

Appendix 1: Sample Construction Permit

CONSTRUCTION PERMIT

Permit No:	Permit Expiration Date:	Project Start Date:
Location of Construction:	Estimated Duration:	
Contractor:	Contact Person:	Tel:
CEO Approval:		
Name	Signed:	Tel:
Hospital Technical Services Manager Approval:		
Name:	Signed:	Tel:
Infection Control Personnel Approval:		
Name:	Signed:	Tel:

Construction/Renovation Activity

Type A - Minor Internal Containable Activities

Inspection and non-invasive activities and small-scale activities that create minimal dust. These include, but are not limited to, activities that require removal of ceiling tiles for visual inspection (limited to 1 tile per 5m²), painting (no sanding), wall covering, electrical trim work, minor plumbing and other maintenance activities that do not generate dust or require cutting of walls or access to ceilings other than for visual inspection. Activities that require access to conduit spaces, cutting of walls or ceilings where dust migration can be controlled for installation or repair of minor electrical work, ventilation components, telephone wires or computer cables. It also includes minor plumbing.

Type B - Major Internal Containable Activities

Any work that generates a moderate level of dust or requires demolition or removal of any fixed building components or assemblies (e.g. counter tops, cupboards sinks). These include, but are not limited to, activities that require sanding of walls for painting or wall covering, removal of floor-covering, ceiling tiles and stud work, new wall construction, minor duct work or electrical work above ceilings, major cabling activities, and any activity that cannot be completed within a single work shift. This type of activity includes extensive plumbing work. It also includes demolition or removal of a complete cabling system or plumbing and new construction that requires consecutive work shifts to complete.

Type C - Minor External Non-Containable Activities

External construction activities that generates moderate levels of dust or minor excavations. Such activities include digging trial pits and minor foundations, trenching, landscaping and minor construction and demolition work.

Type D - Major External Non-Containable Activities

External construction activities that generate large levels of dust. Such activities would include major soil excavation, demolition of buildings and any other construction activity not covered under Type C.

Population Risk Groups

Group 1 - No Evidence of Risk

- Staff Members/Service Providers/Contractors
- All patients not listed in Groups 2-4 below

Group 2 - Increased Risk

- Patients on prolonged courses of high dose steroids
- Severely immunosuppressed AIDS patients
- Patients undergoing mechanical ventilation
- Non-neutropenic patients on chemotherapy
- Dialysis patients

Group 3 - High Risk

- Neutropenic patients (<14 days) following chemotherapy
- Adult acute lymphoblastic leukaemia (ALL) on high dose steroid therapy
- Solid organ transplantation patients
- Patients in neo-natal intensive care units (ICUs)
- Chronic Granulomatous Disease of Childhood
- Laboratories (prevent contamination of microbiological specimens and thereby avoid pseudo-diagnosis)

Group 4 - Very High Risk

- Allogeneic bone marrow transplantation patients
 - During the neutropenic period
 - With graft versus host disease
- Autologous bone marrow transplantation patients, i.e. during neutropenic period
- Peripheral stem cell transplantation patients, i.e. during neutropenic period
- Non-myeloblastic transplantation patients
- Children with severe combined immunodeficiency syndrome (SCIDS)
- Patients with prolonged neutropenia (>14 days) following chemotherapy or immunosuppressive therapy
- Aplastic anaemia patients

Recommendations For Infection Control Preventive Measures

Class I

Class I Preventive Measures are recommended for Minor Internal Containable Construction Activities (Type A)

Dust Control

- Immediately replace ceiling tiles displaced for visual inspection
- Execute work by methods to minimise dust generation from construction or renovation activities
- Provide active means to minimise dust generation and migration into the atmosphere

Cleaning

- Wet mop and vacuum area as needed and when work is completed
- Wipe horizontal and vertical work surfaces with hot soapy water

Infection Control Personnel

- Approval to be given
- In collaboration with cleaners and technical services ensure that the construction zone remains sealed and that the cleaning is adequate at all times

Patient Risk Reduction

- Move at-risk patients (Groups 2-4) away from construction area. If it is not possible to move e.g. ICU patients an impermeable dust barrier should be erected around the construction area
- Minimise patients exposure to the construction /renovation area
- Minimise dust and increase cleaning in patient area

Class II

Class II Preventive Measures are recommended for Major Internal Containable Construction Activities (Type B)

In addition to the Class I measures outlined above the following measures should be also implemented for Type B activities

Dust Control

- Erect an impermeable dust barrier
- Ensure windows and doors are sealed
- A separate entrance away from patient traffic should be created for use by construction workers
- Protective clothing should be worn by construction workers and removed when leaving the construction site
- Dust barrier should not be removed until the project is complete

Ventilation of Construction Area

- Seal windows
- Maintain negative pressure within construction zone by using a portable extract fan
- Ensure air is exhausted directly to the outside and away from intake vents or filtered through a HEPA filter before being re-circulated
- Ensure ventilation system is functioning properly and is cleaned if contaminated by soil or dust after construction or renovation project is complete

Debris Removal and Cleaning

- Contain debris in covered containers or cover with either an impermeable or moistened sheet before transporting for disposal
- Remove debris at end of the work day
- An external chute will need to be erected if the construction is not taking place at ground level
- Vacuum work area with HEPA filtered vacuums daily or more frequently if required

Class II cont'd

Infection Control

- As for Class I

Patient Risk Reduction

- Move all patients from the construction area
- If possible move at-risk patients (Groups 2-4) who are adjacent or near to the construction area
- Ensure that patients do not go near construction area
- All windows, doors, air intake and exhaust vents should be sealed in areas of the hospital containing patients who are classified as high-risk, if the construction or demolition work is considered likely to result in *Aspergillus*-contaminated air entering these areas
- Very high-risk patients (Group 4) should be treated in HEPA-filtered, positive pressure rooms

Traffic Control

- In collaboration with the technical services manager designate a traffic pattern for construction workers that avoids patient care areas and a traffic pattern for clean or sterile supplies, equipment, patients, staff and visitors that avoids the construction area
- A traffic path should be designated for the removal of rubble from the construction site which preferably is separate to and away from all hospital related traffic

Class III

Class III Preventive Measures are recommended for All External Non-Containable Construction Activities (Type C & D)

Dust Control

- Execute work by methods to minimise dust generation from construction or renovation activities
- Provide active means to minimise dust generation and migration into the atmosphere

Debris Removal and Cleaning

- Contain debris in covered containers or cover with an impermeable or moistened sheet before transporting for disposal
- Ensure no increased dust within hospital, increased cleaning may be necessary

Infection Control

- Approval to be given
- In collaboration with technical services ensure that dust is minimised from the construction site and that the construction site measures are being adhered to
- Ensure that cleaning is adequate to minimise dust within the hospital

Patient Risk Reduction

- If possible move at-risk patients (Groups 2-4) who are adjacent or near to the construction area
- Ensure that patients do not go near construction area
- All windows, doors, air intake and exhaust vents should be sealed in areas of the hospital containing patients who are classified as high risk, if the construction or demolition work is considered likely to result in *Aspergillus*-contaminated air entering these areas
- Very high-risk patients (Group 4) should be treated in HEPA-filtered, positive pressure rooms

Traffic Control

- See Class II measures