				% Design	
Air Volume (L/S)		3004		3210 **				107	
External Static Pressure (Pa)		635		Inlet	86	Outlet	327	Total	413
Fan Rotational Speed (R.P.M)		1933		1740					
Filter Test Data	Pre Filter (Pa)	Inlet	*	Outlet	*			ΔP	*50
	Sec Filter (Pa)	Inlet	*	Outlet	*			ΔP	*30
MOTOR									
Manufacturer		TEC		Output kW		5.5			
Serial N°		13061198273		Motor Full Load Current		10.9		Amps	
Voltage		400		Motor Running Current		8.6		Amps	
		Design		Test					
Rotational Speed.		1450		1305					
DRIVE DETAILS									
Motor Pulley/Shaft Size (mmØ)		SPZ 200		38	Motor Pulley Taper Lock Size		2012		
Fan Pulley/Shaft Size (mmØ)		SPZ 150		50	Fan Pulley Taper Lock Size		2517		
Belt Type/Size		XPZ		1140	N°. Of Belts		4		
Shaft Centres mm		300		Adjustment		-	30	+	28 mm
Variable Speed Drive		Yes		Set Point		45 Hz			
STANDBY PLANT									
Test Air Volume		**3210	Inlet Pressure	86	Motor Rotational Speed	1305	Motor Running Current		
% Design		107	Outlet Pressure	327	Fan Rotational Speed	1740	8.6 Amps		
Variable Speed Drive		Yes		Set Point		45 Hz			
Comments. 2 nd Motor Serial Number – 13061198276									
*Filter pressure taken from magnehelic gauge.									
**Total fan volume = TH1 + TH2 + TH3.									
Control static pressure sensor = 340 Pa									
Instrument Used (Ref N°.) HV06/1, HV06/4 & HV06/5									
Date: 6/1/15		Engineer: Ross Parker & Daniel Kane						Sheet 3 of 16	

**Commissioning Services Ltd**

EST: 1975

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E-Mail: talk2us@handv.co.uk

CONTRACT: NSGH, ADULT & CHILDRENS HOSPITAL – PLANTROOM 121**DUCT VOLUME TEST SHEET****SYSTEM: 121 – AHU 03 SUPPLY (8TH TO 11TH FLOOR WARDS)**

VELOCITY PROFILE (taken facing air flow)

TEST HOLE LOCATION: PLANTROOM 121

Test Hole Ref		Duct Dia (mm)		Duct Size (mm)		Duct Area		Design Air Volume		Design Air Velocity	
				Width x Height		M2		L/S		M/S	
TH1				750 800		0.6000		2553		4.26	
4.70	4.60	4.20	4.60	3.40							
5.10	5.20	5.10	5.00	4.10							
5.00	5.20	5.10	5.00	4.10							
4.50	4.90	4.90	4.90	3.70							
4.20	4.30	4.30	4.30	3.80							

Velocity Sub Totals

23.50	24.20	23.60	23.80	19.10							
-------	-------	-------	-------	-------	--	--	--	--	--	--	--

Total Velocity	Number of Readings	Average Velocity	Measured Air Volume	% Design	Static Pressure
M/S		M/S	L/S		Pa
114.2	25	4.57	2741	107	224

Remarks:

Instrument Used: HV06/1

Date: 6/1/15

Engineer: Ross Parker & Daniel Kane

Sheet 4 of 16


Commissioning Services Ltd

EST: 1975

Kilknowe Office,
 16 Barrmill Road,
 Galston,
 Ayrshire, KA48HH.
 TEL N°. 01563 821991
 FAX N°. 01563 822220
 E-Mail: talk2us@handv.co.uk

CONTRACT: NSGH, ADULT & CHILDRENS HOSPITAL – PLANTROOM 121
DUCT VOLUME TEST SHEET
SYSTEM: 121 – AHU 03 SUPPLY (8TH TO 11TH FLOOR WARDS)

VELOCITY PROFILE (taken facing air flow)

TEST HOLE LOCATION: PLANTROOM 121

Test Hole Ref		Duct Dia (mm)		Duct Size (mm)		Duct Area		Design Air Volume		Design Air Velocity	
				Width x Height		M2		L/S		M/S	
TH2		315				0.0779		248		3.18	
3.10	3.00										
3.20	3.10										
3.30	3.20										
3.30	3.30										
3.10	3.50										
2.90	3.30										

Velocity Sub Totals

18.90	19.40										
-------	-------	--	--	--	--	--	--	--	--	--	--

Total Velocity	Number of Readings	Average Velocity	Measured Air Volume	% Design	Static Pressure
M/S		M/S	L/S		Pa
38.3	12	3.19	249	100	53

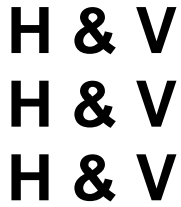
Remarks:

Instrument Used: HV06/1

Date: 6/1/15

Engineer: Ross Parker & Daniel Kane

Sheet 5 of 16

**Commissioning Services Ltd**

EST: 1975

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CONTRACT: NSGH, ADULT & CHILDRENS HOSPITAL – PLANTROOM 121**DUCT VOLUME TEST SHEET****SYSTEM: 121 – AHU 03 SUPPLY (8TH TO 11TH FLOOR WARDS)**

VELOCITY PROFILE (taken facing air flow)

TEST HOLE LOCATION: PLANTROOM 121

Test Hole Ref		Duct Dia (mm)		Duct Size (mm)		Duct Area		Design Air Volume		Design Air Velocity	
				Width x Height		M2		L/S		M/S	
TH3				300 200		0.0600		203		3.38	
3.40	3.60										
3.70	3.70										
3.80	3.70										

Velocity Sub Totals

10.90	11.00										
-------	-------	--	--	--	--	--	--	--	--	--	--

Total Velocity	Number of Readings	Average Velocity	Measured Air Volume	% Design	Static Pressure
M/S		M/S	L/S		Pa
21.9	6	3.65	219	108	83

Remarks:

Instrument Used: HV06/1

Date: 6/1/15

Engineer: Ross Parker & Daniel Kane

Sheet 6 of 16


Commissioning Services Ltd

EST: 1975

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CONTRACT: NSGH, ADULT & CHILDRENS HOSPITAL – PLANTROOM 121
DUCT VOLUME TEST SHEET
SYSTEM: 121 – AHU 03 SUPPLY (8TH TO 11TH FLOOR WARDS)

VELOCITY PROFILE (taken facing air flow)

TEST HOLE LOCATION: CEILING VOID

Test Hole Ref		Duct Dia (mm)		Duct Size (mm)		Duct Area		Design Air Volume		Design Air Velocity	
				Width x Height		M2		L/S		M/S	
TH4		160				0.0201		35		1.74	
1.80	1.60										
1.90	1.90										
1.80	1.80										
1.70	1.70										

Velocity Sub Totals

7.20	7.00										
------	------	--	--	--	--	--	--	--	--	--	--

Total Velocity	Number of Readings	Average Velocity	Measured Air Volume	% Design	Static Pressure
M/S		M/S	L/S		Pa
14.2	8	1.78	36	102	12

Remarks: Test hole serves Grille 9-513-SG001. Test Volume 36 l/s ÷ Balometer Volume 32 l/s = 1.13 Factor.

Instrument Used: HV06/1

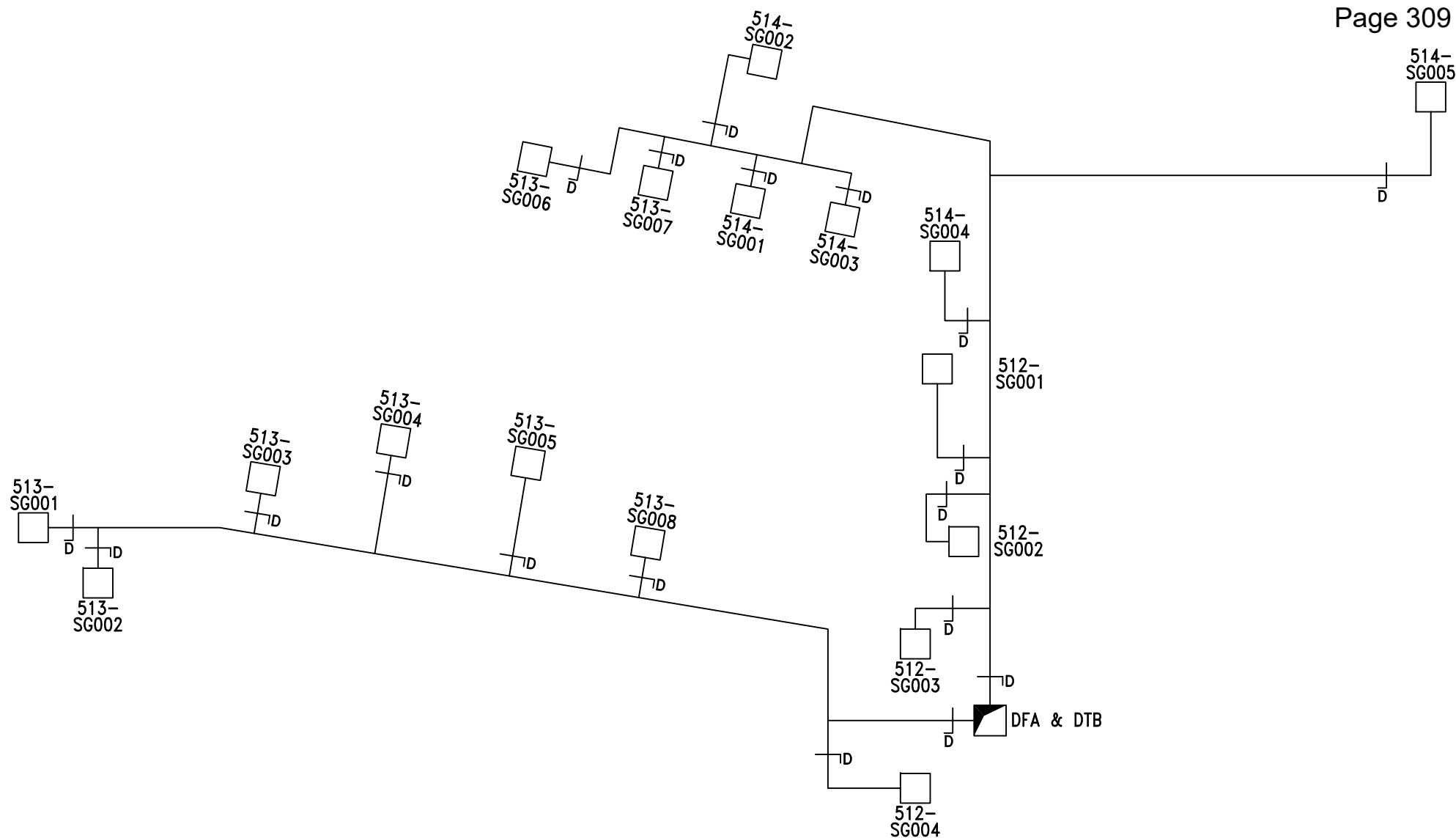
Date: 6/1/15

Engineer: Ross Parker & Daniel Kane

Sheet 7 of 16

SYSTEM: 121 – AHU 03 SUPPLY (8TH TO 11TH FLOOR WARDS)

Design Data		Initial Test Data		Final Test & Regulation Data		
Terminal or Ref No	Design Air Volume l/s	Balometer Initial Air Volume l/s	Balometer Final Air Volume l/s	Balometer Factor	Balometer Final Air Volume l/s	% Design
513-SG001	35	22	32	1.13	36.16	103
513-SG002	35	21	32	1.13	36.16	103
513-SG003	33	24	31	1.13	35.03	106
513-SG004	25	15	23	1.13	25.99	104
513-SG005	78	54	72	1.13	81.36	104
513-SG006	15	10	14	1.13	15.82	105
512-SG004	60	86	55	1.13	62.15	104
513-SG008	47	40	43	1.13	48.59	103
513-SG007	49	43	46	1.13	51.98	106
514-SG002	19	9	18	1.13	20.34	107
514-SG001	45	42	43	1.13	48.59	108
514-SG003	10	15	9	1.13	10.17	102
514-SG005	50	45	45	1.13	50.85	102
514-SG004	40	65	36	1.13	40.68	102
512-SG001	60	94	55	1.13	62.15	104
512-SG002	90	124	82	1.13	92.66	103
512-SG003	20	37	19	1.13	21.47	107
Remarks						
Instrument Used: HV06/15						
Date: 6/1/15	Engineer: Ross Parker & Daniel Kane				Sheet 8 of 16	



H&V Commissioning Services Limited

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CONTRACT:

**NSGH, ADULT & CHILDREN'S
HOSPITAL - PLANTROOM 121**

CLIENT:

MERCURY ENGINEERING LTD.

TITLE:

**SCHEMATIC LAYOUT OF
121-AHU03 SUPPLY
LEVEL 8**

DRAWN:

LH/RP

DATE:

21/01/15

DRG No.:

5902/V35

SHEET:

9 OF 16

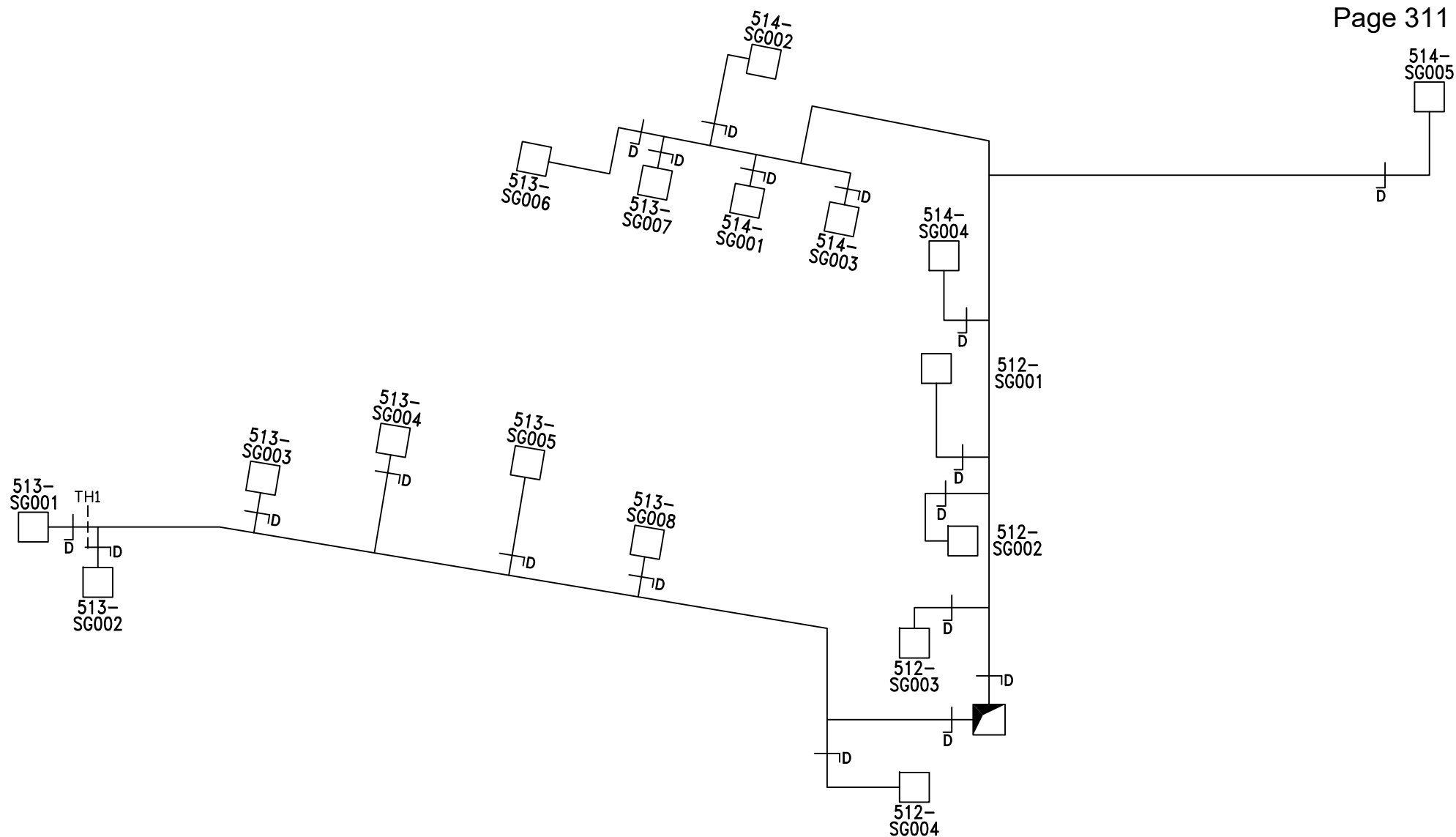
**Commissioning Services Ltd**

EST: 1975

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CONTRACT: NSGH, ADULT & CHILDRENS HOSPITAL – PLANTROOM 121**GRILLE TEST SHEET****SYSTEM: 121 – AHU 03 SUPPLY (8TH TO 11TH FLOOR WARDS)****LEVEL 9**

Design Data		Initial Test Data		Final Test & Regulation Data		
Terminal or Ref No	Design Air Volume l/s	Balometer Initial Air Volume l/s	Balometer Final Air Volume l/s	Balometer Factor	Balometer Final Air Volume l/s	% Design
513-SG001	35	20	32	1.13	36.16	103
513-SG002	35	22	32	1.13	36.16	103
513-SG003	33	22	32	1.13	36.16	110
513-SG004	25	16	24	1.13	27.12	108
513-SG005	78	62	75	1.13	84.75	109
513-SG006	15	13	14	1.13	15.82	105
512-SG004	60	90	55	1.13	62.15	104
513-SG008	47	39	43	1.13	48.59	103
513-SG007	49	43	44	1.13	49.72	101
514-SG002	19	12	18	1.13	20.34	107
514-SG001	45	46	41	1.13	46.33	103
514-SG003	10	16	9	1.13	10.17	102
514-SG005	50	46	46	1.13	51.98	104
514-SG004	40	63	38	1.13	42.94	107
512-SG001	60	108	56	1.13	63.28	105
512-SG002	90	132	82	1.13	92.66	103
512-SG003	20	45	18	1.13	20.34	102
Remarks						
Instrument Used: HV06/15						
Date: 6/1/15	Engineer: Ross Parker & Daniel Kane			Sheet 10 of 16		



H&V Commissioning Services Limited

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CONTRACT:

**NSGH, ADULT & CHILDREN'S
HOSPITAL - PLANTROOM 121**

CLIENT:

MERCURY ENGINEERING LTD.

TITLE:

**SCHEMATIC LAYOUT OF
121-AHU03 SUPPLY
LEVEL 9**

DRAWN:

LH/RP

DATE:

21/01/15

DRG No.:

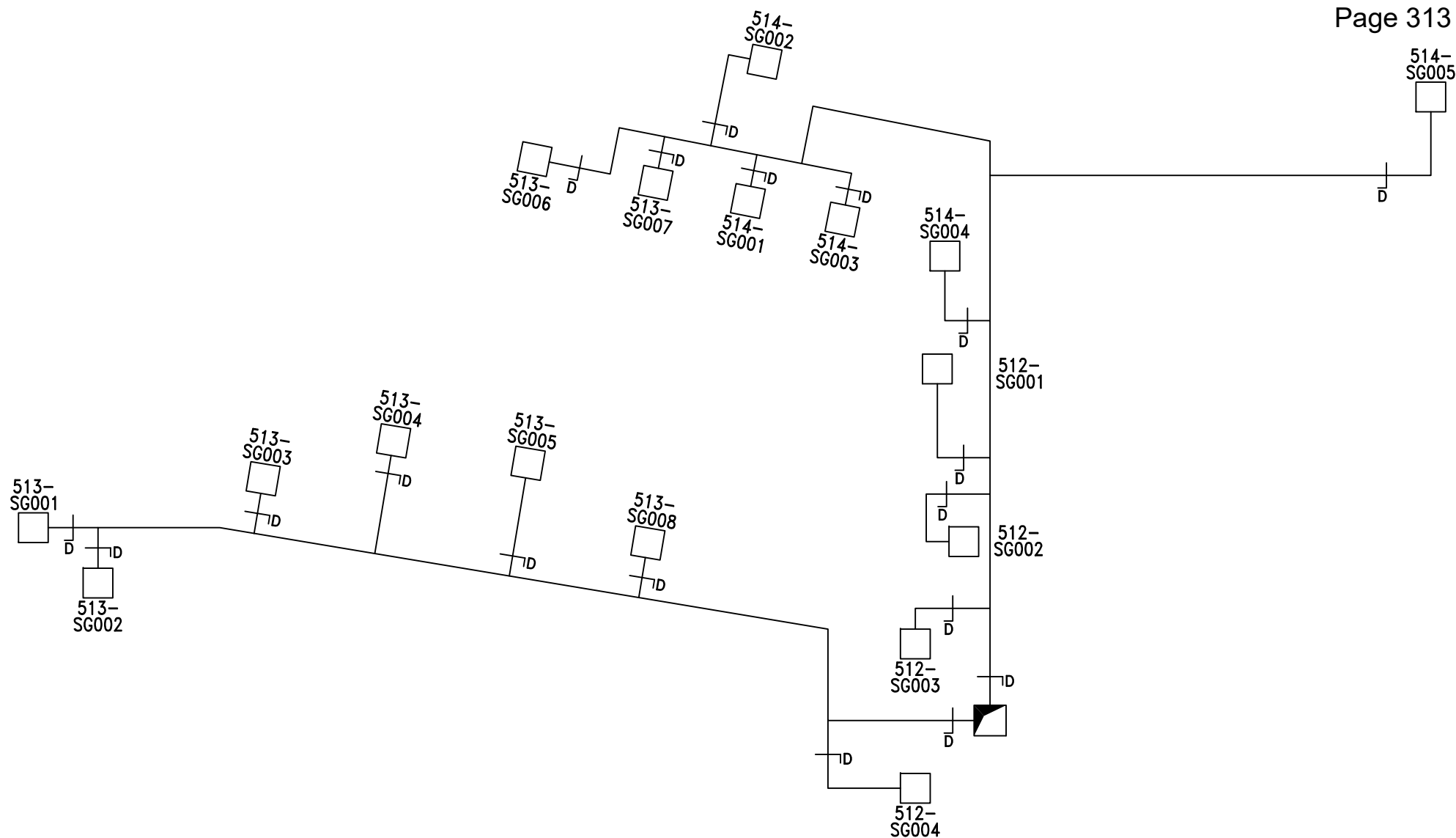
5902/V34

SHEET:

11 OF 16

SYSTEM: 121 – AHU 03 SUPPLY (8TH TO 11TH FLOOR WARDS)

Design Data		Initial Test Data		Final Test & Regulation Data		
Terminal or Ref No	Design Air Volume l/s	Balometer Initial Air Volume l/s	Balometer Final Air Volume l/s	Balometer Factor	Balometer Final Air Volume l/s	% Design
513-SG001	35	21	32	1.13	36.16	103
513-SG002	35	27	32	1.13	36.16	103
513-SG003	33	29	31	1.13	35.03	106
513-SG004	25	15	23	1.13	25.99	104
513-SG005	78	74	70	1.13	79.10	101
513-SG006	15	12	14	1.13	15.82	105
512-SG004	60	107	55	1.13	62.15	104
513-SG008	47	42	43	1.13	48.59	103
513-SG007	49	45	45	1.13	50.85	104
514-SG002	19	14	17	1.13	19.21	101
514-SG001	45	53	41	1.13	46.33	103
514-SG003	10	14	9	1.13	10.17	102
514-SG005	50	62	47	1.13	53.11	106
514-SG004	40	65	38	1.13	42.94	107
512-SG001	60	98	54	1.13	61.02	102
512-SG002	90	181	81	1.13	91.53	102
512-SG003	20	42	19	1.13	21.47	107
Remarks						
Instrument Used: HV06/15						
Date: 6/1/15	Engineer: Ross Parker & Daniel Kane				Sheet 12 of 16	



H&V Commissioning Services Limited

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CONTRACT:

**NSGH, ADULT & CHILDREN'S
HOSPITAL - PLANTROOM 121**

CLIENT:

MERCURY ENGINEERING LTD.

TITLE:

**SCHEMATIC LAYOUT OF
121-AHU03 SUPPLY
LEVEL 10**

DRAWN:

LH/RP

DATE:

21/01/15

DRG No.:

5902/V33

SHEET:

13 OF 16

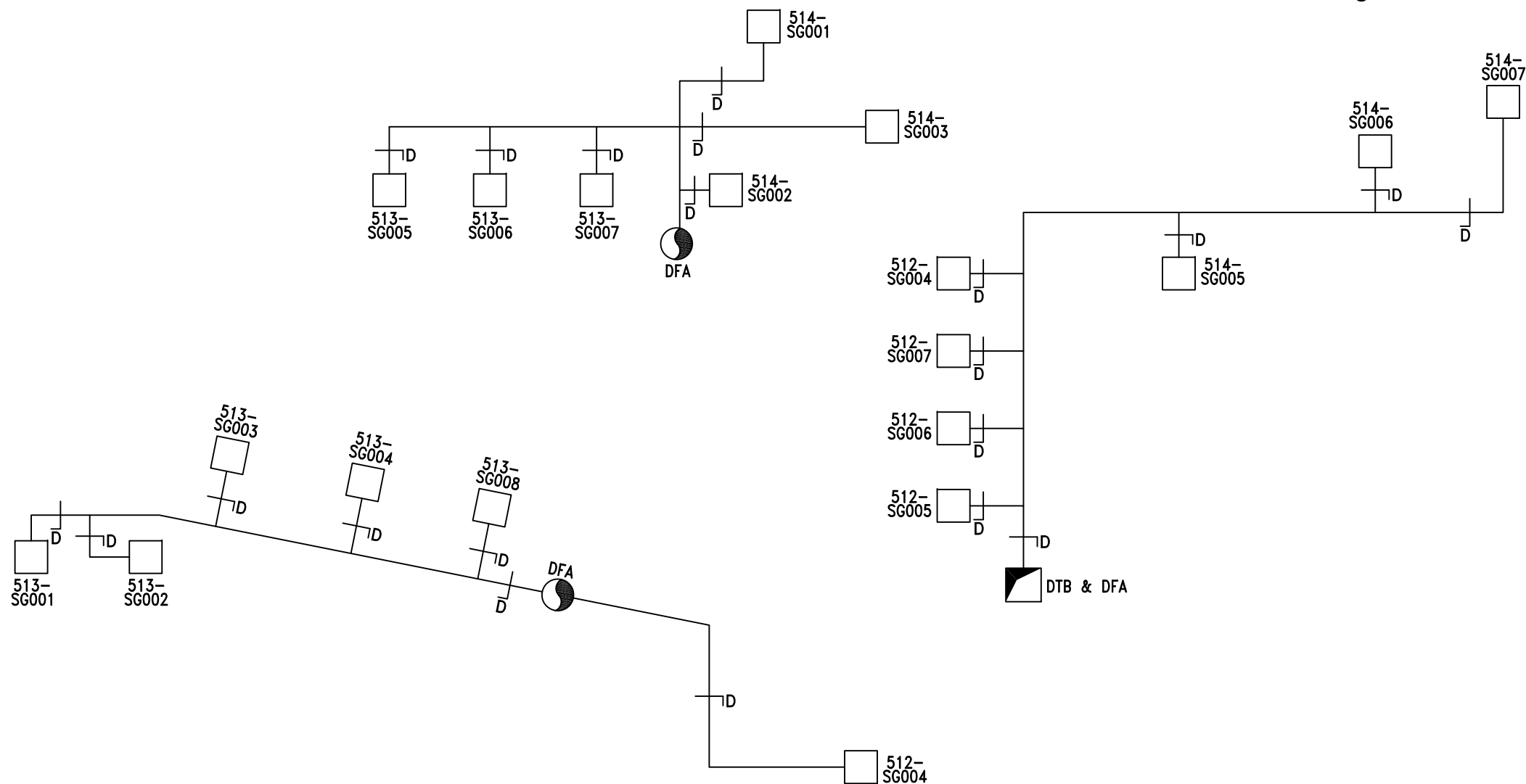
**Commissioning Services Ltd**

EST: 1975

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CONTRACT: NSGH, ADULT & CHILDRENS HOSPITAL – PLANTROOM 121**GRILLE TEST SHEET****SYSTEM: 121 – AHU 03 SUPPLY (8TH TO 11TH FLOOR WARDS)****LEVEL 11**

Design Data		Initial Test Data		Final Test & Regulation Data		
Terminal or Ref No	Design Air Volume l/s	Balometer Initial Air Volume l/s	Balometer Final Air Volume l/s	Balometer Factor	Balometer Final Air Volume l/s	% Design
Branch A						
513-SG001	35	29	32	1.13	36.16	103
513-SG002	35	34	32	1.13	36.16	103
513-SG003	33	46	30	1.13	33.90	103
513-SG004	25	32	23	1.13	25.99	104
513-SG008	15	20	14	1.13	15.82	105
512-SG004	60	95	54	1.13	61.02	102
Branch B						
513-SG005	78	130	73	1.13	82.49	106
513-SG006	47	61	43	1.13	48.59	103
513-SG007	49	95	45	1.13	50.85	104
514-SG001	19	32	18	1.13	20.34	107
514-SG003	10	93	9	1.13	10.17	102
514-SG002	45	102	41	1.13	46.33	103
Branch C						
514-SG007	150	172	135	1.13	152.55	102
514-SG006	10	16	9	1.13	10.17	102
514-SG005	50	30	45	1.13	50.85	102
514-SG004	40	92	36	1.13	40.68	102
512-SG007	60	122	56	1.13	63.28	105
512-SG006	90	211	86	1.13	97.18	108
512-SG005	20	92	18	1.13	20.34	102
Remarks						
Instrument Used: HV06/15						
Date: 6/1/15		Engineer: Ross Parker & Daniel Kane			Sheet 14 of 16	



H&V Commissioning Services Limited

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CONTRACT:

**NSGH, ADULT & CHILDREN'S
HOSPITAL - PLANTROOM 121**

CLIENT:

MERCURY ENGINEERING UK

TITLE:

SCHEMATIC LAYOUT OF

**121-AHU 03 SUPPLY
LEVEL 11**

DRAWN:

LH/RP

DATE:

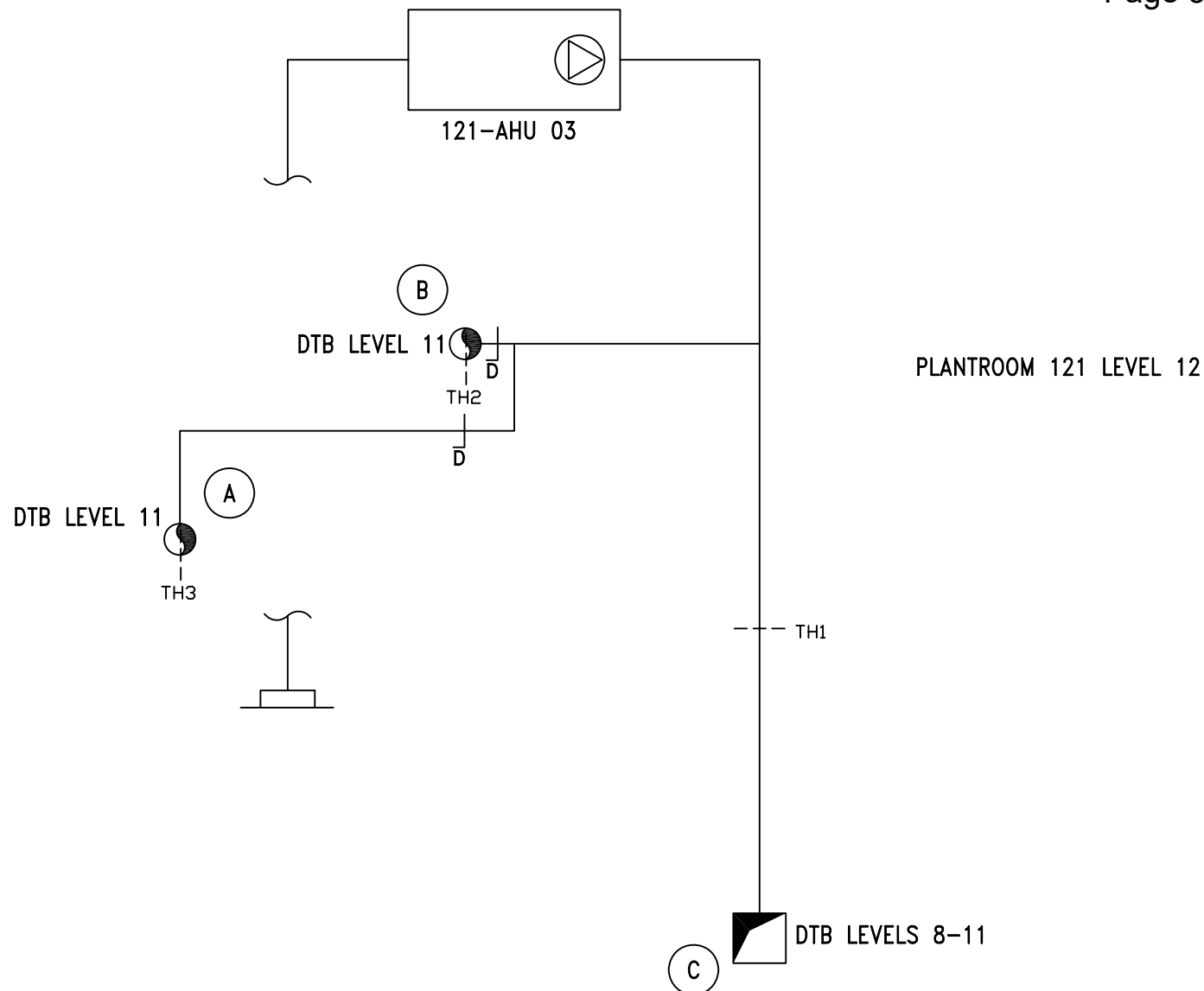
21/01/15

DRG No.:

5902/V31

SHEET:

15 OF 16



H&V Commissioning Services Limited Kilknowe Office 16 Barrmill Road Galston East Ayrshire, KA4 8HH Tel : 01563 821991 Fax: 01563 822200 email: talk2us@handv.co.uk	CONTRACT: NSGH, ADULT & CHILDREN'S HOSPITAL - PLANTROOM 121	TITLE: SCHEMATIC LAYOUT OF 121-AHU 03 SUPPLY (8TH TO 11TH FLOOR WARDS)	DRAWN: LH/RP
	CLIENT: MERCURY ENGINEERING UK		DATE: 16/01/15
			DRG No.: 5902/V32
			SHEET: 16 OF 16



New Southern General Hospitals

Project Management Instruction Report

Notify

ID	3252	Notified by	GGC01.sfrew on 07/01/2015 15:25:57
Notified to	BCL01-Brookfield Construction Limited	Date notified	07/01/2015
Date response required	21/01/2015		
Title	PMI 322 - LTHW system		
Description	The Board confirm that, due to the results of chemical analysis on the closed LTHW systems within the laboratories, Brookfield Multiplex should proceed with the flushing and treatment prior to opening up the Primary LTHW feed from the Energy Centre. Brookfield Multiplex to provide copies of test results at building handover and following top-up of inhibitor in July 2015.		
Instruction	as above		
Status	None	Cancel PMI	None

Meeting

Documents

Notes

5.4 Commissioning Results

Folder Path: .. / Building Services Information / Mechanical / Water Services / Basement Water Services / 5. Test and Commissioning / 5.4 Commissioning Results

Review Status	Reviewed At	Title	Description	Attached Files
		Incoming Mains Water Quality	Incoming Mains Water Quality test results	<div>1</div> LT180413-42 H V Incoming Mains Sample Report.pdf
		Lechate Flush	Lechate Flush Certificate	<div>1</div> Lechate Flush Certification.pdf
Reviewed by Brookfield	25/01/2015 09:16	Trade Cold Water System (TCWS)	Test & Commissioning	<div>1</div> Trade Cold Water Booster Set.pdf
				<div>1</div> 10000x5000x2000 CWST cert.pdf
Reviewed by Brookfield	25/01/2015 09:16	Boosted Cold Water System (BCWS)	Test & Commissioning	<div>1</div> WILO Booster set commissioning Cert.pdf
				<div>1</div> 10000x5000x2000 CWST cert.pdf
				<div>1</div> 27500x5000x2000 CWST cert.pdf



New Southern General Hospitals

Compensation Event #14323

Status: Closed

Notification

Notified By

GGC01.NSGLP.pmoir on 17 Feb 2015

Notified To

BCL01

Proposed Compensation Event?

No

Under Dispute?

No

Type

60.1(5)-Employer or Others not working to stated conditions

Title

CE 074 LTHW SYSTEM

Description

Confirmation of works to flush , refill and treat the LTHW system in Laboratory Block as per PMI 322.

Reply By

10 Mar 2015

Decision

Request to submit quotation

Quotation Request Assumptions

N/A

Quotation #1

Proposed Cost

Accepted Programme affected?

No

Delay to the Completion Date?

No

Delay to a Key Date?

No

Alteration to Accepted Programme?

No

Quote Response Assumption

N/A

A52399188

Quotation Submitted By

on

Reply By

3 Mar 2015

Outcome

An acceptance of a quotation

Outcome Comments

N/A

Assessment / Implementation

Proposed Changes to Price

[REDACTED]

PM Agreed Changes to Price

[REDACTED]

Assessment Made By

on 25 Feb 2015

Proposed Changes to Completion Date

N/A

PM Agreed Changes to Completion Date

Review Status	Reviewed At	Title	Description	Attached Files
Reviewed by Brookfield	22/05/2015 15:28	123AHU02	SUPPLY & DIRTY EXTRACT (8TH TO 11TH FLOOR WARDS)	<div>2123 - AHU 02 DIRTY EXTRACT (8TH TO 11TH FLOOR WARDS) REPORT.pdf</div> <div>1123 - AHU 02 SUPPLY (8TH TO 11TH FLOOR WARDS) REPORT.pdf</div>
Reviewed by Brookfield	22/07/2015 12:07	123AHU01	SUPPLY & DIRTY EXTRACT (8TH TO 11TH FLOOR WARDS)	<div>1123 - AHU 01 SUPPLY (8TH TO 11TH FLOOR).pdf</div> <div>1123 - AHU 01 DIRTY EXTRACT (8TH TO 11TH FLOOR WARDS) REPORT.pdf</div>
Reviewed by Brookfield	22/07/2015 12:07	123AHU04	SUPPLY & EXTRACT - 4TH TO 7TH FLOOR WARDS	<div>2123 - AHU 04 SUPPLY (4TH TO 7TH FLOOR WARDS) REPORT.pdf</div> <div>1123 - AHU 04 DIRTY EXTRACT (4TH TO 7TH FLOOR WARDS) REPORT.pdf</div>
Reviewed by Brookfield	23/06/2015 17:05	123AHU07	SUPPLY & DIRTY EXTRACT (4TH TO 7TH FLOOR WARDS) (NO WITNESS SHEET)	<div>1123 - AHU 07 DIRTY EXTRACT (4TH TO 7TH FLOOR WARDS).pdf</div> <div>1123 - AHU 07 SUPPLY (4TH TO 7TH FLOOR WARDS).pdf</div>
Reviewed by Brookfield	23/06/2015 17:05	123AHU05	SUPPLY & DIRTY EXTRACT (4TH TO 7TH FLOOR WARDS) (NO WITNESS SHEET)	<div>1123 - AHU 05 SUPPLY (4TH TO 7TH FLOOR WARDS).pdf</div> <div>1123 - AHU 05 DIRTY EXTRACT (4TH TO 7TH FLOOR WARDS).pdf</div>
Reviewed by Brookfield	23/06/2015 17:05	AHU Inverter Readings	COMMISSIONING SET POINTS	<div>1NSGH_A&C_Plantroom123_HZ_SP Set Points.xls</div>
Reviewed by Brookfield	22/05/2015 15:28	PR-123 FAN COIL UNITS	FAN COIL UNITS	<div>1NSGH - FAN COIL UNITS PR123.pdf</div>
Reviewed by Brookfield	22/05/2015 15:28	123AHU06	SUPPLY & EXTRACT - 4TH TO 7TH FLOOR WARDS	<div>2123 - AHU 06 SUPPLY (4TH TO 7TH FLOOR WARDS).pdf</div> <div>2123 - AHU 06 EXTRACT (4TH TO 7TH FLOOR WARDS) REPORT.pdf</div>
Reviewed by Brookfield	22/05/2015 15:28	123-03/EF02	4TH TO 11TH FLOOR DIRTY EXTRACT	<div>2123 - 03-EF02 (4TH TO 11TH FLOOR DIRTY EXTRACT) REPORT.pdf</div>
Reviewed by Brookfield	22/05/2015 15:28	123AHU03	SUPPLY & CLEAN EXTRACT - CENTRAL CORE & 8TH TO 11TH FLOOR WARDS	<div>2123 - AHU 03 CLEAN EXTRACT (CENTRAL CORE & 8TH TO 11TH FLOOR WARDS) REPORT.pdf</div> <div>2123 - AHU 03 SUPPLY (CENTRAL CORE & 8TH TO 11TH FLOOR WARDS) REPORT.pdf</div>
Reviewed by Brookfield	22/05/2015 15:28	123-EF03	PLANTROOM EXTRACT	<div>1123 - EF03 (PLANTROOM EXTRACT) REPORT.pdf</div>
Reviewed by Brookfield	22/05/2015 15:28	123-EF02	PLANTROOM EXTRACT	<div>1123 - EF02 (PLANTROOM EXTRACT) REPORT.pdf</div>
Reviewed by Brookfield	22/05/2015 15:28	123-EF01	PLANTROOM EXTRACT	<div>1123 - EF01 (PLANTROOM EXTRACT) REPORT.pdf</div>



New Southern General Hospitals

Compensation Event #16807

Status: Closed

Notification

Notified By

GGC01.NSGLP.pmoir on 17 Sep 2015

Notified To

BCL01

Proposed Compensation Event?

No

Under Dispute?

No

Type

60.1(1)-Change to the Works Information

Title

CE 147 HAEMATO ONCOLOGY WARD L4B - AIR PERMEABILITY TESTS

Description

Please proceed and undertaken air permeability test to 24 single rooms as per PMI 436, submit report with test results to Board for review.

Linked to PMI

4455 - PMI 436 ADULT HOSPITAL LEVEL 4 WARD B HAEMATO ONCOLOGY - AIR PERMEABILITY TEST

Reply By

8 Oct 2015

Decision

Request to submit quotation

Quotation Request Assumptions

Agreed cost 

Quotation #1

Proposed Cost



Accepted Programme affected?

No

Delay to the Completion Date?

No

Delay to a Key Date?

No

Alteration to Accepted Programme?

No

A52399188

Quote Response Assumption

N/A

Reply By

5 Oct 2015

Outcome

An acceptance of a quotation

Outcome Comments

N/A

Outcome Submitted By

GGC01.NSGLP.sfrew on 22 Sep 2015

Assessment / Implementation

Proposed Changes to Price

PM Agreed Changes to Price

Assessment Made By

GGC01.NSGLP.sfrew on 22 Sep 2015

Proposed Changes to Completion Date

N/A

PM Agreed Changes to Completion Date

From: [Jerry Sullivan](#) [[Jerry.Sullivan](#) [REDACTED]] on behalf of [Jerry Sullivan](#)
To: [David Wilson](#)
Cc: [Julie Miller](#); [Gillon Armstrong](#)
Subject: RE: Level 4 B
Date: 22 September 2015 14:20:36
Attachments: [image001.jpg](#)

David,

Mastic will be done tonight for H&V in the morning.

Regards

Jerry

Jerry Sullivan
SiteManager - Construction



Brookfield Multiplex Europe
Site Office
Institute of Neurological Science
Queen Elizabeth University Hospital
1345 Govan Road
Glasgow, G51 4TF, United Kingdom

Web www.brookfieldmultiplex.com

From: David Wilson
Sent: 22 September 2015 13:13
To: Jerry Sullivan
Cc: Julie Miller; Gillon Armstrong
Subject: RE: Level 4 B

Jerry,

Not a good idea to copy Sinead into that email – you're falling straight into Mercurys hands with this - as if we (BMCE) are exactly what she said- disjointed!

We have already missed the date for sealing the rooms and are now failing the second date we gave them – Are you able to get the mastic man to work late tonight?

If Mercury fail with holes in rooms then we can get stuck into them as long as we keep our end of the bargain up.

David Wilson
Commissioning Manager - Construction



Brookfield Multiplex Construction Europe Ltd

Fairfield - Suite 12
1048 Govan Road
Glasgow, G51 4XS, United Kingdom

W www.brookfieldmultiplex.com



Please consider the environment before printing this email.

Please note we have now moved office!

From: Jerry Sullivan
Sent: 22 September 2015 13:03
To: David Wilson
Cc: Julie Miller; [Sinead.Rogan](#) _____ Gillon Armstrong
Subject: FW: Level 4 B

David,

Access to ward 2a for sealing rooms for air test today was paramount, mastic man was borrowed for 2 hours. RSK are booked in for air permeability test tomorrow and need to pass these 2 rooms.

Mastic man (2) has 5 rooms to complete in ward 4B and will be sorted by 11.30am tomorrow

The mdf picture frame sample will be on site tomorrow morning, it will be fitted and benchmarked that it works with magnahelic gauge which is **still not on site**, the remainder of picture frames 24 in total will be fitted by Thursday/Friday.

Mercury are still pulling cables for the gauges and light switches have been removed inside rooms leaving holes into corridor. Are the rooms to be tested by H and V with holes from room into corridor.

Regards

Jerry

Jerry Sullivan
SiteManager - Construction



Brookfield Multiplex Europe
Site Office
Institute of Neurological Science
Queen Elizabeth University Hospital
1345 Govan Road
Glasgow, G51 4TF, United Kingdom

Web www.brookfieldmultiplex.com

From: David Wilson
Sent: 22 September 2015 12:10
To: Jerry Sullivan
Subject: FW: Level 4 B

Jerry,

Can you ensure that the sealing of the ward 4b rooms is complete for H&V to return tomorrow morning. If there is a problem then let me know.

Thanks
David

David Wilson
Commissioning Manager - Construction



Brookfield Multiplex Construction Europe Ltd
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1048 Govan Road
Glasgow, G51 4XS, United Kingdom

W www.brookfieldmultiplex.com

 Please consider the environment before printing this email.

Please note we have now moved office!

From: David Wilson
Sent: 22 September 2015 12:07
To: 'Sinead M. Rogan'
Cc: Ian McKenzie ([imck](#)); Julie Miller; Gillon Armstrong
Subject: RE: Level 4 B

Sinead,

We were not due to go back into the ward until tomorrow for commissioning? Jerry is in charge of the room sealing and he is aware of that this needs to be completed this evening.

Also the NHS walkround is not a completion walkround so makes no difference to what we are doing. The handover date of the ward has taken the magnahelic gauge into consideration (29th Oct.) although the delivery s for the LED plates and the V sensors are late. I will speak to Jerry on the wall boxes and chase them up – if you could chase up the LED plates and V sensors.

As discussed last week we will be unable to determine the actual problem with corridor pressure until all the rooms are sealed. I have discussed this with WW who are looking at the possibility of increasing the corridor extract system (31-63 EF01) and / or transfer grille into the riser to displace some of the supply air. Once we see what we have got we can make a decisions into what is required.

I will be in Aberdeen tomorrow but will be contactable on the phone if you / Ian need to speak to me. Julie will liaise with Ian on the balancing and the outcome of the corridor pressure issue.

David

David Wilson

Commissioning Manager - Construction



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Glasgow, G51 4XS, United Kingdom

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 Please consider the environment before printing this email.

Please note we have now moved office!

From: Sinead M. Rogan |
Sent: 22 September 2015 11:37
To: David Wilson
Cc: Ian McKenzie | ; Julie Miller
Subject: Level 4 B

Hi David

I was on site this morning and the area is still not ready

There are too many variables for the commissioning to commence, Gerry advised that there is a NHS site walk around next week and I think that this is too early.

There are a no of works ie the magnehelics delivery and install time that have not been added to the final handover date and whilst these works are going on commissioning the area is a none starter due to opes in walls and ceiling tiles out.

Also there is still the issue of corridor pressure which will require relief, there is talk of a transfer grille but where is it going and do we have a size for this. These are additional works and the lead time on a damper is in excess of 2 weeks from date of order.

From speaking with Julie this morning this Gerry guy is robbing her labour for the room seals and taking them to other works in the hospital to give a chance to achieve the goals there needs to be a focused directive to prioritising the level 4 works. The wall boxes are still not installed and Gerry is asking that these are completed by us so I would take this as there is nobody on site to do them.

It all appears very disjointed at present, I would suggest that there is a site meeting when we start this with WW present to run figures and reach a final and workable solution.

Regards



Sinead Rogan
Project Manager

Mercury Engineering & Building Services Ltd | Mechanical & Electrical

Mercury House,
Pavilion 3,
Finnieston Business Park,
Minerva Way, G3 8AU
| Glasgow | United Kingdom



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New Southern General Hospitals

Compensation Event #18133

Status: Closed

Notification

Notified By

GGC01.NSGLP.pmoir on 26 Nov 2015

Notified To

BCL01

Proposed Compensation Event?

No

Under Dispute?

No

Type

60.1(1)-Change to the Works Information

Title

CE 159 QEUH WARD 4B - ADDITIONAL WORKS ASSOCIATED WITH UPGRADE OF WARD

Description

Cost arising from additional works to ceilings and M&E infrastructure associated with the general upgrade of the ward.

Linked to PMI

4026 - PMI 424 ADULT HOSPITAL HAEMATO-ONCOLOGY WARD LEVEL 4

Reply By

17 Dec 2015

Decision

Request to submit quotation

Quotation Request Assumptions

Agreed cost  incl OH+P but excluding VAT.

Quotation #1

Proposed Cost



Accepted Programme affected?

No

Delay to the Completion Date?

No

Delay to a Key Date?

No

Alteration to Accepted Programme?

No

A52399188

Quote Response Assumption

N/A

Reply By

14 Dec 2015

Outcome

An acceptance of a quotation

Outcome Comments

N/A

Outcome Submitted By

GGC01.NSGLP.sfrew on 2 Dec 2015

Assessment / Implementation

Proposed Changes to Price

[REDACTED]

PM Agreed Changes to Price

[REDACTED]

Assessment Made By

GGC01.NSGLP.sfrew on 2 Dec 2015

Proposed Changes to Completion Date

N/A

PM Agreed Changes to Completion Date



New Southern General Hospitals

Compensation Event #20242

Status: Closed

Notification

Notified By

GGC01.NSGLP.sfrew on 29 Apr 2016

Notified To

BCL01

Proposed Compensation Event?

No

Under Dispute?

No

Type

60.1(1)-Change to the Works Information

Title

CE 173 - ADULT HOSPITAL - WARD 4B/HAEMATO-ONCOLOGY WARD - ALTERATION TO BOARD

Description

The Board confirm acceptance of the design fees and request that BMCL progress PMI 471 (i.e. establish the feasibility, estimated costs and programme of works to achieve the revised spec as agreed by DWL). Agreed cost **£14,416.99** inclusive of OH&P but ex VAT.

Linked to PMI

5453 - PMI 471 ADULT HOSPITAL - WARD 4B/HAEMATO-ONCOLOGY WARD - ALTERATION TO BOARD REQUIREMENTS

Reply By

20 May 2016

Decision

Request to submit quotation

Quotation Request Assumptions

Agreed cost **£** inclusive of OH&P but ex VAT.

Quotation #1

Proposed Cost

Accepted Programme affected?

No

Delay to the Completion Date?

No

Delay to a Key Date?

No

A52399188

Alteration to Accepted Programme?

No

Quote Response Assumption

N/A

Reply By

13 May 2016

Outcome

An acceptance of a quotation

Outcome Comments

N/A

Outcome Submitted By

GGC01.NSGLP.sfrew on 29 Apr 2016

Assessment / Implementation

Proposed Changes to Price

[REDACTED]

PM Agreed Changes to Price

[REDACTED]

Assessment Made By

GGC01.NSGLP.sfrew on 29 Apr 2016

Proposed Changes to Completion Date

N/A

PM Agreed Changes to Completion Date

Minutes QEUH – Isolation Rooms

Project: QEHB & RHC

Date & Time: Tuesday 31st May 2016 at 2:00pm

Venue: Meeting Room 5, New FM & Lab Medicine Building, QEUH

Invitees:

Ian Powrie (IP)	NHSGGC Sector Estates Manager
Douglas Ross (DRo)	Currie & Brown
David Wilson (DW)	Brookfield Multiplex
John McEwan (JMcE)	Hulley Sfm
Stewart McKechnie (SM)	TUV-SUD
Dave Ramsay (DRa)	Capita

Apologies: **David Loudon (DL)** NHSGGC Director of Facilities and Capital Planning

Purpose Of Meeting: Due to recent formal concerns raised by ID Physicians & ICD colleagues at QEUH, NHSGGC wish to seek confirmation from Health Facilities Scotland (HFS) on certain matters relevant to SHPN 04 Supplement 1. These are contained in Questions 1 and 2 of "HFS Isolation Room Status" document with Question 1 having been submitted to HFS. In advance of Question 2 submission, DL requested Supervisor to comment on Question 2 which highlights variations to SHPN 04 Supplement 1. The Team therefore requires to be unified in support of the submission and supporting information. Question 2 forms Part 1 of the agenda. IP and JMcE met on site on 25th May 2016 to view Isolation Rooms and Supervisor's (JMcE) Notes from that inspection forms Parts 2 and 3 of the agenda which includes relevant design and technical matters pertaining to the proposed submission.

Item	Minute	Action
1.0	PROPOSED SUBMISSION PACK TO HFS	
1.1	<p>HFS Isolation Room Status</p> <p>In this document NHSGGC has prepared 2 Questions to be raised with HFS for confirmation. IP confirmed that the following Question 1 has now been forwarded to HFS. IP advised that HFS at this stage does not require detailed information of what has been provided in the Isolation Rooms at QEUH, but the likelihood is that HFS will be aware of Isolation Room layout.</p> <p><i>Question 1:</i> <i>Is the ventilation design criteria set out in SHPN 04 supplement 1: Isolation Facilities in Acute Settings As detailed in Table 1: Isolation Suite – Ventilation Parameters and Sheet 2: New build single room with en-suite facilities and bed-access lobby (isolation suite), suitable for safe nursing of patients with the one of the following conditions?</i></p> <ol style="list-style-type: none"> 1. Multi Drug Resistant TB (MDRTB)? 2. MERS? 3. H1N1? <p>In advance of NHSGGC issuing the following Question 2 to HFS, the Team requires to be unified in support of the submission of Question 2 and the supporting information for the main variations from SHPN 04 supplement 1.</p> <p><i>Question 2:</i> <i>If the above design criterion is suitable for safe nursing of patients with any one of these conditions please advise if the following design variant is equally suitable?</i> <i>See attached schematic ref: ZBP-XX-XX-SC-524-871, along with a set of commissioning documents for a representative Critical Care Ward (CCW), isolation room ventilation arrangement within the QEUH.</i> <i>The following variations should be noted:</i></p> <ol style="list-style-type: none"> 1. The main extract is located in the isolation room. 2. The alarm system to the nurse's base was deleted, including: <ul style="list-style-type: none"> • Room Lobby pressure gauge alarm. • The extract air flow switch; alarm to the nurses' base. • The supply air flow switch; alarm to the nurses' base. 3. The transfer grille between the isolation room and the en-suite was deleted. <p>Discussion centred on the design development process for the isolation room layout and ventilation design. DW explained that the original ventilation schematic design Drawing No ZBP-XX-XX-SC-524-707 dated 2010 for the Isolation Room Suite showed the extract located only in the En-Suite ceiling. In 2012 the ventilation schematic design submitted by Brookfield (Dwg No ZBP-XX-XX-SC-524-871) showed extract located in both the Isolation Room ceiling and the En-Suite ceiling. SM pointed out that there would have been several iterations of the drawing schematic during that period indicating that there presumably would have been discussions among the parties and reasons for developing the design. DW agreed that Brookfield would research into the process of the design development of the schematic design for the ventilation of the isolation Room Suites (Refer Action 4.1).</p> <p>Brookfield to track the Design Development of the Isolation Room Layouts to inform how the following were decided: - extract grille located within Isolation Room ceiling and En-Suite ceiling; no transfer grill on the En-Suite door; the location of the bed.</p>	DW

2.0	IP/JMcE INITIAL REVIEW OF SOME ISOLATION ROOMS ON 25TH MAY 2016 AND MATTERS DISCUSSED	
2.1	<p>CCW-163 Bed 50 would be used as an exemplar to understand installed standard v Compliance (Also taking into consideration any PMIs or Derogations).</p> <p>JMcE advised that Isolation Room Suite CCW-163 Bed 50 should be used as the exemplar for understanding the installed layout and ventilation design in comparison with SHPN 04 Supplement 1:- CCW-163 (Lobby); CCW-164 (En Suite); CCW-165 (Single Isolation).</p>	Note
2.2	<p>Provision of "all" available validation documentation provided under the construction contract for Bed 50-</p> <p>DW to collate all validation documentation for the Isolation Room Suite as Item 2.1.</p>	DW
2.3	<p>Provision of "all" available verification documentation provided under the FM contract for Bed 50</p> <p>IP explained that Estates are currently verifying the Theatres and will shortly be commencing verification of the Isolation Rooms. IP confirmed that H&V Commissioning Services Ltd were doing verification. JMcE requested the standard pro- forma that is being used for verification so that he can review.</p>	IP/JMcE
2.4	<p>Confirmation on what design standards the rooms are built & validated to</p> <p>Discussions centred on the requirements of SHPN 04 supplement 1.</p>	Note
3.0	SUPERVISOR (JMcE) INITIAL OBSERVATIONS (where access was gained) USING SHPN 04: SUPPLEMENT 1 AS REFERENCE	
3.1	<p>Room pressure was sitting at 8pa. This was at the magnehelic and no true readings were taken to verify. Range should be between 10 and 12 pa. (Appendix 2 Acceptance Testing)</p> <p>DW confirmed that tests undertaken proved that a positive pressure of 10 Pascals between entry lobby and door had been achieved. JMcE requested confirmation of pressure readings taken between Isolation Room and Lobby and taken between Isolation Room and En-Suite. DW confirmed he would provide. DW to issue test results to Supervisor for review.</p>	DW/JMcE
3.2	<p>No Alarms installed to indicate to clinical team of potential ventilation issues or remote alarm at nurses stations. Also demonstrated by low pressures having no indication (4.22)</p> <p>SHPN 04 Supplement 1 Section 4.22 states: - "Audio and visual alarms must be located at the entrance to the lobby and bedroom to warn nursing and maintenance staff of potential unsafe conditions. Continuous monitoring should be provided with remote indication at nurses stations, interlinked to the Building Management System with time delay (adjustable by Estates personnel) to take account of running-up of standby motors or damper operations or other plant items that may take time to open or close."</p> <p>DRo explained that no alarms are provided to nurses' station as these were omitted by the Board in PMI 169 Nurse Call Interface which confirmed requirements of Nurse Base Panel and stated "monitoring bedroom pressure, not required". This was issued following a visit by Lead Nurse on the project and other project team members visiting example hospital in London. DW confirmed that pressure monitoring is linked to the BMS and alarms display on the main BMS control panel in accordance with the BMS specification.</p> <p>PMI 169 states: - "Description The Board confirm their nurse call interface requirements for the Adult & Childrens Hospitals as per the attached document. Instruction Incorporate the attached interface requirement into your design development process for the nurse call system."</p> <p>Attached interface requirement states:-</p> <p>"NURSE CALL INTERFACE REQUIREMENTS</p> <p>Following static workshop and visit to Royal London Hospital we have agreed that we need the following items integrated with Static system: - Nurse call, Door access, Fire alarm, Medical gas alarm, PTS notification, Bedroom temperature notification, Control of 3rd party TV from patient handset i.e. static handset capable of operating as TV remote with infrared on static bedhead.</p> <p>We have discarded the following systems which they have used in RLH</p> <p>Bedroom pressure</p> <p>We have also discarded the following applications offered by Static systems as part of their presentations</p> <p>Patient information details, Patient "wandering" system, Voice communication for patient to staff calls"</p> <p>It was discussed that the PMI concerns the Nurse Call interface requirements and does not appear to specifically instruct the deletion of the Audio and visual alarms.</p> <p>Brookfield to track the Design Development process consequent to PMI 169 to inform on the deletion of alarms.</p> <p>With DRo agreement DW to obtain a quotation for providing audio and visual alarms and forward to DRo.</p>	Note
3.3	<p>The pressure stabiliser was not operating correctly. With corridor door open top blade remained open. Bottom blade appears to have no status change when doors are either open or closed.(4.21)</p> <p>Brookfield to investigate and also forward pressure stabiliser testing and commissioning information to Supervisor.</p>	DW

- 3.4 Door from lobby opens into room and in instance not closing properly leaving a greater leakage path and closing direction not as per exemplar within SHPN 04: Supplement 1. Sheet 2**
 Brookfield to investigate and advise Supervisor. The inconsistency of lobby/room door handle provision was discussed with handles on some doors and pushplates on other doors. **DW**
- 3.5 Extract grille located within room ceiling and toilet. All air should be extracted via the toilet with low level transfer grille within door (4.12)**
 SHPN 04 Supplement 1 Section 4.12 states: - *An extract terminal should be fitted at high level in the en-suite room. An additional terminal may be fitted in certain circumstances at low level adjacent to the bedhead in the bedroom. The clinical requirement for this should be verified and such requirements would probably relate to highly infectious patients.* Refer Actions in 1.1 and 4.2. **Note**
- 3.6 Bed location not as per exemplar within SHPN 04: Supplement 1. Sheet 2**
 JMcE identified that the location of the bed was not in the position shown in SHPN 04: Supplement 1. Sheet 2. DRO advised that this would have been a clinical decision. **Note**
- 3.7 Supply AHU (We used AHU 16 as example) is not identified with what room it serves and neither is the ductwork. (4.19 & SHTM03-01)**
 DW advised that this matter is tracked as a Defect in FM First Summary Schedule and will be corrected. **Ongoing**
- 3.8 Air Permeability (Leakage): We were advised this was carried out using the room volumes and not the envelope volumes. This will be checked on receipt of information noted within 2.2 above.**
 Brookfield to issue Air Permeability results to JMcE for Supervisor review. **DW/JMcE**
- 4.0 Agreed Actions**
- 4.1 As-Built and Commissioned Information Pack for Isolation Room Suite CCW-163 Bed 50**
 With reference to Minute Item 2.1, Brookfield to pull together a pack of information for Isolation Room Suite CCW-163 Bed 50 comprising: - CCW -163 (Lobby); CCW-164 (En- Suite); CCW-165 (Single Isolation). This should comprise the as-built layouts and the ventilation strategy together with "all" available validation documentation. **DW**
- 4.2 Specialist Ventilation Advice**
 With NHSGGC consent JMcE offered to obtain an initial independent view on the extract grille located in the Isolation Room ceiling. **DL/JMcE**
- 5.0 Next Meeting**
 A follow-up meeting to track the actions TBA. **ALL**



New Southern General Hospitals

Compensation Event #28688

Status: Closed

Notification

Notified By

GGC01.NSGLP.sfrew on 10 Jul 2017

Notified To

BCL01

Proposed Compensation Event?

No

Under Dispute?

No

Type

60.1(1)-Change to the Works Information

Title

CE 217 - Flushing to LTHW Network

Description

The Board confirm that Brookfield should proceed with the works as described within PMI 501 Flushing to LTHW Network.

Linked to PMI

7684 - PMI 501 Flushing to LTHW Network

Reply By

31 Jul 2017

Decision

Request to submit quotation

Quotation Request Assumptions

Agreed cost  inc of OH&P ex VAT

Quotation #1

Proposed Cost



Accepted Programme affected?

No

Delay to the Completion Date?

No

Delay to a Key Date?

No

Alteration to Accepted Programme?

No

A52399188

Quote Response Assumption

N/A

Reply By

25 Jul 2017

Outcome

An acceptance of a quotation

Outcome Comments

N/A

Outcome Submitted By

GGC01.NSGLP.sfrew on 17 Jul 2017

Assessment / Implementation

Proposed Changes to Price

[REDACTED]

PM Agreed Changes to Price

[REDACTED]

Assessment Made By

GGC01.NSGLP.sfrew on 17 Jul 2017

Proposed Changes to Completion Date

N/A

PM Agreed Changes to Completion Date

GREATER GLASGOW AND CLYDE NHS BOARD

NEW SOUTH GLASGOW HOSPITAL PROJECT

USERS GROUP TERMS OF REFERENCE

1. NAME OF GROUP

The name of the Group shall be the **New South Glasgow Hospital Haemato-Oncology User Group**.

2. AIM

To provide a forum for agreement/sign off of the 1:200 and 1:50 architectural drawings for the Haemato-Oncology Department. Please note that the architectural drawings will be based on the previously signed off Schedules of Accommodation which are now fixed. Sign-off of the drawings will follow a formal procedure and will be recorded on the "Design Acceptance Procedure" Form. This form will record the outcome of each meeting and be signed by the User Group Lead on behalf of the Directorates at the end of each meeting.

3. MEMBERSHIP

- The membership of the group has been approved by the Acute Services Director(s)
- The Group will have an identified Lead
- Members will be responsible for (i) discussing the design with colleagues and in the user meetings (ii) for communicating the priorities and associated work plans agreed by the Group to their colleagues following each meeting

4. GROUP LEAD

- The Lead for the Haemato-Oncology User Group is Gary Jenkins
- The Group Lead will be responsible for ensuring that Directorate priorities are reflected in the design
- The Group Lead will be responsible for keeping their Director apprised of the status of the design process
- Where differing options regarding the design arise the Project Team will take their instruction from the Group Lead

5. MEETINGS OF THE GROUP

Two to three User Group meetings will be held to agree the 1:200 Departmental layouts and, following this a further 2 to 3 meetings will take place to agree the requirements for each room. The User Group meeting will be facilitated by the Project Team and attended by the Project Team (including FM and Infection Control) and the Contractor Team.

Seven days before each meeting hard copy drawing(s) will be issued by the Project Team to each Group Lead. It will be issued to other members of the User Group electronically.

At the User Group meeting the Design Team (Architect supported by the Health Planner and Project Team members) will provide a detailed update on the User Group Department(s) design progress and take the group through the detailed designs.

6. RECORD OF THE MEETING

Action points will be recorded by the architect on the Design Acceptance Form at the meeting and a copy will be distributed to the Group following the meeting.

ROLE OF USER GROUP LEADS

1. There will be approximately 2 to 3 meetings between February to May 2010 to discuss and sign off the 1:200 detailed departmental layouts and following this 2 to 3 meetings to discuss the detailed requirements of each room (1:50s). Seven days before the first meeting of each User Group hard copies of drawing(s) for each member of the group will be issued by the Project Team to Group Lead (electronic copies will also be sent).
2. Group Leads may wish to hold pre-meeting ensuring that users are familiar with the design plans and have had the opportunity to discuss and reach consensus in terms of thoughts around the design.
3. The Lead will be responsible for:-
 - Attending each of the design user group meetings
 - Ensuring that Directorate priorities are reflected in the design
 - Keeping their Director and other Directorate staff apprised of the outcome of the meetings and status of the design process.
 - Signing on behalf of the Directorate the 'Design Acceptance Procedure Form' at the end of each meeting (see point 5 below for more detail)

The Project Team will take instruction from the Lead where there are differences in opinion between user group representatives.

4. Each User Group meeting with the contractor will be facilitated and led by the Project Team and will include reps from Infection Control and Facilities Management.
5. There will be a formal process for the sign off of the 1:200s and 1:50s. It should be highlighted that the Schedules of Accommodation are now set and cannot be changed unless in exceptional circumstances and requires to be supported by the Chief Operating Officer.
6. The timescale for all stages of the design are tight and any delays in developing the design due to the Board's inability to meet the dates may result in financial penalties.

Procedure for Sign Off

The User Group meeting discussion will lead to:-

- [1] Accepting the Design Team proposals;
- [2] Making some changes with no impact on cost or other departments;
- [3] Making changes with an impact on other departments and/or cost.

If the User Group decision is that [1] or [2] above are the agreed status then the design process can move on to the next planned meeting or the group decide that the design is concluded and can be signed off. A Design Acceptance Procedure Form will be signed to acknowledge the status. (See attached).

If in exceptional circumstances the group agree the status is [3] then the following procedures will be implemented:

- Group Lead will discuss the issues immediately with their Director providing them with the reasoning behind the proposed change(s). This can be supported by member(s) of the Project Team or Design Team if required.
- The Directors must be presented with all appropriate information to enable them to decide whether or not to initially accept or reject the changes.
- If Director decides the change(s) is not required or not worth further work then this will be relayed to the Design Team via the Adult or Children's Project Manager. This must be relayed to the design Team within 7 days of the User Meeting.
- If the Director agrees that the change(s) submitted should be considered for implementation then he/she must make a case to the New South Glasgow Hospital and Laboratories Executive Board Sub-Group. (This group will meet weekly and consider only exceptional circumstances which cause a change to the project and incur additional capital or revenue costs).

The Director must provide the Executive Sub-Group with detailed reasoning and information for requesting change(s) which have an impact on the cost of the project.

The Executive Sub-Group will have the final say on the decision. The Project Director will communicate the decision to the Design Team within 14 days of the User Group meeting to enable the Design Team to conclude their work for the next set of meetings.

NEW SOUTH GLASGOW HOSPITALS & LABORATORY PROJECT DESIGN ACCEPTANCE PROCEDURE

Building: _____ **Issued by:** _____

Subject: _____ **Date issued:** _____

Aspect for Review: _____ **Date returned:** _____

DESIGN REVIEW HISTORY

	Level of Approval	Approval Date	Remarks
Design Review 1			
Design Review 2			
Design Review 3			

BOARD RESPONSE

Level of Approval

Information referred to: _____

Detailed comment: _____

Approval Levels: A = No comment. B = Proceed to comments. C = Resubmit with amendments. D = Rejected.

BOARD ACCEPTANCE SIGN OFF

User Group Lead: _____ Date: _____

Design Manager: _____ Date: _____

Project Manager: _____ Date: _____

DESIGN ACCEPTANCE PROCEDURE FORM
ACTION POINTS

GREATER GLASGOW AND CLYDE NHS BOARD
NEW SOUTH GLASGOW HOSPITAL PROJECT
USERS GROUP
TERMS OF REFERENCE



1. NAME OF GROUP

The name of the Group shall be the **New South Glasgow Hospital Ward User Group**

2. AIM

To provide a forum for agreement/sign off of the 1:200 and 1:50 architectural drawings for the Department. Please note that the architectural drawings will be based on the previously signed off Schedules of Accommodation which are now fixed. Sign-off of the drawings will follow a formal procedure and will be recorded on the "Design Acceptance Procedure" Form. This form will record the outcome of each meeting and be signed by the User Group Lead(s) on behalf of the Directorates at the end of each meeting.

3. MEMBERSHIP

- The membership of the group has been approved by the Acute Services Director(s)
- The Group will have an identified Lead
- Members will be responsible for (i) discussing the design with colleagues and in the user meetings (ii) for communicating the priorities and associated work plans agreed by the Group to their colleagues following each meeting

4. GROUP LEAD

- The Lead for the Ward User Group is John Stuart
- The Group Lead will be responsible for ensuring that Directorate priorities are reflected in the design
- The Group Lead will be responsible for keeping their Director apprised of the status of the design process
- Where differing options regarding the design arise the Project Team will take their instruction from the Group Lead

5. MEETINGS OF THE GROUP

- Two to three User Group meetings will be held to agree the 1:200 Departmental layouts and, following this a further 2 to 3 meetings will take place to agree the requirements for each room. The User Group meeting will be facilitated by the Project Team and attended by the Project Team (including FM and infection control) and the Contractor Team

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At the User Group meeting the Design Team (Architect supported by the Health Planner and Project Team members) will provide a detailed update on the User Group Department(s) design progress and take the group through the detailed designs.

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GREATER GLASGOW AND CLYDE NHS BOARD

NEW SOUTH GLASGOW HOSPITAL PROJECT

USERS GROUP TERMS OF REFERENCE

1. NAME OF GROUP

The name of the Group shall be the **New South Glasgow Hospital Critical Care User Group**.

2. AIM

To provide a forum for agreement/sign off of the 1:200 and 1:50 architectural drawings for the Critical Care Facility. Please note that the architectural drawings will be based on the previously signed off Schedules of Accommodation which are now fixed. Sign-off of the drawings will follow a formal procedure and will be recorded on the "Design Acceptance Procedure" Form. This form will record the outcome of each meeting and be signed by the User Group Lead on behalf of the Directorates at the end of each meeting.

3. MEMBERSHIP

- The membership of the group has been approved by the Acute Services Director(s)
- The Group will have an identified Lead
- Members will be responsible for (i) discussing the design with colleagues and in the user meetings (ii) for communicating the priorities and associated work plans agreed by the Group to their colleagues following each meeting

4. GROUP LEAD

- The Leads for the Critical Care User Group are Jacquie Campbell (Surgical) and Michelle Boyd (Medical)
- The Group Leads will be responsible for ensuring that Directorate priorities are reflected in the design
- The Group Leads will be responsible for keeping their Directors apprised of the status of the design process
- Where differing options regarding the design arise the Project Team will take their instruction from the Group Leads

5. MEETINGS OF THE GROUP

Two to three User Group meetings will be held to agree the 1:200 Departmental layouts and, following this a further 2 to 3 meetings will take place to agree the requirements for each room. The User Group meeting will be facilitated by the Project Team and attended by the Project Team (including FM and Infection Control) and the Contractor Team.

Seven days before each meeting hard copy drawing(s) will be issued by the Project Team to each Group Lead. It will be issued to other members of the User Group electronically.

At the User Group meeting the Design Team (Architect supported by the Health Planner and Project Team members) will provide a detailed update on the User Group Department(s) design progress and take the group through the detailed designs.

6. RECORD OF THE MEETING

Action points will be recorded by the architect on the Design Acceptance Form at the meeting and a copy will be distributed to the Group following the meeting.

GREATER GLASGOW AND CLYDE NHS BOARD
NEW SOUTH GLASGOW HOSPITAL PROJECT
USERS GROUP
TERMS OF REFERENCE



1. NAME OF GROUP

The name of the Group shall be the **New South Glasgow Hospital Renal User Group**

2. AIM

To provide a forum for agreement/sign off of the 1:200 and 1:50 architectural drawings for the Renal Wards and Outpatient Dialysis Department. Please note that the architectural drawings will be based on the previously signed off Schedules of Accommodation which are now fixed. Sign-off of the drawings will follow a formal procedure and will be recorded on the "Design Acceptance Procedure" Form. This form will record the outcome of each meeting and be signed by the User Group Lead on behalf of the Directorates at the end of each meeting.

3. MEMBERSHIP

- The membership of the group has been approved by the Acute Services Director(s)
- The Group will have an identified Lead
- Members will be responsible for (i) discussing the design with colleagues and in the user meetings (ii) for communicating the priorities and associated work plans agreed by the Group to their colleagues following each meeting

4. GROUP LEAD

- The Lead for the Renal User Group is Julia Little
- The Group Lead will be responsible for ensuring that Directorate priorities are reflected in the design
- The Group Lead will be responsible for keeping their Director apprised of the status of the design process
- Where differing options regarding the design arise the Project Team will take their instruction from the Group Lead

5. MEETINGS OF THE GROUP

- Two to three User Group meetings will be held to agree the 1:200 Departmental layouts and, following this a further 2 to 3 meetings will take place to agree the requirements for each room. The User Group meeting will be facilitated by the Project Team and attended by the Project Team (including FM and infection control) and the Contractor Team

Seven days before each meeting hard copy drawing(s) will be issued by the Project Team to each Group Lead. It will be issued to other members of the User Group electronically.

At the User Group meeting the Design Team (Architect supported by the Health Planner and Project Team members) will provide a detailed update on the User Group Department(s) design progress and take the group through the detailed designs.

6. RECORD OF THE MEETING

Action points will be recorded by the architect on the Design Acceptance form at the meeting and a copy will be distributed to the Group following the meeting.

1:50 Drawing Review - Adult User Group Membership

AAU	Debbie Ambridge Stuart Bunton Susan McFadyen Jacqueline Nicol Laura Young	Michelle Boyd Gill Donnelly Scott Muir Ann Wilson
(CC'd to AAU 1:50 emails)	Tracey Baird Joyce Brown Mairi Dick Mike Gronski Craig Harrow Cameron Howie Greg Jones Aileen MacLennan Karen McKay Heather McVey Winnie Miller David Raeside Ann Ross Barry Sillers David Stewart Matthew Walters	Kate Benson Angela Campbell Mark Greig David Hall Marilyn Horne Marjorie Johns Peter Mackie Graeme MacPhee Fiona McTeague Lesley Meikle Cathy Muir Iain Robertson Lynn Ross Ed Spilg Wesley Stuart
Cardiology/Cardiology OP/Cardiology Rehab	Rosemary Brogan Alan Hunter Heather McVey Lynne Scott	Margaret Gray Myra McKenna David Murdoch Elaine Walls
CCU	Jacqueline Adams Mark Greig Alan Hunter David Murdoch	Rosemary Brogan David Hall Heather McVey Liz Thomson
Critical Care	Sandy Binning Jacquie Campbell Eleanor Deacon Stephen Gallacher Gregor Imrie Marion MacDonald Heather McVey Mark Quinn Barry Sillers Iain Thomson George Welch	Michelle Boyd Alan Davidson Ruth Forrest David Hall Andrew Kernohan Karen McKay Scott Muir David Raeside Dave Sutton Liz Thomson
Dermatology	David Bilsland Angela Drummond Mark Greig	Felicity Campbell Clare Fitzsimmons Susan Holmes

	Catherine Jury Joyce Leman Heather McVey Lisa Naysmith	Stewart Kyle Lorraine McGrath Melanie McColgan David Tillman
Diabetes	Ann Boal Andrew Gallagher Mark Greig Heather McVey	Stephen Gallacher Anice Gillespie Cath McFarlane Jamie Quin
ED	Michelle Boyd Joyce Brown Jonny Gordon Mark Greig Marilyn Horne Heather McVey Phil Munro Gerry Wright	Andy Brennan Mairi Dick Patrick Grant Mike Gronski Mhairi Lloyd Cathy Muir Alan Whitelaw
Endoscopy	Kevin Blyth Heather Brannan Mark Greig Cath McFarlane Rebecca Reid Alan Stewart	Robert Boulton-Jones Derek Gillen Susan McFadyen Irene Ramsay Barry Sillers Ann Wilson
ENT	Mary Cunningham Susan Groom Mary McEwan Fiona Rogan Michele Ward	Mark Greig Trish McDonnell Shona Monaghan Barry Sillers
General Outpatients	Morag Busby Mark Greig Janis Hughes Heather McVey Barry Sillers Diane Wink	Mairi Dick Marilyn Horne Karen Loudon June Ramsay Ann Wilson Laura Young
Haemato-Oncology	Myra Campbell Gary Jenkins Fiona Maclean Sandy Sharp	David Dunlop Marjorie Johns Anne Parker Rosemary Twohig
Imaging	Andy Brennan David Hall John Foster Aileen MacLennan Cathy Muir Lynn Ross Grant Urquhart	Barrie Condon Mike Gronski Peter Mackie Winnie Miller Iain Robertson Stuart Sloss

Main Entrance & Public Areas	Elaine Burt Mairi Dick Marilyn Horne Michelle Kirkwood	Claire Curtis Dan Harley Dot Jardine Blair Robertson
Medical Day Unit	Margaret Arnott Natasha Brown Anice Gillespie Cath McFarlane Joseph Sarvesvaren	Robert Boulton-Jones Susan Fraser Robbie Lindsay Heather McVey
Ophthalmology	Iain Bryce Mary Cunningham Jane Fielding Susan Groom Trish McDonnell John R Murdoch Barry Sillers	Etta Cochrane Charles Diaper Mark Greig Sharon MacCormick Rachel McKay Fiona Rogan Jonathan Waugh
Orthopaedics	Mary Cunningham Susan Groom Dominic Meek Jason Roberts Barry Sillers Diane Wink	Mark Greig Margaret Kerr Mary Morrison Andrew Shaw Alan Smith
Rehab	Richard Hassell	Catherine Nivison
Renal	Isabel Brown Chris Deighan Marjorie Johns Hugh McDerment	Stewart Campbell Bill Fiskien Julia Little Margaret McLucas
Respiratory	David Anderson Cath McFarlane	Kevin Blyth Nargis Mustafa
Stroke	Gillian Alexander Janice Elliott Claire Stewart	Yvonne Currie June Lawrie John Stuart
Theatres	Alison Anderson Jacquie Campbell David Hall Alan Girvan Nick Pace David Simpson Audrey Thompson Grant Urquhart	Andy Brennan John Crawford Ruth Forrest Ann Malloy Barry Sillers Dave Sutton Ann Traquair Smith George Welch

Urology

Graeme Conn
 Mark Greig
 Khurram Mir
 Barry Sillers

Michael Fraser
 Frances McLinden
 Grenville Oades
 Ann Wilson

Wards

Robert Boulton-Jones
 Morag Busby
 Mary Cunningham
 Gill Donnelly
 Mark Greig
 Linda Robertson
 Audrey Thompson

Sophia (Theresa) Boyle
 Brenda Byrom
 Colin Cuthbertson
 Janice Elliott
 Catherine Nivison
 John Stuart
 Maureen White

PROJECT TEAM MEMBERS IN ATTENDANCE AT 1:50 MEETINGS:

Frances Wrath
 Jackie Stewart
 John McGarrity

Fiona McCluskey
 Karen Connelly

Heather Griffin
 Stephen Gallacher

1:200 & 1:50 DESIGN PROCESS

Introduction

The attached chart (appendix A) sets out the process for achieving the sign-off of the 1:200 department layout drawings for both the adult and children's hospitals. The same format will be used for the 1:50 room layouts.

This process is reliant upon there being close communication between the User Group Leads and the Acute Service Director at all times.

There is a schedule of all User Group meetings and the membership of each group has been approved by the Acute Service Director and Chief Operating Officer.

Design Process

Seven days before the first meeting of each User Group a drawing(s) will be issued by the Project Team to each Group Lead. At the User Group meeting the Design Team (Architect supported by the Health Planner and Project Team members) will provide a detailed update on the User Group department(s) design progress.

During the User Group sessions discussion will lead to:

- [1] Accepting the Design Team proposals;
- [2] Making some changes with no impact on cost or other departments;
- [3] Making changes with an impact on other departments and/or cost.

If the User Group decision is that [1] or [2] above are the agreed status then the design process can move on to the next planned meeting or the group decide that the design is concluded and can be signed off. The Design Acceptance Procedure Form will be signed to acknowledge the status.

If the group agree the status is [3] then the following procedures will be implemented:

- Immediately issue an Early Warning Notice of the proposed change
- Immediately, or up to 7 days if sketch design and costs are required, the Group Lead will discuss the issues with their Director providing them with the reasoning behind the proposed changes(s). This can be supported by members(s) of the Project Team or Design Team if required.
- The Directors must be presented with all appropriate information including an initial sketch and high level budget cost of the proposed change to enable them to decide whether or not to initially accept or reject the changes.
- If Director decides the change(s) is not required or not worth further work then this will be relayed to the Brookfield via the Adult or Children's Project Manager. This must be relayed to Brookfield within 7 days of the User Meeting.
- If the Director agrees that the change(s) submitted should be considered for implementation then he/she must make a case to the New South Glasgow Hospital & Laboratories Executive Board Sub-Group. Details of the proposal including design and financial implications will be provided by the Project Director. (This group will meet weekly and consider only exceptional

circumstances which cause a change to the project and incur additional capital or revenue costs).

The Director must provide the Executive Sub-Group with detailed reasoning and information for requesting change(s) which have an impact on the cost of the project. At the same time the Project Team will initiate the formal Change Control Procedure (CCP) to record all necessary information for the New South Glasgow Hospitals and Laboratories Executive Board. The CCP must be signed by the appropriate Senior Manager (i.e. Chief Executive or Chief Operating Officer) before it can be implemented.

The Executive Sub-Group will have the final say on the decision. The Project Director will communicate the decision to the Brookfield within 21 days of the User Group meeting to enable the Design Team to conclude their work for the next set of meetings.

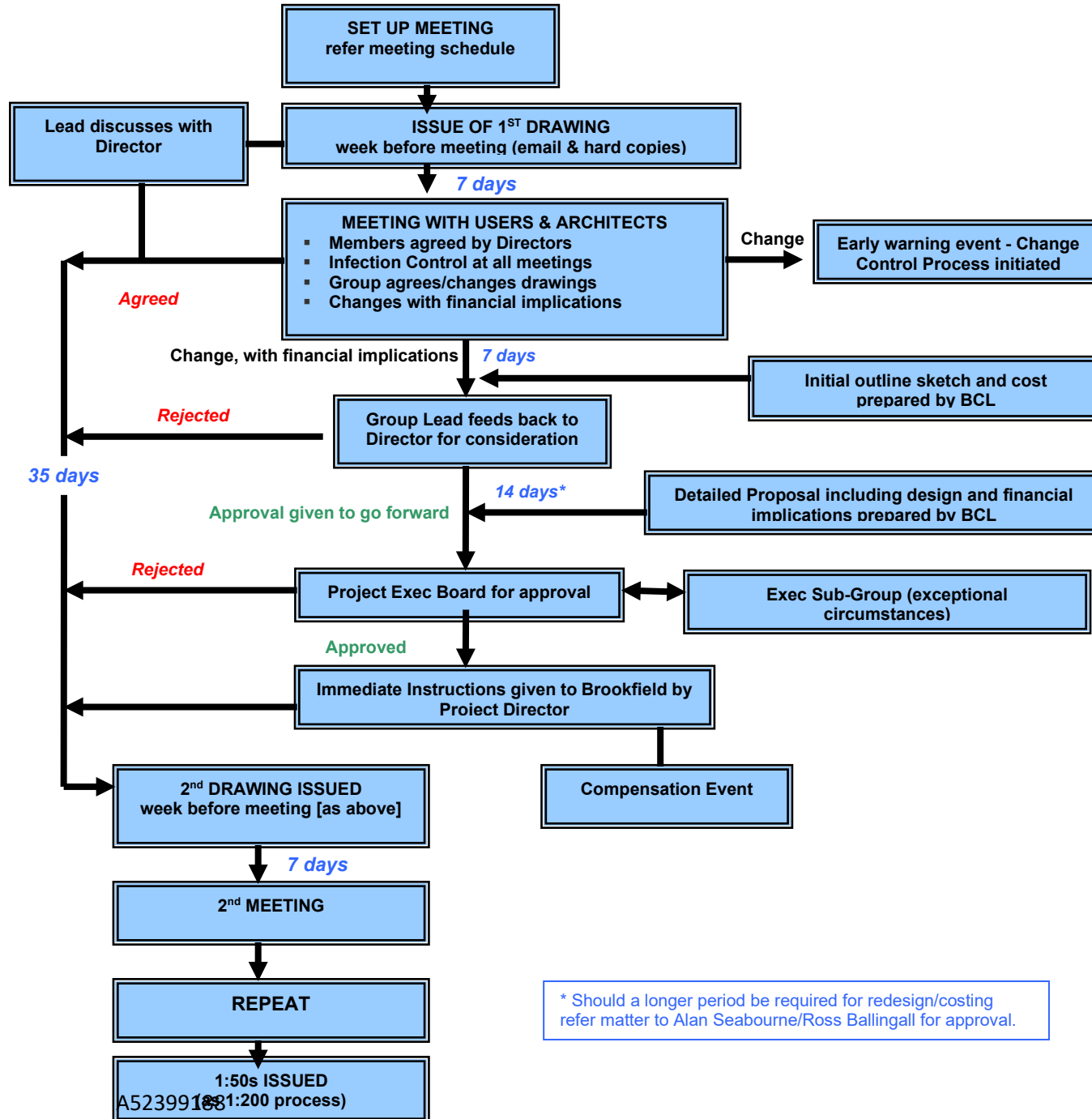
If the changes being considered are complex and/or of a large scale then the Project Director will open discussion with Brookfield to agree how much time can be allowed or is required, beyond the 21 days, to complete any necessary work or achieve a higher level of approval within the Board, without affecting the programme. As the timescales are contractual and changes could cause changes in the Master Programme, which would have a cost impact, it is important that any changes that impact upon programme, either by delaying or instigating additional work, are avoided. It must be made clear to all groups that this contract is a fixed price and it is not anticipated that any changes will increase the existing footprint of the building and hence the cost.

All changes with a financial impact will be recorded and reported to the next meeting of the New South Glasgow Hospitals and Laboratories Executive Board.

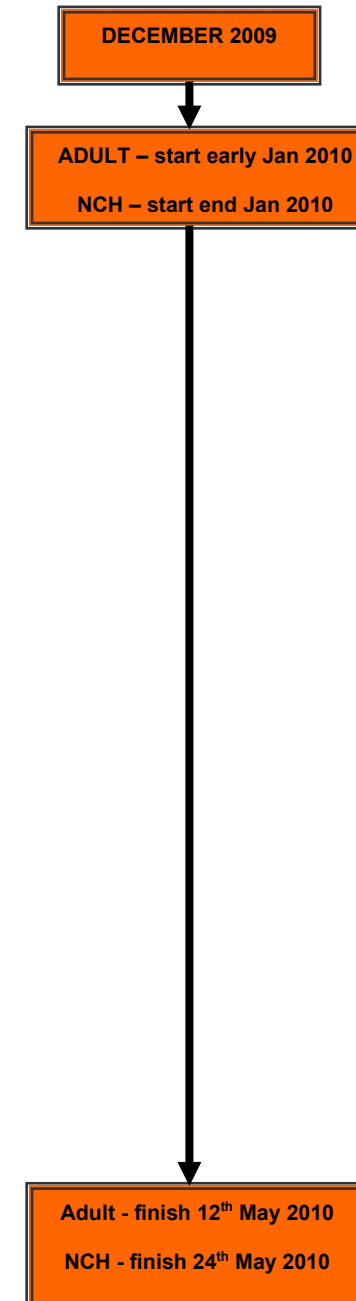
Progress update on the design process will be provided at the monthly Acute Services Redesign Group where members will have the opportunity to raise issues etc with the Project Team.

The level of sign-off of drawings will follow the following procedure and will be recorded on the "Design Acceptance Procedure" Form as shown in Appendix B.

1:200 & 1:50 Process



Timeline



Meetings in 2010

21/01/10
 18/02/10
 18/03/10
 15/04/10
 20/05/10
 17/06/10
 15/07/10
 19/08/10
 16/09/10
 21/10/10

APPENDIX B**NEW SOUTH GLASGOW HOSPITALS & LABORATORY PROJECT****DESIGN ACCEPTANCE PROCEDURE**

The design approval procedure will be used to review and approve a range of deliverables such as clinical functionality at departmental and room level, finishes, colour schemes, materials and components.

The attached form will be used to record the design development process to review and sign off the clinical functionality both at department level and also for the room layout process. These two operations will follow a three stage process.

The review of items such as colour schemes, components and finishes will also follow a three stage process although it is envisaged that these could be completed in fewer stages.

The form is set out to record the history of the design acceptance process and it is envisaged that each drawing, specification or schedule will have its own sheet to record and sign off the history and acceptance of the contractors design.

At each review the Board will consider the design information provided by the contractor and respond within the timescale, confirming the level of approval and providing supporting narrative or marked up drawings.

The Board will ensure that all responses are signed off by the appropriate staff to record user, managerial acceptance of the design element under review.

NEW SOUTH GLASGOW HOSPITALS & LABORATORY PROJECT DESIGN ACCEPTANCE PROCEDURE

Building: _____	Issued by: _____
Subject: _____	Date issued: _____
Aspect for Review: _____	Date return: _____

DESIGN REVIEW HISTORY

	Level of Approval	Approval Date	Remarks
Design Review 1			
Design Review 2			
Design Review 3			

BOARD RESPONSE

Level of Approval

Information referred to: _____

Detailed comment: _____

Approval Levels: **A**= No comment. **B**= Proceed subject to comments. **C**= Resubmit with amendments. **D**=Rejected.

BOARD ACCEPTANCE SIGN OFF

User Group Lead: _____	Date: _____
Design Manager: _____	Date: _____
Project Manager: _____	Date: _____

SUPERVISOR'S NOTIFICATION OF DEFECT (CI 42.2)		Stage 3 A&C		CAPITA SYMONDS	
Short Description				Date	
Defect will prevent the Employer making use of the work	Yes			Instruction No.	
	No	✓			
To: Contractor: Brookfield Multiplex construction Europe					
Project Office Address: Project Office, Hardgate Road, Govan, Glasgow Scotland United Kingdom G51 4SX					
1. Dear Sir NOTIFICATION OF DEFECT <div style="display: flex; justify-content: space-between;"> <div> The following Defect has been found :- Ductwork not capped. </div> <div> Location of Defect: Level 2, Gridlines E1-F & 2.1-2.3 Level 2, THE-350 Ultra Clean Theatre 8 </div> </div>					
Notification					
Signed		Supervisor		Date:	
On inspection the correction to the above Defect is: <ul style="list-style-type: none"> Accepted not accepted because: 					
Detail of further Defect					
Correction of Defect					
Signed		Supervisor		Date:	
Distribution: Alan Keeley, Peter Moir, Alasdair Fernie, Anthony Fogarty, David Hall.					



Contractors Response



Bundle of documents for Oral hearings commencing from 13 May 2025 in relation to the Queen Elizabeth University Hospital and the Royal Hospital for Children, Glasgow

**Bundle 43 - Volume 1
Procurement, Contract, Design and Construction,
Miscellaneous Documents**

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