

NHS Greater Glasgow and Clyde	Paper No. 24/95
Meeting:	NHSGGC Board Meeting
Meeting Date:	27 August 2024
Title:	Radionuclide Dispensary Replacement – Full Business Case (FBC) Submission Approval
Sponsoring Director/Manager	Ann Traquair Smith, Director of Diagnostics Tom Steele – Director of Estates & Facilities
Report Author:	Andrew Baillie, Property & Capital Planning

1. Purpose

The purpose of the attached paper is to:

Seek approval for submission of the attached Full Business Case (FBC) v1.9 to the Scottish Government Capital Investment Group (SGCIG). The FBC will go through relevant NHSGGC governance approval as noted in Section 7.

An Outline Business Case was approved by Scottish Government Capital Investment Group (SGCIG) on 29th March 2023.

If agreed, the FBC will proceed through each of the NHSGGC Governance review groups with the aim of submission to the meeting of SGCIG in September 2024.

2. Executive Summary

The paper can be summarised as follows:

2.1 - Strategic Case.

The strategic rationale for relocating the Radionuclide Dispensary (RND) remains consistent with the IA and OBC, driven by operational challenges, facility constraints, and outdated technology. Moving the RND to Gartnavel Hospital Campus offers strategic benefits, including better access to critical medical services and the capacity to meet future demands with the new location delivering enhanced regulatory compliance, clinical integration, and flexibility. Gartnavel is identified as the optimal site for a centralised West of Scotland facility, aligning with long-term service demands.

2.2 - Change of Procurement Route.

The transition from NHSScotland Framework Scotland 2 to the HUB procurement model, supported by the Scottish Government, aims to address cost increases and delays through a Design & Build Development Agreement (DBDA) contract. Key appointments were made under the HUB model, and the design team remained intact. A financial analysis has shown that switching to Hub West Scotland has delivered improved value for money, justifying the procurement route change in July 2023.

2.3 - Capital and Revenue costs.

The capital cost of the project is £21,475,338, with yearly revenue costs of £1,409,000. Revenue funding will be split between NHS GGC and WoS NHS partners as noted in section 5.5 of the FBC.

2.4 - Refinement of the benefits register.

The benefits register within the business case was refined to review and validate of all identified benefits as noted in section 6.3 of the FBC. This refinement will enable more effective tracking and reporting, providing stakeholders with a clearer understanding of the expected value and outcomes associated with the project.

2.5 - Design Development.

The detailed design phase has refined our sustainability requirements, ensuring that the facility will achieve "Zero Carbon" in operation when the national power grid becomes carbon neutral. At this stage, we have also secured full planning consent alongside the early stage building warrant. This design refinement has resulted in the project receiving National Design Assessment Process (NDAP) Supported Status, and the NHS Key Stage Review (KSAR) has received "preliminary" Supported Status. The preliminary status will be discharged following the clarification on the hierarchy of documents that have been created to support the delivery of the project within the final contract documentation.

3. Recommendations

NHS GGC Board are asked to consider the following recommendation:

The strategic, economic, commercial, financial, and management cases collectively provide a comprehensive framework for the relocation of the Radionuclide Dispensary (RND) to the Gartnavel General Hospital Campus.

Approve the FBC to proceed to the SGCIG on the basis of approval from the NHSGGC groups noted in section 7.

Approve that Colin Neil, Director of Finance or their representative, be authorised to sign on behalf of the Board the Project Documents and any additional documentation required in connection with the Project.

4. Response Required

This paper is presented for, and recommended for, **approval**.

5. Impact Assessment

The impact of this paper on NHSGGC's corporate aims, approach to equality and diversity and environmental impact are assessed as follows:

- | | |
|------------------------|-------------------------------|
| • Better Health | <u>Positive impact</u> |
| • Better Care | <u>Positive impact</u> |
| • Better Value | <u>Positive impact</u> |
| • Better Workplace | <u>Positive impact</u> |
| • Equality & Diversity | <u>Positive impact</u> |
| • Environment | <u>Positive impact</u> |

6. Engagement & Communications

The issues addressed in this paper were subject to the following engagement and communications activity:

The previous FBC details extensive engagement and consultation at all stages with a wide range of stakeholders in its development, including:

- Clinical, management and support service teams across NHSGGC
- Third Sector representatives
- West of Scotland Boards
- National and Regional Pharmacy Services
- Scottish Government
- NHSS Assure

The detail of this engagement is contained within the submission. Engagement has continued whilst developing the updated proposals.

7. Governance Route

The NHSGGC governance route for sign-off of the OBC is detailed below.

The Updated FBC has been circulated to the following groups for comment/ support.

- RND Project Board
- Acute Senior Management Team
- Capital Planning Group
- Corporate Management Team
- Finance, Planning and Performance

The FBC is currently for approval at:

- NHSGGC Board - August 2024

BOARD OFFICIAL

The FBC will be submitted for approval to:

- SG Capital Investment Group - September 2024

8. Date Prepared & Issued

The Full Business Case was completed 13 May 2024. The cover paper and Business Case were completed and submitted to FP&P on 26 July 2024 and issued to NHSGGC Board on 20 August 2024.



Radionuclide Dispensary

Full Business Case

May 2024



V2.2

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1 Executive Summary

1.1 Strategic Case

The strategic case for the relocation of the Radionuclide Dispensary (RND) remains unchanged since the submission of the Outline Business Case (OBC). The need for change is evident due to significant operational challenges, limitations of the current facility, the need for assurance of regulatory compliance to promote patient safety and the inability to adapt to modern standards and technology. The preferred solution is to relocate the RND to Gartnavel Hospital Campus, offering strategic benefits such as co-location with key medical services, improved accessibility, and the ability to meet present and future production demands.

The existing facility, isolated on the former Western Infirmary site, lacks the capacity to meet evolving service needs and faces operational hurdles. Relocation to Gartnavel promises a modern facility capable of meeting production demands and incorporating advancements in technology.

Investment objectives outlined in the Initial Agreement focus on achieving compliance, improving clinical adjacencies, ensuring accessibility, and providing flexibility for maintenance and adaptation. Engagement with regulatory bodies like the Medicines and Healthcare Products Regulatory Agency (MHRA) ensures compliance with production standards. Location at Gartnavel ensures proximity to key medical services, facilitating efficient service delivery.

The preferred strategic solution remains a West of Scotland Centralised Facility within NHS GGC, with Gartnavel identified as the preferred site. Through a comprehensive evaluation process, this solution offers the best strategic position to meet service needs and future demands. The investment objectives set out in the Initial Agreement and Outline Business Case have guided the development of a resilient and adaptable facility that aligns with the organisation's long-term goals.

1.2 Economic Case

The Economic Case for the relocation of the Radionuclide Dispensary (RND) to the Gartnavel General Campus has been thoroughly assessed, considering various options and their financial implications. The analysis conducted confirms that relocating to a new build facility on the Gartnavel Campus offers the best value for money while aligning with the strategic objectives.

The options appraisal process evaluated four proposed solutions, including remaining on-site (Do Minimum) and relocating to Gartnavel, Stobhill, or RAH Campus. Through a weighted assessment of criteria, it was determined that the Gartnavel Campus offered the most favourable conditions to meet investment objectives and strategic goals.

Financial assessment revealed that while the Do Minimum option had lower capital costs, it incurred significant non-recurring costs and lacked long-term sustainability. The Gartnavel New Build option, although initially more expensive, provided better value in the long term, considering revenue costs and non-monetary benefits.

Non-monetary costs and benefits were also considered, with the Gartnavel New Build option demonstrating superiority in areas such as clinical adjacencies, expert support, security, and future investment potential.

Risk appraisal indicated that the Gartnavel option had the lowest risk profile, ensuring a safe and conducive environment for staff and visitors, along with strong stakeholder support.

Net Present Value (NPV) calculations, alongside sensitivity analyses, consistently supported the Gartnavel New Build option as the preferred choice. Even under scenarios of increased construction or revenue costs, Gartnavel remained the most favourable option.

Stakeholder support, including regional clinical and financial groups, further solidified the preference for the Gartnavel New Build option, underscoring its alignment with strategic objectives and long-term sustainability.

In conclusion, the comprehensive evaluation of financial, non-financial, and risk factors reaffirms the selection of the Gartnavel General Campus as the preferred site for relocating the Radionuclide Dispensary. This decision ensures optimal value for investment while meeting service delivery needs and strategic goals.

1.3 Commercial Case

The transition from NHSScotland Framework Scotland 2 to the HUB model of procurement has been supported by the Scottish Government, aiming to address cost uplifts and project delays. The procurement strategy now involves a Design & Build Development Agreement (DBDA) contract under the HUB initiative.

The continuity of the design process has been ensured with the transition of the full Design Team. The appointment changes necessitated by the switch to HUB have been limited to Delivery Partners, Joint Cost Advisor, Primary Contractor, and CDM Advisor. External Advisors have also been appointed to support NHSGGC Capital Planning Team.

The proposed commercial arrangements encompass various aspects such as site selection, design development, scope of works including specialist equipment, Net Zero Carbon (NZC) response, and compliance with NHS Scotland Design Assessment Process (NDaP), among others.

Risk management involves collaboration between NHSGGC, stakeholders, project board, consultants, and contractors, with risks categorised into development and operational risks. Transfer of risk has been optimally allocated between the public and private sectors, with shared risks addressed transparently.

Payment structures involve a Scottish Government capital funded DBDA, with payments made to HUB West Scotland during construction. Project Bank accounts and contractual arrangements under the HUB initiative ensure transparency and accountability. Personnel implications indicate continuity in soft facilities management services provided by NHSGGC, with no anticipated staff transfers. Facilities management and lifecycle maintenance will be managed in-house.

Contractual compliance is ensured through project-specific User Requirements Specification (URS) and Authorities Construction Requirements (ACRs), with any non-compliance addressed through a derogation schedule.

In summary, the proposed commercial arrangements aim to streamline procurement, mitigate risks effectively, ensure compliance, and facilitate the successful development of the Radionuclide Facility.

1.4 Financial Case

A detailed financial overview supporting the preferred option of relocating the Research and Development (RND) service to Gartnavel General Hospital has been provided. The analysis encompasses capital costs, revenue costs, and affordability considerations.

Capital Costs Analysis:

- The procurement model transitioned to a DBDA arrangement with HUB West Scotland (HWS) post-OBC approval.
- Construction costs saw a 2.8% increase from the OBC to £21.475m primarily due to inflation and equipment costs.
- Detailed breakdowns including Prime Cost, Preliminaries, Contractor Fee, and other related expenses are provided.
- Adjustments such as VAT, optimism bias, and contractor risks are factored in.

Financial Model for the Preferred Option:

- The financial model adheres to accounting standards and board policies, ensuring transparency and accountability.

Analysis of Prime Sum and Cost Variations:

- HUB Stage 2 tender returns align with the HUB Stage 1 pricing report after adjustments for inflation and design risks.
- Various cost variations are explained, including preliminaries, clean room design, fire shutters, electrical upgrades, and equipment costs.
- Value engineering efforts helped mitigate cost increases, maintaining project viability.

Recurring and Non-Recurring Revenue Costs:

Detailed calculations for each cost category are provided, ensuring comprehensive financial planning. Costs from OBC have risen significantly and detailed in the table below:

	OBC	FBC
Recurring Revenue Costs	£000's	£000's
Clinical Service Pay	41	224
Clinical service non-pay	0	68
Building Related Running Costs	94	297
Life Cycle Costs (Average)	240	240
Depreciation	524	580
Total Additional Revenue Costs	899	1,409
Sources of Funding:		
NHSGGC	165	365
WoS Boards	210	464
SG (Depreciation)	524	580
Total Sources of Funding	899	1,409

	OBC	FBC
Non-Recurring Revenue Costs		£000's
Decommissioning of existing facility	186	165
Service Transfer Costs	0	163
Double Running Costs	0	123
Signage, Wayfinding ect.	0	15
Post Project Evaluation	0	2
Total Non-Recurring Revenue Costs	186	468
Sources of Funding:		
NHSGGC		206
WoS Boards		262
Total Sources of Funding		468

Recurring revenue costs have increased in three main areas: clinical service pay, due to the need for additional staff to operate the new facility; building-related running costs, driven by inflation in material and utility expenses; and clinical service non-pay costs, which were not considered in the outline business case.

Stakeholder Support:

- Stakeholder consultations confirm internal and external support for the project, ensuring alignment with strategic objectives.

In summary, the financial analysis demonstrates the feasibility and affordability of relocating the RND service to Gartnavel General Hospital, with robust planning, stakeholder engagement, and cost management strategies ensuring project success.

1.5 Management Case

Key project management proposals include a detailed reporting structure and governance arrangements overseen by various governance groups at different levels. The Radionuclide Dispensary Project Board, chaired by the board's Diagnostic Services directors, reports to NHSGGC governance and Scottish Government groups.

Given the project's technical complexity, a Project Delivery Group and focused Delivery Subgroups were established to provide technical oversight during the design refresh stage. This group ensures effective communication with stakeholders, including the Medicines and Healthcare products Regulatory Agency (MHRA).

The appointment of Independent Client Advisors, including Project Manager, Joint Cost Advisor, CDM Advisor, and others, provides technical support and assists in project management and delivery.

Stakeholder engagement is emphasised, particularly regarding operational and service change plans, with strategies outlined for staff transition, training, and familiarisation. Communication and engagement strategies are detailed, including project organisation charts, meeting schedules, and protocols for various communication channels. Stakeholder engagement plans have been enhanced to address deficiencies identified in the NHS Scotland Assure KSAR Report.

The Benefits Register has been expanded during the Full Business Case (FBC) stage to include the Benefits Realisation Plan, outlining responsibilities and timeframes for realising each benefit. Project evaluation will follow SCIM guidelines, with three reviews planned post-completion to assess project success and identify lessons learned.

NHSGGC has established benchmarks for community benefits, with a focus on supporting local businesses and initiatives. Risk management measures have been implemented, and the commissioning process involves coordinated elements overseen by the Commissioning Manager.

Overall, the Management Case demonstrates a robust framework for project management, stakeholder engagement, risk management, and quality assurance to ensure the successful delivery of the Radionuclide Dispensary project.

1.6 Conclusion

The strategic, economic, commercial, financial, and management cases collectively provide a comprehensive framework for the relocation of the Radionuclide Dispensary (RND) to the Gartnavel General Hospital Campus.

The strategic case underscores the imperative need for change, highlighting operational challenges and limitations of the current facility, while emphasising the strategic benefits of relocating to Gartnavel, including improved accessibility and alignment with modern standards and technology. In addition, the need for regulatory compliance to maintain licensed manufacturing is strengthened.

The economic case meticulously evaluates various options and concludes that relocating to Gartnavel offers the best value for money, considering both financial and non-financial factors, alongside risk appraisal and stakeholder support.

In the commercial case, the transition to a Design & Build Development Agreement (DBDA) contract under the HUB model ensures streamlined procurement and effective risk management, while also addressing compliance and contractual obligations. Financially, the analysis demonstrates the feasibility and affordability of the project, with detailed breakdowns of capital and revenue costs, sensitivity analyses, and contingency plans, all supporting the decision to relocate to Gartnavel.

Finally, the management case outlines robust project management strategies, stakeholder engagement plans, risk management measures, and quality assurance protocols, ensuring the successful delivery of the project and maximising the realisation of benefits for stakeholders.

Together, these cases provide a compelling argument for the relocation of the Radionuclide Dispensary to Gartnavel General Hospital Campus, aligning with strategic objectives, optimising value for money, and ensuring effective project management and delivery.

Radionuclide Dispensary

Strategic Case



2 Strategic Case

2.1 Strategic Case Overview

The strategic case for the Dispensary has not changed since the submission of the Outline Business Case.

2.2 Has the Strategic Case for investment altered?

No, the Strategic Case remains unchanged since OBC, there have been no change in terms of the site options reviewed at OBC stage and Gartnavel remains the preferred site. The initial OBC design had an extended journey through the KSAR review process, which saw a full design refresh mid OBC stage to address significant issues highlighted by NHSS Assure. Fundamentally, following this re-design, there have been no further material changes since the final OBC submission and approval.

2.3 The existing site



The existing RND is isolated on the former Western Infirmary site, which since April 2016, has been in the ownership of University of Glasgow. The wider area is undergoing large scale redevelopment by the University and the RND only remains on this site under a lease agreement with the University. The RND service is isolated from other supporting NHSGGC services.

The existing facility cannot meet the changing needs of the service going forward and struggles with significant operational and logistical challenges in its current location. This facility is at the end of its serviceable life and cannot support necessary changes in technology and equipment. It is neither possible nor desirable to replace the current facility on the current site, due to the University's plans for the site and the critical needs to maintain production.

2.4 Vision of the future



Following an evaluation process across the GG&C Estate, the Gartnavel Hospital Campus was considered to offer the best strategic position to relocate the RND service and best placed to meet the service needs.



Gartnavel offers the benefits of co-location with the Beatson Cancer services, the Nuclear Medicine Molecular Therapy team, the Medical Physics team, the Health Physics Team and the Estates management team. In addition, Gartnavel benefits from easy access to main roads network, which is a critical consideration in terms of service delivery.

The relocation of the RND Service to Gartnavel will create a modern Radiopharmacy facility that can incorporate new safer production techniques and continue the manufacture of radiopharmaceutical medicines to meet the present and future levels of production and distribution in line with the needs of the patient population.



2.5 Have the current arrangements changed?

The Radionuclide Dispensary continues its current production from NHS Greater Glasgow & Clyde's (NHSGGCs) former Western Infirmary site which is under ownership and management of the University of Glasgow.

There have been no material changes to the current arrangements since the Initial Agreement and subsequent OBC was prepared and approved. Nor has there been change to the Stakeholders needs in relation to the service delivery. The RND remains a critical facility for supporting patient pathways.

The RNDs daily service of manufacturing radiopharmaceutical medicines and distribution of these to Nuclear Medicine Departments throughout Health Boards in West Central Scotland and the West of Scotland continues to operate at the same levels of production indicated in the OBC. Manufacture and distribution collectively provide services to 60% of the Scottish patient population. This level of production remains the largest centralised NHS Radio-Pharmacy in the UK at 31,000 individual patient doses annually.

Products manufactured are used diagnostically and therapeutically to investigate and treat many human health conditions including heart and cancer conditions.

Doses are manufactured for the catchment population with all doses being distributed directly from the existing RND. Distribution is to numerous nuclear medicine departments across the West and Central Scotland. The percentage split of distribution to these departments was detailed in the IA and is included again below in (the % of doses produced have not changed from the IA figures).

Table 1 - Percentage of Doses Distribution

NHS Board	Hospital Site	% of Doses Supplied
Greater Glasgow & Clyde	Glasgow Royal Infirmary	26.5%
	Queen Elizabeth University Hospital	21.7%
	Gartnavel General Hospital	7.9%
	New Stobhill Hospital	5.6%
	New Victoria Hospital	5.5%
	Royal Hospital for Children	0.6%
	Royal Alexandra Hospital	0.2%
Ayrshire and Arran	University Hospital Crosshouse	10.5%
	University Hospital Ayr	8.9%
Forth Valley	Forth Valley Royal Hospital	3.5%
Lanarkshire	University Hospital Monklands	9.1%

As of December 2023, the current daily workload remains at approximately 115 manufactured Technetium doses plus dispatch of 20-25 long lived doses. When compared with previous years (as shown in table 2) demand has remained relatively consistent over the last five-year period. Radiopharmaceutical manufacture is determined by requests from Nuclear Medicine Departments which in turn are regulated by the number of gamma cameras available.

Should the current facility fail through issues with the building fabric or mechanical and electrical services, the current contingency plan would be enacted. However, there is very limited short-term contingency available and medium-term contingency arrangements could take several months to enact. This would impact patient care due to a reduced number of daily doses being available.

There is ongoing dialogue with MHRA around the continued suitability of the current facility and processes with two-monthly updates sent to the MHRA.

Should the MHRA withdraw the licence for the current facility, then this would severely limit the ability to prepare doses for non-GGC patients. Additional pharmacists would have to be recruited for product release and there would be restrictions on ordering which would impact on Nuclear Medicine departments.

NHS GG&C have considered it prudent to appoint a former MHRA inspector as independent advisor to the project, to provide support to the current facility and ensure that the new facility will comply with MHRA expectations.

Table 2 - Number of doses manufactured annually (NHSGGC)

Year	Manufactured doses (Tc99m and long-lived doses)	Commercially supplied doses	Total
2016	31041	3204	34245
2017	32842	3503	36345
2018	31329	3611	34940
2019	30427	3054	33481
2020	27241	2200	29441
2021	29400	3200	32600
2022	25414	3250	31066
2023	30896	3100	33996

Over the past six years the number of doses manufactured has remained constant with a slight drop in demand in 2019 and 2020. The 2019 reduction was due to the temporary loss of two gamma cameras within NHSGGC for two months while replacement works were undertaken. The 2020 reduction was due to the impact the COVID-19 pandemic and the resulting reduction in patient procedures. The demand in 2021 has continued to be impacted by the COVID-19 pandemic but has started to increase as patient procedures have increased towards previous levels. It is expected that demand will continue to remain constant once patient services return to pre COVID-19 levels. 2022 figure was affected by a Technetium shortage in Nov/Dec. For significant changes in demand to occur there would have to be substantial changes in equipment numbers (gamma cameras & PET CT) and resource to match the increased demand. Demand is unlikely to vary in the near future. Any potential long-term change in approach would be a move from Gamma camera to PET CT with the impact being a different type of production method and workstation within the clean room environment. The proposal has been developed so a change of this type could be accommodated and would be done so by replacing the type of workstation within the facility, rather than provision of additional workstations.

Currently the provision of this service is supported by a workforce comprising 10 staff and demand is not expected to significantly change. Proposals include the addition of Gallium production with an additional staffing requirement. This will be further reviewed through FBC and any change in workforce requirements highlighted. In line with changing guidelines and MHRA response the workforce planning process will review the staffing structure to ensure the appropriate skill mix.

Manufacture of products within this facility is controlled through a Manufacturers Specials License granted by the MHRA. Its buildings operational systems, personnel, controlled environment and accompanying pharmaceutical quality systems must continue to meet the regulatory requirements of the Office of Nuclear Regulation (ONR), Scottish Environmental Protection Agency (SEPA), The Health and Safety Executive (HSE) and Medicines and Healthcare Products Regulatory Agency (MHRA). As the licensing authority, the MHRA have continued to review, audit and report on the existing facility with the licence remaining in place to date. Due to their position as a licensing authority for this and other

facilities within NHSGGC, MHRA have also been engaged in the outline design review process for the proposed new facility and will continue to be engaged through the FBC, construction and commissioning stages.

NHSGGC holds one MHRA multi-site licence covering any facility with the ability to manufacture and distribute medicines. Within NHSGGC the MHRA licence currently covers the following facilities:

- RND: Licence covers manufacture of radioactive medicines.
- RHC Aseptic: Licence covers manufacture of sterile medicines.
- Pharmacy Distribution Centre: Licence covers distribution of medicines.
- PET Radiopharmacy has a licence for PET radiopharmaceutical manufacture and clinical trials.

Whilst the licence covers numerous facilities, each is identified specifically and as a standalone unit requires ongoing inspections and reporting by MHRA. For the purposes of this document, references to the MHRA licence, and potential loss of, are associated with the licence specific to the RND and not the single licence NHSGGC hold.

As described in the IA, whilst in the current facility it is not possible to adapt, extend, modernise, or implement advancements in technology without complete loss of production. This means some areas are no longer utilised, compromises in compliance processes are required and ongoing maintenance is made difficult. Maintenance is further complicated as much of the operational systems are original, 30+ years old and beyond their life expectancy. These items are noted in recent MHRA inspections with the inspection report from 15 June 2021 escalating the status of their categorisation from “Major Failures” to “Critical Failures”. Some modifications have been made to the existing equipment and facility to ensure it can continue to meet standards in the short term. Inspection follow up is ongoing with routine two-monthly progress updates being submitted to the MHRA. This focus and depth of scrutiny from the MHRA will continue until the service moves to the new facility. As modifications have been made and accepted by the MHRA on a short-term basis, maintaining the manufacturing licence is noted as an ongoing significant NHSGGC risk. NHSGGC Estates and Facilities continually monitor the building fabric condition and the building services and infrastructure maintenance backlog via Health Facilities Scotland Estate Asset Management System (HFS EAMS). The latest EAMS survey was completed in March 2021 which identified a number of systems and the building fabric as poor condition. The survey identified £1.9M worth of maintenance and lifecycle replacement works required of which £0.3M was for backlog maintenance. The survey information related to the building does cover standard elements of statutory compliance; it does not however reflect the specific compliance elements associated with MHRA licences. Therefore, costs and information contained with the EAMS system do not reflect the true extent of works required to retain and sustain this facility’s compliance.

As noted previously, the RND in Glasgow provides services to 60% of the Scottish patient population. The remaining 40% of the population is served by similar facilities in Edinburgh, Dundee, Aberdeen, and Inverness. This percentage split has not changed, and a summary of the national provision is provided in Table 3 below.

Table 3 - Number of doses manufactured annually (Nationally)

Location	Board Areas Served	Manufactured Doses	Unit has MHRA licence?
Glasgow	Greater Glasgow & Clyde Ayrshire & Arran Forth Valley Dumfries & Galloway Lanarkshire	31,000	Yes
Edinburgh	Lothian Fife Borders	11,000	Yes
Dundee	Tayside	8,200	No
Aberdeen	Grampian	10,300	No
Inverness	Highland	3,000	Yes

Table 3 also highlights where the facility has an MHRA licence or not. This remains key for the facility development and the case being presented and therefore the numerous elements and impact of having or not having the MHRA licence are detailed below:
Without a MHRA licence the facility:

- Can only provide medicines for patients within their own Health Board area. Therefore, if lost NHSGGC couldn't supply other health boards (loss of 32% of production).
- Can only provide limited support for clinical trials. An exemption in the legislation may allow some manufacture for diagnostic Radiopharmacy trials only.
- Requires all manufactured products to be released by a registered pharmacist.
- Require alternative means of audit by a Regional QA Pharmacist (who will assess to same standards as MHRA inspectors)

With a MHRA licence the facility:

- Can manufacture and distribute for patients out with their own Health Board area.
- Can manufacture products to support diagnostic and therapy clinical trials.
- Can carry out manufacture, product release and distribution with a technical team managed by a pharmacist, so requires less pharmacist resource.

Therefore, should NHSGGC lose its MHRA licence the impact would:

- Mean loss of ability to manufacture and distribute materials to other boards with impact on the Nuclear Medicine service for these boards (loss of 32% of production).
- Impact on the way GGC Nuclear Medicine operates with additional documentation required and less flexibility in the use of doses prepared.
- Require further audit and QA review by Regional QA Pharmacist
- Require product release to be by registered pharmacist(s) to continue to manufacture and distribute (with staffing implications)
- Mean reduced ability to manufacture and distribute materials for clinical trials.

- Require recruitment for additional pharmacists to release products and slow down current manufacturing output until in place.
- Lead to workforce restructuring.
- Due to the single MHRA Licence covering other facilities, be seen as a failure of NHSGGC senior management to support the licence overall and potentially lead to increased scrutiny of other facilities.

2.6 Is the case for change still valid?

2.6.1 Need for change.

The OBC identified a need for change based on problems identified with the current arrangements, together with other drivers for change and opportunities for improvement. A summary of the need for change is provided in Table 4. Since the submission of the OBC there have been no material changes that alter the needs for change.

Table 4 - Summary of Needs for Change

Cause of the need for change:	Effect of the cause on the organisation:	Why action now:
Inability to maintain MHRA manufacturing licence and continue manufacture.	Loss of manufacturing ability impacting treatment and diagnosis for patients in West and Central Scotland.	MHRA carry out ongoing audits on the facility noting recommendations for compliance. Carrying out this project shows commitment to achieving compliance. There is significant scrutiny from MHRA. There have been two inspections and 2 monthly monitoring. It is anticipated there will be another inspection late 2024.
Inefficiencies of service location relative to treatment and diagnosis facilities where products are utilised.	Inefficiencies due to facility being remote from nuclear medicine departments where products are utilised.	Provide a more coordinated and efficient approach to service delivery. Benefit from clinical adjacencies.
Inefficiencies of service location relative to support facilities.	Inefficiencies due to facility being remote from NHSGGC support services	Provide a more coordinated, consistent, and knowledgeable response and delivery for Estates, Facilities and Nuclear Medicine Physics teams.
Lack of control of site environment.	Terms of lease agreement in place with university require permissions to alter or upgrade building. Ongoing works by university creates changes to access and egress to site impacting delivery and distribution.	Issues noted will be prolonged due to delivery time of University Master plan of the former Western Infirmary site. Delivery and distribution form part of licensing recommendations so may impact on this.

Limited manufacturing contingency	Could lead to loss of therapeutic and diagnostic service provision.	Numerous risks identified for the current facility. Limited contingency available to support service delivery.
Existing building lacks flexibility to accommodate works or be adapted while maintaining output.	Existing facility has not been designed and constructed with view to adapt without shut down and decant of service.	Proper mitigation for risk associated with loss of manufacture is development and completion of the project.

As presented in the OBC an evaluation was undertaken to inform where, based on existing issues, this proposal would provide further opportunities for improvement. The opportunities considered included:

- Improvements in sustainability standards with regards to NHSGGCs Carbon Reduction Strategy and NHS Scotland Net Zero Carbon targets for all new buildings from April 2020.
- Improvements in training and development opportunities through the collocation of services and providing more efficient opportunities for education, training, and development of the department's own staff as well as for other collocated services.
- Potential to collocate with or near to the West of Scotland PET CT production unit and service is currently undertaking an options appraisal for future expansion.

2.7 Investment Objectives

The Initial Agreement identified six investment objectives based on the need for change. These objectives are not solution focused instead they set out what any potential solution should achieve for the proposal to be consider successful. The investment objectives remain unchanged from the submission of the Initial Agreement and have been summarised in table 5.

Table 5 - Investment Objectives

Cause of the need for change	Achievements required to deliver change (Investment Objectives)
Ability to maintain MHRA manufacturing licence and continue manufacture.	Objective 1 - A facility compliant with the MHRA production licence requirements.
Inefficiencies of service location relative to treatment and diagnosis facilities where products are utilised.	Objective 2 - Improvement in clinical adjacencies.
Inefficiencies of service location relative to support facilities.	Objective 3 - Provision of easily accessible and knowledgeable response team.
Lack of control of site environment.	Objective 4 - Location on a site which represents long term NHS control and investment.
Lack of manufacturing contingency.	Objective 5 - Delivery of a resilient production capability.

Existing building lacks flexibility to accommodate works or be adapted while maintaining output.	Objective 6 - Provision of a facility that provides flexibility for maintenance and adaptation.
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Each investment objective has been implemented in the development of this proposal. How this has been achieved and how the objective will be implemented in the next stages is described below.

2.7.1 A facility compliant with the MHRA production licence requirements

Early and continued engagement has taken place with MHRA. The MHRA have provided feedback on the design approach and entrance sequence to the clean room elements. This amended approach has been further discussed and agreed with the clinical teams, has been incorporated in the outline design and will be developed further during the next design stage.

Engagement with the MHRA will continue to ensure the facility is designed, constructed, and managed in accordance with their requirements.

2.7.2 Improvement in clinical adjacencies

This will be achieved by having the facility located on a site with a prominent nuclear medicine service. Improvements will be associated with both ease of delivery of product as well as opportunities for educational development and enhanced communication and links with users. The potential for clinical adjacencies has been considered as part of the scoring criteria for the site option selection.

2.7.3 Provision of easily accessible and knowledgeable response team

This will be achieved by locating the facility on a site with suitably qualified and experienced staff knowledgeable in the functions of the Radiopharmacy and wider nuclear medicine field. Improvements will be associated with the ability to share staff knowledge and expertise. Local operational teams who support the existing facility have been involved in the design process to ensure knowledge of the facility prior to taking ownership. This knowledge of the existing facility and ongoing engagement has been extremely beneficial in this stage of the design development. Engagement with these local teams will continue through the detail design, construction, and commissioning phases.

2.7.4 Location on a site which represents long term NHS control and investment.

The strategic options assessment identified a site within NHSGGC as the preferred solution. As a result, consideration has been given as part of the assessment criteria to a site’s long-term investment during the site options appraisal.

2.7.5 Delivery of a resilient production capability

This will be achieved by ensuring that the facility is designed to provide a resilient solution to maintain production in the event of a loss of site infrastructure. In the development of

the outline design, consideration has been given to numerous scenarios where utilities or systems are lost, their impact and how the design can help respond. The design deployment will continue to consider and refine the design to mitigate loss of service where possible.

2.7.6 Provision of a facility that provides flexibility for maintenance and adaptation.

Adaptation has been a key consideration through design work to date and applies both internally & externally.

The outline design has included the features described below:

- Doors with side panels to clean rooms designed with deconstruction in mind.
- Foundation and floor slab below all clean rooms designed to accommodate heaviest PET safety cabinet to allow for labs to accommodate any change in production type.
- Platform at plant room entrance to allow for set down and activity space for any plant equipment removal and replacement.
- Expansion zone within plant room to allow for services replacement with minimal disruption.
- Clear zone on site to allow for potential future expansion.
- Support services spaces designed for flexibility to accommodate additional personnel on site for training and educational purposes.

These considerations will ensure a robust and resilient facility that will be able to adapt for change of service going forward.

2.7.7 Is the choice of preferred strategic solution still valid?

At the Initial Agreement stage, the strategic options in were assessed with Strategic Option 4 identified as the preferred solutions, this being a West of Scotland centralised facility within NHS GG&C.

Table 6 - Strategic Options

Option Number	Description
Strategic Option 1	Do Minimum
Strategic Option 2	Scotland Wide Centralised Facility
Strategic Option 3	West of Scotland Centralised Facility (Out with NHSGGC)
Strategic Option 4	West of Scotland Centralised Facility (Within NHSGGC)
Strategic Option 5	Dispersed West of Scotland Solution
Strategic Option 6	Dispersed Nuclear Medicine Department Solution
Strategic Option 7	Outsourced Solution (Building Only)
Strategic Option 8	Outsourced Solution (Full Service)

Through review of the strategic case in OBC and FBC stages, there has been no change that has materially altered the outcome of the initial selection process. The development of a West of Scotland Centralised Facility within NHSGGC remains the preferred solution with further work undertaken to select a preferred site.

Radionuclide Dispensary

Economic Case



3 ECONOMIC CASE

3.1 Summary of Options Appraisal Process

As detailed in the Outline Business Case 4 proposed solutions were investigated:

- Do Minimum – Remain on site.
- Relocate to Gartnavel General Campus – New Build
- Relocate to Stobhill Campus – New Build
- Relocate to Royal Alexandria Hospital Campus (RAH)- Refurbishment

The analysis provided in the Outline Business Case confirmed that relocation to a new build facility on Gartnavel Campus could best deliver all investment objectives whilst delivering value for money to the public purse.

With Strategic Option 4 - West of Scotland Centralised Facility (Within NHSGGC) identified as the preferred option from the IA a long list of proposed sites was developed. This process formed the first stage of the economic appraisal by developing the short list of site options to be considered further in this proposal.

3.2 Summary of Site Options Appraisal Process to Deliver the Preferred Option

With knowledge of NHSGGCs estate and assets, the Estates, Property and Capital Planning teams were able to present information on NHSGGC sites that offered new build or refurbishment options. For each site identified, specific refurbishment or potential development areas were described. Site options were identified on the basis that the facility would be located within an existing NHSGGC controlled site. This would achieve investment objective 4 (Location on a site which represents long term NHS control and investment) as well as comply with the NHSGGC strategy to use the existing estate prior to procuring new land. From this a long list of options was produced, this was refined further to identify a short-list of options going through a weighted assessment of 11 criteria. From this, a further assessment was carried out that considered the options against the likely availability of a suitable development site and how the options aligned with proposed site's existing use. This assessment discounted several options due to the lack of available developable space or the site's development plan. This left the 4 options noted above.

3.3 Summary of Financial Assessment of Site Options

Only the Do Minimum option had lower capital costs (before Optimism Bias) than the preferred option of relocate to Gartnavel Campus as a New Build in the OBC. The other 2 options (Stobhill Campus New Build) and (RAH Campus-Refurb) were higher than the preferred option with Stobhill being close to Gartnavel and RAH further out again.

Revenue costs followed the same pattern as above with the do minimum option being the lowest. All values were input into the GEM Model as an undiscounted annual recurring cost. It should be noted that whilst not noted in the economic case section in detail (it was noted in more detail in the Financial Case) there would have been a significant impact on non-recurring costs on the Do Minimum option as the service would have to be re-provided on an existing NHS site with a materially significant cost impact. Costs for enabling utility

connections, planning permission and rental costs of appropriate units as well as further decommissioning costs would have to have been incurred. This was reflected in the NPV calculations for the Do Minimum option.

3.4 Summary of non- monetary costs and benefits of options

The results of the non-financial benefits appraisal at OBC clearly demonstrated that the Gartnavel site-New Build ranked number one for 5 of the 11 benefit criteria (clinical adjacencies, expert support & education links, security, programme and potential further NHSGGC investment) whilst tying as highest score on the other 6 (material delivery, material distribution, proximity of material delivery/distribution area to vehicles, future business continuity, compliance and staff transport access) . This analysis was provided through stakeholder engagement workshops and further refined by the Project Board.

3.5 Summary of non-financial risk appraisal

The non-financial risk appraisal concluded that the lowest risk profile was the preferred option, with only 2 risk criteria not scoring the lowest score of the 4 options (Local community object to the proposed site or there are other objections), it either achieved or tied the lowest score on business continuity, stakeholder involvement, safe environment for staff & visitors both clinically and in construction, adverse publicity, service demand, the accommodation is unable to meet service model, unable to decant staff from one site to another in a timely manner and insufficient transport /car parking)

3.6 Summary of Calculation of Net Present Value (or Cost) and assessment of uncertainties

Net Present Value (calculated using discounted cash flow techniques on both the Capital & Revenue Costs associated with the 4 options as entered into the supplied GEM model) showed that the Gartnavel New Build had a NPV of £22,498, second in the list to the do minimum option of £18,439 with the others at £22,948 and £24,333 (Stobhill and RAH respectively). As Sensitivity analysis is fundamental to the evaluation of each of the options, a test of the NPVs along with the non-financial benefits scoring was carried out to assess how robust these results are to underlying assumptions, following guidance in the SCIM Option Appraisal Guide.

3.7 Identifying the Preferred Option

The combined Net Present Value (NPV) per weighted benefit score clearly identified Gartnavel New Build as the preferred option, with a score of 41.36 compared to Stobhill New Build at 55.72, RAH refurb at 69.33 and do minimum at 93.44. The analysis of both the economic tests and options & risk appraisals ranked Gartnavel first in all 3 metrics. The non-financial site options appraisal carried out via stakeholder engagement workshops clearly reflected the key advantages of site logistics, clinical adjacencies, business continuity and future investment that the site can provide.

3.8 Summary of Support for the Preferred Option Site Selection

The project has previously been presented to the West of Scotland Directors of Pharmacy group and the NHS Scotland Chief Pharmacist both of which confirmed support for the project and specifically the proposals to locate the facility within the NHSGGC

geographical footprint. The options developed in the OBC were presented to the West of Scotland Directors of Pharmacy group on 22 March 2022 with the group reconfirming their support for the project and the proposal to locate a new facility on the Gartnavel site. The project gained support from the West of Scotland Directors of Finance Group in November 2023.

3.9 Summary of Calculation of Net Present Values and Assessment of Uncertainties

3.9.1 Net Present Values (NPV's)

The preferred option scored £22,498 against £18,439 for the do minimum option and £22,948 for a new build at Stobhill and £24,333 for the refurb option at the RAH. These values were calculated using the GEM model of discounted cash flow techniques on the capital & revenue costs associated with each option. This shown in the table 7 below.

3.9.2 Assessing Uncertainty

The sensitivity analysis was undertaken on both the NPV's and non-financial benefits sections to test the robustness of both sets of values following section 5.2 of the SCIM option appraisal guide.

Unlike other business cases that will analyse various options to deliver services across different sites possibly in different ways and that, unusually, do nothing was not an option, the testing of uncertainty was narrow. Predictably the do minimum option scored the lowest NPV.

However, when the non-financial appraisal scores were used to calculate a cost per NFA score (NPV/non-financial appraisal weighted score) Gartnavel New Build ranked as the number one choice.

Table 7 - Summary of Calculation of Net Present Values and Assessment of Uncertainties

	Do Minimum on Existing Site	Refurb At RAH Campus	New Build at Gartnavel Campus	New Build at Stobhill Campus
	£'000's	£'000's	£'000's	£'000's
Net Present Values - Based on 60 years	18,439	24,333	22,498	22,948
Non-Financial Appraisal (NFA) Weighted Score	140	228	378	294
Cost Per NFA Score	131.71	106.72	59.52	78.05
Rank	4	3	1	2

Testing was carried out on financial sensitivity by increasing capital & revenue costs for the Gartnavel option, it revealed that capital costs would have to increase by 61% and revenue costs by 262% for the next option- Stobhill new build -to become the preferred option. Given that capital costs would largely have been identical and with revenue costs,

in the main, being “lift & lay” it was deemed exceptionally unlikely that’s these scenarios could occur and cause rankings to be altered.

For non-financial sensitivity, equalising on the weighting on the scores or removing the top ranked score had no impact on the overall ranking. Indeed, testing this further, removing the top five ranked scores did not impact on the option changing from Gartnavel- New Build.

3.10 Summary

The combined NPV per weighted benefit score figures, the economic and risk review exercises and the non-financial benefits score options appraisal all clearly identified Gartnavel –New Build as the preferred option. Any sensitivities such as construction cost increases would apply to all options and no site-specific issues relating to Gartnavel have arisen since the OBC was completed.

The key advantages of clinical adjacencies, expert support & education links, and potential further NHSGGC investment on this site underpin the choice of Gartnavel as the preferred option. Whilst the new build option at Gartnavel is more expensive than the “do minimum” option on the NPV costs alone, the constraints of redeveloping a facility on an isolated site we do not own and the resultant non-recurring costs such as specialised portable cabins on an NHS site (more than likely to be Gartnavel site anyway given its close proximity to the existing site at the Western Infirmary) led to the do minimum option scoring lowest of all 4 considered sites.

Confidence in the sensitivity testing of both the financial and non-financial scores through the various models we used, and the support of both clinical and financial stakeholders at a regional level, underpin the decision to construct a new building on the Gartnavel site.

Radionuclide Dispensary

Commercial Case



4 Commercial Case

The main purpose of the Commercial Case at FBC is to outline the proposed commercial arrangements and implications for the project. The FBC will do this by setting out both the change to the procurement strategy and setting out the procurement route.

4.1 Procurement Strategy

4.1.1 Change to Procurement Strategy

The OBC submission and all appointments were made under NHSScotland Framework Scotland 2 agreement.

The costs presented by the PSCP at OBC stage, indicated significant cost uplift. In addition, there had been unsatisfactory management of the initial OBC stage KSAR process, which resulted in overall delay to the project. As a result of the cost uplift, Capital Planning were asked by Scottish Government to provide independent validation for the costs presented.

NHSGGC Capital Planning have worked successfully with HUB West Scotland over the last 9 years developing and delivering 11 new build facilities. HUB West Scotland were tasked to approach their supply chain and review cost and program.

In March 2023 a paper was presented to Scottish Government which set out the potential significant benefits to switching procurement routes from Framework 2 to the HUB model of procurement. This was subsequently supported by Scottish Government. In May 2023 the Framework 2 Contract was terminated and in June 2023 HUB West Scotland were appointed as Principal Partner for the delivery of the RND Facility.

4.1.2 Procurement Rules and Regulations

The Radionuclide Facility will be delivered using the HUB procurement initiative. This project, which is capital funded, will be delivered via a Design & Build Development Agreement (DBDA) contract.

The HUB initiative has been established in Scotland to provide a strategic long-term programme approach in Scotland to the procurement of buildings that derive enhanced community benefit. The Radionuclide Facility is located within the West Territory. A Territory Partnering Agreement (TPA) was signed in 2012 to establish a framework for delivery of this programme and these benefits within the West Territory. The TPA was signed by a joint venture company, HUB West Scotland Limited, local public sector Participants (which includes NHS GGC and GCC), Scottish Futures Trust (SFT) and a Private Sector Development Partner (PSDP).

The TPA prescribes the stages of the procurement process including:

- New Project Request.
- Stage 1, submission, and approval process (OBC).
- Stage 2, submission, and approval process (FBC).

- conclude DBDA Agreement (financial close).

4.1.3 Appointments

The switch to the HUB procurement model has seen a change to the Consultant and Contractor appointments set out in table 8 below.

Table 8 - Consultant & Contractor Appointments

Role	Organisation
Delivery Partners	HUB West Scotland
Joint Cost Advisor	Currie & Brown
Primary Contractor	BAM Construction
CDM Advisor	Currie & Brown

The full Design Team from Framework 2 have all successfully switch across to be appointed within the HUB Model allowing continuity of delivery. This allows continuity of the design process and avoids split responsibilities.

In addition to the above appointments, NHSGGC Capital Planning Team are supported by the following External Advisors, who have been appointed, utilising the Public Contracts Scotland for procurement.

Table 9 - External Consultant Appointments

Role	Organisation
MHRA Advisor	Harwood Pharma GMP Consulting
Legal Advisor	CMC
Combined Site Monitor / Technical Advisor	TBC July 2024
DQ / IQ / OQ / PQ Commissioning Verifier	TBC July 2024

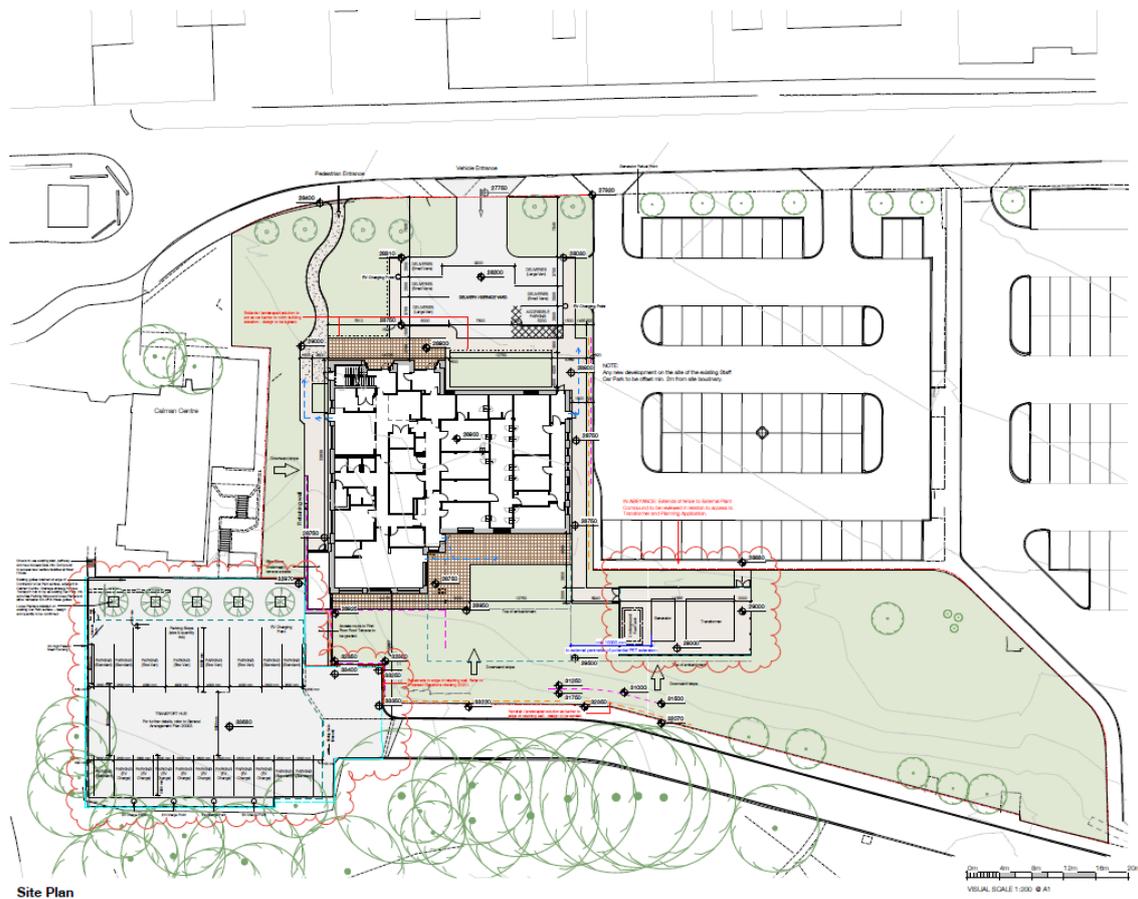
4.2 Scope and Content of Proposed Commercial Arrangements

4.2.1 The Site

The existing site is captured in section 2.3.

The preferred site is located within Gartnavel General site, on the Gartnavel Hospital Campus. The specific area for the development was formerly the location of the Nurses Block. This accommodation was demolished in 2017. The site was subsequently part occupied by the Transport HUB on a temporary basis. However, the Transport HUB is currently being relocated off site, to free the area up for this development.

The site benefits from the adjacent services infrastructure, that previously served the former nursing home site, albeit that this needs upgrading. In addition, the full development land is in the ownership of NHS Greater Glasgow and Clyde.



A Schedule of Accommodation (SOA) has been arrived at following extensive stakeholder engagement and a series of meetings with the users and project team. The Gross Internal Floor Area (GIFA) is 1,157m². A copy of the SOA is included as Appendix C.

4.2.2 Site Access, Constraints and Orientation

There were a number of negative site and access constraints identified by the OBC Stage NDAP during the design phase. These have all been fully addressed with the current design. Planning consent for the current design was granted by Glasgow City Planning on 8th November 2023.

The site is under the ownership of NHS Greater Glasgow and Clyde. Shelly road to the south is adopted by the Local Authority. The site slopes upwards from north to south and is bound on the south by a non-adopted vehicular service road, which is essentially level with the 1st floor level of the proposed facility.

An area for potential expansion to the southeast of the site has been identified and sterilised of services, to allow future development without the difficult requirement for re-routing of services.

Following the transition from Framework 2 to the HUB procurement model, a further round of more detailed site investigations was undertaken in response to the requirement for the

main contractor to take all ground risk under the hub DBDA contract. These surveys have generally indicated favourable ground conditions.

At present it has not been possible to fully complete site investigations below the small footprint of the Transport HUB cabins. Consequently, the board will retain responsibility for ground conditions below the footprints of these buildings until such time as the buildings are demolished and can be surveyed. However, it is anticipated that this will reflect the favourable condition of the rest of the site, which has been fully surveyed.

4.2.3 Design Development

As previously noted, the initial OBC stage design had an extended journey through the KSAR review process, with a number of areas identified where the design did not satisfy the KSAR requirements. This ultimately resulted in a successful full refresh of key aspects of the strategy and design of the facility. Other than the decision to switch from a concrete frame to a steel frame, the design has been evolved from the OBC refresh through to FBC stage design without any further significant changes in layout or materials.

The Architectural Stage 4 presentation was made to the Project Board (26/4/2024) and Delivery Group (10/4/2024) and has been fully endorsed by both.

The building presents a simple compact model. The key functionality of the facility fully revolves around supporting the Clean Room production area (hot zone) and maintaining flow paths that support a clean room environment. There is clear separation between the hot zone and the support accommodation (cold zone) to ensure that the environmental conditions are not compromised. The full top floor is taken up with the building services plant area and ductwork distribution.

The site topography slopes upwards from north to south and this has been utilised to provide level access to the first-floor plant room, to ease service replacement in due course. An area for potential expansion of the facility has been allowed to the southeast of the site.

4.2.4 Scope of other works

Manufacture of radiopharmaceutical medicines within the RND relies on the use of specialist equipment. The OBC stage design refresh has offered the opportunity to incorporate recent changes in process and technology that improve service delivery.

A refreshed equipment list has been developed to revise the equipment required. This has supported the introduction of new equipment such as Technetium Isolator for long lived and short-lived clean rooms and the Gallium Isolator for the PET clean room. This new equipment has different specific requirements from that previously proposed at Initial Agreement. The specific spatial and services requirements, including activity spaces and safe working areas, have dictated the room layouts at 1:50 scale, to ensure they can be fully accommodated, utilised, and maintained safely.

Commercially the Isolators are now included within the contract as Group 1C items. This ensures that the risk associated with the supply, co-ordination and installation of this equipment is fully held by the Primary Contractor. All ongoing maintenance costs and agreements will be arranged by NHSGGC. These details were captured during the tender procurement exercise for the equipment.

4.2.5 Net Zero Carbon (NZC) Response

The response to the global climate emergency is one of the Scottish Governments highest priorities.

The Infrastructure Commission report of January 2020 confirmed a key priority of working towards a zero-carbon future. It states that: -

“All Scottish Government funded projects included in its 2020 Infrastructure Investment Plan should be prioritised against available inclusive net zero carbon economy outcomes.”

The NZC agenda presents a particular challenge to specialist high energy facilities such as the RND. In discussion with NHS Assure, it was agreed that this challenge would be tackled in three areas:

- 1 Consider new production technology and assess if this could offer improved service and support a reduced energy model.
- 2 Review environmental conditions set out in the URS to consider where these can be challenged to reduce the energy impact.
- 3 Ensure that both the building fabric and services are as energy efficiency as practicable.

Item 3 presented a particularly interesting consideration. The initial instruction to the design team had been to ensure that the building fabric was as energy efficient as possible. However, it became apparent that there comes a tipping point where adding further insulation, has a negative effect on the carbon footprint, in that the embedded carbon in manufacture process of the insulation is greater than the energy saving over the lifetime. The instruction to the Design Team changed to a requirement for the fabric to be as efficient as practicable, rather than possible.

Computer simulation of the energy model is provided by the TM54 methodology for forecasting the operational energy efficiency of a building. The current proposals have been fully modelled and evaluated by a specialist consultancy team. This has also undergone external 3rd party review to ensure that it is robust in its assessment.

Table 10 - Benchmark comparisons

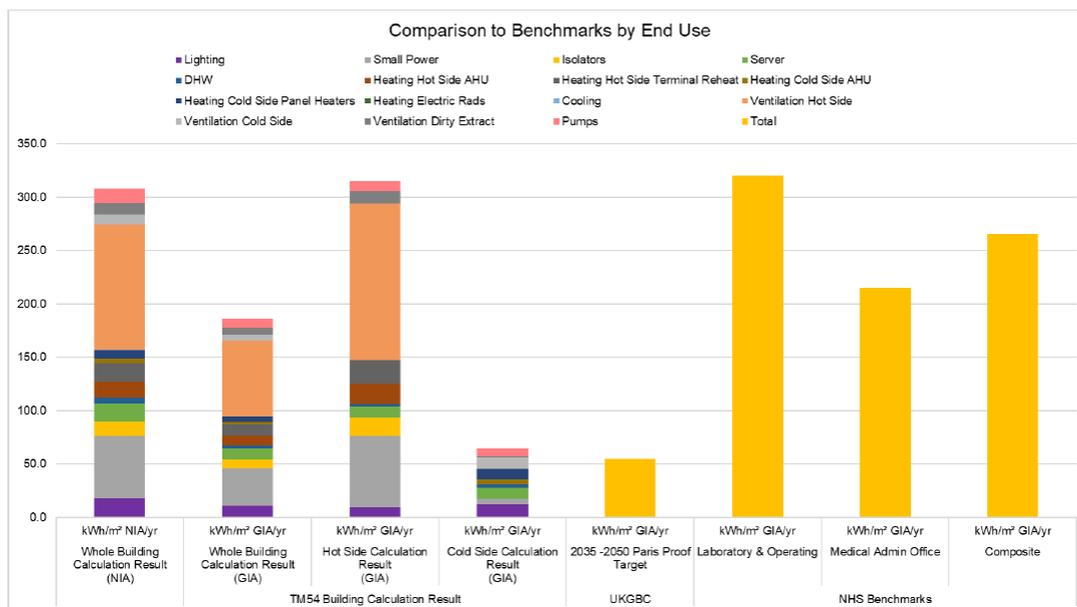


Figure 0-1-1 Summary benchmark result

The executive summary to TM54 Report highlights that the proposals would result in a highly efficient building, which offers significant improvements on established benchmarks derived from the UK Green Building Council. The model indicates that the combined whole building of Production areas (hot zone) and support areas (cold zone) offer a 29% improvement over the appropriate benchmark.

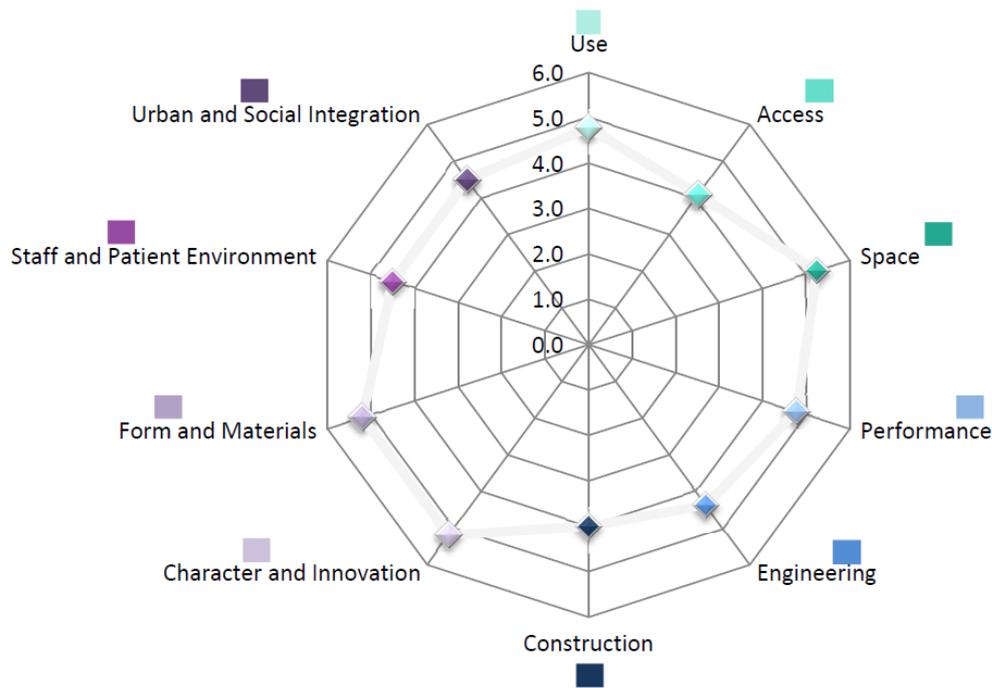
4.2.6 NHS Scotland Design Assessment Process (NDaP)

As part of the embedding of the design process in the various business case stages, the Scottish Government has advocated a formalised design process facilitated by Architecture and Design Scotland (A&DS) and Health Facilities Scotland (HFS). NHS GGC has taken steps to consult with both bodies in the development of the design of the Radionuclide facility.

An initial Design Statement (DS) was prepared by NHS GGC in conjunction with Stakeholders, in late 2019, with workshop support from A&DS. This has been used as a key quality control document to measure the developing design against the project's design objectives. This has been re assessed at each subsequent stage and adjustments have been collated and approved by the Project Board. A further NDAP Review is being conducted by NHS Assure, in conjunction with the core team, to close this out at FBC Stage.

Supporting the NDAP process is the AEDET Assessment. Overall, the Group are very supportive the design that has evolved for the RND facility. However, when scoring, they did find that the question set does not really suit a bespoke and specialist facility of the nature of the RND, where functionality and appropriate materials to support that functionality dictate most selections, with little scope for change.

The AEDET Assessment is provided in Appendix D. This indicates the steady progress in scoring from IA to OBC to FBC that is sought.



Target	Progress	
	Prev	Curr
4.6 Use	4.3	4.8
4.3 Access	3.9	4.1
4.5 Space	4.5	5.3
4.5 Performance	3.8	4.8
4.2 Engineering	2.9	4.4
4.0 Construction	0.0	4.0
4.5 Character and Innovation	4.0	5.2
4.6 Form and Materials	4.1	5.2
4.6 Staff and Patient Environment	4.0	4.5
4.5 Urban and Social Integration	4.0	4.5

4.2.7 NHS Scotland Assure

NHS Scotland Assure was established in June 2021 and seeks to move the culture around projects to one of more rigorous control of compliance, and adherence to technical guidance and standards.

NHS Scotland Assure will provide reassurance to NHS GGC that the project has been developed with due consideration to the Health Associated Infection System for Controlling Risk in the Built Environment (HAI-SCRIBE) and infection control, and compliance on the main building services e.g., ventilation, water, drainage, electrical, and that sufficient briefing and governance arrangements are in place.

The FBC Key Stage Assurance Review (KSAR) commenced in March 2024 and the Project Team are working collaboratively with NHS Scotland Assure through a series of workshops to address the requirements at the Final Business Case stage.

NHS GG&C recognised that the initial OBC stage KSAR had a difficult journey through the review process, with the KSAR assessment identifying a significant number of areas that the design did not satisfy the KSAR requirements. This resulted in NHS GG&C taking stock of the position and instructing a full refresh of the strategy and design of the facility. The final OBC Stage design resulted in improvement in the resilience of the building, the ability to maintain the facility in the long term and also improved its ability to adapt to changed requirements going forward. This significant adjustment received Supported Verified status in April 2023, and it is hoped that this support will continue in its journey through the FBC stage review.

4.2.8 NHS Scotland Sustainable Design and Construction (SDaC)

The SDaC assessment presents a particular challenge to specialist high energy facilities such as the RND. The set up of the clean room environments and the material used to construct this environment are prescribed by the functional requirements with little to no scope for adjustment for a more favourable outcome. In addition, many of Wellbeing and active travel considerations were not addressed in by this project as the RND facility is part of a mature and active hospital campus that addresses the considerations.

When assessing, the Team found that the question set does not really suit a bespoke and specialist facility of the nature of the RND.

The project team are cognisant of the requirement for NHSScotland to be a 'net-zero' Greenhouse Gas (GHG) organisation by 2040 at the latest, and for all NHSScotland new buildings and major refurbishments to be designed to have net-zero GHG emissions from April 2020. The Net Zero Carbon requirements are set out in section 4.3.5 above. The SDaC is reviewed with NHS Assure parallel to the NDAP process. This is currently in the process of being closed out.

NHSScotland Sustainable Design and Construction Guidance - Completion Summary								
NHS Board: NHS GG&C Radionuclide Dispensary (RND-RE)								0105/2024
SDaC Tool (SHTN 02-01) Beta vD0-04								
Completion status	Issue	% complete	1: Commenced	2: Established	3: Almost complete	4: Complete	Not Applicable	Applicable Total
Wellbeing	W1. Healthy Places - Total Wellbeing	50%	0	1	0	1	3	2
	W2. Indoor environmental Quality	67%	0	0	1	2	2	3
Circularity	CE1. Circular design and construction	100%	0	0	0	3	2	3
Climate Change	CC1. Operational emissions	67%	0	0	1	2	2	3
	CC2. Embodied carbon	100%	0	0	0	3	2	3
	CC3. Water consumption	100%	0	0	0	3	2	3
	CC4. Environmental security	67%	0	0	1	2	2	3
	CC5. Active travel and sustainable transport	67%	0	0	1	2	2	3

Summary of Completion

Issue	Completion %
W1. Healthy Places - Total Wellbeing	50%
W2. Indoor environmental Quality	67%
CE1. Circular design and construction	100%
CC1. Operational emissions	67%
CC2. Embodied carbon	100%
CC3. Water consumption	100%
CC4. Environmental security	67%
CC5. Active travel and sustainable transport	67%

We confirm that NHSGGC have established a Climate Change and Sustainability Governance Group to oversee their transition to a net-zero emissions service, and the project team are working collaboratively with this group to ensure this investment aligns with their work across the board.

4.2.9 Hai Scribe

Following the period of design re fresh, a Stage 1 HAI-Scribe was completed for September 2022. This has been followed up with the completion and sign-off for the Stage 2 HAI-Scribe in January 2024.

The nature of the RND projects offers a number of advantages, in terms of Hai Scribe Assessment. This is a standalone new build facility, with reasonable distance to adjacent facilities. In addition, there is no public or patient access to this facility. However, a number of hazards were identified, and mitigation measures agreed to ensure staff, patients and public remain staff during these works. A key action to come out of the review is the need for close liaising with the adjacent Clinical Teams on site to ensure that appropriate mitigation measures are implemented, particularly around the control of dust.

Measures have already been agreed and these will feed into the Construction Phase H&S Plan.

4.3 Risk

4.3.1 Key Principles

Development of the risk register has been carried out in collaboration between the NHSGGC project team, stakeholder group, project board and the appointed consultants, the Principal Contractor, and HUB West Scotland. A review of the risk register takes place at regular intervals to ensure the register remains a live document allowing risks to be added, amended, and removed and mitigation measures to be updated as required.

Risk identified is separated into two categories, these being Development Risk, managed by the HUB West Scotland and Operational Risks, managed by NHSGG&C. These two categories divided into the following subgroups for managing:

- Development Risks
 - Site Issues
 - Utility Issues
 - Third Party Issues
 - Design Issues
 - Commercial Issues

- Operational Risks
 - Asset / Facility
 - Client Brief
 - Project Delivery
 - Business Case
 - Financial

A copy of the current Risk Register is provided as Appendix F

4.3.2 Transfer of Risk

The key principle is that risk has been allocated to the party best able to manage it, with the objective to optimally allocate risk. Inherent construction and design risks are transferred to the HUB West Scotland. Risk transfer is summarised in table 11 below.

Table 11 - Risk Allocation

	Risk Category	Potential Allocation		
		Public	Private	Shared
1	Client/business risks (title, ground conditions, where not disclosed)	100%	0%	
2	Design	0%	100%	
4	Development and construction (note dark ground contamination remain with public)	0%	100%	
5	Transition and implementation (commissioning, migration, Board responsibility)	0%	100%	
6	Availability and performance (with defect risk remaining with HUB company/contractor for a period of 12 months following completion)	100%	0%	
7	Operating	100%	0%	
8	Revenue	100%	0%	
9	Termination	50%	50%	✓
10	Technology and obsolescence	50%	50%	✓
11	Control	100%	0%	
12	Financing	100%	0%	
13	Change in law	100%	0%	
14	Pandemic	0%	100%	

4.3.3 Shared Risk

The Territory Partnering Agreement (to which NHS Greater Glasgow and Clyde form is a signatory) requires Participants to enter into a Design Build Development Agreement (the Standard form Project Agreement) for Approved Projects. The Template Standard Project Agreement is contained as a Schedule to the Territory Partnering Agreement and must be entered into in substantially the form set out in that Template. All changes to the Standard Project Agreement require SFT approval, which will only normally be given to changes required for project specific reasons or to reflect changing guidance or demonstrable changing market circumstances.

In respect of allocation of risk this has been addressed in a transparent manner.

The key features of the HUB Initiative 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.
- A clear and transparent system is in place.
- A level of cost certainty is determined.
- A quantitative and qualitative analysis is used Risk owners are clearly identified to ensure that whoever is best placed to manage, mitigate, and control specific risks is responsible to do so.

4.4 Commercial Arrangements

There are no risks associated with third party tenancy agreements in relation to this development.

4.5 Payment Structure

The RND Dispensary is a Scottish Government capital funded project as a Design & Build (DBDA). Under DBDA, an agreed cash flow will be agreed at Financial Close and monthly payments will be made to HUB West Scotland during construction after approval of monthly interim certificate.

Connection and service connection changes are paid direct by NHS GGC to the provider.

4.6 Project Bank Accounts

Following on from publication of CPN 1/2019 we will be adopting the use of Project Bank accounts for this project, which was included in the tender documentation. This has successfully been done on other similar projects. This will be followed for the RND Dispensary and will be in place prior to any substantive works being undertaken.

4.7 Contractual Arrangements

The HUB initiative in the West Territory is provided through an institutional public private partnership bringing together local public sector participants and a Private Sector Development Partner. The HUB initiative was established by Scottish Futures Trust who continue to be programme managers. HUB West Scotland is responsible for the procurement, development and delivery of design and construction services. HUB West Scotland will subcontract the design and construction delivery obligations of the Project Agreement to its building sub-contractor under a Construction Agreement with whom professional team appointments will also be established. Direct agreements, professional team warranties and collateral warranties from sub-contractors with design responsibility will be provided to NHS GGC.

The HUB programme supports both revenues funded as well as capital funded models of project delivery. The RND project is to be delivered as a capital funded project utilising the Scottish Future's Trust standard Design and Build Development Agreement (DBDA) with any derogations from the standard form position agreed in advance of contract close. HUB West Scotland will therefore be responsible for the procurement, development and delivery of design and construction services. Options are also being explored through the HUB initiative for the provision of complementary facilities management and lifecycle services separately from the DBDA.

HUB West Scotland will delegate the design and construction delivery obligations of the Project Agreement to its building contractor under a Construction Agreement with whom professional team appointments will also be established. Direct agreements, professional team warranties and collateral warranties from sub-contractors with design responsibility will be provided to NHS GGC. It is proposed that, as an adaptation to the standard form, NHS GGC and HUB West Scotland will jointly appoint an Independent Tester who will also perform an agreed scope of work that includes such tasks as undertaking regular inspections during the works, attending site progress, reporting on completion status,

identifying non-compliant work, inspections, and certifying completion. Delay Events, Relief Events and Compensation on Termination will follow the standard contract positions with any project specific amendments agreed prior to financial close.

NHS GGC will retain responsibility for the provision of certain items of equipment (Group 2 and Group 3 items of equipment) which will be procured, supplied and for Group 3 items will also be installed by NHS GGC.

Project of this specialist nature require to follow a DQ / IQ / OQ / PQ qualification process, which is overseen by the Verifier. This position will be appointed by NHS GG&C and achieving OQ Operational Qualification status is integral in achieving Practical Completion.

4.8 Personnel Implications

The management of soft facilities services will continue to be provided by NHS GGC. Therefore, there are no anticipated personnel implications for this contract. No staff will be required to transfer to a new employer and therefore the alternative standard contract provisions in relation to employee transfer (TUPE) have not been used.

Part of the bid submission identifies those individuals who will deliver the project. Should any of these individuals need to be replaced or leave their position; a replacement will need to be proposed along with identification of their experience and suitability. Review and formal approval of any individual will need to be provided.

At present there are no proposed changes to the workforce arrangements. Working hours and workload will remain as existing but within a new facility. Should works be developed on the Gartnavel site, there will be an amended workplace location. All staff are aware of the proposed relocation and relevant staff unions and Human Resources will be advised so any implications for employees can be discussed and agreed.

4.9 Facilities Management and Lifecycle Maintenance

NHSGGC have decided that the project will adopt the default arrangement of in-house maintenance arrangements supported by the required budgets and resources.

4.10 Contractual Compliance

The Design Compliance standards for this project has been developed and agreed in the project specific User Requirements Specification (URS) and the Authorities Construction Requirements (ACR`s). These have been continually updated throughout the OBC and FBC stages to ensure that these are robust reflection of NHSGGC requirements. This information forms part of NHSGGCs contract data. Further requirements to comply with all SHTMs, HTMs, HBNs etc. are covered by the HUB Partnering agreement. Any element of non-compliance is captured in the form of a derogation schedule. This schedule is reviewed by the Project Board, the delivery Group, and the Authorising Engineers and by NHSGGC with an agreed schedule then forming part of the contractual documentation.

Radionuclide Dispensary

Financial Case



5 Financial Case

The Financial Case for the preferred option, the relocation of the RND service to Gartnavel General Hospital, will set out:

- The Capital Costs and associated funding.
- Revenue Costs and associated funding
- That the project is affordable.

It should be noted that since the OBC was approved in March 2023, the procurement model has changed from Frameworks Scotland 2 to a DBDA arrangement with HUB West Scotland (HWS). HWS have taken the original designs at that point and refined them further. The Board incurred design and professional advisor costs up to this point of £1.041m which was fully funded by SG, these are included in the overall capital costs. Since OBC approval, there has been a period of high inflation which has been particularly acute within the construction industry. Coupled with this, equipment costs estimated in the OBC have risen considerably too- the service is unique within the West of Scotland with highly specialised equipment. To mitigate these potential increases, we included a significant optimism bias allowance in the OBC which has reduced the increase in the overall capital project cost. The overall Capital Costs position has increased from £20.882m in the OBC to £21.475m, an increase of £593k or 2.8%.

These costs have been verified by our Capital Finance Department within NHSGGC. Revenue implications have been supplied by Revenue Finance colleagues where applicable.

5.1 Indicative Capital Costs

Market testing of the Stage 4 Design commenced in February 2024, and the resulting HWS Cost Report was received on 16th April 2024. Overall, the Stage 2 tender returns are generally in line with Stage1 Pricing Report when adjusted for design development risk and inflation.

The Prime Cost has been undergone 80.62% competitively tendered to at least three subcontractors in accordance with the agreed method statement. Work Packages with one / two returns this increases this to 98.52% tendered.

Table 12 below details the anticipated construction costs for the new facility with the following assumptions:

- Construction start date: August 2024
- Construction Completion / Operational Qualification (OQ): March 2026
- 9–12-month NHS GG&C Production Qualification (PQ) to achieve MHRA production license.
- Prime Cost allows for an inflation uplift to mid- point construction within the total cost. As inflation had previously been volatile and following market returns, prices have somewhat stabilised. Following previous arrangements with NHSGGC and HWS a fixed price submission has been delivered.
- Contractor risk has been capped at 1%, with overheads & profit capped at 4%.

- Due to the specialist nature of the procurement of Technetium Isolators, which are a high value purchase from a narrow market in terms of suppliers, Optimism Bias has been included at 2.5% of the capital cost which is higher than usual but reflects that costs for this equipment and associated works have not been finalised.
- Equipment –Due to the requirement for double running of both existing and new facilities for continuity and commissioning, the age of the equipment and an upgrade to current production practices, all existing clinical items will require to be replaced.
- VAT at the current rate of 20% has been included on all applicable costs.

Table 12 - Capital Cost Summary

Capital Cost	OBC	FBC
DBDA construction related costs	12,881,186	£12,814,782
Total other DBDA construction related costs	1,785,166	£1,920,433
Total DBDA Costs	14,666,352	£14,735,215
Total furniture and equipment	1,081,000	£1,492,000
Total estimated cost before fees	15,747,352	£16,227,215
Total Direct NHS Fees	440,000	£386,160
VAT	3,237,470	£3,322,675
Total estimated cost including VAT and fees but before optimism bias	19,424,822	£19,936,050
Allowance for optimism bias	1,456,862	£498,401
Total Forecast Costs (DBDA Only)	20,881,684	£20,434,451
Pre-Procurement Change Costs (includes VAT)	0	£1,040,887
Total Forecast Cost	20,881,684	£21,475,338

5.2 Indicative Capital Spend & Funding Profile

The relocation of the RND has been in planning since financial year 2018/19 and was initially funded by GGC in the earlier stages as the Initial Assessment was developed. Since then, SG have funded the project in full, although during the pandemic, work naturally stalled on progression of the scheme given the unprecedented pressures on the NHS at the time. There is a slight mismatch on funding which will be smoothed out during the construction element of the project.

Following the SG communication to Board Chief Executives in December 2023 reviewing the overall funding NHSGGC are proposing to underwrite the capital spend over the next

two years initially from our Capital Formula Allocation and will work closely with SG Capital Finance to inform on spend and funding. This proposal reflects the business criticality of this service regionally and nationally should licencing for this site be withdrawn. If funding becomes available nationally, then NHSGGC have contingency plans in place to reallocate funding to other schemes or equipment depending on the value available or the deliverability of schemes.

5.2.1 Profile of forecast capital expenditure.

Table 13 - Profile of forecast capital expenditure.

Financial Year	Actual / Forecast	Total Capital Spend £000s	GGC Funding*	SG Funding £000s	Total Cumulative Funding
2018/19	Actual	6	6	0	6
2019/20	Actual	198	198	0	204
2020/21	Actual	36	0	100	304
2021/22	Actual	14	0	200	504
2022/23	Actual	676	0	524	1,028
2023/24	Actual	1,094	0	1,094	2,122
2024/25	Forecast	6,914	6,914	0	9,036
2025/26	Forecast	11,935	11,935	0	20,971
2026/27	Forecast	602	0	504	21,475
Total		21,475	19,053	2,422	

* GGC propose to utilise some of our Formula allocation in those years.

5.3 The Financial Model for the Preferred Option

The Financial Model complies with the Board's accounting policies and with the relevant applicable accounting standards. Compliance with accounting standards relating to the NHS Scotland Annual Accounts Manual and the Capital Accounting Manual were followed.

5.4 Analysis of Prime Sum and cost variations

The alteration in procurement approach was anticipated to yield substantial cost reductions for the project. However, contrary to expectations, this has not materialized due to discrepancies in costs across various works packages or specific items compared to the Original Business Case (OBC) stage. Most of these costs, would have been applicable irrespective of the procurement route chosen, and would have led to a considerable cost escalation if left unaddressed.

As previously mentioned, the Stage 2 tender returns generally align with the Stage 1 Pricing Report when adjusted for design development risk and inflation.

Rigorous cost management and selective application of value engineering have partially alleviated the significant upward cost pressures. Additionally, the optimism bias allowance included in the OBC has curbed the extent of the project cost increase.

Below, we outline these discrepancies and provide corresponding explanations:

5.4.1 Prelims in relation to contract duration increase (52 weeks to 72 weeks) - £350K

The projected programme under the framework contract, at OBC stage, indicated a 52-week completion period. Whilst this was shorter than expected the GG&C Team were never comfortable that this was achievable, particularly when the complex DQ / IQ / OQ /PQ commissioning and validation process is considered. In addition, neither the Design Team nor the Clean room Contractor agreed with the programme and their buy-in is critical.

We now have comfort with the current programme, with a Primary Contractor that historically has hit projected completion dates.

5.4.2 Clean room design - £980K

The scope for the clean room works is captured within the URS. This required to be evolved in greater detail as we moved into FBC stage, and this could only be provided by a Specialist Designer / Contractor.

This is a very niche field, where specialisation come at a premium and loss of competitive edge. This has unavoidably been reflected within this cost uplift as we have gone through the FBC stage.

5.4.3 Addition of automatic fire shutters - £15k

Manual shutters were included at OBC stage in error. HUB picked up on this and corrected as the project moved into FBC stage design. This correction has been supported by GG&C Estates and NHS Assure.

5.4.4 HUB Fee to Stage 1 review - £227K & Additional survey fees - £37k

The decision supported by Scottish Government to move off the Framework 2 procurement model onto the HUB model, required the opportunity for HUB West Scotland to assess the robustness of the previous Stage 1 proposals. This was supported by an agreed fee. However, this highlighted a number of gaps in the existing surveys that required to be addressed before moving onto Stage 2 design.

5.4.5 Equipment costs - +£441K

A number of factors have changed since OBC stage.

- NHS Equip were appointed to support the RND project in May 2023. This picked up several items previously excluded.
- The decision was made that these should become Group 1C items rather than group 2. Whilst this removes an element of risk, it results in Main Contractor mark up on this equipment cost.
- The MHRA have set a new requirement that the facility must now use VHP generators.
- Following completion of the 1:50 layouts, the Radiation Protection Advisor has set the requirements in relation to radiation monitoring, which has resulted in a near doubling of the monitoring equipment proposed for the facility in operation.
- It has been established that there requires to be double running of the old facility and the new facility during the MHRA licensing period. Therefore, there is no equipment transfer.

5.4.6 Value Engineering, various items- £560k

To mitigate against the cost uplifts several adjustments were made that provided favourable cost benefits without impacting on the performance or quality of the facility the end product. This includes an overall reduction in GIFA, a switch from concrete frame to steel frame and a switch from ground source heat pump to air source heat pump. In overall effect of the above cost pressures have seen the Capital Costs position increased from £20.882m in the OBC to £21.475m, an increase of £593k or 2.8%.

5.4.7 Pre-Procurement Change Design Fees- £1.040m

Design team fees, which were inadvertently excluded from the Outline Business Case (OBC) submission, have been rectified and incorporated into the Final Business Case (FBC).

5.5 Indicative Recurring Revenue Costs

Table 14 - Recurring Revenue Costs

	OBC	FBC
Recurring Revenue Costs	£000's	£000's
Clinical Service Pay	41	224
Clinical service non-pay	0	68
Building Related Running Costs	94	297
Life Cycle Costs (Average)	240	240
Depreciation	524	580
Total Additional Revenue Costs	899	1,409
Sources of Funding:		
NHSGGC	165	365
WoS Boards	210	464

SG (Depreciation)	524	580
Total Sources of Funding	899	1,409

As noted in the Initial Agreement, the clinical service was expected to be mostly a “lift & lay” from the existing facility to the new one. However, the change to Isolators has led to the requirement for 2wte AfC Band 3 operators and the MHRA have indicated a requirement for additional Quality Assurance staff resource: - 1wte AfC Band 7 & 1wte Band 8a specialists.

The increase in clinical non pay costs is also due to the service upgrade delivery of the introduction of isolators & particle counters which are not currently used in the existing facility, which are associated service contracts. In addition to this annual cleanroom & AHU validation have been included to the enhanced facility.

The project will deliver a new building on a larger footplate, therefore, there is an increase in non-clinical recurring revenue costs such as Heat, Light & Power, cleaning & rates costs. The costs for these have been calculated using the existing facility current values and adjusted as follows:

- **Heat Light & Power** – From our advisors, predicted annual energy usage, verified by the Board’s in house energy team who supplied an annual cost estimate, less existing costs on the current site.
- **Domestic & Portering** – Using the GIFA of the preferred option, costs to clean the site using existing rates.
- **Rates** - As per our Property Advisors- cost for new building.
- **Lifecycle replacement** – Costs have been supplied by our Advisors and the average cost per year over 60 years is £240,153 or £14.4m over the 60 years. No costs are forecast within the first 4 years of the new building opening. This covers both capital and revenue cost replacements.
- **Depreciation** - The existing facility is fully written down in Land, Building and Equipment. Land & Buildings were impaired due to NHSGGC no longer owning the site and equipment is fully written down due to the useful economic life being fully utilised.

The NHS Scotland Capital Accounting Manual has been followed and the following lives have been used to calculate projected depreciation for the assets.

- Buildings – 50 years
- Equipment – 10 years
- IT – 5 Years

5.6 Non-Recurring Revenue Costs

Table 15 - Non-Recurring Revenue Costs

	OBC	FBC
Non-Recurring Revenue Costs		£000's
Decommissioning of existing facility	186	165
Service Transfer Costs	0	163
Double Running Costs	0	123
Signage, Wayfinding ect.	0	15
Post Project Evaluation	0	2
Total Non-Recurring Revenue Costs	186	468
Sources of Funding:		
NHSGGC		206
WoS Boards		262
Total Sources of Funding		468

Decommissioning costs have been calculated and updated using costs from other buildings we have moved from previously on this site. An allowance has been included for the removal and transportation of hazardous substances as well as 2 weekends working for staff to facilitate the move to the new facility when construction is complete. To support the service move, 2wte AfC Band 8a's have been included – a Production Manager & a Quality Assurance pharmacist in line with the project timeline of 12 months, to ensure the smooth transition from the old site to the new site becoming operational. As both new & old sites will need to be operational for a period of up to 6 months, forecast double running costs for additional cleanroom clothing & microbiological testing and supplies have been included as a non-recurring cost.

We have also included a small allowance for signage & wayfinding as well as post project evaluation with external organisations if required.

5.7 Affordability

As noted previously in the Capital Funding Section above, NHSGGC will underwrite the capital spend initially from our Capital Formula Allocation and will work closely with SG Capital Finance to inform on spend and funding. If funding becomes available nationally, then NHSGGC have contingency plans in place to reallocate funding to other schemes or equipment depending on the value available or the deliverability of schemes.

A paper was shared at a meeting of the West of Scotland Directors of Finance in October 2023 noting the revenue costs that were included in the OBC and proposing that additional revenue costs would be funded regionally across the West of Scotland Boards. These indicative costs and funding split were approved in principle. An updated paper containing the revised costs will be circulated at their meeting in June 2024. Costs will be allocated to Boards using the normal redistribution methods (top-sliced and added to the current SLAs for recovery). As for the depreciation costs, which are most of the additional revenue costs, SG will fund these as part the annual depreciation exercise.

5.8 Stakeholder Support

Through the governance process detailed in Section 6, the project has consulted with internal NHSGGC stakeholders. This business case and the options that have been considered are supported by the Project Board with representation from NHSGGC stakeholders.

As the facility provides a service to other health boards as highlighted in section 2, the project has previously been presented to the West of Scotland Directors of Pharmacy group and the NHS Scotland Chief Pharmacist both of which confirmed support for the project and specifically the proposals to locate the facility within the NHSGGC geographical footprint.

The options developed in this OBC were presented to the West of Scotland Directors of Pharmacy group on 22 March 2022, with the group reconfirming their support for the project and the proposal to locate a new facility on the Gartnavel site. The FBC proposals will now be shared with the other health boards in the West of Scotland to confirm their ongoing support for the project and the service delivery proposals.

Radionuclide Dispensary

Management Case



6 Management Case

The main purpose of the Management Case is to demonstrate that the organisation is ready and capable of delivering a successful project.

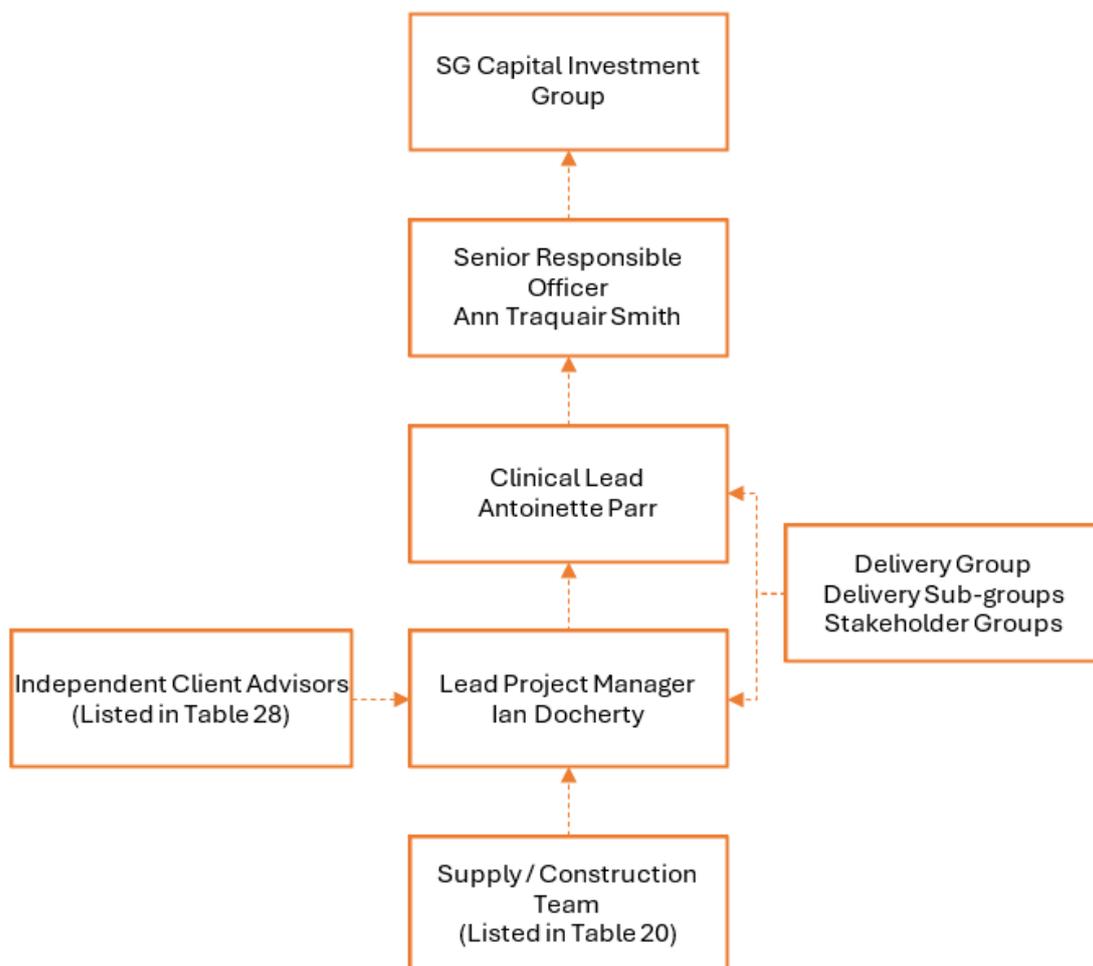
NHS Scotland Assure completed a KSAR Report in June 2022, which identified that there were failings in the robustness of the proposed OBC. This including gaps in the governance processes and a need to review and record decisions taken some 2 years prior. GG&C fully embraced these comments and undertook an 8-month refresh of the OBC submission that went all the way back to the Client Brief and through the design and engagement process. The opportunity was taken to bring on board any changes in process or technology that could be incorporated to improve the service out puts. The Governance process was restructured, and wider stakeholder involvement was identified.

6.1 Project Management Proposals

6.1.1 Reporting structure and governance arrangements

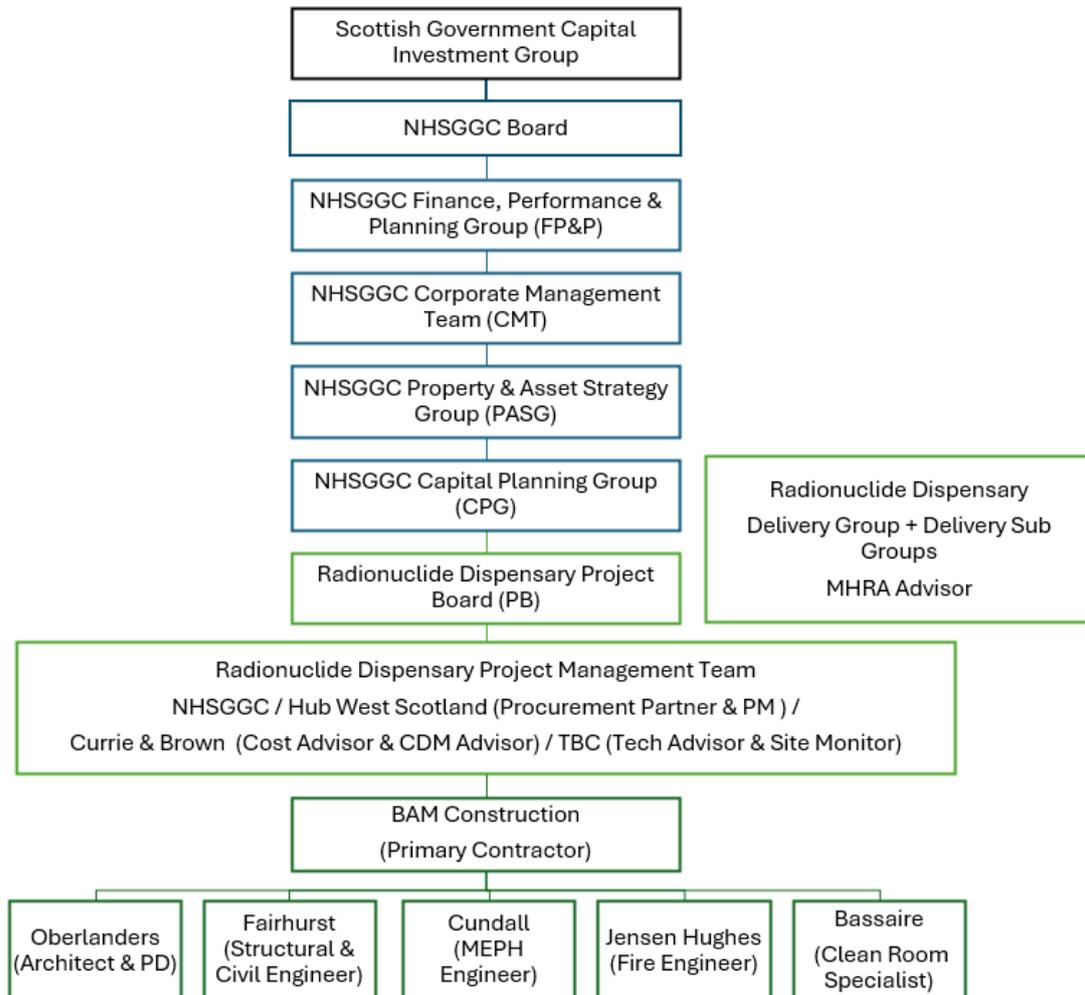
The project's reporting structure is shown below. A more detailed explanation of the key roles and responsibilities is provided in Table 16.

Table 16 - Reporting structure and governance arrangements



In support of the project reporting structure several governance groups provide oversight of the project. This governance structure is made up of project level, NHSGGC governance and Scottish Government groups. The structure and reporting lines of these groups is outlined in Figure 15 below.

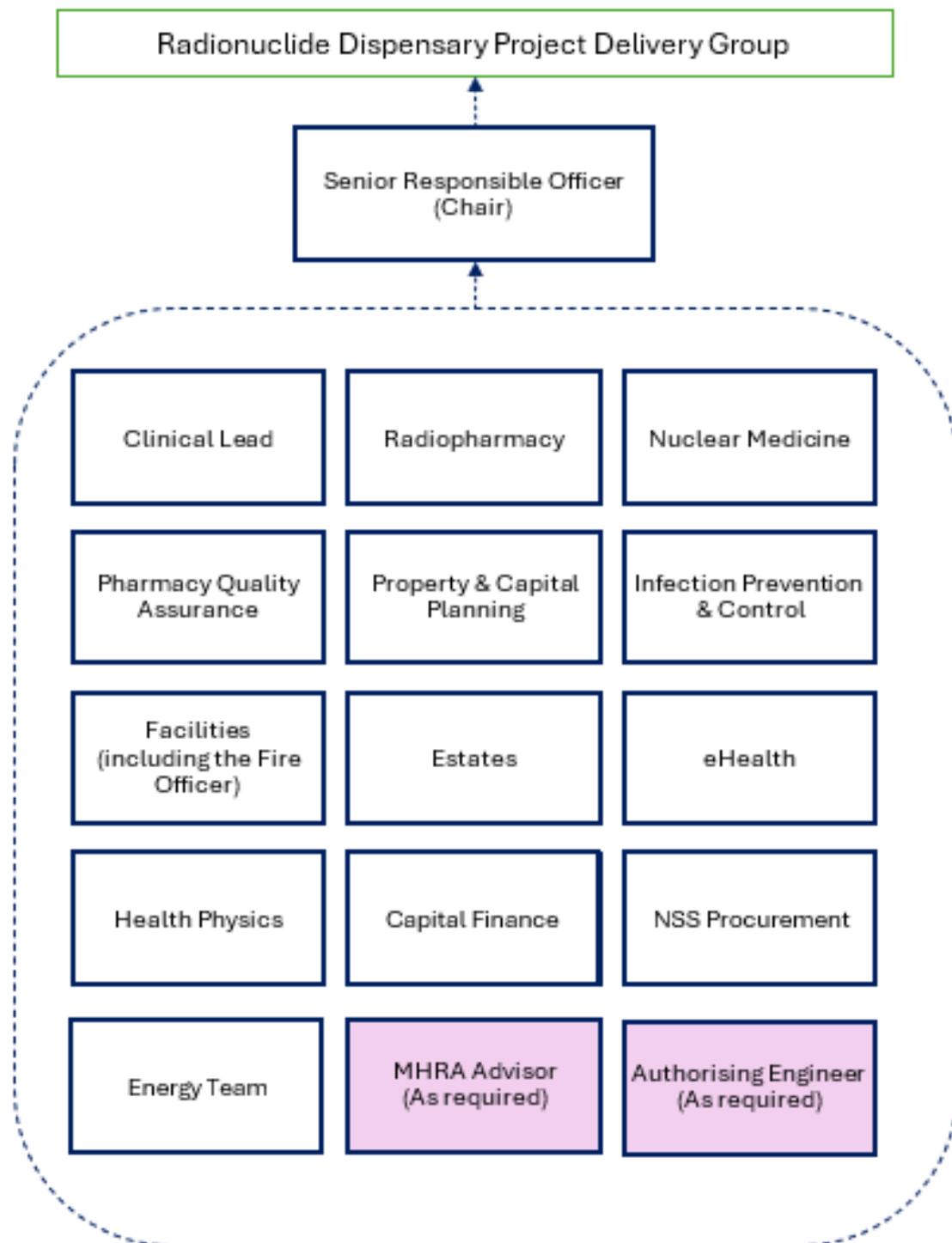
Table 17 - Project Governance Structure



The Radionuclide Dispensary Project Board reports to those groups identified above. Except for the Scottish Government Capital Investment Group, these Groups / Committees oversee the delivery of all NHSGGC Capital projects. These Groups are chaired by the appropriate Director / Chief Executive / Board Member and include representatives from other Project Boards within NHSGGC, Capital Planning, Facilities, and Finance.

Due to the technical complexity of the project a Project Delivery Group and focus Delivery Subgroups have been established during the design refresh stage to provide technical oversight as the project develops. This group is in the first instance chaired by the Senior Responsible Officer, or alternatively Chaired by the GG&C Project Manager as deputy. The Delivery Group comprises the stakeholders identified in Figure 3. This group will also act as the link to the MHRA to ensure communication and engagement is maintained as the project is developed.

Table 18 - Project Delivery Group



Due to the technical nature of this project, 10 out of the 19 Project Board Members also being active members of the Delivery Group and Delivery Sub-groups. This offers the advantage that it ensures that there is detailed knowledge of the project's technical aspects at Project Board Level.

6.1.2 Key Roles and Responsibilities

A Project Board has been established comprising of the Core Project Team supported by those detailed in Table 18. Regular project board meetings are held along with those scheduled at key milestones during the project programme.

Table 19 - Project Board Members

Project Board Members:		
Project Role:	Named person:	Experience:
<p>Organisation's senior business / finance representative - Representing the organisation's business & financial interests.</p>	<p>Ann Traquair Smith Director of Diagnostics (Chair)</p>	<p>Ann has 33 years of NHS experience, 16 of those years as a senior manager level, during which time she has been the Senior Responsible Officer (RSO) on many high value capital projects, including the New Victoria Infirmary theatre suite/day ward and the new Audiology and ENT treatment room capital builds in the QEUH. As well as various capital replacement of Air handling Units with a variety of critical care and theatres suites throughout NHSGG&C. As SRO for these projects Ann was responsible for ensuring the project was met on time in line with requirements of my organisation to the stand required by relevant regulatory authorities.</p>
	<p>Michael McGrory Senior Capital Accountant</p>	<p>Michael is the Senior Capital Accountant within NHSGGC's Capital Finance Department. He has extensive experience of delivering Capital Projects, both minor and major and also through the SCIM process and has reviewed the costs for this project with the Board's Cost Advisors to ensure they are robust. His role on the Project Board is to provide financial advice as the project progresses, advise Scottish Government Capital Finance colleagues of any financial issues and monitor and report spend.</p>
	<p>Jill Flanagan Head of Finance, Diagnostics & Regional</p>	<p>Jill's role as Head of Finance (HOF) is responsible for the overall management and performance of the two Directorates finance provision which include the services based in the Radionuclide Dispensary. In this role, Jill leads on the implementation of developments (Short, Medium, and Long-Term) including capital and revenue developments. Her specific purpose on the RND Board is to oversee the operational financial management arrangements and revenue implications for any change to services as part of this development.</p>

<p>Senior service representative - Representing the end user interests.</p>	<p>Antoinette Parr General Manager Medical Illustration & DCPB (Deputy Chair)</p>	<p>As General Manager Antoinette is responsible for the management of the Department of Clinical Physics and Bioengineering, the Radionuclide Dispensary is part of this overall service. Over a number of years through a number of transitional phases, Antoinette has worked very closely with this team providing support and guidance. She has 38 years of NHS managerial experience crossing many disciplines. Her role on the Project Board is to bring these skills and vast knowledge to each phase of the development providing a link across the project, maintaining a focus, and delivering on the actions while keeping to the timeline.</p>
	<p>Kay Pollock Head of Radio Pharmacy</p>	<p>As head of the service Kay has experience and knowledge of how the whole facility operates. This experience includes the MHRA licensing requirements and liaising with those providing a service to or receiving a service from the facility. Kay has worked in NHS manufacturing facilities for 30 years.</p>
	<p>Elaine Millen Production Manager for the Radionuclide Dispensary</p>	<p>Elaine has worked in RND for over 30 years and since 2009 has been the Production Manager and Lead Technician. She brings vast experience of specific operational needs, procedures, and policies as well as existing failings.</p>
	<p>Sandy Small Consultant Physicist, Head of Nuclear Medicine (NW Sector)</p>	<p>Sandy is responsible for delivery of Nuclear Medicine services (including PETCT and Therapies) on the Gartnavel Campus, he also has a role providing Medical Physics Expert advice to the existing Radionuclide Dispensary. Sandy's role on the project is twofold: 1. To provide Medical Physics Expert (MPE) and general scientific advice to the project and 2. To represent the views of the Radionuclide Dispensary service users / customers across the West of Scotland.</p>
	<p>Andrew Reilly Scientific Director</p>	<p>As professional and scientific lead for clinical physics and bioengineering services across NHS Greater Glasgow and Clyde Andrew is responsible for the operational delivery, performance, and ongoing development of both the radionuclide dispensary (RND) and the wider nuclear medicine service, along with ensuring a smooth working relationship between these services.</p>

<p>Senior Technical / Estates / Facilities representative - Representing the technical aspects of the project</p>	<p>Ian Docherty Project Manager</p>	<p>Ian has been within Capital Planning for 15 years and Senior Project Manager for 9 years.</p> <p>Ian has been the GG&C Project Manager for number of major projects in recent years including Eastwood, Gorbals and Clydebank Health and Care Centres with a combined value of £57 million. Ian's role encompasses the general GG&C management of the Capital Project and provide the conduit for the various service interfaces with the Design Team. His key areas of focus are on the design and technical review of the proposals during the design and detailed phase and to see the project through the construction phase to handover.</p>
	<p>John Donnelly Program Director – Major Projects.</p>	<p>Registered Architect, experienced within the private sector designing, developing, and delivering projects from inception through to completion.</p> <p>Experienced project led to design teams developing masterplans, individual commercial projects, and large-scale social housing utilising traditional and design & build contract processes.</p> <p>Working within NHS since 2000 and currently responsible for managing the team delivering Property Management, Asset Management and Project Management of capital projects across the NHSGGC board area.</p> <p>Board technical lead for delivery of over £200m of projects through the HUB programme utilising DBFM and DBDA contracts.</p> <p>Chair of SPAG Building Design and Construction Group and author of its Quality Matters report.</p>

	<p>Andrew Baillie Depute Program Director – Major Projects.</p>	<p>Qualified in construction management, with over 20 years' experience delivering projects using various contract structures.</p> <p>Andrew holds professional registrations with the Chartered institutes of Architectural Technologies and the Chartered Institute of Building.</p> <p>Over the last few years has led on the delivery of a number of healthcare projects in NHS GGC including Maryhill Health & Care, Woodside Health & Care centres, Inverclyde and Stobhill mental health wards as well as the Northeast HUB.</p> <p>Experienced at managing projects through business case and governance processes. Experienced using the HUB procurement route using either the DBDA or DBFM contract. Accomplished in managing building contracts with complex design, technical, legal, and commercial workstreams as well as detailed technical reviews by key stakeholders. Also completed numerous projects using either JCT or NEC3/4 contracts.</p> <p>Prior to joining the health board, Andrew worked as the in-house technical advisor for the new Ayrshire College £60m Kilmarnock campus.</p>
	<p>Donald Bain Site Estates Manager</p>	<p>Donald has 37yrs NHS experience and has worked within an Estates function for all of these years. He has knowledge at depth of the current SHTM's and will be able to assist with technical input into the project. The build is expected to be on the GGH site, which is one of his hospitals and as such, it will be extremely beneficial to for him to be able to see this process from start to finish. There will also of course, be multiple requests made of Estates within this process, and as such, Donald's involvement will allow him to direct such requests to the appropriate people and ensure this is done in a timeous manner.</p>

	Joanne Freel eHealth Representative	The project has previously engaged with David Daly for the eHealth team. David has recently retired from NHSSGC, and his replacement has now been confirmed.
Stakeholder representative(s) - Representing stakeholders' interests:	Allana Kelly Infection Prevention and Control Lead Nurse	Allana is a qualified registered nurse with a post graduate diploma in Infection Control. She qualified in 2009 and worked in various posts within the medical directorate NHSSGC before moving into infection control. In her role within infection control Allana worked closely with estates and capital planning on projects.
	Aleksandra Marek Consultant microbiologist /Infection Control Doctor,	<ul style="list-style-type: none"> • Fully registered with GMC • Consultant Microbiologist • Provides leadership to medical staff within Infection Control on clinical issues. • Act as a key member of the Senior Infection Control Team • Support the Infection Control Manager • Work closely with the ICM and the other members of the Senior Infection Control Team to develop the service and implement change
	David Gentle Head of Health Physics	David is the Head of the Health Physics section which provides advice regarding radiation protection matters to the Greater Glasgow and Clyde Health Board. This includes providing advice on compliance with regard to the Ionising Radiations Regulations (IRR17), the Environmental Authorisations (Scotland) Regulations (EASR18), the Carriage of Dangerous Goods Regulations 2009 (CDG) and the Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPPPIR). David is also a certificated Radiation Protection Adviser under IRR17 and appointed by NHS GG&C to this role. Together with his colleague Michael Watt he will provide advice to ensure the new facility will meet all extant regulations relating to work with ionising radiations.

	<p>Michael Watt Consultant Clinical Scientist, Health Physics</p>	<p>Michael is a Radiation Protection Adviser (RPA) working in the NHS GGC Health Physics team, with over 10 years' experience providing radiation safety and legal compliance advice to radionuclide production facilities. Currently he is the lead RPA to both the Radionuclide Dispensary and the PET Radiopharmaceutical Production Unit. It is a requirement of the Ionising Radiations Regulations 2017 that an RPA must be consulted on the plans for the new facility, and he will also provide advice relating to the Environmental Authorisations (Scotland) Regulations 2018 and the Carriage of Dangerous Goods Regulations 2009. Michael's advice will address radiation safety and compliance with the regulations, and may have implications for the design, layout, and construction of the facility along with the equipment installed within it.</p>
	<p>Lynn Morrison Regional Quality Assurance Pharmacist</p>	<p>As Regional QA lead for pharmacy Lynn is lead for the GGC MHRA multi-site licence. She has worked in pharmacy QA for over 30 years and has extensive experience in pharmacy new builds, especially aseptic facilities; – New Victoria Hospital 2008/9, Forth Valley Royal Hospital 2008, Queen Elizabeth University Hospital and Royal Hospital for Children 2014/2015, Dumfries, and Galloway Royal Infirmary 2018. Pharmaceutical Specials Service, 2019. Experience and skills – design and installation of production and aseptic facilities, dispensaries, URS development, IQ, OQ, PQ and development of validation master plans, validation test result review and facility sign off. Process mapping and QMS development.</p>
	<p>Andrew Ferguson E-Health SDPM</p>	<p>Andrew has worked in eHealth within the NHS in Scotland for 25 years and a senior manager in NHSGG&C for the last 10 years. Andrew's background has been in operational service delivery and his current role is the eHealth Lead for Diagnostics where his key area of focus is the operational support and strategic delivery of Digital services within Diagnostics.</p>

Independent Client Advisors have been appointed to support the project from a technical perspective as well as support the management and delivery of the works. The appointments are made from a mixture of external consultant appointments as well as internal NHSGGC specialists.

Table 20 - Independent Client Advisors

Independent Client Advisors:	
Project Role	Organisation and Named Lead
Project Manager	HUB West Scotland - Gary Smithson
Joint Cost Advisor	Currie & Brown - Ron Smith
CDM Advisor	Currie & Brown - Alan Pollock
Legal Advisor	CMS - Ailsa Ritchie
Insurance Advisor	WTW - Beverly Bracey
Procurement Lead (Equipment)	NHS Assure Equipe - Ian Laidlaw
Technical Advisor / Quality Monitor	TBC - * Framework pending
Validator- Specialist Systems	TBC
Commissioning Manager	TBC

* Note – GG&C are in the final stages of establishing a Board wide Framework Agreement for the appointment of Capital Projects Technical Advisor and Site Monitor. This appointment filled from within this Framework.

6.1.3 Project Programme

A detailed project programme is in place with the key milestone dates summarised in Appendix E. The provision of the new facility is time-critical to maintain the support of the Medicines and Healthcare Products Regulatory Agency (MHRA). The MHRA are sighted on elements of risk associated with the current facility and arrangements. The smooth progress of this project was delayed in OBC whilst the OBC design re-refresh took place. In addition, the change of procurement route from Framework 2 to the HUB model at early FBC design stage has also had an impact and resulted in several surveys having to be completed in greater depth to reduce project risk. However, that has ultimately resulted in a significantly more robust project, which we hope to gain the support of NHS Assure KSAR and NDAP processes in the coming weeks.

The key milestones are as follows:

Table 21 - Project Programme

Key Milestone	Date
OBC SGCIG Approval	March 2023
FBC SGCIG Approval	September 2024
Commencement of Construction Stage	October 2024
Practical Completion / Operational Qualification OQ	May 2026
Performance Qualification PQ / MHRA License	MHRA direction
Full RND Service Operational	MHRA direction

We previously had considered advancing an enabling works contract. However, this is no longer the case and construction works will now be undertaken in a single-phase contract.

Practical Completion will be fulfilled with the successful close out of the Operational Qualification and Validation process. Production Qualification involves RND Service satisfying MHRA with various operational aspects which are not part of the contract works and therefore can't affect the Contract status of the Practical Completion.

6.2 Stakeholder Engagement

6.2.1 Operational and Service Change Plan

The RND Service is a tight pool of staff of between 15-18 people. A change management strategy has been considered to support a seamless transition of service to the new facility.

Service output will remain consistent with little anticipated changes to staffing levels. Following a period of double running of facilities to ensure continuity of productivity, work will fully transfer to this new facility with its new higher and safer spec equipment. Operational policies and procedures will all have to be updated, new documents developed and put in place to support this transfer. These will be developed by the clinical team, with full oversight by MHRA to ensure compliance. These will be initially developed through the early Construction phase and be based on the detailed general arrangement plans and the 1:50 room layout process.

Double running of the existing and the new facility for a period, will allow new working methods to be trialled whilst ensuring production output is not compromised. Training and familiarisation for all equipment will be required. This relates to not only the specialist production equipment but all plant services, control panels, monitoring systems and the BMS. The leads for training and familiarisation will be dependent on the procurement route. For all specialist equipment, this will be arranged through individual suppliers and, as part of the procurement requirements, attendance for training will form part of the commercial offer.

For training and familiarisation for all plant services, control panels, monitoring systems and the BMS, this will be carried out by the Primary Contractor as part of their soft-landings process. To assist with this process, the estates and FM teams on the Gartnavel site have been fully engaged through the design process. This has ensured that they are familiar with product selection and have had the ability to influence this where deemed critical.

We have on all recent major capital projects, been video recording the training sessions in order that this can be shared amongst all relevant stakeholders and can be referred to at a later date as a refresh for existing staff or as part of an induction for new members of the team. It is the intent to do this again for the RND project.

The service transition will take place alongside a broader initiative for the new buildings and re-design work processes, where staff operate in agile, open plan workspaces, to support full flexibility in use of space, and to encourage more effective joint working through informal networking and peer support.

6.2.2 Facilities Change Plan

As noted above, the process for adopting the required changes to the FM service at the Gartnavel site will follow the Government Soft Landing Principles. This forms part of the Primary Contractors service and will be led by their soft landings champion. GG&C have appointed their Soft-Landing Champion and are seeking wider training from Health Facilities Scotland to support this.

Part of this process will ensure that at pre-handover stage, relevant staff will be able to spend time gaining an understanding of interfaces and new systems and check that the output and functionality expected are provided. At this stage it is anticipated that this will be a transitional process with elements of manufacture taking place at both the existing and proposed new facility. By approaching in a transitional manner, it will allow the clinical, estates and FM teams to occupy and gain an understanding of how facility will really function in sequence and for it to be tested in terms of M&E systems, equipment, furniture, layout, robustness etc. – critical for a successful handover.

Initial aftercare will also be part of the service provided by the PSCP should any issues arise during the initial handover, testing and familiarisation period. The initial timescale forming part of the initial commercial submission is 6 weeks. This duration, and its appropriateness, will be discussed and confirmed through the FBC and stage 4 contract award processes along with any extended period in coordination with the long-term post occupancy evaluation process. It is expected that the PSCP team will retain a presence on site to deal with emerging issues, assist with understanding how systems are operating, measured, monitored, and adjusted to ensure the facility meets the users' expectations and requirements.

6.2.3 Engagement Stakeholder and Communication

A Project Execution Plan (PEP) details the process of stakeholder engagement and communication. The PEP includes details of the reporting structure, processes, and culture to ensure communication is effective from a contractual and consultative perspective.

The key elements of the plan are outlined in the sections below. However, it must be noted that a Radiopharmacy service of this nature, inevitably requires a degree of sensitivity. For this reason, it was decided that wider community engagement would be restricted to that prescribed by the Planning process.

6.2.4 Project Board and Delivery Group

The Project Board and Project Delivery Group primarily provide governance and oversight of the project. However, they also provide the opportunity to engage with the project stakeholders and consult on project issues as they arise. Those issues which have been resolved by the groups will be communicated within the structure presented in Figure 2. Similarly, those decisions out-with the remit of the board will be communicated to the required governance groups along with recommendations to allow informed decision making.

In addition to the formal governance arrangements the Project Delivery Group will provide a link to the MHRA. Although as the licencing authority the MHRA will not formally accept or endorse the design this ongoing communication and consultation will be vital in ensuring the new facility will be capable of achieving the production licence requirements.

6.2.5 Project Organisation

The project organisation chart is captured in the Project Execution Plan (PEP) and identifies the formal communication lines at project team level. A Responsibility Assignment Matrix has also been agreed to identify the project team members and stakeholders who should be involved in key activities during the project stages. The PEP is a live document and is currently on version 3.1.

All reporting communication and engagement out with the project team structure will be the NHSGGC project and clinical lead. This includes engagement with stakeholders such as the RPA and regional QA pharmacist. Along with the identified structure, the roles, and responsibilities of those named are included in the PEP.

6.2.6 Project Meetings and Reporting

Throughout the FBC stage a series of meetings have taken place to provide the opportunity to engage with the project team and stakeholders. These will continue during the construction stages. The meetings have been grouped into the following categories:

- **Delivery Group Meetings** – Often every two weeks at certain stages during design phases
- **Project Progress Meetings** – Monthly
- **Project Quality Meetings** – Monthly
- **Commercial Meetings** – Monthly
- **Commissioning Meetings** – A series of monthly project wide commissioning meeting have been held which have allowed the team to collate the specialist knowledge from the Clean Room Contractor, together with detailed knowledge from key individuals who have previous involvement with similar specialist Pharma production facilities. The Validation Master Plan has evolved out of these scoping meetings. Going forward, the Commissioning Meetings will take on significantly greater emphasis as we commence the construction phase. These Meetings will ramp up from monthly to biweekly, to weekly as the project closes out.

The table below sets out the project overview process.

Table 22 - Project Meetings and Reporting

What will be assessed	When it will be carried out		How it will be done (approach)
	Milestone Date	Report submission	
Project Monitoring stage:			
Affordability Assessment	As part of the FBC approval. Ongoing assessment at Project Board meetings as part of change management and cost reporting.	Commercial report provided for each Project Board meeting. Final assessment report as part of Outturn Cost Report (3 months post occupation)	Affordability will largely be assessed as part of the FBC submission. However, given that there are specialist contractors and suppliers involved there is ongoing dialogue to cleans specialist packages. On approval and construction commencing the Financial Close information will form the baseline for reporting. An Addendum to the FBC will be produced and forwarded to SGHSCD. Ongoing affordability will be assessed during the implementation stage through the change management process

			as part of the regular Project Board meetings. Costs will be assessed against the approved capital spend. Post construction the affordability will be assessed as part of the outturn cost reports.
Works Delivery Costs	Ongoing assessment at Project Board as part of change management and cost reporting	Commercial report provided for each core group meeting. Final assessment report as part of Outturn Cost Report Within 3 months post completion	Comparison between monthly spend profile and agreed forecast at contract award. Carried out by Joint Cost Advisors.
Outturn Capital Costs	By Financial Close	Within 3 months post completion	Comparison between FBC & Final Cost. The report will provide a detailed breakdown of any cost changes and impact of risks realised or mitigated.
Project Programme	Minimum monthly during implementation	Report provided for each Delivery Group/ progress meeting.	Programme status contained on monthly HUB West Scotland and PM reports Comparison between contract completion dates and planned completion dates reviewed: identify slippage or otherwise.
Project Scope Changes	4 Weekly Project Board during implementation OR As required for urgent emerging issues	Recorded as part of Delivery / progress/ design & technical meeting minutes published within 5	Significant changes in project scope are reviewed at the Executive Steering Group meetings to ensure stakeholder and SRO support. Change management discussed at Delivery

		working days of each meeting	group on a monthly basis to review changes to the works.
Health & Safety Performance	Ongoing through project.	Report provided for each Delivery Group meeting. Report as required by any party in event of emergency.	Health & Safety issues captured and reviewed on the monthly HUB West Scotland, Site Monitor & CDM Advisor reports.
Construction Quality	Ongoing through construction and commissioning.	Project completion date and on completion of Commissioning and Soft landings process. Concluded through issue of Independent Tester defects certificate.	Provision of quality to the required standard is the responsibility of the HUB West Scotland. Monitoring of quality will be carried out and reported on by the HUB West Scotland, Site Monitor and CDM advisor. HUB West Scotland target is zero snagging and defects at completion.
Design & Technical Aspects	Monthly during of Delivery / progress/ design & technical meeting or as required for specific issues	Recorded as part of meeting minutes published within 5 working days of each meeting	Technical design meetings are to be held every four weeks involving the Delivery Group and if required external stakeholders. This provides the opportunity to review the delivery of the design and agree on new design solutions or clarifications during implementation.
Risk Management Issues	Every two months in advance of Project Board meetings	Report and risk register review as part of each project board meeting. Risk review meeting held as required.	Monthly Executive Steering Group meetings during implementation to review mitigate and add risks as required. Shared risks are avoided in order to reduce any potential for lack of ownership.

			Designated client risks are defined in the contract with all other risks passed to the HUB West Scotland at Financial Close.
Community Benefits	Quarterly as part of Delivery group/ progress meetings.	HUB West Scotland will provide monthly reports at the Delivery Group/ progress meetings. Targets were agreed on HUB West Scotland appointment and updates on achieving targets or otherwise will be provided through the project.	HUB West Scotland have agreed a community benefits plan that exceeds baseline targets for a project of this size. An updated community benefits tracker has been developed at FBC detailing progress to this stage. Many benefits will be realised through the construction stage and a final report on those achieved will be provided on completion of the commissioning and soft landings process.

6.2.7 Stakeholder Engagement Plan

The NHS Scotland Assure KSAR at OBC stage identified that there were failings in the governance process around stakeholder engagement and an 8-month design refresh was undertaken to address this. The Governance was re-structured and wider stakeholder involvement was identified. There was particularly good engagement from stakeholders during both OBC Refresh and FBC stage.

The FBC stage PEP now sets out the stakeholder meetings to report through the construction phase. However, the RDD sign off and the DQ/IQ/OQ/PQ qualification process will ensure that there is on-going engagement with key stakeholder throughout the construction phase, through into the commissioning and validation process.

6.2.8 Communication and Information Management

The PEP describes the project culture for communication and notes that; project teams perform better where individuals within the teamwork in a spirit of mutual trust and cooperation towards a common goal. This is the type of culture that the project has adopted and wishes to continue to develop and promote through its various forms of interactions:

- **Interface Management** - Lines of communication should generally follow the organisational structures contained in Figure 2. This will help to avoid confusion and miscommunication between the parties.
- **Emails** - Email correspondence on the project is acceptable for day-to-day communication. Emails should be copied into the relevant parties and the subject field should contain an appropriate title including the project title and subject matter. All emails should be drafted in a professional subjective manner.
- **Shared Site Protocols** – BIM 360 is a Common Data Environment (CDE) to be used as a central location for all project documentation to be stored to support configuration control across the project team.
- **External Communication** - All external communication requests should be authorised by the project lead in advance of publication / release.
- **Contractual Correspondence** - All contractual correspondence and notifications must be in a form which can be read, copied, and recorded. The CAT Toolkit must be used by all parties via BIM360.

For the PEP content generally, it should also be noted that it is a live document and its ongoing review forms part of the core team agenda, ensuring its contents are regularly reviewed and updated as required. This is not the only opportunity for review and change, this is a document that is shared with the core team, and it is understood that it can be updated at any time through core team members' awareness of any change.

6.3 Benefits Register

The Benefits Register is included in Table 23, has been reviewed and confirmed as both appropriate and viable for this stage. Whilst the core benefits have remained in place from the Strategic Assessment, the Plan has been expanded upon from that included in the OBC to provide a baseline measurement and a target outcome to ensure there is a clear ability to monitor progress and quantify success through subsequent project evaluation. This will continue to be monitored and evaluated during the development of the project to maximise the opportunities for them to be realised.

The Project Planning Team will monitor and record the statistical returns that relate to the identified benefits. This information will then be made available to feed into the formal project evaluation reports.

Table 23 - Benefits Register

Identification						Prioritisation
Ref No.	Benefit	Assessment	Measured?	Baseline Value	Target Value	Relative importance (RAG ¹)
1	Person Centred Improved safety for staff and handling of hazardous materials.	Qualitative	Staff Survey / Risk Assessment / Quality Management Procedures	No. of Datix reports Current No. of non-conformances of MHRA (June 2021) % Satisfaction on I-Matters Questionnaire? Staff satisfaction survey to be identified pre move to new facility. Measured Staff and Environmental radiation dose levels	Reduction in incidents. Reduction in non-conformances in MHRA audit Staff satisfaction on H&S and wellbeing. Staff and Environmental Radiation dose levels showing no increase, and deemed via radiation risk assessment to be As Low as Reasonably Practicable	5
2	Person Centred Improve the quality / physical condition of the healthcare estate.	Quantitative	EAMS – Survey undertaken in August 2020	Fabric and service condition noted as poor for 19 items	Relates to planned preventative works as well as emergency responses. Completion of decommissioning works and handing facility over to Glasgow University.	3
3	Person Centred Improved Experience for Staff and Service Users		Stakeholder Satisfaction Surveys as part of post project reviews			
4	Safe A modern facility which fully complies with MHRA Standards.	Qualitative	MHRA Report	Current MHRA Report on the existing facility. Current No. of non-conformances of MHRA (June 2021)	MHRA licence updated and in place for new facility. Successful commissioning of manufacturing environment.	5
5	Safe Reduction in risk of microbiological contamination of products.	Quantitative	Environmental Monitoring / Testing	Current and historic % of out of specification results. Change to procedure for manufacture of products, better process flows required for new facility. Staff satisfaction survey to be identified pre move to new facility	Reduction in incidents. Policies and procedures in place that dictate flow of microbiological products. Staff satisfaction that process works well.	4
6	Effective Quality of Care Meets future demand for the manufacture and supply of radiopharmaceutical agents in the treatment of cancer in the West of Scotland.	Quantitative	Data available on existing and projected usage.	Currently no capacity to support GA-68 PET within GG&C.	Success of space & environment designed to be adaptable to accommodate additional or different type, size and weight of specialist equipment and associated users.	3
7	Effective Quality of Care New facility will reduce the risk of loss of service for diagnostic testing.	Quantitative	Part of Waiting Times / RTT Pathway.	Number of loss of service incidents within the last 12 months Number of disruption/delays of service incidents within the last 12 months	Reduction in incidents causing loss of service production. Improvement in response times.	4

8	Health of Population PET Generation will support the early detection of cancer and treatment.	Quantitative	Patient booking data.	Currently no capacity to support GA-68 PET within GG&C.	Provision of PET generation from new facility. Improvement in ability to meet Referral to Treatment (RTT) and Treatment Time Guarantee (TTG). Measuring targets for treatment and diagnostics: RTT and TTG.	3
9	Value & Sustainability Potential opportunity to collate with similar services to enable flexible use of staff (Cyclotron)	Quantitative	Data from suppliers	Not currently possible to share resource as site is remote from other NHSGGC facilities	Increased skills, training and educational records associated with staff development. Increase in recorded training sessions held within facility.	3
10	Value & Sustainability Potential for improved space utilisation and optimised running costs.	Qualitative	GG&C data	Energy efficiency saving from new cabinets and reduced number of cabinets. Current operational costs?	Meeting or showing improvement on predicted life cycle costs associated with the new facility.	2
11	Value & Sustainability Deliver a more energy efficient building within the NHSGGC estate, reducing CO2 emissions and contributing to a reduction in whole life costs. Provides future infrastructure to allow the building to be net zero carbon.	Quantitative	GG&C data	Energy costs and consumption. General revenue operating costs		
12	Value & Sustainability Achieve a high design quality in accordance with the Board's Design Action Plan and guidance available from A+DS	Qualitative		Stakeholder feedback AEDET Review Construction quality Review		

RAG rating is based on 1 = Fairly Insignificant, 3 = Moderately Important and 5 = Vit

6.3.1 Benefits Realisation Plan

During the FBC stage the benefits register has been expanded to provide the Benefits Realisation Plan. This identifies who will be responsible for realising the benefit and the timescale to do this. The Project Management Team will monitor and record the statistical return that relate to the identified benefits. This information will then be made available to feed into the formal project evaluation reports.

Evaluation of all benefits will be led by the NHSGGC Post Project Review Manager with the assistance of the Project Board, Project Design & Delivery Group, and where appropriate stakeholder representatives from staff, patients, and visitors' groups. Their aim is to improving future project performance, achieving best value for money from public resources and improving decision-making.

There will be 3 reviews undertaken following completion of the project:

- Initial Review - 12 months after completion and will be an initial review of project.
- Mid Term Review - 1-3 years after completion with the focus being realisation of project benefits plan and update feedback and previous recommendations.
- Final Review 3-5 years after completion will focus on the realisation of long-term community benefits, update on benefits plan and feedback and previous recommendations.

Lessons learned from these reviews will be fed back into current and future projects ensuring recommendations are taken forward and implemented.

Table 24 - Benefits Realisation Plan

Identification		Realisation					
Ref No.	Main Benefit	Who Benefits?	Who is responsible?	Investment Objective	Dependencies	Support Needed	Date of Realisation
6 1.	Person Centred Improved safety for staff and handling of hazardous materials.	Staff	Head of Radionuclide Dispensary / Production Manager RND / Radiation Protection Advisor	Objective 1 - A facility compliant with the MHRA production licence requirements.	Policies and procedures in place that are compliant with IRR17, EASR18 and CDG19 requirements and not reliant on compromise.	Long term monitoring required demonstrating numbers of incidents typically associated with the former facility have reduced and staff and environmental radiation dose levels are not increased. Radiation safety audits and risk assessments to determine regulatory compliance and confirm if dose levels are as low as reasonably practicable.	Within 24 months of commissioning Realisation will probably be a stepped cycle with an initial review undertaken in order for licence to be issued and facility come into use - thereafter there may be annual, 2 yearly or 4yearly re-inspections to be undertaken to maintain licence - service will know.
7 2.	Person Centred Improve the quality / physical condition of the healthcare estate.	Staff	Assistant Head of Estates (Partnerships)	Objective 4 - Location on a site which represents long term NHS control and investment.	Up to 36 months will allow time to establish if predicted life cycle costs associated with the new facility are accurate and represent the anticipate improvement in estate.	EAMS updated annually. Decommissioning programme to commence following transitional period and completion of soft-landing and handover.	Within 12-36 months of commissioning
8	Person Centred Improved Experience for Staff and Service Users	Staff/service users		Objective 1&2&4		Measured - Stakeholder Satisfaction Surveys as part of post project reviews	Reviews: Within 12 months 1-3 years 3-5 years
9 3.	Safe A modern facility which fully complies with MHRA Standards.	Staff / Patients / Public	Head of Radionuclide Dispensary / Production Manager RND / Regional QA Pharmacist	Objective 1 - A facility compliant with the MHRA production licence requirements.	MHRA licence updated and in place for the new facility.	Engagement with the MHRA through the design, construction, and commissioning stages. Agreement to commence production once facility fully commissioned	Within 12 months of commissioning
10 4.	Safe Reduction in risk of microbiological contamination of products.	Staff / Patients	Head of Radionuclide Dispensary / Production Manager RND / Regional QA Pharmacist	Objective 1 - A facility compliant with the MHRA production licence requirements.	Policies and procedures in place that dictate product and process flow to minimise microbiological risk to products while minimising radiation risk to staff.	Routine microbiological monitoring of the clean room environment	Within 12 months of commissioning

11 5.	Effective Quality of Care Meets future demand for the manufacture and supply of radiopharmaceutical agents in the treatment of cancer in the West of Scotland.	Staff / Patients	General Manager DCPB / Scientific Director	Objective 5 - Delivery of a resilient production capability.	NHSGGC Board strategy and replacement of gamma cameras	Potential additional staff to support increase in demand	Target date unknown. Will be dictated by increased demand of existing production type or change in approach from Gamma camera to PET CT.
12 6.	Effective Quality of Care New facility will reduce the risk of loss of service for diagnostic testing.	Staff / Patients	Assistant Head of Estates (Partnerships)	Objective 2 - Improvement in clinical adjacencies.	Co-location on site with estates and medical physics support will ease problem solving.	Response from support teams to failure of equipment of building fabric	Within 12 to 24 month from commissioning
13 7.	Health of Population PET Generation will support the early detection of cancer and treatment.	Staff / Patients	General Manager DCPB / Scientific Director	Objective 6 - Provision of a facility that provides flexibility for maintenance and adaptation.	NHSGGC Board strategy and development of PET service	Potential additional staff to support increase in demand	Up to 5 years from commissioning
14 8.	Value & Sustainability Potential opportunity to collate with similar services to enable flexible use of staff (Cyclotron)	Staff	General Manager DCPB / Scientific Director	Objective 3 - Provision of easily accessible and knowledgeable response team.	Co-location with existing radiopharmaceutical production unit. Increased opportunities for closer co-operation between facilities to share knowledge, training, and potential contingency.	Transitional bedding in period with time to develop training and educational programmes.	Within 36 months of commissioning
15	Value & Sustainability Potential for improved space utilisation and optimised running costs. A key benefit now would be in relation to reduction in energy use for the facility and meeting the Scottish Governments Energy Targets in relation to NZC. Split maybe – space utilisation and a separate energy/sustainability item.		Head of Radionuclide Dispensary / Production Manager RND / Assistant Head of Estates (Partnerships)				

16	<p>Value & Sustainability</p> <p>Deliver a more energy efficient building within the NHSGGC estate, reducing CO2 emissions and contributing to a reduction in whole life costs. Provides future infrastructure to allow the building to be net. zero carbon</p>		Head of Estates/Head of Service				
17	<p>Value & Sustainability</p> <p>Achieve a high design quality in accordance with the Board's Design Action Plan and guidance available from A+DS</p>		Capital planning/ project Team				

6.4 Community Benefits

NHSGGC has developed and implemented a set of benchmarks related to community benefits and incorporating supported businesses. This development has been carried out in collaboration with the Construction Industry Training Board with minimum targets set and a tracker template established. Targets and objectives generated are done so based on the project value. These targets were established prior to the appointment of HUB West Scotland and compliance with and monitoring of form part of their duties under the agreed appointment.

Over the last 12 projects, HUB West Scotland have demonstrated their ability to exceed the targets set by NHSGGC and it is against enhanced targets that success will be measured. The team responsible for the delivery of this is Angeline Robertson HUB West Scotland Partnership Director and Louise Sutherland BAM Community Benefits Co-ordinator. This team will work closely with NHSGGC to ensure that the investment made by this project maximises opportunities that are both real and tangible to the local community. A record of progress will be kept through the monthly updating of the community benefits tracker.

The key Community Benefit commitments include:

- Education programme with local schools.
- Construction Work Academy – link in with Kelvin College with focus on women in construction.
- Use of SMEs – BAM have already held a meet the buyer event January 2024.
- BAM are to organise a mental health programme once on site.
- Local charity to support e.g. volunteering or with a small project. One focus will be on the adjacent Calman Centre which operates Cancer Support Scotland.

6.5 Risk Management

The main project risks and mitigation factors were identified at a high level at OBC stage. These took to form of 2 registers, first in the standard HUB format will deal with construction and site risks, the second in NHS format to look at operation and business risks. As the project has developed through FBC stage any remaining risked on the HUB West Scotland risk register had been transferred to the HUB West Scotland. The operation and business risks still being reviewed. The remaining risks at this stage are highlighted in Appendix F. The Risk Registers will continually be reviewed and discussed at the Project Board and Executive Group.

Within the Operational / Business Risk Register AF-02 remains the only high risk to the project. Unfortunately, this will remain high until the new facility becomes fully operational.

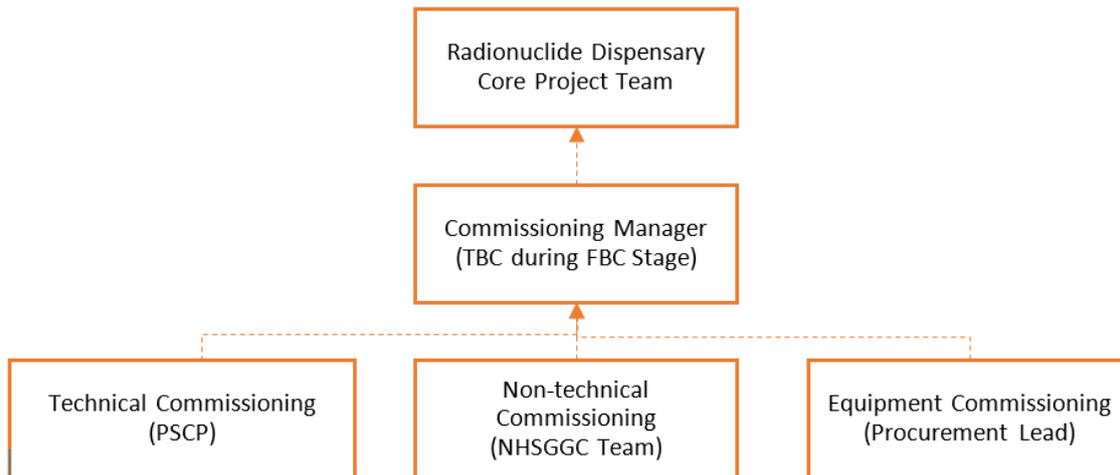
Table 25 - The current 4 highest scoring risk

Risk No	Risk Description	Mitigation	Score
AF-02	<p>Continuity of Service RISK: Failure in existing RND facility</p> <p>CAUSE: Programme delay causing fabric / services failure or License revoked.</p> <p>EFFECT: Alternative service delivery.</p>	<p>Business Continuity Plan (BCP) to be maintained. NHS GG&C to monitor building condition and implement maintenance/temporary repairs as required. Regular engagement with MHRA is ongoing. RND Oversight Group established to address immediate recommendations from MHRA inspection to maintain the function of the existing facility. BCP in place and reviewed as required. GG&C reviewing alternative contingency plans regarding the lease of mobile units in case this is required - could be up to 18months for manufacture and delivery if buying outright.</p>	20
CB-03	<p>Regulatory Approval Third Party approvals from MHRA are more challenging and protracted than anticipated.</p>	<p>Refer to Risk Register</p>	9
PD-01	<p>GG&C Resource RISK: Commitment to project affects existing service delivery.</p>	<p>Refer to Risk Register</p>	9
PD-03	<p>Operational Date: RISK: Delay from handover to building being operational.</p>	<p>Refer to Risk Register</p>	9

A copy of the risk register is included in Appendix F of this submission.

6.6 Commissioning

Section 6.2 identifies the parties that comprise the project team along with the project's governance structure. The diagram below identifies the structure of the commissioning arrangements and how this will feed into the RND project team.



Commissioning will comprise of 3 elements to be coordinated by the Commissioning Manager. The scope of their role will be to oversee the varying commissioning types which are further described below. The appointment of the commissioning manager will be undertaken during the FBC stage.

6.6.1 Technical Commissioning (Cold Zone + Associated Plant)

This role will be carried out by the Primary Contractor utilising their in-house team. BAM have identified Stephen Schofield as their as their commissioning lead. Stephen has been involved in the Services Reviews since the commencement of FBC stage.

The Independent board site monitor along with the NHS GGC Capital Planning Project Manager will be responsible for overseeing the final stages of the project including all training needs for the new building and final commissioning certificates. They will liaise with the Main Contractor and other specialist contractors, along with the Commissioning Group to ensure a smooth transition to the New Facility. We have a set of detailed completion requirements for the project including the contractors commissioning program. This set of requirements has been developed in conjunction with SFT and NHS ASSURE and sets out a clear set of requirements that need to be met prior to building handover.

6.6.2 Specialist Technical Commissioning (Hot Zone + Associated Plant and Equipment)

This role will be carried out for the Primary Contractor by an external a Quality Accredited Specialist HVAC Commissioning Team, with a history of commissioning facilities of this nature.

The approach to the Technical and Specialist Technical Commissioning of this facility has been defined as follows:

- Establish a Validation Steering Group comprising those required as part of the NHSGGC and contractual process for validation.
- Develop a Validation Master Plan and Strategy for the following stages:
 - Pre-Qualification
 - Factory Acceptance Tests
 - Design Qualification - review against URS.
 - Installation Qualification
 - Operational Qualification
 - Performance Qualification
 - Cleaning Validation
 - Process Validation
 - Operator Validation
 - Revalidation
- Develop a programme for commissioning verification. Includes identifying testing and commissioning outputs required and demonstrating compliance or methods of rectification. This includes demonstration of service integration with existing where required.
- Develop a programme with NHSGGC for training and demonstrations schedule.
- Implement a 'count-down procedure' early on to generate momentum and ensure all parties are fully aware of their role in close out activities.
- Coordinate handover activities from Stage 3 FBC to ensure commissioning is 'designed in'.
- Drive handover procedures focussed on optimising operations.
- Identify and provide testing and commissioning certification for statutory compliance and for recording and inclusion in projects H&S and O&M manuals.
- Liaise with MHRA in collaboration with NHSGGC.
- Compile evidence to provide assurance that the Radionuclide Dispensary and equipment performs consistently for the manufacture of products, complying with the principles of Good Manufacturing Practices (GMP).
- Coordinate GMP inspections onsite and work with the clean room contractor.
- This group will also be responsible for the review of qualification / commissioning / validation results and reports and sign off for same. Any non conformity will also require appropriate scrutiny and mitigation.

Working alongside the Primary Contractor, in a contractual capacity, during the technical commissioning process will be an NHSGGC appointed Quality Monitor / Technical Advisor. Their role will be to review the service install works for compliance with the proposals as well as ensuring the commissioning leads roles are fulfilled to the requirement and satisfaction of NHSGGC as a client. NHS GG&C are currently completing a Framework Agreement for Quality Monitor / Technical Advisor and appointments will be made from this framework.

The Project Delivery Group will provide oversight of the commissioning process and will be involved in developing the overall commissioning master plan.

6.6.3 Validation of Specialist Ventilation Systems

Given the complexity and specialist nature of the facility and in full consultation with the Ventilation Authorising Engineer, NHSGGC will appoint an Independent Validator for the specialist ventilation systems to the Hot Zone (clean room production area). Depending on this appointment, the Validator may sub-contract the particulate counts and ventilation performance to an independent a clean room specialist.

The Independent Validator will require to witness / review the commissioning and validation evidence with regards to the following:

- Designer information
- Commissioning brief
- Standard of installation
- Cleanliness of installation
- Certification of equipment
- Filters
- Fire dampers.
- Volume control dampers
- Performance standards
- Noise levels.
- Bacteriological sampling
- Verification of delivery of design air volumes.

They will also require to undertake systems inspection of the following:

- AHU intakes and discharge
- Drainage systems
- Component parts
- Filtration
- Energy recovery devices
- Identification labelling
- Fabric of the Hot Zone (Clean room production area).

The Independent Validator will require to provide a report, the purpose of which is to provide feedback on the witness of documentation to demonstrate the validation of ventilation systems to prove that the systems are fit for purpose and in accordance with Scottish Health Technical Memorandum03-01 Specialist Ventilation Systems for Healthcare Premises.

6.6.4 Non-Technical Commissioning/Procurement

A non-technical commissioning group will be established during the construction stage with membership from the various stakeholders in the project including, amongst others, RND Service, IT, Telecoms, Estates, Procurement, Facilities Management, Estates, and input from Infection Control. The Group will be led by an internal Commissioning Team drawing with experience new Health and Care Centres to develop an agreed Commissioning programme in conjunction with users.

Through identification of the non-technical items for commissioning the following has been established and has been used for the development of the Commissioning Master Plan and Commissioning Requirements Brief:

- Agreed procurement routes for items including understanding if existing routes and supply chains exist or if new routes are required.
- Implementing routes to tendering carried out in accordance with NHSGGC standing financial instructions.
- Established protocols for stakeholder engagement and review periods to finalise items for procurement and commissioning.
- Established timescales for item commissioning reviewed and agreed in line with overall project programme. Timescales now include engagement and review periods, lead in, install and testing, commissioning, and training required.
- Established if item commissioning requires Contractor input regarding any preparatory or install works. Contractor works have taken cognisance of such work identified which now forms part of the construction and installation works.
- Overall works and commissioning programme and construction contract agreed in such a way to provide beneficial access agreed through the construction contract.

The group will also be responsible for the development of a migration programme for the service move to the new facility and co-ordination of all the service teams to achieve the migration timescale, in line with the contract programme.

The group will draw on knowledge and experience from previous NHSGGC Capital Planning new build projects within the wider NHSGGC Capital Planning team. With this support and experience available, further recruitment for commissioning is not anticipated. Should there be any change to the availability of this team then the scope of works described above will be added to the scope of works to be carried out by the commissioning manager.

6.6.5 Equipment Commissioning (including IT Systems)

The appointment of a Procurement Lead has been identified for the specialist equipment, with NHS Assure Equipping Services key not only to procurement but also the associated commissioning requirements. In collaboration with the project team and project lead, the procurement lead will be advised of those elements that will either have an impact on

design and commissioning or require individual commissioning. This information, as detailed below, will be requested from all suppliers through the procurement stage. Specialist Equipment Key Information:

- Spatial requirements including height, weight, depth, and loading.
- Spatial requirements for clear activity spaces and maintenance access.
- Electrical services requirements.
- Requirements for mechanical and environmental conditions.
- Provision of BIM information.
- Lead in time from order confirmation.
- Product delivery information including set down spaces, access routes and associated spatial requirements.
- Product installation requirements including site condition, personnel and CDM and H&S requirements.
- Duration of installation or assembly time.
- Duration of commissioning works.
- Duration, proposals, and methods for training.
- Product aftercare and warranty periods.

The equipment list has been established by the 1:50 room layouts. This is now captured in the project programme through, pre-construction, construction, and commissioning stages. It will also be used to inform both the design works as well as the overall commissioning master plan.

The procurement lead is noted as a key role for providing this information however it should be noted that the responsibility for utilisation and implementation of the commissioning information accordingly will be that of the commissioning manager.

6.7 Project Evaluation

Post Project Evaluation will be undertaken in line with the SCIM guidelines to determine the project's success and identify lessons to be learned.

Leading this process and ensuring compliance with SCIM guidelines will be NHSGGCs Property and Capital Planning's Post Project Evaluation Manager. The PPE Manager has experience of leading and carrying out all Post Project Evaluation processes within NHSGGCs Capital Planning Department. An outline of the roles that they will undertake is provided below:

- Assist with developing benefits plan detailing service benefits expected on completion of project and programme of when these will be realised.
- Advise/ aid Project Board in drawing up a measurable Benefits Realisation and Evaluation Plan.
- Review the benefits of a project then assess the outcomes following completion.

- Initial Post Project Evaluation - reviewing the performance of the project in terms of the original project objectives.
- Post Occupancy Evaluation now all service benefits have been realised.
- Request and summarise information from NHSGGCs property team on building performance, EAMS records and life cycle costing.
- Request and evidence ongoing compliance with MHRA.
- Undertake staff and user group satisfaction surveys, questionnaires, or workshops. Includes feedback from end users within NHSGGC and other boards.
- Organise Lessons Learned Workshop for project team/ key stakeholders.
- Key stakeholders to assist in assessing benefit outcomes.

During construction, the project will be monitored with regards to time, cost, the procurement process contractor's performance, and any initial lessons learned. Project Reviews will be undertaken at 3 milestone stages post completion of the project.

The timetabling of these reviews reflects the benefits realisation timetable contained within Benefits Plan.

Initial Post Project Evaluation (PPE) undertaken 6-12 months post occupancy. At this stage review will comprise:

- Final Project Monitoring Report
- Lessons to be learnt from project.
- Initial Stakeholder feedback on the new development
- Initial review of Benefits Plan

Post Occupancy Evaluation (POE) undertaken 18-24 months post occupancy; allowing for a reasonable bedding in period for services. The focus of the evaluation will involve:

- Assessment of whether and to what extent the project has realised its expected benefits. This is the main review of Benefits Realisation Plan
- Gaining feedback from stakeholders on the project outcomes i.e., how stakeholder expectations have been met.
- Reviewing the impact of any service change on operational activities, processes, and people.
- Understanding of how well the project has impacted on service activity and performance.
- Reflection of what went well and what could have been improved to provide learning to be passed on to other similar projects.

Final Service Benefits Review undertaken 3-5 years post occupancy; allowing for a review of longer-term service and community benefits. This is the final review of the project and comprises:

- A final review of Benefits Realisation Plan; has project achieved its expected targets in respect of service change, operational activity and performance and impact on local community.
- Final reflection on lessons learnt from project and outcome of any recommendations made.
- Does Stakeholder expectations continue to be met, further stakeholder feedback exercise reviewing both staff and public satisfaction with building long-term.

A key focus will be sharing the information gathered so that the lessons to be learned is made available to others.

6.7.1 Project Monitoring and Service Benefits Evaluation Plan

Project Monitoring plans and methodologies have been developing throughout the FBC process. This has been achieved through engagement and collaboration with core user and stakeholder groups to ensure plans, methods, timescales and means of engagement forming part of the monitoring and evaluation process have been agreed by all parties. The following provides an explanation of monitoring undertaken for the various components of the project.

As detailed in the following Project Execution Plan, a variety of meeting types are in place to ensure appropriate monitoring and compliance with the contractual arrangements. A summary of the approach, including the key core group, is presented below and further described in the Monitoring and Evaluation Plan:

- **Project Board meetings:** held every 4 weeks with key elements of monitoring forming part of the agenda.
- **Affordability Assessment:** Monitoring overall project affordability will be carried out through the joint cost advisor role with representation and input by costs advisors. Assessment will be against baseline costs presented in the FBC.
- **Works Delivery Costs:** A project spend profile has been developed to include the Fixed Price and all project related costs. The joint cost advisors will review, and report spend against the profile highlighting any issues.
- **Project Programme:** Monitoring will be completed by the site monitor and in accordance with the requirements of the contract. An updated programme will therefore be provided every 4 weeks or as required / requested through the contract allowing ongoing up to date monitoring.
- **Project Scope Changes:** Changes will be discussed and follow the established Change Control and Governance Procedures.
- **Health & Safety Performance:** All have a role in monitoring performance. Formal reporting will be provided by the HUB West Scotland with input and review from the appointed CDM Advisor.
- **Risk Management Issues:** Full review of current project Risk Register by Project Board
- **Design & Technical:** Update from designers will be provided along with any request for stakeholder engagement in line with agreed contract protocols.

- **Construction Quality:** Achieving required quality is the responsibility of the HUB West Scotland. Quality monitored and reported on at Project Board by Site Monitor through site visits, both planned and ad- hoc.
- **Design & technical meetings** held as HUB West Scotland feels appropriate, alternating frequency with the core group, or as required. Discussions requiring stakeholder engagement will be arranged in accordance with the engagement protocols in place to ensure required representation.

Stakeholder Engagement. Stakeholders will be represented at the Project Board meeting and be engaged for design and technical discussion and any elements of change. Further detail on how stakeholders will be kept engaged is provided in the communication plan.

6.7.2 Monitoring & Evaluation Plan:

Table 26 - Project Monitoring Programme

What will be assessed	When it will be carried out		How it will be done (approach)
	Milestone Date	Report submission	
Project Monitoring stage:			
Affordability Assessment	As part of the FBC approval. Ongoing assessment at Project Board meetings as part of change management and cost reporting.	Commercial report provided for each Project Board meeting. Final assessment report as part of Outturn Cost Report (3 months post occupation)	Affordability will largely be assessed as part of the FBC submission. On approval and construction commencing the Financial Close information will form the baseline for reporting. An Addendum to the FBC will be produced and forwarded to SGHSCD. Ongoing affordability will be assessed during the implementation stage through the change management process as part of the regular Project Board meetings. Costs will be assessed against the approved capital spend. Post construction the affordability will be assessed as part of the outturn cost reports.

Works Delivery Costs	Ongoing assessment at Project Board meetings as part of change management and cost reporting	Commercial report provided for each core group meeting. Final assessment report as part of Outturn Cost Report Within 3 months post completion	Comparison between monthly spend profile and agreed forecast at contract award. Carried out by Joint Cost Advisors.
Outturn Capital Costs	By Financial Close	Within 3 months post completion	Comparison between FBC & Final Cost. The report will provide a detailed breakdown of any cost changes and impact of risks realised or mitigated.
Outturn Revenue Costs	By Financial Close	18 months post occupancy	The revenue costs will be assessed against the baseline and the target reductions identified within the FBC and benefits register. The resulting report will provide a breakdown of the actual costs against forecast. This forms part of the initial POE review 18months post occupancy, allowing for full year review data availability.
Stakeholder Support	Minimum 4 Weekly Project Board during implementation.	Recorded as part of meeting minutes published within 5 working days of each meeting.	Signed stakeholder support letters to be provided as part of the FBC submission. Regular Project Board meetings throughout the project to maintain support and direction from project SRO. Key project information to be passed to those forming Stakeholder support.
Stakeholder Engagement	Monthly Progress Meetings during implementation with stakeholder representation.	One month after construction start.	Pre- Start, progress and Commissioning meetings will be held throughout implementation to ensure continued stakeholder

	Stakeholder engagement meetings as required through project.	Service Benefits Evaluation Report produced: 6-12 months post occupancy 2-3 years post occupancy 4-5 years post occupancy	engagement as outlined within the PEP. Part of the Service Benefits Evaluation Report initially undertaken after 6 months post occupancy will seek stakeholder feedback on engagement through the project.
Project Programme	Minimum monthly during implementation	Report provided for each Project Board/Delivery Group progress meeting.	Programme status contained on monthly HUB West Scotland and PM reports Comparison between contract completion dates and planned completion dates reviewed: identify slippage or otherwise.
Project Scope Changes	4 Weekly Project Board Group meetings during implementation OR As required for urgent emerging issues	Recorded as part of Project Delivery/ progress/ design & technical meeting minutes published within 5 working days of each meeting	Significant changes in project scope are reviewed at Project Board meetings to ensure stakeholder and SRO support. Change management discussed at Delivery group on a monthly basis to review changes to the works.
Health & Safety Performance	Ongoing through project.	Report provided for each Project Board/Delivery Group meeting. Report as required by any party in event of emergency.	Health & Safety issues captured and reviewed on the monthly HUB West Scotland, Site Monitor & CDM Advisor reports.
Construction Quality	Ongoing through construction and commissioning.	Project completion date and on completion of Commissioning and Soft landings process. Concluded through issue of Independent Tester defects certificate.	Provision of quality to the required standard is the responsibility of the HUB West Scotland. Monitoring of quality will be carried out and reported on by the HUB West Scotland, Site Monitor and CDM advisor. HUB West Scotland target is zero snagging

			and defects at completion.
Design & Technical Aspects	Monthly during of Delivery / progress/ design & technical meeting or as required for specific issues	Recorded as part of meeting minutes published within 5 working days of each meeting	Technical design meetings are to be held every four weeks involving the Project Board/Delivery Group and if required external stakeholders. This provides the opportunity to review the delivery of the design and agree on new design solutions or clarifications during implementation.
Risk Management Issues	Monthly as part of Project Board meetings	Report and risk register review as part of each project board meeting. Risk review meeting held as required.	Monthly Project Board meetings during implementation to review mitigate and add risks as required. Shared risks are avoided in order to reduce any potential for lack of ownership. Designated client risks are defined in the contract with all other risks passed to the HUB West Scotland at Financial Close.
Community Benefits	Quarterly as part of Delivery group/ progress meetings.	HUB West Scotland will provide monthly reports at the Delivery Group/ progress meetings. Targets were agreed on HUB West Scotland appointment and updates on achieving targets or otherwise will be provided through the project.	HUB West Scotland have agreed a community benefits plan that exceeds baseline targets for a project of this size. An updated community benefits tracker has been developed at FBC detailing progress to this stage. Many benefits will be realised through the construction stage and a final report on those achieved will be provided on completion of the commissioning and soft landings process.

A Project Monitoring Report will be provided to SGHSCD shortly after project completion incorporating:

- An updated Project Cost Monitoring Form
- A Programme Monitoring Form
- Summary of significant scope changes
- Summary of Health and Safety performance
- An overview of achievement of the project design objectives
- A review of the management of risk throughout the project development

6.7.3 Monitoring & Evaluation Plan: Service Benefits Evaluation

Provided within section 6.4 is the project Benefits Realisation plan and Benefits Register comprising core benefits identified and developed from the Strategic Assessment. Further details on the approach and engagement through the evaluation process are provided in the 'Monitoring & Evaluation Plan – Service Benefits Evaluation' table below. This is a supplementary table to Section 6.4 Benefits Plan and Benefits Register tables which provided detailed targets and realisation dates for each benefit.

Project Reviews will be undertaken at 3 stages post completion of the project as detailed above.

Table 27 - Service Benefits Evaluation

What will be assessed	When it will be carried out		How it will be done (approach)
	Milestone Date	Report submission	
Service Benefits Evaluation stage:			
Expected benefits; detailed in Benefits Register (table 23) & Benefits Plan (table 24)	Onwards within a 6 month – 5year timeframe depending on the benefit being evaluated	6 months –5 years following completion depending on the benefit being evaluated	Benefits register completed and endorsed by Object Owners. Evaluation to be completed against the agreed target/ baseline and within the specified 6 month – 5year timescale. A detailed breakdown per expected service benefit is provided in Benefits Plan (Table 24)
Deliver a more energy efficient building within the NHSGGC estate reducing CO2 emissions and contributing to a reduction in whole life costs.	Review 2 years after occupation	Review 2years after occupation	Initially will be assessed during first year of occupation on how facility meets the sustainability standards as detailed in (ACRs) with final review after 2 years occupancy.

Achieve a high design quality in accordance with the Board's Design Action plan and guidance available from A+DS	1 month post occupation	1 month post occupation	AEDET assessment and joint supporting statement from A+DS and HFS
Meet statutory requirement and obligations for public buildings e.g., with regards to DDA	6 months post occupation	6 months post occupation	DDA audit and EQIA of facility involving local disability groups with different types of disability
Stakeholder expectations	Initially at 6 months post occupation; then at 18months and 3 years	Review at all 3 stages of post project reviews	Undertaken through all stages of review from initial post occupancy stage, Main review as part of the Service Benefits Evaluation Report undertaken after 18 months of occupation. This will assess how well the project achieved its objectives with feedback direct from the stakeholders. Follow up long term review at 3-5 years.
Impact of service change	Initially at 6 months post occupation; then at 18months and 3 years	Review at all 3 stages of post project reviews	A Service Benefits Evaluation Report in, line with the benefits register will be undertaken 18 months after occupation and will capture feedback from staff patient and carer surveys. Long term benefits reviewed at 3-5 years
Service activity & performance	Initially at 6 months post occupation; then at 18months and 3 years	Review at all 3 stages of post project reviews	In line with the benefits register the service activity and performance will be evaluated as part of the Service Benefits Evaluation Report.

6.8 Building Design and Construction Quality

There has been a considerable increased focus on quality in recent years following upon high-profile issues in publicly procured facilities across the country.

Radionuclide Dispensary represents a significant public investment in the critical Radiopharmacy infrastructure serving the Nuclear Medicine Department. It is therefore critical that the investment is secured in a facility that truly represents best quality alongside value for money.

Considerable focus has been placed on quality throughout the development of this project and is embedded in the project management plans, and more importantly, has been implemented in all activities to date. Quality is not achieved simply by improving site inspections. It needs to be embedded in a project from its inception.

NHSGGC has been actively involved in the pilot projects with SFT's promotion of the Construction Quality Assurance Initiative at Stobhill Mental Health beds and Greenock Health & Care Centre testing approaches to focus the whole project team on quality. The learning from these pilots has been carried into this project.

The key actions taken to date to ensure quality are:

- Appropriately experienced and resourced client team.
- Clear governance structure.
- High quality briefing documentation.
- Realistic budget and programme.
- Quality-led design team selection.
- Design Team appointment with enhanced reporting requirements.
- Quality-led Tier 1 contractor selection with clear requirements for design team reporting.
- Change of Contract procurement route From NHS Framework 2 to the HUB model.
- Comprehensive stakeholder engagement through site selection and design development process.
- Open and honest culture about quality throughout the development process.
- Sense checking all aspects of design proposals as they are developed.
- Ongoing review of ACRs and URS as learning from completed projects is absorbed.
- Stakeholder engagement and updates throughout the development process.
- Specialist Designers / Contractors brought on board at an early stage to inform design outputs.
- Thorough processes for examination of Contractors Proposals utilising experienced in-house resource supplemented by appointed Technical Advisers.
- Dialogue with Leads from similar projects nationally, with adapted documentation utilised.

As we move into the construction stage the focus on quality will continue. This has been adopted by HUB West Scotland, the Tier 1 contractor, and the design teams, and therefore quality is part of the culture of the project development. Some of the key actions that will be taken forward include:

- Quality Control meetings during the construction process.
- The appointment of Quality Monitor off the NHS GG&C Framework (quasi-Clerk of Works) through construction period.
- Fortnightly 3rd party photo-shoot of construction process and recording of structure, fireproofing and M&E installation prior to covering up.
- Review and sign off contractor design elements.

6.9 Soft Landings

Soft Landings is a key element of the design and construction process maintaining the “golden thread” of the building purpose through to delivery and operation, with early engagement of the end users and inclusion of a Soft Landings champion on the project team, and commitment to aftercare post construction.

The project will follow the Soft Landings process set out the NHS Scotland Soft Landings Guidance document. The membership of the Delivery Group will naturally evolve into the Soft-Landing Group as we go forward into the Construction Phase.

Key activities carried during the OBC stage were:

- Appointment a Soft Landings Champion, Donald Bain.
- Soft Landing kick off, initially merged with Delivery Group.
- Using BIM and associated digital simulation techniques to assess the early design.

7 APPENDICES

7.1 Appendix A – OBC Approval Letter OBC Stage.

7.2 Appendix B – Full Planning Approval

7.3 Appendix C – Schedule of Accommodation

7.4 Appendix D – AEDET Assessment

7.5 Appendix E – Detailed Project Program

7.6 Appendix F – Risk Register



T: 0131-244 2790
E: dghsc@gov.scot

Jane Grant
Chief Executive
NHS Greater Glasgow and Clyde
J B Russell House
Gartnavel Royal Hospital
1055 Great Western Road
Glasgow, G12 0XH

29 March 2023

Dear Jane

NHS Greater Glasgow and Clyde – Radionuclide Dispensary - Outline Business Case

The above Outline Business Case was considered by the Health Directorates' Capital Investment Group (CIG) at its meeting of 22 March 2023 and following group discussion, the CIG recommended approval. I am pleased to inform you that I have accepted that recommendation and now invite you to submit a Full Business Case.

A public version of the document should be sent to the CIG mailbox (NHSCIG@gov.scot) within one month of receiving this approval letter. It is a compulsory requirement within the Scottish Capital Investment Manual, **for schemes in excess of £5 million**, that NHS Boards set up a section of their website dedicated specifically to such projects. The approved Business Cases / contracts should be placed there, together with as much relevant documentation and information as appropriate. Further information on this requirement can be found at <http://www.pcpd.scot.nhs.uk/Capital/Approval.htm>

I would ask that if any publicity is planned regarding the approval of the business case that NHS Greater Glasgow and Clyde liaise with SG Communications colleagues regarding handling.

As always, CIG members will be happy to engage with your team during the development of the Full Business Case and to discuss any issues which may arise. In the meantime, if you have any queries regarding the above, please contact Alan Morrison on 0131 244 2363 or e-mail Alan.Morrison@gov.scot.

Yours sincerely

Caroline Lamb
Chief Executive of NHS Scotland and Director-General for Health & Social Care



**Neighbourhoods, Regeneration
and Sustainability**
Glasgow City Council
Exchange House
231 George Street
Glasgow, G1 1RX
www.glasgow.gov.uk

Executive Director
George Gillespie
BEng (Hons) CEng MICE

Oberlanders Architects LLP
Aleksandra Patarova
16 Melville Street
EH3 7NS

Our ref: DECISION
GCC Application Ref: **23/00859/FUL**

8 November 2023

Dear Sir/Madam

SITE: Site To The West Of 75 Shelley Road Glasgow
PROPOSAL: Erection of two storey building (Class 4) to accommodate radionuclide
dispensary with associated plant, delivery vehicle parking and landscaping.

I am pleased to inform you that a decision to approve your application, **23/00859/FUL** has now been taken.

A copy of the decision notice is attached with any appropriate conditions/notes which should be read together with the decision.

The decision notice is a legal document and should be retained for future reference.

Should you require any additional information regarding the decision, please contact the case officer **David Haney** on direct phone , or email **david.haney@glasgow.gov.uk**, who will be happy to help you.

Yours faithfully

Head of Planning

Encls.



PLANNING DECISION NOTICE

Full Planning Permission GRANTED SUBJECT TO CONDITION(S)

IN RESPECT OF APPLICATION 23/00859/FUL

Erection of two storey building (Class 4) to accommodate radionuclide dispensary with associated plant, delivery vehicle parking and landscaping.

AT

Site To The West Of 75 Shelley Road Glasgow

AS SHOWN ON THE APPROVED PLAN(S)

This consent is **granted** subject to the following **condition(s)** and **reason(s)**:

01. The development to which this permission relates shall be begun no later than the expiration of three years beginning with the date of grant of this permission.

Reason: In the interests of certainty and the proper planning of the area, and to comply with section 58(1) of the Town and Country Planning (Scotland) Act 1997, as amended.

02. External materials shall be red clay brick and zinc standing seam cladding. Samples shall be submitted to and approved by the planning authority in writing in respect of type, colour and texture. Written approval shall be obtained before the materials are used on site.

Reason: In order to protect the appearance of both the property itself and the surrounding area.

Reason: In order to protect the visual amenity of the surrounding area.

03. The delivery/service yard shall be permeable but shall exclude loose material. It shall be available for use before the development/the part of the development served by the yard in question, is occupied.

Reason: To attenuate drainage from the site in the interest of flood control; to keep the road free of loose material in the interests of pedestrian and vehicular safety; and to ensure that parking is available for the deliveries and collections.

04. During the construction period, wheel washing equipment shall be provided at all egress points and kept in operation during all times when vehicles are leaving the site. Before any work on the site is begun, details of the type of equipment shall be submitted to and approved in writing by the planning authority.

Reason: To ensure, in the interests of traffic and pedestrian safety, that mud from the site is not carried onto any road.

05. Provision shall be made in the design of the development for the parking of cycles. This provision shall be in accordance with the requirements of City Development Plan, Supplementary Guidance 11: Sustainable Transport, Section 4 Cycle Parking: locations; minimum levels; safe, sheltered and secure; and in 'Sheffield' type racks. The cycle parking shall be available for use in accordance with the approved drawings before the development is occupied.

Reason: To ensure that cycle parking is available for the occupiers/users of the development.

06. Details of the proposed drainage design (with supporting calculations), SUDS (Sustainable Urban Drainage Systems) features and outfall structure shall be submitted and approved in writing by the planning authority before works commence on site. Connection points to the Scottish Water sewers should also be identified.

Reason: In order to protect the appearance of both the development itself and the surrounding area

Reason: To attenuate drainage from the site in the interest of flood control.

07. Noise from or associated with the completed development (the building and fixed plant) shall not give rise to a noise level, assessed with windows closed, within any dwelling or noise sensitive building in excess of that equivalent to Noise Rating Curve 35 between 0700 and 2200, and Noise Rating Curve 25 at all other times.

Reason: To protect the occupiers of dwellings or noise sensitive buildings from excessive noise.

08. Prior to the completion of construction works for the building, full details of the proposed landscaping, including layout, material specifications, level changes, tree and planting species, hard and soft landscaping works, boundary treatments, lighting proposals, the type and position of street furniture, and biodiversity enhancements accompanied by a maintenance schedule, shall be submitted to and approved in writing by the Planning Authority. All landscaping, including planting, seeding and hard landscaping, shall be completed in accordance with the approved scheme prior to the development being occupied.

Reason: To enable the Planning Authority to consider these aspects in detail.

09. In the event that the removal of Invasive Non-Native Species (INNS) do not take place in 2023, an updated ecological survey shall be submitted prior to the removal of INNS. The removal of INNS shall be carried out in accordance with the updated ecological survey.

Reason: To determine whether INNS presence has changed within the site and protect against biodiversity loss.

10. Any trees or plants which die, are removed or become seriously damaged or diseased within a period of five years from the completion of the development shall be replaced in the next planting season with others of similar size and species.

Reason: To ensure the continued contribution of the landscaping scheme/open space to the landscape quality and biodiversity of the area.

11. The minimum depth of topsoil shall be 150mm for grass areas, 450mm for shrub areas and 900mm for trees on clean subsoil free from builder's rubble and other deleterious materials. Topsoil shall be free from pernicious weeds and shall have a pH value of approximately 7.0.

Reason: To ensure that favourable conditions are created for survival of the planting.

12. When submitting the required Building Warrant application for this development, an updated Statement on Energy (SoE) shall be submitted to and approved in writing by the planning authority. The SoE shall demonstrate how the development will incorporate low and zerocarbon generating technologies to achieve at least a 20% cut in CO2 emissions and that the Gold Hybrid Standard are to be met, as per City Development Plan policy CDP 5: Resource Management & accompanying Supplementary Guidance SG5: Resource Management. The development shall thereafter be constructed in compliance with the approved SoE. Formal confirmation of the constructed development's compliance with the SoE, carried out by a suitably qualified professional, shall be submitted to and approved in writing by the planning authority before the development/the relevant part of the development is occupied.

Reason: To enable the Planning Authority to consider these aspects in detail.

13. Unless otherwise agreed in writing with the Planning Authority, no development shall commence on site until a comprehensive contaminated land assessment has been submitted to and approved in writing by the Planning Authority. The assessment shall determine the nature and extent of any contamination on the site, including contamination that may have originated from elsewhere. The assessment shall be conducted and reported in accordance with current recognised codes of practice and guidance and shall include a risk assessment of all relevant pollutant linkages, as required by Planning Advice Note PAN33 'Development of Contaminated Land'. Any potential risks to human health, property, the Water Environment and designated ecological sites shall be determined.

Reason: To ensure the ground is suitable for the proposed development.

14. Where the contaminated land assessment has identified any unacceptable risk or risks (as defined by Part IIA of the Environmental Protection Act 1990), a remediation strategy shall be submitted to and approved in writing by the Planning Authority prior to development commencing on site, and shall thereafter be implemented as approved. The strategy shall set out all the measures necessary to bring the site to a condition suitable for the intended use by removing any unacceptable risks caused by contamination, including ground and mine gas. The remediation strategy shall also include a timetable and phasing plan where relevant.

Reason: To ensure the ground is suitable for the proposed development.

15. Upon completion of the approved remediation strategy, and prior to any part of the development site being occupied, a remediation completion / validation report shall be submitted to and approved in writing by the Planning Authority. The report shall be completed by a suitably qualified Engineer and shall demonstrate the execution and effectiveness of the completed remediation works in accordance with the approved remediation strategy.

Reason: To ensure the ground is suitable for the proposed development.

16. In the event that any previously unsuspected or unencountered contamination is found at any time when carrying out the approved development, it shall be reported to the Planning Authority within one week and work on the affected area shall cease. Unless otherwise agreed in writing with the Planning Authority, no development shall recommence on the affected area of the site until a comprehensive contaminated land investigation and assessment to determine the revised contamination status of the site has been submitted to and approved in writing by the Planning Authority. Where required by the approved assessment, a remediation strategy shall be prepared and agreed in writing with the Planning Authority before work recommences on the affected area of the site. Upon completion of any approved remediation strategy and prior to the site being occupied, a remediation completion / validation report which demonstrates the effectiveness of the completed remediation works shall be submitted and approved in writing by the Planning Authority.

Reason: To ensure the ground is suitable for the proposed development.

17. Unless otherwise agreed in writing with the Planning Authority, no development shall commence on site until all boreholes, probeholes or monitoring wells completed across the subject site are decommissioned. Upon completion of site investigations and gas monitoring and following agreement on the findings of these with the planning authority; the boreholes, probeholes or monitoring wells should be decommissioned (backfilled) and sealed in a manner that prevents them acting as a migration pathway and evidence of this provided to the Planning Authority. Works shall be completed in accordance with Scottish Environment Protection Agency 2014 good practice guidance and BS 8576: 2013.

Reason: To ensure the ground is suitable for the proposed development.

Approved Drawings

The development shall be implemented in accordance with the approved drawing(s)

1. RND-OBE-XX-XX-PL-A-20202 EXTERNAL SITE COMPOUND ELEVATIONS AS PROPOSED Received 8 September 2023
2. RND-OBE-XX-00-RL-A-70114 LOCKER ROOM DETAILS Received 26 October 2023
3. RND-OBE-XX-XX-PL-A-00001 P01 A LOCATION PLAN P01 Received 6 April 2023
4. RND-OBE-XX-XX-PL-A-20001 P01 GENERAL ARRANGEMENT FLOOR PLANS P01 Received 6 April 2023
5. RND-OBE-XX-XX-PL-A-20002 P01 ROOF PLAN P01 Received 6 April 2023
6. RND-OBE-XX-XX-PL-A-20101 P01 PROPOSED ELEVATIONS SHEET 1 P01 Received 6 April 2023
7. RND-OBE-XX-XX-PL-A-20202 P01 PROPOSED ELEVATIONS SHEET 2 P01 Received 6 April 2023
8. RND-FHT-XX-00-DL-C-90100 PROPOSED LEVELS LAYOUT Received 9 August 2023
9. 10958-LD-PLN-101 LANDSCAPE GENERAL ARRANGEMENT Received 9 August 2023
10. 10958-LD-PLN-401 SOFTWARES GENERAL ARRANGEMENT Received 9 August 2023
11. RND-FHT-XX-00-DL-C-00001 SITE PLAN Received 9 August 2023
12. RND-FHT-XX-00-DL-C-90101 PROPOSED DRAINAGE LAYOUT Received 9 August 2023

As qualified by the above condition(s), or as otherwise agreed in writing with the Planning Authority



Dated: 8th November 2023

Head of Planning

THIS DECISION NOTICE SHOULD BE READ WITH THE ATTACHED ADVICE NOTES

IMPORTANT NOTES ABOUT THIS GRANT OF PLANNING PERMISSION

IT IS YOUR RESPONSIBILITY TO SATISFY YOURSELF WITH REGARD TO THE MATTERS LISTED BELOW PRIOR TO IMPLEMENTATION OF THE WORKS WHICH ARE THE SUBJECT OF THIS CONSENT.

DURATION OF PLANNING PERMISSION

This permission lapses **3 years** from the date on this notice unless the development is begun before then and unless this notice specifies a longer or shorter period. Where there is such a specification, the permission lapses the specified number of years from the date on this notice unless the development is begun before then.

CONDITIONS OF THIS NOTICE

By this notice, your proposal has been approved subject to conditions which are considered necessary to ensure the satisfactory implementation of the proposal. **It is important that these conditions are adhered to and these will be actively monitored to ensure this. Failure to comply with conditions may result in enforcement action being taken.**

RIGHTS OF APPEAL

If you are not satisfied with the terms of this decision, including the conditions attached to the planning permission, you may request a review within **three months** of the date on this notice. Please note that the right of appeal is to the Planning Local Review Committee of the Council and **not** to Scottish Ministers.

Before pursuing a review, you should consider contacting your case officer to discuss whether there are changes which could be made to the proposed development to make it acceptable. The case officer's contact details are on the letter accompanying this Decision Notice. Your case officer can also advise on how a fresh application could be submitted. Please note that if you do submit a fresh application within 12 months, you would be unlikely to have to pay a further planning fee.

Before contacting the case officer, you would be well advised to view the report on the application. It is available for inspection [online](#). The report explains how the decision was reached and should help you decide whether to proceed with further discussion or a review. If your application was granted subject to conditions, it may be clear from the terms of the report that any conditions which you might be concerned about are necessary.

A notice of review must be served on the Planning Local Review Committee by submitting online at <https://www.eplanning.scot/ePlanningClient/>

The notice of review must include a statement setting out your reasons for requiring the Planning Local Review Committee to review this case. You must state by what procedure (written representations, hearing session(s) or inspection of application site) or combination of procedures you wish the review to be conducted. However, please note that the Planning Local Review Committee will decide on the review procedure to be followed.

You must also include with the notice of review a copy of this decision notice, the planning application form, the plans listed on the decision notice and any other documents forming part of the proposed development as determined. If you have a representative, you must give their name and address. Please state whether any notice or other correspondence should be sent to the representative instead of to you.

NOTICES OF INITIATION AND COMPLETION

Under Section 27A of the Act, the person undertaking the development is required to give the planning authority written notification of the date on which it is intended to commence the development. Failure to comply with this statutory requirement would constitute a breach of planning control under Section 123(1) of the Act, which may result in enforcement action being taken. A pro-forma is attached to this decision which can be used for this purpose.

As soon as practicable after the development is complete, the person who completes the development is obliged by Section 27B of the Act to give the planning authority written notice of that position. A pro-forma is attached to this decision which can be used for this purpose.

OWNERSHIP OF THE SITE

This consent only grants permission to develop on land of which you are the owner or have obtained the necessary consents from the owners of land or buildings.

If permission to develop land is granted subject to conditions, and the owner of the land claims that the land has become incapable of reasonably beneficial use in its existing state and cannot be rendered capable of reasonably beneficial use by the carrying out of any development which has been or would be permitted, he/she may serve on the planning authority a purchase notice requiring the purchase of his/her interest in the land in accordance with the provisions of Part V of the Town and Country Planning (Scotland) Act 1997.

BUILDING WARRANT

This permission does not exempt you from obtaining a Building Warrant under the Building (Scotland) Acts. For further information, please contact Building Standards and Public Safety, online at <https://www.glasgow.gov.uk/index.aspx?articleid=17319>

ROADS CONSTRUCTION CONSENT

This permission does not exempt you from obtaining a Roads Construction Consent under the Roads Scotland Act 1984. For further information please email RoadsConstructionConsents@glasgow.gov.uk

DISABLED ACCESS

You are reminded that in providing premises (including university and school buildings, offices, shops, railway premises, factories and toilets) which are open to the public, you should make provision, where reasonably and practicable, for the means of access and parking to be designed to meet the needs of disabled people. This should include appropriate signposting indicating the availability of these facilities. Your attention is specifically drawn to the BSI Code of Practice on Access for the Disabled to Buildings (BS 5810:1979) which explains the manner in which appropriate provision can be made for the needs of disabled people in the design of buildings. For further information please contact Building Control on 0141 287 5937.

WORK INVOLVING GROUND EXCAVATION

The attention of any applicant proposing works involving ground excavation is drawn to the DIAL BEFORE YOU DIG website at www.national-one-call.co.uk. This provides access to information regarding the location of services to prevent damage to plant from uninformed ground excavation.

SMALL FORMAT POSTERS

The City Council acknowledges the contribution that tourism, cultural, leisure and entertainment activities including film and theatre, music and dance, make to the economy and vitality of the City. Such activities tend to be advertised in small poster format (flyposting) which, if uncontrolled, can seriously detract from the appearance of the City. The City Council is working with the postering industry to prevent this, whilst accommodating the aspirations of the industry. It has approved a report stating that, where developments incorporate site screening panels prior to or during building operations, developers are encouraged to be receptive to approaches by the postering industry to accommodate an element of posting, in a controlled way, on the screen panels. It should be noted that any such posting will require separate Express Consent, usually sought by the advertiser, from the City Council to ensure that an acceptable standard of display is achieved. Developers are invited to assist the Council's initiative with the postering industry by making suitable sites available, as indicated above.

COMMUNITY BENEFIT

Glasgow City Council (GCC) has developed a policy on Community Benefit to ensure that Glasgow secures the maximum economic and social benefit for residents and businesses from planned investment being made in the city.

The policy introduces measures to encourage:

- the targeted recruitment and training of those furthest from the job market, the long-term unemployed and individuals leaving education
- the advertising of sub-contracted business opportunities
- dedicated support for small to medium sized businesses (SMEs) and social enterprises (SEs) to build capacity.

These elements have been included in the development of the Commonwealth Arena, the Commonwealth Games Athletes' Village and the Hydro Arena at the SECC, among others, with significant success to date.

The Council is now working with Private Sector developers to maximise the impact of their investment in the City, for example Land Securities, developer of Buchanan Galleries. Significant assistance is available from various Public Sector agencies to achieve these outcomes and the support private contractors.

Should you wish to discuss these opportunities in more detail, please contact the Council's Community Benefit Programme Manager on 0141 287 6014.

Further background information on the Community Benefit model can be found at;

<http://www.scotland.gov.uk/Publications/2008/02/12145623/1>

TOWN AND COUNTRY PLANNING (SCOTLAND) ACT 1997

Notice under Section 27A Notification of Initiation of Development

THE TOWN AND COUNTRY PLANNING (DEVELOPMENT MANAGEMENT PROCEDURE) (SCOTLAND) REGULATIONS 2013

Notice under Regulation 40 Notification of Initiation of Development

A person who intends to carry out development for which planning permission has been given, must, as soon as practicable after deciding on a date on which to initiate the development and in any event before commencing the development, give notice to Glasgow City Council by returning this completed Notice It should be uploaded as a PSAD to the corresponding application at <https://www.eplanning.scot/ePlanningClient/> or addressed to Glasgow City Council, Planning, 231 George Street, Glasgow G1 1RX

FAILURE TO SUBMIT THIS NOTICE PRIOR TO COMMENCING WORK IS A BREACH OF PLANNING CONTROL UNDER SECTION 123(1) OF THE 1997 ACT AND ENFORCEMENT ACTION MAY BE TAKEN.

Application Reference:	23/00859/FUL	DHAN
Application Address:	Site To The West Of 75 Shelley Road Glasgow	
Proposal:	Erection of two storey building (Class 4) to accommodate radionuclide dispensary with associated plant, delivery vehicle parking and landscaping.	
Applicant:	NHS Greater Glasgow & Clyde Mr Ian Docherty 1055 Great Western Road Glasgow G12 0XH	
Decision:	Grant Subject to Condition(s)	
Decision Date:	8 November 2023	
Full name and address of person(s), company or body carrying out the development (if different from applicant):		
Full name and address of all owner(s) of the land to be developed (if different from applicant):		
Full name, address and contact details of person(s), company or body appointed to oversee the carrying out of the development:		
START DATE:		

Signed

Date

.....
*On

behalf

of

.....
*Delete where inappropriate

TOWN AND COUNTRY PLANNING (SCOTLAND) ACT 1997

Notice under Section 27B Notification of Completion of Development

A person who completes development for which planning permission has been given must, as soon as practicable after doing so, give notice of completion to Glasgow City Council by returning this completed Notice. It should be uploaded as a PSAD to the corresponding application at <https://www.eplanning.scot/ePlanningClient/> or addressed to Glasgow City Council, Planning, 231 George Street, Glasgow G1 1RX

Application Reference:	23/00859/FUL	DHAN
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Applicant:	NHS Greater Glasgow & Clyde Mr Ian Docherty 1055 Great Western Road Glasgow G12 0XH	
Decision:	Grant Subject to Condition(s)	
Decision Date:	8 November 2023	
COMPLETION DATE FOR DEVELOPMENT:		

If the development is to be carried out in phases then, in accordance with the relevant condition of the planning permission, this Notice must, as soon as practicable after each phase is completed, be completed and returned to the address above.

Phase 1 completed date:	
Phase 2 completed date:	
Phase 3 completed date:	
Phase 4 completed date:	

Signed

.....
*On behalf

Date

.....
of *Delete where inappropriate

Schedule of Accommodation

Level	Zone	Department	Room Number	Room Name	Area - Stage 3 Design	Original SoA Req.	Difference between Stage 3 and Original areas	ADB Room Code	Notes / Comments
Level 0									
RND-COLD									
Level 0	RND-COLD	Admin Circulation	C0/01	Circulation Zone	15.2 m ²	26.0 m ²	-10.8 m ²	Z9003	Originally Z9003B
Level 0	RND-COLD	Admin Circulation	C0/04	Circulation Zone	27.7 m ²	21.0 m ²	6.7 m ²	Z9003C	Originally Z9003A
Level 0	RND-COLD	Administration (Cold)	0/04	DSR	10.4 m ²	10.0 m ²	0.4 m ²	Y1510A	
Level 0	RND-COLD	Administration (Cold)	0/05	Agile Workspace	56.6 m ²	55.0 m ²	1.6 m ²	M09254	
Level 0	RND-COLD	Administration (Cold)	0/06	Breakout / Quiet Room	6.5 m ²	8.0 m ²	-1.5 m ²	M0252	
Level 0	RND-COLD	Administration (Cold)	0/07	Training / Meeting Room	20.5 m ²	15.0 m ²	5.5 m ²	M0330-01	
Level 0	RND-COLD	Administration (Cold)	0/08	Shower Room	6.2 m ²	5.0 m ²	1.2 m ²	V1321A	
Level 0	RND-COLD	Administration (Cold)	0/09	Access. Staff WC	4.4 m ²	5.0 m ²	-0.6 m ²	V0923A	
Level 0	RND-COLD	Administration (Cold)	0/10	Staff WC	3.2 m ²	3.0 m ²	0.2 m ²	V91010	
Level 0	RND-COLD	Administration (Cold)	0/11	Staff WC	3.2 m ²	3.0 m ²	0.2 m ²	V91010A	
Level 0	RND-COLD	Administration (Cold)	0/11a	Staff WC	3.1 m ²	0.0 m ²	3.1 m ²	V91010B	Not included on original SoA - Additional requirement
Level 0	RND-COLD	Administration (Cold)	0/12	Staff Room	28.1 m ²	27.0 m ²	1.1 m ²	D0201	
Level 0	RND-COLD	Administration (Cold)	0/13	Locker Room	11.6 m ²	15.0 m ²	-3.4 m ²	V0554-02A	
Level 0	RND-COLD	Dispatch/Delivery	0/28	Bulk Store	19.4 m ²	22.0 m ²	-2.6 m ²	W0266	
Level 0	RND-COLD	Dispatch/Delivery	0/30	Returns Room	11.3 m ²	9.0 m ²	2.3 m ²	Y0706	
Level 0	RND-COLD	Entrance	0/01	Secure Staff/ Visitor Entrance	11.4 m ²	7.0 m ²	4.4 m ²	G09001	
Level 0	RND-COLD	Entrance	0/02	Front Office / Reception	14.3 m ²	10.0 m ²	4.3 m ²	J0232-01	
Level 0	RND-COLD	Entrance	0/15	Delivery & Dispatch Entrance	8.4 m ²	7.0 m ²	1.4 m ²	G09002	
Level 0	RND-COLD	Entrance	0/16	Drivers' WC	3.8 m ²	5.0 m ²	-1.2 m ²	V1010A	
Level 0	RND-COLD	Entrance	0/18	Driver Waiting	12.7 m ²	11.0 m ²	1.7 m ²	J1255A	
Level 0	RND-COLD	External Space	0/45	Waste Store	7.6 m ²	0.0 m ²	7.6 m ²	Y0650	Not on original SoA - Initially separate structure
Level 0	RND-COLD	External Space	0/48	Bike Store	19.6 m ²	0.0 m ²	19.6 m ²	N/A - External	Not on original SoA
Level 0	RND-COLD	Plant	0/03	El. Cup.	5.6 m ²	0.0 m ²	5.6 m ²	N/A - Plant	Not on original SoA
Level 0	RND-COLD	Plant	0/14	El. Cup.	2.2 m ²	0.0 m ²	2.2 m ²	N/A - Plant	Not on original SoA
Level 0	RND-COLD	Plant	0/17	GSHP Riser	1.5 m ²	0.0 m ²	1.5 m ²	N/A - Plant	Not on original SoA
RND-HOT									
Level 0	RND-HOT	Circulation	C0/02	Radiation Controlled Corridor	19.0 m ²	13.0 m ²	6.0 m ²	Z9003A	Originally Z9003, now split into Z9003A & Z9003B - Shares ADB Name with rooms 0/32a & 0/32b
Level 0	RND-HOT	Circulation	C0/03	Radiation Controlled Corridor	14.8 m ²	0.0 m ²	14.8 m ²	Z9003B	Not on original SoA
Level 0	RND-HOT	Circulation	C0/05	Lobby	5.4 m ²	0.0 m ²	5.4 m ²	G0502	Not on original SoA
Level 0	RND-HOT	Manufacturing (Hot)	0/19	Radioactive Store	11.5 m ²	12.0 m ²	-0.5 m ²	Y0661	
Level 0	RND-HOT	Manufacturing (Hot)	0/20	Radioactive Waste	8.5 m ²	11.0 m ²	-2.5 m ²	W0284	
Level 0	RND-HOT	Manufacturing (Hot)	0/21	Clean Room (Short Lived)	33.5 m ²	25.0 m ²	8.5 m ²	Z9002	
Level 0	RND-HOT	Manufacturing (Hot)	0/22	Clean Room (Long Lived)	19.4 m ²	16.0 m ²	3.4 m ²	Z9002B	
Level 0	RND-HOT	Manufacturing (Hot)	0/23	2nd Change	7.5 m ²	11.0 m ²	-3.5 m ²	G0504B	
Level 0	RND-HOT	Manufacturing (Hot)	0/24	Clean Room (PET)	18.7 m ²	21.0 m ²	-2.3 m ²	Z9001	
Level 0	RND-HOT	Manufacturing (Hot)	0/25	Support Room	37.9 m ²	49.0 m ²	-11.1 m ²	Z0201	
Level 0	RND-HOT	Manufacturing (Hot)	0/26	Quality Control	19.6 m ²	21.0 m ²	-1.4 m ²	Z0201C	
Level 0	RND-HOT	Manufacturing (Hot)	0/27	1st Change	16.4 m ²	17.0 m ²	-0.6 m ²	G0504A	
Level 0	RND-HOT	Manufacturing (Hot)	0/29	Preparation	20.1 m ²	21.0 m ²	-0.9 m ²	Z0201A	
Level 0	RND-HOT	Manufacturing (Hot)	0/31	Packing & Dispatch	23.8 m ²	21.0 m ²	2.8 m ²	Z0201B	
Level 0	RND-HOT	Manufacturing (Hot)	0/32a	Monitor & CWHB Station	2.2 m ²	0.0 m ²	2.2 m ²	Z9003A	Hosted on C0/02
Level 0	RND-HOT	Manufacturing (Hot)	0/32b	Monitor & CWHB Station	2.0 m ²	0.0 m ²	2.0 m ²	Z9003B	Hosted on C0/03
Level 0	RND-HOT	Manufacturing (Hot)	C0/06	Corridor	18.8 m ²	0.0 m ²	18.8 m ²	G0504	Not on original SoA
Level 1									
RND-COLD									
Level 1	RND-COLD	Circulation	C1/01	Main Staircase	16.2 m ²	0.0 m ²	16.2 m ²	Z9003G	Not on original SoA
Level 1	RND-COLD	Circulation	C1/02	Corridor	20.0 m ²	0.0 m ²	20.0 m ²	Z9003E	Not on original SoA
Level 1	RND-COLD	Circulation	C1/03	Corridor	6.4 m ²	0.0 m ²	6.4 m ²	Z9003F	Not on original SoA
Level 1	RND-COLD	Circulation	C1/04	Roof Access Stair	4.4 m ²	0.0 m ²	4.4 m ²	N/A - Roof Access	Not on original SoA
Level 1	RND-COLD	Plant	1/01	IT Node	10.8 m ²	0.0 m ²	10.8 m ²	N/A - Plant	Not on original SoA
Level 1	RND-COLD	Plant	1/02	Water Tank Room	14.2 m ²	0.0 m ²	14.2 m ²	N/A - Plant	Not on original SoA
Level 1	RND-COLD	Plant	1/03	Dry Plant Room	227.8 m ²	0.0 m ²	227.8 m ²	N/A - Plant	Not on original SoA
Level 1	RND-COLD	Plant	1/04	FM Store	14.0 m ²	0.0 m ²	14.0 m ²	N/A - Plant	Not on original SoA
Level 1	RND-COLD	Plant	1/05	LV Switch Gear Room	19.5 m ²	0.0 m ²	19.5 m ²	N/A - Plant	Not on original SoA
Level 1	RND-COLD	Plant	1/06	Plant (Wet)	208.0 m ²	0.0 m ²	208.0 m ²	N/A - Plant	Not on original SoA
Level 1	RND-COLD	Plant	1/07	UPS	10.7 m ²	0.0 m ²	10.7 m ²	N/A - Plant	Not on original SoA
Roof Access Level									
RND-COLD									
Roof Access Level	RND-COLD	Circulation	C2/01	Roof Access Stair/Lobby	12.2 m ²	0.0 m ²	12.2 m ²	N/A - Roof Access	Not on original SoA
					1157.6 m ²				

IN ABEYANCE: Rooms subject to changes as a result of fire strategy review

Scale convertor

A1 Scale - A3 Scale A1 Scale - A3 Scale

1:1 1:2 1:5 1:10
 1:10 1:20 1:25 1:50
 1:50 1:100 1:100 1:200
 1:250 1:500

Thermal performance : U-Value Curtain Walling 0.8 W/m²K
 Floors 0.12 W/m²K
 Roofs 0.12 W/m²K
 Walls 0.15 W/m²K
 Windows 0.8 W/m²K

Air infiltration : <0.6 m³/hr/m² @ 50 Pa

P02 21/08/23 Drawing revised in line with NHS GGC comments via email dated 21/08/23. Unenclosed external spaces removed from schedule. Roof access stairway added to schedule. CG AP

P01 18/08/23 First issue of SoA in sheet form. CG AP
 Rev. Date Amendment Issued Reviewed



oberlanders

Project Name
 NHS Greater Glasgow & Clyde
 Radionuclide Department

Title
 Schedule of Accommodation

Status
RIBA STAGE 3

Drawing no. Rev.
RND-OBE-XX-XX-SA-A-20500 P02

Drawn By Project
 CG 2514
 Drawn date
 15/08/23
 Scale(s) @ A2
Oberlanders Architects LLP
 16 Melville Street
 Edinburgh EH3 7NS
 0131 225 9070
 E: mail@oberlanders.co.uk
www.oberlanders.co.uk

Functionality

Build Quality

Impact

Use	Weight	Score	Notes
A.01 The prime functional requirements of the brief are satisfied	2	5	NO
A.02 The design facilitates the care model	1	0	
A.03 Overall the design is capable of handling the projected throughput	1	6	NO
A.04 Work flows and logistics are arranged optimally	1	5	NO
A.05 The design is sufficiently flexible to respond to clinical /service change and to enable expansion	2	6	NO
A.06 Where possible spaces are standardised and flexible in use patterns	1	5	NO
A.07 The design facilitates both security and supervision	2	5	NO
A.08 The design facilitates health promotion and equality for staff, patients and local community	1	6	NO
A.09 The design is sufficiently adaptable to external changes e.g. Climate, Technology	1	5	NO
A.10 The benchmarks in the Design Statement in relation to building USE are met	2	4	NO

Performance	Weight	Score	Notes
D.01 The building and grounds are easy to operate	1	5	
D.02 The building and grounds are easy to clean and maintain	0	5	
D.03 The building and grounds have appropriately durable finishes and components	1	5	
D.04 The building and grounds will weather and age well	1	5	
D.05 Access to daylight, views of nature and outdoor space are robustly detailed	1	4	
D.06 The design maximises the opportunities for sustainability e.g. waste reduction and biodiversity	1	4	
D.07 The design minimises maintenance and simplifies this where it will be required	2	6	
D.08 The benchmarks in the Design Statement in relation to PERFORMANCE are met	2	4	

Character and Innovation	Weight	Score	Notes
G.01 There are clear ideas behind the design of the building and grounds	2	6	
G.02 The building and grounds are interesting to look at and move around in	1	5	
G.03 The building, grounds and arts design contribute to the local setting	1	5	
G.04 The design appropriately expresses the values of the NHS	1	5	
G.05 The project is likely to influence future designs	1	6	
G.06 The design provides a clear strategy for future adaptation and expansion	2	6	
G.07 The building, grounds and arts design contribute to well being and a sustainable therapeutic strategy	1	4	YES
G.08 The benchmarks in the Design Statement in relation to CHARACTER & INNOVATION are met	2	4	YES

Access	Weight	Score	Notes
B.01 There is good access from available public transport including any on-site roads	2	5	NO
B.02 There is adequate parking for visitors/ staff cars/ disabled people	1	3	YES
B.03 The approach and access for ambulances is appropriately provided	0	0	
B.04 Service vehicle circulation is well considered and does not inappropriately impact on users and staff	2	5	NO
B.05 Pedestrian access is obvious, pleasant and suitable for wheelchair/ disabled/ impaired sight patients	1	5	NO
B.06 Outdoor spaces wherever appropriate are usable, with safe lighting indicating paths, ramps, steps etc.	1	5	NO
B.07 Active travel is encouraged and connections to local green routes and spaces enhanced	1	6	NO
B.08 Car parking and drop-off should not visually dominate entrances or green routes	1	6	NO
B.09 The benchmarks in the Design Statement in relation to building ACCESS are met	2	4	NO

Engineering	Weight	Score	Notes
E.01 The engineering systems are well designed, flexible and efficient in use	2	5	
E.02 The engineering systems exploit any benefits from standardisation and prefabrication where relevant	1	4	YES
E.03 The engineering systems are energy efficient	1	5	
E.04 There are emergency backup systems that are designed to minimise disruption	1	6	
E.05 During construction disruption to essential services is minimised	1	5	
E.06 During maintenance disruption to essential healthcare services is minimised	1	5	
E.07 The design layout contributes to efficient zoning and energy use reduction	1	4	YES

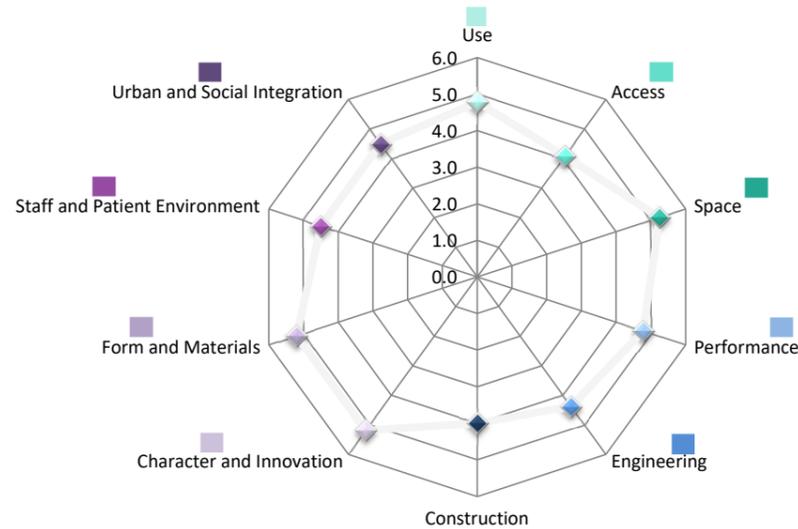
Form and Materials	Weight	Score	Notes
H.01 The design has a human scale and feels welcoming	1	5	YES
H.02 The design contributes to local microclimate, maximising sunlight and shelter from prevailing winds	1	4	YES
H.03 Entrances are obvious and logical in relation to likely points of arrival on site	2	6	YES
H.04 The external materials and detailing appear to be of high quality and are maintainable	2	6	YES
H.05 The external colours and textures seem appropriate and attractive for the local setting	1	5	YES
H.06 The design maximises the site opportunities and enhances a sense of place	1	6	YES
H.07 The benchmarks in the Design Statement in relation to FORM & MATERIALS are met	2	4	YES

Space	Weight	Score	Notes
C.01 The design achieves appropriate space standards	1	6	
C.02 The ratio of usable space to total area is good	1	5	
C.03 The circulation distances travelled by staff, patients and visitors is minimised by the layout	1	6	
C.04 Any necessary isolation and segregation of spaces is achieved	2	6	
C.05 The design maximises opportunities for space to encourage informal social interaction & wellbeing	1	5	
C.06 There is adequate storage space	2	5	
C.07 The grounds provided spaces for informal/ formal therapeutic health activities	1	6	
C.08 The relationships between internal spaces and the outdoor environment work well	1	5	
C.09 The benchmarks in the Design Statement in relation to building SPACE are met	2	4	

Construction	Weight	Score	Notes
F.01 If phased planning and construction are necessary the various stages are well organised	0	0	YES
F.02 Temporary construction work is minimised	0	5	
F.03 The impact of the building process on continuing healthcare provision is minimised	1	5	
F.04 The building and grounds can be readily maintained	1	5	
F.05 The construction is robust	1	5	
F.06 Construction allows easy access to engineering systems for maintenance, replacement & expansion	1	5	
F.07 The construction exploits opportunities from standardisation and prefabrication where relevant	1	0	YES
F.08 The construction maximises the opportunities for sustainability e.g. waste and traffic reduction	1	4	YES
F.09 The construction contributes to being a good neighbour	1	4	YES
F.10 Infection control risks for options, design and construction recorded/ minimised using HAI Scribe	1	4	YES

Staff and Patient Environment	Weight	Score	Notes
I.01 The design reflects the dignity of patients and allows for appropriate levels of privacy	0	0	YES
I.02 The design maximises the opportunities for daylight/ views of green natural landscape or elements	2	5	
I.03 The design maximises the opportunities for access to usable outdoor space	1	6	
I.04 There are high levels of both comfort and control of comfort	2	5	
I.05 The design is clearly understandable and wayfinding is intuitive	1	4	YES
I.06 The interior of the building is attractive in appearance	0	4	YES
I.07 There are good bath/ toilet and other facilities for patients	1	0	YES
I.08 There are good facilities for staff with convenient places to work and relax without being on demand	2	5	
I.09 There are good opportunities for staff, patients, visitors to use outdoors to recuperate/ relax	1	6	
I.10 The benchmarks in the Design Statement in relation to STAFF & PATIENT ENVIRONMENT are met	2	4	

AEDET Refresh FBC Summary



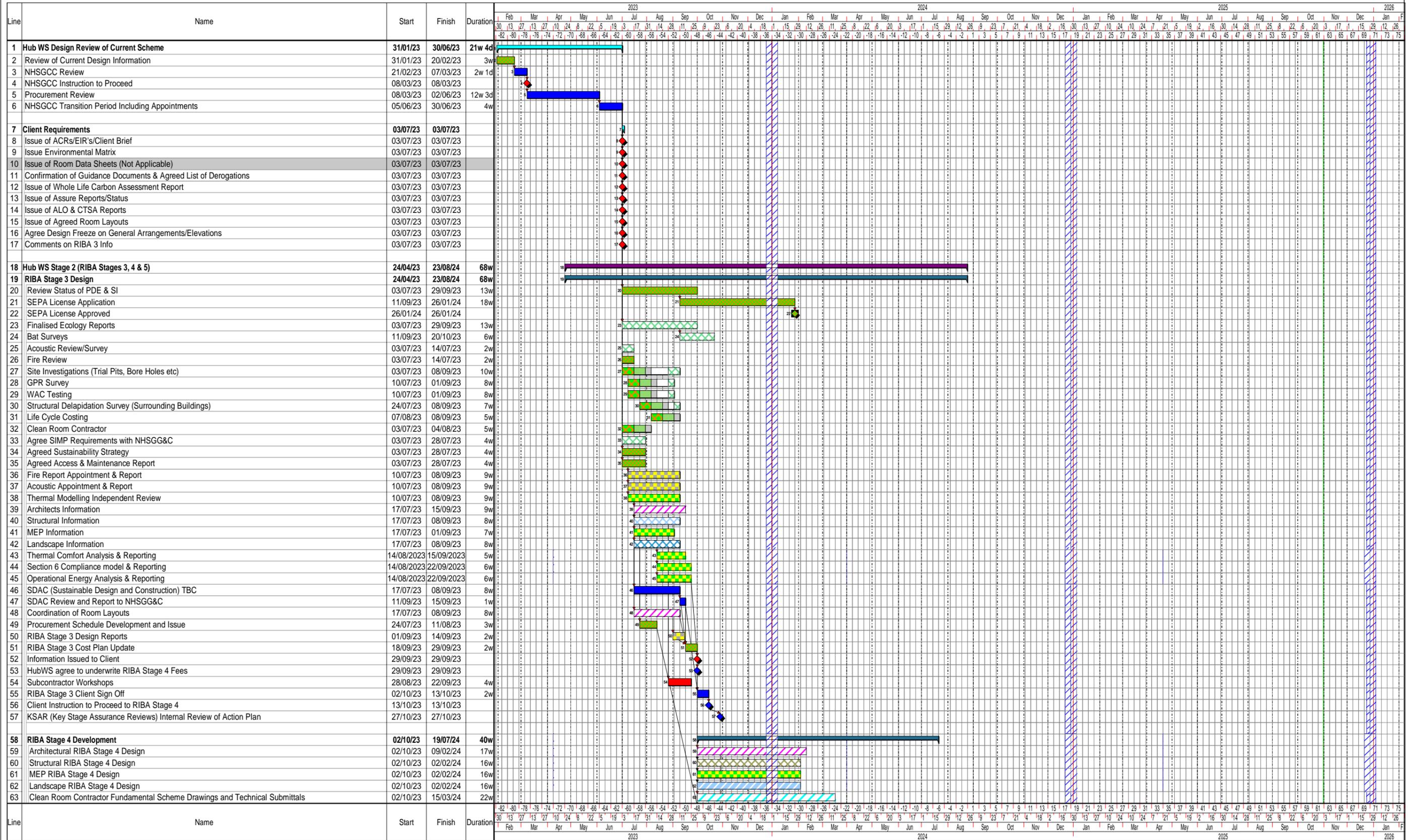
Urban and Social Integration	Weight	Score	Notes
J.01 The height, volume and skyline of the building relate well to the surrounding environment	1	4	YES
J.02 The facility contributes positively to its locality	1	4	YES
J.03 The hard and soft landscape contribute positively to the locality	1	4	YES
J.04 The design contributes to being a good neighbour and is sensitive to neighbours and passers-by	1	4	YES
J.05 There is a clear vision behind the design, its setting and outdoor spaces	2	5	YES
J.06 The benchmarks in the Design Statement in relation to INTEGRATION are met	2	5	YES

Target	Progress	
	Prev	Curr
4.6 Use	4.3	4.8
4.3 Access	3.9	4.1
4.5 Space	4.5	5.3
4.5 Performance	3.8	4.8
4.2 Engineering	2.9	4.4
4.0 Construction	0.0	4.0
4.5 Character and Innovation	4.0	5.2
4.6 Form and Materials	4.1	5.2
4.6 Staff and Patient Environment	4.0	4.5
4.5 Urban and Social Integration	4.0	4.5

Weighting	=	Target
2	=>	5 - 6
1	>	3 - 4
0	<	3

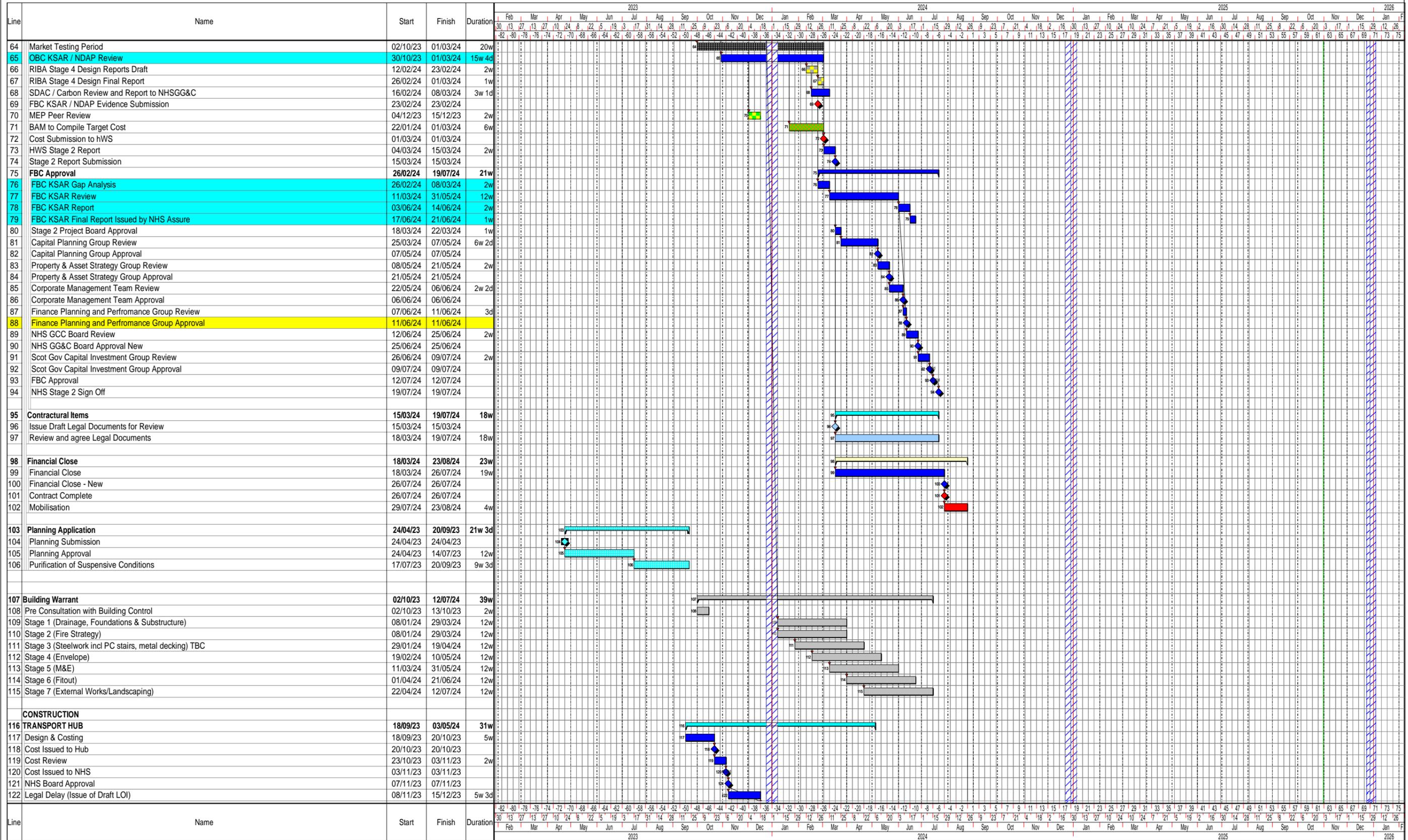


Radionuclide Hub West Scotland / NHSGCC Development & Construction Programme



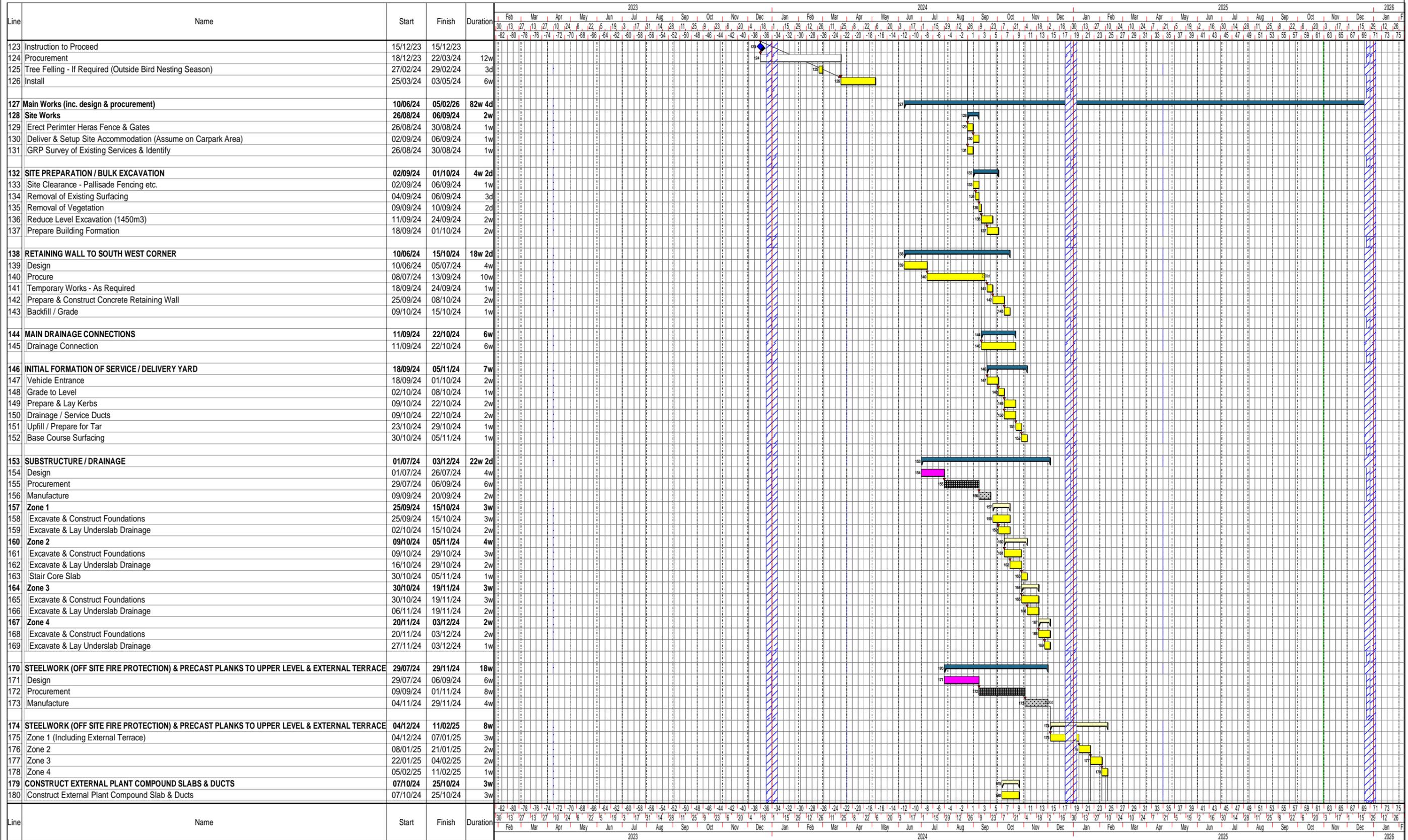


Radionuclide
Hub West Scotland / NHSGCC
Development & Construction Programme





**Radionuclide
Hub West Scotland / NHSGCC
Development & Construction Programme**



Risk Ref No.	Date Identified	Summary Description of Risk		Risk Category	Risk Manager(s)	Accountable Owner	PRE-CONTROL				Risk Treatment Approach	Risk cost allowance	POST-CONTROL				Date Reviewed	Movement in the period	Planned Next Steps and Future Actions Required	Next Review Date		
							Likelihood	Impact / Consequence	Inherent Risk	Risk Status			Likelihood	Impact / Consequence	Residual Risk	Risk Status						
		Risk Title	Risk Description																			
Site Issues	S-01	Pre OBC	Site strategy	RISK: Anticipated site strategy is flawed. CAUSE: Information used as part of the project brief is unreliable EFFECT: Additional cost and delay to the project, with unanticipated additional remediation works.	Development Risk	HWS	NHS GG&C	2	3	6	Medium	Treat		SI undertaken and report now available, water infrastructure undertaken and awaiting report and grading survey to be undertaken. Costs for site surveys captured within the OBC stage, however allowance for any survey results and consequential design solutions within the FBC cost report. Engagement with site Estates Team ongoing.	1	3	3	Low	29/11/2023	Closed	WAC tests received end Hub Stage 1. Made ground is contaminated with elevated PH levels. Costs included in Stage 1 Cost Plan.	01/03/2024
	S-02	Pre OBC	Asbestos throughout site	RISK: Potential asbestos around the site CAUSE: below demolished buildings and/or existing infrastructure not identified in Site Information EFFECT: Additional cost and delay to the project, with unanticipated additional remediation works.	Development Risk	HWS	NHS GG&C	2	3	6	Medium	Treat	NHS held risk	WAC (Waste Acceptance Classification) testing detailed as a requirement as part of Site Information which will be undertaken by PSCP - extent of testing TBC by Fairhurst (via Aecom). SI undertaken and report now available - no asbestos concerns raised. Risk will remain until ground works on site complete.	2	3	3	Low	31/07/2023	Remained Static	No asbestos within SI information shared to date. To be verified via BAM prior to end Hub Stage 1. Asbestos to water pipes TBC pending surveys due May 24. SI under transport hub TBC - pending surveys May 24.	15/05/2024
	S-03	Pre OBC	Gabion wall	RISK: Gabion wall requires reinstatement CAUSE: Condition of existing gabion wall is poor EFFECT: Additional cost to the project	Development Risk	PSCP	NHS GG&C	3	2	6	Medium	Terminate		Existing gabion wall removed from design - propose to close risk.	3	2	6	Medium	21/03/2023	Closed		
	S-04	FBC	Site Boundary / Red Line	RISK: Final definition of site boundary / red line CAUSE: Addition of transport hub to project EFFECT: Increase in scope and or change to planning boundary	Development Risk	HWS	NHS GG&C	4	3	12	High	Treat		Scope of works to be clarified and approach to incorporation into project clearly defined. Oberlanders to assess best approach to planning. Transport Hub to be kept as separate site plan and scope.	2	2	4	Low	31/07/2023	Closed	Site boundary for Transport Hub now separated out	Closed
	S-05	FBC	Ecology	RISK: Ecology restrictions may be present CAUSE: Existing habitat adjacent to site EFFECT: restrictions to be managed	Development Risk	BAM	hWS	3	3	9	Medium	Treat		Existing information to be assessed and works programmed according to report recommendation	2	2	4	Low	31/07/2023	Remained Static	Restrictions addressed in Stage 2 Construction Programme and Transport Hub early works.	closed
Utility Issues	U-01	Pre OBC	Utility requirements - SEPA	RISK: Delay in clarifying SEPA requirements CAUSE: Lack of engagement by third party EFFECT: Project uncertainties regarding costs and programme.	Development Risk	HWS	NHS GG&C	1	4	4	Low	Treat		Engagement with NHS GG&C Radiation Protection Advisor (RPA) commenced within OBC Refresh. Design to be developed and agreed to meet SEPA licensing requirements. Engagement with SEPA commenced during OBC Refresh via email. New SEPA licence to be applied for once design confirmed during FBC stage. Pre-application process to be defined in advance of SEPA licence application.	1	4	4	Low	31/07/2023	Remained Static	RPA engaged during OBC design process. Sink locations agreed, existing SEPA licences shared to inform design. New SEPA licence to be applied for once design confirmed during FBC stage. License is site wide, and is being applied for by NHS Radiation team. NHS (ID) to seek update.	15/05/2024
	U-02	Pre OBC	Utility requirements - Water supply	RISK: Water flow and pressure of mains water and fire hydrant is insufficient CAUSE: Existing flow and pressure is too slow / weak EFFECT: Water booster or pump may be required or alternative supply (upgrade or new) to be identified	Development Risk	hWS	NHS GG&C	2	3	6	Medium	Treat		Water flow and pressure test undertaken and results issued by PSCP. Report to be fully understood and if insufficient, way forward to be confirmed with GG&C Estates. Fire Hydrant A pressure and flow - unable to test due to leak when switched on / poor condition of existing hydrant. HWS/BAM to provide a summary of issues and options to resolve. HWS/BAM to confirm if asbestos pipework connecting to the hydrant. Water booster or pump may be required or alternative supply (upgrade or new) to be identified. Water pump allowed for within cost plan as potential design solution if required - minimal design risk.	2	2	4	Low	31/07/2023	Remained Static	Water flow and pressure test to be undertaken. NHS Estates have addressed previous valve leak. Test to be completed. Condition of existing pipework to be determined. BAM to check to satisfy risk of connection. Survey due May 24.	15/05/2024
	U-03	Pre OBC	Utility requirements - Power	RISK: Insufficient capacity of existing substation to support proposed electrical design CAUSE: Capacity used elsewhere on site EFFECT: Alternative substation to be identified or upgrade / new substation required	Development Risk	hWS	NHS GG&C	3	4	12	High	Treat		Grading study to be undertaken on existing electrical infrastructure / substation to confirm capacity. HWS/BAM to confirm what type of survey is required to understand capacity and route (path of least resistance) as grading survey more often used to understand quality and condition of existing infrastructure (not capacity). If insufficient, way forward to be confirmed with GG&C Estates. Costs for survey and allowance for survey results and potential design solutions to be proven within cost plan.	3	4	12	High	31/07/2023	Remained Static	Grading study being procured by NHS. Existing capacity assessed by Cundall and confirmed as available for new RND demand. Condition of existing HV cable to be determined once new HV ring main is installed.	01/12/2024
	U-04	Pre OBC	Utility requirements - Surface and Foul water	RISK: Connection to a combined sewer not accepted by Scottish Water CAUSE: existing infrastructure being utilised EFFECT: New connection to be identified or new infrastructure required, additional cost and programme	Development Risk	BAM	hWS	2	4	8	Medium	Treat		Early engagement with Scottish Water. PDE (Pre Development Enquiry) raised noting a connection to the combined sewer will be undertaken - no adverse comments raised to date (verbally confirmed only by Fairhurst).	2	4	8	Medium	31/07/2023	Remained Static	Continue engagement with SW. Await response on PDE.	15/05/2024
	U-05	Pre OBC	Utility requirements - IT	RISK: Proposed data design intent still to be proven out in line with existing IT infrastructure due to complex scale of scope (e.g. length of cabling required) CAUSE: engagement not yet commenced with existing data supplier to date EFFECT: current design not compatible with existing infrastructure / cannot be achieved / design to be amended	Development Risk	NHS GG&C	NHS GG&C	3	3	9	Medium	Treat		Engagement with GG&C data supplier and internal IT team to review proposed design solution to ensure compatibility and compliance has commenced (minutes being captured). Non-intrusive survey with Cundall and Estates to be undertaken to review some manholes to check existing and proposed routes and containment - not yet undertaken. Allowance for potential design solutions (still to be proven) within cost plan. HWS/BAM to undertake groundworks but GG&C to install cabling and DP point in building.	2	2	4	Low	31/07/2023	Remained Static	Design to be finalised with NHS GGC IT and IT provider(s). BAM works to agreed chamber adjacent to Diabetes Centre. NHS to procure works for cable route back to 2 nr existing IT nodes on campus.	15/05/2024
TP	TP-01	Pre OBC	Local Authority / Regulatory Approval	RISK: Third Party approvals from Local Authority and SEPA are more challenging and protracted than anticipated (e.g. GG&C have experienced Building Control 12 weeks response time for warrant). CAUSE: Challenge of engagement with parties. Complexities not appreciated. EFFECT: Delay to commencement on site or invalidation for completion.	Development Risk	hWS/BAM	NHS GG&C	4	3	12	High	Treat		The project programme should consider the complexity of design in relation to Planning and Building Standards risks when projecting a reasonable time period for this stage. The Local Authority and SEPA should be engaged at an early stage once design proposals are formed to understand any constraints or further expectations. Current design is an extension of existing Gartnavel application for SEPA regarding the RND facility - RPA will likely be key point of contact for application. Pre-Planning Assessment issued during OBC Refresh and Planning Application submitted and fee paid in April 2023. Proposing to issue a staged warrant to help speed up response times from Building Control.	2	2	4	Low	29/11/2023	Closed	Planning approval now granted	closed
	TP-02	Pre OBC	Planning- Site selection	RISK: Objections to this use for the site. CAUSE: Immediate local community don't support this. EFFECT: Complexities for journey through Planning.	Development Risk	hWS/BAM	NHS GG&C	3	2	6	Medium	Treat		Public consultation for the proposed use of the site required - engagement with GG&C Public Engagement Officer required to commence process - if required once feedback received on Planning Application. Pre-Planning Assessment response received and no concerns raised - awaiting feedback from Planning Application.	2	2	4	Low	29/11/2023	Closed	Planning approval now granted	closed

Risk Ref No.	Date Identified	Summary Description of Risk		Risk Category	Risk Manager(s)	Accountable Owner	Likelihood	Impact / Consequence	Inherent Risk	Risk Status	Risk Treatment Approach	Risk cost allowance	Control and Mitigation Actions	Likelihood	Impact / Consequence	Residual Risk	Risk Status	Date Reviewed	Movement in the period	Planned Next Steps and Future Actions Required	Next Review Date
		Risk Title	Risk Description																		
Third Party Issues	TP-03	Pre OBC	Planning Considerations	RISK: Existing mature trees impact on Planning appraisal. CAUSE: Proximity of building in relation to TPO's. EFFECT: Complexity for Planning. Additional costs.	Development Risk	hWS/BAM	NHS GG&C	3	3	9	Medium	Tolerate	Surveys undertaken and design retaining as many trees as possible. Planning Application submitted in April 2023.	1	2	2	Low	31/07/2023	Closed	Design of the building being developed around the existing trees where possible. Allowance in the Cost Plan for Tree removal. Planning may require compensation for tree loss. Tree removal includes for trees with TPOs identified.	closed
	TP-04.1	Pre OBC	Inadequate Business	RISK: OBC Refresh stage approval delay from CIG. CAUSE: Business case is not robust. 3rd party approval withheld EFFECT: Project delay / Knock on effect with MHRA license.	Development Risk	Both PSCP & GG&C	NHS GG&C	2	5	10	Medium	Treat	Engagement with NHS Assure, HFS / NDAP and CIG ongoing. The project is required to achieve the NDAP and NHS Scotland Assure supported status (letter received "supported and verified" status). Early and continued engagement is required to align expectations and avoid confusion. Accelerating the FBC stage at risk prior to obtaining OBC Refresh approval in order to maintain the programme has been instructed for first 3 months of FBC only. RND Action Plan issued to NHS Assure on 10.11.22 addressing key concerns previously raised. NDAP workshop held. OBC approved by CIG - propose to close.	2	3	6	Medium	25/04/2023	Closed		
	TP-04.2	Pre OBC	Inadequate Business	RISK: FBC stage approval delay from CIG. CAUSE: Business case is not robust. 3rd party approval withheld EFFECT: Project delay / Knock on effect with MHRA license.	Development Risk	hWS/BAM	NHS GG&C	2	5	10	Medium	Treat	Engagement with NHS Assure, HFS / NDAP and CIG ongoing.	2	5	10	Medium	29/11/2023	Remained Static	NHS Assure OBC close out ongoing as of 14.4.24. FBC review now also underway. Project Status update to be provided June 24.	01/06/2024
	TP-05	Pre OBC	Operational date	RISK: Delay to project handover CAUSE: Commissioning tests do not meet SEPA / MHRA / RPA required standards. EFFECT: Delay to handover and Operational Commissioning.	Development Risk	hWS/BAM	NHS GG&C	2	4	8	Medium	Treat	Healthcare specialists appointed throughout the project team. Project Board established to oversee the development on the commissioning plan. Plans to be fully developed during the FBC stage. Ensure that the operational commissioning plan is aligned with any construction programme and that service move arrangements are in place and ready to move at the appropriate time. GG&C to appoint a Technical Specialist / Advisor to support the commissioning process and to review the design proposals. Commissioning processes to be developed by PSCP, Clean Room specialist and GG&C. A commissioning risk register to be developed and confirmed at FBC stage to develop a commissioning programme, budget or specification. Regular project team meetings to manage project cost and programme. PSCP will appoint a commissioning manager to engage with GG&C Estates and key stakeholders.	2	4	8	Medium	25/04/2023	Remained Static	commissioning planning meeting to be arranged with all parties with programme and responsibilities to be mapped out. MHRA consultant (Ian Hardwood) & Lynn Morrison (NHS Pharmacist) to be present. Commissioning Committee now established and meeting. Validation Master Plan to be prepared for May 24.	15/5/24
	D-01	Pre OBC	Informed design process.	RISK: Design does not meet complex service needs CAUSE: Failure in briefing information or in design. Technology developments over period. EFFECT: Build is not fit for purpose in some respects.	Development Risk	hWS/BAM	NHS GG&C	1	5	5	Medium	Treat	Review service model & activity levels at early design planning stages and test assumptions throughout design development and implementation. Develop a Project Execution Plan to engage with the service provider to fully understand the service needs. Develop detailed URS and ACR's. Embrace KSAR process by NHS Assure. Opportunities have been explored to utilise potential future technology advances as part of OBC Refresh - any suggestions identified within FBC design need to be commercially assessed before instructing between PSCP & GG&C. In depth engagement with RND Team and RPA via stakeholder workshops covering both design and sustainability topics ongoing throughout design phases. Regular engagement with 3rd parties to ensure requirements are captured within the design.	1	4	4	Low	25/04/2023	Remained Static	Service leads have been involved throughout the design development to ensure that the design proposals meet the future service model. New technologies explored during the design development in relation to service. New technology being considered as part of the design review ahead of FBC stage. RIBA4 Delivery Group approvals currently in process of being sought as of 14.4.24	01/05/2024
Design Issues	D-02	Pre OBC	Changes in technology result in services being provided using non-optimal technology	RISK: Current energy trends are not reflected in proposals. CAUSE: Rapidly changing environment and targets. Specialist facility. EFFECT: Failure to meet SG targets. CIG approval withheld.	Development Risk	hWS/BAM	NHS GG&C	3	4	12	High	Treat	Potential future technology advances being explored as part of the OBC Refresh and as part of SDaC process. Continue to monitor SG guidance on energy. TMS4 and TMS2+ surveys have been undertaken as part of OBC Refresh provided good results for the project. These surveys will be undertaken in FBC to compare results with OBC report. ASHP confirmed by GG&C as preferred option (HFS on board with this decision). SDaC process ongoing throughout FBC.	2	3	6	Medium	25/04/2023	Closed	New technologies explored during the design development in relation to the building fabric and requirement for Net Zero Carbon. New technology being considered as part of the design review ahead of FBC stage for service delivery. Allowance provided within the cost plan to be developed during FBC Stage	09/01/2024
	D-03	Pre OBC	Meeting brief	RISK: Difficulties in meeting brief CAUSE: Design requirements have challenging technical requirements EFFECT: Design / Build does not fully meet Client needs or third party approvals	Development Risk	hWS/BAM	NHS GG&C	2	4	8	Medium	Treat	Ambitions for complexity of design should be balanced with the design team and contractor's capabilities to implement such designs. Derogations to be raised where required to discuss where some items cannot achieve compliance - these would need to be reviewed and approved by Project Board - some derogations updated within URS v7 to remove derogation in line with Board approval. Stakeholder workshops include key GG&C stakeholders including RND team and RPA which should help minimise this risk. 4% design development risk allowed at hub Stage 1 (on costs excl clean room)	2	3	6	Medium	25/04/2023	Remained Static	Clean Room Design Qualification Process to be closed out.	31/6/24
	D-04	Pre OBC	Meeting brief / brief inadequacies	RISK: Security strategy is inadequate CAUSE: Complexities are not fully understood. EFFECT: Difficulty in achieving sign off by all parties.	Development Risk	hWS/BAM	NHS GG&C	2	3	6	Medium	Transfer	Early engagement required with external bodies (MHRA etc). Industry best practice to be applied to the design proposals. SBD included within project brief. Comments from SBD to be considered within the design as practicable as possible. CTSA engagement commenced and any changes to the proposed design to be confirmed - PSCP to arrange a meeting to catch up with CTSA for comment in line with the current design. Allowance for external CCTV requirements included in cost plan. Design to be developed further within FBC Stage. Security workshop held during OBC refresh and a follow up one to be held during FBC. Consultation and buy in from the service required on the security and access mark up - not yet reviewed and agreed with RND Team.	2	2	4	Low	25/04/2023	Closed	OBC design developed using 'secure by design' standards. Allowance for external CCTV requirements included in cost plan. Design to be developed further within FBC Stage. Police Scotland Terrorist group to review proposals. Confirmed with Police Scotland as not within Counter Terrorist parameters. Review therefore by NHS GGC only.	09/01/2024
	D-05	Pre OBC	Meeting brief / brief inadequacies	RISK: Radiation protection design still to be developed (process of installing led blocks unknown as well as cost and programme impact) CAUSE: Failure in briefing information or in design EFFECT: Cost and programme impact / Delay of design / Build does not fully meet Client needs	Development Risk	hWS/BAM	NHS GG&C	3	3	9	Medium	Treat	Coordination with RPA and Clean Room Projects required to confirm radiation protection design. Good engagement with RPA to date - almost at full sign off of FBC design.	2	2	4	Low	25/04/2023	Closed	Coordination with RPA and Clean Room Projects required to confirm radiation protection design. RPA requirements issued Nov 23 and included in RIBA4 design.	09/01/2024
	D-06	OBC Refresh	Meeting brief / brief inadequacies	RISK: Failure of Clean Room specialist to provide detailed design in a timely manner CAUSE: Contractual disagreement EFFECT: Delay of design / Cost and programme impact	Development Risk	hWS/BAM	NHS GG&C	3	4	12	High	Treat	BAM to meet with Clean Room Projects to mitigate cost and programme issues and delay experienced to date. Alternative solutions have been identified. 5% risk allowed on currently tendered clean room price	2	3	6	Medium	25/04/2023	Remained Static	Information release programme for Clean Room now issued.	15/05/2024
	C-01	Pre OBC	Loss of PSCP side resource	RISK: Loss of specialist knowledge CAUSE: Key personnel are lost to project. EFFECT: Delay or design / Build does not fully meet Client needs	Development Risk	hWS	NHS GG&C	2	2	4	Low	Tolerate	Appoint a competent partners and supply chain. Obtain CV for any change of appointments.	2	2	4	Low	31/07/2023	Remained Static	Review management plans prepared by BAM.	15/05/2024

Risk Ref No.	Date Identified	Summary Description of Risk		Risk Category	Risk Manager(s)	Accountable Owner	Likelihood	Impact / Consequence	Inherent Risk	Risk Status	Risk Treatment Approach	Risk cost allowance	Control and Mitigation Actions	Likelihood	Impact / Consequence	Residual Risk	Risk Status	Date Reviewed	Movement in the period	Planned Next Steps and Future Actions Required	Next Review Date
		Risk Title	Risk Description																		
PD-01	Pre OBC	GG&C resource	RISK: Commitment to project affects existing service delivery. CAUSE: Time constraints on key individuals. EFFECT: Quality of existing service delivery is impacted.	NHS Operational Risk	GG&C	Director of Diagnostics	3	3	9	Medium	Treat		Governance group established to monitor the impact of the project on day to day business operations and to assess the memberships' skills and experience. Appropriate resourcing to be allocated to provide the necessary capacity to minimise any impact on operations.	3	3	9	Medium	25/04/2024	Remained Static	Operational delegation . Protect time by reaching out to other disciplines for assistance.	
PD-02	Pre OBC	Operational date	RISK: Delay from handover to building being operational CAUSE: Operational commissioning is not aligned with main programme. EFFECT: Delay in providing service and decommissioning.	NHS Operational Risk	GG&C	Director of Diagnostics	3	3	9	Medium	Treat		Ensure that the operational commissioning plan is aligned with any construction programme and that service move arrangements are in place and ready to move at the appropriate time. Project Board established to oversee the development on the commissioning plan. Plans to be fully developed during the FBC stage.	2	3	6	Medium	25/04/2024	Remained Static	GG&C Commissioning team engaged at early stage. Develop commissioning programme between GG&C and PSCP.	
PD-03	Pre OBC	Operational date	RISK: Delay from handover to building being operational CAUSE: Operational processes are not approved by MHRA. EFFECT: Delay in providing service and commissioning.	NHS Operational Risk	GG&C	Director of Diagnostics	3	3	9	Medium	Treat		Ensure that the operational commissioning plan is aligned with any construction programme and that service move arrangements are in place and ready to move at the appropriate time. Project Board established to oversee the development on the commissioning plan. Plans to be fully developed during the FBC stage. Develop the commissioning programme during FBC. Continue engagement with MHRA. As of April 2023, engagement with MHRA is proving more challenging due to internal changes / resourcing issues within MHRA, however the RND Team are liaising with an independent consultant to support the MHRA process and requirements e.g. aligning to Annex 1. Risk of delays to arrange inspections to obtain the licence at the end - unknown at this stage but experiences from similar facilities has been verbally communicated. GG&C reviewing whether it would	3	3	9	Medium	25/04/2024	Remained Static	GG&C Commissioning team engaged at early stage. Continue engagement with MHRA.	
PD-04	Pre OBC	Delay to commissioning	RISK: Delay to Operational commissioning and going live. CAUSE: Delay to main contract. EFFECT: Issues with timing of deliveries and facility being operational.	NHS Operational Risk	PSCP	Director of Diagnostics	3	4	12	High	Tolerate		A construction based risk register should be developed and confirmed at FBC stage to minimise changes to programme, budget or specification. Current facility remains operational. Develop to a commissioning programme for inclusion within contract. EWs to be raised as per the contract.	2	3	6	Medium	25/04/2024	Remained Static	Risk register to continue to be developed during FBC stage. Full construction risk to be identified as design is developed.	
PD-05	Pre OBC	Critical programme dates are unrealistic	RISK: Programme is not realistic CAUSE: PSCP assumption are not correct or reflect complexities EFFECT: Delay to handover	NHS Operational Risk	GG&C	Director of Diagnostics	2	5	10	Medium	Treat		The programme has been developed from FBC through to Construction and thorough detail has been added and reviewed between all parties to ensure accuracy based on current information. Performance is recorded against the programme dates and progress is monitored through the Project Board. FBC programme agreed and in progress. Construction programme detail to be developed with GG&C and PSCP.	1	3	3	Low	25/04/2024	Decreased		
PD-07	Pre OBC	Loss of Client side resource	RISK: Loss of specialist knowledge CAUSE: Key personnel are lost to project. EFFECT: Delay or design / Build does not fully meet Client needs	NHS Operational Risk	GG&C	Director of Diagnostics	3	2	6	Medium	Treat		Detailed URS and ACR's has been developed and updated within the period to reflect current project requirements and guidance. Process to be implemented for recording decisions and changes to project information. Governance groups to be established to ensure the sharing of information. Handover processes to be developed where changes in personnel are unavoidable. Robust process in place for recording decisions and changes to the project information. Project governance groups in place to enable the sharing of knowledge. Clean Room Projects now appointed to support design development, specialist contractor to be appointed to support. Investigate potential cover from other Health Boards.	2	2	4	Low	25/04/2024	Remained Static	Investigate potential cover from other Health Boards.	
PD-08	Pre OBC	Delay due to Covid-19	RISK: Elongation of programme and delayed Completion CAUSE: COVID-19 - Workplace distancing measures resulting in extra time to complete activities or handle supplies and materials coming into work site. EFFECT: Delay to Practical Completion and services occupying the new building.	NHS Operational Risk	GG&C	Director of Diagnostics	2	3	6	Medium	Tolerate		Process established for Project Manager to report on programme delays due to COVID-19 to the Project Board. Project Manager to hold regular review meeting with PSCP and report to Project Board. Unless there is significant change in government guidance, the risk should be tolerated.	2	2	4	Low	25/04/2024	Decreased	Project Manager to hold regular review meeting and report to Project Board.	
PD-09	Pre OBC	Brexit or other materials delays	RISK: Lack of manufacture resource affects deliveries and installation of materials on critical path. CAUSE: Workload pressures on other projects. EFFECT: Delay in completing commissioning installation and occupancy of building.	NHS Operational Risk	GG&C	Director of Diagnostics	3	3	9	Medium	Treat		Procurement entering into dialogue with suppliers at the appropriate time. Continue engagement with suppliers. Specialist equipment or long lead time materials to be identified during the design development and allowances made within the programme. FBC and Construction programme now details long lead items.	2	2	4	Low	25/04/2024	Decreased	Equipment lists developed identifying key items. To be reviewed during FBC stage with ongoing engagement between the PSCP and their Supply Chain. Continue engagement with suppliers. Isolators now Group 1C	
PD-10	Pre OBC	Group 2 +3 items, Brexit or other materials delays	RISK: Lack of manufacture resource affects deliveries and installation of materials on critical path. CAUSE: Workload pressures on other projects. EFFECT: Delay in completing commissioning installation and occupancy of building.	NHS Operational Risk	GG&C	Director of Diagnostics	3	3	9	Medium	Treat		Procurement entering into dialogue with suppliers at an early stage. Specialist equipment or long lead time materials to be identified during the design development and allowances made within the programme. FBC and Construction programme now details long lead items. Continue engagement with suppliers.	2	3	6	Medium	25/04/2024	Remained Static	Get NHS Scotland procurement team involved early. Procurement to advise as the project progresses. Equipment lists developed identifying key items. To be reviewed during FBC stage with ongoing engagement between the PSCP and their Supply Chain. Continue engagement with suppliers.	
PD-11 / U-01	Pre OBC	Utility requirements	RISK: Delay in clarifying SEPA requirements CAUSE: Lack of engagement by third party EFFECT: Project uncertainties regarding costs and programme.	PSCP / NHS Shared Risk	Both PSCP & GG&C	Director of Diagnostics	1	3	3	Low	Transfer		NHS GG&C Radiation Protection Advisor (RPA) engaged during OBC stage and FBC Stage. Design to be developed and agreed to meet SEPA licensing requirements. New SEPA licence to be applied for once design confirmed during FBC stage. Sink locations agreed, existing SEPA licences shared to inform design. Minimal adaptations to the new license compared with existing so minimal risk.	1	2	2	Low	25/04/2024	Remained Static		
BC-01	Pre OBC	Change strategy	RISK: The clinical need for change and expected outcomes isn't clearly defined CAUSE: Brief and Business case not fully developed. EFFECT: Delay in Business case approvals and lack of service buy-in.	NHS Operational Risk	GG&C	Director of Diagnostics	3	3	9	Medium	Terminate		Develop a Project Execution Plan to engage with the service provider to fully understand the service based need for change and the expected benefit from investment. This links with URS and Business Case.	3	3	9	Medium	17/07/2022	Closed		
BC-02	Pre OBC	Service Planning	RISK: Service demand does not match planned levels. CAUSE: Poor predictive data / change in service delivery. EFFECT: Benefits Realisation are not achieved. Financial case is not reflective. Facility does not meet capacity needs.	NHS Operational Risk	GG&C	Director of Diagnostics	2	2	4	Low	Tolerate		Carry out sensitivity testing of assumptions behind service demand projections to understand and manage any underlying risks, Demand levels reviewed for past 6 years and presented in the IA and OBC. Business cases demonstrate that demand remains constant with the criteria identified that would cause any increase	2	2	4	Low	25/04/2024	Remain Static	Continue engagement with stakeholders.	
BC-03	Pre OBC	Service Changes.	RISK: New service models cant be implemented CAUSE: Operational factors not in place to support transition. EFFECT: Failure to achieve improvements in Benefit Realisation. Business Case failure.	NHS Operational Risk	GG&C	Director of Diagnostics	2	3	6	Medium	Treat		A service change plan should be developed which is closely aligned to the design development process and implementation of the project. Service plans are being developed to align with the new facility. The project board has been established that will oversee the service change plan and move to the new facility including updating the Business Continuity Plan and Operating Procedures. Service leads have been and continue to be involved in the design development. Resource planning to be considered by GG&C as increased staffing likely required in new facility. IT working group engaged to support the project e.g. paper free transition.	2	3	6	Medium	25/04/2024	Remained Static	Continue engagement with stakeholders.	
BC-04 (TP-04)	Pre OBC	Inadequate Business	RISK: OBC / FBC stage approval delay from CIG. CAUSE: Business case is not robust. 3rd party approval withheld EFFECT: Project delay	PSCP / NHS Shared Risk	Both PSCP & GG&C	Director of Diagnostics	3	4	12	High	Treat		Accelerating the FBC stage at risk prior to obtaining OBC approval from GG&C (obtained by CIG) in order to maintain the programme. Engagement with NHS Assure / HFS / NDAP and GG&C governance groups ongoing throughout FBC.	2	3	6	Medium	25/04/2024	Decreased	Review of design underway to mitigate delay in project approval Positive feedback from NHS Assure, travel in right direction. Delay more to project start rather than project unsuitable.	06/06/2023
NEH 030	Pre OBC	PSCP Capacity	RISK: PSCP delivery is sporadic and poor quality. CAUSE: Insufficient capacity to deliver within PSCP Team EFFECT: Delay to project and quality issues.	NHS Operational Risk	GG&C	Director of Diagnostics	2	5	10	Medium	Terminate		The capacity and capability of the PSCP and the design team should be fully explored by the client and contractor during the procurement stage, and evidenced in the project's OBC.	1	2	2	Low	31/03/2022	Closed		

Risk Ref No.	Date Identified	Summary Description of Risk		Risk Category	Risk Manager(s)	Accountable Owner	Likelihood	Impact / Consequence	Inherent Risk	Risk Status	Risk Treatment Approach	Risk cost allowance	Control and Mitigation Actions	Likelihood	Impact / Consequence	Residual Risk	Risk Status	Date Reviewed	Movement in the period	Planned Next Steps and Future Actions Required	Next Review Date
		Risk Title	Risk Description																		
Communication	COM-01	Pre OBC	Project Support	RISK: Poor Stakeholder engagement. CAUSE: Project Board and Delivery Groups not in place or not representative. EFFECT: Lack of wider support for project and local support.	NHS Operational Risk	GG&C	Director of Diagnostics	2	3	6	Medium	Tolerate	Project governance and management groups now in place and which will engage with all appropriate stakeholders at appropriate stages of the project. Project Board and Project Delivery Group established to maintain communication with appropriate stakeholders through out the project stages. Project Board will highlight, if required, any concerns regards lack of engagement.	1	2	2	Low	25/04/2023	Remain Static	Continue doing what we are doing.	06/06/2023
	COM-02	Pre OBC	Negative publicity.	RISK: Adverse publicity in relation to project. CAUSE: Various EFFECT: Reputational damage and political pressures.	NHS Operational Risk	GG&C	Director of Diagnostics	2	3	6	Medium	Tolerate	Reputational risk to be considered in the impact of all risk. Regular engagement with key stakeholders to be managed and NHS GG&C public affairs team to be consulted before any public information is released (i.e., planning application) RND Oversight Group established to maintain communication with MHRA as main external regulator. Planning application submitted and no feedback received to date.	2	3	6	Medium	25/04/2023	Remain Static	We now have full Planning Approval. Much of the debate around the facility was played out within the assessment process.	06/06/2023
	COM-03	Pre OBC	Poor communication	RISK: Ineffective engagement. CAUSE: Poor communications. EFFECT: Stakeholder interests ignored.	NHS Operational Risk	GG&C	Director of Diagnostics	2	2	4	Low	Tolerate	Ensure that the project communication plan covers issues of public perception / consultation feedback / media interest / parliamentary interest / organisational reputation, etc. Governance groups established to monitor and manage engagement with stakeholders. Comms team to be consulted at appropriate stage prior to any public engagement	2	2	4	Low	25/04/2023	Remain Static	Staff news letter via comms team. All Governance groups up to CEO sighted in progress.	06/06/2023
Financial	FIN-01	Pre OBC	Funding shortfall	RISK: Project costs over run. CAUSE: Various EFFECT: Additional funding required	NHS Operational Risk	GG&C	Director of Diagnostics	5	4	20	V High	Treat	Additional funding obtained at OBC refresh. Risk remains for FBC. Cost of NZC elements and risk allowances have been included in the FBC cost plan. A fully costed construction risk register will be developed during the FBC stage.	3	3	9	Medium	25/04/2023	Remained Static		06/06/2023
	FIN-02	Pre OBC	Cost risk	RISK: Cost risk CAUSE: Changes in legislation or taxes EFFECT: Increase in project costs.	NHS Operational Risk	GG&C	Director of Diagnostics	2	4	8	Medium	Tolerate	Legislation should be regularly reviewed and current status confirmed prior to each business case submission. Risk allowances have been included within the cost plan. Specific risks have been identified to address the impact from likely legislation changes such as BREXIT.	1	4	4	Low	25/04/2023	Remained Static	Time to Financial Close has reduced. Recent Service legislation has been adopted.	06/06/2023
	FIN-03	Pre OBC	Project unaffordable	RISK: Cost estimates are not reflective of tender returns CAUSE: Various, including volatile economic conditions EFFECT: Project is put at risk.	NHS Operational Risk	GG&C	Director of Diagnostics	4	4	16	High	Tolerate	The level of detail required for project cost estimates should align with guidance on each planning stage. The affordability of the project tested at IA stage and further explored as part of the OBC and FBC stages of the project. Cost models have been developed in line with the SCIM guidance. Suitable allowances have been made for assumptions and risks presented at the business case stages. Project affordability has been tested and presented in the IA and OBC with appropriate funding profiles developed, risk allowances and assumptions made. As Q2 2023, forecasts show stabilising in pricing - risk likelihood reduced to possible / 3.	2	3	6	Medium	25/04/2023	Remained Static		06/06/2023
	FIN-04	Pre OBC	Specification uplift	RISK: Increased project costs and delay CAUSE: Specialist consultants requirements are not currently costed EFFECT: Specification is uplifted resulting in cost and programme pressures.	NHS Operational Risk	GG&C	Director of Diagnostics	2	3	6	Medium	Treat	Clean Room Projects now appointed as Clean Room Specialist. Appointment of Fire Engineer now in place. Appointment of specialist Technical Advisor to be undertaken early in FBC stage. Cost currently allowed. Clean Room specialist to help with design of the facility and GG&C Procurement Team to support supplying the requirements - engagement with both ongoing and spec to be agreed during FBC. GG&C to look to appoint validation specialist to provide comment on the proposed commissioning specification of the specialist equipment. GG&C to review AE/AP experience with working on aseptic / radiopharmacy facilities.	2	3	6	Medium	25/04/2023	Remained Static	Design currently based on architect's interpretation of requirements. Specialist appointments required early in FBC stage	06/06/2023
	FIN-05	Pre OBC	Disruption to supplies / material due to Covid-19 or other economic factors	RISK: Disrupted or cancelled supplies/materials orders to the work site CAUSE: Supply chains affected by financial viability, workplace measures and/or staff availability, resulting in delays in programme and additional costs from sourcing materials from other suppliers or waiting for existing orders to be fulfilled; EFFECT: Costs increase from time delays, extra staff time and commodity price changes. Delay to Practical Completion and services occupying the new building.	NHS Operational Risk	GG&C	Director of Diagnostics	2	2	4	Low	Transfer	Procurement entering into dialogue with suppliers at the appropriate time. Specialist equipment or long lead time materials identified during the design development and allowances made within the programme. Post FBC risk passes to PSCP with exception of group 2 and 3 items. Continue engagement with supply chain and GG&C procurement team throughout FBC stage. Group 1C items to be introduced where risk lies with PSCP - development ongoing with GG&C. Procurement Team to undertake credit checks on each supplier.	2	2	4	Low	25/04/2023	Remained Static	Technetium Isolators are critical pieces of equipment with long lead-in times. These have now been changed to Group 1C items, which are now full specified and tendered.	06/06/2023
	FIN-06	FBC close out	Project Cost uplift	RISK: Provisional Sum allowed for Group 1C Gallium Isolators is insufficient CAUSE: Item not yet tendered by NSS Equipe; EFFECT: Increase in cost to GG&C.	NHS Operational Risk	GG&C	Director of Diagnostics	3	3	9	Medium	Treat	Complete tender exercise as matter of urgency.	3	3	9	Medium	25/04/2024	New	Gallium Isolators are critical pieces of equipment with long lead-in times. Item drops off RR once tendered.	06/06/2023
	FIN-07	FBC close out	Project Cost uplift	RISK: High Voltage electrical cable needs renewed over a stretch.; CAUSE: We know cable is at end of life. Cable cant be fully tested, but will be tested during works. EFFECT: Costs increase from variation to contract.	NHS Operational Risk	GG&C	Director of Diagnostics	2	3	6	Medium	Treat	Get indicative cost from BAM to make provision.	2	3	6	Medium	25/04/2024	New	Grading study suggests cable will be sufficient	06/06/2023