

Infection Prevention and Control Engagement in the Built Environment Policy

V4.0

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Summary

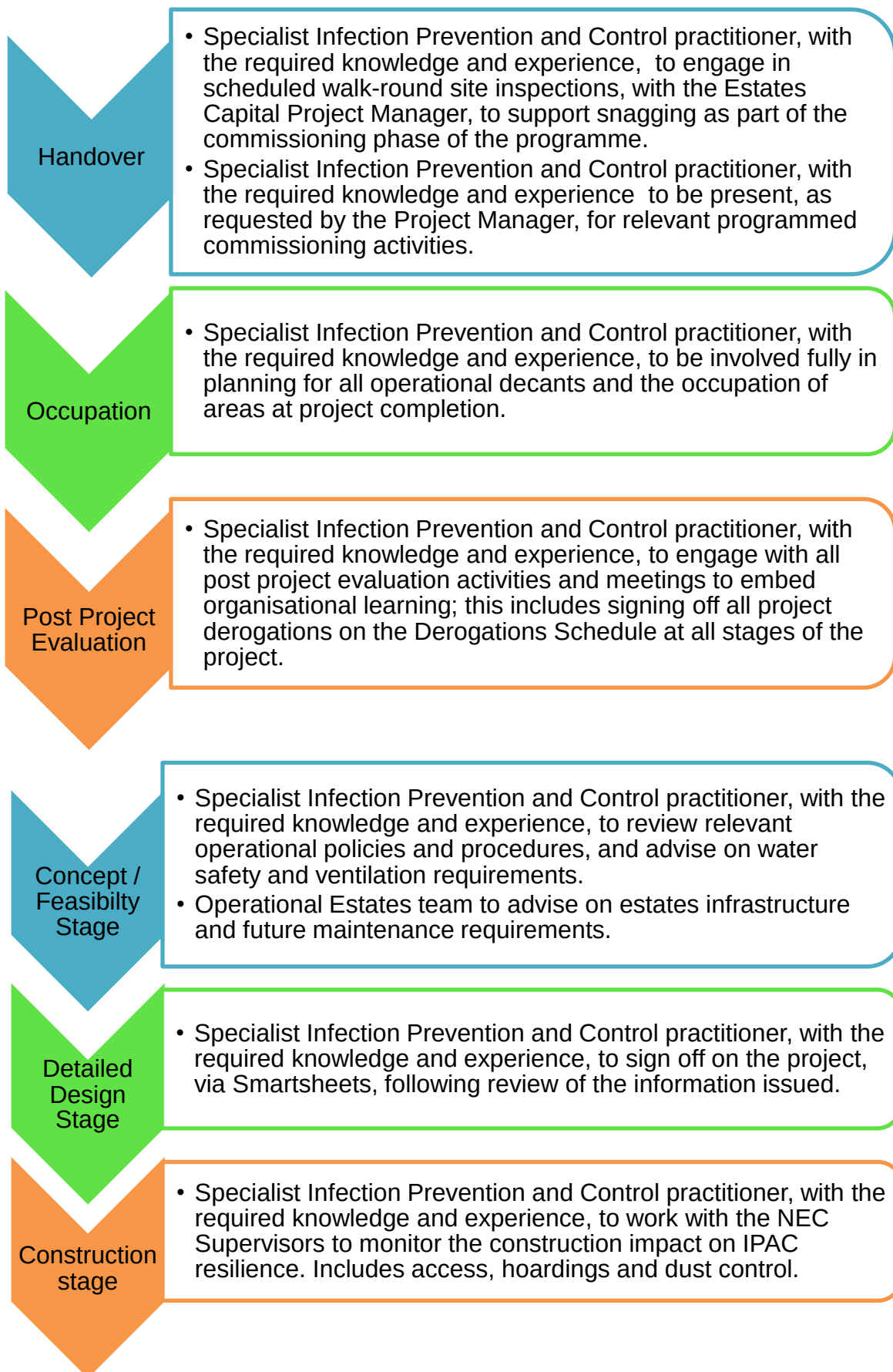


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Data Protection Act 2018 and UK General Data Protection Regulations 2016/679 is applicable to all staff; this includes those working as contractors and providers of services.

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1. Introduction

- 1.1. Effective Infection Prevention and Control (IPC) is essential to ensure that people who use health and adult social care services receive safe and effective care and has been written into legislation to ensure that quality assurance and compliance is achieved. This policy aims to guide the approach needed to ensure IPC is effectively and consistently designed in throughout the planning and design stages of a new build or refurbishment project and that input continues up to the final build stage and onto post occupation and lifecycle.
- 1.2. The Health and Social Care Act (2008) Code of practice for health and adult social care on the prevention and control of infections and related guidance (Department of Health and Social Care) which is more commonly known as “The Hygiene code” aims to provide an assurance framework that ensures appropriate systems are in place for patients/clients and staff, to deliver care in an environment where the risk of Healthcare Associated Infections (HCAIs) are kept to a minimum.
- 1.3. There are ten overarching criteria in the Code of practice associated with Infection Prevention and control practice. Each of the criterion states compliance with different aspects of Infection Prevention and control practice. In particular Criterion 2 of the Code of practice states “the provision and maintenance of a clean and appropriate environment in managed premises that facilitates the prevention and control of infections”. The Health and Social Care Act provides the overall framework for the regulation of health and social care activities, which is regulated by the Care Quality Commission (CQC).
- 1.4. Healthcare associated infections can develop across a wide range of clinical conditions and can affect people of all ages. Infection prevention and control team members must be involved at all stages of new healthcare developments; particularly development briefing/ planning meetings, design development, planning, construction phase, equipping and the building services aspect of commissioning the new facility.
- 1.5. It is critically important for local infection prevention and control team to have appropriate representation on the project team for the duration of any new development programme or refurbishment works, this is to ensure that there is consistent input and to enable effective working with other disciplines. IPC advice and recommendations should be aligned to national IPC guidance and the recommendations detailed in HBN 00-09 “Infection Control in the built environment” 2013 and associated guidance.
- 1.6. The importance of a clean safe environment for all aspects of healthcare should not be underestimated. It is important that healthcare buildings are designed with appropriate consultation, and the design facilitates good infection prevention and control practice.
- 1.7. Planning and design of new healthcare facilities, or major healthcare facilities refurbishments, should take account of relevant UK NHS Health Technical Memoranda (HTM), Health Building Notes (HBN), or an equivalent international guidance document that has been approved by Health and Safety Executive (HSE) Capital and Estates. Initial planning and design of all new builds, upgrades and refurbishments should maximise the available space for service user

accommodation and support services within a design that allows for future reconfiguration of inpatient accommodation.

1.8. General Considerations of project programmes:

- 1.9. In the design and planning of new developments cognisance should be taken of future service needs and the flexibility of layouts and functions should be considered.
- 1.10. The overall shape and layout of new healthcare facility buildings, upgrades or refurbishments should optimise staff workflow, service user comfort, service user flow, goods and consumables flow/ storage, waste flow/ storage while considering effective management of cleaning and disinfection of healthcare facilities. Service users and staff comfort, health and safety requirements need to be considered while allowing for optimal delivery of healthcare, through consultation with infection prevention and control staff.
- 1.11. The NHS Chief Medical Officer's report on infections and the rise of antimicrobial resistance (Davis, 2013), stated that design, construction, and maintenance of healthcare facilities have a substantial bearing on the risk of developing a HCAI, and thus increasing the risk associated with antimicrobial resistance.
- 1.12. IPC is an integral element of the Trust's integrated governance and risk management frameworks. It is everyone's responsibility across the whole organisation. All staff must understand their role in the prevention and control of infection in their area of work. Not only is this part of a professional duty to care to patients, but is a responsibility to themselves, and other members of staff under the Health and Safety at Work Act (1974).
- 1.13. This version supersedes any previous versions of this document.

2. Purpose of this Policy/Procedure

- 2.1. The importance of a clean, safe environment for all aspects of healthcare should not be underestimated. It is important that healthcare buildings are designed with appropriate consultation, and the design facilitates good infection control practice and compliance with this policy forms a key part of the Trusts compliance with the Health and Social Care Act 2008 Code of practice.
- 2.2. The Royal Cornwall Hospitals NHS Trust (RCHT) will ensure that all parts of the premises in which it provides healthcare are suitable for purpose and kept clean and maintained in good physical repair and condition. RCHT will adopt the Department of Health document, 'Health Building Note 00-09: Infection Control in the Built Environment 2013', as its primary guidance source to ensure a consistent, robust and 'designed-in' approach to Infection, Prevention and Control (IPAC) in relation to all building and engineering projects.
- 2.3. Engagement with the Infection Prevention and control team throughout the process of the management of the built environment, is vital to ensure that the standards and advice provides a robust strategy in order to prevent the acquisition of Healthcare Associated Infections.

- 2.4. The organisation aims to ensure that IPC risks associated with proposed construction, renovation, maintenance, and repair of the environment are minimised by demonstrating that all:
- 2.5. Building, refurbishment, and maintenance work follow agreed processes and are planned, appropriately risk assessed, authorised, documented, and carried out in ways that minimise infection risks and disruption to staff, people receiving care and visitors.
- 2.6. The proposed application and intended outcome of this policy is for all RCHT hospital facilities and developments to be built / refurbished to provide an environment to a standard which is fit for purpose, and which reduces the potential of cross infection from the built environment.
- 2.7. It is required that the RCHT IPC team and the Major Capital Projects and Operational Estates Departments, work collaboratively to reduce HCAs through planning out IPC risks in all building and refurbishment projects. This requirement includes the commissioning of services, as well as the day-to-day mitigation of risks.
- 2.8. Collaborative working and consultation is required between all parties at all project stages – from Project Initiation(pre-concept); through to Strategic Outline Case (SOC) or concept stage; to Outline Business Case (OBC) or justification stage; to Full Business Case (FBC) or delivery stage and construction; and continues on to the equipping and commissioning stages; and finally, the post contract completion and evaluation stages. Research has confirmed consistently that the healthcare environment is a known reservoir for microorganisms, some of which will be pathogenic and increase the risk of acquisition of infection.
- 2.9. To ensure that no person is harmed by a preventable infection, by ensuring that a healthcare facility is designed and maintained in a way to support infection prevention.
- 2.10. In order for this to be achieved, these requirements need to be considered at the outset of the planning and design stages and the IPC team must be involved from the start working alongside all disciplines involved. It is vital that good working relationships are built up between IPC and all parties.

3. Scope

- 3.1. This Policy applies to all members of staff associated with ensuring a safe environment in RCHT, IPC team members, Estates staff, Planning and design teams, Clinical service managers, quality and risk managers, external contractors and consultants involved in the strategic development of proposals, planning, design and delivery of all new building programmes, and all healthcare setting refurbishment projects (including but not limited to the installation of specialist equipment or IT installations), located on any of the hospital sites under the management of the RCHT.
- 3.2. These sites include the Royal Cornwall Hospital, Truro; St. Michael's Hospital, Hayle and West Cornwall Hospital, Penzance.

3.3. This Policy provides guidance for 'designing-in' IPAC measures at the start of projects and also for the ongoing consideration of IPAC measures and requirements throughout the life of the project. It also provides guidance on the appropriate risk assessments required in advance of, and during, the delivery of all estates construction and refurbishment works.

This is achieved by:

- Implementation of the Department of Health/NHS Estates recommendations where this underpins infection control practice in relation to the planning, design and maintenance of healthcare buildings for both refurbishments and new build programmes.
- Provision of expert level advice on infection control best practice in new and existing healthcare facilities.
- Providing information and advice regarding the role and responsibilities of the team during new projects and all refurbishment and upgrade works including maintenance and repair.

Infection Prevention and control risk assessments are required at each stage of the design process. Completion of a risk assessment is the most crucial step in identifying potential hazards and the containment measures necessary to maintain a safe environment.

A risk assessment includes consideration of:

- **Persons at risk** – the patients most at risk in a hospital are patients with severely compromised immune systems such as those in haematology or transplant units.
- **External factors** – such as location of air intakes, ventilation system design features, infiltration points, penetration of existing walls and weather conditions
- **Internal factors** – utility outages, specific training requirements, high risk activities, hazard control measures and location of the construction or renovation. > access points – construction site entry and exit points away from ward areas.

A comprehensive risk assessment during the planning phase will determine the level of precautions required and is dependent on the:

- Type of construction or activity.
- Proximity to high-risk patient groups.
- The principal stages of development of any healthcare facility comprise:
 - Consideration of the proposed site and any relevant implications
 - Design and planning processes:
 - Construction and refurbishment work.

- Ongoing maintenance and repair

4. Definitions / Glossary

- FBC Full Business Case.
- HBN Health Building Note.
- HCAI Healthcare Associated Infections.
- HTM Health Technical Memorandum.
- IPAC Infection Prevention and Control.
- IPACC Infection Prevention and Control Committee.
- MCPC Major Capital Projects Committee.
- NEC New Engineering Contract (NEC) Supervisor.
- OBC Outline Business Case.
- PID Project Initiation Document.
- PM Project Manager.
- RCHT Royal Cornwall Hospitals NHS Trust.
- RAMS Risk Assessments and Method Statements.
- SOC Strategic Outline Case.

5. Ownership and Responsibilities

This Policy is owned by the Estates Department and will be kept updated as per the direction of the Director of Estates. The following paragraphs provide an overview of the strategic and operational roles which are responsible for the development, management, and implementation of this Policy:

5.1. Role of Line Managers and Project Managers

Line managers and Project Managers must ensure that all staff involved in any operational estates; major capital projects; new building programmes or refurbishment projects have access to a copy of this Infection Prevention and Control Engagement in the Built Environment Policy and are aware of how they are required to contribute to RCHT's overall targets for reducing HCAs.

Line Managers and Project Managers are responsible for ensuring that this Policy is made available to all project stakeholders:

- Essential that there is a timely collaborative partnership to achieve infection prevention and control goals specific to each construction /development/ refurbishment / renovation.

- Should enlist the guidance and support of the IPC team for all stages of each new build or renovation project.
- Sending intent to commenced design and construction memoranda and copies of all relevant building plans and schematics.
- Ensure sign off of mutually agreed plans throughout each stage of the programme.

5.2. Roles of the Operational Estates and Major Capital Projects Departments

The Operational Estates and Major Capital Projects Departments are responsible for:

- Ensuring the Project Manager (PM) enlists the support of senior or suitably experienced IPC team member for each stage of new build, refurbishment, or maintenance project, especially where any activities may have an impact on maintaining IPC standards.
- Informing, advising, and updating RCHT stakeholders on all building, refurbishment, and maintenance programmes. Governance should occur via regular reporting mechanisms including all water safety and ventilation safety committees to provide timely evidence for effective governance.
- Ensuring appropriate Senior IPC advice is gained and is implemented throughout all stages of any new project lifecycles from concept to post project evaluation stages including maintenance and repair.
- Ensuring IPC risk assessments and any agreed derogations from current standards are rationalised and are included in all business cases for development and new building, refurbishment, and maintenance estates capital projects.
- Ensuring all relevant project documentation issued is agreed by a Specialist Infection Prevention and Control practitioner, with the required knowledge and experience. This practitioner will be part of the Project team and will review all relevant documents such as Room Data Sheets, Risk and Method Statements (RAMS) and ensure that any IPC advice given is documented as part of the project assurance process.

5.3. Role of the Infection Prevention and Control (IPC) Team

The IPC are team responsible for:

- Ensuring compliance with all aspects of the Health and Social Care Act (2008) Code of practice on the prevention and control of infections in relation to the built environment in order to minimise the risk of acquisition.
- Ensure key services supporting the IPC agenda e.g., cleaning and waste management are meeting the needs, requirements, and specification of the service, assessing and identifying any risks or gaps in provision.

- Providing guidance and support to the relevant Operational Estates officers, and Major Capital Projects Project Managers, of all IPC risk assessment and requirements at the business case and initial planning stages.
- Monitoring and advising all estates capital project teams of IPC risks and requirements throughout project lifecycles, from concept to post project evaluation stage.
- Provide specific IPC associated input and advice in relation to any infection risks associated with the building services e.g., air handling, plumbing, water systems, and identify any effective prevention and control strategies for implementation, any construction works for risk of exposure e.g., to *Aspergillus* spores.
- IPC are required to ensure a timely response to reasonable requests for projects sign off to avoid programme delays and subsequent cost impacts on projects.
- Ensuring appropriate resource allocation and ensure appropriately senior IPC or designated suitably experienced member IPC team.
- IPC should aim to attend or provide appropriately qualified substitution to all required project working groups/project boards, where possible, in order to ensure agreement is reached in an appropriate timeframe to enable the project management reach timelines and review costs.
- Ensuring that all Senior IPC members or suitably qualified IPC team member, actively participates in monitoring control and mitigation measures required during construction are reviewed by IPC and the NEC Supervisor, prior to construction work commencing to ensure they are compliant and suitable standard.

5.4. Role of Individual Staff

All staff members are responsible for an overall awareness of Senior IPC issues and risks and have a duty to take account of IPC advice delivered by designated Senior IPC advisors.

5.5. IPC Steering Group (monthly)

The RCHT IPC Steering Group will be responsible for:

- Timely and appropriate review and providing IPC agreement any derogations in design and specification of the built environment for estates capital building programmes, refurbishment, or maintenance projects.
- Identify risks identified through water safety group and ventilation safety group.
- Understanding and assessing the IPC risks relating to individual estates capital building projects, refurbishment programs, and maintenance projects and their over-arching corporate aims.

- Approving construction phase risk assessments and agreeing mitigation strategies to manage dust and prevent risk of spread of Aspergillus.
- Ensuring the compliance of all designs, refurbishments, and maintenance programmes with current regulatory guidance such as HTMs and HBNs in order to be compliant with Infection Prevention and control design principles.
- Reporting to the RCHT Infection Prevention and Control Committee (IPACC) for oversight and governance of all proposed and planned works from the earliest opportunities, including appropriate attendance at relevant safety groups such as water safety group, ventilation safety groups.

5.6. Project Managers are responsible for:

- Ensure that all infection prevention and control issues, that relate to each building and engineering projects, are discussed with a member of infection prevention and control team at the earliest possible stage.
- Consulting the IPCT team if there are any changes to the plans that may have an impact on Infection prevention and control.

5.7. Estates officers are responsible for:

- Ensuring all contractors employed directly by the Trust are competent and confident to carry out the required proposed works.
- Manage all the relevant technical aspects of the programme and ensure compliance within their remit.
- Collaborate and inform the IPC team of all proposed works and the likely impact on service.
- Collaborate with and inform the IPC team, of any new building works to be planned to be undertaken, any new refurbishment or upgrade works to be carried out within the Trust and any alterations of the use of rooms/premises, including development and minor adaptations.

5.8. Major Capital Projects Committee (MCPC)

The Major Capital Projects Committee will be responsible for:

- Approving business cases for estates capital development work for onwards presentation to the Capital Approvals Group (CAG) and ultimately Trust Board (TB), depending on the value of the case.
- Approving new programmes of capital building, high value equipment replacement and refurbishment projects.

6. Standards and Practice

Consideration in the design and planning of the facility layout, and finishes to all surfaces; floors, walls and fittings, ventilation, shelving, bed layout etc should be

reviewed and addressed by the suitably experienced IPC team members so that, where possible, IPC risks can be eliminated or at least reduced significantly.

Senior or suitably experienced IPC team members should advise on all aspects of the built environment, including design and planning of facilities, including but not limited to fixtures, fittings and finishes including the proposed layouts of specific clinical spaces.

There are distinct stages of the project which require differing level of IPC input and advice required.

6.1. Strategic Outline case (SOC):

Strategic Outline Case works to establish and create a robust case for change that supports approval to proceed to later business case stages and associated costs to justify the need to either build new, refurbishment, or upgrade works.

Infection Prevention and control input required at this stage, including but not limited to:

IPC teams at this stage should attempt to provide input and advise on the high-level risks aligned with the built environment and the proposed service delivery e.g., Cancer, Cardiac care, Critical care, and others.

Critically at this stage IP and C can provide some insight into the most high-risk areas and the critical provision required from an infection control perspective, it is also helpful for the IPC team to understand the programme objectives and the needs of the organisations.

6.2. Outline Business case (OBC):

Outline Business case stage develops the associated with the options appraisal and determining an affordable, viable and value for money preferred ways forward.

Infection Prevention and control input required at this stage, including but not limited to:

The proposed way forward is agreed at this stage, and the IP and C team should support and advise on the elements of the Infection control in the built environment should be identified at this stage.

For example, aspects such as risk assessment for the clinical services that are influenced by the environment such as isolation requirements and ventilation specification and other aspects such as costing for mitigation of those risks.

6.3. Full Business case

This stage is to confirm affordable and value for money scheme is ready to proceed and approval are sought. This stage aims to provide the information for justification for approval of the business case to progress into the next stage which is initial agreement. The contractor may also be appointed at this stage.

Infection Prevention and control input required at this stage, including but not limited to:

The stage aims to confirm the affordability of the project and identify the value for money aspects of the overarching business case. It is critical for IPC to review and comment on the overall business case to ensure that any obvious and high-level risks have been identified and reviewed for impact on the continuation of the project. RIBA Plan of work: 2022 Stages 0-7:

Stage 0: Strategic Definition.

Stage 1: Preparation and Briefing.

Stage 2: Concept Design.

Stage 3: Spatial Coordination.

Stage 4: Technical Design.

Stage 5: Manufacturing and Construction.

Stage 6: Handover.

Stage 7: Use.

6.4. Strategic Definition: Stage 0

Issues considered at this stage are how the case best meets the needs the strategic need of the organisation. During the strategic definition stage, the client's business case and strategic brief are assessed to ensure that they have been properly considered and the scope of the project is defined. This is not about design or the practical details.

At this stage little details of the project are known at this stage. This stage will outline the critical path for the delivery of the programmes and project timescales, benefits, and risks.

Infection Prevention and control input required at this stage including but not limited to:

Critical areas such as project outcomes and client requirements. IPC teams should aim to review the high-level brief in the context of the current development control plan and attempt to identify any potential issues with regard to IPC practice and standards that may arise as a result of the proposals.

6.5. Preparation and Briefing: Stage 1

The preparation and briefing stage aim to develop project objectives, including quality outcomes, sustainability aspirations, other parameters, and initial project brief. The information that the design team will need to commence the design process is developed at this stage. Feasibility studies might also be required in order to tease out the full range of briefing considerations and to demonstrate that the spatial requirements can be accommodated on the proposed site.

Infection Prevention and control input required at this stage including but not limited to:

In certain instances, there will be specifics required at briefing stage that impacts on IPC practice from an IPC perspective, such as where the building proposed is to be a high-risk clinical building. Cancer care is one such area which has very specific risks associated with the design, even at high level, such as water or air specification systems, other issues such as the number of isolation facilities for the building as this influences the resources required overall.

6.6. Concept/Feasibility: Stage 2

Drawings at the scale of 1:200 are created at this stage. Issues such as clean and dirty flow patterns and confirming room relationships and adjacencies are explored at this stage. Considerations of issues such as appropriate placement of hand hygiene facilities are also discussed and agreed. Whether existing facilities are being modified, or extended, a Specialist Infection Prevention and Control practitioner, with the required knowledge and experience, should review all relevant risks and any critical operational policies and procedures. The impact on existing estates infrastructure, and future maintenance requirements, in order to minimise potential IPC risk to patient, should be reviewed. These periodic reviews need to occur before, during and after the construction phase of the project and after completion.

Infection Prevention and control input required at this stage including but not limited to:

During the concept stage, IPC should consider operational procedures that are impacted by the initial design plans, for example the potential impact on resource allocation on the number of planned beds. The impact of the layout of wards, clinical adjacencies, and the size of wards on such issues as storage, waste, equipment, and logistics should be reviewed. Clinical areas requirements for isolation and the impact of the plant requirements for plant equipment needs to be presented and agreed at the earliest opportunity. Building services costings needs to be discussed as soon as possible in the design stages, as the impact of incorrect specification and drawings can be costly and impact on the overall programme, that is why these discussions are critical.

6.7. Detailed Design Stage / Spatial co-ordination

At the end of each part of the design stage, the estates and capital project team, collectively with IPC team will be required to formally sign-off and agree the design and information issued and reviewed, to ensure compliance with current guidance and legislation. This process is part of the Operational Estates and Major Capital Projects assurance process and the sign off must be requested and recorded via Smartsheet's.

At each stage this sign off confirms that the design brief requirements, including any changes or derogations, which may be required due to cost or space constraints, are agreed during project team discussion with the IPC team, have been incorporated and / or reasonably risk assessed and therefore are able to be signed off.

Details such as the location and type of fixtures and fittings (for example, type and size of wash-hand basins), and a final review of room layouts, equipment, fittings, and room data sheets, should be conducted at the end of this stage.

This is where the final sign-off on the design occurs, this may be as a result of many engagement meetings to formulate a tender document so as to be confident in instructing the construction contractors to begin works.

Infection Prevention and control input required including but not limited to:

This is a more intense stage of the design process from an IPC perspective. Aspects of schedules of accommodation are created, initial design layouts will be drawn, clean to dirty flows agreed and confirmed. In addition to this, the early-stage mechanical service specifications will have been drawn up and can be initially reviewed by the IPC team, this would mainly be concerning such systems as ventilation and water systems with specific focus on the clinical risk profile of the services.

6.8. Project Monitoring/Construction phase

Prior to the construction works commencing there will be a requirement to carry out a review during construction or renovation projects. There are particular airborne and waterborne risks to persons with poor functioning immune systems. During construction works there will be regular review required by the Specialist Infection Prevention and Control practitioner, with the required knowledge and experience, for the project. This may include reviewing access routes to sites, hoardings erection and dust control mechanisms, materials storage etc.

All aspects of IPC risk assessment and monitoring during construction, on any construction site within the RCHT estate, must be discussed with the relevant New Engineering Contract (NEC) Supervisor (also known as the Clerks of Works). Relevant Risk and Method Statements (RAMS) will need to be reviewed in a timely manner, as agreed between the Specialist Infection Prevention and Control practitioner, with the required knowledge and experience, and the relevant NEC Supervisor.

This is particularly important where there are disturbance/alterations to the fabric of the building including, but not limited to, water systems and / or ventilation systems planned. This will be particularly important to ensure where there are immunocompromised patients likely to be exposed.

Infection Prevention and control input required but not limited to:

Construction and renovation activity related infections due to fungi and bacteria, and subsequent deaths, are well documented. These generally occurred in high-risk units/areas that contain patients with poor immune systems such as Haematology/Oncology. Certain measures during renovation and construction are required to ensure that risks of exposure to microorganisms are minimised and can include.

Conducting random construction site inspections to ensure effective precautions are in place to prevent dust infiltration into patient care areas. Precautions may include sealing air conditioning vents, windows, and doors, using portable HEPA filters, or generating negative air pressure within the construction area.

Where the risks are identified and agreed, IPC risk mitigation and control measures required during construction must be reviewed by the Specialist Infection Prevention and Control practitioner, with the required knowledge and experience, and the NEC Supervisor prior to construction work commencing to ensure they are of an acceptable standard.

Upon completion of works but before occupation, the area must be inspected to ensure it is fit for purpose. This should include demonstrating the area has been thoroughly cleaned and disinfected (walls, floors, ceilings, and air vents) and there are no areas which have holes or gaps between them.

Where patients are present in the care environment and are at increased risk of infection from the works, it is important that appropriate risk assessments are carried out in advance of any building works starting and an action plan and escalation strategy developed.

Further details on the risk management of Aspergillus can be found in the **Policy for the Prevention of Nosocomial Invasive Aspergillosis** in the Trust Document Library.

6.9. Commissioning and Handover

Technical commissioning of the building, services and equipment should include any special areas that require enhanced inspection and microbiological testing to demonstrate compliance with IPC parameters outlined in HTM/HBNs standards (for example special ventilated isolation rooms/suites etc). Commissioning parameters including the projected timelines and any risk mitigation that may be required to manage those risks should be identified at the outset of the project.

Infection Prevention and control input into but not limited to:

The IPC team should attend as many as possible scheduled walk-round site inspections, with the Estates Major Capital Project Manager, to provide input and support snagging as part of the commissioning phase of the programme.

This will include being present as requested by the Project Manager, for relevant programmed commissioning activities. This is a critical time IPC involvement to ensure that the live systems do not pose a risk to the proposed patient population and provide advice on any mitigations.

Air sampling may be required after construction or renovation activities before using a critical space. Water systems once filled and commissioned will also be tested to ensure that there is microbiological sampling required prior to occupation. IPC team member should provide appropriate review and input on sampling results and any required mitigations to manage any risks.

6.10. Decant and Enabling works

During the process of construction works, many clinical teams are moved from their usual clinical area, to allow for decommissioning and demolition of areas to make way for new builds or upgrade works.

The IPC team need to be involved in any planning for the transfer of services from one facility to another, either as a temporary decant, or as a phased occupation of facilities post project completion.

Decant works will often require an IPC risk assessment of the service prior to being moved in terms of both the layout of the space, and the state, function of the building services which were designed for a different clinical service and different levels of risk.

It is recommended that a Specialist Infection Prevention and Control practitioner, with the required knowledge and experience, provides advice on any decant proposals at an early stage, such as any required mitigations such as baseline water testing, cleaning schedule reviews, isolation facilities, storage for equipment and access to suitable facilities for patient hygiene needs.

Infection Prevention and control input required but not limited to

The IPC team should be included in any project Working Groups to ensure any agreed derogations, or design modifications, are implemented as intended, and that compliance with current guidance and legislation with regards IPC is understood and implemented fully at all stages of the project.

In addition to being involved in working groups, the IPC team should provide input into the risk assessment and review of space where clinical services are decanted to, and any enabling works required and advise on the remedial actions.

6.11. General Design Principles

The Trust will adopt the Department of Health document, '**Health Building Note 00-09: Infection Control in the Built Environment 2013**' to inform the standard design principles for all new, refurbishment or maintenance estates capital projects conducted on any one of the 3 RCHT hospital sites.

Disseminating specialist knowledge and involving infection prevention and control teams throughout all phases of construction and renovation projects is considered best practice. Failure to properly assess prevention and control of infection risks can lead to expensive redesign/refitting later and further expose the patient and healthcare worker to infection hazards.

Risk assessment is fundamental in the planning and design stages of a healthcare facility, yet it is often overlooked or compromised throughout the lifecycle of the project. IPC team should be aware of and provide support and advice to the appropriate disciplines.

The risk of infection increases when micro-organisms exist in sufficient numbers in the environment and have the means of transmission to a susceptible host. Implementation of effective prevention and control of infection reduce the risk of transmission by promoting an environment where the risk of interaction between the organism and the susceptible host is minimised by ensuring:

- Design and maintenance of suitable ventilation systems which minimise accumulation of liquids in the airstream.
- Adequate space for storage of equipment and consumables.
- Design which facilitates cleaning and good housekeeping.
- Easy access to adequate hand hygiene facilities.
- Adequate decontamination facilities e.g., housekeepers' room and dirty utility rooms etc.
- Adequate space for patient, staff, and equipment movement.
- Surfaces, finishings and fittings which minimise dust accumulation.
- Surfaces, finishings and fittings which can withstand recommended decontamination processes, and which are cleanable.
- Secure and prompt waste and laundry disposal.

Section 3.0 of the '**Health Building Note 00-09: Infection Control in the Built Environment 2013**' includes specific design guidance on the following:

Building elements and spaces:

- Sizing and Space.
- Patient Groups.
- Privacy and Dignity: Same Sex Accommodation.
- Isolation Facilities.
- Ceilings.
- Doors.

- Lobbies.
- Hand hygiene facilities.
- Wash hand basin design.
- Water/taps.
- Ancillary areas.
- Dirty utility rooms.
- Clean utility rooms.
- Linen stores.
- Treatment rooms.
- Disposal rooms.
- Cleaners' rooms.
- Day rooms.
- Storage.

Engineering services:

- Planned preventative maintenance.
- Heating/temperature control.
- Pipework siting and access.
- Ventilation ductwork.
- Specialised ventilation.
- Hot and cold-water systems.
- Bed head services.
- Wastewater and sanitation.
- Macerators.
- Medical Gas vacuum systems.
- Pneumatic-air tube transport systems.
- Engineering requirements for special ventilated isolation rooms/suites.

7. Dissemination and Implementation

- 7.1. A copy of the approved Infection Prevention and Control Engagement in the Built Environment Policy will be stored electronically in the Estates Department section of the RCHT document library on the RCHT Intranet site.
- 7.2. A clear communication will be sent to all Operational Estates and Major Capital Projects Line Managers and Project Managers to make them aware that this Policy has been issued. The communication will state that all line managers have a responsibility to send on this new Policy information to all members of their department, including staff who do not have regular access to email, and any staff who may become engaged on a new building, maintenance, or refurbishment estates capital project.
- 7.3. This Policy will also be shared with any external third parties who may become involved in the delivery of new building, maintenance, or refurbishment estates capital projects at RCHT (For example: contractors, designers, authoring engineers, architects, surveyors, consultancy, and advisory partner etc.).
- 7.4. This Policy will be cross-referenced with the RCHT Management of Contractors Policy 2021 to ensure all obligations for contractors working with RCHT are fully understood.

8. Monitoring compliance and effectiveness

Information Category	Detail of process and methodology for monitoring compliance
Element to be monitored	This Policy will be reviewed annually and any IPAC concerns escalated in accordance with the Policy either the RCHT Infection Prevention and Control Committee (IPACC) or the Major Capital Projects Committee (MCPC) as appropriate. Post Project Evaluation meetings will include feedback on the efficacy of any IPAC measures implemented as part of the project.
Lead	The Operational Estates Governance Manager will take responsibility for the regular review and updating of this Policy, reporting to the Director of Estates. The Operational Estates Governance Manager will take responsibility for collating any required audit information on the implementation of this Policy for presentation at either the RCHT Infection Prevention and Control Committee (IPACC) or the Major Capital Projects Committee (MCPC), as appropriate.
Tool	Compliance Workbook
Frequency	This Policy will be reviewed annually by the Operational Estates Governance Manager.

Information Category	Detail of process and methodology for monitoring compliance
Reporting arrangements	Either the RCHT Infection Prevention and Control Committee (IPACC) or the Major Capital Projects Committee (MCPC), as appropriate.
Acting on recommendations and Lead(s)	The Operational Estates Governance Manager will lead on any recommendations from Either the RCHT Infection Prevention and Control Committee (IPACC) or the Major Capital Projects Committee (MCPC) and will submit these recommendations to the appropriate stakeholders for further action.
Change in practice and lessons to be shared	Any required changes to practice as a result of this implementation of this Policy will be shared with all relevant stakeholders by the Operational Estates Governance Manager, under the direction of the Director of Estates

9. Updating and Review

This policy will be reviewed every three years, in accordance with the set review date, or earlier to respond to necessary changes (e.g., legislative changes, national policy instruction - NHS England or the Department of Health and Social Care - Trust Board decisions etc.).

10. Equality and Diversity

10.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the [Equality Diversity And Inclusion Policy](#) or the [Equality and Diversity website](#).

10.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 1. Governance Information

Information Category	Detailed Information
Document Title:	Infection Prevention and Control Engagement in the Built Environment Policy V4.0
This document replaces (exact title of previous version):	Building and Refurbishment: Infection Prevention and Control in the Built Environment V3.0
Date Issued / Approved:	November 2023
Date Valid From:	January 2024
Date Valid To:	January 2027
Author / Owner:	Phil Bond, Performance Improvement, Compliance and Governance Manager
Contact details:	01872 253400
Brief summary of contents:	Requirements for the engagement of the IPAC team when building, maintaining, and refurbishing the RCHT estate.
Suggested Keywords:	Estates, Infection Control, HBN, built environment, Planning.
Target Audience:	RCHT: Yes CFT: No CIOS ICB: No
Executive Director responsible for Policy:	Chief Performance, Partnerships and Transformation Officer
Approval route for consultation and ratification:	RCHT Infection Prevention and Control Committee
Manager confirming approval processes:	Director of Estates
Name of Governance Lead confirming consultation and ratification:	Performance, Compliance and Governance Manager (Estates and Facilities)
Links to key external standards:	CQC Regulation 15. HTM / HBN Documents.

Information Category	Detailed Information
Related Documents:	Health Act (2006): Code of Practice for the Prevention and Control of Healthcare Acquired Infections (Rev. Jan 2008). Health Building Note 00-09 Infection Control in the Built Environment: Design and Planning (2013). RCHT Management of Contractors Policy 2021. Health and Safety at Work etc. Act (1974). Management of Health and Safety at Work Regulations (1992). Workplace (Health, safety, and Welfare) Regulations (1992). Department of Health (2008). Clean, Safe, Care. Reducing infections and saving lives.
Training Need Identified:	No
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet and Intranet
Document Library Folder/Sub Folder:	Estates and Facilities / Estates / General

Version Control Table

Date	Version Number	Summary of Changes	Changes Made by
23.10.13	V1.0	New Policy	Sarah Roby – Acting Head of Estate Development
15.12.14	V2.0	3.1 amended to incorporate all works to “fabric and building services” and “projects to include installation of equipment or IT installations”. 3.2. amended to include “IPAC measures and risk assessments guidance for the carrying out of building works”	Sarah Roby – Acting Head of Estate Development
16.08.18	V3.0	Full Review - Addition of summary page. Update to governance and Equality Impact Assessment Reference to the Aspergillosis Policy added	Phil Bond, Governance Lead

Date	Version Number	Summary of Changes	Changes Made by
13 November 2023	V4.0	Policy renamed and updated following further comments from external consultant (Alyson Prince) and RCHT Consultant Nurse (IPAC) (Jo Taylor).	Roberta Fuller, Associate Director Major Capital Projects and Programme Director, Women and Children's Hospital.

All or part of this document can be released under the Freedom of Information Act 2000.

All Policies, Strategies and Operating Procedures, including Business Plans, are to be kept for the lifetime of the organisation plus 6 years.

This document is only valid on the day of printing.

Controlled Document.

This document has been created following the Royal Cornwall Hospitals NHS Trust [The Policy on Policies \(Development and Management of Knowledge Procedural and Web Documents Policy\)](#). It should not be altered in any way without the express permission of the author or their Line Manager.

Appendix 2. Equality Impact Assessment

Section 1: Equality Impact Assessment (EIA) Form

The EIA process allows the Trust to identify where a policy or service may have a negative impact on an individual or particular group of people.

For guidance please refer to the Equality Impact Assessment Policy (available from the document library) or contact the Equality, Diversity, and Inclusion Team
rcht.inclusion@nhs.net

Information Category	Detailed Information
Name of the strategy / policy / proposal / service function to be assessed:	Infection Prevention and Control Engagement in the Built Environment Policy V4.0
Department and Service Area:	Estates and Facilities Directorate
Is this a new or existing document?	Existing
Name of individual completing EIA (Should be completed by an individual with a good understanding of the Service/Policy):	Roberta Fuller, Associate Director Major Capital Projects and Programme Director, Women and Children's Hospital.
Contact details:	07554 223585

Information Category	Detailed Information
1. Policy Aim - Who is the Policy aimed at? (The Policy is the Strategy, Policy, Proposal or Service Change to be assessed)	The aim of this policy is to ensure that all staff are aware of their direct responsibilities to mitigate infection risk when designing, constructing, refurbishing, and maintaining the hospital-built environment.
2. Policy Objectives	To ensure that RCHT fulfils one its duties under The Heath Act 2006 to provide a "clean and appropriate environment for healthcare"
3. Policy Intended Outcomes	The policy aims to ensure that all stakeholders involved in the implementation of new buildings, maintenance and refurbishment projects follow the recommendations of Health Building Note (HBN) 00-09.
4. How will you measure each outcome?	Via evidence collected on Smartsheet's of the completion of robust project assurance processes for all estates capital projects and minor works.
5. Who is intended to benefit from the policy?	All staff, patients, visitors and wider stakeholders using the RCHT built environment.

Information Category	Detailed Information
6a. Who did you consult with? (Please select Yes or No for each category)	- Workforce: Yes - Patients/ visitors: No - Local groups/ system partners: No - External organisations: No - Other: No
6b. Please list the individuals/groups who have been consulted about this policy.	Please record specific names of individuals/ groups: Operational Estates Governance Lead. RCHT IPAC Committee.
6c. What was the outcome of the consultation?	Approval.
6d. Have you used any of the following to assist your assessment?	National or local statistics, audits, activity reports, process maps, complaints, staff, or patient surveys: No.

7. The Impact

Following consultation with key groups, has a negative impact been identified for any protected characteristic? Please note that a rationale is required for each one.

Where a negative impact is identified without rationale, the key groups will need to be consulted again.

Protected Characteristic	(Yes or No)	Rationale
Age	No	
Sex (male or female)	No	
Gender reassignment (Transgender, non-binary, gender fluid etc.)	No	
Race	No	
Disability (e.g. physical or cognitive impairment, mental health, long term conditions etc.)	No	
Religion or belief	No	
Marriage and civil partnership	No	

Protected Characteristic	(Yes or No)	Rationale
Pregnancy and maternity	No	
Sexual orientation (e.g. gay, straight, bisexual, lesbian etc.)	No	

A robust rationale must be in place for all protected characteristics. If a negative impact has been identified, please complete section 2. If no negative impact has been identified and if this is not a major service change, you can end the assessment here.

I am confident that section 2 of this EIA does not need completing as there are no highlighted risks of negative impact occurring because of this policy.

Name of person confirming result of initial impact assessment: Roberta Fuller, Associate Director Major Capital Projects and Programme Director, Women and Children's Hospital.

If a negative impact has been identified above OR this is a major service change, you will need to complete section 2 of the EIA form available here:
[Section 2. Full Equality Analysis](#)