Public Services Delivery
Scotland

NHS SCOTLAND

Key Stage Assurance Review (KSAR)

NHS Highland Lochaber | OBC KSAR Report

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Document overview

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Prepared for:

NHS Highland

Prepared by:

Public Services Delivery (PSD) Scotland – Assurance Services

Document control sheet

Revision history

Version	Date	Revision details	Originator	Changes marked
V1.0	29/05/2026	Draft version for factual accuracy	Neil Robson	N/A
V2.0	16/06/2026	NHS Highland factual accuracy comments incorporated Final version	Neil Robson	N/A

Approvals

Version	Date	Name and organisation	Role	Signature
V1.0	29/05/2026	Thomas Rodger	Head of Engineering	TGR

Version	Date	Name and organisation	Role	Signature
V2.0	16/06/2026	Thomas Rodger	Head of Engineering	TGR

Distribution

This document has been distributed to:

Version	Date of issue	Name and organisation	Role/Area
V1.0	29/05/2026	Kevin Richard, NHS Highland	Head of Compliance & Digital Strategy
V2.0	16/06/2026	Kevin Richard, NHS Highland	Head of Compliance & Digital Strategy
V2.0	16/06/2026	Alan Morrison, Scottish Government	Deputy Director of Health Infrastructure & Sustainability
V2.0	16/06/2026	Paul Mortimer, Scottish Government	Head of NHS Strategic Capital Investment
V2.0	16/06/2026	Gordon Stewart, Scottish Government	Capital Projects Advisor
V2.0	16/06/2026	Julie Critchley, PSD Scotland	Director of NHS Scotland Assure
V2.0	16/06/2026	Stuart Brown, PSD Scotland	Assistant Director of NHS Scotland Assure

1. Executive Summary

NHS Scotland Assure (NHSSA) confirms that **NHS Highland (NHS H) has provided sufficient assurance through the OBC KSAR response to receive a supported status**. This reflects positive engagement with the assurance process and evidence of progress across key technical and governance areas. NHS Scotland Assure extend their thanks to the NHS Highland Project team for undertaking the KSAR process in a collaborative and transparent manner throughout.

It is however essential that all observations raised within this report and associated detailed review findings are addressed timeously to ensure readiness for the Full Business Case (FBC) Key Stage Assurance Review (KSAR). This is particularly important for the matters raised with respect to resolution of the technical design observations and governance themes.

Key Considerations Prior to FBC KSAR

1. Governance, Assurance and Project Controls

A core theme across the review is the need to strengthen documented governance arrangements and demonstrable assurance processes. Whilst the health board have been able to demonstrate they acknowledge the importance of good governance, implementation of the following recommendations will add a further level of robustness to the existing processes as the project moves on to detailed design:

- Competency Assurance: Evidence of competency assessments for design teams is incomplete. It remains unclear who undertook these assessments and whether all relevant personnel have been assessed consistently.
- Duty Holder and Resource Planning: There is insufficient assurance that NHS H will have an adequate number of trained Authorised Persons (APs), Competent Persons (CPs), and Authorising Engineers (AEs) across key systems (water, ventilation, electrical, medical gases) at operational stage.
- Derogations Management: Although a derogations schedule exists, it is fragmented. A single, controlled derogation register aligned with SHTN 00-06 is recommended to demonstrate clear oversight and approvals.
- Procurement and CDP Oversight: There is limited evidence demonstrating how IPC, technical governance, and design assurance will be embedded in the procurement approach particularly for Contractor Designed Portions (CDPs).
- Clinical Input and Strategy Documentation: While stakeholder engagement is evident, assurance is lacking regarding demonstrable clinical expertise, and certain strategies (e.g. HCID patient pathways) are not formally documented in the clinical brief.

2. Water Systems and Drainage

Overall, the design is broadly aligned with the level of detail required at the OBC stage. During the KSAR review, including the technical workshops, NHS H demonstrated a logical approach to the development of their technical design, although several themes were identified that should be resolved early in the FBC stage to ensure the designs can then be developed fully in agreement with all relevant stakeholders. These include:

- Design Assurance and Compliance:
  - Limited evidence of designer-led risk assessments (e.g. BS 8680, HSG 274 for scalding and water safety).
  - Compliance with SHTM 04-01 requires further validation (e.g. filtration, cistern arrangements).
- Governance and AE Involvement: Inconsistent evidence of engagement from the Authorising Engineer (Water) across all relevant design reviews.
- Future Capacity and Flexibility: No documented strategy for spare capacity allowances within the system.
- Design Risk Issues:
  - Routing of drainage above high-risk clinical areas presents a potential risk.
  - Key design decisions (e.g. mains connection, materials) remain unresolved.

3. Ventilation Systems

Overall, the ventilation design is generally developed to the required level of detail for an OBC package, however there are a number of areas that NHS H will have to address early in the FBC design. These include areas of potential non-compliance with SHTM 03-01 that have been discussed with the health board in the course of the KSAR. The health board have indicated that the points raised within the KSAR will be addressed.

- Design Completeness and Coordination:
  - There are a small number of Room Data Sheets where the environmental data is incomplete – it is important this is resolved to ensure that ventilation strategies are developed in full accordance with SHTM and NHS H requirements.
- Compliance Risks:
  - Use of fan coil units in clinical areas and air change rates in imaging spaces do not align with SHTM 03-01 requirements. Fan coil units should not be installed above occupied clinical spaces.
  - Shared AHU strategies (e.g. endoscopy areas) require formal clinical and IPC risk assessment.
- Capacity and Future Proofing:
  - No clearly defined spare capacity strategy for HVAC systems.
- Commissioning and Validation:

    - Commissioning proposals are in development, but independent validation arrangements and design commissioning briefs require confirmation.
- Strategic Risks:
    - The use of bio-propane as a primary heat source requires further evidence on resilience, supply chain, and environmental impact.

4. Electrical Systems

Overall, the electrical design is generally developed to the required level of detail for an OBC package, however there are areas that NHS H should address as part of the early FBC stage design development. This includes reviewing medical IT system locations which may not comply with BS 7671 and SHTM 06-01 as well as considering the incoming HV and LV strategy to mitigate single points of failure. These were discussed at the electrical workshop on 08/04/2026 and we note that HNS H are taking a pragmatic approach to reviewing these items.

- Primary Power Supply Strategy:
    - Proposed single low-voltage supply introduces a single point of failure and does not align with SHTM guidance for hospitals of this scale.
    - Consideration should be given to high-voltage supply and dual transformer arrangements to improve resilience.
- Infrastructure and Compliance:
    - Medical IT system locations may not comply with BS 7671 and SHTM 06-01 distance requirements.
- Future Capacity:
    - No evidence of an agreed electrical spare capacity strategy at this stage.
- Governance and Oversight:
    - Limited assurance that Authorising Engineers have formally reviewed the design proposals.

5. Medical Gases

There were no significant technical concerns highlighted in the course of the OBC KSAR. NHSSA however recommend that NHS H complete a fuller assessment of the AP/CP resource requirement early in the next stage and formally document any assumptions regarding the ability of the current workforce to support the new facility. NHS H should also consider refinement of their expansion strategies to fully consider medical gas system impacts.

As the design continues to develop, NHS H should also ensure that commissioning requirements are developed in parallel with the technical design.

6. Fire Safety

There were no significant technical concerns highlighted in the course of the OBC KSAR. NHSSA however recommend as part of early the FBC stage design development, that NHS H give further consideration to progressive horizontal evacuation in the theatre areas.

7. Infection Prevention & Control (IPC)

Whilst NHS H were able to demonstrate engagement with IPC colleagues in the development of the OBC design, the health board themselves acknowledged some challenges around IPC resource and capacity. This has potentially impacted on the health boards ability in some instances to provide evidence of formal processes and sign-offs. NHS H should therefore consider the following themes as priority areas requiring attention:

- Resourcing and Capacity: The scale of this project represents a resource challenge based on the size and current workplan activities of the NHS H IPC team, , with limited evidence of future resource planning or backfill arrangements.
- Governance and Reporting: Clarity is required on how IPC risks, decisions, and updates are escalated to senior leadership (including SRO and HAI Executive Lead).
- Integration with Design and Procurement: IPC involvement is inconsistent, particularly where representatives are not present at meetings. There is no clear process for ensuring retrospective review and sign-off.
- Standards Implementation: While adoption of the NIPCM is confirmed, there is no clear evidence of how staff will access and apply it consistently throughout delivery and operation.
- Equipment and Design Decisions: Assurance is required that IPC requirements are consistently integrated into equipment procurement, room design, and derogations approvals.

1.1 Summary of Findings

The findings of this report have been collated based on information provided by NHS H. The following table outlines the status of key findings as derived from the KSAR and identified within the NHS SA Recommended Action Plan issued to NHS H under separate cover:

Review	No. of issues per category				
	1	2	3	4	5
Project Governance and General Arrangements	0	0	8	7	0
Water and Internal Plumbing / Drainage Systems	1	0	5	0	0
Ventilation	0	2	6	3	0
Electrical	1	1	5	0	0
Medical Gases	0	0	4	0	0
Fire	0	0	0	5	0
Infection Prevention & Control Built Environment	0	0	5	4	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 Lochaber Health and Social Care Redesign Project aims to modernise health and social care services across Lochaber and includes the replacement of Belford Hospital. The existing Belford Hospital currently has space constraints, an inflexible layout and tired building fabric which is difficult to maintain.

The clinical model and service change proposals indicate a requirement to create a circa 12,000m^2 facility, providing a mixture of in-patient and out-patient facilities, as well as improved site access to ensure resilience against current and projected future service demands.

The proposed new hospital has been designed to deliver a modern, high quality healthcare facility that meets the evolving needs of patients, staff and visitors. The design reflects a commitment to creating a welcoming, sustainable and resilient environment that will enhance patient experience, support efficient clinical delivery and respond sensitively to the unique landscape and identity of Lochaber.

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 NHS Scotland Assure - Assurance Service was launched on the 1st June 2021 following a letter issued by Scottish Government to Health Board Chief Executives, Directors of Finance, Nursing Directors and Directors of Estates. This 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 1st June 2021, all NHS Board projects that require review and approval from the NHS Capital Investment Group (CIG), will need to engage with NHS Scotland Assure 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 NHS Scotland Assure to undertake reviews on other healthcare built environment projects. This does not change accountability for the projects; NHS Boards remain accountable for their delivery. NHS Scotland Assure will be accountable for the services it provides that support delivery of the projects.

NHS Scotland Assure 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. We 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 – governance, water / above ground 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 Outline Business Case (OBC) 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 design. It looks to provide assurance that the project can proceed to the Construction phase.

Additionally, the KSAR at OBC will carry out an appropriate level of checking of the design calculations and solutions adopted.

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

2.2.1 The OBC KSAR for NHS H Lochaber project took place between 09/02/2026 and 29/05/2026.

2.2.2 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 OBC KSAR Workbook and OBC Deliverables list.
The KSAR report includes an overview of the main findings of the review, with a further itemised list of detailed observations provided under separate cover to NHS H. The detailed observations are recorded in an action plan that should be adopted by NHS H following the review and subsequently monitored by them to ensure appropriate actions are completed in a timeous manner.

2.2.3 As part of the KSAR process, NHS issued a document transmittal log which details the evidence provided in response to the KSAR Workbook and NHS SA recommended deliverables list. As part of an initial gap analysis, NHS SA 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.

2.4 Project Technical Outline Summary

The project's proposed main heat source is a set of dual-fuel boilers, using bio-propane as the primary fuel and diesel for backup operation. The boilers will be located in the energy centre within the hospital service yard. They will generate low-temperature hot water (LTHW) at 65°C to serve the space heating and domestic hot water systems. The space heating system will supply radiant panels, fan coil units, heater batteries and AHU heating coils.

Cooling will be provided by a number of modular chillers located in the external plant area on the second floor, serving AHU cooling coils and fan coil units. Additional local cooling will be provided by split air conditioning units in areas such as IT node rooms.

Mechanical ventilation will be provided by 15 air handling units (AHUs) located in the second-floor plant room. Each AHU will include LTHW heating coils, chilled water cooling coils and heat recovery.

The domestic cold water system comprises of mains water entering 2 no. raw cold water storage cisterns located in the ground floor plant room. The raw water is filtered via dual back washable filtration plant before entering 2 no. filtered cold water storage cisterns. The domestic cold water services is supplied to the hospital via a booster set located in the ground floor plant room.

Domestic hot water is provided via 3 no. LTHW high output plate heat exchangers located in the 2nd floor West plant room. The cold feed to the plate heat exchangers is supplied from the ground floor cold water storage cisterns.

It is proposed to supply the new hospital at low voltage from a single dedicated HV/LV transformer that will be owned and maintained by the District Network Operator. This primary electrical supply shall be delivered to the hospitals primary incoming switchboard, which subsequently supplies both A and B main switchboards which shall be the sources of all sub-mains power supplies in the hospital.

Both the A and B switchboards are supported by diesel generators which provide a safety power supply source that is rated to support the electrical load of the entire hospital.

Tertiary power supplies are provided to designated areas by means of uninterruptible power systems that typically supply isolated power supply units to support areas deemed as Group 2 Medical Locations.

Photo-voltaic arrays are proposed to be installed on the roof of the building.

The A and B main switchboards are the origin point of all general power supplies within the hospital, generally feeding final circuits and mechanical plant by means of local distribution boards throughout the building.

The hospital will have electronic and safety services such as fire alarms, staff call, emergency lighting, specialist earthing and lightning protection and will also incorporate information technology systems to support building and medical functions.

The medical gas pipeline systems for the project includes oxygen, medical air (4 bar) and anaesthetic gas scavenging systems (AGSS). Oxygen will be supplied from a liquid oxygen tank located in the service yard with an emergency reserve cylinder manifold to the emergency department, operating theatres, in-patient wards, renal/ SACT, maternity ward and radiology department. Out-patient rooms will be provided with oxygen cylinders where they are identified as being required. Medical air will be provided by an automatic changeover manifold with an emergency reserve cylinder manifold to the operating theatres, maternity ward and endoscopy decontamination. AGSS is provided by an arrangement of four duplex pumps to the operating theatres, the CT scanner and the emergency department.

Medical vacuum will be provided by portable vacuum solutions throughout the hospital and by utilising a coordinated surgical fluid disposal system for the operating theatres. Due to the clinical activity in the hospital, surgical air will not be required, Entonox will be provided by cylinders in the emergency and maternity departments and nitrous oxide will be available in cylinders on the anaesthetic trolley in theatre only.

Medical gas monitoring and plant alarms will be provided at the required locations throughout the hospital.

3. KSAR Review Summary

The following narrative relates directly to the OBC 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	Evaluation of changes detailed from previous KSAR.	Assessment of any substantive changes in highlighted areas from previous review stage and all actions have been implemented.
NHS Scotland Assure Observations: NHS H have provided assurance which confirms details and progress of any changes since the previous project stage, with a summary document, tracker and minutes of meetings being submitted to confirm the status and agreement of any such changes to the project. **Documents referenced are:** *20250609_LochaberIDTMeeting_FullCombinedPapers* *20250811_LochaberIDTMeeting_FullPapers* *20250908_LochaberIDTMeeting_FullPapers* *20251013_LochaberIDTMeeting_FullCombinedPapers (1)* *20251110_LochaberIDTMeeting_FullPapers* *20251208_LochaberIDTMeeting_FullPapers* *NHSH_Lochaber_Redevelopment_KSAR_Tracker - LIVE* *Summary of Project Changes*		

Workbook Ref No.	Areas to probe	Evidence expected
1.2	Verification that CIG recommendations have been implemented with respect to prescribed in scope areas.	Review of the implementation of all CIG recommendations. Evaluation of any deviation from previous submissions or reviews.

NHS Scotland Assure Observations:
NHS H have provided assurance with respect to this KSAR question with the submission of correspondence which notes the CIG recommendations at Initial Agreement stage coupled with subsequent correspondence which confirms the implementation and approval of these.

Documents referenced are:

2022-23 - NHS Highland - Approval Letter - Lochaber - Initial Agreement - 4 July 2022 (002)
NHS Highland - Lochaber - Initial Agreement_FINAL

Workbook Ref No.	Areas to probe	Evidence expected
1.3	Has cross-referencing with NDAP and AEDET recommendations been implemented?	An assessment if there is full compliance with the applicable recommendations and actions from the preceding step.

NHS Scotland Assure Observations:
NHS H have provided assurance which reference and acknowledge the NDAP recommendations along with confirmation that these will be developed through the subsequent project stages.

Documents referenced are:
20251127 HL09 Lochaber interim-early OBC UPDATED NDAP

Workbook Ref No.	Areas to probe	Evidence expected
1.4	Does the Health Board continue to demonstrate service / clinical input into design decisions based on a current and comprehensive knowledge of patient cohorts?	Recorded and updated input taken from service lead(s) / clinician(s) about relevant patient cohort characteristics and their typical needs in terms of the accommodation's environment, safety and infection control standards. Demonstrable expertise of service lead(s) / clinician(s) in providing this advice.

NHS Scotland Assure Observations:
Based upon the evidence submitted by the health board, there remain areas where NHS H should provide further assurance.

NHS H have provided assurance that there has been input from the service leads and clinicians regarding the proposed accommodations environmental, safety and infection control standards that relates to the relevant patient cohort requirements.

However, no assurance has been provided to confirm the demonstratable expertise for each of the noted service leads. As noted in DRF observation OBC.GOV1.4.1.

Documents referenced are:
Approval Request for Lochaber Redesign Stakeholder Approvals
Clinical Advisor & PM Stakeholder Approvals Process
H231H_22003-NHSS-XX-XXXX-RA-R-00021
H231H22003_Lochaber Redesign_Approvals Process_v1
Lochaber Clinical Assessment
Lochaber Redesign_Acute SLT Presentation
Lochaber Stakeholder Approvals
Appendix B - LochaberRedesign_GovernanceStructure_v11

Workbook Ref No.	Areas to probe	Evidence expected
1.5	Project team continues to demonstrate a unified and recorded understanding of needs of main users and patient cohorts of the proposed accommodation and how this has influenced the design of critical building, engineering and infection prevention and control quality and safety standards.	Updated and current list available of all stakeholders, service users and patient cohorts impacted by this project, plus the identification of any high risk groups and their specialist needs. Updated and recorded engagement on these designs issues having taken place between the project team and service lead(s) / clinician(s), infection prevention and control team, and other key stakeholders (e.g. Estates, Medical Physics, IPC, the AEDET, NDAP or other design briefing workshops). Details available of how service users / patient cohort needs and their expected use of the accommodation are influencing the design brief; including critical building,

		engineering and infection prevention and control quality and safety standards.

NHS Scotland Assure Observations:
NHS H have generally provided assurance which confirms all project stakeholders, service users and patient cohorts that will be impacted by the new project, along with recognition of any high-risk groups and their associated specialist needs. Assurance has also been provided which confirms that engagement has taken place between the project team and all service leads and key stakeholders.

Assurance has been provided which demonstrates how the identified needs of the service users are being adopted and influencing the design of the new facility.

During the IPC KSAR workshop on 19/03/2026, it was noted by NHS H that if any HCID type patients presented to the facility, they would be sent to Raigmore Hospital for treatment. Based on the information provided by NHS H as part of the KSAR response, it is not evident that this has been documented as part of the clinical brief/strategy for the facility.

NHSSA recommend that NHS H review the briefing information to ensure the strategy is appropriately documented and consider whether any further supporting provisions are required for HCID patients. As noted in DRF observation OBC.IPC.3.7.2.1.

Documents referenced are:
Thirty-six sets of minutes and file notes uploaded to the folder titled "Design Team Minutes_selected_2026-02-06_08-36-25am
Approval Request for Lochaber Redesign Stakeholder Approvals
Clinical Advisor & PM Stakeholder Approvals Process
H231H_22003-NHSS-XX-XXXX-RA-R-00021
H231H22003_Lochaber Redesign_Approvals Process_v1
Lochaber Clinical Assessment
Lochaber Redesign_Acute SLT Presentation
Lochaber Stakeholder Approvals
Appendix B - LochaberRedesign_GovernanceStructure_v11

Workbook Ref No.	Areas to probe	Evidence expected
1.6	Planned approach towards determining the necessary standards for this accommodation.	Updated and current list of the relevant NHS and non-NHS guidance that is being used and adopted (see previous section of

		workbook OBC KSAR (Page 9) for examples of appropriate guidance). Updated and current list of all proposed derogations from NHS guidance with a detailed technical narrative on each derogation and/or list of known gaps in guidance that will need to be resolved in order to meet the needs of the patient / user cohort. Knowledge of the role of infection prevention and control and microbiologist advisors to be used throughout the design stages, and details of the resource plan in place to ensure this advice will be available. Knowledge of the role of infection prevention and control advisors (IPCN and ICD) to be used throughout the final design stages, and details of the resource plan in place to ensure continuity into the construction phase.

NHS Scotland Assure Observations:
NHS H have provided assurance which confirms the current schedule of both NHS and non-NHS guidance that is being used for the project. A current list of all project derogations has also been provided which confirms the current status and progress of each of the derogations.

We recommend that NHS H consider adopting one record of derogations for the project in accordance with SHTN 00-06 to ensure that there is an accurate record of variations and derogations and their status for the project. As noted in DRF observation OBC.GOV.3.1.2.2. NHS H have not provided assurance of suitable IPC and Microbiology resource throughout the design stages of the project. Refer to Section 3.7, Question 7.1 of the report for further assurance requirements.

Documents referenced are:
H231H_22003-NHSS-XXXX-XX-SP-A-00500
H231H_22003-NHSS-XXXX-XX-SP-S-00501
H231H_22003-NHSS-XXXX-XX-SP-Z-00502
Derogations Download 16.03.26

Workbook Ref No.	Areas to probe	Evidence expected
1.7	How does the Health Board demonstrate that there is an effective infection prevention and control management structure in place and how does it relate to the development of the project? 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 and how does it relate to the design development?	Evidence IPC and clinical teams have been integrated into all decisions regarding any derogations through the design process and are satisfied this will not impact on patient safety such as, specific sign off, supporting meeting minutes, risk assessments, risk registers relating to IPC with evidence of escalation through the agreed NHS board governance process.

NHS Scotland Assure Observations:

NHS H have provided an organogram for IPC and technical teams. From the notes provided, the IPCT have been involved in key decisions, although numerous meetings had no IPC representation.

NHS H have provided limited assurance that the project is being highlighted on flash reports at the Control of Infection Committee (COIC), however it is not clear what is being communicated to the HAI executive lead who is the SRO for the project. Evidence should be provided of SRO communications to ensure they are being kept abreast of developments. Refer to Section 3.7, Question 7.1 of the report for further assurance requirements.

Documents referenced are:

Lochaber Stage 3 TA Design Review Packages 293, 294, 296-20251208_140405-Meeting Recording
Lochaber Stage 3 TA Design Review Packages 284 (partial), 286-20251215_143144-Meeting Recording
Lochaber Stage 3 TA Design Review Packages 284 (partial), 289, 297, 305, 312, 319-20251215_120230-Meeting Recording
Lochaber Stage 3 TA Design Review 283, 327, 330, 331, 334-20251218_091741-Meeting Recording

Lochaber Stage 3 TA Design Review 283, 330, 435, 470-20260112_125807UTC-Meeting Recording
Lochaber Stage 3 TA Design Reviews 430 & 458-20260122_155540UTC-Meeting Recording
Lochaber TDF Meeting 02.12.25
TDF 06.01.26 AI Notes
TDF Invite 06.01.26

Workbook Ref No.	Areas to probe	Evidence expected
1.8	Integration with Authority Policies and Operation How does the Board demonstrate implementation of evidence-based infection prevention and control measures?	The Health 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. (Ask staff) IPC are fully embedded in the project team and the OBC programme-taking cognisance of any actual or perceived risks identified provided.

NHS Scotland Assure Observations:
Assurance was provided during the IPC Workshop of 19/03/26 that the NIPCM has been adopted. NHS H have also provided a copy of the presentation from this session, which details embedding NIPCM implementation during the design phases of the project. Assurance, however**,** has not been provided as to how staff across the health board will access the NIPCM routinely as the project progresses. As noted in DRF observation OBC.GOV.1.8.1.

NHS H have demonstrated that IPC is embedded into the project team and regularly attend design and other project meetings. It is noted, however, that meetings have also taken place with the IPC team out with routine design and project meetings. No details of these have been provided. As noted in DRF observation OBC.GOV.1.8.2.

Documents referenced are:
H231H_HAI-SCRIBE Stage 1 & 2
HAIScribe -Stage 2 - Part 1 of 3 - Meeting 11.12.25
SHFN 30 HAI-SCRIBE Stage 1 & 2
LochaberStakeholderApprovals
HAI-Scribe training with Craig Webster-20250922_143126-Meeting Recording

Workbook Ref No.	Areas to probe	Evidence expected
1.9	The Health Boards Infection Prevention and Control Strategy	Assessment of the Health Boards approach to all IPC related matters in relation to the development of the design, HAISCRIBE etc. IPCT annual programme of work.

NHS Scotland Assure Observations:
Based upon the evidence submitted by the health board, there remain areas where NHS H should provide further assurance.

NHS H have demonstrated ongoing collaboration related to IPC matters during the project with regular input into key components and considerations via numerous meeting notes. An IPCT Annual Work Plan has been provided, however, this does not reflect previous or upcoming contributions to the Lochaber project. Refer to Section 3.7, Question 7.2 of the report for further assurance requirements.

Documents referenced are:
H231H_HAI-SCRIBE Stage 1 & 2
HAIScribe -Stage 2 - Part 1 of 3 - Meeting 11.12.25
SHFN 30 HAI-SCRIBE Stage 1 & 2
Internal resources list

Workbook Ref No.	Areas to probe	Evidence expected
1.10	The Health Boards Monitoring and Records	Evidence that the Health Board integrating this project with wider IPC requirements within the context of the OBC. For example, evidence that the proposals for equipping incorporate IPC requirements?

NHS Scotland Assure Observations:
Based upon the evidence submitted by the health board, there remain areas where NHS H should provide further assurance.

NHS H have provided assurance that IPC considerations have been incorporated into the majority of design collaboration workshops.

Further assurance, however, is required that, where IPC representatives are not present at meetings, IPC requirements are considered for equipping proposals. Refer to Section 3.7, Question 7.4 of the report for further assurance requirements.

Documents referenced are:
H231H_22003-GBB-XX-XXXX-FN-PP-102001

H231H_22003-GBB-XX-XXXX-FN-PP-108001 *H231H_22003-GBB-XX-XXXX-FN-PP-108002* *H231H_22003-GBB-XX-XXXX-FN-PP-108003* *H231H_22003-GBB-XX-XXXX-FN-PP-108004* *H231H_22003-GBB-XX-XXXX-FN-PP-108005* *H231H_22003-GBB-XX-XXXX-FN-PP-108006* *H231H_22003-GBB-XX-XXXX-FN-PP-108007* *H231H_22003-GBB-XX-XXXX-FN-PP-108008* *H231H_22003-GBB-XX-XXXX-FN-PP-551501* *H231H_22003-GBB-XX-XXXX-FN-PP-551502* *H231H_22003-GBB-XX-XXXX-FN-PP-551503* *H231H_22003-GBB-XX-XXXX-FN-PP-654001* *H231H_22003-GBB-XX-XXXX-FN-PP-654002*

Workbook Ref No.	Areas to probe	Evidence expected
1.11	Planned approach for managing the design process to ensure successful compliance with agreed and approved standards	The project governance arrangements and resource plan in place to ensure that the necessary decision-making authority and technical expertise is available to take responsibility for and deliver the project as planned and agreed. Details of how gaps in expertise are being filled. Details of how compliance with the appropriate guidance, design brief and other standards are being agreed, signed off, monitored, reported against and if necessary escalated / adjudicated throughout the design, construction and commissioning stages. Details of how all stakeholders' interests are being agreed, signed off, monitored, reported against and if necessary escalated / adjudicated throughout the design, construction and commissioning stages. Details of how all stakeholders' interests are being agreed, signed off, monitored, reported against and if necessary escalated

		/ adjudicated throughout the design, construction and commissioning stages.

NHS Scotland Assure Observations:
NHS H have provided assurance with respect to this KSAR question with the submission of their resource plan and structure along with documentation that details the make-up of the specialist teams involved in the project. This documentation has been supplemented with details of the stakeholder notification, approval and sign-off processes alongside several sets of design team minutes that record the stakeholder's involvement in the decision making process.

Documents referenced are:
Internal resources list
Lochaber_Project Structure_2024Dec16
PSCP Competency assessment
Meet the Technical Team
NHS H IPC Team
Lochaber TDF Meeting 02.12.25
TDF 06.01.26 AI Notes
TDF Agenda 06.01.26
TDF Invite 06.01.26
Lochaber Stakeholder Approvals)
Clinical Advisor & PM Stakeholder Approvals Process
Approval Request for Lochaber Redesign Stakeholder Approvals
Thirty-six sets of minutes uploaded in the folder titled "Design Team Minutes_selected_2026-02-06_9-35-28am" that confirm stakeholder involvement in the decision-making processes.

Workbook Ref No.	Areas to probe	Evidence expected
1.12	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	Evidence on how Infection Prevention and Control are involved with the conceptual procurement approach to the design stage and future plans for project. Plans to identify any gaps in the procurement approach that may require to be addressed. Evidence on how the Infection Control procedures and management will fit with the conceptual procurement approach and initial thinking on how it will be managed.

		Evidence of a detailed procurement strategy report. Evidence that the Health Boards selected procurement route has gone through the Health Board's Governance channels.

NHS Scotland Assure Observations:
Based upon the evidence submitted by the health board, there remain areas where NHS H should provide further assurance.

Evidence has been provided showing that IPC have been involved from an early stage. The stage 1 & 2 HAI SCRIBE documents have been submitted as evidence. However, evidence has not been provided as how the IPCT are fully involved in procurement decisions both now and going forward. As noted in DRF Observation OBC.GOV1.12.1.

No evidence was provided to identify any gaps in the procurement process that may arise, other than those identified in the procurement strategy related to appointment of contractors. As noted in DRF Observation OBC.GOV1.12.2.

Assurance has been provided that HAI SCRIBE is being followed, with stages 1 and 2 completed with an IPC representative (ICM) in attendance. IPC have been present at design reviews and have been involved in discussions with project team members. However, no assurance on how the process is managed has been provided. As noted in DRF Observation OBC.GOV1.12.3.

An early procurement strategy proposal has been provided, which details the tendering process and considerations for appointing contractors for different parts of the project. Assurance, however, has not been provided regarding IPC considerations for the strategy. As noted in DRF Observation OBC.GOV1.12.4.

AI generated notes for a technical design meeting on 06/01/2026 have submitted, however no assurance has been provided regarding governance channels for procurement. As noted in DRF observation OBC.GOV1.12.5

Documents referenced are:
DQP Appendix 2 - Technical Team
Appendix G2 - Caithness - Existing Information
NHSS-XX-XX-GU-X-0001 Project Derogation Procedure
H231H_22003-GBB-XXXX-XXXX-PS-PP-505001.pdf,

Workbook Ref No.	Areas to probe	Evidence expected

1.13	The Health Boards approach on those areas of design that the procurement route has provided identification as possibly being Contractors Designed Portions (CDP's).	Evidence that the Health Board integrating this project with wider IPC requirements within the context of the OBC. For example, evidence that the proposals for equipping incorporate IPC requirements? Evidence that the procurement of the lead designer will encompass these areas in their oversight and sign off on the complete design.

NHS Scotland Assure Observations:
Based upon the evidence submitted by the health board, there remain areas where NHS H should provide further assurance.

Assurance has been provided through meeting notes, and during workshops confirms that where IPC representatives are in attendance, IPC risks and requirements are considered and discussed in the wider context of the project. Assurance has also been provided on seeking approvals from IPC for aspects of the project. Further assurance, however, should be provided that there is a clear route as to how the IPCT are involved with equipping proposals. Refer to Section 3.7, Question 7.4 of the report for further assurance requirements.

Roles and responsibilities are not always explicitly recorded within meeting minutes or transcripts that have been provided, making it difficult to establish if design leads are present. Further assurance to be provided that lead designers are incorporating IPC requirements for equipping proposals. As noted in DRF observation OBC.GOV1.13.1.

Documents referenced are:
Approval Request for Lochaber Redesign Stakeholder Approvals.pdf
Clinical Advisor & PM Stakeholder Approvals Process.docx
Lochaber Stakeholder Approvals.xlsx
H231H_22003-NHSS-XX-XXXX-SP-R-00401.pdf

Workbook Ref No.	Areas to probe	Evidence expected
1.14	Evaluation of the Health Boards commissioning plan.	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.

NHS Scotland Assure Observations:
NHS H have provided assurance of progress with respect to the commissioning plans, including details of resourcing that is in accordance with the level of detail expected at OBC stage. It is noted that it has been confirmed that the commissioning plans will be further developed at the next project stage.

Documents referenced are:
Commissioning, Handover & Training Plan
H231H_22003-GBB-XXXX-XXXX-PL-PP-603001
Lochaber_SL Delivery Plan_LIVE

Workbook Ref No.	Areas to probe	Evidence expected
1.15	Evaluation of the Health Boards duty holder matrix.	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. 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.

NHS Scotland Assure Observations:
Based upon the evidence submitted by the health board, there remain areas where NHS H should provide further assurance.

NHS H have provided assurance with respect to the resources that have been identified and are in place for the project and where such resources are placed within the project structure.

However, no assurance has been provided to confirm the responsibilities of each of the persons noted on the resource list and project structure. A DQP Responsibility Matrix is quoted in these documents, however no such matrix was provided within the evidence uploaded. As noted in both DRF observations OBC. GOV1.15.1 and OBC.GOV.15.2.

Documents referenced are:
Internal resources list
Lochaber_Project Structure_2024Dec16
H231H_22003-NHSS-XX-XXXX-SP0R-00402

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	**Competency Assessments** The document tilted "PSCP Competency Assessment" provides a summary of the competency checks carried out on the PSCP and design team personnel, however there is no title or provenance on this document to confirm who (person and organisation) carried out the noted checks. In order to provide assurance NHS H should provide an updated version of the Competency Assessment document that confirms the person(s) and organisation that have undertaken the noted checks. As noted in DRF observation OBC.GOV.3.1.2.1.
3.1.2.2	**Derogations** SHTN 00-06 Derogation Identification and Management Guidance was published in March 2026. NHSSA recommends that NHS H consider adopting one record of derogations for the project in accordance with SHTN 00-06 to ensure that there is an accurate record of variations and derogations and their status for the project.
3.1.2.3	**AP and CP Governance** NHS H have advised that the project will replace the existing Belford Hospital in Fort William where the existing teams will transfer to the new hospital upon completion of the project. However, it is not clear from the evidence submitted how NHS H have ensured that there will be an appropriate number of trained staff (AP and CP) for the new facility. NHS H should provide further assurance on how they will ensure that there will be an appropriate number of trained staff (Authorised and Competent Persons) for the water, ventilation, electrical (LV) and MGPS systems installed in the new facility.
3.1.2.4	**Lessons Learned** NHSSA published KSAR Lessons Learned documents for water, ventilation, electrical, medical gases and fire safety in March 2026.

	NHSSA recommends that NHS H consider these documents for future KSAR stages.

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	Has the Health Board completed competency checks on the water and drainage consultant designers?	Recorded evidence that the design team are experienced and have a comprehensive knowledge of the relevant design standards. Where anyone does not have a record of extensive health care experience what recorded plans are to be put in place by the Consultant Designers? Recorded evidence that input from the Health Authorising Engineer for Water (AE(W)) has been requested.

NHS Scotland Assure Observations:
Based upon the evidence submitted by the health board, there remain areas where NHS H should provide further assurance.

NHS H should provide evidence that all members of the water services design team have been included within the competency assessment, and record who has completed the assessment on behalf of NHS H. NHS H should provide further supporting evidence detailing the measures the consultant designers have in place for those individuals who do not have extensive relevant health board experience. As noted within DRF observation OBC.GOV.3.1.2.1.

Evidence has been provided that NHS H have requested project specific input from the Authorising Engineer (water). There is also evidence of an invite from NHS H with optional attendance to the AE (Water) to attend water and drainage technical design reviews. Attendance is noted at the above ground drainage review. However, there is no evidence however indicating the AE (Water) attended the corresponding water systems technical design review meeting. Refer further to Question 2.5.

Documents referenced are:
PSCP Competency assessment
Hulley and Kirkwood CV's

Workbook Ref No.	Areas to probe	Evidence expected
2.2	How does the Health Board ensure that water services are designed in a fashion, which will retain space for minor additions and modifications to services in the future?	Evidence that the engineers are presented their co-ordination drawings (BIM model), with space for future flexibility identified, to the Board. Evidence that the Design Consultant has considered and agreed with the Board, space for future flexibility in the service installations. Evidence that the designers have presented each of the main service runs plus plant rooms to the Board's FM team, to highlight space for future flexibility. Evidence that the Board has agreed a strategy (percentage) for spare capacity and a documented allowance to be incorporated into the design. 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 NHS H should provide further assurance.

Assurance has been provided of discipline specific services drawings being presented to NHS H. At the electrical, ventilation and water & drainage workshops held on 08/04/2026, 09/04/2026 and 15/04/2026 respectively, the designers presented their multi service coordination drawings to the health board and other stakeholders. The designers also demonstrated that space for future flexibility had been identified.

Assurance has been provided that the designers have considered and agreed with the health board, space for future flexibility within the water and drainage services installations. At the water and drainage workshop held on 15/04/2026, the consultant designers provided details of the main plant and equipment, incoming mains and principal hot and cold-water services allowances made for future flexibility.

Assurance has been provided that the designers have presented drawings detailing the main pipe runs and allowances for future flexibility at MEP design collaboration meetings. Attendees of the meetings include representation from NHS H Estates department. The designers have also presented multi service coordination drawings to the health board at the MEP workshops held on 08/04/2026, 09/04/2026 and 15/04/2026 and at water and above ground drainage technical reviews.

Evidence has been provided detailing the expansion allowance for the incoming mains, the raw and filtered cold water storage cisterns and details provided around the designed resilience for plate heat exchangers, booster sets, cat 5 pump sets, POE filtration system and expansion vessels. Expansion allowances for the principal hot and cold water services pipework were discussed at the OBC water and drainage workshop held on 15/04/2026. However no documented allowance (percentage) has been provided. As noted in DRF observation OBC.WD2.2.1.

Evidence was provided at the water and drainage workshop dated 15/04/2026 that main plant / tank rooms, horizontal distribution runs and risers are appropriately sized for the equipment being installed and facilitate safe adequate maintenance. The designer indicated that the clearance above the cold-water storage cisterns was in accordance with SHTM 04-01 Part A. However, no plant room sections were provided to confirm compliance. As noted in DRF observation OBC.WD2.2.2.

Documents referenced are:

H231H_22003-HUKI-CWDI-XXGF-D-M-5570001.pdf
H231H_22003-HUKI-XXXX-XXXX-R-Z-4030001
H231H_22003-HUKI-XXXX-XXXX-R-Z-4030001
Hulley & Kirkwood Lochaber KSAR OBC Water WorkshopBIM fly through presentations at MEP OBC workshops
Minutes from several design collaboration workshops
Water technical review
Above ground drainage technical review.
Presentations at MEP OBC workshops

Workbook Ref No.	Areas to probe	Evidence expected
2.3	How does the Health Board assure itself that all variations / derogations, which may be required to water systems, are investigated and agreed by	Evidence that each variation / derogation has a detailed technical analysis, has been referred to the Board, and agreed with their water management group clinical, engineering, Estates, infection prevention, control, and FM teams.

	all parties before they are incorporated in the design?	

NHS Scotland Assure Observations:
NHS H have provided assurance with respect to this KSAR question with the submission of an electronic version of the current derogations schedule, containing the status of the derogations to date. This schedule has been supplemented with a document confirming that the derogations raised are assessed by all relevant stakeholders.

We recommend that NHS H consider adopting one record of derogations for the project in accordance with SHTN 00-06 to ensure that there is an accurate record of variations and derogations and their status for the project. As noted in DRF observation OBC.GOV.3.1.2.2.

Documents referenced are:
Derogations Process H231H_22003 -
Derogations Download 05.02.26
Derogation Schedule Review H231H_22003- GBB-XX-XXX-FN-PP-551503
Derogation Schedule H231H_22003- GBB-XX-XXX-SH-PP-000001
Project Derogation Procedure H231H_22003- NHSS-XX-XXX-SP -R-0040

Workbook Ref No.	Areas to probe	Evidence expected
2.4	Water Management Strategy	Assessment of Board proposed water management strategy and how this relates to the specification, guidance and project requirements. What involvement has there been from the water management group?

NHS Scotland Assure Observations:
NHS H have provided assurance with respect to evidence of a Stage 3 water management strategy has been provided. There remain some key design decisions around mains water supply connection point, and incoming pipework material to be agreed as part of the water services design development process. These however are detailed in the designers M&E outline design approach report.

NHS H have also provided assurance with there is a standing agenda item in the NHS H Water Safety Group to discuss projects. The agenda for the 25/11/2025 meeting includes a

specific item for the Lochaber project. A Lochaber Hospital update presentation was also delivered to the WSG at the same meeting on 25/11/2025.

Documents referenced are:

NHS Highland Water Management Strategy H231H_22003-HUKI-XXXX-XXXX-R-Z-4030004

NHS Highland Lochaber Replacement Hospital RIBA Stage 3 M&E Outline Design Approach Report December 2025

202511 Water Safety Group Agenda

Water Safety Group - Lochaber Update Presentation

Workbook Ref No.	Areas to probe	Evidence expected
2.5	Water governance arrangements	Has the Health Board commenced its water governance planning and recorded how it will ensure appropriate numbers of trained staff (AP and CP) and AE(W) will be appointed, is there an established project water management group that ensures the water management strategy is adhered to for the Board, and is it clear how this project will interface with this existing group? Evidence that the Health Boards AE(W) have been involved with and reviewed the design proposals to date.

NHS Scotland Assure Observations:

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

The NHS H / PSCP document ‘’H231H_22003OBC’’ states that "the project will replace the existing Belford hospital in Fort William where the existing teams will transfer to the new hospital upon completion of the project. The assessment of workforce plans for the maintenance requirements is currently ongoing with the delivery of the Stage 3 COBie file to make an assessment on the resource demand changes". No evidence has been provided that the Board Water Safety Group has developed a plan to ensure that appropriate numbers of trained staff (AP and CP) and AE (W) will be appointed. As noted in DRF observation OBC.WD.2.5.1

Evidence has been provided that the AE (Water) attended the drainage technical design review held on 17/12/2025**.** There is no evidence indicating that the AE (Water) attended the corresponding water systems technical design review held on 13/01/2026. NHS H should provide further assurance that the health boards AE (Water) has attended both

water and drainage review meetings as well as reviewing the Stage 3 water services and drainage design proposals. As noted in DRF observation OBC.WD.2.5.2.

Documents referenced are:

Lochaber review invite

Water stage 3 TA design review

Above ground drainage stage 3 TA design review.

H231H_22003OBF

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.

3.2.2.1	Observation withdrawn.
3.2.2.2	**Water Service Routes Above High Risk Areas** The PSCP's water services design consultant stated at the water services workshop of 15/04/2026 that drainage pipework would be located above the CT scan room and theatres. NHS H should consider alternative routing of water and drainage pipework to mitigate the risk of leakage into high risk clinical spaces. As noted in DRF observation OBC.WD.3.2.2.2.
3.2.2.3	**Designers Risk Assessments** There is no evidence that the designer has completed a designer's risk assessment in accordance with BS 8680:2020 or a scalding risk assessment in accordance with HSG 274 part 2. NHS H should provide documented evidence that the designer has carried out designer's water safety risk assessments in accordance with BS8680:2020 and HSG 274 Part 2 and that there has been adequate consultation with the Board's WSG to ensure that the quality of water is appropriate and safe at the point of use for all intended uses and users.

3.3 Ventilation

3.2.1 Ventilation: KSAR Observations

Workbook Ref No.	Areas to probe	Evidence expected
3.1	Has the Health Board completed competency checks on the ventilation consultant designers?	Recorded evidence that the design team are experienced and have a comprehensive knowledge of the relevant design standards. Where anyone does not have a record of extensive health care experience what recorded plans are to be put in place by the Consultant Designers? Recorded evidence that input from the Health Boards Authorising Engineer for Ventilation (AE(V)) has been requested.

NHS Scotland Assure Observations:
Based upon the evidence submitted by the health board, there remain areas where NHS H should provide further assurance.

NHS H have provided assurance that most of the ventilation consultant designers are experienced in healthcare projects and have a knowledge of the appropriate design standards. A competency assessment matrix has been provided, however this does not include all members of the mechanical design team for which CVs have been submitted. It is also not clear who from NHS H has completed the competency assessment.

NHS H should provide further assurance that all members of the mechanical design team have been included within the competency assessment, and record who has completed the assessment on behalf of NHS H. As noted in DRF observation OBC.GOV.3.1.2.1.

Documents referenced are:
PSCP Competency assessment
Hulley and Kirkwood CV's

Workbook Ref No.	Areas to probe	Evidence expected
3.2	How does the Health Board ensure that ventilation services are designed in a fashion, which will retain space for minor additions	Evidence that the design engineers have presented their co-ordination drawings (BIM model), with space for future flexibility identified, to the Board.

	and modifications to services in the future, and there is an appropriate plant access strategy?	Evidence that the design consultant has considered and agreed with the Health Board, space for future flexibility in the service installations. Evidence that the design engineers have presented each of the main service runs plus plant rooms to the Board's Estates team and / or FM team, to highlight space for future flexibility. Evidence that the Health Board has agreed a strategy (percentage) for spare capacity and a documented allowance to be incorporated into the design. Are plant rooms, IPS sections, horizontal distribution runs and risers appropriately sized for the equipment being installed and facilitate safe adequate maintenance? Evidence that a plant access strategy for the entire ventilation system has been provided to ensure safe, adequate access, including access for cleaning.

NHS Scotland Assure Observations:

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

Evidence has been provided which demonstrates expansion has been considered from an architectural perspective, however it is unclear if the impact on the HVAC system has been fully considered.

It is unclear if NHS H have agreed a strategy for spare capacity with stakeholders and the project team and if this has been incorporated within the design.

Evidence has been provided to demonstrate that access for main plant and equipment for maintenance and lifecycle replacement has been considered. However, it remains unclear if access to all maintainable assets has been considered once all other services are installed and finished ceilings are complete.

As noted within DRF observations OBC.V3.2.1. and OBC.V3.2.2, NHS H should provide further assurance on the following:

1. The impact of departmental expansion has been considered from a HVAC perspective.
2. Clarity of NHS H's agreed strategy for spare capacity and evidence that this has been incorporated within the design.
3. All maintainable assets are accessible for maintenance and lifecycle replacement once all other services are installed and finished ceilings complete.

Documents referenced are:
H231H_22003-KEPP-XXXX-XXGF-DR-A-6080500
H231H_22003-KEPP-XXXX-XX01-DR-A-6080500
H231H_22003-KEPP-XXXX-XX02-DR-A-6080500
H231H_22003-NHSS-XXXX-XXXX-SY-K-00001 - Expansion Strategy 2025
H231H_22003-HUKI-XXXX-XXXX-R-Z-4030001 - M&E Outline Design Approach Report

Workbook Ref No.	Areas to probe	Evidence expected
3.3	How does the Health Board assure itself that all variations / derogations, which may be required to the ventilation systems, are investigated and agreed by all parties before they are incorporated in the design?	Evidence that each variation / derogation has a detailed technical analysis, has been referred to the Health Board, and agreed with their ventilation safety group, clinical, engineering, Estates, infection control and FM teams.

NHS Scotland Assure Observations:
NHS H have provided assurance with respect to this KSAR question with the submission of a Project Derogation Procedure which details the process for identifying, reviewing and approving derogations. The process includes engagement with relevant stakeholders, including the Ventilation Safety Group (VSG).

It was noted at the Ventilation Worksop on 09/04/2026 that there are currently no proposed derogations related to the mechanical services, however NHSSA have identified potential areas of non-compliance during the KSAR review. To provide assurance, NHS H should complete a review of the current design to consider any areas of non-compliance with guidance. As an example, items identified within DRF observations OBC.V.3.3.2.3 and OBC.V.3.3.2.5 should be considered.

We recommend that NHS H consider adopting one record of derogations for the project in accordance with SHTN 00-06 to ensure that there is an accurate record of variations and derogations and their status for the project. As noted in DRF observation OBC.GOV.3.1.2.2.

Documents referenced are:
H231H_22003-NHSS-XX-XXXX-SP-R-00408 - Project Derogation Procedure

Workbook Ref No.	Areas to probe	Evidence expected
3.4	Does the Health Board have a strategy for ventilation (for rooms where this is permitted within the SHTM/SHPN guidance)?	Evidence of agreed environmental matrix. Evidence that the Dynamic thermal modelling confirms what the design must include (e.g. structure, solar shading/protection, orientation, equipment optimisation, etc.) to ensure that room temperatures comply with SHTM guidance, in naturally ventilated rooms. Floor plans with associated plant locations highlighted plus simple schematic of strategy. This must also identify the air intake and exhaust strategy / locations.

NHS Scotland Assure Observations:
Based upon the evidence submitted by the health board, there remain areas where NHS H should provide further assurance.

NHS H have provided ventilation layouts and schematics which show main plant locations, air intake and exhaust locations and main distribution routes. NHS H advised at the Ventilation Workshop on 09/04/26 that all environmental data would be populated within the Room Data Sheets, and an Environmental Matrix would not be utilised for this purpose. However, some room data sheets for areas within the facility have not yet been populated with key environmental data such as air change rates, temperature etc.

The cross-referencing mechanism between the EM, RDS and drawings appears cumbersome with the potential risk of information being missed

NHS H should clarify if the room data sheets will be updated to include relevant environmental data for all rooms within the facility and advise if all rooms will be linked to a Room Data Sheet. NHS H should also clarify the document hierarchy and referencing process. As noted within DRF observation OBC.V3.4.1.

Documents referenced are:
H231H_22003-HUKI-XXXX-XXXX-ST-M-4030001 – Stage 3 CBDM Pre-Simulation Summary Report
H231H_22003-NHSS-XXXX-XX-SP-EN-00200 – Project Environmental Energy Requirements
H231H_22003-NHSS-XX-XXXX-DT-R-00001 - H231H_22003-NHSS-XX-XXXX-DT-R-00016
H231H_22003-NHSS-XX-XXXX-RA-R-00021 – Environmental Matrix

Workbook Ref No.	Areas to probe	Evidence expected
3.5	Is there evidence of stakeholder input to ventilation strategies?	Addition to or supplement to the Environmental Matrix which confirms the following, on a room by room basis: a) The type of ventilation (to SHTM 03-01) b) Patient group and / or function related to the space. c) Name of the Consultant, Clinical Lead or Department Lead who has agreed to the room requirements. d) Name of the Infection Prevention and Control Doctor or equivalent who has agreed to the room requirements. e) Name of the Infection Prevention and Control Nurse who has agreed to the room requirements. f) Name of the Estates / FM team representative who has agreed to the room requirements. g) Name of the NHS Project Manager who has agreed to the room requirements. Name of the Decontamination Manager who has agreed to the room requirements (where this is part of the project).

NHS Scotland Assure Observations:
Based upon the evidence submitted by the health board, there remain areas where NHS H should provide further assurance.

A "Clinical Advisor & PM Stakeholder Approvals Process'' has been provided which sets out the electronic process for stakeholder approval of specific items. An export from this system has also been provided, however this does not appear to include any specific information relating to environmental data or the ventilation strategy.

NHS H should provide further evidence to demonstrate the process for stakeholder engagement, specifically for the development of room environmental data.

Evidence that all relevant stakeholders have approved the environmental parameters, patient cohort / room function and ventilation strategies for occupied spaces should also be provided.

As noted within DRF observation OBC.V3.5.1.

Documents referenced are:

Approval Request for Lochaber Redesign Stakeholder Approvals *Clinical Advisor & PM Stakeholder Approvals Process* *Lochaber Stakeholder Approvals*

Workbook Ref No.	Areas to probe	Evidence expected
3.6	Is there evidence of the Health Board developing Ventilation Commissioning Proposals?	Evaluation of the suitability of the proposed plans in the context of the OBC, are these sufficient do the meet the requirements of the project, guidance and the design of the system?
NHS Scotland Assure Observations: NHS H have provided partial assurance with respect to this KSAR question with the submission of an MEP commissioning plan which demonstrates a commissioning specialist has been appointed and the Health Board are developing ventilation commissioning proposals. This will be further developed at RIBA Stage 4 and reviewed as part of the FBC KSAR. For Assurance, NHS H should provide evidence that a designers commissioning brief has been prepared**,** and an independent Validator has been appointed as per SHTM 03-01 Part A Clauses 11.13 and 12.4 - 12.10. As noted within DRF observation OBC.V3.6.1. **Documents referenced are:** *H231H_22003-GBB-XXXX-XXXX-PL-PP-603001 – Lochaber Hospital NHSH Commissioning Plan* *Commissioning, Handover & Training Plan*		

Workbook Ref No.	Areas to probe	Evidence expected
3.7	Has the Health Board started developing its ventilation governance arrangements?	Is the Heath Board considering how it will ensure appropriate numbers of trained staff (AP and CP) and AE(V) for the project? Evidence that the Health Boards AE(V) have been involved with and reviewed the design proposals to date.
NHS Scotland Assure Observations: Based upon the evidence submitted by the health board, there remain areas where NHS H should provide further assurance. NHS H should provide evidence that the resource requirements for AP(V) and CP(V) have been considered. Whilst the Health Board has advised the existing teams from the Belford		

Hospital will transfer over, assurance should be provided that the operative numbers and skillsets are suitable for the Lochaber project and that any additional requirements to cover a potential crossover period have been considered. As noted within DRF observation OBC.GOV.3.1.2.3. **Documents referenced are:** *OBC Gap Analysis Response*

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	**Primary Heating Source** Recommendation Ref: HL09-OBC-047 of the NDAP Report relates to the use of Bio propane as the primary energy source for the hospital and for NHS H to reconsider this. If NHS H decide to continue with this option, the following should be considered. The main heat source within the project is dual fuel boilers, utilising bio-propane as the primary fuel and diesel as the standby fuel. For assurance, NHS H should provide evidence that the following has been considered: 1. Resilience of bio-propane supply chain both in the short and longer term. 2. Capacity of on-site fuel storage (primary and secondary), and what impact this has on fuel delivery frequencies based on peak winter load. 3. Impact this has on project environmental targets. 4. Estimated annual energy consumption. As noted in DRF observation OBC.V.3.3.2.1.
3.3.2.2	**Operating Theatre / Treatment Area Design** Floor layouts and Room Data Sheets have been provided by NHS H for various treatment spaces (operating theatres, treatment areas, dialysis cubicles, SACT etc.). To provide assurance, NHS H should provide the clinical risk assessment which identifies the patient cohort and clinical procedures which can safely be carried out within each space. Layout drawings which show pressure

	regimes and airflow direction for these areas should also be provided. As noted in DRF observation OBC.V.3.3.2.2.
3.3.2.3	**Heating / Cooling Strategy** Heating strategy drawings have been provided which identify the heat emitters in each location comprising radiant panels, fan coil units, direct from the AHU or via duct mounted heater batteries. FCUs are noted as the emitter type in some clinical areas which is non-compliant with SHTM 03-01 Part A paragraphs 5.25 and 9.85 NHS H should provide evidence that the following has been considered: 1. Relevant stakeholders have reviewed and approved the selection of appropriate emitters for each space. 2. Where fan coil units have been selected for clinical areas, a suitable risk assessment is provided which includes IPC and access and maintenance risks. As noted in DRF observation OBC.V.3.3.2.3.
3.3.2.4	**Ventilation / Air Conditioning Within Plant Rooms** Heating and cooling strategy drawings are provided which show plant room areas as unconditioned spaces, with a requirement for frost protection. For assurance, NHS H should provide evidence that all plant areas have been suitably assessed and do not require active cooling / ventilation. As noted in DRF observation OBC.V.3.3.2.4.
3.3.2.5	**Ventilation Within Imaging Suites** Room Data Sheets have been provided for both the X-Ray and CT Scanner Rooms which show 6 and 10 ACH respectively. SHTM 03-01 Part A Appendix 2 Table 1A requires 10 ACH in interventional or non-interventional imaging rooms of any type. For assurance, NHS H should provide evidence of a clinical risk assessment which determines these conditions are suitable for the patient demographic and procedure taking place within the space. As noted in DRF observation OBC.V.3.3.2.5.
3.3.2.6	**Endoscope Wash Room AHU** Within the current design, the endoscope wash room / inspection room, theatre recovery area and day unit are served from a single AHU. NHS H should provide evidence of appropriate stakeholder engagement / risk assessment of the proposal to provide a single ANU serving these areas. As noted in DRF observation OBC.V.3.3.2.6.

	NHS H should provide evidence of appropriate stakeholder engagement / risk assessment of the proposal to provide a single AHU serving these areas. As noted in DRF observation OBC.V.3.3.2.6.

3.4 Electrical

3.4.1 Electrical: KSAR Observations

Workbook Ref No.	Areas to probe	Evidence expected
4.1	Has the Health Board completed competency checks on the electrical consultant designers?	Recorded evidence that the design team are experienced and have a comprehensive knowledge of the relevant design standards. Where anyone does not have a record of extensive health care experience what recorded plans are to be put in place by the Consultant Designers? Recorded evidence that input from the Health Boards Authorising Engineer for Electrical (AE(E)) has been requested.
NHS Scotland Assure Observations: Based upon the evidence submitted by the health board, there remain areas where NHS H should provide further assurance. NHS H have provided assurance that the electrical design team are experienced in healthcare projects and have a knowledge of the appropriate design standards. Evidence has also been provided that demonstrates that input from the health boards electrical Authorising Engineer has been requested. However, no assurance has been provided to confirm who undertook the vetting procedure in relation to the competency assessments that have been carried out on the PSCP and design team personnel. As noted in DRF observation OBC.GOV.3.1.2.1. **Documents referenced are:** *Hulley and Kirkwood CV's* *PSCP Competency assessment* *Lochaber Stage 3 TA Design Reviews 342*		

Workbook Ref No.	Areas to probe	Evidence expected
4.2	How does the Health Board ensure that electrical services are being designed in a fashion which will provide ease of access for	Evidence that the designers have presented their co-ordination drawings (BIM model) to the Board.

	future maintenance and which will retain space for minor additions and modifications to services in the future?	Evidence that the designers have presented each of the main service runs plus plant rooms to the Health Board's FM team. Evidence that the Board has agreed a strategy (percentage) for spare capacity and a documented allowance has been incorporated into the design. 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.

NHS Scotland Assure Observations:
Based upon the evidence submitted by the health board, there remains an area where NHS H should provide further assurance.

NHS H have provided evidence to confirm that the project designers have presented their co-ordinated layouts and Revit model to the health board. Evidence has also been submitted that details the main electrical service rooms, along with switchroom and riser details that indicate that such areas are appropriately sized. Confirmation has been provided that the detail of the service runs and electrical rooms have been presented to the health board.

However, no assurance has been provided with respect to the strategy for spare electrical capacity and confirmation that such a spare capacity has been incorporated in the design at OBC stage. As noted in DRF observation OBC.E4.2.1.

Documents referenced are:
Thirty six sets of minutes that were uploaded in the folder titled "Meeting Minutes"
H231H_22003-GBB-XX-XXXX-MI-PP-403003
H231H_22003-GBB-XX-XXXX-MI-PP-403005
H231H_22003-GBB-XX-XXXX-MI-PP-403007
H231H_22003-HUKI-CCTU-XX01-D-E-7030001
H231H_22003-HUKI-CCTU-XX02-D-E-7030001
H231H_22003-HUKI-CCTU-XXGF-D-E-7030001
H231H_22003-NHSS-XXXX-XXXX-SY-K-00001

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

NHS Scotland Assure Observations:

NHS H have provided assurance with respect to this KSAR question with the submission of an electronic version of the current derogations schedule, containing the status of the derogations to date. This schedule has been supplemented with a document confirming the derogations process for this project which confirms that derogations raised are assessed by all relevant stakeholders.

We recommend that NHS H consider adopting one record of derogations for the project in accordance with SHTN 00-06 to ensure that there is an accurate record of variations and derogations and their status for the project. As noted in DRF observation OBC.GOV.3.1.2.2.

Documents referenced are:

Derogations Process
H231H_22003 – Derogations Download 05.02.26
H231H_22003-GBB-XX-XXXX-FN-PP-551503

Workbook Ref No.	Areas to probe	Evidence expected
4.4	Has the Health Board assured itself of availability of adequate supply from the local utility infrastructure?	Confirmation from the Regional Electricity Company as to how the supply will be provided from their network and if single or dual supplies are being made available.

NHS Scotland Assure Observations:

NHS H have provided assurance that they have engaged with the District Network Operator (DNO) regarding how it is proposed to provide the primary electrical supply for the new hospital, with the DNO having provided a quotation for this works.

It is noted that the current DNO proposal is to provide a single low voltage supply to serve the new hospital. Refer to Further Observation OBC.E.3.4.2.1.

Documents referenced are:

111_Revised SSEN Quote_02-05-26
FGG834_002_20251211_CORRESPONDENCE

FGG834_002_20251211_DESIGNDOCUMENT *FGG834_002_20251211_QUOTELETTER*

Workbook Ref No.	Areas to probe	Evidence expected
4.5	Evidence of provisions for emergency supplies during loss of the utility incoming supply.	Floor plans with standby generator locations highlighted plus simple schematic. Capacity of generators UPS provision
NHS Scotland Assure Observations: NHS H have provided assurance that confirms the proposed arrangements for the provision of safety power supplies to the hospital, with information provided that details the proposed standby generator provision inclusive of details of how this provision supports and forms part of the electrical infrastructure. Assurance has also been provided that confirms the UPS proposals and arrangements that will form the tertiary power infrastructure at the hospital. **Documents referenced are:** *H231H_22003-HUKI-POIN-XXXX-D-E-7030001* *H231H_22003-HUKI-POIN-XXXX-SC-E-7030001* *H231H_22003-HUKI-POIN-XXXX-SC-E-7030002* *H231H_22003-HUKI-POIN-XXXX-SC-E-7030004*		

Workbook Ref No.	Areas to probe	Evidence expected
4.6	Is there a strategy for locating substations?	Floor plans with substation locations highlighted plus simple schematic.
NHS Scotland Assure Observations: NHS H have provided assurance that confirms the proposed strategy for the location of substations at the hospital. It is noted that there are no internal substations proposed and only one external substation, on the site boundary, that shall be owned and operated by SSEN. **Documents referenced are:** *H231H_22003-HUKI-POIN-XXXX-D-E-7030001*		

H231H_22003-HUKI-POIN-XXXX-SC-E-7030003
FGG834_002_20251211_DESIGNDOCUMENT

Workbook Ref No.	Areas to probe	Evidence expected
4.7	Is there a strategy for locating switch rooms?	Floor plans with switchroom locations highlighted plus simple schematic.

NHS Scotland Assure Observations:
Assurance has been provided that NHS H have developed a strategy for the location of the internal switchrooms, that is demonstrated by means of layout and schematic drawings.

Documents referenced are:
H231H_22003-HUKI-POIN-XXXX-D-E-7030001
H231H_22003-HUKI-POIN-XXXX-SC-E-7030001
H231H_22003-HUKI-POIN-XXXX-SC-E-7030002
H231H_22003-HUKI-CCTU-XX01-D-E-7030001
H231H_22003-HUKI-CCTU-XX02-D-E-7030001
H231H_22003-HUKI-CCTU-XXGF-D-E-7030001

Workbook Ref No.	Areas to probe	Evidence expected
4.8	Is there a strategy for locating Medical IT distribution equipment?	Floor plans with Medical IT board locations highlighted plus simple schematic. Compliance with BS7671 section 710 Compliance with SHTM 06-01

NHS Scotland Assure Observations:
Based upon the evidence submitted by the health board, no assurance has been provided that the medical IT equipment has been located appropriately in relation to relevant guidance and standards.

NHS H have submitted floor plans and schematic drawings as evidence that demonstrate the proposed Medical IT strategy for the hospital.

However, there are concerns that the proposed location of the Medical IT transformers, on a different floor level from the theatre areas they serve, does not comply with BS7671, Clause 710.512.1.1. As noted in DRF observation OBC.E4.8.1.

Also relating to the location of the Medical IT transformers, there is no clarification that these are located with 30m of the final outlets that they serve, which is in line with the guidance noted in section 16.34 of SHTM 06-01 Part A 2015. As noted in DRF observation OBC.E4.8.2.

Documents referenced are:
H231H_22003-HUKI-POIN-XXXX-SC-E-7030001
H231H_22003-HUKI-POIN-XXXX-SC-E-7030002
H231H_22003-HUKI-POIN-XXXX-SC-E-7030004
H231H_22003-HUKI-POIN-XXXX-SC-E-7030005
H231H_22003-HUKI-CCTU-XX01-D-E-7030001
H231H_22003-HUKI-CCTU-XX02-D-E-7030001
H231H_22003-HUKI-CCTU-XXGF-D-E-7030001

Workbook Ref No.	Areas to probe	Evidence expected
4.9	Is there a strategy for distribution?	Floor plans with containment distribution routing (horizontal and vertical).

NHS Scotland Assure Observations:
NHS H have provided assurance with respect to this KSAR question with the submission of floor plans that detail both horizontal and vertical electrical containment. This submission was supplemented with a presentation of the co-ordinated Revit model at the electrical workshop on 08/04/2026.

Whilst the distribution strategy that has been submitted at OBC stage provides assurance that the diverse routing of resilient power supplies has been considered, this should be further developed at FBC stage to detail the separation and diverse routing for A and B power supplies. Confirmation should also be provided at FBC stage that the proposed cabling for resilient power supplies is in accordance with BS 8519 2020. As noted in DRF observation OBC.E4.9.1.

Documents referenced are:
H231H_22003-HUKI-CCTU-XX01-D-E-7030001
H231H_22003-HUKI-CCTU-XX02-D-E-7030001
H231H_22003-HUKI-CCTU-XXGF-D-E-7030001

Workbook Ref No.	Areas to probe	Evidence expected
4.10	Is there evidence of the Health Board developing electrical commissioning proposals?	Evaluation of the suitability of the proposed plans in the context of the OBC, are these sufficient do the meet the requirements of the project, guidance and the design of the system?

NHS Scotland Assure Observations:
NHS H have provided assurance regarding progress of the electrical commissioning plan, with the level of detail and progression demonstrated being consistent with what is expected at the OBC stage.

NHS H have confirmed that the commissioning plan will be developed through the FBC KSAR stage.

Documents referenced are:
Commissioning, Handover & Training Plan
H231H_22003-GBB-XXXX-XXXX-PL-PP-603001

Workbook Ref No.	Areas to probe	Evidence expected
4.11	Has the Health Board starting on its early thinking for the electrical governance arrangements for the operational phase?	Is the Health Board considering how it will ensure appropriate numbers of trained staff (AP(HV), AP(LV), CP(HV), CP(LV), AE(HV) and AE(LV) for the project, inclusive of third party providers? Evidence that the Health Boards AE(E) have been involved with and reviewed the design proposals to date.

NHS Scotland Assure Observations:
Based upon the evidence submitted by the health board, there remain areas where NHS H should provide further assurance.

NHS H have provided assurance that they have considered the provision of both Authorised and Competent Persons for the new hospital. As this project will replace the existing Belford Hospital, it was also confirmed at the electrical workshop of 08/04/2026, that the current AP and CP personnel will fulfil the same roles at the new hospital.

However, no assurance has been provided to confirm that the Authorising Engineer has reviewed the design proposals at the OBC stage. As noted in DRF observation OBC.E4.11.1.

Documents referenced are:

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	**Incoming Electrical Supply** As previously noted, in the observation relating to workbook question 4.4, the current proposal for the incoming electrical supply to the new hospital is a single low voltage connection, sourced from a new DNO substation location on the site boundary. Having such a single low voltage supply is not in accordance with the guidance given in Section 6.7 of SHTM 06-01 Part A 2015, which states that "supply ratings between 750kVA and 12MVA should be supplied at high voltage (11kV)". As the new hospital falls within this load profile we would recommend that consideration is given to re-engaging with the DNO with a view to the electrical supply to the new hospital being provided at high voltage. As noted in DRF Observation OBC.E.3.4.2.1.
3.4.2.2	**Single Points of Failure** The current design proposal for the primary electrical supply that has one HV/LV transformer supplying the hospital, using a single low voltage cable, introduces a potential single point of electrical failure at the origin point of the hospitals electrical supply. As such the current proposals are not in accordance with the guidance in section 4.36 of SHTM 06-01 Part A 2015 that notes that one of the essential elements when providing a resilient infrastructure is "moving the first single points of failure as near to the point of use as possible". We would recommend that consideration is given to providing an electrical distribution strategy that incorporates at least two HV/LV transformers to deliver the primary electrical supply to the hospital, in accordance with the guidance given in Section 6.8 of SHTM 06-01 Part A 2015. Adopting such a strategy would improve the resilience of the incoming primary electrical supply and remove the current single point of failure that is inherent in the current design proposals. As noted in DRF Observation OBC.E.3.4.2.2.

3.5 Medical Gases

3.5.1 Medical Gases: KSAR Observations

Workbook Ref No.	Areas to probe	Evidence expected
5.1	Has the Health Board completed competency checks on the medical gases consultant designers?	Recorded evidence that the design team are experienced and have a comprehensive knowledge of the relevant design standards. Where anyone does not have a record of extensive health care experience what recorded plans are to be put in place by the consultant designers? Recorded evidence that input from the Health Boards Authorising Engineer for Medical Gases (AE(MG)) has been requested.

NHS Scotland Assure Observations:
Based upon the evidence submitted by the health board, there remain areas where NHS H should provide further assurance.

Assurance has been provided in the form of a detailed CV, that the medical gas designer is experienced in designing medical gas pipeline systems in healthcare facilities.

Assurance has been provided to demonstrate that the NHS H Authorising Engineer for medical gases has been engaged and has had input to the project.

NHS H should provide an updated version of the Competency Assessment document that confirms the person(s) and organisation that have undertaken the noted checks. As noted within DRF observation OBC.GOV.2.1.2.1.

Documents referenced are:
Graham Carracher Assoc Med Gas H&K - Healthcare
PSCP Competency assesment [sic}
Lochaber - Graeme Dunn Engagement
Lochaber Stage 3 TA Design Reviews_ 400

Workbook Ref No.	Areas to probe	Evidence expected
5.2	How does the Health Board assure itself that all variations / derogations' which may be required to medical gas systems are being 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 medical gases management group, clinical, Estates, infection control and FM teams.

NHS Scotland Assure Observations:

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

NHS H should provide evidence that the proposed derogations for the MGPS have been approved through the appropriate project governance routes. As noted within DRF observation OBC.MGPS5.2.1.

We recommend that NHS H consider adopting one record of derogations for the project in accordance with SHTN 00-06 to ensure that there is an accurate record of variations and derogations and their status for the project. As noted in DRF observation OBC.GOV.3.1.2.2.

Documents referenced are:

Derogations Process

H231H_22003 - Derogations Download 05.02.26

H231H_22003-GBB-XX-XXXX-SH-PP-000001 – Derogation Schedule_DS3 (MEP tab)

Workbook Ref No.	Areas to probe	Evidence expected
5.3	How does the Health Board ensure that medical gas services are designed in a fashion, which will provide ease of access for future maintenance and which will retain space for minor additions and modifications to services in the future	Evidence that the designers have presented their co-ordination drawings (BIM model) to the Board. Evidence that the designer has presented each of the main service runs to the Board's FM team.

NHS Scotland Assure Observations:

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

Assurance has been provided that the designers have presented their co-ordinated drawings, layouts and the main MGPS pipe routes and plant/ manifold rooms to the health board. The co-ordinated Revit model was also presented at the medical gas workshop on 16/04/2026.

NHS H should provide evidence of their strategy for future expansion requirements of the MGPS and demonstrate how this has been considered and allowed for. As noted within DRF observation OBC.MGPS5.3.1.

NHS H should provide evidence of their access and maintenance and plant replacement strategies for the project. As noted within DRF observation OBC.MGPS5.3.2.

Documents referenced are:
H231H_22003-GBB-XX-XXXX-MI-PP-403003 – Meeting minutes Design Collaboration Workshop no.3 – MEP
H231H_22003-HUKI-BLOO-XX01-D-M-552001 – Drawing Medical Gas – Level 1 Zone 1
H231H_22003-HUKI-BLOO-XX01-D-M-552002 – Drawing Medical Gas – Level 1 Zone 2
H231H_22003-HUKI-BLOO-XX02-D-M-552001 – Drawing Medical Gas – Level 2 Zone 1
H231H_22003-HUKI-BLOO-XX02-D-M-552002 – Drawing Medical Gas – Level 2 Zone 2
H231H_22003-HUKI-BLOO-XXGF-D-M-552001 – Drawing Medical Gas – Level 0 Zone 1
H231H_22003-HUKI-BLOO-XXGF-D-M-552002 – Drawing Medical Gas – Level 0 Zone 2
H231H_22003-HUKI-BLOO-XXXX-SC-M-5520001 – Drawing Medical Gas – Proposed Medical Oxygen Schematic
H231H_22003-HUKI-BLOO-XXXX-SC-M-5520003 – Drawing Medical Gas – Proposed Medical Air 4bar Schematic
H231H_22003-HUKI-BLOO-Z0XX-D-M-5520001 – Drawing Medical Gas – Proposed Externals Layout Site Plan

Workbook Ref No.	Areas to probe	Evidence expected
5.4	Is there evidence of the Health Board developing medical gases commissioning proposals?	Evaluation of the suitability of the proposed plans in the context of the OBC are these sufficient do the meet the requirements of the project, guidance and the design of the system?

NHS Scotland Assure Observations:
NHS H has provided assurance regarding progress with respect to the MGPS commissioning plans has been submitted and is in accordance with the level of detail expected at OBC stage. It is noted that it has been confirmed that the commissioning plans will be further developed at the next project stage.

During the MGPS workshop on 16/04/2026 it was noted that the AP (MGPS) at the existing Belford Hospital is proposed to undertake the role of Contract Supervising Officer and that the Quality Controller role will be provided through an existing agreement between NHS H and NHS Grampian.

Documents referenced are:
Commissioning, Handover & Training Plan
H231H_22003-GBB-XXXX-XXXX-PL-PP-603001 – Lochaber Hospital Commissioning Plan

Workbook Ref No.	Areas to probe	Evidence expected
5.5	Has the Health Board started developing its medical gases governance arrangements for the operational phase?	Is the Health Board considering how it will ensure appropriate numbers of trained staff (AP and CP) and AE(V) for the project? And is it clear how this project will interface with the Board existing arrangements for management of the medical gases installations?

NHS Scotland Assure Observations:
Based upon the evidence submitted by the health board, there remain areas where NHS H should provide further assurance.

Assurance has been provided that NHS H have engaged with their Authorising Engineer for medical gases and included them in their design review meetings. It was noted during the medical gas workshop on 16/04/2026 that it is proposed that the existing Belford Hospital AP (MGPS) will fulfil the role of CSO on the project.

It is not clear from the evidence submitted how NHS H have ensured that there is an appropriate number of trained staff (AP and CP) for the project. NHS H should provide evidence as to how they have ensured that there will be an appropriate number of trained staff, Authorised and Competent Persons for the MGPS installed in the facility. As noted within DRF observation OBC.GOV.3.1.2.3.

Documents referenced are:
Lochaber - Graeme Dunn Engagement
Lochaber Stage 3 TA Design Reviews_ 400

Workbook Ref No.	Areas to probe	Evidence expected
5.6	Is there recorded evidence of a strategy for bulk gas and bottle gas storage?	Floor plans with cylinder locations highlighted Site plan with VIE location(s) Simple schematic Confirmation that the medical gas strategy is adequate. Floor plans with pipework distribution routing and manifold locations.
NHS Scotland Assure Observations: Assurance has been provided that NHS H have a strategy for bulk liquid and cylinder gas storage. **Documents referenced are:** *64_Medical Gas Cylinder Storage_02-05-26 – RFI #64 Medical Gas Storage* *H231H_22003-HUKI-BLOO-XXXX-SC-M-5520001 – Drawing Medical Gas – Proposed Medical Oxygen Schematic* *H231H_22003-HUKI-BLOO-XXXX-SC-M-5520003 – Drawing Medical Gas – Proposed Medical Air 4bar Schematic* *H231H_22003-HUKI-BLOO-Z0XX-D-M-5520001 – Drawing Medical Gas – Proposed Externals Layout Site Plan*		

Workbook Ref No.	Areas to probe	Evidence expected
5.7	Is there recorded evidence of a strategy for medical gas plant?	Description of medical; gas requirements signed off by clinical colleagues. Floor plans with pipework distribution (horizontal and vertical) routing. Details of all medical gas plant areas ensuring safe and adequate access.
NHS Scotland Assure Observations: Assurance has been provided that NHS H have a strategy for medical gas plant. **Documents referenced are:** *H231H_22003-HUKI-BLOO-XX01-D-M-552001 – Drawing Medical Gas – Level 1 Zone 1* *H231H_22003-HUKI-BLOO-XX01-D-M-552002 – Drawing Medical Gas – Level 1 Zone 2*		

H231H_22003-HUKI-BLOO-XX02-D-M-552001 – Drawing Medical Gas – Level 2 Zone 1 *H231H_22003-HUKI-BLOO-XX02-D-M-552002 – Drawing Medical Gas – Level 2 Zone 2* *H231H_22003-HUKI-BLOO-XXGF-D-M-552001 – Drawing Medical Gas – Level 0 Zone 1* *H231H_22003-HUKI-BLOO-XXGF-D-M-552002 – Drawing Medical Gas – Level 0 Zone 2* *H231H_22003-HUKI-BLOO-XXXX-SC-M-5520001 – Drawing Medical Gas – Proposed Medical Oxygen Schematic* *H231H_22003-HUKI-BLOO-XXXX-SC-M-5520003 – Drawing Medical Gas – Proposed Medical Air 4bar Schematic* *H231H_22003-HUKI-BLOO-Z0XX-D-M-5520001 – Drawing Medical Gas – Proposed Externals Layout Site Plan* *SBAR – Lochaber Med Gases* *Lochaber Medical Gas Matrix- 03-07-25* *Lochaber Medical Gas Matrix 07-07-25* *Lochaber Medical Gas Approvals 07-07-25*

3.5.2 Medical Gases: 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.

3.5.2.1	**Future Expansion Zones** During the medical gas workshop on 16/04/2026, a question was raised as to what the strategy was for the future expansion zones on the project and medical gases. NHS H should consider what the impact of any expansion to the building will have to the MGPS and include this in their expansion strategy. Evidence for this strategy should be provided. As noted within DRF observation OBC.MGPS.3.5.2.1.

3.6 Fire Safety

3.6.1 Fire Safety: KSAR Observations

Workbook Ref No.	Areas to probe	Evidence expected
6.1	Has the Health Board completed competency checks on the Fire Engineering consultant designers?	Recorded evidence that the design team are experienced and have a comprehensive knowledge of the relevant design standards. Where anyone does not have a record of extensive health care experience what recorded plans are to be put in place by the Consultant Designers? Recorded evidence that input from the Health Boards Fire Advisors has been requested.
NHS Scotland Assure Observations: NHS H has provided assurance that they have engaged a fire engineering consultancy to develop the fire strategy. The health board confirmed the company was appointed through the national procurement framework, and NHS H has reviewed the Curriculum Vitae (CV) of the engineers working on the project. **Documents referenced are:** *5.3 Lead Advisor (2024) Key Personnel Project Experience Pro Forma (002)* *2024-03-27 HLIP Consultant Key Personnel Project Experience* *1 PAGE CV(1.-)-lochaber*		

Workbook Ref No.	Areas to probe	Evidence expected
6.2	Has a written fire strategy been completed and does it provide evidence, where there is a variance from statutory and mandatory guidance, that an equivalent level of safety has been achieved by alternative means?	Is there documented evidence that fire suppression systems have been considered for life safety and property protection? Is progressive horizontal evacuation available for all patient areas that continuously moves away from the fire area? Does the design considerations of the fire and detection system, for in-patient

		facilities, provide L1 coverage including voids? Does the design provide for a compliant emergency lighting system? Are free swing arm self-closers fitted to all leafs of doors serving sleeping accommodation? Have escape lifts been considered for the evacuation of patients and others with mobility issues? Are multi sensor fire detectors installed to reduce the occurrence of unwanted fire alarm signals? Are there adequate storage facilities to ensure escape routes are not used for this purpose? Are measures in place to provide safe charging of electrical and personal electronic equipment? Have fire hazard rooms been designated based on fire load? Where there is a mechanical ventilation system - have all compartments, sub-compartments and corridors serving sleeping accommodation been designed to be fitted with fire and smoke dampers?

NHS Scotland Assure Observations:
NHS H has provided assurance that a written fire strategy has been submitted, however, as anticipated at this stage of the project, there are still some areas that require further development for the Full Business Case. See 3.6.2: Fire safety supplementary observations.

Documents referenced are:
Strategy H231H_22003-OFRK-XXXX-XXXX-R-FI-8050002
Drawing H231H_22003-KEPP-XXXX-XX01-DR-A-8050002'

Workbook Ref No.	Areas to probe	Evidence expected
6.3	How does the Health Board assure itself that all variations / derogations, which may be required to fire systems, are investigated and agreed by all parties before they are instigated?	Evidence that the each variation / derogation and any fire engineering proposals are being referred to the Board and agreed with their fire safety group, clinical, engineering, infection prevention and control and FM teams.
NHS Scotland Assure Observations: NHS H has provided assurance that they have prepared a fire strategy that identifies each variation and an explanation of how it meets or exceeds the benchmark standards. **Documents referenced are:** *Strategy H231H_22003-OFRK-XXXX-XXXX-R-FI-8050002*		

Workbook Ref No.	Areas to probe	Evidence expected
6.4	How does the Health Board assure itself that all fire dampers and fire/smoke dampers are designed to allow for inspection, resetting and maintenance?	Evidence that the designers have presented their co-ordination drawings (BIM model) to the Board. Evidence that the designers have presented each of the fire dampers and smoke / fire dampers to the Board's FM team. Safe and adequate access has been allocated on both sides of all fire dampers for maintenance.
NHS Scotland Assure Observations: NHS H has provided assurance which demonstrates that safe and adequate access has been allocated on both sides of all fire dampers for maintenance, which includes ventilation drawings and meeting minutes. **Documents referenced are:** *H231H_22003-HUKI-XXXX-XXXX-R-Z-4030001* *H231H_22003-HUKI-XXXX-XXXX-R-Z-4030005* *KSAR - Ventilation Workshop*		

Workbook Ref No.	Areas to probe	Evidence expected
6.5	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. Written confirmation from the design consultant.
NHS Scotland Assure Observations: This question is not applicable and will form part of the FBC review. **Documents referenced are:** *Not Applicable*		

Workbook Ref No.	Areas to probe	Evidence expected
6.6	How does the Health Board assure itself that any smoke control and/or clearance systems are fit for purpose?	Evidence that the smoke system is being designed by an accredited Fire Engineer. Evidence that Building Control are being consulted. Confirmation from the Building Services Design Consultant that the operating sequence for the smoke system has been discussed regarding being integrated into the control of other building systems.
NHS Scotland Assure Observations: NHS H has provided assurance that the fire strategy identifies the requirements of smoke control, supported by fire strategy drawings. **Documents referenced are:** *H231H_22003-HUKI-SMVE-XX01-D-M-6540001* *Strategy H231H_22003-OFRK-XXXX-XXXX-R-FI-8050002*		

Workbook Ref No.	Areas to probe	Evidence expected
6.7	Evidence that the Health Board is ensuring fire safety input into the design process together with early design decision-making.	Input from Fire lead(s) and HFS / SFRS on fire safety into site / option selection. Documents e.g. option appraisal report, fire strategy report, meeting minutes.

		Demonstrable and appropriate engagement and expertise of relevant Fire lead(s). Signed off documents, e.g. reports, role profiles, minutes. Evidence that the Health Boards Fire Advisor have been involved with and reviewed the design proposals to date.
NHS Scotland Assure Observations: NHS H has provided assurance by evidencing details of the design team and various meeting minutes demonstrating a clear design process and early decision-making. **Documents referenced are:** *Meet the technical team*		

Workbook Ref No.	Areas to probe	Evidence expected
6.8	Has the Health Board started the development of the fire system outline commissioning proposals?	Has the Health Board designed appropriate trained staff and appointed a fire officer for the project, is there an established firer management group that will ensure the fire management strategy is adhered to?
NHS Scotland Assure Observations: NHS H has provided assurance by evidencing details of the design team, which includes the fire safety management group. **Documents referenced are:** *meet the technical team*		

3.6.2 Fire Safety: Supplementary Observations

A written fire strategy has been submitted; however, as anticipated at this stage of the project, there are still some areas that require further development for the FBC KSAR Stage.

The recommendations and guidance set out below will support the health board in assuring itself that the FBC KSAR Stage is robust and that all relevant fire safety factors have been appropriately identified and considered.

3.6.2.1	**Fire and Smoke Dampers** NHS H should ensure that fire and smoke dampers fitted in ventilation ducts and flues are actuated by remotely resettable automatic smoke detection

	linked to the fire detection and alarm system. As noted in DFR observation OBC.F.3.6.2.1.
3.6.2.2	**Fire Strategy** Section 4.3 of the existing Fire Strategy identifies a proposed courtyard accessed directly from a mental health ward, which will be enclosed and have a locked external gate. The Fire Strategy accompanying the Full Business Case (FBC) should clearly define, justify, and document the means of escape arrangements for this courtyard and for all other areas accommodating mental health patients who require care within a secure unit. These arrangements should be developed in accordance with the principles and standards set out in Scottish Health Technical Memorandum (SHTM) 81, demonstrating that life safety is maintained while appropriately balancing security requirements and patient risk considerations. NHS H should ensure that the FBC submission includes a clearly defined and detailed means of escape strategy for all relevant areas. This should identify any proposed locked doors or controlled egress arrangements, provide the rationale for their use, and confirm how staff will manage these measures in the event of a fire. As noted in DFR observation OBC.F.3.6.2.2.
3.6.2.3	**Emergency Lighting** Section 4.3 of the Fire Strategy states the intention to provide emergency lighting in accordance with BS 5266. It should also be confirmed that the additional requirements and standards set out in SHTM 81 will be applied to ensure that escape lighting arrangements are appropriate for healthcare. As noted in DRF observation 3.6.2.3.
3.6.2.4	**Fire Detection and Alarm System** Section 8 of the strategy states that the fire detection and alarm system will be installed in accordance with BS 5839. It should also be confirmed that the requirements and recommendations of SHTM 82 will be followed. These healthcare-specific requirements are particularly important in relation to alarm zoning, sound pressure levels, and the use of multi-sensor detector heads, to ensure that the system appropriately supports patient safety, staff response, and the intended evacuation strategy within healthcare premises. As noted in DRF observation OBC.F.3.6.2.4.
3.6.2.5	**Progressive Horizontal Evacuation** The fire strategy drawing 'H231H_22003-KEPP-XXXX-XX01-DR-A-8050002' indicates that the theatre suite does not currently meet the requirements of SHTM 81 in respect of progressive horizontal evacuation, which requires that patients can be moved to an adjacent area where their care can be safely continued in the event of a fire. At present, there is no suitable protected adjoining space that allows this principle to be achieved.

	The provision of a cross corridor fire resisting door located at an appropriate section of the 'TH907 circulation corridor' would address this deficiency. This measure would enable patients to be transferred from one theatre to another, protecting them from the effects of heat and smoke while allowing clinical care to continue in a controlled and safe environment, consistent with the intent and standards of SHTM 81. As noted in DRF Observation OBC.F.3.6.2.5

3.7 Infection Prevention and Control Built Environment

3.7.1 Infection Prevention & Control Built Environment: KSAR Observations

Workbook Ref No.	Areas to probe	Evidence expected
7.1	How does the Health Board demonstrate that there is an effective infection prevention and control management structure in place? How does the 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; inputting into the design process?	The Health Board provides evidence that there is an IPC Management Structure with the necessary expertise and leadership skills to support the design work. The Health Board provides evidence that there is an IPC Management Team with the necessary expertise and leadership skills to support the project. Executive board reports or minutes. Risk registers or equivalent, Minutes from operational and governance groups, (and action points). Structure of infection prevention and control team (IPCT) and qualifications held, previous experience supporting new build projects. Evidence IPC and clinical teams have been involved with any derogation through the design process and are satisfied this will not impact on patient safety. This can be meeting minutes, risk assessments, and risk registers. There is IPC evidence of escalation through the agreed NHS board governance process. 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. Evidence that fixtures fitting and equipment

		have not been proposed for the project that would represent an IPC risk.

NHS Scotland Assure Observations:
Based upon the evidence submitted by the health board, there remain areas where NHS H should provide further assurance.

Assurance has been provided that the IPCT have an effective management structure in place. Further evidence of qualifications and experience in projects should, however, be provided for the Consultant Microbiologists. As noted in DRF observation OBC.IPC7.1.1.

Assurance has been provided of the IPC derogations, however final sign off by the health boards Control of Infection Committee (COIC) / WSG is awaited and should be provided when complete. As noted in DRF observation OBC.IPC7.1.2.

We recommend that NHS H consider adopting one record of derogations for the project in accordance with SHTN 00-06 to ensure that there is an accurate record of variations and derogations and their status for the project. As noted in DRF observation OBC.GOV.3.1.2.2.

Further assurance should be provided that the HAI Executive Lead is kept abreast of project developments. As noted in DRF observation OBC.IPC7.1.3.

Inclusion of job titles / roles within meeting notes should be provided to make the persons role clear or alternatively provide a set of ToR's outlining project team members roles and responsibilities, including those of design leads. As noted in DRF observation OBC.GOV.1.13.2.

Documents referenced are:
H231H_2203-Lochaber hospital
H231H_22003-GBB-XX-XXXX-FN-PP-102001.pdf
H231H_22003-GBB-XX-XXXX-FN-PP-108002.pdf
H231H_22003-GBB-XX-XXXX-FN-PP-108005.pdf
H231H_22003-GBB-XX-XXXX-FN-PP--551502.pdf
H231H_22003-GBB-XX-XXXX-FN-PP-654001.pdf
20251208_LochaberIDTMeeting_FullPapers.pdf - 8.12.25
20251216_LochaberPBMeeting_FullCombinedPapers.pdf
H231H_22003-GBB-XX-XXXX-SH-PP-000001 - Derogation schedule
NHSH IPC Team - PowerPoint presentation

Workbook Ref No.	Areas to probe	Evidence expected
7.2	How does the Health Board demonstrate implementation of evidence	The Health Board evidences that:

	based infection prevention and control measures during the design process?	The Health 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 design process. • IPC work programme and planned IPC audit programme for new building taking cognisance of any actual or perceived risks identified.

NHS Scotland Assure Observations:
Based upon the evidence submitted by the health board, there remain areas where NHS H should provide further assurance.

Further assurance is required that the IPC resource capacity is sufficient to support delivery of the programme moving forward. NHSSA observations note that the Lochaber project does not currently feature on the draft 2026/2027 IPC workplan, and the allocated IPC resource 0.1 wte for ICD and 0.25 wte for IPCN and has no evidence of backfill arrangements within the submitted materials. In addition, the Lochaber Health and Care Redesign risk register shows the NHS H resource as Red/Amber for supporting teams, which include IPC. As noted in DRF observations OBC.IPC7.2.1 and OBC.IPC7.2.2.

Documents referenced are:
H231H_2203-Lochaber Redesign_KSAR IPC_v1.pptx (Provided as additional info for IPC 7.01)
Internal resources list – copy.xlsx
COIC papers 5.7 IPC Annual Workplan 2026 2027 DRAFT.doc.docx (provided as additional info for IPC 7.01)
20250811_LochaberIDTMeeting_FullPapers.pdf (provided as additional info for Gov 1.01)

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

		built environment for all staff involved in the project.

NHS Scotland Assure Observations:
Based upon the evidence submitted by the health board, there remain areas where NHS H should provide further assurance.

An awareness session for HAI SCRIBE was provided, and it was evident from the recording that NHS H staff attended, although it is unclear from the evidence provided if the PSCP and project designers attended this session or a similar session.

Further assurance, however, is required to confirm that all NHS H staff and PSCP and designers have received appropriate IPC information, understand specific IPC processes, and are clear on their individual responsibilities to ensure infection prevention and control risks are effectively managed. As noted in DRF observation OBC.IPC7.3.1.

Documents referenced are:
2025-09-01 NHSH TDF Presentation (inc script) (1).pdf

Workbook Ref No.	Areas to probe	Evidence expected
7.4	How does the Health Board assure itself that equipment being proposed 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 NIPCM and manufacturers' instructions.

NHS Scotland Assure Observations:
NHS H demonstrated during the IPC workshop of 19/03/2026 that the IPCT have been actively involved throughout the process and are frequently involved in discussions and decision-making regarding procurement. This was further evidenced by design workshop minutes, although the IPCT were not present at all of these meetings.

Assurance should be provided that where IPC are not present, IPC is considered and followed up with the IPC team. As noted in DRF observation OBC.IPC7.4.1.

Documents referenced are:
H231H_2203-Lochaber Redesign_KSAR IPC_v1.pptx (Provided as additional info for IPC 7.01)
H231H_22003-GBB-XX-XXXX-FN-PP-102001
H231H_22003-GBB-XX-XXXX-FN-PP-108001
H231H_22003-GBB-XX-XXXX-FN-PP-108002
H231H_22003-GBB-XX-XXXX-FN-PP-108003
H231H_22003-GBB-XX-XXXX-FN-PP-108004
H231H_22003-GBB-XX-XXXX-FN-PP-108005

H231H_22003-GBB-XX-XXXX-FN-PP-108006 *H231H_22003-GBB-XX-XXXX-FN-PP-108007* *H231H_22003-GBB-XX-XXXX-FN-PP-108008* *H231H_22003-GBB-XX-XXXX-FN-PP-551501* *H231H_22003-GBB-XX-XXXX-FN-PP-551502* *H231H_22003-GBB-XX-XXXX-FN-PP-551503* *H231H_22003-GBB-XX-XXXX-FN-PP-654001*

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.

3.7.2.1	**HCID / Isolation Requirements** During the IPC KSAR workshop on 19/03/2026, it was noted by NHS H that if any HCID type patients presented to the facility, they would be sent to Raigmore Hospital for treatment. Based on the information provided by NHS H as part of the KSAR response, it is not evident that this has been documented as part of the clinical brief/strategy for the facility. NHSSA recommend that NHS H review the briefing information to ensure the strategy is appropriately documented and consider whether any further supporting provisions are required for HCID patients. As noted in DRF observation OBC.IPC.3.7.2.1.
3.7.2.2	**Suspended Ceilings** Suspended ceilings were discussed at one of the workshop meetings. Whist they would not be incorporated into high-risk areas, there was discussion regarding significantly immunocompromised patients within the Lochaber site. Consensus should be reached regarding the inclusion of suspended ceilings and should include assessment and discussion with the project team and the IPCT. As noted in DRF observation OBC.IPC.3.7.2.2.

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

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