

FULL BUSINESS CASE



**NEW THEATRE SUITE WITHIN THE
IMAGING CENTRE of EXCELLENCE
QUEEN ELIZABETH UNIVERSITY
HOSPITAL CAMPUS**

DECEMBER 2015

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SECTION 1: EXECUTIVE SUMMARY

The purpose of this document is to present the Full Business Case (FBC) to support the proposed investment for four new replacement Neurosurgical and Oral and Maxillofacial (OMFS) theatres and associated support accommodation within the Imaging Centre of Excellence (ICE). The ICE building is currently being constructed on the Queen Elizabeth University Hospital Campus in the South of Glasgow and will physically link into the Institute of Neurological Services at the first floor.

The Institute of Neurological Services (INS) provides national and regional neurosciences and OMFS services. In 2014/15, there were 4,502 elective inpatients, 3,377 emergency inpatients and 4,450 day cases treated.

The INS is physically linked to the new Queen Elizabeth University Hospital (QEUH) via a link bridge, this enables trauma patients arriving at the QEUH helipad to have rapid onward transfer to the INS from the Emergency Department. The site master plan in appendix 1 shows the relative locations of the INS and QEUH currently in situ and the remainder of the campus as it will be in 2017 following clearance and demolition of the old Victorian buildings currently on site.

The proposals for four, fit for purpose, Neurosurgical and Oral and OMFS theatres will support the Health Boards plans to develop both a Regional Trauma Centre and a Stroke Centre on the Queen Elizabeth University Hospital campus.

The INS building was constructed in the 1970's and the Board is investing in improving both the infrastructure and the external state of the INS building with current works including over cladding, a newly developed entrance and improvement to plant and lifts. The theatre facilities however are dated and no longer meet current SHTM guidelines both in terms of size and operating environment. In addition, there have been discussions, with subsequent sign off, from referring Health Boards for additional activity to meet demand and the Time to Treatment Guarantee (TTG).

The theatre facilities require to be co-located with the Neurosciences Critical Care (Intensive Care and High Dependency) to facilitate rapid transfer of pre and post op patients between theatres and Critical Care and vice versa.

The options for the provision of SHTM standard theatre facilities are limited due to the lack of a) footprint within the INS and b) available land surrounding the INS.

This document describes the option appraisal between Option 1 (do minimum), a four theatre refurbishment within the INS verses Option 2, four new theatres within a floor of the ICE building and presents the case for Option 2 offering better value for money.

- Option 1, 'do minimum' has been developed to give a comparator in keeping with the Scottish Capital Investment Manual (SCIM) guidelines. It should be highlighted however that Option 1 would present significant issues as:

- a) It would require a temporary decant with operational challenges associated with patient transfers,

- b) There is no footprint available in the INS to enlarge the existing theatres to the required 55m² and,
- c) There is insufficient footprint to accommodate the necessary plant to provide the new SHTM theatre environmental standards.

The 'do minimum' option however, in the absence of an alternative, is the next nearest feasible option to Option 2 described below and is therefore used to give a comparator in the appraisal.

Option 2, the proposal for a theatre suite within the ICE building, has two component parts to the investment. The first being a commitment to building the shell of the floor within the ICE building and the second being the commitment to the theatre fit out within the floor. The floor shell investment is within the Boards delegated authority and, given the lack of viable alternatives and opportunities this provides to enhance patient care, the Board has committed to the floor shell. This business case describes the proposals for the overall investment, including fit out which exceeds the Board's delegated authority.

Under Option 2 the Board will enter into a finance lease with the University of Glasgow (UoG). The UoG will enter into the Construction Contract with its appointed contractor and will manage the construction aspects of the full building, including the fit out of the theatre suites on the first floor.

As described, this document presents the case for Option 2 offering better value for money as presented on the table below.

Options	Weighted Benefits Score	NPC £'000	NPC / Benefit Point £	Rank
Option 1 Do Min	655	13,733	£20,967	2nd
Option 2 Leased Floor	3395	10,255	£3,021	1st

Option 2 also scored significantly higher than Option 1, 'do minimum' in the non financial benefits analysis, the scores being 3,395 and 655 respectively.

It should be highlighted that Option 2 also offers the important opportunity, at a future date, to reconfigure and refurbish the released footprint in the INS theatres increasing the overall theatre capacity to meet future activity growth. This will not take place within this or the next financial year and therefore will be a separate scheme and subject to a separate business case.

The anticipated completion date for the preferred Option 2 is January 2017, the key dates are as follows:

Event	Date completed/anticipated date of completion
Planning Approval	1 st September 2015
Site Clearances / Demolitions	21 September 2015
Construction Commencement (Piling Works)	9th November 2015
Target Price Agreed with UoG / PSCP	November 2015
Deadline for Shell, Core and Plant Option	20th November 2015
FBC approval CIG	12th January 2016
Deadline for full Fit Out Option	13th January 2016
Anticipated construction completion	20th January 2017

Opportunities of being embedded in the ICE building

The location of the new Imaging Centre for Excellence (ICE) under construction can be seen on the site plan in appendix 1. As described in the UoG business case for the ICE building its function and benefits are as follows. The “ICE will accommodate clinical academic imaging specialists, NHS clinical physics expertise, innovation space for SME’s (Small to Medium Enterprises) and medical imaging companies, and also provide future expansion space for stratified medicine activities. The creation of an internationally competitive centre incorporating NHS, academic and industry partners will allow Glasgow to support a much greater volume and variety of clinical trials and translational development than currently, including benefits to the associated supply chain including the local Scottish company base of specialist CROs and other service providers.”

“The building will deliver world class clinical imaging that will be unique in the UK and, through the triple helix enable the creation of new innovative collaborations in imaging which will ultimately create significant benefits for patient outcomes”

“The ICE building is being designed to allow direct ambulatory access for patients, and the building will be linked to the new Clinical Research Facility to allow clinical trials to benefit from the advanced imaging technologies. The (7 Tesla) MRI facility will offer a resource that will be uniquely valuable for researchers across the country, and central to its goals will be the application of advanced technology to understanding of human disease. The ability to undertake the most advanced imaging across the entire spectrum of clinical problems, encompassing acutely unwell or dependent patients, is a key principle of the research imaging facility”

The embedding of NHS facilities within the ICE building will further enhance NHS and University of Glasgow working collaboratively and a further development of the triple helix strategy.

SECTION 2: THE STRATEGIC CASE & ORGANISATIONAL OVERVIEW

2.0 Strategic Case

2.1 Overview

NHS Greater Glasgow and Clyde (The Board), serves a population of 1.2 million people, employs 38,000 staff and has annual budget of £3 billion. The Board provides a wide range of services to the local population of Glasgow and Clyde and also regional and national services.

The Institute of Neurological Services (INS) within Greater Glasgow and Clyde Health Board provides elective and emergency national and regional neurosciences, spinal and maxillofacial services. The INS is located on the Queen Elizabeth University Hospital Campus and has 138 inpatient beds.

2.1.1 Current services and stakeholders and customers, Mission of the organisation, service objectives

Services:

Theatres in the Institute of Neurological Sciences (INS) accommodate elective and emergency surgery for the needs of Neurosurgical and Oral Maxillo-Facial Surgery (OMFS) patients in the West of Scotland. This includes cranial and spinal surgery, head and neck oncology surgery, orthognathic and cleft work and OMFS trauma.

Some services are provided for patients throughout Scotland.

A significant proportion of work is trauma and emergency work and theatres run 24/7 365 days a year. The cumulative utilisation of theatre sessions in 2014/15 was 100% for OMFS and 96.4% for Neurosurgery.

Stakeholders

The stakeholders in the service are:

- Patients requiring Neurosurgical and OMFS procedures
- Referring clinicians/Boards – predominantly from NHSGGC, Ayrshire and Arran, Dumfries and Galloway, Forth Valley, Highland, Lanarkshire, Western Isles
- Clinical teams – surgeons, neuro-anaesthetists, theatre nursing and recovery staff. Spinal Injuries team. Critical care, diagnostic and interventional staff, ward staff.
- NHSGGC – Regional Services Directorate team, capital planning team, infection control and prevention team, finance team
- Scottish Government Health Department
- University of Glasgow

How the proposals in this business case fit in with national initiatives and the Health Boards Goals.

The following describes how the proposals in this business case fit in with national initiatives and Goals:

- Provision of facilities which comply with SHTM standards;
- Provision of Neurosurgical services for the local, regional and national population as agreed with the National Managed Service Network for Neurosurgery; and
- Provision of OMFS services including Head and Neck Oncology services as agreed via the West of Scotland Regional Planning Group. This will meet the recommendations of two separate strategies, the West of Scotland Specialised Services Group plan for the regionalisation of OMFS services and the West of Scotland Regional Cancer Advisory Group recommendations for the centralisation of all complex microvascular Head & Neck Oncology Surgery. Provision of adult cleft surgery in line with the recommendations of the 2012 Scottish Review of Cleft Surgery, which was endorsed by the Cabinet Secretary for Health & Wellbeing and reinforced in a recent Options Appraisal in November 2015. This review recommended a single surgical site within Scotland for this small but clinically complex patient group. Co-location on site with the pre-existing nationally designated Paediatric Cleft Surgery service in the Royal Hospital for Children and the availability of both critical care (INS Wards 60 and 61) and specialist airways support (INS Ward 62) were key drivers for this recommendation.
- Provision of a new purpose built SHTM standard theatre suite will support the delivery of both the Time to Treatment Guarantee and the 18 week Referral to Treatment Target by providing more efficient patient flow and facilities. This proposal also releases footprint in the INS which can be reconfigured and refurbished at a future date to provide increased capacity.

The following describes how the proposals in this business case fit in with the Health Board's goals:

- The Health Board is planning to develop a Regional Trauma Centre on the Queen Elizabeth University Hospital campus which will result in an increase in head injury cases and also multiple teams operating simultaneously. The availability of fit for purpose neurosurgical theatre facilities providing a modern operating environment with laminar flow and capable of accommodating multiple surgical teams will be a key aspect of providing the service.
- The Board is also planning to develop a state of the art Stroke Centre on the Queen Elizabeth University Hospital campus; again access to fit for purpose neurosurgical theatres to support the service will be key.

- The Health Board's clinical strategy, 'Clinical Services Fit For The Future', highlights the goals of maintaining safe, sustainable services achieving best practices and standards allowing for a better patient experience and better access.

The proposals in this business case for a purpose built theatre suite will achieve:

- Facilities which are fit for purpose supporting staff in providing a 21st century clinical service meeting complex national and regional service needs
- Improved quality of services through more efficient patients flows;
- Reduced risk of infection through effective pathways, and good quality design especially in regard to finishes and fittings enabling thorough cleaning and maintenance.
- A better patient environment improving the patient experience;
- Sustainable services with improved environmentalals reducing unpredictable down time of theatres for repairs /problems to plant.

2.2 Existing Arrangements and Business Needs – (issues with the status quo)

2.2.1 Current Facilities

The neurosurgical and Oral and Maxillofacial (OMFS) theatres within the Institute of Neurological Services (INS) were constructed in the 1970s and reflect the service models and patient flows that were in place at that time, forty five years ago. Since then the range and sophistication of procedures and equipment used in both specialities has expanded considerably.

The theatre facilities within the Neurological Institute do not meet building regulations in terms of size or environmental factors and there are increasing problems with downtime due to the fabric of the building and problems with infrastructure, for example flooding. The current theatres are small ranging from 35m² to 42m² compared to the current requirement for 55m². Some are unable to adequately accommodate the equipment and staff now required to carry out complex surgical procedures for regional and national specialties, for example a number of procedures require two surgeons operating and two associated scrub teams.

The theatre suite layout and configuration leads to inefficient patient flow, for example anaesthetic rooms and scrub facilities are shared between theatres leading to bottle necks. The current configuration and patient flow is also challenging from an infection control point of view, such as the flow from the anaesthetic room to theatre being across a corridor.

Finally some of the procedures (e.g. spinal implants) require an ultra clean environment to minimise the risk of surgical site infections. This is not available in the existing theatre estate.

2.2.2 Demand

As the demand for neurosurgical/spinal surgery has increased the West of Scotland Neurosciences group was asked to develop a model to accommodate this regional spinal activity in the INS. Greater Glasgow and Clyde (NHSGGC) has agreed plans with NHS Ayrshire and Arran and NHS Lanarkshire to provide this additional theatre capacity and the associated revenue funding has been signed off by the referring Boards.

Within OMFS services there are longstanding plans in place for centralisation of complex Head and Neck services in INS and for some Boards additional OMFS activity will also transfer.

In addition to the planned increases in activity there is also demand for new developments in the INS, as a national and regional provider, to expand services such as deep brain stimulation and cleft surgery. NHS Greater Glasgow and Clyde has submitted a bid to the National Services Division to provide a national Deep Brain Stimulation Service (DBS) and a recent option appraisal exercise has confirmed the preferred model for cleft services is for this to be based solely in NHSGGC in INS and the Royal Hospital for Children.

2.2.3 Other developments

Glasgow University is developing a new build research and development facility, the Imaging Centre for Excellence (ICE) which will be co-located with the INS. This facility will have direct physical links into the INS. The building consists of four floors providing a 7 Tesla MRI scanner and research and development facilities on three floors. The fourth floor (located on level 1) is available for the NHS to accommodate theatre facilities. Details of the proposed arrangement are given in 'The Commercial Case' in Section 4.

The following highlights key aspects of the UoG business case for the ICE building. The ICE building is now in the process of being built and will:

- Accommodate clinical academic imaging specialists, NHS clinical physics expertise, innovation space for SME's (Small to Medium Enterprises) and medical imaging companies, and also provide future expansion space for stratified medicine activities.
- Create an internationally competitive centre incorporating NHS, academic and industry partners allowing Glasgow to support a much greater volume and variety of clinical trials and translational development than currently, including benefits to the associated supply chain including the local Scottish company base of specialist CROs and other service providers.
- Maximise and facilitate the economic impact from the clinical research excellence at the New South Glasgow University Hospital, and ensure the

hospital site becomes a UK exemplar of a Life Sciences cluster. The addition of the first 7 Tesla scanner in Scotland and indeed the UK will bring significant added value to Scotland assets including enriching existing imaging facilities as the 7 Tesla scanner has the ability to undertake the most advanced imaging across a wide spectrum of clinical problems.

- The ICE building will deliver world class clinical imaging which will be unique in the UK.

The proposals in this business case to embed clinical services within the building will further enhance the collaborative relationship between NHSGGC and UoG, giving ownership and commitment to the ethos of working together and will capitalise on opportunities that arise for joint working and innovation.

2.3 Investment objectives

The investment objectives (what the Board is seeking to achieve) include service, sustainability and design quality objectives. The following describes these in more detail. Section 2.3.1 describes the service objectives, section 2.3.2 the design and sustainability objectives and the quality objectives.

2.3.1 Service Investment Objectives

The service investment objectives fall into five main criteria as follows:

- Clinical Quality
- Sustainability of Service
- Environment
- Community Benefits
- University Relationships.

In brief the key investment objectives of the proposed project are to provide theatre facilities which:

- a) Are co-located with critical care and the wards to allow rapid access for patients post surgery to critical care and to the wards;
- b) Provide a modern operating environment to meet the SHTM guidelines and
- c) Provide opportunity for future increase in capacity to meet the rising demand.

The investment objectives are described in more detail in the table below along with how they will be measured.

	Category	Investment Objective	Measurement of success:	Timetable
1	Clinical Quality	Health facilities which are fit for purpose through the provision of a clean and safe modern operating environment meeting national guidance and requirements of clinical services	<p>Achievement of 55m² theatre</p> <p>Achievement of SHTM 03-01 specified air exchange rates</p> <p>Compliant with SHFN Note 30 V3 Infection Control in the Built Environment.</p> <p>Address CEL 05 (2005) improved audit scores and reduced HAI rate. Achievement of the SGHD HAI targets for 2017 onwards</p> <p>Improved surgical site infection rates to meet national benchmarks</p>	Review 6 months post operational

	Category	Investment Objective	Measurement of success:	Timetable
2	Clinical Quality	Ensure infrastructure meets specific requirements of clinical service recognising high risk nature of some of the procedures.	Reduction in theatre down time due to infrastructure/supplies failures Achievement of SHTM 03-01 specified environmental measure eg air flow, exchange rates Provision of laminar flow facilities	6 months post operational Validation and commissioning Immediately prior to becoming operational
3	Clinical Quality	Minimise clinical risk to the patient through hospital acquired infection by providing a clinical environment that is safe through use of quality design and materials and good patient flows.	Reduction in HAI rates attaining the Scottish Government Health Department HAI targets for 2017 onwards DL19 (2015) Improved surgical site infection rates to meet national benchmarks	6 months post operational
4	Clinical Quality	Achieve good co-locations and rapid access between critical care/wards and theatres and vice-versa reducing potential risk to patients in transit. Good intra-departmental co-locations reducing bottle necks and improving patient flow through the department.	Improved turnaround time as measured via theatre utilisation reports	6 months post operational

	Category	Investment Objective	Measurement of success:	Timetable
5	Clinical Quality	Enhance facilities ensuring patient privacy and dignity	Patient Satisfaction survey	6 months post operational
6	Sustainability of service	Provide opportunity for future reconfiguration of existing theatre estate whilst safely maintaining clinical activity thus ensuring sufficient operative capacity is available to meet current HEAT and other performance targets including Treatment Time Guarantee (TTG).	Sustained delivery Government targets such as HEAT targets and TTG Monitor activity and access time via Regional Neurosciences and OMFS monitoring meetings	6 months post operational
7	Environment	Achieve improved environment for patients providing fit for purpose facilities which meet the needs of patients.	Patient satisfaction surveys Trolley and bed spacing in recovery meeting the CEL 27 (2010)	6 months post operational
8	Environment	Improve working environment for staff with improved retention and recruitment leading to enhanced staff skills and knowledge.	Staff satisfaction surveys Increased number of applicants for posts and reduction in leavers/staff turnover rate.	12 months post operational

	Category	Investment Objective	Measurement of success:	Timetable
9	Future proofing	Provide future proofing to enable service to meet increase in local demand and develop services as agreed with West of Scotland Board partners.	Achievement of agreed activity levels Monitor activity and access time via Regional Neurosciences and OMFS monitoring meetings	12 months post operational
10	Community Benefits	Contractor to provide community benefits through provision of apprenticeships and work experience placements including opportunities in construction, quantity surveying and possible Trade placements via the supply chain. The contractor to link with surrounding schools, colleges and universities to provide a number of activities to support the curriculum, this will include site visits, course support and educational activities such as design challenges.	Target for number of placements and apprenticeships to be confirmed between University and contractor	End of construction period.
11	University relations	Increased collaboration with university by embedding key clinical services within university development and providing enhanced opportunities for teaching and research	Teacher and student satisfaction questionnaires	12 months post operational

2.3.2 Design and sustainability objectives

➤ Design

The design of the theatre facility will deliver the following:

- ❖ A theatre suite, fully compliant with all current SHTM's and able to provide a 21st century clinical environment to meet the needs of this distinct patient group
- ❖ Achieve a high design quality in accordance with the Board's Design Action Plan, Design Statement and guidance available from Heath Facilities Scotland;
- ❖ Meet statutory requirements and obligations for public buildings e.g. with regards to Disability Discrimination Act (DDA), Health Environment Inspectorate (HEI), Healthcare Associated Infections (HAI); and
- ❖ Seek to contribute to a Building, Research, Establishment, Environmental, Assessment, Method (BREEAM) rating of 'Excellent'.

➤ Sustainability

NHS Greater Glasgow & Clyde is committed to the Scottish Government's purpose, (Scottish Planning Policy: Sustainability & Planning): ***“to focus government and public services on creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth”***.

Sustainability is a key investment objective for the new theatre facilities. These are within a building being constructed by the University and the NHS are working closely with the University and their Design team to ensure that the NHS theatre floor within the building contributes to the overall BREEAM rating of excellent for the building.

The University have appointed a BREEAM Assessor in order to help deliver the 'best-value' BREEAM rating.

The BREEAM Accreditation will be assessed against the following categories:

- ❖ Management;
- ❖ Health & Wellbeing;
- ❖ Energy;
- ❖ Transport;
- ❖ Water;
- ❖ Materials;
- ❖ Waste;
- ❖ Land Use and Ecology;
- ❖ Pollution; and
- ❖ Innovation.

NHS Greater Glasgow & Clyde has taken cognisance of the principles laid down both locally and nationally for the promotion of sustainability. The building will:

- ❖ Deliver an energy efficient facility reducing CO₂ emissions and contributing to a reduction in whole life costs;
- ❖ Demonstrate the commitment of NHSGGC to reducing the environmental impact of its operations within the building.

➤ Quality Strategy

The Healthcare Quality Strategy for Scotland published in May 2010 set out the three Quality Ambitions for NHS Scotland.

- ❖ Mutually beneficial partnerships between patients, their families and those delivering healthcare services which respect individual needs and values and which demonstrate compassion, continuity, clear communication and shared decision-making;
- ❖ There will be no avoidable injury or harm to people from healthcare they receive, and an appropriate, clean and safe environment will be provided for the delivery of healthcare services at all times; and
- ❖ The most appropriate treatments, interventions, support and services will be provided at the right time to everyone who will benefit, and wasteful or harmful variation will be eradicated.

In order to support these ambitions, NHSGGC aspires to promote clinical excellence, by offering a modern health care environment which meets the Scottish Building Standards.

➤ Quality Objectives

NHSGGC is committed to the integration of design quality in the re-provision of theatre facilities. A Design briefing has been prepared and signed off in consultation with the key project stakeholders and is a key document for the Design Team and has been used to inform the more detailed briefing documents such as the Schedules of Accommodation, key adjacencies and Room Data Sheets.

2.4 Project Scope

Working within the Boards capital allowance the project scope is to achieve four theatres and associated support accommodation to the SHTM standards.

2.5 Options

The options for providing four theatres which are SHTM compliant are limited for the following reasons:

- A key requirement is that the wards, Critical Care, Theatres and recovery are all co-located allowing ease of patient flow/journey from theatres and recovery to either Critical Care or to the wards. The most critical of these being proximity of theatres to Critical Care.
- The theatres providing neurosciences and Oral and Maxillofacial surgery services are working to their full capacity and cannot be taken out of service as there would not be enough capacity to meet demand for clinical activity.
- The type of surgery being undertaken is intricate requiring both prolonged periods of concentration and fine movement from the surgeon; it is not possible to carry out surgical activity with major capital works ongoing within the building due to the noise and vibration caused.
- The Institute of Neurological Services is landlocked, no land/footprint is available near or within the INS other than footprint within the ICE building.

In order to give a comparison in keeping with the *SCIM* guidelines a 'do minimum' option has been developed. This however would present significant problems around the operational logistics of a decant facility, also there is no footprint available to enlarge the existing theatres to the required 55m² and there would be insufficient footprint to provide the necessary plant to provide the new SHTM environmental standards. The 'do minimum' option however, in the absence of an alternative, is the next nearest feasible option to Option 2 described below and is used to give a comparator in the appraisal.

➤ Option 1 – Do minimum

Option 1 involves the refurbishment of four of the current theatres.

The current theatres in the Institute of Neurological Sciences (INS) accommodate elective and emergency surgery for the needs of Neurosurgical and Oral Maxillofacial surgery (OMFS) patients in the West of Scotland and nationally. Current utilisation is high and the theatres are working to full capacity. In order to refurbish 4 existing theatres they would need to be taken out of service, stripped back and reconstructed - this process would take 28 weeks. As described reduction in capacity is not feasible therefore a replacement facility in the form of a temporary four theatre modular facility with reception, anaesthetic rooms, scrub and recovery would be required. An approximate 8 week period of enabling works would be required to provide the modular building with the necessary services. Avoidance of impingement on the traffic flow around the campus would need to be taken into account in considering location.

As the INS is landlocked the modular theatre facility could not be co-located with the neurosciences and OMF wards or critical care but would need to be located on another part of the Queen Elizabeth campus necessitating ambulance transfer with appropriate clinical staff between the INS and the modular building pre and post surgery. The visual below shows the Queen Elizabeth Campus with the INS highlighted in green and the optimum available site for the modular building in blue.

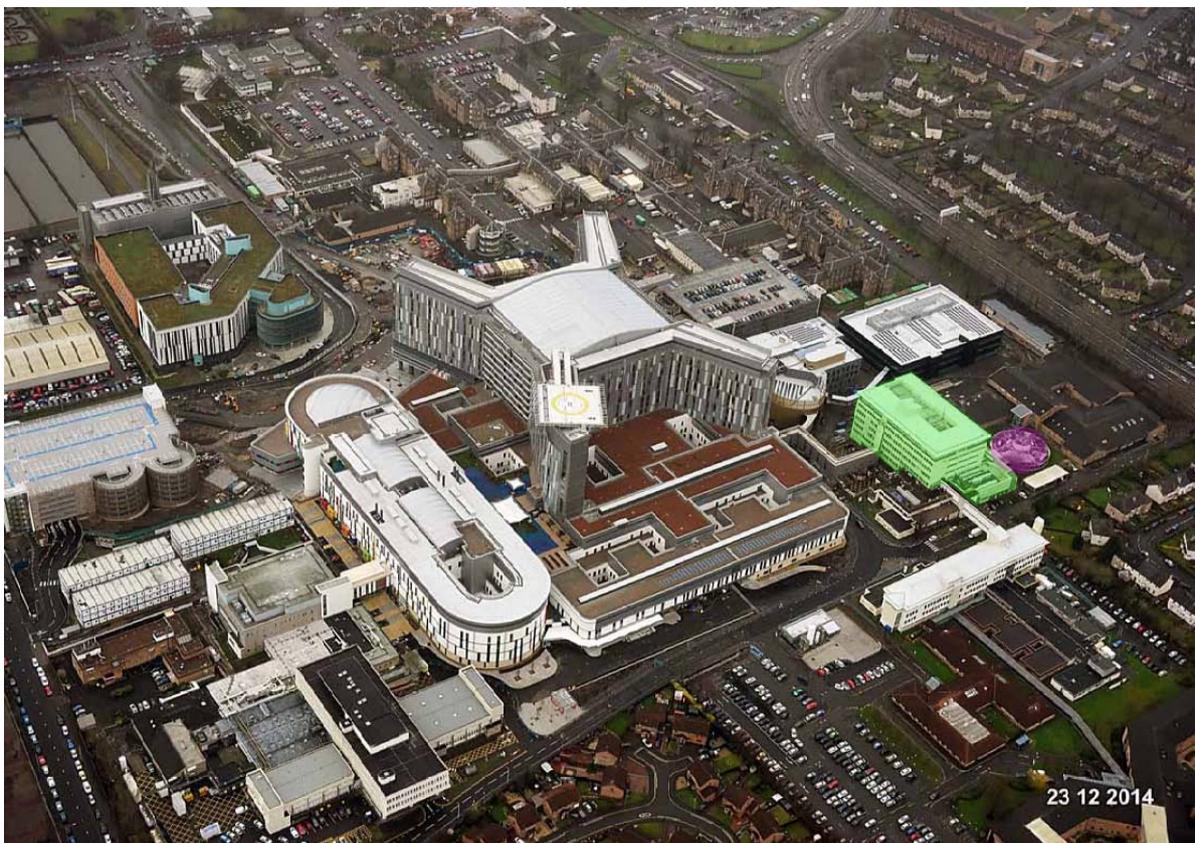
Please note the size of theatres remains the same under this option as the theatres are landlocked and cannot be enlarged.

This option represents the 'do minimum' and acts as a benchmark to allow the nearest comparison of like to ensure value for money has been explored.



➤ Option 2 – ICE Option (4 new build theatres)

Option 2 involves the provision of 4 new theatres, along with associated supporting accommodation within the first floor of the new Imaging Centre of Excellence on the Queen Elizabeth Campus. The support accommodation includes reception, anaesthetic rooms and scrub facilities and a 6 place recovery facility. The detailed 1:200 plans and 1:50 room layouts have been developed with nominated medical and nursing representatives. The Schedule of Accommodation and 1:200 drawings are shown in appendix 2 and appendix 3 respectively. As described this new build is co-located with, and will physically link into the INS. The total footprint of the development is 1510 m² including plant. The visual below shows an aerial view of the Queen Elizabeth University Hospital campus with the ICE building in purple and co-located INS building in green.



The land upon which the ICE building is being built is owned by NHS GGC. NHS GGC has granted the University of Glasgow (UoG) a ground lease for an initial period of 45 years with option to extend to 60 years. There is an opportunity for NHS GGC to have a floor in the ICE building to create the new complex with 4 theatres.

Having reviewed the nature of the lease agreement, it is NHS GGC's view that the lease arrangement constitutes a Finance Lease under IAS (International Accounting Standard) 17.

In examining the substance of this transaction, the Board's view is also that the financial contribution to be made to the UoG under the Development Agreement

represents the early settlement of future lease payments to secure occupation rights of the first floor of the ICE Building for the duration of the Sub-Lease. As such, this amount should be included as part of estimating and recognising the fair value of the asset at the inception of the lease.

2.6 Benefits

The key benefits fall into the categories of clinical quality, sustainability of services, physical environment, community benefits and University relations and are as follows:

- Provision of a clean and safe modern operating environment meeting national guidance;
- Infrastructure meeting specific requirements of clinical service recognising high risk nature of some of the procedures;
- Minimise clinical risk to the patient through hospital acquired infection;
- Achieving good co-locations and rapid access between Critical Care/wards and theatres and vice-versa reducing potential risk to patients in transit. Good intra-departmental co-locations reducing bottle necks and improving patient flow through the department;
- Enhancing facilities ensuring patient privacy and dignity;
- Providing opportunity for future reconfiguration of existing theatre estate whilst safely maintaining clinical activity thus ensuring sufficient operative capacity is available to meet current HEAT and other performance targets including Treatment Time Guarantee (TTG);
- Achieving improved environment for patients;
- Improving working environment for staff;
- Providing future proofing to enable service to meet increase in local demand and develop services as agreed with West of Scotland Board partners;
- Community benefits through the provision of apprenticeships and work experience placements by the Contractor and
- Increased collaboration with university by embedding key clinical services within university development providing enhanced opportunities for teaching and research.

2.7 Risks

The main project risks and mitigation factors were identified as below:

Description	Mitigation
Business Risks	
Financial	Robust business case & procurement process.
Regulation	Encompass current legislation.
Environmental	Close liaison with University to ensure contribution to BREEAM
Quality	Detailed briefing & monitoring.
Procurement method	NEC3 contract (risk to University of Glasgow)
Organisational	Agreed early project management framework and delegated authority limits.
Service Risks	
Technical	Employ strict change control management processes.
Cost	Employ strict change control management processes.
Programming	Employ strict change control management processes.
Operational support	Control service User input effectively.
Resource	Adequate resources have been identified and dedicated team aligned.
External Environmental Risks	
Neighbouring Disturbance	Manage with appropriate communication.

2.8 Constraints

<ul style="list-style-type: none"> • Required Co-locations and Land availability 	<ul style="list-style-type: none"> ➤ The theatre facilities must be co-located with the neurosciences Critical Care and wards. The only co-located footprint available to support 4 new theatres is within the ICE building which is currently being built. All other sides of the building are landlocked and footprint within the INS itself is restricted.
<ul style="list-style-type: none"> • Maintaining operational viability of the INS 	<ul style="list-style-type: none"> ➤ Due to activity demand the continuity of surgical activity at the INS must be maintained with no down time of existing theatres
<ul style="list-style-type: none"> • Programming & Site Conditions 	<ul style="list-style-type: none"> ➤ Maintaining vehicular access and egress during the course of construction to the all existing services within Queen Elizabeth Campus ensuring continuity of clinical service.
<ul style="list-style-type: none"> • Planning Approvals 	<ul style="list-style-type: none"> ➤ Ongoing liaison between the University and Glasgow City Council Planning Department has taken place and Planning Approval was granted on 1st September 2015 to build a four storey building co-located to INS.

- Sustainability

- The NHS aim to contribute towards the building achieving a BREEAM 'Excellent rating'.

2.9 Dependencies

As described above, achievement of the co-locations between the theatres and critical care/wards is critical and the required footprint, other than in the ICE building, is not available therefore options for achieving four SHTM compliant theatres are limited.

SECTION 3: THE ECONOMIC CASE

In accordance with the Scottish Capital Investment Manual (SCIM) and the requirements of HM Treasury's Green Book (A Guide to Appraisal in the Public Sector), this section of the Full Business Case (FBC) documents the process and provides evidence to show that the selection of the preferred option is derived from most economically advantageous option, whilst best meeting the service needs and optimising value for money.

3.0 Critical Success Factors

The critical success factors were explored as part of the way forward for the provision of a SHTM compliant theatre suite and are listed below:

Critical Success Factor (CSF)	Broad Description
CSF 1: Business Needs	Must meet NHS Greater Glasgow & Clyde's investment objectives related business needs and service requirements.
CSF 2: Strategic Fit	Must provide fit for purpose accommodation for staff to provide high quality health services for patients in a safe modern environment.
CSF 3: Value for money	Must deliver value for money in terms of providing improved accommodation, which is sustainable with a low carbon footprint, efficient running costs and co-located with Critical Care and wards for rapid transit of pre and post surgery patients requiring critical care.
CSF 4: Potential Achievability	NHS Greater Glasgow & Clyde Project Board must have the appropriate governance structures in situ and a Project Team with the necessary level of skills (capacity and capability) to deliver the project and manage any associated risks.
CSF 5: Supply Side Capacity & Capability	The scheme must support the staff in delivering their clinical services.
CSF 6: Potential Affordability	Must meet Greater Glasgow & Clyde's ability to fund the required level of capital and revenue expenditure.
CSF 7: Timescale	Construction must be completed by Jan 2017 in order to meet the need for a compliant environment

3.1 Short Listed Options

The short listed options are described under Section 2.5. In brief, the numbers of options are limited:

- a) As the Theatre facilities must be co-located with the Neurosciences Critical Care and the wards;
- b) The current theatre activity output cannot be interrupted as emergency and elective demand and waiting time guarantees must be met and

- c) The INS is landlocked with the only footprint available next to the INS is the ICE building currently in construction by the University.

The options are:

1. Option 1 – Refurbish the current Theatres (Do Minimum), involves setting up temporary theatre facilities elsewhere on the campus and ferrying pre and post surgery patients back and forth in high tech ambulances with appropriate staff between theatres and Critical Care/wards.
2. Option 2 – Build four new theatres within a dedicated floor within the ICE building which will be physically linked to the INS.

The preferred option is Option 2, building four theatres within the ICE building.

3.2 Benefits Appraisal

The benefits criteria were derived from the investment objectives which are given in section 2.3. There are five benefits criteria these being: clinical quality, sustainability of service, environment, community benefits and University relationships.

A workshop was held with representatives from INS including clinical input to discuss and assign a weighting to each criteria out of a total of 100 with those criteria which were perceived to be more important receiving higher weightings.

The ability of each option to achieve each of the identified benefit sub criteria was then scored out of 10, a score of 1 being very poor delivery of the criteria and a score of 10 being outstanding delivery.

The scores for each of the sub criteria were totalled and then multiplied to give a total weighted score for each option.

The preferred option was identified on the basis of the highest score.

The table below shows both the weightings and scores awarded for each option.

Table showing the weighting and scoring awarded to each option

	Category	The Benefit	Weighting (out of 100)	Option 1 – do minimum- Refurb		Option 2 – 4 new build theatres (within ICE development)	
				Scoring (out of 10)	Weighting X scoring	Scoring (out of 10)	Weighting X scoring
1	Clinical quality	Provision of a clean and safe modern operating environment meeting national guidance and requirements of clinical services.	40%	2		10	
2	Clinical Quality	Ensuring infrastructure meet specific requirements of clinical service recognising high risk nature of some of the procedures.		2		10	
3	Clinical Quality	Minimising clinical risk to the patient through hospital acquired infection		3		10	
4	Clinical Quality	Achieving good co-locations giving short travel times and rapid access between Critical Care/wards and theatres and vice-versa reducing potential risk to patients in transit.		0		8	
5	Clinical Quality	Good intra-departmental co-locations reducing bottle necks and improving patient flow through the department		2		10	
6	Clinical Quality	enhanced facilities ensuring patient privacy and dignity		3		10	
	Subtotal			12	480	58	2320
7	Sustainability of service	Providing opportunity for future reconfiguration of existing theatre estate whilst safely maintaining clinical activity thus ensuring sufficient operative capacity is available to meet current HEAT and other performance targets including TTG.	30%	0		10	
	Sustainability of	Providing future proofing to enable service to meet increase in local demand and develop services as agreed with West of		0		10	

	service	Scotland Board partners.					
				0	0	20	600
8	Environment	Achieving improved environment for patients	20%	3		10	
9	Environment	Improved working environment for staff.		3		10	
	Sub total			6	120	20	400
11	Community Benefits	Community benefits through provision of apprenticeships and supporting local businesses	5%	6	30	7	35
12	University Relationships	<i>Increased collaboration with university by embedding key clinical services within university development and providing enhanced opportunities for teaching and research.</i>	5%	5	25	8	40
		TOTAL SCORE			655		3395
		RANK			2nd		1st

3.3 Preferred Option (Non financial appraisal)

As described the key benefits of the project are to provide a fit for purpose modern theatre facilities which are close to critical care and the wards for safe and rapid transfer of pre and post surgical patients, achieving this without a reduction in patient activity.

Option 2, the 4 new purpose built theatre development within the ICE building, will deliver all of the above and in addition provide an important opportunity for future capacity growth.

Option 1 scores poorly as a) the landlocked theatres, even when refurbished will still not meet the SHTM requirements and b) the requirement to use interim facilities which, will be located away from the INS necessitating seriously ill post theatre patients being transported by ambulance between theatres and Critical Care. This is not clinically safe.

Option 2, with a score of 3,395, is therefore perceived to be significantly more able to provide the required benefits compared to Option 1, 'do minimum' with a score of 655.

3.4 Investment Appraisal

The investment appraisal is based on guidance provided in the Scottish Capital Investment Manual.

Following the scoring of the non financial benefits, a Generic Economic Model (GEM), using the discounted cashflow technique, was applied to the costs for each option which exclude VAT and depreciation. This presented comparable cost implications of each of the two options in the form of Net Present Costs (NPC).

NPC tables for each of the options are included within the Appendices.

3.5 Inputs to the Generic Economic Model

The table below presents the inputs to the GEM model for each of the options. All costs exclude VAT.

INPUTS TO THE GEM MODEL

	Option 1 Do Min £'000	Option 2 Lease Floor £'000
Lease costs	0	4,647
Refurbishments costs	5,645	0
Fees	672	103
Equipment	333	333
IT	250	250
Risk	1,250	1,184
	8,150	6,517
Maintenance	26	26
Rates	15	15
HL&P	42	42
Domestic & Portering	91	91
	8,324	6,691
<u>Non Recurring Revenue Costs</u>		
Modular Theatre Hire	1,731	0
Patient Transport	200	0
	10,255	6,691

3.6 Value for Money Analysis (VfM)

Value for Money is defined as the optimum solution in terms of comparing both qualitative benefits to Net Present Cost (NPC).

This has been calculated by dividing the NPC cost by the weighted benefits score for each option to produce a Cost per Benefits Point.

The result of this analysis is presented in the table below.

Options	Weighted Benefits Score	NPC £'000	NPC / Benefit Point £	Rank
Option 1 Do Min	655	13,733	£20,967	2nd
Option 2 Leased Floor	3395	10,255	£3,021	1st

3.7 Sensitivity Analysis

In order to test the robustness of the results of the economic appraisal, it is necessary to assess the quantum of change required to swap the overall result. This has been achieved by carrying out sensitivity analysis on both net present costs and the non financial benefits score.

3.7.1 NPC Sensitivity.

The NPC of Option 1 would require to reduce by circa £12m in order to achieve the same cost per benefit point as Option 2. This represents a reduction of over 85% in NPC terms. Alternatively, net present costs for Option 2 would require to increase by over £60m in order to change the results.

The cost analysis illustrates that the costs for both options are fairly similar with the exception of the unavoidable costs under Option 1 for the modular theatre hire at £1.7m. As such, the likelihood of any such cost movements applying to solely one option and not the other is deemed to be remote.

3.7.2 Benefits Score Sensitivity

The benefits score for Option 1 would require to increase by over 418% in order for the ranking to change.

Alternatively, Option 2 scores would require to reduce by 2,741 which represents a reduction of over 80%.

Given the fact that the majority of the non financial benefits score relate to clinical quality and future proofing, for which, Option 1 scored very poorly, the likelihood of any significant movement in benefits score changing the result is deemed to also be remote.

3.8 Preferred Option

The results of both the non financial and financial appraisals, and confirmed through subsequent sensitivity analysis, have confirmed that the preferred option is Option 2, the lease of a floor within the University of Glasgow's ICE building.

SECTION 4: THE COMMERCIAL CASE

4.1 Section Overview

As noted previously, the University of Glasgow have initially developed a three storey building to provide their facilities to enable leading research in stroke, cardiovascular disease and brain imaging. As part of the collaborative discussions between the University of Glasgow (UoG) and the Health Board it was agreed that a further floor could be added with the intention of providing neuro-surgery theatres. It is therefore proposed that the first floor of the ICE building is dedicated to providing a theatre suite (1137m²) with further allocation of space for the associated theatre plant (375m²). A ground lease and development agreement was established for this project and the design and construction works developed in partnership.

In order to develop this project, BAM Construction was appointed as construction partner by the University of Glasgow. The conditions of the appointment of BAM are similar to those of a HFS Frameworks 1 for Scotland appointment. This appointment contract is founded on collaborative working principles and the New Engineering Contract (NEC 3) - Option C (Target Cost) is used to support these principles. It should be noted that the Board influenced the University to procure the ICE Building via NEC 3 as a result of the successful outcomes for the QEUH hospitals, the Teaching and Learning Building and the new Office Accommodation Block.

To allow the additional theatre suite, BAM Construction has been engaged with the NHS GGC Project Team to finalise design, work up the target cost for the scheme and to allow development of the Full Business Case and inform discussions around construction.

The current status of the project, which accords with Royal Institute of British Architects (RIBA) Stage 5 Construction, (Former Stage K) Construction to Completion reflects the results of this collaborative approach between the University of Glasgow, the Board and the construction partner (PSCP) in defining the scope and the financial envelope of the project.

As noted above, the mechanism for ensuring that this partnership ethos is carried through to the construction of the new facility is via the use of the NEC3 form of contract. The main principles of this procurement methodology are outlined in section 4.2 below:

4.2 Required Services

The University of Glasgow has appointed external advisors who sit on the core team with the specific remits similar to those made under Frameworks Scotland. This team is detailed below and will see the project through to completion:-

- ❖ PSCP: Bam Construction Limited
- ❖ PSC Project Manager: Currie & Brown UK Limited
- ❖ PSC Cost Advisor: Currie & Brown UK Limited
- ❖ PSC CDM Advisor: Currie & Brown UK Limited
- ❖ PSC (NEC) Supervisor: Currie & Brown UK Limited

To assist the Board to successfully deliver the project, a shadow team will be appointed to see the project through to completion. The appointment of a Cost Advisor has been made and they have assisted in the agreement of the Target Costs for this proposal. Going forward this appointment will review PSCP applications to ensure the board is receiving value for money and provide financial advice. The Board will also appoint a) additional consultant support for project management to monitor programme and performance of the contractor and b) a NEC 3 supervisor (NHS Senior Project Manager) to ensure that the Boards requirements are met. Noted below are the Boards Technical Advisors;

- ❖ Boards Cost Advisor: Aecom
- ❖ Boards (NEC) Supervisor / Commissioning Engineer: To be confirmed
- ❖ Boards Shadow Project Manager – NHS Greater Glasgow & Clyde

4.3 Risk and Commercial Framework

The key features of the New Engineering and Construction Contract NEC3 contract are:

- ❖ The parties are encouraged to work together as partners in an open and transparent approach and to ensure that this partnering ethos is maintained;
- ❖ There is a 'Gain/Pain share' mechanism to act as an incentive to the delivery team, by rewarding good performance and penalising poor performance;
- ❖ A clear and transparent system is 'on the table' to enable negotiation to take place on prices;
- ❖ A level of 'price certainty' is determined;
- ❖ All price thresholds are set using quantitative risk analysis; and
- ❖ It provides a Target Cost.

In accordance with the guidance notes provided by Frameworks Scotland, University of Glasgow and Bam Construction (PSCP) act as joint owners of the Project Risk Register for the main building. The UoG and NHSGGC and their professional advisors will ensure that there is an appropriate allocation of risks between the UoG and NHSGGC and Bam Construction relative to the first floor fit out which is dedicated to the theatre suite. The table of risks and an indicative allocation are shown below:

Potential Risk Allocation- for the first floor fit out only

Potential Risk Category	Potential allocation of risk			
	UoG	NHSGGC	Bam Construction	Shared
Design		√	√	
Development				√
Construction	√		√	
Transition and Implementation				√
Town and Country Planning	√		√	
Building Control	√		√	
Site Conditions	√			
Performance for Delivery of the Project			√	
Operation of Site Post-completion	√	√		
Revenue Cost Post-completion	√	√		
Financing	√	√		
Legislative	√	√		
During the ongoing risk management workshops, allocation and ownership of risks will be reviewed and detailed throughout the project.				

4.4 Agreement arrangements

The land upon which the ICE Building is being built is owned by NHSGGC. NHSGGC has granted the University of Glasgow (UoG) a ground lease for an initial period of forty five years with option to extend to sixty years. There is an opportunity for NHSGGC to take a floor in the ICE building to create the new theatre complex with four theatres.

Having reviewed the nature of the lease agreement, it is NHSGGC's view that the lease arrangement constitutes a Finance Lease under IAS (International Accounting Standard) 17.

In examining the substance of this transaction, the Board's view is also that the financial contribution to be made to the UoG under the Development Agreement represents the early settlement of future lease payments to secure occupation rights of the first floor of the ICE Building for the duration of the Sub-Lease. As such, this amount should be included as part of estimating and recognising the fair value of the asset at the inception of the lease.

4.5 Change Control Procedures

As part of the collaboration between the University and the Board, certain principles have been confirmed. The instigator of any Compensation Event for their own benefit would require to pay 100% of the associated costs. However if the change has been previously agreed by both parties and is to their mutual benefit then the reimbursement will be as per agreed percentage allocation – currently 32% (NHS) and 68% (UoG).

Change Control is not intended to prevent change but to ensure that all parties are in a position to make informed decisions based upon a position of certainty of commitment at all times and with a high degree of predictability of outcome.

The change control process will manage the issuing, approving or rejection of changes, this will be achieved by using the NHSGGC Change Control Procedure form, (please see Appendix 7). This sets out the detail and reason for the specific change requested and its impact to the delivery of the project time and cost (capital & revenue). For approval to be incorporated the form needs to be signed off at the appropriate level of the governance structure.

This actual implementation will be managed by the NEC Project Manager using the Contract Administration Toolkit pro-formas electronically on A-site and in accordance with the NEC3 contract terms.

The NEC3 contract requires early and prompt consideration of any matters which may affect the price paid by the Board. The procedures detailed in this section will be used to control all changes or other events, which may arise during the construction stage of the project.

Change may arise as a result of the following:

- ❖ Changes initiated by the Design Team (and Project Manager) including drawing revisions and Provisional Sums; or
- ❖ Changes arising from NHSGGC operational updates or changes in national guidance

The NEC3 Early Warning and Compensation Event procedures will be implemented in accordance with the specific contract procedures

4.6 Open Book Philosophy

A key principle of the NEC3 Form of Contract is the payment of 'Defined Cost' and an open book accounting philosophy. These require a robust, reliable and transparent system to record staff time and manage the invoicing process. This allows the Cost Advisor not only to identify costs but also to establish that the costs have been properly expended on the project and that they are allowable under the NEC3 contract as defined under the "schedule of cost components".

Project costs must be referenced to items on the activity schedules with detail added against 5 main headings of; labour, plant, materials, sub contractors and preliminaries. Orders, deliveries, invoices for payment, external plant hires and sub-contracts also have to be cross-checked against Goods Received Notes.

The target price is key to the cost operation of the contract and is set at FBC stage. This process concludes when the PSCP's proposals are completed for costing and the risk register has been agreed.

4.7 Agreed Implementation Timescales

The timescale for the proposed project is as follows.

<i>Event</i>	<i>Date completed/anticipated date of completion</i>
<i>Planning Approval</i>	<i>1st September 2015</i>
<i>Site Clearances / Demolitions</i>	<i>21 September 2015</i>
<i>Construction Commencement (Piling Works)</i>	<i>9th November 2015</i>
<i>Target Price Agreed with UoG / PSCP</i>	<i>November 2015</i>
<i>Deadline for Shell, Core and Plant Option</i>	<i>20th November 2015</i>
<i>FBC approval CIG</i>	<i>12th January 2016</i>
<i>Deadline for full Fit Out Option</i>	<i>13th January 2016</i>
<i>Anticipated construction completion</i>	<i>20th January 2017</i>

4.8 Agreed Accountancy Treatment

The accounting treatment for this development recognises the following proposed lease arrangements:

- The provision of a Ground Lease by NHSGGC, on behalf of the Scottish Ministers, to the University of Glasgow (UoG), to enable the development of the full ICE Building to be undertaken by the University;
- The creation of a Sub-Lease between the University of Glasgow and NHSGGC, on behalf of the Scottish Ministers, enabling the lease of the first floor of the ICE Building to NHSGGC from UoG;
- The conclusion of a Development Agreement that will govern the relationship between both parties, and their respective rights and obligations, during the development and construction phase of the Building. This will include the operational and financial arrangements during the construction period;
- The Development Agreement identifies the financial contribution to be paid by NHSGGC to UoG in respect of this project. This is based on the additional costs of constructing the four storey building, including the Theatre Floor, compared to the initial costs of the three storey building originally planned for sole UoG use. This contribution, along with a nominal annual rent of £1, secures the occupation rights for the duration of the Sub-Lease. The annual rental figure of £1 is fixed for the duration of the Sub-Lease;
- In order to avoid any interest charges being payable by NHSGGC to UoG as a result of entering into this lease arrangement, a payment mechanism has been agreed whereby, the total cost due by NHSGGC over the primary period, will be paid to UoG in line with the relevant pro-rata share of the monthly interim valuation certificates to be paid to the appointed Contractor by UoG during the construction period;
- As noted in further detail below, within paragraph 5.2, having reviewed the nature of the lease agreement, it is NHSGGC's view that the lease arrangement constitutes a Finance Lease under IAS (International Accounting Standard) 17.
- In examining the substance of this transaction, the Board's view is also that the financial contribution to be made to the UoG under the Development Agreement represents the early settlement of future lease payments to secure occupation rights of the first floor of the ICE Building for the duration of the Sub-Lease. As such, this amount should be included as part of estimating and recognising the fair value of the asset at the inception of the lease.

The fair value of the asset and liability will be estimated at the inception of the lease, with the asset being classified under non-current assets and set against the Capital Resource Limit (CRL) and a corresponding liability recorded. The fair value of the asset will be depreciated over the remaining period of the lease in accordance with International Financial Reporting Standards.

Any direct capital costs, e.g. Equipment procured directly by NHSGGC in respect of the NHS Floor will be capitalised and depreciated in line with the requirements of the Capital Accounting Manual.

SECTION 5: FINANCIAL SECTION

The financial case for the preferred option; Option 2- Lease Occupation of a floor in University of Glasgow's New ICE building on the Southern General site, sets out the following key features:

- Proposed Lease Arrangements;
- Accounting Treatment
- Finance Lease, Capital Costs & Funding;
- Revenue Requirements and Funding;

5.1 Proposed Lease Arrangements

The accounting treatment for this development recognises the following proposed lease arrangements:

- The provision of a Ground Lease by NHSGGC, on behalf of the Scottish Ministers, to the University of Glasgow (UoG), to enable the development of the full ICE Building to be undertaken by the University;
- The creation of a Sub-Lease between the University of Glasgow and NHSGGC, on behalf of the Scottish Ministers, enabling the lease of the first floor of the ICE Building to NHSGGC from UoG;
- The conclusion of a Development Agreement that will govern the relationship between both parties, and their respective rights and obligations, during the development and construction phase of the Building. This will include the operational and financial arrangements during the construction period;
- The Development Agreement identifies the financial contribution to be paid by NHSGGC to UoG in respect of this project. This is based on the additional costs of constructing the four storey building, including the Theatre Floor, compared to the initial costs of the three storey building originally planned for sole UoG use. This contribution, along with a nominal annual rent of £1, secures the occupation rights for the duration of the Sub-Lease. The annual rental figure of £1 is fixed for the duration of the Sub-Lease;
- In order to avoid any interest charges being payable by NHSGGC to UoG as a result of entering into this lease arrangement, a payment mechanism has been agreed whereby, the total cost due by NHSGGC over the primary period, will be paid to UoG in line with the relevant pro-rata share of the monthly interim valuation certificates to be paid to the appointed Contractor by UoG during the construction period;
- As noted in further detail below, within paragraph 5.2, having reviewed the nature of the lease agreement, it is NHSGGC's view that the lease arrangement constitutes a Finance Lease under IAS (International Accounting Standard) 17.
- In examining the substance of this transaction, the Board's view is also that the financial contribution to be made to the UoG under the Development Agreement represents the early settlement of future lease payments to secure occupation rights of the first floor of the ICE Building for the duration of the Sub-Lease. As such, this amount should be included as part of estimating and recognising the fair value of the asset at the inception of the lease.

5.2 Determining the Lease Type

In determining the lease type, NHS Greater Glasgow & Clyde (NHSGGC) referred to the Capital Accounting Manual and in particular International Financial Reporting Standards (IFRS) and International Accounting Standard 17, which provides indicators, the presence of which, individually or in combination, leads to leases being classified as a finance lease.

The table below demonstrates why NHSGGC determined that this lease should be classified as a finance lease.

Conditions resulting in classification of a Finance Lease	Does the condition justify the classification of a Finance Lease?
The Lease transfers ownership of the asset to the lessee by the end of the lease term	YES
The Lessee has the option to purchase the asset at a price that is expected to be sufficiently lower than the fair value at the date the option becomes exercisable for it to be reasonably certain, at the inception of the lease, that the option will be exercised.	YES
The lease term is for the major part of the economic life of the asset even if title is not transferred	YES
At the inception of the lease the present value of the minimum lease payments amounts to at least substantially all the fair value of leased asset.	YES
The leased assets are of a specialised nature such that only the lessee can use them without major modifications being made.	YES

5.3 Accounting Treatment

- The fair value of the asset and liability will be estimated at the inception of the lease, with the asset being classified under non current assets and set against the Capital Resource Limit (CRL) and a corresponding liability recorded. The fair value of the asset will be depreciated over the remaining period of the lease in accordance with International Financial Reporting Standards.
- Any direct capital costs, e.g. Equipment procured directly by NHSGGC in respect of the NHS Floor will be capitalised and depreciated in line with the requirements of the Capital Accounting Manual.

5.4 Finance Lease and Capital Costs.

The Lease cost and other costs for the preferred option are shown below.

NHSGGC ICE BUILDING

NHS Costs only.

Costs including Irrecoverable VAT

	£'000
Lease Cost	5,576
Fees	103
Equipment Costs	400
IT Costs	300
Risk Register	1,421
	7,800

The lease cost represents NHSGGC's financial contribution to the first floor within the ICE building to be occupied over a forty five year primary lease period.

5.5 Period of Lease

The proposed lease term will be forty five years, after which time the primary lease period will either be extended or the ownership of the floor will transfer to NHSGGC for nil consideration.

5.6 Capital Costs

Capital costs include Groups 2 to 5 Equipment and IT costs.
The equipment costs were derived from 1:50 Room Data sheets.

5.7 Capital Affordability

NHS Greater Glasgow & Clyde confirms that it has made provision for the finance lease and capital costs within its capital programme.

5.8 Revenue Impact

The table below sets out the recurring revenue implications for the preferred option.

Recurring Revenue Costs		£'000
Depreciation on Leased Asset	45 yrs	158
Depreciation on Equipment	10 & 5 yrs	100
Maintenance		26
Rates		15
HL&P		42
Domestic & Portering		91
		432

5.9 Revenue Affordability

NHS Greater Glasgow & Clyde confirms that it has made provision for this investment within its revenue programme.

SECTION 6: THE MANAGEMENT CASE

6.1 Project Management

The new Imaging Centre of Excellence is being procured directly by the University of Glasgow through similar contract arrangements to the NHS Framework Scotland model. BAM have been appointed as the Principle Supply Chain Partner (PSCP). The basis of the contract appointment is through the use of the NEC3 Engineering Construction Contract with An Option C Target Cost.

The diagram below illustrates current arrangements for managing the contract through the construction period and also the governance of the project from the NHSGGC.

The right hand side of the diagram illustrates the traditional NEC3 contract appointments that the University of Glasgow have made for the project delivery. The Project Manager (Currie & Brown) will work with the Contractor BAM (PSCP) to deliver the Contract as set out within the conditions. To achieve this the PM will be supported by 2 technical advisors; firstly the Cost Advisor's main task will be to value the project at the various assessment periods and also agree cost associated with any compensation events (variations). The other appointment is the Supervisor; they play an important quality control role in the ECC, checking that the works are carried out by the Contractor in accordance with the Works Information.

The governance and project management arrangement from the NHS perspective are shown on the left hand side of the diagram. The normal day to day activities to ensure a successful delivery of the Neurosurgery Theatre floor will be managed by a Project Manager from the NHSGGC Capital Planning section. To do this the Project Manager will be supported by three distinct stakeholder groups, these are the Clinical Team for whom the theatres are being delivered, the shadow construction consultant team and finally the group of other interested parties.

The Clinical team have worked with the design team in developing and signing off the 1:200 and 1:50 drawings and includes anaesthetists, surgeons, nursing staff and infection control.

In order to provide technical assistance through the project NHSGGC will be appointing three technical advisors. Firstly a shadow PM will be appointed, their tasks will predominantly be to ensure that the contract is being administered correctly and provide reporting on progress and any other relevant issues. A Cost Advisor has been appointed to assist the board in ratifying the value of the proposed theatre floor and also verify the value of assessed works and variations. Finally, the NHSGGC will be appointing a NEC3 Supervisor who will carry out a similar role to the UoG NEC3 Supervisor but their priority will be the commissioning of the Neurosurgery Theatres.

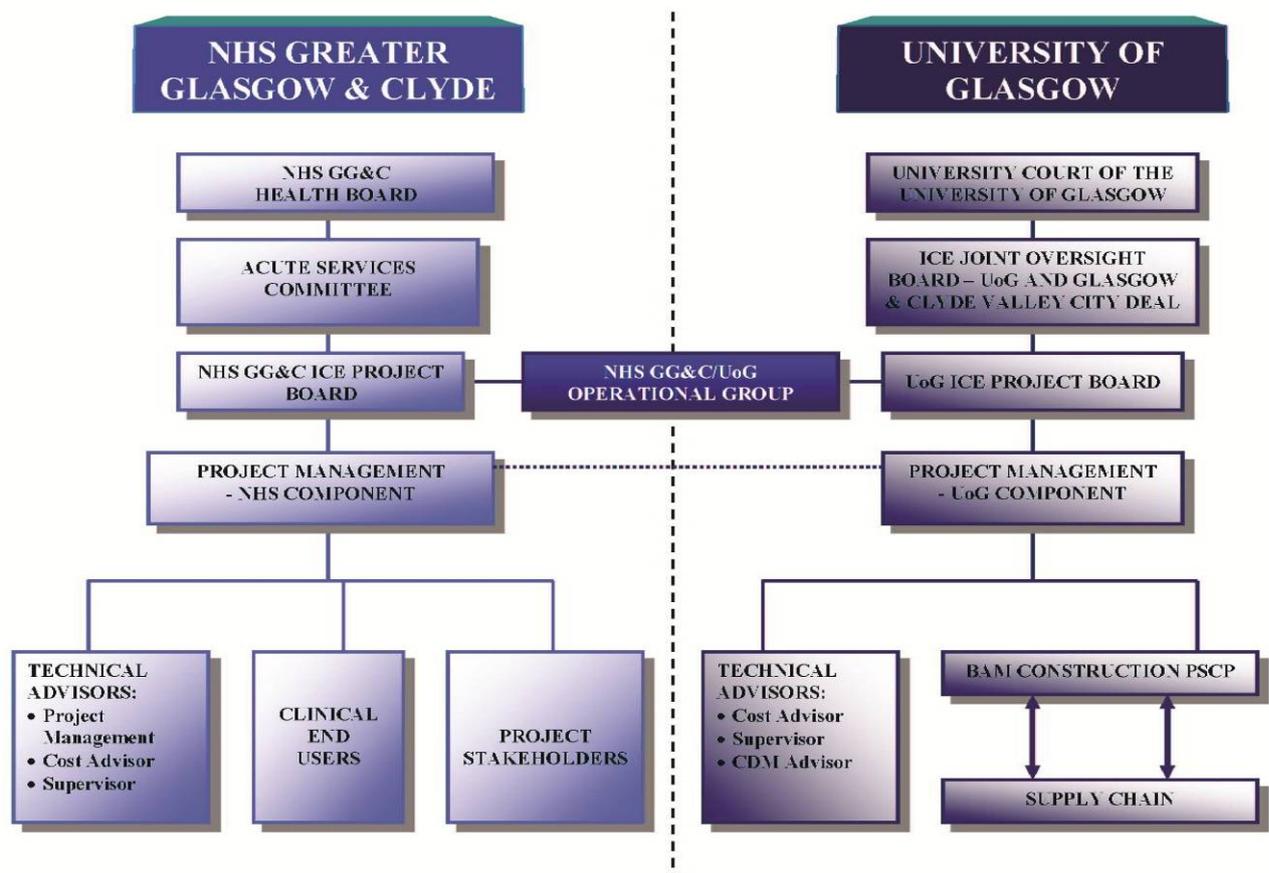
The final group of stakeholders are other groups within the Board required for a successful delivery including Estates, Facilities Management, Adjacent building users etc.

The ICE Project Manager will report to the Project Board on project performance (program, budget, etc.) and seek decisions on sign off of change controls, approvals to proceed etc. The Project Board will liaise with the University of Glasgow on matters such as finance and agreement of leases through the NHS/University of Glasgow Operational Group. This group is jointly chaired between the NHS and UoG and will decide on any joint operational issues for the ICE building.

The Project Board will be led by a senior NHS manager from Regional Services, the main client group and also senior representatives from the NHSGGC Capital Planning section and Finance.

This board will subsequently report back to the Acute Planning Group which has a remit to monitor all capital projects in the Acute sector.

On the diagram below the main solid lines indicate the formal contractual communication routes with the dotted lines illustrating the non contractual routes required to successfully deliver the project.



6.2 Change management process

6.2.1 Design Change

Design change will be managed by the Project Manager in the first instance to avoid any change, or by re-designing within the cost envelope. If however, there are changes due to legislation or a change in the requirements of a user, this change will be managed through the Project Governance Structure (as above) via the use of a Change Control Form (please see Appendix 7). This Change Control Form requires approval through the governance structure with sign off by the Chief Officer (Acute) or nominated senior officer of the Board.

6.2.2 Managing Workforce Change Strategy

The staff transferring to the new theatre facilities will be the medical, nursing and support staff who make up the theatre and recovery teams. The new facilities will give rise to more efficient patient flows and working practices to enhance the patient service. The staff will transfer to the new facilities within their existing teams with no fundamental changes to working patterns or site and therefore there are minimal staff change implications.

6.3 Risk Management

The project's risk register has been established by the University of Glasgow in accordance with the standard format for the Frameworks Scotland Joint Project Risk Register. The risk register will drive the ongoing management of the risks throughout the remaining construction phase of the project. Operational risks identified during the various risk workshops will be transferred to the Board's risk register as the Board will manage operational risks prior to conclusion of the FBC. Risk has been discussed in Section 4.

6.4 Post Project Evaluation

NHS Greater Glasgow and Clyde is aware that in order to assess the impact of the project, an evaluation of activity and performance must be carried out post completion. This is an essential aid to improving future project performance, achieving best value for money from public resources, improving decision-making and learning lessons for both the Board and others. Sponsors of capital projects in NHSScotland are required by the Scottish Government Health Directorates to evaluate and learn from their projects.

6.4.1 Purpose

The Board has an evaluation framework in place as follows:

- ❖ A post project evaluation will be carried out no later than 12 months after occupation;
- ❖ The strategic/service objectives detailed in this FBC will be used to assess project achievement; and
- ❖ Staff surveys will be carried out and trends will be assessed.

6.4.2 Pre- requisites for successful evaluation

To ensure maximum pay-off from evaluation, the following criteria are deemed as important:

- ❖ The evaluation is viewed as an integral part of the project and it is planned for at the outset;
- ❖ There is commitment from senior managers within the organisation;
- ❖ All key stakeholders are involved in its planning and execution;
- ❖ Relevant criteria and indicators will be developed to assess project outcomes from the outset of the project;
- ❖ Mechanisms will be put in place to enable monitoring and measurement of progress;
- ❖ A learning environment will be fostered to ensure lessons are heeded; and
- ❖ There is a commitment to feedback to Framework Scotland monitoring groups.

6.4.3 The stages of evaluation

Although evaluation will be carried out throughout the life of a project to identify opportunities for continuous improvement, evaluation activities will be undertaken at four main stages:

Stage 1: at the project appraisal stage the scope and cost of the work will be planned out.

Stage 2: progress will be monitored and evaluation of the project outputs will be carried out on completion of the facility.

Stage 3: there will be an *initial* post-project evaluation of the service outcomes 6 to 12 months after the facility has been commissioned.

Stage 4: there will be a follow-up post-project evaluation to assess longer-term service outcomes two years after the facility has been commissioned.

It addresses issues such as the extent to which the project has achieved its objectives; how out-turn costs, benefits, and risks compare against the estimates in the original business case and lessons learned from developing and implementing the project.

Appendices

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- Appendix 2 - Schedule of Accommodation
- Appendix 3 - 1:200 Floor Plan drawings
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- Appendix 6 - Risk Register
- Appendix 7- Change Control form

APPENDIX 1: Campus Master Plan Post 2017



QUEEN ELIZABETH UNIVERSITY HOSPITAL
AND
ROYAL HOSPITAL FOR CHILDREN
CAMPUS MASTERPLAN (POST 2017)

APPENDIX 2: SCHEDULE OF ACCOMMODATION – proposed theatre suite located on level 1.

3106

Schedule of
Accommodation



CLIENT: UNIVERSITY OF GLASGOW (BAM)
PROJECT: IMAGING CENTRE OF EXCELLENCE (ICE)

REV: K
DATE: 23.9.15
REF: 3106/ JAW

Revision	Date	Details
A	04.03.14	Facility replanned to accommodate design team comment
B	11.03.14	Facility replanned to accommodate design team comment
C	18.03.14	Facility replanned to accommodate design team & Client comment following Meeting with the University of Glasgow (12.3.14)
D	18.03.14	Additional Passenger Lift Added and adjacent areas replanned to accommodate this change
E	25.08.14	Facility replanned to accommodate Client comment following Meeting with the University of Glasgow
F	27.10.14	Updated to reflect procurement packages issued for Billing & Stage D Report
G	08.05.15	Updated to reflect Revised GA Drawings and Status B approved Theatre Layout - to be issued for Planning Approval (11.5.15)
H	15.05.15	Reflects Drawings: AL(00)01P/02T/03N/04J/05H. Compliance guide added.
J	29.06.15	STAGE D/ BILLING ISSUE Drawings: AL(00)01R /02W/ 03R/ 04M/ 05L/ 06A. Layout amends to incorporate Client Meeting changes (18.5.15) and Theatre User Mtg (22.5.15) comments (partial), Design development.
K	23.09.15	TARGET COST Drawings: AL(00)01U /02Z/ 03T/ 04Q/ 05N/ 06C to incorporate Post-Billing coordination amendments (CCO No. 6) and Client Meeting changes as follows: CCO No. 1: Relocation of MRI Scanner/ Partitions; CCO No. 2: Level 0 Layout changes, as per Client Mtg 22.6.15/ DTM 1.9.15; CCO No. 3: Level 3 Layout changes, as per Client Mtg/ DTM 1.9.15; CCO No. 5: Level 1 Layout changes, as per User Mtg 10.9.15; Derogations clarified with area shortfall from current recognised standard shown in red. New column showing difference from current and original briefed areas added

Accommodation		Area/ Occupancy				Compliance Guide				Briefing Comments	
Room No.	Room Name	Original High Level Brief/ SOA 23.1.15	Stage D (m ²)	Current Area (m ²)	Difference from original brief	Occupancy	Guidance	Difference from guidance (m ²)	Derogation Sought Where areas differ from guidance or client brief <i>See below & Comments for details</i>	Comments	Amendments/ Clarifications Rev K amends highlighted in YELLOW
LEVEL 0	7T MRI										
	Public Areas										
L0.01	Main Entrance/Foyer	70	138	108	+ 38 sq.m		BS 8300 for access			Not specifically an NHS area so UoG standards apply. SoA was evolved with the users during 1:200 sign-off process	Reduced in area from Stage D due to omission of helical stair
L0.02	Main Reception	40	13	17	- 23 sq.m		BS 8300 for access & desk			Not clinical area - UofG standards apply. SoA was developed with the users during 1:200 sign-off process. Reduction in size due to	Rev K: CCO No. 2: Level 0 Layout changes: Changes requested at Client Mtg 22.6.15 / DTM 1.9.15. Back Office omitted, admin support from MRI Reception Office Area only

										omission of Back Office.	required.
L0.03	Back Office		26	26							Rev K: CCO No. 2: Level 0 Layout changes: Back Office omitted (not required) - all admin to be within MRI Back Office
L0.04	Visitor Centre	20	24	22	+ 2 sq.m					Not clinical area - UofG standards apply. SoA was developed with the users during 1:200 sign-off process	
L0.05	Meeting Room	40	23	28	- 12 sq.m			No - brief reduced to 1 larger meeting room		Not clinical area - UofG standards apply. SoA was developed with the users during 1:200 sign-off process	Rev K: Increase of 2m2 from Rev J - general layout update originally two meeting rooms at 20 sq.m each then reduced to one.
	MRI Reception										
L0.08	MRI Reception & Office	30	28.0	30	-		HBN 12 - 10 sq.m	+ 10 sq.m		Reception is combined with the Back Office hence the larger area. Previous signed off 1:50 layout can still be accommodated.	Rev K: CCO No. 2: Level 0 Layout changes: 2m2 increase.
L0.09	Interview Room 1	Not provided	8	6	- 2.0 sq.m		HBN 00-03 - 8 sq.m	- 2.0 sq.m	Slightly smaller area acceptable on basis that this is not an OPD Interview/Consulting room	Area is for a one-to-one assessment and does not require a clinical whb as is assumed in HBN 00-03 - so slightly smaller area acceptable	Rev J: Correction to measured area (as per AL(00)01 Rev M replanning
L0.10	Interview Room 2	Not provided	8	6	- 2.0 sq.m		as above	- 2.0 sq.m	as above		Rev K: CCO No. 6 Post Billing Coordination - structural setting out for lifts
L0.46	Waiting	Not provided	10	9	- 1.0 sq.m		HBN 06 Vol.2 has 9.0 sq.m for MRI waiting (p.63)	- 1.0 sq.m	2.25 sq.m includes for Childrens' play area etc which was not requested during 1:50 sign off	Six chairs can be fitted into this space. 1.3 sq.m per person deemed adequate during 1:50 sign-off so 7.8 sq.m adequate.	Rev K: Decrease of 1m2 - general layout update Stage D: Max no. of patients and carers will be six at any given time
	MRI Clinical Areas										
L0.17	Scanning Room	112	105	103	- 9 sq.m		Siemens 7T Planning Guide	NA	Siemens to lay out room. No issues raised to date.	Size dictated by gauss line perimeter zone (9m x 5m approx.) and structural grid to maintain a safe environment. Siemens to lay out room.	Rev K CCO No. 1 Relocation of MRI Scanner/partitions: Layout amendment to Tech/Scanner Rm & MRI location and adjoining rooms. Cupboards omitted (not required).
L0.18	Control Room	30	33	29	- 1.0 sq.m		Siemens 7T Planning Guide	NA	Siemens to lay out room. No issues raised to date.	New magnet is being supplied so Siemens require to lay out this room to suit their standards. (HBN 06 Vol.2 has 16 sq.m for a 1.5T Control Room - p.64)	Rev K: CCO No. 1 Relocation of MRI Scanner/partitions: Layout amendment to Tech/Scanner Rm & MRI location and adjoining rooms.

L0.19	Data/ Analysis Room	40	32	31	- 9.0 sq.m		HBN00-03 states 4.5 sq.m per person for open plan office	- 4.0 sq.m	8 person office would require 36 sq.m in total but only 31 sq.m total here. However this room will be purely for digital analysis so 3.9 sq.m deemed acceptable	The HBN 00-03 standard is for a 2m x 2.25m (4.5 sq.m) zone with space for a visitors chair included. This area is for analysis and not multi-tasking. Room was previously signed off at 32 sq.m.	Rev K: CCO No. 6 Post Billing Coordination - structural setting reduced area by <1m2
L0.20	Bed Transfer 1	30	12	12	-		HBN 06 Vol.2 has twin bed space recovery area at 20 sq.m (p.63) - i.e. 10 sq.m per bed space.	+ 2.0 sq.m	Area is used to transfer patients onto a non-ferrous trolley. Space of 3.5m x 3.4m is slightly smaller than an in-patient bed area of 3.6m x 3.7m.	Patients are note being treated here for any length of time i.e. it is a temporary holding area for transfer to a trolley pre and post scanning.	
L0.21	Bed Transfer 2		12	11	- 1.0 sq.m		as above	+ 1.0 sq.m	as above		Rev K: CCO No. 6 Post Billing Coordination - structural setting reduced area by <1m2
L0.22	Ambulant patient WC	-	-	3	-	-	HBN 12: 2.0 sq.m for staff we	+ 1.0 sq.m	-	-	Rev K: CCO No.2: Level 0 Layout changes: Deleted at pre-DTM meeting 09.09.15
L0.47	Sub-Waiting	Not provided	2	2	-	-	HBN 00-03 1.85-2.0 sq.m per person	-1.7 sq.m	3.7 sq.m is the minimum area required for two people sitting and includes circulation space	Area on drawing is for two chairs and does not take into account corridor space	Subsequently deleted by Jozien in e-mail dated 14th July in response to Anaesthetic Room sketches.
L0.26	Simulation Room	50	30	20	- 30 sq.m		User specified area signed off.	- 20.0 sq.m	Users agreed that simulation room could reduce in area to 30 sq.m from 50 sq.m.	Users to provide equipment lists and clinical requirements to verify that functionality is still satisfactory at 1:50 stage.	Rev K: CCO No.2: Level 0 Layout changes: Area reduced due to include an EEG Booth - Client request via BAM 7.10.14.
L0.26A	ECG Booth			8	+ 0.5 sq.m		7.5 sq.m requested based on EEG Room on Level 5 CRF.	+ 0.5 sq.m			Rev K: CCO No.2: Level 0 Layout changes: Client addition - Client request via sketch sent 7.10.15. Area of 7.5 sq.m confirmed at pre-DTM meeting on 01.09.15
L0.27	Coil Lab	20	39	38	+ 18 sq.m		User specified area signed off	+18 sq.m		Area has increased slightly due to column being introduced into room. It is still anticipated that the original layout can be maintained.	Rev K: CCO No. 6 Post Billing Coordination - structural setting reduced area by <1m2
L0.28	Programming Room	20	22	22	+ 2.0 sq.m		User specified room signed off.		UoG briefed areas.	Increased in area as layout was becoming congested for five occupants. At 4.5 sq.m per person, area is now more or less compliant with HBN 00-03.	
L0.29	Technical Room	40	37	46	+ 6.0 sq.m		Siemens Planning Guide	NA		Siemens to lay out room	Rev K CCO No. 1 Relocation of MRI Scanner/partitions: Layout amendment to Tech/Scanner Rm & MRI location and adjoining rooms.

L0.30	AV Office	15	20.5	20	+ 5.0 sq.m		Healthcare Premises Cost Guide 2010 recommends 13 sq.m.	+ 7 sq.m	Area had been reduced from 15 sq.m specified due to constraints on available area but then increased.	Room could work for two people but was very tight at 12 sq.m. Subsequently increased in size.	Rev K CCO No.2: Level 0 Layout changes: Room increased in line with space recommendations for 3 no. people as per HBN00-03 - 4.5 sq.m per person for open plan office; Rev J: Position of structure confirmed impacting on party wall location. Issue of VAT and need for separating wall led to re-plan at DTM on 09.09.15. Area increased to 20 sq.m.after clinical waste re-sited.
L0.16	Anaesthetic Room (previously Preparation Room)	*	28	33	+ 5.0 sq.m		HBN 26 for a Theatre Anaesthetic room is 19 sq.m.	+ 14 sq.m		This room is different from a theatre preparation room as here the patient is brought into the room. As such is closer to an anaesthetic room which is normally 19 sq.m.	CCO No.2: Level 0 Layout changes: Room name change from 'Preparation' to 'Anaesthetic' Room.
	WCs/ Shower/ DSR										Note: 120m2 total allowed for items starred *
L0.11	Dis WC	*	3	4	-		HBN 12 - Aaccessible specimen WC - 4.5 sq.m HBN 00-02 - 5 sq.m BS8300 - (1.5x2.2) 3.3sq.m.	-1 sq.m	Derogation for reduced area than recommended in HBN 00-02	Area/ room complies with HBN 12 and mandatory BS 8300 Disabled Code of Practice.	Rev K: General layout update
L0.13	DSR	10	10	9	- 1.0 sq.m		HBN 12 - min. 7 sq.m.	+ 1.0 sq.m		Other SGH projects are recommending 10 sq.m as a recommended minimum but that is for a ward situation. Current size is augmented by 9 sq.m MRI DSR.	Rev K: General layout update.
L0.14	Dirty Utility		8	12	-		HBN 06 Vol. 2 recommends MRI Dirty Utility at 9 sq.m (p.63). HBN 12 recommends 12m2	-		HBN 12 for outpatients is for specimen testing for a large volume of patients so facilities for disposal are required thus requiring 12 sq.m room. Type of patient here will be there for a short period before returning to ward or going home.	Rev K: CCO No. 2: Increased area to 12m2 as per HBN 12 requested at Client Mtg 22.6.15 / DTM 1.9.15
L0.15	Clean Utility	*	9	12	-		HBN 06 Vol. 2 recommends MRI Clean Utility at 9 sq.m (p.63). HBN 12 recommends 12m2	-		HBN 12 is for a large volume of patients. Type of patient here will be here for a short period of time before returning to ward or going home. Attendances are also scheduled to suit capacity planning.	Rev K: CCO No. 2: Increased area to 12m2 as per HBN 12 requested at Client Mtg 22.6.15 / DTM 1.9.15
L0.22	Patient WC	*	3	3	-		HBN 12 has 2.5 sq.m as the minimum size for a visitor/patient	-	-	-	As below

							we-				
L0.22	Dis WC	*	5.0	6	+ 1.0 sq.m		HBN 00-02 Sanitary Spaces recommends 5m2 BS 8300 - Dis WC 1.5m x 2.2 m = 3.3 sq.m	+ 1.0 sq.m		NB: Dedicated staff WCs off Patient Corridor.	Rev K CCO No.2: Level 0 Layout changes: Patient WC & Staff Dis WC omitted at Theatre Reception meeting on 10.09.15. 1 no. Dis WC (L0.24) to be utilised by Staff & Patients in Controlled Area.
L0.23	Assisted Patient Change	*	6.5	7	-		DoH Design Manual for wheelchair changing has 6 sq.m as the minimum.	-		No Scottish equivalent identified so default position is to use the current English Standard. Hfs Scotland are re-aligning their SHPNs to more closely match English HBNs, so the latter standard is seen as the most current.	6 sq.m seems to be the current DoH standard.
L0.24	Patient Change	*	5	4	-	-	DoH Design Manuals allow 2.5 sq.m for a semi-ambulant changing room	+ 1.5 sq.m	-	-	Rev K CCO No.2: Level 0 Layout changes: Patient WC omitted at Theatre Reception meeting on 10.09.15. Assisted change to be used by all patients.
L0.25	MRI DSR	*	7	9	*		No specific size referenced in HBNs but normally 5-6 sq.m	+ 3 sq.m		For non-ferrous equipment storage.	Probably over sized but depends on equipment being specified (to be advised by Client).
L0.42	Dis WC	*	3.0	3.3	*		BS 8300 - Dis WC 1.5m x 2.2 m = 3.3 sq.m	-		BS 8300 Disabled Code of Practice has the minimum size for an independent wheelchair wc as 1.5m x 2.2 m = 3.3 sq.m. This is the minimum mandatory standard.	Rev S changed this from visitor wc to disabled wc
L0.43	WC	*	3.1	2	*		n/a UoG area	-			HBN 12 has 2.0 sq.m for staff so within similar recommended sizes.
L0.44	Staff WC	*	3.2	3	-		HBN 12: 2.0 sq.m for staff wc	+ 1.0 sq.m			
L0.45	Staff WC	*	3.3	3	-		HBN 12: 2.0 sq.m for staff wc	+ 1.0 sq.m			
L0.46	Lobby	*	n/a	7	-		BS 8300 for access				Rev K CCO No.2: Level 0 Layout changes: New lobby to close deadend corridor due to Water Tank Rm relocation; Access & Stairs to INS omitted to provide single entrance point to MRI suite.
L0.58	Lobby (Changing)	30	n/a	8	- 14.0 sq.m		HBN 12 has 5 person staff changing at	n/a	Current area is 8m2 total for chaning/shower area + 8m2 lobby, so effectively 8m2/ each changing	Changing area was a late addition to the original brief. It is understood this is for Level	Lobby increased in area after meeting on 09.09.15
L0.59	Changing/ Shower (Male)		19.0	4		- 7 sq.m		Rev K: CCO No. 2: Staff Changing/			

L0.60	Changing/ Shower (Female)			4			8.5m2 + 2.5m2 for a shower. 11m2 each	- 7 sq.m	area.	0, 2 & 3 ICE Building staff cyclists only and not staff changing. 16 no. BREEAM halfheight lockers provided as per BREEAM requirements.	BREEAM cycle facilities. Area changed at pre-DTM meeting on 01.09.15.
	Circulation										
L0.40	Stair 1	20	16.4	28	+ 2.0 sq.m		HBN 00-04/ BS 8300			Stair is not for mattress evacuation	
L0.41	Stair 1 Lobby		5	6			HBN 00-04/ BS 8300				
L0.50	Stair 2	20	23	21	+ 1.0 sq.m		HBN 00-04/ BS 8300			Stair is not for mattress evacuation	
L0.51	Stair 2 Lobby		5	6			HBN 00-04/ BS 8300				Rev K CCO No.2: Level 0 Layout changes; door omitted between stair & lobby
L0.56	Lift Lobby (INS)		Not scheduled	37			HBN 00-04				Rev K CCO No.2: Level 0 Layout changes Rev J: Remeasure of area
L0.61	Ramp Corridor		91	37			HBN 00-04 minimum bed width 2150mm	2500mm wide		For single bed passage	Rev K CCO No.2: Level 0 Layout changes
L0.62	Patient Corridor			40			HBN 00-04 minimum bed width 2150mm	2200mm wide		For single bed passage	Rev K CCO No.2: Level 0 Layout changes
L0.63	Controlled Corridor		48	63			HBN 00-04 minimum bed width 2150mm	1800mm + 2200mm wide	Limited length at 2200mm width and many doors so not anticipating handrail provision.	For ambulant patients only in 1800mm wide section. For bed passing minimum width between protection/handrails is 2150mm. All patients will be escorted in this area.	Rev K CCO No.2: Level 0 Layout changes
L0.64	Controlled Corridor		21	24			HBN 00-04 width for 2 wheelchairs passing is 1800mm	2200mm wide		For staff only.	Rev K CCO No.2: Level 0 Layout changes
Existing	Spinal Link Corridor			33			n/a	4500mm wide		Existing and used for bed traffic to Spinal Unit - currently no proposals to change this significantly.	ICE Building Interface only
	Plant / Waste										Note: 50m2 total allowed for waste areas starred **
L0.44	LV Switchroom 1	30	Not scheduled	30			n/a				Rev K: General layout update; May 2010 HK Addition - Required for Theatres; Stage D: Located in Existing Area of Neuroscience Building
L0.49	Gas/Tel/Comms/Oil/Gen		7	10			n/a				
L0.52	HV Sub Station 1		Not scheduled	22			n/a				Rev K: General layout update; May 2010 HK Addition - Required for Theatres
L0.53	HV Sub Station 2		n/a	24			n/a				May 2010 HK Addition - Required for Theatres

L0.54	LV Switchroom 2		n/a	39			n/a				Rev K: General layout update; May 2010 HK Addition - Required for Theatres
L0.55	Water Tank		31	46			n/a				Rev K: CCO No. 2: Increase to floor area due to reconfigured room layout Relocated in INS as part of Theatre Feasibility; Rev J: Increased floor area due to finalisation of partitions
L0.57	Waste Store	**	n/a	12	-		HBN 12- small disposal hold of 6 sq.m for an OPD unit.	+ 6.0 sq.m		This was a late addition for the ground floor MRI suite.	Rev K: CCO No. 2: Location Originally 'Security & Stores' 50 sq.m Position changed and area increased at pre-DTM meeting on 01.09.15; Rev J: Position of structure confirmed impacting on party wall location
LEVEL 1	NHS Theatres										
											KEY COMMENTS
											27.01.15 SOA - User comments
											01.04.15 User Mtg No. 1 comments / 17.04.15 User Mtg No. 2 comments
											28.04.15 User Mtg No. 3 comments / 22.05.15 User Mtg No.4 comments
L1.03	Theatre 1	55	n/a	55	-		HBN 26 has 55 sq.m min. for theatres	-		HBN 26 in Scotland is 'Best Practice' so represents current guidance.	20.3.15 PF Email User Comments on Feasibility Layout: Theatres must be better shape, square preferred. Daylight is important - see New Adults.
L1.07	Anaesthetic Room	19	n/a	19	-		HBN 26 has 19 sq.m min. for anaesthetic rooms	-		as above	
L1.04	Scrub-up	11	n/a	10	- 1.0 sq.m	3	HBN 26 has 11 sq.m min. for Scrub-up	-1.0 sq.m	Extra space in dirty utility would bring this on area.		27.01.15 SOA User comments: Size for three persons
L1.05	Prep Room	15	n/a	16	+ 1.0 sq.m		HBN 26 has 12 sq.m min. for Preparation rooms	+ 4.0 sq.m		Brief called for these at 15 sq.m minimum.	27.01.15 SOA User comments: Clean utility room / Prep Room
L1.02	Dirty Utility	8	n/a	13	+ 1.0 sq.m		HBN 26 has 12 sq.m min. for Dirty Utility rooms	+ 1.0 sq.m			27.01.15 SOA User Comments - (Called a 'disposal' room in client brief and normally 12.0 sq.m) Leave as is. 17.04.15 D McConnell Email: 12 m2 (single) or 14 m2 (shared between 2)
L1.14	Theatre 2	55	n/a	61			HBN 26 has 55 sq.m min. for theatres	+ 6 sq.m		Larger area explained by short corridor forming exit being included in the room area.	20.3.15 PF Email User Comments on Feasibility Layout: Theatres must be better shape, square preferred. Daylight is important - see New Adults.

L1.13	Anaesthetic Room	19	n/a	19	-		HBN 26 has 19 sq.m min. for anaesthetic rooms	-			
L1.11	Scrub-up	11	n/a	10	- 1.0 sq.m	3	HBN 26 has 11 sq.m min. for Scrub-up	-1 sq.m	We think we can get this to work at 10 sq.m. 1:50 process will confirm if this is the case. If not we need to reduce the gap to the touchdown area.		27.01.15 SOA User comments: Size for three persons
L1.10	Prep Room	15	n/a	15	-		HBN 26 has 12 sq.m min. for Preparation rooms	+ 3.0 sq.m			27.01.15 SOA User comments: Clean utility room / Prep Room
L1.19	Dirty Utility	8	n/a	13	+ 5.0 sq.m		HBN 26 has 12 sq.m min. for Dirty Utility rooms	+ 1.0 sq.m			27.01.15 SOA User Comments - (Called a 'disposal' room in client brief and normally 12.0 sq.m) Leave as is. 17.04.15 D McConnell Email: 12 m2 (single) or 14 m2 (shared between 2)
L1.33	Theatre 3	55	n/a	54	-		HBN 26 has 55 sq.m min. for theatres	- 1.0 sq.m	Additional area may be obtainable from corridor subject to user agreement	Not immediately clear where we can manipulate extra space for this room without affecting theatre shape. May have to leave with one slightly smaller theatre and one slightly larger.	20.3.15 PF Email User Comments on Feasibility Layout: Theatres must be better shape, square preferred. Daylight is important - see New Adults.
L1.32	Anaesthetic Room	19	n/a	19			HBN 26 has 19 sq.m min. for anaesthetic rooms	-			
L1.30	Scrub-up	11	n/a	12	+ 1.0 sq.m	3	HBN 26 has 11 sq.m min. for Scrub-up	+ 1.0 sq.m			27.01.15 SOA User comments: Size for three persons 04.06.15 User Mtg comments
L1.31	Prep Room	15	n/a	16	+ 1.0 sq.m		HBN 26 has 12 sq.m min. for Preparation rooms	+ 4.0 sq.m		Brief called for these at 15 sq.m minimum.	27.01.15 SOA User comments: Clean utility room / Prep Room 04.06.15 User Mtg comments
L1.29	Dirty Utility	8	n/a	13	+ 5.0 sq.m		HBN 26 has 14 sq.m min. for a combined Dirty Utility room.	- 1.0 sq.m	Reduced area requires derogation	Additional area may be obtainable from corridor - subject to user agreement	27.01.15 SOA User Comments - (Called a 'disposal' room in client brief and normally 12.0 sq.m) Leave as is. 17.04.15 D McConnell Email: 12 m2 (single) or 14 m2 (shared between 2) Rev g: Shared Room, between Theatres 3 & 4.
L1.27	Theatre 4	55	n/a	55			HBN 26 has 55 sq.m min. for theatres	-			Rev K: General layout update - area reduced by <1m2. May 2010 HK Addition - Required for Theatres; Stage D: Located in Existing Area of Neuroscience Building. 20.3.15 PF Email User Comments on Feasibility Layout: Theatres must be better shape, square preferred. Daylight is important - see New Adults.

L1.28	Anaesthetic Room	19	n/a	19	-		HBN 26 has 19 sq.m min. for anaesthetic rooms	-			
L1.25	Scrub-up	11	n/a	11	-	3	HBN 26 has 11 sq.m min. for Scrub-up	-			27.01.15 SOA User comments: Size for three persons
L1.26	Prep Room	15	n/a	15	-		HBN 26 has 12 sq.m min. for Preparation rooms	+ 3.0 sq.m			27.01.15 SOA User comments: Clean utility room / Prep Room
L1.29	Dirty Utility	8	n/a	13	+ 5.0 sq.m		HBN 26 has 14 sq.m min. for a combined Dirty Utility room.	- 1.0 sq.m	User request for 14 sq.m combined - derogation required.	Not immediately clear where we can gain space for this room without affecting theatre shape. May have to leave with one slightly smaller theatre and one slightly larger.	27.01.15 SOA User Comments - (Called a 'disposal' room in client brief and normally 12.0 sq.m) Leave as is. Note: Shared Room, between Theatres 3 & 4.
L1.01	Lift Lobby	n/a	n/a	27	-						Rev K: CCO No. 5 Level 1 Layout changes: Reception relocated to INS (former Male Changing Area); Lobby doubles as a holding area in the event of a fire - so larger. Doors separating area from ICE lift lobby & theatre corridor required.
L1.TBC	Reception	20	n/a	63	+ 43 sq.m		HBN 26 has 24 sq.m for Reception & Communication base rooms	+ 39 sq.m			Rev K: CCO No. 5 Level 1 Layout changes: Reception relocated to INS (former Male Changing Area) - 4 no. beds with bed head services and nurse station as per (sketch issued 10.9.15); 20.3.15 PF Email User Comments on Feasibility Layout: Redesign to suit Patient Flows (see Diagrams) 02.04.15 User Mtg No. 1 - Pass through hatch for samples requested.
L1.08	Equipment Store	30	n/a	30	-	0	HBN 26 has a clinical equipment store at 39 sq.m for eight theatres.	-		As per briefed area.	07.04.15 Email (David Koppel): Query regarding affect of MRI Scanner on equipment including in Storage. UoG to liaise with Siemens. Equipment Rm moved away from MRI.
L1.20	Sterile Instrument Store	30	n/a	30	-		HBN 12 has a sterile supplies store at 15 sq.m. for an OPD department.	-	Two stores at 15 sq.m were combined into one. Should still work as there will be fewer partitions and the room is more flexible for laying out.	HBN 26 has an additional Prep. Room at 20 sq.m which would probably encompass sterile supplies. However originally briefed here as two stores at 15 sq.m.	20.3.15 PF Email User Comments on Feasibility Layout: Can be combined, appropriate size. 02.04.15 User Mtg No. 1- combined.
L1.21	General Store	15	n/a	15	-		No specific equivalent other than reference immediately above.	-		Consumables store briefed at 15 sq.m by users.	27.01.15 SOA User comments: Consumables/surgical sundries

L1.36	Recovery Room	60	n/a	94	+ 34 sq.m	6	HBN 26 has 13.5 sq.m per recovery bay so 81 sq.m required + a staff base at 15 sq.m = 96 sq.m	- 2.0 sq.m	Recovery room was increased in area for HAI reasons. Staff base was to be essentially a touchdown space for preparing drugs etc. so 6 sq.m agreed as adequate by users for this purpose.	3.6m x 3.7m standard bed bay was not achievable within the constraints of the space available. However the separation of bed spaces to ensure 3.6m between patients has been achieved and has been accepted as meeting the HAI requirement.	27.01.15 SOA User Comments - Space for 4, working base for staff, no male segregation. No direct daylight. 08.04.15 D McConnell Email: 6 no. bed spaces required (360deg access) 3.6m between beds (middle to middle). 24.4.15 D McC Email 04.06.15 User Mtg comments - Recovery Area Replanning
	Areas added to Original Brief										
L1.tbe	Theatre Staff Rest room (INS)	28	-	24	-	-	HBN 26 has a rest room for 20 staff at 28 sq.m	-8.0 sq.m	Layout has been signed off by users so area deemed adequate. Actual numbers of staff will be spread across three staffrooms.	We have not been given definitive numbers of people working here other than an estimated 95 persons in total for the entire theatre floor. There are other staff rest rooms available outwith our site boundary so area requirement is seen as being adequate within the total area available.	27.01.15 SOA User comments: Normally required - includes beverage bay - There is a large staff rest area within the INS, if this is being maintained then this is not required. 20.04.15 Dr Urmila Ratnasabapathy Email 22.05.15 User Mtg - Staff Room omitted (utilise existing INS Staff Room) - space absorbed into Changing/WCs (Male)
L1.01d	Linen Store	6		4	- 2 sq.m	-	-	-	-	Linen exchange trolley at end of theatre corridor - enclosed store proposed for Recovery room Clean Utility.	CCO No.5 Level 1 Layout changes: Linen store reinstated due to Reception relocation 02.04.15 User Mtg No. 1 - For recovery area beds - could reduce in size Yes. Omitted 08.04.15 D McConnell Email: Current linen is in a dedicated room however if space is tight a dedicated enclosed container could be supported
n/a	Linen Exchange Trolley	-	n/a	2.5	new room		HBN 26 has a linen store at 6.0 sq.m	- 4.0 sq.m	Linen exchange trolley wanted in a recess so store not seen as necessary	There are fire and HAI issues with exchange trolleys that will have to be addressed separately. May require fire doors to recess.	Rev G: Stored within Corridor L1.46.
L1.tbc	Disposal Hold	15	n/a	15	-		HBN 26 requires 15 sq.m	-			27.01.15 Central holding store for all DU waste - locate close to exit; 08.04.15 D McConnell Email: Locate close to lifts; 17.04.15 User Mtg No. 2 - Sub-Disposal Hold created adjacent to theatres with main Disposal Hold in INS (Pam/Donna). 15m2 required.
n/a	Bed lifts	6	n/a				No specific area requirement other than relevant British Standards for car sizes and guidance in	-		Bed lifts will be used for evacuation in the event of a fire	02.04.15 Fire Engineer Comments: 2 no. evacuation bed lifts added for fire escape in addition to 2 no. platform lifts 17.04.15 User Comments Platform lifts omitted. Passenger lift upgraded to evacuation bed lift. Bed lifts required to go to ground floor t

							HBN 00-04				
L1.09	UPS	6	n/a	8	+ 2.0 sq.m		HBN 26 has 9.0 sqm for UPS and IT Hub room.	- 1.0 sq.m	Area to be laid out by M&E engineer to see if feasible at 8.0 sq.m	There are limited opportunities for increasing the are of this room be losing some adjacent circulation spece into the Equipment Store.	20.3.15 PF Email User Comments on Feasibility Layout: CAT 2 Patient must have UPS/IPS/Blue sockets and new MEIGaN compliance. 29.4.15 HK Email - UPS required on Theatre floor, circa 9m2.
L1.16	Staff Base	20	n/a	12	- 0.8 sq.m		No specific HBN requirement as this would come under total area for staff rest facilities.	-	Request was made for a small staff area for staff to work and be available in the event of an emergency. No size stipulated.	Area will allow three armchairs and a sink unit as requested by users. Actual layout of room and equipment required will be determined through 1:50 room layout process.	27.01.15 SOA User Comments - This an office for a senior clinician. 17.04.15 User Mtg No. 2 - Added as Medical Office for consultants to meet/ work on case work outwith staff rooms. User Mtg No.3 - Amended to title: Staff Base 22.05.15 User Mtg - Touchdown Space removed and space absorbed into Staff Base
L1.17	Satellite Pharmacy	6		6	-		HBN 26 has a satellite pharmacy at 6.0 sq.m	-			27.01.15 SOA User comments: Required
L1.22	Sub Disposal Hold		n/a	8	-		No HBN equivalent.	-		Essentially a turn-out zone to mitigate the travel distance to the disposal hold room by having an intermediate storage area. No space stipulated by users so will be verified by signing off 1:200 layout.	17.04.15 User Mtg No. 2 - DSR changed to Sub-Disposal Hold 17.04.15 D McConnell Email: (main) Disposal Hold at theatre entrance to be 15 m2 01.06.15 User Mtg - Omitted
L1.23	Nurse Office	15	n/a	9	- 6.0 sq.m		HBN 26 recommends 10.5 sq.m for a unit manager's office	- 1.5 sq.m	SHPN 52 for Day Surgery units in Scotland has 9.0 sq.m for an office so it is deemed workable.	Will require to be signed off by unit manager at 1:50 stage to determine if acceptable or not. Original briefed area would be for a clinical director as opposed to a consulatnt or manager's office.	27.01.15 PF SOA: This an office for a senior clinician. User Mtg No. 2 - Clarified as Nursing Staff Office (Pam) 20.3.15 PF Email User Comments on Feasibility Layout: Nurses Station just needs to be a communication hub, no reception desk, PCs, wall monito
L1.34	Clean Utility (Recovery)	14	n/a	16	+ 2 sq.m	n/a	HBN 26 has 14 sq.m min. as the recommended area.	+ 1.0 sq.m		There is some scope for increasing the neighbouring staff base if required by losing area for each of this room, but it is of limited value. A linen exchange trolley has also been added to this room so extra area may be required.	08.04.15 D McConnell Email: Clean Utility required in Recovery 17.04.15 D McConnell Email: Required to be 14 m2 24.4.15 D McC Email: The clean utility needs to accommodate a clinical wash hand basin, a prep sink, drug cupboard, clean and sterile items and

L1.35	Dirty Utility (Recovery)	12	n/a	11	-1.0 sq.m	n/a	HBN 26 has 12 sq.m min. as the recommended area.	- 1.0 sq.m	12m2 may be achievable during 1:50 layout review otherwise derogation sought for reduced area.	08.04.15 D McConnell Email: Dirty Utility required in Recovery incl. CWHB, a decontamination sink and a macerator; 17.04.15 D McConnell Email: Area to be 12 m2 (single); 24.4.15 D McC Email: The dirty utility needs to accommodate a clinical wash hand basin; 04.06.15 User Mtg comments - Recovery Area Replanning
	Touchdown areas									22.05.15 User Mtg - Touchdown Spaces omitted-space absorbed into Staff Base/ Corridors
L1.tbc (INS)	WC (Staff Unisex)	2.5 sq.m	n/a	2	- 0.5 sq.m		HBN 12 has 2.0 sq.m for a staff wc			Rev K: CCO No. 5 Level 1 Layout changes: WCs amended to Unisex SS (See BMJ note above) 20.3.15 PF Email User Comments on Feasibility Layout: 1 x Staff WC + 1 x Dis WC only
L1.tbc (INS)	WC (Staff Unisex)	2.5 sq.m	n/a	2	- 0.5 sq.m		HBN 12 has 2.0 sq.m for a staff wc			
L1.tbc (INS)	Lobby (to Staff WCs)			4						
L1.18	Staff Dis WC	-		4	-		HBN 00-02 Sanitary Spaces recommends 5m2 BS 8300	- 1.0 sq.m	Area below HBN BS 8300 compliant	DDA/ Building Control requirement WC within Theatre Suite
L1.01c	Staff Dis WC	-		4	-		HBN 00-02 Sanitary Spaces recommends 5m2 BS 8300 - Dis WC 1.5m x 2.2 m = 3.3 sq.m	- 1.0 sq.m	Area below HBN BS 8300 compliant	Rev K: CCO No. 5 Level 1 Layout changes: Unisex Staff WC provision for Level 1 DDA/ Building Control requirement
	Circulation									
L1.40	Stair 1	n/a	n/a	24			HBN 00-04/ BS 8300			Stair is not for mattress evacuation 20.3.15 PF Email User Comments on Feasibility Layout: No mattress evacuation required, standard escape stairs
L1.41	Stair 1 Lobby	n/a	n/a	6			HBN 00-04/ BS 8300			
L1.42	Upper Lift Lobby (ICE)		n/a	38			HBN 00-04/ BS 8300			Rev K: CCO No. 6 Post Billing Coordination - structural setting out
L1.43	Lower Lift Lobby (INS)		n/a	20			HBN 00-04/ BS 8300			
L1.45	Corridor		n/a	66			HBN 00-04 normally 2900mm for bed passing	2500mm	The corridor has passing places at 3000mm wide in two locations 12m apart, so perceived as being acceptable given limited bed traffic.	2500mm is adequate to turn a bed into Anaesthesia Room for Theatre 3. All others have 3000mm width.
L1.45a	Corridor		n/a	9						Rev K: CCO No. 5 Level 1 Layout changes: Minor alterations to corridors 02.04.15 User Mtg No. 1 -Corridors to provide sufficient space for 2 beds passing (where applicable) and large

L1.46	Corridor		n/a	64			HBN 00-04 normally 2900mm for bed passing	3000mm + 1600mm		3000mmm width applies to bed passing areas and turning into clinical rooms. 16000mm width applies to non-patient areas.	pieces of equipment - splay corners where possible etc
L1.47	Corridor		n/a	33			HBN 00-04 has 2150mm for single bed passage.	2150mm	Solely for bed passage so no handrails, only flat surface wall protection.	This corridor is solely to get patients to Recovery in shortest possible time. In a fire situation it will contain two beds awaiting evacuation, but will still allow passage of staff	
L1.48	Corridor	-	n/a	OMITTED	-	-	HBN 00-04 has 2150mm for single bed passage.	2150mm	Solely for bed passage so no handrails, only flat surface wall protection.	This small section of corridor is effectively an extension of the Recovery room and allows direct access to the latter's clean and dirty utility rooms.	
L1.49	Corridor		n/a	21			HBN 00-04 has 2150mm for single bed passage.	2150mm	Solely for bed passage so no handrails, only flat surface wall protection.	This corridor is solely to get patients to Recovery in shortest possible time. In a fire situation it will contain two beds awaiting evacuation, but will still allow passage of staff	
L1.50	Stair 2		n/a	25			HBN 00-04			Stair is not for mattress evacuation	
L1.51	Stair 2 Lobby	6	n/a	6			HBN 00-04				Rev K: CCO No. 6 Post Billing Coordination - structural setting out 20.3.15 PF Email User Comments on Feasibility Layout: No mattress evacuation required, standard escape stairs

LEVEL 2	University of Glasgow Research								1:200 signed off for planning application		
L2.01	Conference Room	Not included	38	38							PF 18.5.15 Mtg - Requested amendments Smaller meeting rooms in Open Plan Offices omitted.
L2.02	Tea Point	*		9							PF 18.5.15 Mtg - General office area replan
L2.03	Admin Office	40	32	66	+ 26 sq.m	8				Includes circulation route to cellular offices (desk area 40m2)	PF 18.5.15 Mtg - Includes circulation (to research & open plan areas)
L2.04	Head Researcher Office	Not included	14.5	15	- 0.5 sq.m	1					Rev K: CCO No. 6 Post Billing Coordination - Area adjustment due to external wall setting out; Previous note - Keith Muir
L2.05	Researcher Office 1	Not included	12.5	12	- 0.5 sq.m	1					Rev K: CCO No. 6 Post Billing Coordination - Area adjustment due to external wall setting out; Stage D: Additional Break-Out Space provided in Collaboration Zone
L2.06	Researcher Office 2	Not included	12.5	12	- 0.5 sq.m	1					
L2.07	Researcher Office 3	Not included	12.5	12	- 0.5 sq.m	1					
L2.08	Researcher Office 4	Not included	12.5	12	- 0.5 sq.m	1					

L2.09	Researcher Office 5	Not included	12.5	12	- 0.5 sq.m	1					
L2.10	Researcher Office 6	Not included	12.5	12	- 0.5 sq.m	1					
L2.11	Researchers - Sackler	45	46	47	+ 2 sq.m						Rev K: CCO No. 6 Post Billing Coordination - Area adjustment due to external wall setting out; Stage D: Additional Break-Out Space provided in Collaboration Zone
	Cardiology Researchers	45	45	48	+ 3 sq.m						6 no. @ 7.5m2
	Imaging Analysing Lab (Non Wet)	100	56.5	65	- 35 sq.m						Stage D: Reduced to 56.5m2 - Additional Break-Out Space provided in Collaboration Zone PF 18.5.15 Mtg - Level 1/ Open Plan Office replanning to meet requested changes
	Researchers	22.5	27	17	- 5.5 sq.m						3 no. @ 7.5m2 Stage D: Jonathon Kavanagh, Additional Break-Out Space provided in Collaboration Zone PF 18.5.15 Mtg - Level 1/ Open Plan Office replanning to meet requested changes
	Post Graduate Research	30	35	29	- 1 sq.m					1:200 signed off for planning application. Exact numbers to be confirmed for 1:50 layout.	Rev K: CCO No. 6 Post Billing Coordination - Theatre duct changed setting out of Tea Prep & Office wall reducing area Stage D: Additional Break-Out Space provided in Collaboration Zone; 2 no. @ 15m2 (offices required?)
	MRI Physics	30	25	31	+ 1 sq.m						4 no. @ 7.5m2 PF 18.5.15 Mtg - Level 1/ Open Plan Office replanning to meet requested changes
	Psychology	36	37	36	-						2 no. @ 18m2 PF 18.5.15 Mtg - Level 1/ Open Plan Office replanning to meet requested changes
	Multidiscipline	120	120	127	+ 7.0 sq.m						Includes 7m2 circulation (to Collaboration Zone) PF 18.5.15 Mtg - Level 1/ Open Plan Office replanning to meet requested changes
L2.12	Reprographics	Not included		3	-						Stage D: Additional Break-Out Space provided in Collaboration Zone PF 18.5.15 Mtg - Level 1/ Open Plan Office replanning to meet requested changes
L2.22	Collaboration Zone	Not provided	130	115	-						Rev K: CCO No. 6 Post Billing Coordination - structural setting out PF 18.5.15 Mtg - Open Plan Office replanning to meet requested changes
	WCs/ Shower/ DSR										Note: 120m2 total allowed for items

Refer to Occupancy Schedule for maximum occupancy

										starred *
L2.42	WC Lobby	*	n/a	4			BS 8300 - Access			
L2.43	Dis WC	*	3.5	3.3			BS 8300 - Dis WC 1.5m x 2.2 m = 3.3 sq.m.	-		Rev J: Design Development due to relocation of Theatre Duct
L2.44	DSR	10	9.5	7	- 3 sq.m			- 3.0 sq.m	SGH site wide recommendation is for 10 sq.m	Rev J: Design Development due to relocation of Theatre Duct
L2.45	Male WC	*	12	14			Building Regulations BS 6465		Numbers & facilities comply	Rev K: CCO No. 6 Post Billing Coordination - addition of INS service duct Rev J: Design Development due to relocation of Theatre Duct
L2.46	Female WC	*	12	13			Building Regulations BS 6465		Numbers & facilities comply	Rev J: Design Development due to relocation of Theatre Duct
L2.47	WC Lobby	*	n/a	5			BS 8300 - Access		Retricted access within lobby to Dis WC; vision panel added to outer lobby door to assist	Rev J: Design Development due to relocation of Theatre Duct
	Circulation									
L2.40	Stair 1	20	28	24	+ 4.0 sq.m		BS 8300			Stair is not for mattress evacuation
L2.41	Stair Lobby		5	6			BS 8300			
L2.50	Stair 2		22	25			BS 8300			Rev K: CCO No. 6 Post Billing Coordination - structural setting out
L2.51	Stair Lobby		6	6			BS 8300			Stair is not for mattress evacuation
L2.23	Circulation		42	39			BS 8300			Rev K: CCO No. 6 Post Billing Coordination - structural setting out
	Stair 3		8				BS 8300			
	Plant / Waste									
L2.21	SME Node Room	Not included	22	36	-					Changes 27.10.2014. Room name change 05.05.15. Rev J Note: Room Layout/ Rack no.s as per 1:50 layout
L2.20	Waste	**	11.5	12	-					
EXTERNAL	Condensors Enclosure		n/a	57						Rev K: CCO No. 6 Post Billing Coordination - area confirmed
	LEVEL 3									
	SME									
L3.01	Conference Room	250 (see note)	46	37	- 1 sq.m					No specific numbers advised.
L3.02	SME Lab 1	350 (see note)	56	58	- 91 sq.m					Rev K: CCO No. 3: Level 3 Layout Changes: New layout requested by Client (22.6.15). CCO No. 6 Post Billing Coordination - Increase to Data Centre and Bed Lift/ Theatre Risers has reduced SME unit space (Client approved); PF 18.5.15 Mtg - Layout
L3.03	SME Office 1	Part of Office Total	19	25						
L3.04	SME Lobby 1		79	7			BS 8300			

L3.05	SME Lab 2	Part of Lab Total	66	44							reverted to include office adjacent to Lab (sliding doors removed) Note: Original Brief: 5 no. Offices @ 50m2 each = Total 250m2 4 no. Labs - 2 @100m2, 2 no. @ 75m2 = Total 350m2
L3.06	SME Office 2	Part of Office Total	29	17							
L3.07	SME Lobby 2			7			BS 8300				
L3.10	SME Lab 3	Part of Lab Total	65	70							
L3.11	SME Office 3	Part of Office Total	39	19							
L3.23	SME Office 3 (a)			11							
L3.12	SME Lobby 3 (b)			7			BS 8300				
L3.13	SME Lab 4	Part of Lab Total	51	43							
L3.14	SME Office 4 (1)	Part of Office Total	9	20							
L3.24	SME Office 4 (2)			54	11						
L3.16	SME Lobby 4			7			BS 8300				
L3.08	Meeting Room	Part of Office Total	28	15							
L3.09	Meeting Room			15							
L3.17	SME Lab 5	New rooms added 01.09.15		44							
L3.18	Office 5	Part of Office Total		16							
L3.19	Lobby 5			6			BS 8300				
L3.22	SME Welcome Area	Part of Office Total	26	29					No specific area advised.	Rev K: CCO No. 6 Post Billing Coordination - structural setting out Previously Circulation/ Stair 3. PF 18.5.15 Mtg - Room renamed/ renumbered	
	Circulation										
L3.40	Stair 1		28	24			BS 8300		Stair is not for mattress evacuation		
L3.41	Stair Lobby		6	6			BS 8300				
L3.47	Circulation		56	32			BS 8300				
L3.48	Corridor		Not scheduled	80			BS 8300				
L3.50	Stair 2		27	29			BS 8300		Stair is not for mattress evacuation		
L3.51	Stair Lobby		6	5			BS 8300				
	WCs/ Shower/ DSR										
L3.42	WC Lobby	*	n/a	4			BS 8300 - Access			Note: 120m2 total allowed for items starred *	
L3.43	Dis WC	*	3.5	3.3			BS 8300 - Dis WC 1.5m x 2.2 m = 3.3 sq.m.	-		Rev J: Design Development due to relocation of Theatre Duct	
L3.44	DSR	10	7	7	- 3 sq.m			- 3.0 sq.m	SGH site wide recommendation is for 10 sq.m		

L3.45	Male WC	*	12	13			Building Regulations BS 6465		Numbers & facilities comply		Rev J: Design Development due to relocation of Theatre Duct
L3.46	Female WC	*	12	13			Building Regulations BS 6465		Numbers & facilities comply		Rev J: Design Development due to relocation of Theatre Duct
L3.47	WC Lobby	*	n/a	5			BS 8300 - Access		Retricted access within lobby to Dis WC; vision panel added to outer lobby door to assist		Rev J: Design Development due to relocation of Theatre Duct
	Plant / Waste										
L3.20	Waste	**	n/a	10							Rev K: CCO No. 6 Post Billing Coordination - Room relocated to south of plan to accommodate increase to Data Centre area. Note: 50m2 total allowed for waste areas starred ** PF 18.5.15 Mtg - Level 1/ Open Plan Office replanning to meet requested changes
L3.21	Data Centre	50	77	78	+ 28 sq.m						Rev K: CCO No. 6 Post Billing Coordination - Room area increase to accomodate 26 no. racks and required M&E plant; Rev J Note: Room Layout/ Rack no.s as per 1:50 layout
LEVEL 4	PLANT ROOM/ ROOF										
L4.40	Stair 1		30	11			BS 8300		Stair is not for mattress evacuation		Rev K: CCO No. 6 Post Billing Coordination - Area amended to incorporate structural design
L4.01	Boiler Room	Not scheduled	25	45							Rev K: CCO No. 6 Post Billing Coordination - Area amended to incorporate M&E design Rev G: Area increase due to Theatre Floor
L4.02	Plantroom	100	128	504	+ 404 sq.m						Rev K: CCO No. 6 Post Billing Coordination - Area amended to incorporate M&E design Rev G: Area increase due to Theatre Floor Rev J: Design Development-External walls/ structure setting out
L4.03	External Plantroom (Chillers)	Not scheduled	68	79							Rev K: CCO No. 6 Post Billing Coordination - Area amended to incorporate M&E design Rev G: Area increase due to Theatre Floor
L4.04	Lobby			6			BS 8300				Rev K: CCO No. 6 Post Billing Coordination - Added as part of Building Warrant
L4.40	Stair 1		30	11			BS 8300		Stair is not for mattress evacuation		

TOTALS		2122.5	2833	4783.4							
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Notes		
	WC provision to meet Building Regulations and BS 6465. Dis WC provision and access to be to BS:8300 for University areas.	
	Clinical Rooms to follow guidance/ sizing from relevant HBN/HTM (refer to Deregations Column above for any deviations)	

APPENDIX 4 – NET PRESENT COST TABLES

Net Present Value Calculation						3.5%	enter	
ALL COSTS EXCLUDING VAT						31-75years	103.0%	
option 1	Do Minimum Refurbishment of Existing Theatres					1-30 years	103.5	enter
Year	Lease cost	Modular Theatre Theatre Hire	Capital Cost	Revenue Cost	Total	Discount Factor	Discounted Cost	NPC
2015= yr0	£'000	£'000	£'000	£'000	£'000			
0	0	502	2,194	50	2,746	1.0000	2746	13,733
1	0	1,229	5,956	324	7,508	0.9662	7,255	
2	0	0	0	174	174	0.9335	162	
3	0	0	0	174	174	0.9019	157	
4	0	0	0	174	174	0.8714	152	
5	0	0	0	174	174	0.8420	147	
6	0	0	0	174	174	0.8135	142	
7	0	0	0	174	174	0.7860	137	
8	0	0	0	174	174	0.7594	132	
9	0	0	0	174	174	0.7337	128	
10	0	0	0	174	174	0.7089	123	
11	0	0	0	174	174	0.6849	119	
12	0	0	0	174	174	0.6618	115	
13	0	0	0	174	174	0.6394	111	
14	0	0	0	174	174	0.6178	107	
15	0	0	0	174	174	0.5969	104	
16	0	0	0	174	174	0.5767	100	
17	0	0	0	174	174	0.5572	97	
18	0	0	0	174	174	0.5384	94	
19	0	0	0	174	174	0.5202	91	
20	0	0	0	174	174	0.5026	87	
21	0	0	0	174	174	0.4856	84	
22	0	0	0	174	174	0.4692	82	
23	0	0	0	174	174	0.4533	79	
24	0	0	0	174	174	0.4380	76	
25	0	0	0	174	174	0.4231	74	
26	0	0	0	174	174	0.4088	71	
27	0	0	0	174	174	0.3950	69	
28	0	0	0	174	174	0.3817	66	
29	0	0	0	174	174	0.3687	64	
30	0	0	0	174	174	0.3563	62	
31	0	0	0	174	174	0.3459	60	
32	0	0	0	174	174	0.3358	58	
33	0	0	0	174	174	0.3260	57	
34	0	0	0	174	174	0.3165	55	
35	0	0	0	174	174	0.3073	53	
36	0	0	0	174	174	0.2984	52	
37	0	0	0	174	174	0.2897	50	
38	0	0	0	174	174	0.2812	49	
39	0	0	0	174	174	0.2731	48	
40	0	0	0	174	174	0.2651	46	
41	0	0	0	174	174	0.2574	45	
42	0	0	0	174	174	0.2499	43	
43	0	0	0	174	174	0.2426	42	
44	0	0	0	174	174	0.2355	41	
	0	1,731	8,150	7,856	17,737		13,733	

Equivalent Annual Charge Calculation

Capital Receipts	1,731
Capital Expenditure	8,150
Revenue - Increase/(Decrease)	7,856
Net Cash Flow	17,737
NPC	13,733
Annualizing Factor	23.4166
Equivalent Annual Cost	586

Net Present Value Calculation						3.5%	enter	
ALL COSTS EXCLUDING VAT						31-75years	103.0%	
option 2 ICE Building - Leased Floor						1-30 years	103.5	enter
Year	Lease cost	Modular Theatre Theatre Hire	Capital Cost	Total Revenue	Total	Discount Factor	Discounted Cost	NPC
2015= yr0	£'000	£'000	£'000	£'000	£'000			
0	1,348	0	373	0	1,721	1.0000	1721	10,255
1	3,299	0	1,497	174	4,970	0.9662	4,802	
2	0	0	0	174	174	0.9335	162	
3	0	0	0	174	174	0.9019	157	
4	0	0	0	174	174	0.8714	152	
5	0	0	0	174	174	0.8420	147	
6	0	0	0	174	174	0.8135	142	
7	0	0	0	174	174	0.7860	137	
8	0	0	0	174	174	0.7594	132	
9	0	0	0	174	174	0.7337	128	
10	0	0	0	174	174	0.7089	123	
11	0	0	0	174	174	0.6849	119	
12	0	0	0	174	174	0.6618	115	
13	0	0	0	174	174	0.6394	111	
14	0	0	0	174	174	0.6178	107	
15	0	0	0	174	174	0.5969	104	
16	0	0	0	174	174	0.5767	100	
17	0	0	0	174	174	0.5572	97	
18	0	0	0	174	174	0.5384	94	
19	0	0	0	174	174	0.5202	91	
20	0	0	0	174	174	0.5026	87	
21	0	0	0	174	174	0.4856	84	
22	0	0	0	174	174	0.4692	82	
23	0	0	0	174	174	0.4533	79	
24	0	0	0	174	174	0.4380	76	
25	0	0	0	174	174	0.4231	74	
26	0	0	0	174	174	0.4088	71	
27	0	0	0	174	174	0.3950	69	
28	0	0	0	174	174	0.3817	66	
29	0	0	0	174	174	0.3687	64	
30	0	0	0	174	174	0.3563	62	
31	0	0	0	174	174	0.3459	60	
32	0	0	0	174	174	0.3358	58	
33	0	0	0	174	174	0.3260	57	
34	0	0	0	174	174	0.3165	55	
35	0	0	0	174	174	0.3073	53	
36	0	0	0	174	174	0.2984	52	
37	0	0	0	174	174	0.2897	50	
38	0	0	0	174	174	0.2812	49	
39	0	0	0	174	174	0.2731	48	
40	0	0	0	174	174	0.2651	46	
41	0	0	0	174	174	0.2574	45	
42	0	0	0	174	174	0.2499	43	
43	0	0	0	174	174	0.2426	42	
44	0	0	0	174	174	0.2355	41	
	4,647	0	1,870	7,656	14,173		10,255	

Equivalent Annual Charge Calculation

Capital Receipts	-
Capital Expenditure	1,870
Revenue - Increase/(Decrease)	7,656
Net Cash Flow	9,526
NPC	10,255
Annualizing Factor	23.4166
Equivalent Annual Cost	438

APPENDIX 5 – DESIGN STATEMENT

NHS Greater Glasgow and Clyde

Queen Elizabeth University Hospital

Neurosurgery Theatre Complex

Imaging Centre of Excellence



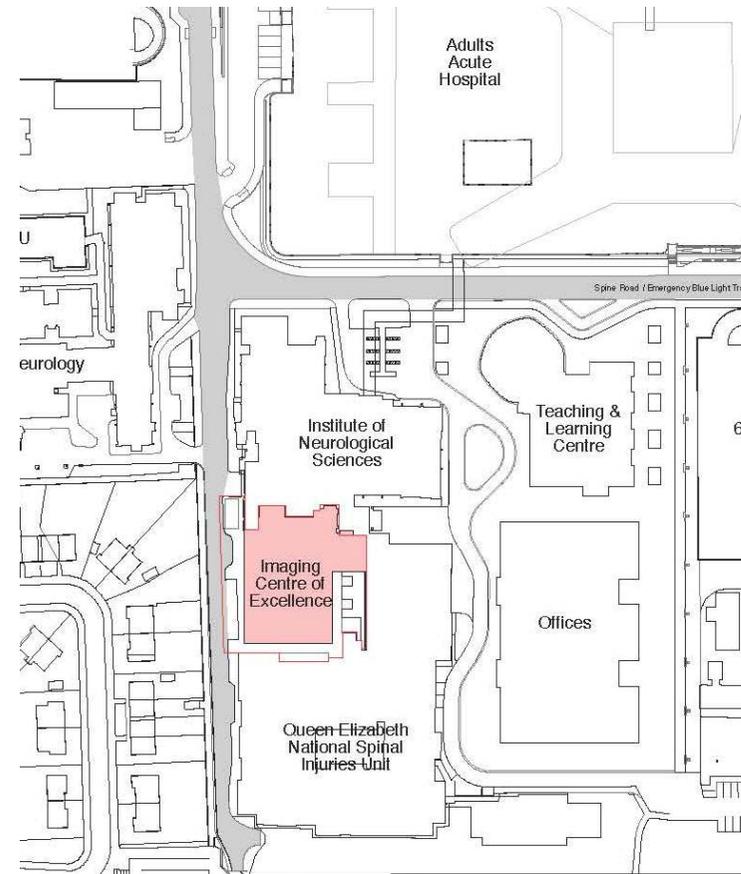
Design Statement

Section 1.0 Introduction

NHS Greater Glasgow and Clyde (NHS GGC) have embarked on the second stage of their Acute Services Strategy with significant redevelopment of the former Southern General Hospital Campus. The new facilities on the site currently include a new 1109 bed Adult Acute Hospital for the South of Glasgow, a new 256 bed Children's Hospital for the West of Scotland, a Diagnostic Laboratory Medicine Facility, a Teaching & Learning Centre and an Office Block.

The proposed new Neurosurgical Theatres within the ICE Building are to be sited alongside the existing Neurosurgery Building, fronting onto Langlands Drive and adjacent to the existing Queen Elizabeth Spinal Injuries Unit.

The site, shown adjacent highlighted in red, used to accommodate the Neurophysiology department which has relocated to the Neurology building. Glasgow City Council approved a Warrant for the site clearance and construction of the ICE Building. Work is currently underway to construct the building sub structure.



Section 2.0 Key Design Principles

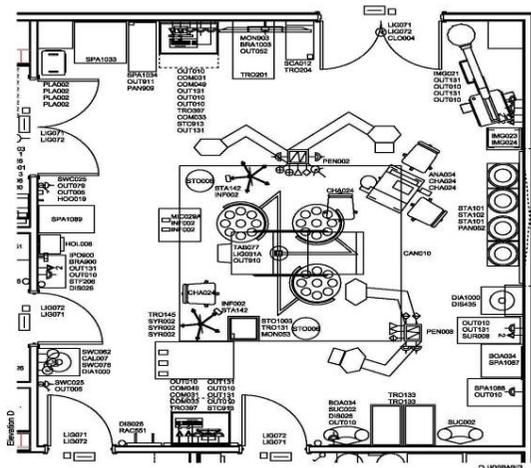
- *Creation of a new fit for purpose 21st century Neurosurgery Theatre complex to support the delivery of 21st century Clinical Practice.*
- *Reduce capital and management costs through more efficient buildings.*
- *Provide more sustainable facilities.*
- *Demonstrate NHS core ethos and values.*
- *Deliver a high quality working environment that supports modern medical practices.*



Section 3.0 Clinical Space

Key Components

- Creation of 4 No Ultra clean Neurosurgery Theatres with Laminar flow canopies.
- Provision of associated accommodation Anaesthetics, Preparation and Scrub.
- Support accommodation (Recovery, Reception and office accommodation).
- Stores and FM Areas.
- Compliance with SHTM/SHPN.

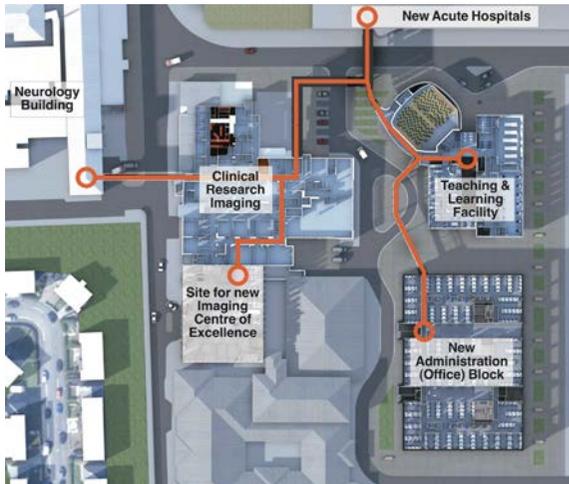


Section 4.0 Accessibility

The design shall comply with the requirements of the Disability Discrimination Act 1995, and take full consideration of HFN14 "Disability access", HFN20 "Access audits for primary healthcare facilities" and BS 8300:2001 "Design of buildings and their approaches to meet the needs of disabled people – code of practice".

The Contractor shall ensure that the design and functionality of the Works meets the requirements of the Disability Discrimination Act 1995 as relevant and set standards of best practice to enable full access and use of the services and facilities available.

Entrances to the Works shall be clearly identified to promote ease of wayfinding and distinctive 'landmarks' shall be incorporated into the design particularly for the main entrances.



The Works' environment, both externally and internally, shall be designed to be accessible to everyone. The journey onto the Site, from pedestrian / vehicle routes, through the main receptions, into the Works and to the desired locations shall follow a safe, logical and clear system.

Attention shall be paid in the design to all aspects of the physical environment relating to the accessibility of the Works as follows:

- Access to buildings, such as level or ramped entry;
- Emergency evacuation arrangements, in particular for the visually impaired, the disabled and the frail, such as fire refuges or alternative escape routes for people with mobility impairments;
- The accessibility of external paths and landscaping;
- Circulation within buildings, including their interior layout;
- Effective lighting and signage and colour or tone contrast on doors to aid orientation;
- Desks, laboratory benches, work surfaces and reception desks at varying or flexible heights;
- Appropriate seating;
- Accessible toilets; and
- Convenient and reserved parking spaces for those who need them.

The Contractor shall ensure, as far as practically possible, that the Works design draws upon and endeavours to further develop improve and exceed current best practice and standards achieved in other similar projects, and incorporates full accessibility for the prospective patient groups, staff and public. This shall include aspects of both physical environment and visual and audio aids to enable full use of the Works for all groups. This philosophy of design shall be extended across all parts of the Works including access to the landscaped and external areas as well as the essential patient treatment and residential areas.

Section 5.0 External Envelope

Concept Site Development Strategy

By adopting the principles of the existing Campus Masterplan Strategy, the designers have developed a site strategy that ties in with the overall masterplan. This means making sure that consideration such as, active building frontages, site shading, massing, public realm and landscape respond to and embrace the requirements of the Campus Masterplan with regard to movement and activity on the site. These factors will place substantial emphasis on how the users will perceive the building and more importantly, how the building will work within the overall Site Strategy.

The principles include the following:

- Main approach
- Visibility & Presence
- Primary access points
- Relationship to public realm and overall site context
- Potential views and vistas
- Potential links and connections to adjacent buildings
- Elevations

The Board's vision for the New South Glasgow Hospitals site has identified a number of key requirements relating to elevation treatments and importance of each elevation in relation to the context. It has been identified that all elevations facing directly onto the Main Adult hospital are to be treated as "Grade A" importance, which equates to a higher quality palette of materials, design and focus. In addition to this master plan requirement the University of Glasgow have made clear that the facility is to be prestigious in the way that it presents itself to the wider campus, and wider city.

Materials

A material palette has been developed to take cognisance of the wider campus and the re-cladding of the adjacent Neurosurgical Tower, whilst meeting the overarching desire to provide a unique and distinct facility that is instantly recognisable.

Materials have been assigned to reflect the overall massing and façade design. The external palette can be summarised as follows:

South and East Elevations

- Level 0 – Polished stainless steel cladding to entrance canopy/ Polished charcoal pre-cast concrete panels with inset pattern (to be developed with users) to reflect research/ building functionality
- Level 1-3 – Tensile woven stainless steel mesh brise soleil fixed to aluminium curtain walling system, with lightly mirrored glazing.

North Elevations (including partial East/ West Elevations)

- Level 0-3 – Profiled metal cladding with aluminium curtain walling system full height windows, with areas of glazed in aluminium louvres (to plant areas).

West Elevation

- Level 0-2 – Polished charcoal pre-cast concrete panels

Sustainability and Energy Efficiency are integral to the building design and envelope specification as

follows:

- A Green Specification Guide (GSG) Rating of A/ A+ is targeted for all new materials and finishes.
- Proposed U-values and Air tightness levels shall exceed the minimum requirements stated.

Section 6.0 Sustainability

1) Environmental Assessment

BREEAM is currently an accepted industry benchmark for environmental assessment. The design team are designing to comply with the statutory requirements and good practice associated with BREEAM, which includes

- Design for minimum waste
- Aim for lean construction
- Minimise energy in construction and use
- Avoid sources of pollution
- Conserve water resources

2) Energy Performance Certificate (EPC)

EPC's provide a "white goods" rating for buildings. New buildings in excess of 1000m² require an EPC and this can be obtained through the SBEM process, which is carried out at building warrant stage to demonstrate compliance with Technical Standards. Good Design = Sustainable Design.

3) Design for Flexibility

To maximise the potential for future change, the design seeks to create flexibility by:

- Utilising a steel frame solution allowing for adaptation.
- Utilising where possible lightweight internal wall construction that can be more easily demolished or altered.
- Aim for lean construction

4) Design for Durability

- Detailing external envelopes to avoid water penetration therefore alleviating fabric decay.
- Specifying BBA approved materials to meet the Boards lifespan requirements
- Integrating protection to areas where heavy use is anticipated

5) Thermal Performance

It is proposed that the new ICE Building will be designed to meet u-values in current edition of the technical handbook to the Scottish Building Standards Agency.

6) Air Tightness

Requirements for air tightness and reduction in thermal bridging are considered as part of compliance with Technical Standards

7) Material Specification

The selection of materials gives consideration to:

- The use of material with recycled content
- Material source (eg Timber from FSC or managed sources)
- Utilisation of local building material where possible

8) Construction Phase

- Recycling
- Waste management and good practice

Section 7.0 Maintenance Access

The building has been designed to facilitate ease of maintenance with minimum disturbance to the various areas contained within the building.

Access to Services Plant Rooms

All Plant Rooms are planned and designed to ensure that adequate and safe access is provided for the purpose of maintenance and where necessary the replacement of items of plant and equipment in accordance with the requirements of CDM Regulations and appropriate Health & Safety Legislation.

Access to Service Riser Ducts

Service risers are located off main circulation routes to minimise disruption to users and provide safe working access. Risers are provided across the floor plate for flexibility and are sufficiently sized. Slab openings within riser will be floored with metal grating of structural intumescent mortar to avoid the risk of falling.

- Electrical and data services are provided in a central riser behind the lift shaft.
- Water services are contained within a dedicated riser on Level 1 to 3, adjacent to the Water Tank Storage Room, this is accessed from the main corridor.
- Ducts for piped and ventilation services are clustered around Stair 1 to provide direct access to the Level 3 Plant Room. Access to the risers is from the stairwell or Office areas.

Access to Services Above Ceilings within Rooms

Services items above ceilings that require access for maintenance will be positioned above circulation areas not above fixed furniture. All circulation zones are to be fitted with a full access ceiling systems.

Access for maintenance of Roof and Plant on Roofs

The Design Team has actively sought to remove all plant from roof top areas. Where this has been avoidable a flat roof is proposed with access footpaths, with a full height barrier around the perimeter (Level 4 and 5). Stair access is available to Level 3 Plant Room and roofs. An access hatch is also provided to the external plant area of Level 3 as a secondary fire escape from this roof, in the event of a fire in the Level 3 Plant Room. All roof areas are flat roofs. Access to the Level 4 Roof, for clearance of gutters, is via a fixed caged ladder with a full perimeter balustrade.

Window Cleaning

External glazing will be cleaned in accordance with the following cleaning regime.

- East and South Elevations are designed to be cleaned through the use of a cherry picker/ spider lift, where an operative shall be able to reach the glazed areas behind the mesh cladding. Mesh panels have been shaped and arranged in groups of no more than 3 to provide side access for cleaning.
- The North Elevation glazing can be cleaned utilising a 'Reach and Clean' system (suitable for glazing up to 18m AFGL).
- Internal glazing is fully designed to a height that can be easily reached by hand/ pole from floor level by one operative.



APPENDIX 6 - RISK REGISTER



Risk No.	Risk Category	Risk Heading	Risk Description	Pre - Mitigation				Risk Effect	Client or PSCP Risk	Risk Owner (Public / Private)	Risk Manager	Mitigation	Post Mitigation				Risk Opened By	Risk Opated	Last Updated
				Probability (Likelihood)	Impact	PI Score	Risk Level						Probability (Likelihood)	Impact	PI Score	Risk Level			
1			Failure to identify appropriate Stakeholders	1	3	3	Low		UoG			Stakeholder map to be drawn up	1	3	3	Low			
2			Failure to engage with Stakeholders	1	3	3	Low		UoG			Stakeholder map to be drawn up	1	3	3	Low			
3			Stakeholder may have contradictory aspirations	2	4	8	Medium		UoG			Clear definition of building requirements at initial stages and constrictions of the business case costs	2	4	8	Medium			
4			Client may not involve appropriate Professional expertise (Design, Commercial, Clinical)	1	4	4	Medium		UoG			Early identification of all clinical requirements and appropriate liaison with Clinical Staff	1	4	4	Medium			
5			May not involve appropriate Professional expertise, (Design, Commercial, Clinical)	1	4	4	Medium		PSCP			Early identification of all clinical requirements and appropriate liaison with Clinical Staff	1	4	4	Medium			
6			May fail to adequately determine the overall programme	3	4	12	High		PSCP			Detailed review of workscope and input from key subcontractors when compiling programme	3	4	12	High			
7			Lease Arrangements	2	2	4	Medium		UoG			Board & University to engage in early consultation to agree terms	2	2	4	Medium			
8			There may be changes to clinical research regulations or other related legislation	1	3	3	Low		UoG			The design is to be Future Proofed where possible and Board & UoG/Healthcare specialists to advise on possible revisions to HBNS	1	3	3	Low			
9			Site constraints, (Operational Adjacencies); <small>Site constraints, (Operational Adjacencies); confirmations from Client that all 3rd Party agreements and consents for access to the site and carrying out the works are in place.</small>	3	5	15	High		UoG			Client to put in place all 3rd party consents/agreements necessary for the works to be carried out in accordance with contract programme	3	5	15	High			
10			Site constraints, (Operational Adjacencies)	3	5	15	High		UoG			Regular update meetings with Estates, FM, and Clinical Leads.	3	5	15	High			
11			Construction Inflation calculations may be inadequate (MIPS)	1	3	3	Low		UoG						0	Low			
12			UoG may fail to identify future staff requirements	1	3	3	Low		UoG			UoG are to identify staff key to the project development	1	3	3	Low			
13			UoG may fail to acquire appropriately skilled staff	1	2	2	Low		UoG						2	Low			
14			PSCP may fail to acquire appropriately skilled staff	1	3	3	Low		PSCP			Skilled staff now in place and performance to be monitored by PSCP Pre-construction manager and PM	1	3	3	Low			
15			There may be a lack of resource (Funds, time or people) to complete project milestones	1	3	3	Low		UoG			Full identification of all parties and requirements for completion of stages 2 & 3	1	3	3	Low			
16			Land Acquisition / use of land premises	3	4	12	High		UoG			Clients early engagement with Landowner/Development partner	3	4	12	High			
17			Environmental Awareness/Impact	2	4	8	Medium		UoG			Inclusion of early sustainability of discussions, Review of BREEAM ratings	2	4	8	Medium			
18			Environmental Awareness/Impact	2	4	8	Medium		PSCP			Inclusion of early sustainability of discussions, Review of BREEAM ratings	2	4	8	Medium			
19			Strategic Partnership Changes	2	2	4	Medium		UoG			Formalisation of early Joint Development Agreement with partners	2	2	4	Medium			
20			Cultural Changes	1	4	4	Medium		UoG			Early establishment of community/public engagement and consultation processes.	1	4	4	Medium			
21			Quality - Design	2	4	8	Medium		UoG			Full detailed specification and requirement briefing with full signoff procedures & monitoring	2	4	8	Medium			

Risk No.	Risk Category	Risk Heading	Risk Description	Pre - Mitigation				Risk Effect	Client or PSCF Risk	Risk Owner (Public / Private)	Risk Manager	Mitigation	Post Mitigation				Risk Opened By	Risk Opened	Last Updated
				Probability (Likelihood)	Impact	PI Score	Risk Level						Probability (Likelihood)	Impact	PI Score	Risk Level			
22			Quality - Design	2	4	8	Medium		PSCP			Full detailed specification and requirement briefing with full signoff procedures & monitoring	2	4	8	Medium			
23			Increase in VAT rate beyond 20% on other changes	1	3	3	Low		UoG			Fully detailed and robust business case model	1	3	3	Low			
24			Organisational changes & re-structuring	1	3	3	Low		UoG			Early development of the project management framework and delegated authority limits	1	3	3	Low			
25			Organisational changes & re-structuring	1	3	3	Low		PSCP			Early development of the project management framework and delegated authority limits	1	3	3	Low			
26			Client Document Security & Control	1	3	3	Low		UoG			Development of full document recording and control strategy	1	3	3	Low			
27			PSCP Document Security & Control	1	3	3	Low		PSCP			Development of full document recording and control strategy	1	3	3	Low			
28			Requirement for Specialist Equipment - Cost and Time	3	5	15	High		UoG			Appointment of equipment procurement advisors Early identification for specialist equipment and potential lead in times. Confirmation on level of investment	3	5	15	High			
29			Requirement for Specialist Equipment - Cost and Time	3	5	15	High		PSCP			Appointment of equipment procurement advisors Early identification for specialist equipment and potential lead in times. Confirmation on level of investment	3	5	15	High			
30			Co-ordination of Services for Equipment	2	4	8	Medium		UoG			Full identification for responsibility for services design and installation.	2	4	8	Medium			
31			Co-ordination of Services for Equipment	2	4	8	Medium		PSCP			Full identification for responsibility for services design and installation - based on information provided by Client	2	4	8	Medium			
32			Compliance with all SHTM & NHSGGC & UoG Guidance	1	3	3	Low		Client/ PSCP			As documents are prepared to contractor for inclusion within the development. Proposed design is compliant with SHTMs and GGC Guidance	1	3	3	Low			
33			May fail to establish and agree target price	1	5	5	Medium		UoG			Overall affordability / budget to be regularly checked by PSCP and Board & UoG Core Team	1	5	5	Medium			
34			May fail to establish and agree target price	1	5	5	Medium		PSCP			Overall affordability / budget to be regularly checked by PSCP and Board & UoG Core Team	1	5	5	Medium			
35			Costs of discharging conditions of planning consent may be greater than allowance provided for.	2	3	6	Medium		PSCP			Early and continuing dialogue with the local planning authorities.	2	3	6	Medium			
36			May fail to comply with changes to legislation / standards - DDA	1	4	4	Medium		PSCP			Future proof design where possible and early consultation with statutory authorities - Planners and building control. Current signed off design is compliant with future proof design where possible and	1	4	4	Medium			
37			May fail to comply with changes to DDA legislation / standards - Building Regs	2	5	10	High		PSCP			Future proof design where possible and early consultation with statutory authorities - Planners and building control. Current signed off design is compliant with future proof design where possible and	2	5	10	High			
38			May fail to comply with changes to legislation / standards - HTMs/SHTMs	1	2	2	Low		PSCP			Future proof design where possible and early consultation with statutory authorities - Planners and building control. Current signed off design is compliant with future proof design where possible and	1	2	2	Low			
39			May fail to comply with changes to legislation / standards - Fire Regs	2	5	10	High		PSCP			Future proof design where possible and early consultation with statutory authorities - Planners and building control. Current signed off design is compliant with future proof design where possible and	2	5	10	High			
40			May fail to comply with changes to legislation / standards - CDM	1	3	3	Low		PSCP			Future proof design where possible and early consultation with statutory authorities - Planners and building control. Current signed off design is compliant with future proof design where possible and	1	3	3	Low			
41			The Design May fail to support the project Brief as issued to BAM - note ER's still awaited	1	3	3	Low		PSCP			Client Design Products documents to be developed, agreed with the Board & UoG and then followed. Design has captured all User requirements issued to BAM	1	3	3	Low			
42			May fail to maintain a consistent interpretation of Standards	2	4	8	Medium		PSCP			Continuing reference to standards throughout the design, continuing involvement of Healthcare specialists	2	4	8	Medium			

APPENDIX 7 – CHANGE CONTROL FORM

CHANGE CONTROL PROCEDURE QUEEN ELIZABETH UNIVERSITY HOSPITALS CAMPUS	
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Unique CCP Reference No:	ICE 00x	Imaging Centre of Excellence Building
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SECTION 1: INITIATION

Project Name:	Imaging Centre of Excellence		
Date CCP Raised:		Raised By:	
Date Decision Required By:			

SECTION 2: DESCRIPTION OF CHANGE

Description of change:

Business Justification for Change:

Enclosures:	<input type="checkbox"/> Drawing	<input type="checkbox"/> Narrative	<input type="checkbox"/> Budget Cost
-------------	----------------------------------	------------------------------------	--------------------------------------

Authorised by Director:	<i>Print Name</i>	<i>Signature</i>	<i>Directorate</i>	<i>Date</i>
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Authorised by Chief Operating Officer:	<i>Signature</i>	<i>Date:</i>
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SECTION 3: IMPACT OF CHANGE

Time:	<input type="checkbox"/>	No impact to project delivery programme.
-------	--------------------------	--

Revenue Cost:	<input type="checkbox"/>	Operational Cost will be covered from Regional Service Directorate budgets.
---------------	--------------------------	---

Capital Cost:	<input type="checkbox"/>	The proposed change will be contained within the Project Target Cost
---------------	--------------------------	--

We recommend that the Total Sum should be:	Contained within Existing Budget <input type="checkbox"/> Funded from within the Optimism Bias Sum <input type="checkbox"/> Funded from Directorate Budget <input type="checkbox"/> No change or effect to the project budget <input type="checkbox"/>
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Impact Assessed By:	Date Assessed:
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SECTION 4: AUTHORISATION

Levels of Authority:	Value (£)	Assessed	Date
Project Manager	0 – 10k		
Project Director	10k -100k		
Executive Sub-group	100k – 1.5m		
Quality & Performance Committee	> 1.5m		

PM to issue instruction to carry out the works if approved

Distribution:	PM <input type="checkbox"/>	PD <input type="checkbox"/>	Executive Sub-group <input type="checkbox"/>	BCL <input type="checkbox"/>	Currie & Brown <input type="checkbox"/>
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Unique CE Reference No:	
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All completed forms must be returned to: New South Glasgow Hospitals Project, New Office Block, Level 2, Zone 3, C 2.13, 1345 Govan Road, Glasgow, G51 4SX