

# Policy for Infection Prevention and Control In the Built Environment

**Author:** Shila Patel, Nurse Consultant Infection Prevention and Control

**Executive**

**Lead:** Dr David Fluck, Director of Infection Prevention and Control / Medical Director

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## History

Issue	Date Issued	Brief Summary of Change	Author
1	Feb 2010	New policy	IPC Team
2	Dec 2023	Policy name changed from Infection Control Guidance for Design, Construction and Renovation / Refurbishment Projects. Policy fully rewritten to provide greater depth and details about the infection prevention and control standards required for the healthcare environment within the Trust	Shila Patel, Nurse Consultant Infection Prevention & Control / Control of Infection Committee

For more information on the status of this document, please contact:	
Policy Author	Shila Patel, Nurse Consultant Infection Prevention and Control / Infection Prevention and Control Team
Department/Directorate	Infection Prevention and Control
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## Executive summary

This policy sets the standards for infection prevention and control (IPC) for the built environment within all Trust premises. The standards detailed are based on national guidance provided in Health Building Note 00-09: Infection Control in the Built Environment (Department of Health, 2013) and are applicable to all NHS Trusts, including ASPH.

It has been consistently confirmed that the healthcare environment can act as a reservoir for organisms, with the potential for infecting patients that can result in healthcare associated infections (HCAIs). For HCAIs to be reduced, it is imperative that IPC measures are “designed-in” at the very outset of the planning and design stages of a healthcare facility and that input from IPC specialists continues up to, into and beyond the final building stage.

Designed-in IPC means that designers, architects, engineers, facilities managers, and planners must work in collaborative partnership with IPC teams, as well as healthcare staff and the users to deliver facilities in which IPC needs have been anticipated, planned for, and met.

The IPC Team within ASPH will advise the Trust on new builds and refurbishment projects using these standards, best practice and utilising their prior experience. In addition, the IPC Team will undertake regular audits, including assessing the environment of wards and patient departments, to determine the Trust’s compliance with the required environmental standards and where there are deficiencies, will advise on actions needed to achieve compliance, in order to reduce the risk of infection to patients, staff and visitors.

The environmental standards detailed in this policy includes the standards for isolation facilities, dirty and clean utility rooms, clinical hand wash basins, sanitary facilities, the general environment such as floors and walls, and fixtures and fittings. Staff with responsibility for implementing these standards, primarily the Estates and Projects Teams, need to ensure they are familiar with the required standards and read this policy in conjunction with the full guidance provided in Health Building Note 00-09: Infection control in the built environment, as well as other relevant national guidance, for implementation within the Trust.

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# 1. Introduction

- 1.1. This policy sets the standards for infection prevention and control (IPC) for the built environment within all Trust premises. The standards detailed are based on national guidance provided in Health Building Note 00-09: Infection Control in the Built Environment (Department of Health, 2013), and are applicable to all NHS Trusts, including Ashford and St Peter’s Hospitals (ASPH).
- 1.2. It has been consistently confirmed that the healthcare environment can act as a reservoir for organisms, with the potential to cause healthcare associated infections (HCAs) in vulnerable patients. To reduce the risk of HCAs, it is imperative that IPC measures are “designed-in” at the very outset of the planning and design stages of a healthcare facility and that IPC input continues up to, into and beyond the final building stage.
- 1.3. Designed-in IPC means that designers, architects, engineers, facilities managers, and planners work in collaborative partnership with IPC teams, as well as healthcare staff and the users, to deliver facilities in which IPC needs have been anticipated, planned for, and met.
- 1.4. The IPC Team within ASPH will advise the Trust on new builds and refurbishment projects using these standards, best practice and utilising their specialist knowledge and prior experience. Furthermore, the IPC Team will undertake audits, including assessing the environment of wards and patient departments, to determine the Trust’s compliance with the required environmental standards and where there are deficiencies, will advise on actions needed to achieve compliance, in order to reduce the risk of infection to patients, staff and visitors.

# 2. Scope

- 2.1. This policy applies to all Trust staff and in particular staff working in the Estates and Projects Department involved with new builds, refurbishments and ongoing maintenance within the Trust, and staff working in patient wards and departments, in particular ward/department managers and matrons with responsibility for ensuring patient care is delivered in a safe environment.

# 3. Purpose

- 3.1. The purpose of this policy is to set the standards for infection prevention and control in the built environment within all Trust premises, in order to safeguard patients, staff and visitors from the risk of healthcare associated infections and communicable diseases which may be transmitted via the environment.

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## 4. Duties and responsibilities

### 4.1 Chief Executive

- Has overall responsibility for infection prevention and control across the Trust. This includes implementation of this policy, including providing formal agreement / sign-off to any derogations from the standards set in this policy, during new builds and refurbishment projects
- Has responsibility for ensuring adequate resources are available for infection prevention and control
- Is legally responsible for identifying, assessing, and controlling the risk of infection, but may delegate operational responsibilities.

### 4.2 Director of Estates and Facilities

- Has responsibility for ensuring all staff in the Estates and Projects Team work collaboratively and proactively with the IPC Team, in order to improve the environment in Trust premises to reduce the risk of infections that may be transmitted via the healthcare environment.

### 4.3 Assistant Director of Property and Capital Development

- Has responsibility for ensuring the IPC Team are consulted at the earliest stage throughout refurbishment projects and new builds, including design, planning, construction
- Has the responsibility for ensuring the standards detailed in the policy and relevant national guidance are adhered to during refurbishment projects and new builds.

### 4.4 Assistant Director of Estates Operational Services

- Has responsibility for ensuring the standards detailed in this policy and relevant national guidance are adhered to all estate ongoing maintenance
- Has responsibility for carrying out remedial actions to improve the environment, including as identified by the IPC Team.

### 4.5 Director for Infection Prevention and Control (DIPC)

- Is accountable for the implementation of the Health and Social Care Act (2008), which includes overseeing implementation of Trust infection prevention and control policies and guidelines, including this policy
- Has responsibility for signing off any significant deviations from the environmental standards required, in the knowledge that such deviations may pose a risk of cross-transmission of infection
- Has responsibility for reporting directly to the Board about all matters relating to infection prevention and control, including compliance with this Policy.

### 4.6 Chief Nurse / Deputy Chief Nurse

- Has responsibility for the implementation of this policy within Nursing and Midwifery, to ensure patient care is delivered in a safe environment that reduces the risk of HCAs to vulnerable patients, staff and visitors

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- Has responsibility for championing the standards detailed in this policy, to make improvements to the environment and help safeguard patients, staff and visitors from the risk of healthcare associated infections.

#### 4.7 **Divisional Chief Nurses / Divisional Directors**

- Has responsibility for monitoring compliance with this policy in each Division and taking forward areas of non-compliance that require remedial action with the Estates and Projects Department
- Has responsibility for helping to secure funding for environmental improvements to be made, as necessary within each Division, including writing business cases and applying for capital funding
- Has responsibility for including any ongoing/significant risks within the environment on the Divisional risk register.

#### 4.8 **Matrons / Ward Managers / Department Managers**

- Has responsibility for monitoring compliance with this policy in their wards / departments
- Has responsibility for seeking advice from the IPC Team and liaising with the Estates and Projects Department for remedial action as appropriate, where the standards detailed in this policy are not met
- Has responsibility for alerting divisional chief nurses/directors to environmental issues within their wards / departments, in particular issues which cannot be easily rectified or requires additional funding.

#### 4.9 **Associate Director IPC / Nurse Consultant IPC / Lead Doctor IPC / IPC Team**

- Are responsible for setting the Trust standards for infection prevention and control, including for the environment, in line with national guidance, current best practice, and any changes in legislation
- Are responsible for advising the Trust about environmental IPC standards, in particular for patient areas, during new builds, refurbishment projects and ongoing maintenance
- Are responsible for ongoing surveillance of healthcare associated infections, early identification and control of clusters / outbreaks of infection and identifying/advising on the role of the environment in these scenarios
- Are responsible for raising awareness about the role of the environment in spreading infection and advising on improvements / mitigations needed to help reduce this risk.

#### 4.10 **Control of Infection Committee (COIC)**

- Has responsibility for monitoring and reviewing all issues relevant to infection prevention and control within the Trust, including the standards detailed in this policy.

#### 4.11 **Housekeeping Manager / Team**

- Are responsible for maintaining high standards of environmental cleaning in all areas of the Trust, in line with the national standards of cleanliness for the NHS

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- Are responsible for ensuring adequate resources (staff and cleaning equipment) are available to facilitate thorough cleaning of the environment.

#### 4.12 **All Staff Working in Wards / Departments**

- Are responsible for familiarising themselves with the standards detailed within this policy and for reporting any non-compliances in the environment to their line manager / Estates for repair or replacement, as appropriate and seeking further advice from the IPC Team as necessary.

## 5. Policy

### Designing a healthcare facility – issues to consider

#### 5.1 **New builds / refurbishment projects - involving the IPC Team**

- The IPC Team will form part of the engagement process on in all new builds and refurbishment projects from the earliest stage, including design, planning, construction. All projects are designed in full compliance with relevant Health Building Notes (HBNs) and Health Technical Memorandums (HTMs) and any minor derogations that are requested to the standards are approved by the IPC team and project SRO. For any major derogations, in addition to consulting with the IPC Team, the Director of Infection Prevention and Control (DIPC) and Trust Executives are also required to provide formal sign off
- The IPC Team will advise on ‘designing in’ IPC standards, including ASPH specific requirements in order to reduce the risk of cross-transmission via the environment and thus reduce the risk of healthcare associated infections (HCAIs). Where new builds/refurbishment projects do not comply with the required IPC standards deviations will be rectified prior to hand over
- It is the responsibility of the Estates and Projects Team to involve the IPC Team at the earliest stage and seek IPC sign-off at each stage of new builds and refurbishment projects and it is the responsibility of the IPC team to respond and engage within reasonable project timescales
- Where it is felt necessary to deviate from the required standards, this must be discussed with and approved by the IPC Team (who can also advise on mitigations to reduce the risk of HCAIs). For deviations that may present significant risk of HCAIs, as well as seeking approval from the IPC Team, approval must also be sought from the Director of Infection Prevention and Control and other Trust Executives, as appropriate. This approval must be documented and kept for cross-reference in the event of future queries or issues that may arise
- The IPC Team will advise on ‘designing in’ IPC standards into new builds and refurbishment projects in general patient areas, such as wards, based on relevant national guidance, including Infection Control in the Built Environment (Department of Health, 2013), best practice and using their specialist knowledge and experience. In addition, for new builds / refurbishment projects in specialist areas, such as operating theatres and

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intensive care units, specific relevant guidance will also be utilised as appropriate

- Follow appendix 3 for IPC risk assessment during construction / refurbishment.

## 5.2 Sizing/space

- The provision of sufficient space in clinical areas, particularly for each bed space, is one of the most important considerations in the planning and design of in-patient accommodation. A risk-based approach should be taken to ensure that the environment is appropriate for carrying out clinical activities and undertaking manual handling operations while maintaining a good standard of infection control.

Health Building Note 04-01 – ‘Adult in-patient accommodation’ states: “Ergonomic studies have established that most activities carried out at the bedside can be accommodated within the dimensions 3600 mm (width) × 3700 mm (depth). This represents the clear bed space and does not include space for fixed storage, preparation and worktops.”

- For IPC reasons, it is imperative that staff are able to attend to one patient without impinging on the bed space or equipment of a neighbouring patient. In the majority of cases, the dimensions in Health Building Note 04-01 should be adequate (although bed spaces for critical care areas need to be greater for reasons of circulation space and the equipment used in these areas)
- It is also important that the physical environment complies with disability access requirements and does not compromise the privacy and dignity of patients.
- Spacing should take into account the amount of and easy access to equipment around the bed area and clear access for staff to clinical wash-hand basins.

## 5.3 Isolation facilities

- The IPC Team will advise on the level of isolation facilities required in each ward/department, taking account of the speciality of patients seen in each area and the most likely infections the patients may have.
- Ideally all single room isolation facilities should have full ensuite facilities, including toilet, wash basin and shower, so that the patient does not have to leave their room to use these facilities and is therefore optimum for infection prevention. Where ensuite facilities are not provided, a dedicated commode will be provided.
- In wards where it is likely that patients with respiratory infections that pose a risk of cross-infection to others, e.g. TB and COVID, are cared for e.g. Chestnut ward, in addition to provision of standard isolation rooms with ensuite facilities, specialised mechanical ventilation must also be provided ensuring negative or neutral pressure, along with the appropriate air

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exchanges, in order to minimise the risk of cross-infection to others on the ward.

- There should be sufficient en-suite single-bed rooms in each in-patient ward/department, to prevent patients suspected or known to be a risk for spreading infections being cared for in open ward areas.
- The IPC Team will audit single room isolation facilities, in order to advise the Trust on additional facilities required.

#### 5.4 Hand hygiene facilities

- In each single-bed room, a clinical wash-hand basin should be available. Single-bed rooms with en-suite facilities should have a separate general wash-hand basin for patients and visitors to use in the en-suite facility.
- In critical care areas, one clinical wash-hand basin should be available by each bed space or between two beds if located such that the basin is readily accessible to both bed spaces.
- In multi-bed rooms/bays, two clinical wash-hand basins should be provided appropriately located (not adjacent to each other, which is likely to result in one basin becoming a low use water outlet).
- In primary care and out-patient settings, where clinical procedures or examination of patients is undertaken, a clinical wash-hand basin should be close to where the procedure is carried out, e.g. inside the procedure/examination room.
- All clinical wash-hand basins should be readily accessible and should not be situated behind curtain rails.
- Clinical wash-hand basins must comply with the following standards:
  - should not have an overflow
  - should not have a plug/chain or be capable of fitting one
  - should not have a swan neck tap
  - should not have taps aligned to discharge directly into the waste aperture
  - should not have an alcohol hand-rub dispenser fitted above the basin (as splashing of hand-rub onto the tap encourages organisms to grow in the tap)
  - should be sealed to a waterproof splash-back
  - should have wall-mounted liquid soap and paper-towel dispensers available close by
  - should have adequate space to place a waste bin by each basin
  - should have a hands-free operated tap, e.g. elbow operated, ensuring the handle(s) are long enough to operate by elbow
  - the alignment of the tap and basin should be such that staff can wash their hands without excessive splashing to their bodies.

### Ancillary areas

#### 5.5 Dirty utility room

- Each ward / clinical department must have an adequately sized dirty utility room and be in a good state of repair, for disposal of body fluids, storage

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and cleaning of commodes and storage of other equipment / consumables, e.g. disposable bedpans, urinals and vomit bowls.

- There must be suitable and sufficient work surface for urine testing and collection of samples.
- Must include a sluice/slop hopper for disposal of body fluids / used wash water.
- Must include a macerator for disposal of used cardboard bedpans / urinals (or a bedpan washer if the plumbing cannot withstand the fitting of a macerator). If it is felt this is not required due to the speciality of the department, this should be discussed with the IPC Team for approval.
- Must include sufficient space for temporarily storing equipment awaiting return to the Sterilising Department (as well as sufficient space for storing used linen bags, waste bags and used sharps containers awaiting disposal, if a separate disposal room is not available on the ward/department for storing these items).
- Must include sufficient cupboard storage space for storing equipment / consumables, e.g. bedpans and urinals.
- Must include a compliant clinical wash-hand basin.
- May include a metal sink for washing equipment; however, this must be discussed and approved by the IPC Team, to ensure appropriateness of equipment to be washed in this room and to prevent a low use water outlet from arising.
- There needs to be clear demarcation between clean/unused equipment from soiled/used equipment. Clean and dirty areas should be kept separate.

#### 5.6 Clean utility room

- Each ward / clinical department must have an adequately sized clean utility room and be in a good state of repair, for preparation of medication and storage of clean/sterile consumables.
- Must have suitable and sufficient storage for clean/sterile supplies, to ensure all supplies are stored off the floor.
- All storage/shelving must be fully impervious, to allow for ease of cleaning (unsealed wooden / chipboard shelves are not acceptable).
- For wall mounted shelving, the lowest shelf should have a vertical plinth fitted to prevent ingress of dust and prevent storage of items on the floor underneath the shelf.
- Must have sufficient worktop area to enable aseptic preparation of drugs / intravenous fluids.
- Must include a compliant clinical hand-wash basin, situated approximately 2 metres away from the drug preparation surfaces and stored consumables.

#### 5.7 Clean linen storeroom / cupboard

- Clinical areas should have a designated area for the storage of clean linen to maintain the cleanliness of the linen and allow easy access. Storage should be on slatted shelving or racking and be off the floor, with sufficient

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space under the lowest shelf to permit cleaning the floor underneath, or have a vertical plinth fitted to the lowest shelf to prevent ingress of dust.

- Shelving / racking must be fully impervious, to allow for ease of cleaning (unsealed wooden shelving / chipboard shelving is not acceptable and must not be used).

#### 5.8 **Equipment decontamination room**

- In clinical areas where local decontamination of equipment has to be undertaken, e.g. in the neonatal intensive care unit where local decontamination of incubators is undertaken, a room dedicated for the purposes of decontaminating equipment needs to be provided (it is not acceptable for these rooms to be multi-functional, including for storing equipment etc, as this increases the risk of cross-contamination). The room should be in a good state of repair.
- The room should facilitate a defined dirty-to-clean flow throughout the decontamination process and have sufficient work surfaces / sinks to allow for effective decontamination.
- Two separate deep sinks should be provided for washing and rinsing reusable equipment / instruments, as necessary.
- The need for an equipment decontamination room and its layout must be discussed with and approved by the IPC Team.

#### 5.9 **Disposal room**

- Wards / clinical departments should be provided with a disposal room for the temporary storage of used linen bags, waste bags and used sharps bins whilst awaiting collection for disposal.
- The room should be sufficiently sized to house large lockable wheeled bins, used for storing domestic and clinical waste bags, along with used sharps bins and used linen bags.
- The room needs to be secure and not accessible to the public.

#### 5.10 **Cleaner's / Housekeeping room**

- Each ward/clinical department must have an adequately sized cleaner's room for storage of cleaning supplies/equipment, cleaning trolley and disposal of dirty water.
- Must include either a slop-hopper or janitorial sink for disposal of dirty water.
- Must include a hand wash basin (this may be combined with the janitorial sink).
- There should be unrestricted access to the slop-hopper / janitorial sink.
- Must include sufficient storage space for storing cleaning supplies (this room must not be used to store clean supplies, such as clean/unused paper hand towel packets, as this increases the risk of contamination in advance of use).
- The room needs to be in a good state of repair.

#### 5.11 **Storage areas**

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- Storage areas need to be appropriate for the operational requirements of each clinical area, including storage of consumables and bulky items/equipment, e.g. patient hoist.
- Insufficient storage leads to equipment/consumables being stored inappropriately and increases the risk of cross-contamination. Therefore, it is crucial this is adequately assessed when designing/planning new builds or refurbishments.

#### 5.12 Interior finishes/fixtures and fittings

**Note:** a number of antimicrobial-impregnated products, such as surface coatings, paints and curtains, are available. However, currently there is no definitive data to support their efficacy in reducing healthcare associated infections. Therefore, use of such products is NOT recommended and must be discussed with the IPC Team.

- The quality of finishes in all clinical areas should be readily cleaned, resilient and in a good state of repair. Whilst it is important that the healthcare environment is aesthetically pleasing, environmental IPC standards must not be compromised.

#### 5.13 Flooring in clinical areas

- Flooring should be seamless, smooth, slip-resistant, easily cleaned (with detergents / disinfectants) and appropriately wear-resistant.
- The flooring should be coved between the floor and wall to prevent accumulation of dust and dirt in corners and crevices.
- Any joints should be welded or sealed to prevent accumulation of dirt and damage due to ingress of water.
- Flooring should be in a good state of repair. Where damage to flooring, e.g. vinyl, occurs it can be taped over temporarily, whilst repair or replacement is arranged. However, it is not acceptable to leave damaged flooring taped for prolonged periods of time as tape hampers adequate cleaning, particularly as the tape edges fray.
- Carpets must not be used in clinical areas, including corridors/entrances to wards/departments. If carpets are being considered for non-clinical areas, such as a counselling room, a local documented risk assessment must be undertaken with IPC involvement and a pre-planned cleaning protocol should be put into place.

#### 5.14 Walls

- Walls should be smooth, impervious and in a good state of repair.
- Where walls are at risk of gouging/damage from beds or trolleys banging into them or are exposed to water/steam, such as in bathrooms, additional wall protection/covering should be used, e.g. Whiterock or Trespa.

#### 5.15 Ceilings

- Ceilings should be in a good state of repair.
- Smooth jointless impervious ceilings should be used in operating theatres and special ventilated isolation rooms.

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- Suspended ceilings can be used in general clinical areas / other areas of the hospital.
- Where ceiling tiles are removed to access services located above the tiles, it is important these are put back into place as soon as possible. It is unacceptable to leave ceiling tiles missing.

#### 5.16 **Doors**

- Doors should be in a good state of repair: smooth, non-porous and fluid resistant, thus allowing for cleaning, which is particularly important in areas where contamination with blood / body fluids is a possibility.
- Doors in clinical areas should be reinforced with an additional protective covering to guard against gouging/impact from beds and trolleys, as needed.
- Door handles / touch plates need to be smooth and easily cleaned.

#### 5.17 **Windows**

- Windows should be sealed and unopenable in operating theatres and other areas with specialised mechanical ventilation installed, e.g. ventilated isolation rooms.
- Windows / window frames should be in a good state of repair.
- Internal window ledges should be avoided in clinical areas, as ledges allow dust and clutter to accumulate. Where a ledge is fitted, ideally the ledge should be sloped.

#### 5.18 **Finishes**

- Floors or walls penetrated by pipes, ducts or conduits should be sealed to stop entry of pests and to allow for ease of cleaning. All finishes should be in a good state of repair.

#### 5.19 **Fixtures and fittings**

- Fixtures and fittings, such as shelves, shelving units and cupboards, should be fully impervious and in a good state of repair. They should be able to withstand the effects of regular cleaning with detergents and disinfectants.

#### 5.20 **Work surfaces**

- All work surfaces should be impervious, designed for easy cleaning, be free of cracks, crevices and unsealed joints, and be in a good state of repair. They should be able to withstand the effects of regular cleaning with detergents and disinfectants.
- Work surfaces should be uncluttered and kept tidy, to allow for ease of cleaning.

#### 5.21 **Soft furnishings**

- Soft furnishings, e.g. seating, used within all patient areas should be fully impervious, preferably seam-free, heat sealed, in a good state of repairs and be able to withstand the effects of regular cleaning with detergents and disinfectants.

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- Non-impervious fabric covered seating / other fabric covered soft furnishing cannot be used in patient areas.

#### 5.22 **Catering / food hygiene**

- Hand hygiene facilities should be available for staff who prepare and serve food
- Ward kitchens should have a separate staff handwash basin with non-touch taps, liquid soap and paper towels.

#### 5.23 **Waste storage**

- As part of the “duty of care” (as set out in section 34 of the Environmental Protection Act 1990 and associated regulations) anyone who manages waste and/or has responsibility for the management of waste must take all reasonable steps to keep that waste safe. As waste producers, the Trust has to comply with this duty of care, including:
  - Adequate secure waste storage areas for wards/departments. These are best located at the entrances, preferably with access from the ward and the hospital corridor to facilitate waste collection by authorised personnel only. By storing waste in these storage areas, valuable space in dirty utility rooms can be kept for storing other items.
  - Storage areas should be sufficiently sized to allow for storage of large, wheeled bins and used sharps bins.
  - Storage areas must be secured and inaccessible to the public.
  - Storage areas must allow for ease of cleaning.

#### 5.24 **Used linen storage**

- Storage for used linen should be in a clearly designated area separate from the waste storage area. This should minimise any risks of used linen being accidentally taken for disposal, or of waste being taken to the laundry.

#### 5.25 **Ventilation**

- Specialised ventilation is required in certain areas of the Trust to minimise the risk of healthcare associated infections/respiratory infections, e.g.:
  - In operating theatres, to prevent contaminated air from entering designated clean areas. It should be ensured that air flows from the cleanest to sequentially less clean areas. This direction of airflow prevents contaminated air passing in the opposite direction, thus reducing the risk of surgical site infection.
  - In areas where patients with certain airborne infections are cared for, e.g. open pulmonary tuberculosis. This is to ensure contaminated air flows to the outside, rather than towards the rest of the ward/department.
  - In areas where immunocompromised patients are cared for. This is to ensure contaminated air from the ward/department does not flow into the single room/area, where the vulnerable patient is being cared for.
- Ventilation standards, as detailed in Health Technical Memorandum (HTM) 03-01 Specialised ventilation for healthcare buildings, should be

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adhered to. Ventilation assessments should be undertaken to assess the Trust's compliance with the standards detailed in the HTM, reported to the Trust's Control of Infection Committee and where the standards are not met within existing Trust premises a short, medium and long-term plan must be developed to achieve improvements/compliance with the HTM standards. The plan should be approved at the Trust's Control of Infection Committee.

#### 5.26 **Hot and cold-water systems**

- The Water Supply (Water Quality) Regulations 2000 contain provisions to ensure that the drinking water supply within buildings to which the public has access remains wholesome and is not adversely affected by local distribution systems. The Trust must comply with these regulations.
- Many microorganisms can be isolated from healthcare water systems, including *Legionella* spp. and *Pseudomonas aeruginosa*, and can potentially cause infection particularly in vulnerable patients. Therefore, preventative measures are important, including:
  - Routine inspection of water storage tanks, with cleaning as required
  - Identifying and removing dead-legs and blind-ends
  - Keeping cold water systems cold and hot water systems hot
  - Ensuring rapid turnover in water storage
  - Regular temperature monitoring as per Health Technical Memorandum 04-01 Part B (or any updates to this guidance).

#### 5.27 **Sanitary facilities**

- Toilets, bathrooms/showers should be in a good state of repair and designed for ease of cleaning and maintenance. Handwash basins should be provided in or adjacent to toilet facilities.
- Shower seats should allow for ease of cleaning.
- Showerheads should be cleaned and descaled on a regular basis.
- High quality water-resistant cladding/covering should be used on the walls in bathrooms/showers, to prevent mould.
- Health Building Note 00-10 Part C provides further guidance for the selection, specification and application of sanitary facilities in healthcare buildings. This guidance is to be followed within the Trust.

#### 5.28 **Water fittings**

- The use of flexible hoses should be avoided. Where flexible hoses must be used, they must be lined with a suitable alternative to EPDM (ethylene propylene diene monomer), as well as being WRAS approved.

## 6. Training

Training about the role of the environment in spreading organisms/infection is included in induction and update infection prevention and control training. Training compliance is monitored by the Learning and Development Department.

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## 7. Stakeholder Engagement and Communication

This policy has been circulated to all relevant stakeholders via the Control of Infection Committee (COIC), which includes representation from all divisions and in direct communication with other relevant staff, such as the Director of Estates. The COIC members have been asked to comment on the Policy, so relevant feedback can be incorporated into the policy standards.

## 8. Approval and Ratification

This policy has been approved / ratified by the Control of Infection Committee.

## 9. Dissemination and Implementation

The policy is available to all staff on the Trust intranet and disseminated for implementation via ward managers / matrons. In addition, the policy has been directly provided to Estates/Projects as they are responsible for implementing many of the standards detailed within.

## 10. Review and Revision Arrangements

The policy will be reviewed every 3 years, or sooner, if new national guidance is issued / becomes available.

## 11. Monitoring compliance with this Policy

Measurable Policy Objective	Monitoring/ Audit method	Frequency of monitoring	Responsibility for performing the monitoring	Monitoring reported to which groups/ committees, inc responsibility for reviewing action plans
Audit / spot check the standards detailed in this policy	Spot checks	Ongoing	Ward / department managers / matrons	Control of Infection Committee
	Ward IPC audits	Annual	IPC Team	As above
		Ongoing	IPC Team	As above

	IPC ward rounds			
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## 12. Supporting References / Evidence Base

Department of Health (2013) Infection control in the built environment. Department of Health

NHS England (2022) National infection prevention and control manual (NIPCM) for England. Accessed online: [NHS England » National infection prevention and control manual \(NIPCM\) for England](#)

NHS England Health Technical Memorandum 03-01 Specialised ventilation for healthcare premises. Part A: The concept, design, specification, installation and acceptance testing of healthcare ventilation systems. Accessed online: [Health Technical Memorandum 03-01 Part A \(england.nhs.uk\)](#)

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## APPENDIX 1: EQUALITY IMPACT ASSESSMENT

### Equality Impact Assessment Summary

<b>Name</b> Shila Patel	<b>Title</b> Nurse Consultant Infection Prevention and Control
<b>Policy</b> Policy for infection prevention and control in the Built Environment	

<p><b>Background</b></p> <ul style="list-style-type: none"> <li>The Equality Impact Assessment has been undertaken by Shila Patel, Nurse Consultant Infection Prevention and Control.</li> </ul>
<p><b>Methodology</b></p> <ul style="list-style-type: none"> <li>The impact of this policy has been assessed for all patients being admitted, readmitted or transferred into the Trust.</li> </ul>
<p><b>Key Findings</b></p> <ul style="list-style-type: none"> <li>This policy is applied equally to all patients admitted, readmitted or transferred into the Trust and does not adversely impact patients based on their race, ethnic origin, disability, gender, culture, religion or belief, sexual orientation or age.</li> </ul>
<p><b>Conclusion</b></p> <ul style="list-style-type: none"> <li>This policy does not adversely impact patients based on their race, ethnic origin, disability, gender, culture, religion or belief, sexual orientation or age.</li> </ul>
<p><b>Recommendations</b></p> <ul style="list-style-type: none"> <li>Following the equality impact assessment there are no changes required to the policy.</li> <li>The equality impact assessment will be reviewed / re-evaluated when the policy is reviewed.</li> </ul>

## APPENDIX 2: IPC risk assessment during construction/refurbishment projects

1. First, identify construction activity type from the table below:

Type	Construction activity type
Type A	Inspection and non-invasive activities, includes, but not limited to: <ul style="list-style-type: none"> <li>• removal of ceiling tiles for visual inspection on corridors and non-clinical areas;</li> <li>• painting and minimum preparation in corridors and non-clinical areas;</li> <li>• electrical trim work (all plugs, switches, light fixtures, smoke detectors, ventilation fans);</li> <li>• minor plumbing and activities that do not generate dust or require cutting of walls or access to ceilings other than for visual inspection.</li> </ul>
Type B	Small scale, short duration activities that create minimal dust. Includes: <ul style="list-style-type: none"> <li>• removal of a limited number of ceiling tiles in low risk clinical areas for inspection only;</li> <li>• installation of telephone and computer cabling;</li> <li>• access to chase spaces;</li> <li>• cutting of walls or ceiling where dust migration can be controlled in non-clinical areas.</li> </ul>
Type C	Any work of long/short duration which generates a moderate-to-high level of dust or requires minor building works, demolition or removal of any fixed building components or assemblies. Includes, but is not limited to: <ul style="list-style-type: none"> <li>• sanding of walls for painting or wall covering;</li> <li>• removal of floor coverings, ceiling tiles, panelling, and wall-mounted shelving and cabinets;</li> <li>• new wall construction;</li> <li>• minor duct work or electrical work above ceilings;</li> <li>• major cabling activities</li> </ul>
Type D	Major demolition and construction projects. Includes, but is not limited to new construction/machinery and equipment installations, rectifications and modifications

2. Then identify the infection control risk group by area:

Group 1 – low risk	Group 2 – medium risk	Group 3 – high risk
Office areas/corridors/plant rooms/ service ducts  Primary care/community treatment rooms	A&E clinical rooms Radiology/magnetic resonance imaging General surgery recovery units Wards Nuclear medicine Admissions/discharge units Echocardiography Other departmental clinical areas Outpatient department Pharmacy (general) Laboratories Endoscopy clinics Examination rooms	Day surgery rooms All intensive care units All operating suites All high dependency units Dialysis and transplant units Oncology Cardiology Cardiac catheterisation suite Pharmacy clean rooms Sterile services departments Bone marrow transplant units

3. Now identify the “risk class” by correlating “construction type” with “risk group” (from 1 and 2 above) in the matrix below:

Construction activity type				
Risk group	Type A	Type B	Type C	Type D
Group 1	Class 1	Class 2	Class 2	Class 3
Group 2	Class 1	Class 2	Class 3	Class 3
Group 3	Class 2	Class 3	Class 3	Class 4

4. After identifying the risk class from 3 above, follow the risk measures advised for each class:

Class	Risk measures
Class 1	<ul style="list-style-type: none"> <li>• Execute work by methods to minimise dust from construction</li> <li>• Immediately replace any ceiling tile displaced for visual inspection</li> </ul>
Class 2	<ul style="list-style-type: none"> <li>• Where appropriate, isolate HVAC (heating, ventilating, and air conditioning) system in areas where work is being performed</li> <li>• Provide active means to prevent airborne dust from dispersing into atmosphere if practicable, i.e. dust bag to machine</li> <li>• Water-mist work surfaces to control dust while cutting</li> <li>• Avoid pooling of water which may be prolonged</li> <li>• Seal unused doors with duct-tape</li> <li>• Block off and seal air-vents</li> <li>• Wipe work surfaces with detergent</li> <li>• Contain construction waste before transport in tightly covered containers</li> <li>• Wet-mop and vacuum with filtered vacuum cleaner before leaving work area</li> <li>• Place dust-attracting mat at entrance and exit of work area (tacky mat)</li> <li>• Remove isolation of HVAC system</li> </ul>
Class 3	<ul style="list-style-type: none"> <li>• Where appropriate, isolate HVAC system in area where work is being done to prevent contamination of duct system</li> <li>• Complete all critical barriers and implement dust control methods before construction begins</li> <li>• Maintain negative air pressure within work site. Use HEPA (high efficiency particulate air)-equipped air filtration unit if there be a risk that air will enter building</li> <li>• Do not remove barriers from work area until complete project is clinically clean</li> <li>• Vacuum with filtered vacuum cleaner during works</li> <li>• Wet-mop area during works</li> <li>• Remove barrier materials carefully to minimise spreading of dust and debris associated with construction</li> <li>• Contain construction waste before transport in tightly covered containers</li> <li>• Remove isolation of HVAC system in areas where work has been done and appropriate checks performed</li> </ul>
Class 4	<ul style="list-style-type: none"> <li>• Isolate HVAC system in area where work is being done to prevent contamination of duct system</li> <li>• Complete all critical barriers and implement dust control methods before construction begins</li> <li>• Maintain negative air pressure within work site using HEPA-equipped air filtration unit</li> <li>• Seal holes, pipes, conduits and punctures appropriately</li> <li>• Construct airlock and require all personnel to remove dirty apparel and clean down before leaving the work site. The use of cloth/paper disposable overalls/shoes, etc., may be required</li> <li>• Do not remove barriers from work area until completed project is thoroughly cleaned (as before) and repeat clinical clean after barrier removed</li> <li>• Vacuum work area with filtered vacuum cleaner</li> <li>• Wet-mop area with detergent during works</li> <li>• Remove barrier materials carefully to minimise spreading of dust and debris associated with construction</li> <li>• Contain construction waste before transport in tightly covered and sealed containers</li> <li>• Remove isolation of HVAC system in areas where work has been done and appropriate checks performed</li> </ul>