

**NHS Greater Glasgow  
and Clyde  
Radionuclide Dispensary  
Key Stage Assurance  
Review (KSAR)**

**Construction  
KSAR Report V2.0**

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# Document Overview

## Key Stage Assurance Review Report | Construction Stage

### Prepared for:

NHS Greater Glasgow and Clyde

### Prepared by:

NHSScotland Assure – Engineering, Energy and Assurance Service

# Document Control Sheet

## Revision History

| Version | Date       | Revision Details                             | Originator                  | Changes Marked |
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## Approvals

This document requires the following signed approvals:

| Version | Date       | Name & Organisation | Role                          | Signature |
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## Distribution

This document has been distributed to:

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| V1.0    | 16/01/2026    | [REDACTED] | Project Manager, NHSGGC Property and Capital Planning |

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| V2.0 | 18/02/2026 | [REDACTED] | Scottish Government – Head of NHS Strategic Capital Investment                  |
| V2.0 | 18/02/2026 | [REDACTED] | Scottish Government   |

# 1. Executive Summary

NHS Scotland Assure (NHSSA) confirms that NHS Greater Glasgow and Clyde (NHSGGC) have provided sufficient assurance at this stage to receive a supported status for the Construction Key Stage Assurance Review (KSAR). NHSSA also acknowledge the hard work undertaken by NHSGGC to close out the majority of observations from previous KSAR's and their continued commitment to provide assurance.

With respect to the Construction KSAR stage, NHSSA have identified a number of key themes that the health board should consider prioritising, in order to assure themselves that the project can be delivered safely. A summary of these is noted within this executive summary. However, it is essential that all observations raised through this report and associated detailed review findings (DRFs) are addressed timeously by NHSGGC through their action plan to ensure readiness for the Commissioning KSAR.

## 1.1 Governance and Quality Assurance

- Inspection and test plans: current plans do not comprehensively cover all MEP systems or specialist cleanroom contractor works. NHSGGC should ensure a complete inspection and test register is developed and maintained.
- Document control processes: evidence of robust processes for ensuring latest drawings/specifications are approved and used remains incomplete. Non-conformance management procedures require clear documentation.
- Commissioning plan: while a commissioning plan exists and an independent validator has been appointed, the contractor's commissioning plan is outstanding and should be submitted and accepted by all stakeholders.
- Soft landings and handover: the Terms of Reference for the Soft Landings group and lead roles remain undefined. These should be formalised to support commissioning and handover stages.
- Duty holder matrix: evidence of sufficient competent, qualified staff for lifecycle duties (including IPC, engineering, Estates) is lacking. NHSGGC should confirm resourcing and governance arrangements.

## 1.2 Water and Drainage Systems

- Competency assurance: while training records have been provided, evidence of vetting processes and competency sign-off for plumbing sub-contractors is incomplete.
- Design compliance: outstanding assurance on BIM coordination for service access and future flexibility. Plant access strategy monitoring requires documentation.
- Technical observations: pressure reduction strategy and cold-water storage cistern arrangement require review and documented approval; evidence of pipe joint testing methodology and inspection reports is missing; manufacturer assurances on component testing and disinfection compatibility have not been provided.
- Pre-commissioning: checklists require alignment with SHTM 04-01 Part A, independent audit arrangements should be confirmed.

## 1.3 Ventilation

- Installer competency: evidence of healthcare experience and site induction for ductwork and plant installers is incomplete.
- Future flexibility and access: NHSGGC should provide detailed BIM coordination evidence, including stakeholder sign-off and spare capacity allowances.
- Pre-Commissioning: ductwork pressure testing protocols, calibration certificates, and independent verification should be documented.
- Variation Management: a complete derogation schedule with risk assessments, mitigations and stakeholder approvals is required.

## 1.4 Electrical

- Competency and Induction: while qualifications have been provided, assurance on site induction and commissioning contractor qualifications is outstanding.
- Pre-commissioning: the electrical pre-commissioning plan / programme, which details checks and current status should be submitted.
- Material storage: verification of storage conditions for electrical materials is required.

## 1.5 Infection Prevention and Control (IPC)

- Governance Structure: IPC management structure requires updating to reflect current staffing and roles. Evidence of executive health board oversight and regular reporting is lacking.
- National standards: confirmation of adoption and application of the National Infection Prevention and Control Manual (NIPCM) is required.
- Contractor training: evidence of comprehensive IPC training and induction for all relevant contractor staff is missing.
- Equipment procurement: assurance on IPC oversight in procurement decisions and governance approval for equipment remains incomplete.
- Outstanding observation: Tap selection approval and governance sign-off remain unresolved from the FBC stage.

## 1.6 Fire Safety

- Fire related observations have largely been addressed, however NHSGGC should ensure pre-commissioning fire safety checks are completed and independently verified prior to the commissioning stage.

NHSSA would like to note that NHSGGC have acted in a collaborative manner throughout the KSAR process and would like to thank the health board's team for their cooperation and commitment to the KSAR process.

## 1.1 Summary of Findings

The findings of this report have been collated based on information provided by NHSGGC. The following table outlines the status of key findings as derived from the

KSAR and identified within the NHSSA Recommended Action Plan issued to NHSGGC under separate cover:

| Review   | No. of Issues per category |     |     |     |     |
|--|----------------------------|-----|-----|-----|-----|
|  | 1                          | 2   | 3   | 4   | 5   |
| Project Governance and General Arrangements      | 0                          | 3   | 5   | 4   | 0   |
| Water and Internal Plumbing / Drainage Systems   | 0                          | 1   | 16  | 2   | 0   |
| Ventilation                                      | 0                          | 0   | 8   | 1   | 1   |
| Electrical                                       | 0                          | 0   | 6   | 0   | 0   |
| Medical Gases                                    | N/A                        | N/A | N/A | N/A | N/A |
| Fire Safety                                      | 0                          | 0   | 0   | 0   | 0   |
| Infection Prevention & Control Built Environment | 0                          | 2   | 6   | 1   | 0   |

The following categories were used in relation to the findings:

| Category | Definition  |
|----------|---|
| 1        | Significant – concerns requiring immediate attention, no adherence with guidance.                   |
| 2        | Major – absence of key controls, major deviations from guidance.                                    |
| 3        | Moderate – not all control procedures working effectively, elements of noncompliance with guidance. |
| 4        | Minor – minor control procedures lacking or improvement identified based on emerging practice.      |
| 5        | Observation and improvement activity.   |

## 1.2 Project Overview

The Radionuclide Dispensary is a new two storey facility on the existing Gartnavel General Hospital Campus, with the upper storey being exclusively for supporting plant and equipment. The ground floor includes the pharmaceutical accommodation with supporting offices and changing areas.

NHSGGC have appointed a main contractor to deliver the project under a design and build contract. There is also a specialist cleanroom sub-contractor in place to design and build the specialist areas of the facility. The scope of the project is to construct a cleanroom facility for manufacturing of radiopharmaceutical medicines and distribution of them to Nuclear Medicine departments throughout health boards in West Central Scotland as well as other medical customers.

Whilst not a patient facility, there are considerable critical radiopharmaceutical manufacturing operations that the Radionuclide department facilitates which require bespoke environmental and resilience solutions.

The selected site on the Gartnavel Campus presents unique challenges of its own, which must be considered. Not only in terms of the Radionuclide project, but also the safe and ongoing operation of existing facilities that are in the vicinity of the project and have shared services or access with the Radionuclide project.

The primary services, such as electricity, telecoms, drainage and water all originate from within the private networks of the Gartnavel General Hospital Campus and will be subject to connection requests and liaison with the site estates team.

The project includes significant electrical, domestic water, drainage and ventilation elements, however there is no medical gas installation proposed in the building. There are no specific fire engineering proposals within the project design. These elements will be discussed in more detail throughout this review.

## 2 Review Methodology

### 2.1 Overview of NHS Scotland Assure and the KSAR Process

Good management and effective control of projects is an essential element to the successful delivery and maintenance of healthcare facilities across NHS Scotland estates.

The NHSScotland Assure (NHSSA), Assurance Service was launched on 1 June 2021 following a letter issued by Scottish Government to health board Chief Executives, Directors of Finance, Nursing Directors and Directors of Estates. The letter outlined the purpose of NHS Scotland Assure, with an overarching aim to deliver a co-ordinated approach to the improvement of risk management in new builds and refurbishment projects across NHS Scotland. The new service will underpin a transformation in the approach to minimising risk in our healthcare buildings and environments, protecting patients from the risk of infection and supporting better outcomes for patients in Scotland.

From the 1 June 2021, all NHS health board projects that require review and approval from the NHS Capital Group (CIG), will need to engage with NHSSA to undertake key stage assurance reviews (KSARs). Approval from the CIG will only follow once the KSAR has been satisfactorily completed. The KSARs have been designed to provide assurance to the Scottish Government that guidance has been followed. The Scottish Government may also commission NHSSA to undertake reviews on other healthcare-built environment projects. This does not change accountability for the projects; NHS health boards remain accountable for their delivery. NHSSA will be accountable for the services it provides that support delivery of the projects.

NHSSA will also work closely with health boards to identify where a KSAR may be required for projects under their delegated authority, utilising a triage system to assess risk and complexity of projects.

The KSARs will assess if health boards project management teams (inclusive of clinicians, appointed construction consultants, and contractors) are briefed and following best practice procedures in the provision of facilities. NHSSA will review if projects are compliant in all aspects of safety, if specific engineering systems are designed, installed and commissioned, and for ongoing safety maintenance including infection prevention and control (IPC).

The KSAR focuses on key topics, specifically – project governance, water (including plumbing and drainage), ventilation, electrical, medical gases, fire safety and IPC. This ensures they are designed, installed and functioning from initial commissioning of a new facility and throughout its lifetime. Health boards are required to have appropriate governance in place at all stages of the construction procurement journey.

The purpose of the KSAR at the Construction stage is to confirm there is a good and comprehensive understanding of the category of patient who will use the proposed facility and that the project team consider how appropriate quality and safety standards will influence the build. It looks to provide assurance that the project can proceed to the Commissioning stage.

Whilst the KSAR focusses on actions to improve the end product, it is not intended to detract from the merits of a development that will add significant benefit for the healthcare of the population served, and which has many exemplary elements. Rather, it is a reflection of the complexity of healthcare construction projects and the stage of development at which it was reviewed. Some conflicts and changes are to be expected as complex projects develop, and project teams have in place mechanisms to identify and address these. This report adds a layer of scrutiny and assurance to that process to address the above requirement from government.

## **2.2 KSAR Process**

The Construction KSAR for NHSGGC Radionuclide Dispensary took place between 13/10/2025 and 16/01/2025.

To inform the findings of the KSAR, the Health Board were issued with key documents outlining the assurance question set and expected level of evidence and supporting documents in accordance with relevant legislation and guidance. This included the Construction KSAR Workbook and Construction Deliverables list.

The KSAR report includes an overview of the main findings of the review, with a further itemised list of detailed observations included within the appendices of the report. The detailed observations are recorded in an action plan that should be adopted by the Health Board following the review and subsequently monitored by them to ensure appropriate actions are completed in a timeous manner.

As part of the KSAR process, NHSGGC issued a document transmittal log which details the evidence provided in response to the KSAR Workbook and NHSSA recommended deliverables list. As part of an initial gap analysis, NHSSA reviewed the transmittal log to ensure all documents had been successfully received. The transmittal log provides a version history and audit trail of information reviewed.

## **2.3 Application of Standards & Legislation**

**2.3.1** NHS Scotland Assure currently provides a range of advisory and delivery services across a wide variety of topics from a portfolio which covers the built estate, engineering and environment and facilities management. With some exceptions these services are largely advisory in nature, identifying best practice and developing national guidance and standards.

**2.3.2** Antimicrobial Resistance and Healthcare Associated Infection (ARHAI) Scotland currently provides advice and guidance on all aspects of infection protection and control nationally in Scotland, inclusive of expert advice and Construction KSAR Report NHSGGC Parkhead Hub Page 11 of 76 Version: V2.0 Client Confidential guidance on the topic of Healthcare Associated Infections (HAI) and antimicrobial resistance.

The NHSScotland National Infection Prevention and Control Manual (NIPCM) was first published on 13 January 2012, by the Chief Nursing Officer (CNO (2012)1) and updated on 17 May 2012 (CNO (2012)1 Update).

The NIPCM provides IPC guidance to all those involved in care provision and is considered best practice across all health and care settings in Scotland. The re-launch of the NIPCM by the CNO on 11 July 2022 emphasises the ongoing importance of application of Infection Prevention and Control (IPC) guidance within health and care settings across Scotland.

The authority of guidance produced by National Services Scotland (NSS) and other national organisations e.g. Healthcare Improvement Scotland is best described by the definitions outlined below (SHTM 00 – Best practice guidelines for healthcare engineering):

**Regulations** are law, approved by Parliament. These are usually made under the Health and Safety at Work etc Act following proposals from the Health & Safety Commission. Regulations identify certain risks and set out specific actions which must be taken.

**Approved Codes of Practice** give advice on how to comply with the law by offering practical examples of best practice. If employers follow the advice, they will be doing enough to comply with the law.

Approved Codes of Practice have a special legal status. If employers are prosecuted for a breach of health and safety law, and it is proved that they did not follow the relevant provisions of an Approved Code of Practice, they will need to show that they have complied with the law in some other way, or a court will find them at fault.

**Standards** (British or European), institutional guides and industry best practice play a large part in how things should be done. They have no direct legal status (unless specified by Regulations). However, should there be an accident; the applied safety practices at the place of work would be examined against existing British or European Standards. It would be difficult to argue in favour of an organisation where safety was not to the described level.

**Guidance** is issued in some cases to indicate the best way to comply with Regulations, but the guidance has no legal enforcement status.

**2.3.3** Whilst guidance is deemed not compulsory by the Health and Safety Executive (HSE), where compliance with guidance is specified in a contract, as is the case here, it becomes a contractual requirement. Therefore, any permitted deviation from it would be expected to follow a formal process with input from all relevant parties, with clarity around how the outcome was reached, including risk assessments where appropriate and sign off by all those authorised to approve it.

## 2.4 Project Technical Outline Summary

This new build facility is divided into two key areas. The “hot” side includes the cleanroom manufacturing facility, and the “cold” side includes the supporting ancillary staff and office accommodation. The upper floor plantroom above the “hot” side is known as the “dry” plantroom and above the “cold” side is known as the “wet” plantroom.

The new build facility is supplied directly with cold water from the raw external Mains Cold Water Supply (MCWS).

Within the “cold” side of the building the direct MCWS will serve the cold-water outlets and the local electrical point of use (PoU) water heaters which will in turn provide a domestic hot water supply (DHWS).

The ventilation strategy for the facility is also divided into a “hot” side and “cold” side. There are two distinct systems for each space. The “hot” side system is a cascade ventilation system used to control the cleanliness of the various cleanroom areas and provide the required level of heating and cooling to control the internal temperature of the spaces. The cleanroom facility is identified as being designed in accordance with EU GMP Volume 4, Annex 1. “EU Guidelines to Good Manufacturing Practice Medicinal Products for Human and Veterinary Use”.

The “cold” side system is a supply and extract system with separate dirty extract for the WC spaces. The perimeter ground floor office and training rooms are proposed to use natural ventilation from openable windows.

The cleanroom spaces also include for Tc Isolators and Ga Isolators with local exhaust ventilation (LEV) systems.

The electricity supply to the facility will be supplied from a new 0.5MVA LV transformer connected into the existing HV infrastructure within the Gartnavel General Hospital site. A backup power supply is proposed via a 600kVA generator. If future expansion is required NHSGGC have advised that both the transformer and generator may require to be upgraded.

Lighting and emergency lighting is detailed within the design information. Within the cleanroom areas there will be a minimum of two lighting circuits per space to ensure that if one circuit is lost there will be the provision of 50% redundancy in the room.

Fire alarm systems are provided via automatic point detection in both the “hot” and “cold” sides of the facility. The drawings and documentation note a level L1 of protection as defined in BS5839-1.

## 3 KSAR Review Summary

The following narrative relates directly to the Construction KSAR workbook, and the evidence indicated therein. The comments associated with the points are because of the evidence presented by the Board and their advisors during the review process.

### 3.1 Project Governance and General Arrangements

#### 3.1.1 Project Governance and General Arrangements KSAR Observations

| Workbook Ref No.  | Areas to probe   | Evidence expected  |
|---|--|--|
| 1.1   | Has suitable plans and documentation been put in place for the project to manage and monitor Quality Management and Assurance? | Project Quality Plan<br>Inspection and Test Plans<br>Inspection and Test Schedule/Register |
| <p><b>NHS Scotland Assure Observations:</b><br/>Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.</p> <p>NHSGGC have provided assurance that a project quality plan is in place for the project which details how the stakeholders deliver and monitor quality management and assurance.</p> <p>NHSGGC have submitted an inspection and test plan for the project, however this does not detail all of the testing that will be undertaken on the respective MEP systems and it also does not cover all of the testing that will be undertaken by the specialist cleanroom contractor in their respective areas of work, as noted in DRF observation CON.G1.1.1.</p> <p>The RND quality plan that has been submitted does not contain an inspection and test register for the project that should be completed by all respective stakeholders. As noted in DRF observation CON.G1.1.2.</p> <p><b>Documents referenced are:</b><br/> <i>Cleanroom DQ – Rev 04 - Bassaire Equipment</i><br/> <i>Cleanroom DQ – Rev 04 – Validation and Documentation</i><br/> <i>Cleanroom DQ – Rev 05 – EMS</i><br/> <i>Cleanroom DQ – Rev 05 – Fabric Work</i><br/> <i>Cleanroom DQ – Rev 05 – Overview</i><br/> <i>Cleanroom DQ – Rev 06 – HVAC &amp; Drainage-Water Services</i><br/> <i>RND Quality Plan</i><br/> <i>RND-BAM-XX-XX-RP-W-00101</i></p> |  |  |

| Workbook Ref No. | Areas to probe   | Evidence expected   |
|------------------|--|---|
| 1.2              | Has suitable arrangements been implemented on the project for document control processes for Quality Assurance and Management? | <p>Process for ensuring latest drawings approved and used.</p> <p>Processes for ensuring latest specification and details approved and used.</p> <p>Approach to management of non-conformances.</p> <p>Approach to change management control.</p> <p>Document management recording and structure.</p> |

**NHS Scotland Assure Observations:**

Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.

The documentation submitted by NHSGGC does not detail the process to ensure that the latest drawings are approved and used on the project, as noted in DRF observation CON.G1.2.1.

Similarly, the evidence submitted also does not detail the process to ensure that the latest specifications and details are approved and used on the project, with DRF observation CON.G1.2.2 relating to this item.

There has been no assurance provided to confirm how the management and resolution of any non-conformances are undertaken on the project, as noted in DRF observation CON.G1.2.3.

Assurance has been provided, of the projects approach to change control management.

**Documents referenced are:**

- 2025.08.27 PM Report
- ACN 004 Generator
- CCN-01 Attenuation Tank Status B
- HWS RND Variation Template
- P78 ACN-04 20250219
- RND Variation Procedure

| Workbook Ref No.  | Areas to probe   | Evidence expected   |
|---|--|---|
| 1.3   | How has the Health Board approached Quality Assurance on the project to ensure processes and procedures are being adhered? | Evidence of regular Quality Assurance audits / reports undertaken on the project. |
| <p><b>NHS Scotland Assure Observations:</b><br/> NHSGGC have submitted several reports that provide assurance that regular and structured quality assurance audits are being undertaken on the RND project. There are two sets of reports that are produced by Phoenix Commissioning Ltd and Thomas and Adamson respectively.</p> <p><b>Documents referenced are:</b><br/> 3026 – NHS RND – T&amp;A QM Report 011<br/> 3026 – NHS RND – T&amp;A QM Report 016<br/> P8808 – RND Weekly QM Report 001<br/> P8808 – RND Weekly QM Report 002<br/> QM Report – 03 NHS Radionuclide – 20.02.2025</p> |  |   |

| Workbook Ref No.   | Areas to probe  | Evidence expected  |
|--|---|--|
| 1.4  | How does the Health Board assure itself that Testing and Commissioning of services and systems have / are being developed and put in place to meet the project needs? | <p>Evidence of Testing and Commissioning monitoring / witness of tests.</p> <p>Evidence of Testing and Commissioning review of results.</p> <p>Evidence of Testing and Commissioning acceptance of results.</p> <p>Testing and Commissioning programme.</p> <p>Plans have / are being developed for collating information and documents.</p> <p>Have additional checks (external parties) been carried out to review the Contractors T&amp;C's proposed plans.</p> |
| <p><b>NHS Scotland Assure Observations:</b><br/> Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.</p> <p>At this construction stage of the project, no evidence of the monitoring or witnessing of the testing and commissioning has been provided, as these tasks have yet to be undertaken on the project.</p> |   |  |

As noted above, testing and commissioning has still to be undertaken therefore there are no results available for review.

NHSGGC have submitted a full testing and commissioning programme for the project which covers all building services disciplines.

The minutes provided of the commissioning subgroup meeting by NHSGGC detail discussions that have taken place, and are on-going, regarding the commissioning documentation that is required and the provision of all relevant documentation.

The submission of a contractors commissioning plan is outstanding, and this should be submitted following the review and acceptance of the document by all relevant stakeholders. As noted in DRF observation CON.G1.4.1.

**Documents referenced are:**

2025.08.11 Delivery DQ IQ commissioning subgroup v1  
 250529 RND MEP Full Commissioning programme  
 E-mail 2025.07.10 Validator Appointment  
 Flowtech Enviro Ltd Order

| Workbook Ref No. | Areas to probe  | Evidence expected  |
|------------------|---|--|
| 1.5              | How does the Health Board assure itself that the management of defects have / are being developed and put in place to meet the project needs? | <p>Systems and process for recording and management defects.</p> <p>Process for the rectification and close out of defects prior to handover.</p> <p>Plans have / are being developed for collating information and documents.</p> |

**NHS Scotland Assure Observations:**

NHSGGC have provided assurance which details the systems and processes that are in place on the project for recording defects, with the information also detailing how any identified defects are managed through rectification to an accepted resolution.

**Documents referenced are:**

2025.08.26 GG&C DQ IQ sign off matrix V6  
 2025.09.29 Cover paper item 5.1  
 RND-BAM-XX-XX-PL-W-54100  
 SCO-BAM-XX-XX-GU-W-00000-BIM360 Defects Issues Guidance  
 SCO-BAM-XX-XX-GU-W-00001-BIM360 Defects Process

| Workbook Ref No.  | Areas to probe   | Evidence expected   |
|---|--|---|
| 1.6   | How does the Health Board assure itself that the management of the Handover process have / are being developed and put in place to meet the project needs? | Soft Landings process<br><br>Plans have / are being developed for collating as installed information and documents. |
| <p><b>NHS Scotland Assure Observations:</b><br/>Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.</p> <p>The documentation submitted confirms that plans for a soft landings delivery group are in place, however both of the appropriate lead roles within the group have still to be defined along with the Terms of Reference for the group. As noted in the DRF observation CON.G1.6.1.</p> <p><b>Documents referenced are:</b><br/> 2025.08.26 GG&amp;C DQ IQ sign off matrix V6<br/> 2025.09.29 Cover paper Item 1.6<br/> e-mail 2025.07.10 Validator Appointment<br/> P78 Completion Requirements V4<br/> P78 RND Completion Requirements v4<br/> Radionuclide Dispensary project Board DRAFT MINUTE 29.08.25<br/> RND-BAM-XX-XX_PL-W-54100</p> |  |   |

| Workbook Ref No.   | Areas to probe  | Evidence expected  |
|--|---|--|
| 1.7  | How does the Health Board assure itself that the works are following the procedures as laid out in HAISCRIBE? | Evidence that the Contractor in charge of the works has read, understood and signed the HAISCRIBE.<br><br>Evidence that Infection Control have carried out interim site inspections at points where setting out of the rooms are underway to pick up implications of any Contractor's onsite adjustments.<br><br>For works inside of or adjacent to healthcare spaces which are in use, evidence that a task specific HAISCRIBE has been produced and that compliance is monitored by the Board. |
| <p><b>NHS Scotland Assure Observations:</b><br/>Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.</p> |   |  |

NHSGGC have provided information regarding governance arrangements confirming that a task-specific HAI Scribe has been completed. However, the version provided does not appear to include all current project team members names. As noted in DRF observation CON.G1.7.1.

Project Board minutes indicate examples of governance oversight, and a recent site walk round with the IPCT provides evidence of discussions on HAI Scribe elements, including risk considerations and communication to the Project Board. However, it is unclear whether additional IPCT walk rounds are planned. As noted in DRF observation CON.G1.7.2.

No documented Terms of Reference (ToR) for the Project Board has been provided. As noted in DRF observation CON.G1.7.3.

***Documents referenced are:***

*2025.01.21 Hai Scribe Stage 3 Version R1 Signed.pdf*  
*2025.08.26 GG&C DQ IQ sign off matrix V6*  
*2025.08.27 PM Report.pdf*  
*CBES Water Safety Plan Template Rev 1 24.08.25.docx*  
*Project Board MINUTE 29.08.25.pdf*  
*RND-CBES-XX-XX-DT-M-0022.pdf*

***Additional documents provided 25/11/25***

*2025.10.31 IPC email exchange re meeting.pdf*  
*2025.11.07 IPC email exchange re meeting.pdf*

***Additional documents provided 01/12/25***

*2025.10.29 PM Report distribution.pdf*  
*2025.11.27 PM Report distribution.pdf*

***Additional documents provided 02/12/25***

*2025.10.28 PM Report.pdf*  
*2025.11.04 Response to IPC concerns.pdf*  
*2025.11.07 IPC report to Board.pdf*  
*20251104\_141229.jpg*  
*20251104\_141302.jpg*

| Workbook Ref No.   | Areas to probe   | Evidence expected  |
|--|--|--|
| 1.8  | How does the Health Board continue to assure itself that the clinical needs of the facility are clearly understood by each section of the client organisation? | <p>Updated description of each department of the facility review process evidenced.</p> <p>All specifications are being related back to the Portfolio Document (PD).</p> <p>An updated and live Derogation document.</p> |
| <p><b>NHS Scotland Assure Observations:</b><br/> NHSGGC have provided assurance that a Reviewable Design Data (RDD) review has been undertaken for each area within the RND facility, with this being accepted by the appropriate stakeholders.</p> <p>Assurance has also been provided that the user specification is related back to the projects Authority Construction requirements.</p> <p>NHSGGC have provided assurance regarding the status of the derogations and the process to manage these by means of the documentation submitted.</p> <p><b>Documents referenced are:</b><br/> 2025.06.04 Derogation Sign off tracker MEP Extract<br/> 2025.06.25 RDD Process and sign off<br/> 2025.07.25 Project Board minutes<br/> 2025.08.12 Minute of Delivery Group Full Meeting V1<br/> 2025.08.12 RND Risk Register Rev U1<br/> 2025.08.27 PM Report<br/> 2025.08.29 Project Board minute<br/> 2025.09.26 Cover paper Item 1.8<br/> RDN-BAM-XX-XX-SH-W-0001 – ACR URs Guidance Tracker 25-10-24<br/> RND ACRs Version 8G<br/> RND-NHS-XX-XX-WI-K-12407 P10M – RND User Spec 2024.11.05</p> |  |  |

| Workbook Ref No. | Areas to probe   | Evidence expected  |
|------------------|--|--|
| 1.9              | Are the Principal Designers regularly carrying out site inspections and providing reports to the Board and Principal Contractor? | <p>Regular (fortnightly) reports being provided to the clients' project management team, certifying installation is being provided in accordance with the CD.</p> <p>Regular comment on each of the installing contractors' quality safety plan and work delivered.</p> <p>If the Principal Designer is not employed to carry out site inspections, evidence that the Board has alternative, adequate means of design / construction quality control in place.</p> |

**NHS Scotland Assure Observations:**

Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.

NHSGGC have provided Quality Monitoring reports produced by Thomas and Adamson along with Principal Designers Reports authored by Currie and Brown. These reports confirm that the site works are proceeding in accordance with the contract documents, however the most recent reports provided are from February 2025 and, in order to demonstrate that this assurance is reflective of the current stage of the project, reports should be provided that cover the period up until the construction KSAR. As noted in DRF observation CON.G1.9.1.

**Documents referenced are:**

3026 – NHS RND – T&A QM Report 011  
GGH, RND\_PD CDM Report February 2025  
QM Monthly Report – 03 NHS Radionuclide – 20.02.2025

| Workbook Ref No.   | Areas to probe   | Evidence expected   |
|--|--|---|
| 1.10   | The Health Boards approach on the procurement journey with evidence of the plans on how the Board will provide assurance, particularly emphasis on the critical system identified earlier. | <p>Evidence on how this requirement is being managed and how it fits with the project governance arrangements</p> <p>Plans to identify any gaps in the procurement approach that may require to be addressed.</p> <p>Evidence on how Infection Prevention and Control are involved with the procurement approach to future plans for project.</p> <p>Evidence that the Health Boards selected procurement route has gone through the Board's Governance channels.</p> |
| <p><b>NHS Scotland Assure Observations:</b><br/> NHSGGC have provided assurance that they continue to act diligently with respect to the procurement journey. This has been evidenced through information provided as part of the FBC KSAR closeout and the Construction KSAR and includes details of legal and technical reviews of the procurement structure.</p> <p>At this stage of the project, the main areas relating to procurement are associated with equipping and NHSGGC have demonstrated a process for how they are managing this, including RDD and equipping considerations. Evidence has also been provided of IPC involvement in these processes.</p> <p>NHSSA welcome NHSGGC's approach to engagement with their IPC team through the construction stage of the project and would recommend that this proactive approach continues for the duration of the project.</p> <p><b>Documents referenced are:</b><br/> 2025.06.04 Derogation Sign off tracker MEP Extract.pdf<br/> 2025.07.22 RDD Meeting Matrix V7B.xlsx<br/> 2025.07.25 Project Board minutes.pdf<br/> 2025.08.26 GG&amp;C DQ IQ sign off matrix V6.pdf<br/> 2025.08.27 PM Report<br/> 2025.08.29 Project Board minute<br/> Equipment NRD Financial Report 20240312<br/> VMP for RND new build project -rev 03 Aug 2025</p> <p><b>Documents provided under 7.4 and referenced</b><br/> 2025.11.07 DQ IQ OQ PQ process.pdf<br/> 2025.11.07 IPC confirm involvement from OQ.pdf</p> |  |   |

| Workbook Ref No.  | Areas to probe                                      | Evidence expected  |
|---|---|--|
| 1.11  | Evaluation of the Health Boards commissioning plan. | <p>Evidence that the Health Board has recorded plans that are comprehensive and adequate to address the needs of the project and that they are fully resourced.</p> <p>Evidence that the Board has had all pre-commissioning checks audited and approved by an independent organisation.</p> |
| <p><b>NHS Scotland Assure Observations:</b><br/> NHSGGC have provided assurance by means of the referenced documents that a commissioning plan is in place and being developed by the appropriate project stakeholders. Evidence has also been provided to demonstrate that NHSGGC have appointed an independent validator and commissioning management company.</p> <p><b>Documents referenced are:</b><br/> 2025.08.05 Delivery DQ IQ commissioning subgroup v1<br/> 2025.08.11 Delivery DQ IQ commissioning subgroup v1<br/> 2025.09.29 Cover paper Item 1.11<br/> e-mail 2025.07.10 Validator Appointment<br/> P78 Completion Requirements V4<br/> Quality Monitor Appointment (T+A International Ltd)<br/> 251110 RND Commissioning Plan Rev A</p> |   |  |

| Workbook Ref No. | Areas to probe                                      | Evidence expected  |
|------------------|---|--|
| 1.12             | Evaluation of the Health Boards duty holder matrix. | <p>Evidence that the health board have a fully recorded matrix of the required roles and responsibilities and have a clear governance structure that is fully resourced together with plans in place for the implementation.</p> <p>Evidence that Health Boards have appropriate number of competent, qualified staff to carry out specific duties throughout the life cycle of the project e.g., IPC, Engineers, Estates staff etc. The number of competent, qualified staff will depend on the type and size of the Build Project.</p> |

### **NHS Scotland Assure Observations:**

Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.

Evidence has been submitted by NHSGGC which demonstrates assurance of the project boards roles and responsibilities, with this information also confirming the project governance structure that is in place for the project.

However, no evidence has been provided to confirm that NHSGGC have an appropriate number of competent qualified staff to carry out the required duties throughout the lifecycle of the RND project. The document titled 'Cover Paper Item 1.12' that has been provided acknowledges that this aspect of the project requires further development. As noted in DRF item CON.G1.12.1.

#### **Documents referenced are:**

*2025.09.29 Cover paper item 1.12*

*Appendix A – 20240415 RND Risk Register Rev M*

*Appendix B – KPI hub wide*

*Appendix D – RDN –hWS-78-Project Directory 251024*

*Appendix E – 2024.02.24 Meeting Matrix V4*

*Appendix F – DRM- 260324*

*Appendix G – P78 Stage 1+2 Deliverables\_V10*

*RND-P78-XX-XX-PROJECT PLAN- V5*

### **3.1.2 Project Governance and General Arrangements: Further Observations**

In addition to the points raised via the KSAR workbook above, we also include the following observations as a result of the review, all of which relate to the evidence presented during the appraisal.

#### **3.1.2.1**

#### **FBC Detailed Review Findings (DRF)**

1 no. governance observation (FBC.G1. Ob.1) remains open from the FBC stage KSAR assurance review. This relates to the MEP PPM process. NHSGGC have stated that the RDD process requires to be completed before this is progressed as the RDD process may impact on the nature and frequency of maintenance.

## 3.2 Water and Internal Plumbing / Drainage Systems

### 3.2.1 Water and Internal Plumbing/Drainage Systems: KSAR Observations

| Workbook Ref No. | Areas to probe  | Evidence expected   |
|------------------|---|---|
| 2.1              | How does the Health Board assure itself that all plumbers are trained to understand the needs (including special requirements) for the installation of water and plumbing/drainage systems in the healthcare environment? | <p>Evidence of a vetted list of site plumbers which confirms qualifications and healthcare experience.</p> <p>Evidence that the site induction with respect to working on water and plumbing/drainage services has been developed, implemented and agreed with the Board.</p> <p>Where anyone does not have previous healthcare experience, evidence should be provided of the relevant onsite training which was provided to them before they commence work on site.</p> <p>Evidence that all contractors and sub-contractor competency checks have been completed and signed off.</p> |

#### **NHS Scotland Assure Observations:**

Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.

NHSGGC have provided assurance in relation to the skills and training of the operatives undertaking the plumbing works in the form of skills card registrations and relevant training records such as Certificates of Training on 'Legionella and Microbiological Awareness in Healthcare Buildings Hot and Cold-Water Systems' and 'Manufacturers Pipework Jointing'. However, no assurance has been provided in relation to the vetting process to be followed, the level of competency checks being undertaken, or that the competency of the sub-contractor(s) has been signed off by NHSGGC. As noted in DRF observation CON.WD2.1.1.

NHSGGC have provided assurance that the plumbing sub-contractors have been inducted for the site. However, no evidence has been provided to confirm that the site-specific inductions have been developed, implemented and agreed with the health board. As noted in DRF observation CON.WD2.1.2.

#### **Documents referenced are:**

*Plumber Skills/Register Cards (multiple)*  
*Certificates of Pipework Manufacturer Training (multiple)*

*Certificates of Training on Legionella and Microbiological Awareness (multiple)*

*Forth Mechanical Relevant Experience Summary (2 individuals)*

*Previous experience for NHS.docx*

*Site Management Structure Forth Mech.dox CBES Induction Register*

| Workbook Ref No. | Areas to probe  | Evidence expected   |
|------------------|---|---|
| 2.2              | How does the Health Board assure itself that the plumbing contracting company have the relevant experience to direct and manage their staff on the site for a healthcare environment? | Evidence of similar, previous healthcare projects by the contractor.<br><br>Evidence of site management structure.<br><br>Evidence of HAI and SHPN 30 training. |

**NHS Scotland Assure Observations:**

Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.

NHSGGC have provided assurance that the mechanical sub-contracting company has the relevant experience to direct and manage their staff within a healthcare environment.

NHSGGC have provided sufficient evidence of the site management structure including the project managers CV highlighting multiple examples of relevant healthcare experience.

However, no evidence of specific Healthcare Associated Infection (HAI) and Scottish Health Planning Note (SHPN) 30 training has been provided. As noted in DRF observation CON.WD2.2.1.

**Documents referenced are:**

*Forth Mechanical Relevant Experience Summary*

*City Building Relevant Experience Summary*

*CBES CVs & Site Manager Info & Organogram.pptx –*

*Mechanical Project Managers CV*

| Workbook Ref No. | Areas to probe   | Evidence expected  |
|------------------|--|--|
| 2.3              | How does the Health Board ensure that the water and plumbing / drainage systems are being installed to the correct standard and reflect the agreed design? | Written and photographic, monthly evidence for the progress of work produced by a body which is independent of the contractor, and which confirms compliance of the works to date. |

**NHS Scotland Assure Observations:**

Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.

NHSGGC have appointed a quality monitor who is independent of the main contractor. The quality monitor carries out weekly site inspections on behalf of

NHSGGC. To date, 2 no. MEP inspection reports produced by the quality monitor have been provided for review. The reports confirm site attendance at weekly intervals from 18/08/2025 and 25/08/2025, with ongoing attendance understood to be continued to project completion. No evidence, however, has been provided detailing how observations and actions from the quality monitor reports are being recorded, tracked and actioned. As noted in DRF observation CON.WD2.3.1.

Checklists from both the main contractor and the mechanical sub-contractor have also been provided by NHSGGC, with ongoing quality inspections understood to be continuing through to project completion.

**Documents referenced are:**

*Phoenix Commissioning Services Ltd – Inspection 001 Commencing 18/8/2025*

*Phoenix Commissioning Services Ltd – Inspection 002 Commencing 25/8/2025*

*CBES – Domestic and Drainage Works Quality inspection 15/8/2025*

*BAM -Pipework (Pre-Insulation) domestic checklist 15/8/2025*

| Workbook Ref No. | Areas to probe   | Evidence expected  |
|------------------|--|--|
| 2.4              | How does the Health Board ensure that precautions are taken throughout the works to avoid open pipe ends for a period beyond the time needed to make a joint on that pipe end? | Photographic and written evidence for the progress of work produced by a body which is independent of the contractor (on a monthly basis). |

**NHS Scotland Assure Observations:**

Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.

NHSGGC have provided assurance they are taking the necessary precautions during the construction works to avoid open pipe ends noting that services are protected in accordance with NHS protocols.

As noted in question 2.3, NHSGGC have appointed a quality monitor to undertake regular site inspections. The quality monitor reports capture photographic examples of capped pipework on installed services, and highlight the importance of material storage, preparation pre-install, and capping post-install. The quality monitor reports also acknowledge that the plumbing and above ground drainage installations are at an early stage and that more detailed inspections will be conducted as the construction phase progresses.

However, as the reports were issued during the early construction stage, we would welcome further assurance as part of the health boards ongoing action plan review that these protocols are being continued. As noted in DRF observation CON.WD2.4.1

**Documents referenced are:**

BAM -Pipework (Pre-Insulation) RND domestic 8/8/2025  
Site Operative Pipework Joint Installation Videos (multiple)  
Gartnavalrnd (CBES quality Monitoring report) 15/8/2025  
P8808 – RND Weekly QM Reports 001-012 (12 reports)

| Workbook Ref No. | Areas to probe  | Evidence expected   |
|------------------|---|---|
| 2.5              | How does the Health Board ensure that water services are installed in a fashion which will provide ease of access for future maintenance? | <p>Evidence that the contractor has presented their co-ordination drawings (BIM model) to the Board.</p> <p>Evidence that the contractor has presented their co-ordination drawings (BIM model) to the design consultant and that they have agreed them for construction.</p> <p>Evidence that the contractor has presented each of the main service runs plus plant rooms to the Board's FM team.</p> <p>Evidence that the plant access strategy is being adhered too.</p> |

**NHS Scotland Assure Observations:**

Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.

No assurance has been provided to confirm that the contractor has presented their co-ordination drawings (BIM model) to the Board or design consultant, and that they have been agreed / approved for construction. As noted in DRF observation CON.WD2.5.1

NHSGGC have provided a high-level supporting cover paper which provides evidence of early engagement with members of the NHSGGC project and Estates teams.

Partial assurance has been provided that the contractor has presented examples of the main service runs and plant room layouts. As noted in DRF observation CON.WD2.5.2.

An overview of the BIM model highlighting access and maintenance provision was shared with the Estates staff over 4 sessions on 22/09/2025 and 23/09/2025. In accordance with the project soft landings strategy, site reviews/co-ordination workshops were provided over the 2 days to enable Estates staff to visualise the first fix of the plumbing and above ground drainage installations.

Assurance has been provided confirming access to services is a topic reviewed during the Board site visits. The site visit reports (2.5 Cover Paper) did not raise any concerns in relation to future service access.

The cover paper states that BIM modelling workshops have and will continue to take place with other stakeholders.

NHSGGC have not provided evidence of how the plant access strategy is being monitored and adhered to during the construction stage. As noted in DRF observation CON.WD2.5.3

**Documents referenced are:**

*2.5 Cover Paper*

*Cundall Stage 4 Resilience Report Bim & Information Management*

*Client BIM360 Workshop (AE's) 19.09.23.pdf*

*Bim & Information Management - Client Federated Model Meeting 21.02.24.pdf*

*RND -BAM-XX-XX-MI-W-003 - Client Co-ordination mtg notes No 2 15-05-25.pdf*

*RND -BAM-XX-XX-MI-W-003 - Client Co-ordination mtg notes.pdf*

| Workbook Ref No. | Areas to probe   | Evidence expected  |
|------------------|--|--|
| 2.6              | How does the Health Board ensure that water and plumbing / drainage services are installed in a fashion which will retain space for minor additions and modifications to services in the future? | <p>Evidence that the contractor has presented their co-ordination drawings (BIM model), with space for future flexibility identified, to the Board.</p> <p>Evidence that the design consultant has considered and agreed with the Board, space for future flexibility in the service installations.</p> <p>Evidence that the contractor has presented their co-ordination drawings (BIM model), with space for future flexibility identified, to the design consultant and that they have agreed them for construction.</p> <p>Evidence that the contractor has presented each of the main service runs plus plant rooms to the Board's FM team, to highlight space for future flexibility.</p> <p>Evidence that the Health Board has agreed a strategy (percentage) for spare capacity and a documented allowance to be incorporated into the design.</p> |

|  |  |   |
|--|--|---|
|  |  | Are plant/tank rooms, IPS sections, horizontal distribution runs and risers appropriately sized for the equipment being installed and facilitate safe adequate maintenance? |
|--|--|---|

**NHS Scotland Assure Observations:**

Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.

As per item 2.5, NHSGGC have provided a high-level supporting cover paper which provides evidence of early engagement with NHSGGC. The cover paper states that BIM modelling workshops have and will continue to take place with other stakeholders.

The project ACR's state that the main contractor shall agree a suitable philosophy with the health board to reflect growth for natural expansion, and that services shall be sized to accommodate future expansion. However, no evidence has been provided confirming that the design consultant or the health board have considered and agreed the space for future flexibility allowances. As noted in DRF observation CON.WD2.6.1.

No assurance has been provided in relation to how the spare capacity for future additions noted within the ACR's (specifically within risers and horizontal distribution runs) is being monitored during the construction stage. As noted in DRF observation CON.WD2.6.2.

NHSGGC have provided assurance that some of the main service runs plus plant room layouts were presented to the Boards Estates team during site visit / coordination workshops held on 22/09/2025 and 23/09/2025. NHSGGC have advised that further site visits / coordination workshops will be delivered as the installations progress.

NHSGGC have provided assurance that a strategy has been agreed for spare capacity and that the documented allowance has been incorporated into the design. The water safety plan included in the KSAR OBC submission states that 45% spare capacity will be provided on the mains entering the building and 5% spare capacity will be included for all internal mains distribution pipework.

NHSGGC have provided assurance that the main plant / tank rooms are appropriately sized for the equipment being installed and facilitate safe adequate maintenance. However, NHSGGC have not provided assurance that all IPS sections, horizontal distribution runs and risers are appropriately sized for the equipment being installed and facilitate safe adequate maintenance. NHSSA acknowledge that these elements have been discussed at the site coordination workshops and that the report from the initial workshop does not highlight any concerns. As noted in DRF observation CON.WD2.6.3.

**Documents referenced are:**

*2.5 Cover Paper*

*BCWS Calculation – P02.pdf*

*Cundall Stage 4 Resilience Report Bim & Information Management  
 Client BIM360 Workshop (AE's) 19.09.23.pdf  
 BIM & Information Management - Client Federated Model Meeting 21.02.24.pdf  
 RND -BAM-XX-XX-MI-W-003 - Client Co-ordination mtg notes No 2 15-05-25.pdf  
 RND -BAM-XX-XX-MI-W-003 - Client Co-ordination mtg notes.pdf*

| Workbook Ref No.  | Areas to probe  | Evidence expected  |
|---|---|--|
| 2.7   | How does the Health Board assure itself that all plumbers materials are stored on site in an environment which protects them from deterioration and from the entry of contaminants into the parts of the component which will be in contact with the water? | <p>Written, monthly evidence for the progress of work produced by a body which is independent of the contractor, and which confirms inspection of the site storage of materials.</p> <p>Photographic evidence of the site storage of materials produced by a body which is independent of the contractor (on a monthly basis).</p> |
| <p><b>NHS Scotland Assure Observations:</b><br/>           NHSGGC have provided assurance via the Quality Monitoring reports, including photographic evidence, that they are taking the necessary precautions to ensure all plumbing materials are stored on site in an environment which protects them from deterioration and from the entry of contaminants.</p> <p>The observations noted in response to question 2.4 are also applicable to this question.</p> <p><b>Documents referenced are:</b><br/> <i>BAM -Pipework (Pre-Insulation) RND domestic 8/8/2025<br/>           Site Operative Pipework Joint Installation Videos (multiple)<br/>           Gartnavalrnd (CBES quality Monitoring report) 15/8/2025<br/>           P8808 – RND Weekly QM Report 001.</i></p> |   |  |

| Workbook Ref No. | Areas to probe   | Evidence expected  |
|------------------|--|--|
| 2.8              | How does the Health Board assure itself that all pre-commissioning inspections are completed and recorded before commissioning can commence? | <p>Evidence that adequate pre-commissioning check sheets (SHTM 04-01 Part A) have been completed and signed off.</p> <p>Evidence that the Health Board has had all pre-commissioning checks audited and approved by an independent organisation.</p> |

### **NHS Scotland Assure Observations:**

Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.

Whilst the commissioning process has yet to commence, examples of checklists from the building services sub-contractor have been provided. Although the checklists are detailed in content, there are some suggested pre-commissioning checks as noted within SHTM 04-01Part A (16.22 to 16.34) that have not been incorporated into the checklist template provided and NHSSA would recommend that this is reviewed by NHSGGC. As noted in DRF observation CON.WD.2.8.1.

A series of commissioning sub-group meetings have taken place. These have given way to Design Quality (DQ) 'sign off' meetings and NHSGGC have confirmed in their Cover Paper that the meetings will resume on completion of the DQ 'sign off' process.

This confirms a process is in place for the contracting team to self-check the installation ahead of testing and commissioning. However, no designer's commissioning brief has been provided and note 9-2.1 from the Radionuclide Dispensary Delivery DQ IQ Commissioning Sub-Group meeting held on 11/08/2025 notes the requirement for a commissioning plan to be developed. As noted in DRF observation CON.WD.2.8.2

NHSGGC confirmed that they have appointed a commissioning manager to oversee and manage the physical commissioning activities undertaken by the main contractor and their respective subcontractors on their behalf. It is not clear however if the individual is independent to the main contractor. NHSSA note that the commissioning manager/s is identified as David Wilson and Gary Wilson in the minutes (item 8-6.1) of the RND DQ IQ commissioning subgroup meeting held on 04/08/2025. As noted in DRF observation CON.WD.2.8.3.

### **Documents referenced are:**

*2025.08.05 Delivery DQ IQ Commissioning sub group V1*

*2025.08.11 Delivery DQ IQ Commissioning sub group V1*

*2025.09.29 Cover paper item 2.8*

*Manufacturers quality monitoring checklists (multiple)*

| <b>Workbook Ref No.</b> | <b>Areas to probe</b>  | <b>Evidence expected</b>  |
|-------------------------|--|---|
| <b>2.9</b>              | How does the Health Board assure itself that all variations which may be required to water and plumbing and drainage systems after tender are investigated and agreed by all parties before they are instigated? | Evidence that each variation / derogation has a detailed technical analysis and has been referred to the Board and agreed with their water management group, clinical, Estates, infection control and FM teams. |

### **NHS Scotland Assure Observations:**

NHSGGC have provided assurance they have processes in place to deal with variations to the water and drainage systems.

Evidence provided includes a specific example of a construction stage variation relating to instantaneous water heaters and taps. A Hub West variation enquiry, an Authority Change Notice (ACN-006) variation including cost estimates, a variation confirmation notice from NHSGGC authorising the change and revised water services schematics are included as evidence.

Minutes from the RND Dispensary Project Board and the Project Managers Report confirm further that there are rigid governance processes in place for managing variations and derogations.

#### **Documents referenced are:**

*2025.08.27 PM Report*

*2025.09.29 Cover paper item 2.9*

*ACN 006 Water heater and tap selection*

*Project Board Minute 29.08.25*

*Dwg number RND-CDL-XX-XX-SH-P-040002 C02*

*Dwg number RND-CDL-XX-XX-DR-P-020603 C02*

## **3.2.2 Water and Internal Plumbing/Drainage Systems: Further Observations**

In addition to the points raised via the KSAR workbook above, we also include the following observations as a result of the review, all of which relate to the evidence presented during the appraisal.

|                |   |
|----------------|---|
| <b>3.2.2.1</b> | <b>Water pressure strategy</b><br>Drawing no. RND-CDL-XX-XX-DR-P-040002 indicates a common PRV on the discharge of the booster set, with a further 4 PRV's and associated isolation at each of the 4 circuits. Given that the point of use water heaters have appropriate pressure reduction at each unit, NHSSA are unsure if the pressure reduction strategy is correct. As noted in DRF observation CON.WD.OB.3.2.2.1  |
| <b>3.2.2.2</b> | <b>Cold water storage cistern arrangement</b><br>Drawing no. RND-CDL-XX-XX-DR-P-040002 indicates a dual cold water storage cistern arrangement. NHSSA note that the installed cold water storage cistern is a single cistern pattern with no facility for maintaining water supply to the building during maintenance. NHSSA are unsure what process was followed for the change in specification, how this was documented, and if it was approved by the Board or Project Water Safety Group with delegated authority from the GGC Board As noted in DRF observation CON.WD.OB.3.2.2.2 |

|         |   |
|---------|---|
| 3.2.2.3 | <p><b>Pipe joint testing</b><br/> CBES Quality Management System – Water Safety Plan states that the AE will identify a number of joints for testing. NHSSA have not been provided with evidence detailing the process for identifying the joints to be tested, the process for inspecting the joints, the competence of the individual responsible for inspecting the joints or documented evidence of inspection reports. As noted in DRF observation CON.WD.OB.3.2.2.3</p> |
| 3.2.2.4 | <p><b>Component testing during manufacturing</b><br/> NHS GGC have not provided evidence from the water services plant and equipment manufacturers confirming post manufacture test methods. NHSSGC should provide letter of assurance from manufacturers detailing the processes used for testing plant and equipment as noted in DRF observation CON.WD.OB.3.2.2.4</p>  |
| 3.2.2.5 | <p><b>Pipework and equipment disinfection</b><br/> NHS GGC have not provided evidence from the equipment and pipework manufacturers that the proposed disinfection process will not adversely affect performance as per SHTM 04-01 Part A Clause 17.4. As noted in DRF observation CON.WD.3.2.2.5</p>   |
| 3.2.2.6 | <p><b>OBC and FBC Detailed Review Findings (DRF)</b><br/> 3 no. observations (OBC.WD06, OBC.WD07 and OBC.WD08) remain open from the OBC stage KSAR assurance review. 1 no. observation (FBC.WD.OB.1) remains open from the FBC stage KSAR assurance review.</p>   |

## 3.3 Ventilation

### 3.3.1 Ventilation: KSAR Observations

| Workbook Ref No. | Areas to probe   | Evidence expected   |
|------------------|--|---|
| 3.1              | How does the Health Board assure itself that all duct and plant installers are trained to understand the needs (including special requirements) for the installation of ventilation systems in the healthcare environment? | <p>Evidence of a vetted list of duct and plant installers which confirms qualifications and healthcare experience.</p> <p>Evidence that the site induction with respect to working on ducts and plant services has been developed, implemented and agreed with the Board.</p> <p>Evidence that all contractors and sub-contractor competency checks have been completed and signed off.</p> |

#### **NHS Scotland Assure Observations:**

Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.

Whilst details of company experience has been provided, no evidence has been included for individual operatives experience e.g. projects worked on, length of service, role within company etc, of working within a healthcare environment. No evidence has been provided relating to the healthcare experience of the sub-contractor for whom they work. As noted in DRF observation CON.V3.1.1.

No assurance has been provided of a site induction process for operatives / contractors or that this has been agreed by NHSGGC. As noted in DRF observation CON.V3.1.2.

No assurance has been provided confirming that contractor and sub-contractor competency checks have been completed and signed off. As noted in DRF observation CON.V3.1.3.

#### **Documents referenced are:**

*Evidence provided includes certificates for individual attending a 1 day course "Introduction to Healthcare Ventilation" issued by M&M Consultancy Training Services*

*Cover paper provided within upload of 25/11/25 indicating each person and their respective role within their company and also within the project, but not their healthcare experience.*

| Workbook Ref No.  | Areas to probe  | Evidence expected  |
|---|---|--|
| 3.2   | How does the Health Board assure itself that the ventilation contracting company and their plant installers have the relevant experience to direct and manage their staff on the site for a healthcare environment? | Evidence of similar, previous healthcare projects by the contractor.<br><br>Evidence of site management structure. |
| <p><b>NHS Scotland Assure Observations:</b><br/>Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.</p> <p>Assurance has been provided that the ventilation sub-contractor has relevant experience. No assurance, however, has been provided as to how the ductwork sub-contractor is being managed / co-ordinated by the main contractor / mechanical sub-contractor and Bassaire for their respected areas of the project. As noted in DRF observation CON.V3.2.1.</p> <p><b>Documents referenced are:</b><br/><i>Organogram provided noting 'management' structure / lines of communication.</i><br/><i>Summary letter provided dated 22/9/25 in later upload of 25/11/25</i></p> |   |  |

| Workbook Ref No.   | Areas to probe   | Evidence expected   |
|--|--|---|
| 3.3  | How does the Health Board ensure that the ventilation systems are being installed to the correct standard and reflect the agreed design? | Written, monthly evidence for the progress of work (including photographs) produced by a body which is independent of the contractor, and which confirms compliance of the works to date. |
| <p><b>NHS Scotland Assure Observations:</b><br/>Evidence has been provided to give assurance.</p> <p>NHSGGC have provided copies of monthly progress reports, containing both written and photographic content confirming progress and compliance of the works to date. The reports have been produced by the commissioning contractor who are independent of both the main contractor and the electrical subcontractor.</p> <p>Note: Refer to further observation CON.V3.3.2.1.OB for potential items NHSGGC may wish to include in future site quality reports.</p> <p><b>Documents referenced are:</b><br/><i>Weekly reports provided by Phoenix [nos. 001 to 012] "Mechanical &amp; Electrical Quality Monitoring provided in upload of 25/11/25</i></p> |  |   |

| Workbook Ref No.  | Areas to probe   | Evidence expected  |
|---|--|--|
| 3.4   | How does the Health Board ensure that precautions are taken throughout the works to avoid open duct, or plant ends for a period beyond the time needed to make a joint on that duct / plant end? | Photographic and written evidence for the progress of work produced by a body which is independent of the Contractor (on a monthly basis). |
| <p><b>NHS Scotland Assure Observations:</b><br/> Evidence has been provided to give assurance through quality monitoring reports that suitable protection is in place at open ends of ductwork and plant.</p> <p>Note: Refer to further observation CON.V3.3.2.1.OB for potential items NHSGGC may wish to include in future site quality reports.</p> <p><b>Documents referenced are:</b><br/> <i>Weekly reports provided by Phoenix [nos. 001 to 012] "Mechanical &amp; Electrical Quality Monitoring provided in upload of 25/11/25"</i></p> |  |  |

| Workbook Ref No.  | Areas to probe  | Evidence expected  |
|---|---|--|
| 3.5   | How does the Health Board ensure that ventilation services are installed in a fashion which will provide ease of access for future maintenance? | <p>Evidence that the Contractor has presented their co-ordination drawings (BIM model) to the Board.</p> <p>Evidence that the Contractor has presented their co-ordination drawings (BIM model) to the Design Consultant and that they have agreed them for construction.</p> <p>Evidence that the Contractor has presented each of the main service runs plus plant rooms to the Board's FM team. Safe and adequate access has been provided.</p> |
| <p><b>NHS Scotland Assure Observations:</b><br/> Whilst NHSGGC have provided assurance that they have in place a process to review the co-ordination of the BIM model, NHS Scotland Assure note that due to the complexity of the ventilation installation and the specialist nature of the facility, further assurance is required to fully address this KSAR question and KSAR question 3.6.</p> <p>Refer to KSAR Workbook Question 3.6 for a further overview of the additional points to be addressed by NHS GGC.</p> |   |  |

**Documents referenced are:**

Cover paper titled: *Construction Phase KSAR Governance 2.5: To demonstrate that water services are installed in a fashion which will provide ease of access for future maintenance*

Minutes of meeting on 2/4/25 re: 'Client Co-Ordination mtg No1' provided in upload of 25/11/25

| Workbook Ref No. | Areas to probe   | Evidence expected   |
|------------------|--|---|
| 3.6              | How does the Health Board ensure that ventilation services are installed in a fashion which will retain space for minor additions and modifications to services in the future? | <p>Evidence that the contractor has presented their co-ordination drawings (BIM model), with space for future flexibility identified, to the Board.</p> <p>Evidence that the design consultant has considered and agreed with the Board, space for future flexibility in the service installations.</p> <p>Evidence that the contractor has presented their co-ordination drawings (BIM model), with space for future flexibility identified, to the design consultant and that they have agreed them for construction.</p> <p>Evidence that the contractor has presented each of the main service runs plus plant rooms to the Board's Estates team and / or, to highlight space for future flexibility.</p> <p>Evidence that the ventilation solution has been agreed with clinical and IPC colleagues.</p> <p>Evidence that the Board has agreed a strategy (percentage) for spare capacity and a documented allowance to be incorporated into the design.</p> <p>Are plant rooms, horizontal distribution runs and risers appropriately sized for the equipment being installed and facilitate safe adequate maintenance?</p> |

**NHS Scotland Assure Observations:**

Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.

As noted within DRF observation CON.V3.6.1 NHSGGC should provide the following:

1. Ventilation installation specific evidence.
2. Minutes of coordination / drawing review meetings which should include details of stakeholder attendance, discussion / reviews, key actions, etc.
3. Demonstrate that actions have been closed out.
4. BIM model / drawing 'screenshots' to evidence installation, coordination with other services / trades, access and plant / component replacement arrangements, etc.
5. Spare capacity allowances for plant and ductwork.
6. Sign off by NHSGGC stakeholders including Estates. IPC, etc.
7. As noted in DRF observation CON.V3.6.1.

**Documents referenced are:**

*Cover paper titled: Construction Phase KSAR Governance 2.5: To demonstrate that water services are installed in a fashion which will provide ease of access for future maintenance*

*Additional evidence provided in upload of 25/11/25 includes:*

- a. *M&M Consultancy Observation Report dated 6/11/25*
- b. *M&M Consultancy letter dated 6/11/24*
- c. *Report dated 20/5/25 "MMCTS AIR HANDLERS NORTHERN AHU INSPECTION"*

| Workbook Ref No. | Areas to probe  | Evidence expected   |
|------------------|---|---|
| 3.7              | How does the Health Board assure itself that all ventilation materials are stored on site in an environment which protects them from deterioration and from the entry of contaminants into the parts of the component which will be in contact with the air flow? | <p>Written and photographic, monthly evidence for the progress of work produced by a body which is independent of the contractor, and which confirms inspection of the site storage of materials.</p> <p>Photographic evidence of the site storage of materials produced by a body which is independent of the contractor (on a monthly basis).</p> |

**NHS Scotland Assure Observations:**

Evidence has been provided to give assurance through CBES reports dated 11/09/2025 and 15/09/2025 which note that ventilation materials are stored on site in an environment which protects them from deterioration and from the entry of contaminants.

**Documents referenced are:**

- CBES Ductwork Systems Report dated 18<sup>th</sup> Aug 2025*
- CBES Report "Ventilation Infection Control" dated 15<sup>th</sup> Aug 2025*
- Inspection report provided [Phoenix] No.004 "Mechanical & Electrical Quality Monitoring" dated 11<sup>th</sup> Sept 2025*
- Inspection report provided [Phoenix] No.005 "Mechanical & Electrical Quality Monitoring" dated 15<sup>th</sup> Sept 2025*

| Workbook Ref No. | Areas to probe   | Evidence expected   |
|------------------|--|---|
| 3.8              | How does the Health Board assure itself that all pre-commissioning inspections are completed and recorded before commissioning can commence? | Evidence that adequate pre-commissioning check sheets (CIBSE, BSRIA) have been completed and signed off.<br><br>Evidence that the Board has had all pre-commissioning checks audited and approved by an independent organisation. |

**NHS Scotland Assure Observations:**

Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.

It is acknowledged that the project is still at early stages of installation works. However, we would recommend the following is completed in advance of the Commissioning stage KSAR:

1. Ductwork pressure test sheets are dated and referenced.
2. Ductwork sections being tested are clearly identified.
3. Testing of ductwork should be independently verified / checked and signed off.
4. Calibration certificates associated with any testing equipment should be provided.
5. Evidence of NHSGGC undertaking necessary appointment of independent party to check/approve pre-commissioning proposals.

As noted in DRF observation CON.V3.8.1.

**Documents referenced are:**

*NHSGGC Commissioning Sub-Group Minutes 4th August 2025,  
NHSGGC Commissioning Sub-Group Minutes 11th August 2025,  
NHSGGC 'paper' outline approach to pre-commissioning inspections [not dated]  
Ductform [ductwork installer] Duct pressure test sheet ref 001 [not dated]  
Ductform [ductwork installer] Duct pressure test sheet ref 002 [not dated]*

*Additional information provided within upload of 25/11/25 i.e. Test 01 & Test 02 for non-cleanroom side.*

| Workbook Ref No. | Areas to probe   | Evidence expected   |
|------------------|--|---|
| 3.9              | How does the Health Board assure itself that all variations which may be required to ventilation systems after tender are investigated and agreed by all parties before they are instigated? | Evidence that each variation / derogation has a detailed technical analysis and has been referred to the Board and agreed with their clinical, Estates, infection control and FM teams. |

### **NHS Scotland Assure Observations:**

Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.

No evidence has been provided and therefore NHSGGC should provide the following information:

1. A copy of the Derogations Schedule, including risk assessments and mitigation measures.
2. Clarify if 'paper' refers to ventilation or electrical systems.
3. A schedule of project variations.
4. Evidence of review of derogations and variations by the relevant safety groups/stakeholder including IPC, estates, AE, etc.
5. Signature of appropriate stakeholder/s associated with derogations and variations.

An noted in DRF observation CON.V3.9.1.

### **Documents referenced are:**

*Project Managers Report dated 27<sup>th</sup> Aug 2025 ['last edited']*

*'Paper' titled "Construction Phase KSAR" re topic Ventilation 3.9: Assurance that all variations which may be required to electrical system after tender are investigated and agreed by all parties before that are instigated.*

*Project Board Minutes of meeting 29<sup>th</sup> August 2025*

## **3.3.2 Ventilation: Further Observations**

In addition to the points raised via the KSAR workbook above, we also include the following observations as a result of the review, all of which relate to the evidence presented during the appraisal.

### **3.3.2.1**

#### **Site Quality Reports**

Whilst NHSGGC have provided assurance that they have in place processes for monitoring site installation quality, through the KSAR review, NHS Scotland Assure have identified potential items the health board may wish to include in future site quality reports to enhance the quality and robustness of the process. These are as follows:

1. Report is extended to include specific ventilation 'section' which covers installed ductwork, stored ductwork on site and storage of ductwork within site containers etc.
2. Evidence that sample areas of internal ductwork cleanliness has been checked
3. Evidence of pressure testing of ductwork sections.
4. Clear confirmation that area / section of work inspected are compliant with the contract specifications, documents, standards etc.
5. Summary of estimated progress of works / installation against programme.

|         |  |
|---------|--|
|         | <p>6. Detail of exact location of observation description rather than 'general'.</p> <p>7. Suggest that separate section within the report that summarises key actions to be completed / undertaken is included.</p>   |
| 3.3.2.2 | <p><b>Ductwork Aspect Ratio</b></p> <p>From the site visit of 26/11/2025 it was observed that low level extract ductwork appears to exceed aspect ratios advised in SHTM 03-01 and DW144. We recommend that this is reviewed by NHSGGC and commissioning flow rates are checked in due course.</p> |
| 3.3.2.3 | <p><b>FBC Detailed Review Findings (DRF)</b></p> <p>NHSGGC have successfully provided assurance on all ventilation items from the FBC stage KSAR assurance review.</p>   |

## 3.4 Electrical

### 3.4.1 Electrical: KSAR Observations

| Workbook Ref No.   | Areas to probe   | Evidence expected  |
|--|--|--|
| 4.1  | How does the Health Board assure itself that all electricians are trained to understand the needs (including special requirements) for the installation of electrical systems in the healthcare environment? | <p>Evidence of a vetted list of site electricians which confirms qualifications and healthcare experience.</p> <p>Evidence that the site induction with respect to working on electrical services has been developed, implemented and agreed with the Board.</p> <p>Evidence that all contractors and sub-contractor competency checks have been completed and signed off.</p> |
| <p><b>NHS Scotland Assure Observations:</b><br/>Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.</p> <p>NHSGGC have provided assurance that the electrical systems installers are trained to understand the needs for the installation of electrical services in the healthcare environment.</p> <p>However, no assurance has been provided in relation to the site induction process or how the competency of the sub-contractors has been assessed. As noted in DRF observations CON.E4.1.1 and CON.E4.1.2 respectively.</p> <p><b>Documents referenced are:</b><br/> <i>CBES Competencies NHS Works</i><br/> <i>Q5 CV08 Projects Manager - Colin Maclean</i><br/> <i>Document folder titled Ben Neilson</i><br/> <i>Document folder titled Cormac Jamieson</i><br/> <i>Document folder titled David MacKenzie</i><br/> <i>Document folder titled Grieg Young</i><br/> <i>Document folder titled Sean Creane</i><br/> <i>Document folder titled Sean Purcell</i></p> |  |  |

| Workbook Ref No. | Areas to probe  | Evidence expected   |
|------------------|---|---|
| 4.2              | How does the Health Board assure itself that the electrical contracting company have the relevant experience to direct and manage their | <p>Evidence of similar, previous healthcare projects by the contractor.</p> <p>Evidence of site management structure.</p> |

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|--|---|---|
|  | staff on the site for a healthcare environment? | <p>Electricians completed approved current BS 7671 training course.</p> <p>Evidence that commissioning contractors have completed relevant test and commissioning courses.</p> <p>Evidence of trained operatives (AP and CP) to SHTM 06-02.</p> |
|--|---|---|

**NHS Scotland Assure Observations:**

Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.

NHSGGC have provided evidence of previous healthcare experience undertaken by the electrical installation contractor, along with an organogram showing the management hierarchy of the electrical installation and supervision personnel. Evidence has also been submitted that details the respective electricians' qualifications and gradings.

However, there has been no assurance submitted with respect to the qualifications of the electricians employed by the commissioning contractor. As noted in DRF observation CON.E4.2.1.

At this stage of the project there are also no details provided for the APs and CPs who will be responsible for the operation and management of the electrical installation within the RND facility. As noted in DRF observation CON.E4.2.2.

**Documents referenced are:**

- CBES Competencies NHS Works*
- David MacKenzie – FAW – EXP 13.02.28*
- David MacKenzie IPAF Exp 300925*
- David MacKenzie SJIB ECS Card EXP 29.04.2027*
- Q5 CV08 – Projects Manager – Colin Maclean*
- Screenshot 2025-09-16 121340*
- Screenshot 2025-06-16 121351*
- SMSTS David Alexander Mackenzie Exp 28.02.30*
- RND Electrical Organogram 4.2*
- Document folder titled Ben Neilson*
- Document folder titled Cormac Jamieson*
- Document folder titled David MacKenzie*
- Document folder titled Grieg Young*
- Document folder titled Sean Creane*
- Document folder titled Sean Purcell*

| Workbook Ref No. | Areas to probe  | Evidence expected   |
|------------------|---|---|
| 4.3              | How does the Health Board ensure that the electrical systems are being installed to the correct standard and reflect the agreed design? | Written, monthly evidence for the progress of work produced by a body which is independent of the contractor, and which confirms compliance of the works to date.<br><br>Photographic and written evidence for the progress of work produced by a body which is independent of the contractor (on a monthly basis). |

**NHS Scotland Assure Observations:**

NHSGGC have provided assurance with respect to this KSAR question by submitting monthly progress reports, containing both written and photographic content confirming progress and compliance of the works to date. The reports have been produced by the commissioning contractor who are independent of both the main contractor and the electrical subcontractor.

**Documents referenced are:**

- CBES – Elec 1<sup>st</sup> Fix Checklist (1)
- CBES – Elec 1<sup>st</sup> Fix Checklist (2)
- CBES – Elec 1<sup>st</sup> Fix Checklist (3)
- CBES – Elec 1<sup>st</sup> Fix Checklist (4)
- CBES – Elec 1<sup>st</sup> Fix Checklist
- P8808 – RND Weekly QM Report 001
- P8808 – RND Weekly QM Report 002
- P8808 – RND Weekly QM Report 003
- P8808 – RND Weekly QM Report 004
- P8808 – RND Weekly QM Report 005
- P8808 – RND Weekly QM Report 006
- P8808 – RND Weekly QM Report 007
- P8808 – RND Weekly QM Report 008
- P8808 – RND Weekly QM Report 009
- P8808 – RND Weekly QM Report 010
- P8808 – RND Weekly QM Report 011
- P8808 – RND Weekly QM Report 012

| Workbook Ref No. | Areas to probe   | Evidence expected  |
|------------------|--|--|
| 4.4              | How does the Health Board ensure that electrical services are installed in a fashion which will provide ease of access for future maintenance? | Evidence that the contractor has presented their co-ordination drawings (BIM model) to the Health Board.<br><br>Evidence that the contractor has presented their co-ordination drawings (BIM model) to the design consultant and |

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|  |  | <p>that they have agreed them for construction.</p> <p>Evidence that the contractor has presented each of the main service runs plus plant rooms to the Health Board's FM team.</p> |
| <p><b>NHS Scotland Assure Observations:</b><br/> Assurance has been provided that the BIM model has been presented to, and accepted by, NHSGGC, with minuted discussions confirming that the plant rooms and plant access for future maintenance was discussed. It is recorded that all relevant stakeholders were involved in the process including the NHSGGC Estates team who took part in the meeting sessions.</p> <p><b>Documents referenced are:</b><br/> 4.4 Cover paper<br/> RND-BAM-XX-XX-MI-W-0003 – Client Co-ordination mtg notes</p> |  |   |

| Workbook Ref No. | Areas to probe  | Evidence expected   |
|------------------|---|---|
| 4.5              | How does the Health Board ensure that electrical services are installed in a fashion which will retain space for minor additions and modifications to services in the future? | <p>Evidence that the contractor has presented their co-ordination drawings (BIM model), with space for future flexibility identified, to the Health Board.</p> <p>Evidence that the design consultant has considered and agreed with the Health Board, space for future flexibility in the service installations.</p> <p>Evidence that the contractor has presented their co-ordination drawings (BIM model), with space for future flexibility identified, to the design consultant and that they have agreed them for construction.</p> <p>Evidence that the contractor has presented each of the main service runs plus plant rooms to the Health Board's FM team, to highlight space for future flexibility.</p> <p>Evidence that the Health Board has agreed a strategy (percentage) for spare capacity and a documented allowance to be incorporated into the design.</p> |

|   |  |  |
|---|--|--|
|   |  | Are sub stations, switch rooms, distribution board cupboards, horizontal distribution runs and risers appropriately sized for the equipment being installed and facilitate safe, adequate maintenance? |
| <p><b>NHS Scotland Assure Observations:</b><br/> Evidence has been provided to give assurance that the contractor has presented the projects BIM model to NHSGGC, with the minutes of the review meeting showing that space for future maintenance access and flexibility has been reviewed.</p> <p>NHSGGC have also provided assurance that the MEP design consultant has considered space for future flexibility and expansion, with the report confirming that the MEP design incorporates the spare capacity requirements determined by NHSGGC.</p> <p><b>Documents referenced are:</b><br/> 4.5 Cover paper<br/> RND-BAM-ZZ-XX-MI-W-0003 – Client Co-ordination mtg notes<br/> RND-CDL-XX-XX-RP-Z-090201</p> |  |  |

| Workbook Ref No. | Areas to probe  | Evidence expected   |
|------------------|---|---|
| 4.6              | How does the Health Board assure itself that all electrical materials are stored on site in an environment which protects them from deterioration and from the entry of contaminants into the operational parts of the component? | <p>Written, monthly and photographic evidence for the progress of work produced by a body which is independent of the contractor, and which confirms inspection of the site storage of materials.</p> <p>Photographic evidence of the site storage of materials produced by a body which is independent of the contractor (on a monthly basis).</p> |

|   |  |  |
|---|--|--|
| <p><b>NHS Scotland Assure Observations:</b><br/> Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.</p> <p>NHSGGC have provided two reports, dated 18/09/2025 and 01/10/2025 respectively, which contain photographic evidence that show the storage of the electrical materials on the site and within the site compound containers. There is, however, no information included within the reports noting who the author is as well as no confirmation that they have been produced by a body who is independent of the main contractor, as noted in DRF observation CON.E4.6.1.</p> <p><b>Documents referenced are:</b><br/> RND-CBES-XX-XX-QUA-E-0001<br/> RND-CBES-XX-XX-QUA-E-0005</p> |  |  |
|---|--|--|

| Workbook Ref No. | Areas to probe   | Evidence expected   |
|------------------|--|---|
| 4.7              | How does the Health Board assure itself that all pre-commissioning inspections are completed and recorded before commissioning can commence? | <p>Evidence that adequate pre-commissioning check sheets (e.g. SHTM 06-01 Part A, BS7671, etc.) have been completed and signed off.</p> <p>Evidence that the Health Board has had all pre-commissioning checks audited and approved by an independent organisation.</p> |

**NHS Scotland Assure Observations:**

Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.

The quality monitoring reports that have been submitted by NHSGGC have been authored by Phoenix Commissioning Services Ltd and Thomas & Adamson respectively and the noted reports contain records, including photographic records, regarding the progress of the electrical works throughout the site.

The documents provided, however, do not provide assurance with respect to the second part of the KSAR question as there is no commentary within either of the reports submitted with respect to the pre-commissioning reviews. Based on observations from site, it may still be too early to undertake a number of the pre-commissioning tests. However, an electrical pre-commissioning plan / programme should be provided detailing the proposed checks and tests to be undertaken including the current status of these. As noted in DRF observation CON.E4.7.1.

**Documents referenced are:**

*Phoenix – RND Weekly QM Report 007*

*T&A RND Weekly QM Report 040*

| Workbook Ref No. | Areas to probe  | Evidence expected  |
|------------------|---|--|
| 4.8              | How does the Health Board assure itself that all variations which may be required to electrical systems after tender are investigated and agreed by all parties before they are instigated? | Evidence that each variation / derogation has a detailed technical analysis and has been referred to the Health Board and agreed with their clinical, Estates, infection control and FM teams. |

**NHS Scotland Assure Observations:**

The documentation provided by NHSGGC provides assurance that health board has satisfied itself that all variations which may be required to the electrical systems post financial close are investigated and agreed by all relevant stakeholders. The document titled 'Cover paper Item 4.8' details the process for agreement of any

changes, with the report and minutes provided demonstrating the application of this process whilst confirming that the appropriate stakeholders are involved.

***Documents referenced are:***

*2025.09.29 Cover paper Item 4.8*

*2025.08.27 PM Report*

*Project Board MINUTE 29.08.25*

### 3.4.2 Electrical: Further Observations

In addition to the points raised via the KSAR workbook above, we also include the following observations as a result of the review, all of which relate to the evidence presented during the appraisal.

#### 3.4.2.1

##### **FBC Detailed Review Findings (DRF)**

NHSGGC have successfully provided assurance on all electrical items from the FBC stage KSAR assurance review.

## **3.5 Medical Gases**

### **3.5.1 Medical Gases: KSAR Observations**

NHSGGC do not propose to install any medical gas installations in the Radionuclide Dispensary.

## 3.6 Fire

### 3.6.1 Fire: KSAR Observations

| Workbook Ref No.  | Areas to probe   | Evidence expected  |
|---|--|--|
| 6.1   | How does the Health Board assure itself that all fire stopping specialists are trained to understand the needs (including special requirements) for the installation of fire stopping systems in the healthcare environment? | <p>Evidence of a vetted list of site fire stopping specialists which confirms qualifications and healthcare experience.</p> <p>Evidence that the site induction with respect to working on fire stopping services has been developed, implemented and agreed with Board.</p> <p>Evidence that all contractors and sub-contractor competency checks have been completed and signed off.</p> |
| <p><b>NHS Scotland Assure Observations:</b><br/>           NHSGGC have provided certification to demonstrate that the fire stopping contractor is accredited to 'Constructionline Gold Standard' and has previous experience within healthcare projects; additionally, the fire stopping contractor's staff CVs were provided. NHSSA are satisfied that the health board has assured itself that the contractor understands the requirements of the fire-stopping works.</p> <p><b>Documents referenced are:</b><br/> <i>Gold Certificate 2025</i><br/> <i>NHS Project List</i><br/> <i>Safe Contractor certificate</i><br/> <i>Staff CV – Mark Reeves, Paul Cassidy &amp; Paul McIlroy</i></p> |  |  |

| Workbook Ref No.  | Areas to probe   | Evidence expected   |
|---|--|---|
| 6.2   | How does the Health Board assure itself that the fire stopping contracting company have the relevant experience to direct and manage their staff on the site for a healthcare environment? | <p>Evidence of similar, previous healthcare projects by the contractor.</p> <p>Evidence of site management structure.</p> |
| <p><b>NHS Scotland Assure Observations:</b><br/>           NHSGGC have provided a 'loss prevention certification board' certificate that states that the fire stopping contractor is approved to install penetration, cavity barrier and linear gap seals, fire board protection and intumescent coatings. Additionally, they have provided evidence of samples of fire stopping. NHSSA are satisfied that the health board has assured itself that the contractor has the relevant experience.</p> <p><b>Documents referenced are:</b></p> |  |   |

| Workbook Ref No. | Areas to probe   | Evidence expected   |
|------------------|--|---|
| 6.3              | How does the Health Board ensure that the fire stopping systems are being installed to the correct standard and reflect the agreed design? | Written, monthly evidence for the progress of work produced by a body which is independent of the contractor, and which confirms compliance of the works to date. |

**NHS Scotland Assure Observations:**

NHSGGC have provided photographic evidence of fire-stopping. In addition, they have noted that fire-stopping works progress is included within the weekly quality management (QM) reports and recorded on their internal ‘Multivista’ site. NHSSA are satisfied that the health board has assured itself that the fire-stopping works should be completed to the agreed-upon design and to the appropriate standard.

**Documents referenced are:**

3026-NHSRND T&A QM report 029  
hWS - Gartnaval Radionuclide- Multivista – Scopes  
P8808-RND weekly QM Report 003  
Sample firestopping – destructive test report

| Workbook Ref No. | Areas to probe   | Evidence expected  |
|------------------|--|--|
| 6.4              | How does the Health Board ensure that precautions are taken throughout the works to avoid openings in fire barriers to occupied spaces during the works? | Written and photographic evidence for the progress of work produced by a body which is independent of the contractor (on a monthly basis). |

**NHS Scotland Assure Observations:**

NHSGGC provided the following written response: ‘*This development is a self-contained free-standing, new build facility. There is no shared services that could compromise adjacent occupied spaces.* In addition, the report titled ‘3026 - NHS RND - T&A QM Report 029’ contains photographic evidence that confirms the adjacency position of occupied spaces. NHSSA are satisfied that the health board has assured itself that adequate provision is in place to ensure that work does not impact on other occupied spaces.

**Documents referenced are:**

2025.09.29 Cover paper Item 6.4  
3026 - NHS RND - T&A QM Report 029

| Workbook Ref No.  | Areas to probe   | Evidence expected  |
|---|--|--|
| 6.5   | How does the Health Board ensure that fire stopping systems are installed on ventilation, electrical, plumbing and drainage services where they penetrate fire barriers? | Photographic and written evidence for the progress of work produced by a body which is independent of the contractor (on a monthly basis). |
| <p><b>NHS Scotland Assure Observations:</b><br/> NHSGGC have confirmed that they have an initial scope of works for fire-stopping works, which the appointed fire-stopping contractor will complete. In addition, they have noted that fire-stopping works progress is included within the weekly quality management (QM) reports and recorded on their internal 'Multivista' site. NHSSA are satisfied that the health board has assured itself that the fire-stopping works should be completed to the agreed design and to the appropriate standard.</p> <p><b>Documents referenced are:</b><br/> hWS - Gartnaval Radionuclide- Multivista – Scope<br/> P8808 - RND Weekly QM Report 003 &amp; 005</p> |  |  |

| Workbook Ref No.  | Areas to probe   | Evidence expected  |
|---|--|--|
| 6.6   | How does the Health Board ensure that fire stopping is installed in electrical containment (trunking / tray systems) systems where they penetrate fire barriers? | Photographic and written evidence for the progress of work produced by a body which is independent of the contractor (on a monthly basis). |
| <p><b>NHS Scotland Assure Observations:</b><br/> Refer to general observations in relation to fire stopping noted in response to questions 6.3 and 6.5.</p> |  |  |

| Workbook Ref No. | Areas to probe  | Evidence expected  |
|------------------|---|--|
| 6.7              | How does the Health Board assure itself that all fire stopping materials are stored on site in an environment which protects them from deterioration? | <p>Written, monthly evidence for the progress of work produced by a body which is independent of the contractor, and which confirms inspection of the site storage of materials.</p> <p>Photographic evidence of the site storage of materials produced by a body which is independent of the contractor (on a monthly basis).</p> |

**NHS Scotland Assure Observations:**

NHSGGC have confirmed that fire-stopping materials are provided by the appointed contractor and are not stored on site. If this approach changes, the health board will review the requirements and ensure suitable storage is available. NHSSA are satisfied that the health board have assurance that the materials are stored appropriately.

**Documents referenced are:**

6.7 Cover paper

| Workbook Ref No. | Areas to probe  | Evidence expected  |
|------------------|---|--|
| 6.8              | How does the Health Board assure itself that all fire detection and alarm systems are installed in the correct locations and are easily maintained? | Written evidence for the progress of work produced by a body which is independent of the contractor (on a monthly basis).<br><br>Demonstration by the contractor that any detectors which are above 3m from floor level or in ceiling voids, to the Board's FM team, have suitable access for maintenance. |

**NHS Scotland Assure Observations:**

NHSGGC have confirmed that installation of the fire detection and alarm has commenced. The fire detection and alarm specification and proposed layout drawings were submitted as part of the FBC KSAR, with no changes made and no intention to vary from the agreed design. Should any variation be required, NHS GG&C's 'Contractor Change Process' must be followed. NHSSA are satisfied that the health board have appropriate measures in place to ensure that the fire detection and alarm system components will be installed in the correct locations and will be accessible for maintenance.

**Documents referenced are:**

2025.09.29 Cover paper Item 6.8

RND-CDL-XX-XX-DR-E-061001 - Ground & First Floor Fire Alarm Layout

RND-CDL-XX-XX-DR-E-065000 - Indicative Fire Alarm Schematic

RND-CDL-XX-XX-RP-Z-90207 - Fire Alarm Strategy Summary - Rev A

| Workbook Ref No. | Areas to probe   | Evidence expected   |
|------------------|--|---|
| 6.9              | How does the Health Board assure itself that all variations which may be required to fire stopping systems after tender are investigated and agreed by all parties before they are instigated? | Evidence that the each variation has been referred to the Health Board and agreed with their clinical, engineering, infection control and FM teams. |

**NHS Scotland Assure Observations:**

NHSGGC have confirmed that they do not intend to vary from the agreed fire-stopping scope of works. Should any change in method of application be required, it will be identified in the weekly Quality Management Reports and submitted through the Contractor Change Process. NHSSA are satisfied that the health board has appropriate measures in place to ensure any variations to fire-stopping work are properly managed.

**Documents referenced are:**

2025.09.29 Cover paper Item 6.9

| Workbook Ref No. | Areas to probe  | Evidence expected  |
|------------------|---|--|
| 6.10             | How does the Health Board assure itself that all fire dampers and fire/smoke dampers can be accessed for inspection, resetting and maintenance? | Evidence that the contractor has presented their co-ordination drawings (BIM model) to the Health Board.<br><br>Evidence that the contractor has presented their co-ordination drawings (BIM model) to the design consultant and that they have agreed them for construction.<br><br>Evidence that the contractor has presented each of the fire dampers and smoke / fire dampers to the Health Board's FM team. |

**NHS Scotland Assure Observations:**

NHSGGC have confirmed that the installation of fire dampers is subject to frequent checks from their estates staff; these checks are documented, and to date, there have been no instances identified where access is obstructed. Installation will be inspected continuously as construction progresses, and video evidence will be available on completion of works. NHSSA are satisfied that the health board have adequate checks in place to offer assurance that fire dampers will have the required access for maintenance.

**Documents referenced are:**

Cover paper / P8808 - RND Weekly QM Report 003

P8808 - RND Weekly QM Report 005

| Workbook Ref No.   | Areas to probe   | Evidence expected  |
|--|--|--|
| 6.11   | How does the Health Board assure itself that any fire rated ductwork is correctly installed? | Evidence that the system is certificated and that the installation follows the installation details which were used for the certification.<br><br>Written confirmation from the design consultant. |
| <p><b>NHS Scotland Assure Observations:</b><br/> NHSGGC have confirmed that no fire-rated ductwork has been installed to date. Certification will be provided upon installation at a later construction phase to demonstrate compliance with the required standards. NHSSA are satisfied that the health board cannot offer assurance on this subject until installation is complete; this will be reviewed during the commissioning stage.</p> <p><b>Documents referenced are:</b><br/> Cover paper</p> |  |  |

| Workbook Ref No.   | Areas to probe   | Evidence expected   |
|--|--|---|
| 6.12   | How does the Health Board assure itself that any smoke control and / or clearance systems are fit for purpose? | Evidence that the smoke system has been designed by an accredited Fire Engineer.<br><br>Evidence that Building Control have accepted the solution.<br><br>Confirmation from the Building Services Design Consultant that the operating sequence for the smoke system has been agreed and integrated into the control of other building systems. |
| <p><b>NHS Scotland Assure Observations:</b><br/> Smoke control or clearance systems are not required in this type of building under Scottish Building Standards; however, the stair serving the first floor and roof will be designed as a fire-fighting stair and will be provided with one ventilator at each storey on the external wall. This has been designed by a fire engineer and is included within the fire strategy for the building. NHSSA are satisfied that the health board can offer assurance that smoke control methods are fit for purpose.</p> <p><b>Documents referenced are:</b><br/> Fire Strategy - R1 Issue 5 Radionuclide Department, Glasgow<br/> Cover page</p> |  |   |

| Workbook Ref No.   | Areas to probe   | Evidence expected  |
|--|--|--|
| 6.13   | How does the Health Board assure itself that all pre-commissioning inspections are completed and recorded before commissioning can commence? | Evidence that the Health Board has had all pre - commissioning checks audited and approved by an independent organisation. |
| <p><b>NHS Scotland Assure Observations:</b><br/> NHSGGC have confirmed that pre-commissioning fire safety checks have not yet commenced. However, they have appointed a partner to conduct these checks, which will be carried out as part of the pre-commissioning process. These checks are scheduled to begin in early 2026. NHSSA are satisfied that the health board has provided sufficient assurance that all relevant fire safety checks will be completed before the commissioning stage.</p> |  |  |

### 3.6.2 Fire: Further Observations

In addition to the KSAR workbook questions referenced above, NHSSA has also considered the Fire Safety Construction Stage Aide-Memoire during this review. NHSSA concludes the following points:

|         |   |
|---------|---|
| 3.6.2.1 | <p><b>FBC Detailed Review Findings (DRF)</b><br/> The fire safety actions noted in the previous FBC stage DRF have been addressed and are closed.</p>   |
| 3.6.2.2 | <p><b>Fire Strategy</b><br/> The fire strategy highlights the means of escape in two rooms (Radioactive Waste and Radioactive Store). NHSSA are satisfied that it outlines the methodology used and provides assurance that the proposal satisfies the functional standard for escape as set out in the Technical Handbook.</p> |
| 3.6.2.3 | <p><b>Appropriate Fire Safety Subject Matter Experts</b><br/> NHSSA are satisfied that the health board have demonstrated adequate involvement of appropriate fire safety subject matter experts in this project. This includes the appointed fire engineers and the NHSGGC Fire Safety Team.</p>                               |
| 3.6.2.4 | <p><b>Fire Safety Site Induction</b><br/> NHSSA are satisfied that the health boards have a suitable fire safety site induction in place for all contractors and visitors.</p>  |
| 3.6.2.5 | <p><b>Health Board Developed Fire Safety Control Measures</b><br/> NHSSA are satisfied that the health board have adequate control measures in place, examples of these measures are included within the weekly quality management (QM) reports and recorded on the 'Multivista' site.</p>                                      |

## 3.7 Infection Prevention & Control Built Environment

### 3.7.1 Infection Prevention & Control Built Environment: KSAR Observations

| Workbook Ref No. | Areas to probe  | Evidence expected  |
|------------------|---|--|
| 7.1              | <p>How does the Health Board demonstrate that there is an effective infection prevention and control management structure in place?</p> <p>How does the Health Board demonstrate leadership and commitment to infection prevention and control to ensure a culture of continuous quality improvement throughout the organisation and that there is an effective IPC structure in place?</p> | <p>The Health Board provides evidence that there is an IPC Management Structure with the necessary expertise and leadership skills to support the organisation:</p> <p>The Health Board provides evidence that there is an IPC Management Team with the necessary expertise and leadership skills to support the project. The board are compliant with content of HDL (2008) role of the ICM / CNO 22.12.16.</p> <p>Executive board reports or minutes. Risk registers or equivalent, Minutes from operational and governance groups, (and action points).<br/>Structure of infection prevention and control team (IPCT) and qualifications held, previous experience supporting new build projects.</p> <p>Evidence IPC and clinical teams have been involved with any derogation through the build process and are satisfied this will not impact on patient safety, evidence could be through meeting minutes, risk assessments, risk registers relating to IPC with evidence of escalation through the agreed NHS board governance process.</p> <p>Evidence the Executive Board Member assigned to lead on IPCT has been kept informed of IPC risks identified and associated with the project this can be demonstrated by the board.</p> <p>Evidence IPCT advice has been followed, such as IPCT walk round audits during the construction process.</p> |

|  |  |  |
|--|--|--|
|  |  | <p>Evidence that fixtures fitting and equipment have not been incorporated into the project that would represent an identified IPC risk.</p> <p>Evidence that all contractors and sub-contractor competency checks have been completed and signed off.</p> |
|--|--|--|

**NHS Scotland Assure Observations:**

Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.

NHSGGC have provided documentation in relation to an IPCT structure chart, HAI Scribe Stage 3, and the IPCT annual programme (2024–25). These documents outline the intended IPC governance arrangements and planning approach, however, it is noted that the structure chart does not appear to reflect the most up-to-date staffing configuration, and the HAI Scribe document does not include all current project team members. While the documentation indicates some consideration of roles and responsibilities, there is limited assurance that the current IPC management structure has the required expertise and leadership skills to support the project. As noted in DRF observations CON.IPC7.1.1 and CON.IPC7.1.2. See also report item CON.IPC.G1.7.

Evidence has been provided regarding IPCT engagement, supported by email evidence confirming participation in a site walk round and actions taken to address identified risks. While an up-to-date derogation tracker has been shared, there is no documented evidence of IPCT involvement in derogation discussions, and the formal approval and governance process for decision-making remains unclear. Additionally, there is no confirmation that the Executive Board receives regular updates on project progress, associated risks, and IPC recommendations. As noted in DRF observation CON.IPC.7.1.3.

No evidence has been provided for contractor and subcontractor competency checks relative to IPC knowledge and experience. As noted in DRF observation CON.IPC.7.1.4.

**Documents referenced are:**

- 2025.01.21 HaiScribe Stage 3 Version R1 Signed.pdf*
- Annual IPC Programme 2024-25.pdf*
- IPC Chart January 2024.doc*

**Additional documents provided 25/11/25**

- 2025.11.07 DQ IQ OQ PQ process.pdf*
- 2025.11.07 IPC confirm involvement from OQ.pdf*

**Additional documents provided 01/12/25**

- 2025.10.29 PM Report distribution.pdf*
- 2025.11.27 PM Report distribution.pdf*
- 20251104\_141229.jpg*
- 20251104\_141302.jpg*

**Additional documents provided 02/12/25**

- 2025.10.28 PM Report.pdf
- 2025.11.04 Resdponse to IPC concerns.pdf
- 2025.11.07 IPC report to Board.pdf

**Documents provided under 7.2 and 7.4 and referenced**

- 2025.05.17 Works notification.pdf
- 2025.07.22 RDD Meeting Matrix sheet 1.pdf
- 2025.07.22 RDD Meeting Matrix sheet 2.pdf
- 2025.07.22 RDD Meeting Matrix sheet 3.pdf
- 2025.07.22 RDD Meeting Matrix sheet 4.pdf
- 2025.07.22 RDD Meeting Matrix sheet 5.pdf
- 2025.11.06 Derogation Sign off tracker.pdf
- 2025.08.29 AE confirm not derogation.pdf

| Workbook Ref No. | Areas to probe  | Evidence expected   |
|------------------|---|---|
| 7.2              | How does the Health Board demonstrate implementation of evidence-based infection prevention and control measures during the design process? | <p>The Health Board provides evidence: The board can demonstrate the current version of the National Infection Prevention and Control Manual has been adopted by the organisation and all staff are aware of how and where to access this and it is being referred to during the construction process.</p> <p>IPC risks (actual or perceived) risks identified during the work programme or through the KSAR evidence review are provided.</p> <p>Evidence of walk rounds during the construction process, and these are being fed back to clinical staff and the executive team to provide assurance that the requirements of the CD are being adhered with.</p> |

**NHS Scotland Assure Observations:**

Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.

NHSGGC have not provided assurance that the National Infection Prevention and Control Manual (NIPCM) has been adopted by the health board. There is no confirmation that staff are aware of how and where to access the manual, or that it is being referenced throughout the construction process. There is no evidence that the national IPC standards are being consistently applied during project delivery. As noted in DRF observation CON.IPC7.2.1.

NHSGGC have provided evidence relating to technical risks and have confirmed that the IPCT have been consulted on Reviewable Design Data (RDD) items. However, the outcomes of further enquiry referred to in the file reviewed '2025.11.04 Response to IPC concerns.pdf' and any subsequent resolutions are not documented. While IPCT participation in a site walk round has been demonstrated, there is no indication that these walk rounds are being conducted on a regular basis, limiting assurance on the consistency of IPC oversight. Additionally, there is no evidence demonstrating that project updates are being communicated to Executive Board members (e.g., HAI Executive Lead). As noted in DRF observation CON.IPC7.2.2.

**Documents referenced are:**

- 2025.05.17 Works notification.pdf
- 2025.07.22 RDD Meeting Matrix sheet 1.pdf
- 2025.07.22 RDD Meeting Matrix sheet 2.pdf
- 2025.07.22 RDD Meeting Matrix sheet 3.pdf
- 2025.07.22 RDD Meeting Matrix sheet 4.pdf
- 2025.07.22 RDD Meeting Matrix sheet 5.pdf
- 2025.07.25 Project Board minutes.pdf
- 2025.08.12 Minute of Delivery Group Full Meeting V1.pdf
- 2025.08.12 RND Risk Register Rev U1.pdf
- 2025.08.26 Example of IPC RDD input.pdf
- 2025.08.26 GG&C DQ IQ sign off matrix V6
- Radionuclide Dispensary Project Board DRAFT MINUTE 29.08.25

**Additional documents provided 25/11/25**

- 2025.08.29 AE confirm not derogation.pdf
- 2025.10.08 PM Report.pdf
- 2025.11.05 RND Risk Register Rev U2 Hub update.pdf
- 2025.11.06 Derogation Sign off tracker.pdf
- 2025.11.07 IPC confirm involvement from OQ.pdf

**Additional documents provided 02/12/25**

- 2025.10.28 PM Report.pdf
- 2025.11.04 Resdponse to IPC concerns.pdf
- 2025.11.07 IPC report to Board.pdf
- 20251104\_141229.jpg
- 20251104\_141302.jpg

| Workbook Ref No. | Areas to probe   | Evidence expected  |
|------------------|--|--|
| 7.3              | How does the Health Board assure itself that the contractors have a proper understanding of the infection prevention and control procedures required by the CD and that the contractors work | The Health Board evidences that: All relevant staff within the contractors' organisation are provided with clear guidance on roles and responsibilities in relation to infection prevention and control. |

|   |  |   |
|---|--|---|
|   | is being rigorously managed in this respect? | The contractors' organisation provides an education programme that meets the need of staff which includes mandatory induction, training and updates on HAI guidance, policies and procedures. |
| <p><b>NHS Scotland Assure Observations:</b><br/>Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.</p> <p>The information provided by NHSGGC titled '<i>RND Induction.pdf</i>', appears to be a site welcome booklet issued by BAM. However, this document does not provide evidence that all relevant staff within the contractor's organisation receive clear and comprehensive guidance regarding their roles and responsibilities in relation to infection prevention and control. As noted in DRF observation CON.IPC7.3.1.</p> <p><b>Documents referenced are:</b><br/><i>RND Induction.pdf</i></p> |  |   |

| Workbook Ref No.  | Areas to probe   | Evidence expected  |
|---|--|--|
| 7.4   | How does the Health Board assure itself that equipment meets the required IPC standards? | The IPC Team are involved and IPC advice followed in all procurement decisions for new equipment prior to purchase. IPCT are satisfied that all equipment purchased can be decontaminated safely in line with National Guidance and manufacturer's instructions. |
| <p><b>NHS Scotland Assure Observations:</b><br/>Based upon the evidence submitted by the health board, there remain areas where NHSGGC should provide further assurance.</p> <p>NHSGGC have provided assurance that the Infection Prevention and Control Team (IPCT) are being consulted regarding fixtures and fittings and is demonstrated in recorded communications provided. However, it is unclear as to how comments provided have been resolved. It is acknowledged that, due to the specialised nature of the facility under construction, the Medicines and Healthcare products Regulatory Agency (MHRA) will oversee the standards of equipment used in the manufacture of radiopharmaceuticals. As noted in DRF observation CON.IPC7.4.1.</p> <p>An equipment financial report has been provided (as part of Question 1.10 evidence), listing several items such as trollies, sack holders, wipeable chairs, etc. However, there is limited evidence of the procurement route, IPC oversight, or formal approval through governance channels. To provide assurance, NHSGGC should provide evidence of the procurement route for listed equipment, confirming that it aligns with organisational requirements.</p> |  |  |

In addition, demonstrating IPC oversight within the procurement process and providing confirmation that the route has been approved through the appropriate governance channels would support transparency. As noted in DRF observation CON.IPC7.4.2.

**Documents referenced are:**

- 2025.07.22 RDD Meeting Matrix sheet 1.pdf*
- 2025.07.22 RDD Meeting Matrix sheet 2.pdf*
- 2025.07.22 RDD Meeting Matrix sheet 3.pdf*
- 2025.07.22 RDD Meeting Matrix sheet 4.pdf*
- 2025.07.22 RDD Meeting Matrix sheet 5.pdf*
- 2025.08.06 IPC comments and response.pdf*
- RND Project Board MINUTE 25.07.25.pdf*
- 2025.11.07 DQ IQ OQ PQ process.pdf*
- 2025.11.07 IPC confirm involvement from OQ.pdf*
- Equipment NRD Financial Report 20240312 (uploaded to Question 1.10)*

**Documents provided under 7.1 and 7.2 and referenced**

- 2025.08.26 Example of IPC RDD input.pdf*
- 2025.11.04 Response to IPC concerns.pdf*

### 3.7.2 Infection Prevention & Control Built Environment: Further Observations

In addition to the points raised via the KSAR workbook above, we also include the following observations as a result of the review, all of which relate to the evidence presented during the appraisal.

|                |  |
|----------------|--|
| <b>3.7.2.1</b> | <b>FBC Detailed Review Findings (DRF)</b><br>1 no. IPC observation (FBC.IPC7.OB.3) remains open from the FBC stage KSAR assurance review. This relates to tap selection, for which assurance has not yet been provided. While NHSGGC have evidenced clear direction and progress, formal approval and governance of the decision-making process remain outstanding. NHSSA recommends that this observation is addressed by NHSGGC prior to the Commissioning Stage KSAR. |
|----------------|--|

## 4. Appendices

### Appendix 1: Glossary

Please refer to NHS Scotland Assure – Assurance Service Master Glossary document available to download from [NHS National Services Scotland website](https://www.nss.nhs.scot/media/1540/nhs-scotland-assure-assurance-service-master-glossary-v10.docx)

<https://www.nss.nhs.scot/media/1540/nhs-scotland-assure-assurance-service-master-glossary-v10.docx>

