



**HSE South Capital Projects & Estates  
Aspergillus Prevention Risk Assessment & Instructions**

<p><b>Project Title : Chimney Demolitions University Hospital Kerry</b></p> <p><b>Location of Project / Construction:</b></p> <p><b>Project Start Date: tbc</b>  <b>Estimated Duration of works: Estimate 4 weeks</b></p> <p><b>Contractor: TBD      Date Issued to Contractor:</b></p> <p><b>Class &amp; Type of Activity identified in table 1.</b>  <b>Population Risk Groups identified in table 2.</b>  <b>Required Preventative Measures identified in table 3.</b></p>
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Capital Projects & Estates HSE South must inform the Contractor of the following requirements:

<b>Contractor is informed of</b>	<b>Detailed Description</b>	<b>Complete</b>
Categorisation of Work / Project	Class III Type D: Major external Non –Containable Activity	
Group or Population at risk	Group 1 to possibly 3	
Class of Preventative Measures required (refer to table 3)	Class III Preventive Measures are recommended for All External Non Containable Construction Activities (Type C&D)	
Area of work/ project & rationale for measures	Staff population accessing entrance to supplies/catering depts	
Construction Permit completed	To be completed by Microbiologist	
Documentation of daily preventative measure checks	To be completed by the contractor	
Deep clean is carried out as part of commissioning	Daily liaise with housekeeping team	
No of phases in the works/project	One	
Access and egress of contractors	To be detailed in RAMS	

**Required Information can be found as follows:**

<b>Requirements</b>	<b>Action</b>	<b>Responsible Person</b>
<b>Dust Control</b>	Refer to Table 3 : Measures as per National Guidelines for the prevention of Nosocomial Aspergillosis (2018)	Contractor
<b>Debris Removal &amp; Cleaning</b>	Refer to Table 3 : Measures as per National Guidelines for the prevention of Nosocomial Aspergillosis (2018)	Contractor
<b>Ventilation of Construction Site</b>	Refer to Table 3 : Measures as per National Guidelines for the prevention of Nosocomial Aspergillosis (2018)	Contractor
<b>Traffic Control</b>	Refer to Table 3 : Measures as per National Guidelines for the prevention of Nosocomial Aspergillosis (2018)	Contractor
<b>Patient Risk Reduction</b>	Refer to Table 2: Population Risk Groups & Refer to Table 3 : Measures as per National Guidelines for the prevention of Nosocomial Aspergillosis (2018)	UHK Management

**Aspergillosis Preventative Measures per Phase of Work/Project:**

<b>Phase Name: Demolition of Chimney adjacent to boiler house at University Hospital Kerry</b>		
<b>Description of Phase:</b> The works will take approximately 3-4 weeks. The demolition process will involve each section of the 5-storey chimney structure being cut, (roof/floor section, side walls separately cut & removed, down through each floor). All cutting will be carried out using mechanical cutters and water to control dust. Each cut section will be lowered via crane (A) onto a truck (B) and transported across to the compound (C) , where it will be crushed (water control) and then removed from site.		
<b>Categorisation of Work / Project</b>	Class III Type D: Major external Non –Containable Activity	Refer to Table 2 : Measures as per National Guidelines for the prevention of Nosocomial Aspergillosis (2018)
<b>Class of Aspergillus Preventative Measures required</b>	Class III preventative measures for major external activity	Refer to Table 3 : Measures as per National Guidelines for the prevention of Nosocomial Aspergillosis (2018)
<b>Weekend and Night Works required?</b>	To be determined	Refer to Table 2 : Measures as per National Guidelines for the prevention of Nosocomial Aspergillosis (2018)
<b>Access &amp; Egress for Contractors for this</b>	All access external to University Hospital Kerry	Refer to Table 2 : Measures as per National

<b>phase</b>		Guidelines for the prevention of Nosocomial Aspergillosis (2018)
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<https://www.hpsc.ie/a-z/respiratory/aspergillosis/guidance/Aspergillus%20Guidelines%202018.pdf>

- All construction access to and egress from the site shall be external to the main hospital.
- All windows located to the works will be sealed with tape and wedged with timber to prevent same being opened by UHK employees. Any other windows identified by University Hospital Kerry management and IPC team will also be sealed. All windows will be checked for leaks daily by the contractor.
- All doors in proximity to the works to be kept closed eg Catering, supplies entrance
- All skips/waste containers MUST be covered once debris/waste deposited into them until and whilst the skip is being removed from site
- A traffic path should be designated for the removal of rubble / waste from the construction site which preferably is separate to and away from all hospital-related traffic.
- All delivery equipment used (delivery wheels, pallet truck, specialist lift truck, rubbish bins etc.) must be clean and free dust, grime and dirt and must be suitable for movement through hospital corridors if required (again not without prior discussion). All wheels to be cleaned prior to entering and leaving site ensuring no dust/dirt shed on hospital on roadway during removal
- Preventative measures are checked and documented daily by the contractor and also by the project coordinator as this work encroaches into the internal structure of the hospital.
- Clean as you go policy is essential and Vacuum work area with HEPA-filtered vacuums frequently.
- The contractor shall in all cases ensure that adequate retention measures are in place and maintained to ensure the minimum practicable dust transmission to areas retained in use by the Employer.
- In the event of dust transmission to areas retained in use by the Employer, the Contractor shall at no expense to the Employer take such action as the Employer's representative may consider reasonable in the circumstances to minimise the risk.

**Tables 1 & 2:**

<b>Table 1: Construction / Renovation Activity</b>	<b>Tick</b>	<b>Table 2: Population Risk Group-</b>	<b>Tick</b>
<b>Class 1 Type A2: Minor Internal Containable Activity</b>		<b>Group I: No Evidence of Risk</b>	✓
This includes, but is not limited to, minor works on a small scale where dust containment is achieved by using dust barriers and a HEPA-filtered vacuum. Activities that require access to conduit spaces, cutting of walls, woodwork or ceilings where dust migration can be		<ul style="list-style-type: none"> <li>• Staff Members / Service / Contractors</li> <li>• All patients not listed in Groups 2-4 below</li> </ul>	
		<b>Group 2: Increased Risk</b>	✓

controlled for installation or repair of minor electrical work, ventilation components, telephone wires or computer cables. It also includes minor plumbing as well as minor drilling to allow for the erection of brackets and shelving		<ul style="list-style-type: none"> <li>• Patients on prolonged courses of high dose steroids</li> <li>• Severely immunocompromised AIDS patients</li> <li>• Patients undergoing mechanical ventilation</li> <li>• Non-neutropenic patients on chemotherapy</li> <li>• Dialysis patients</li> </ul>	
<b>Class II Type B: Major Internal Containable Activity</b>		<b>Group 3: High Risk</b>	✓
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		<ul style="list-style-type: none"> <li>• Neutropaenic patients ( &lt;14 days) following chemotherapy</li> <li>• Adult acute lymphoblast leukaemia (ALL) on high dose steroid therapy</li> <li>• Solid organ transplantation patients</li> <li>• Neonates in intensive care units (ICU's)</li> <li>• Chronic Glaucomatous Disorder</li> <li>• Patients with extensive burns</li> <li>• COPD Patients meeting GOLD stage III &amp; IV criteria</li> </ul>	
<b>Class III Type C: Minor external Non-Containable Activity</b>		<b>Group 4: Very High Risk</b>	
External construction activities that generate moderate levels of dust or minor excavations. Such activities include, but are not limited to, digging trial pits and minor foundations, trenching, landscaping, minor construction & demolition work		<ul style="list-style-type: none"> <li>• Allogenic bone marrow transplantations during the neutropaenic period / with graft versus host disease requiring steroid +/- other immunosuppressive therapy</li> <li>• Autologous bone marrow transplantation patients during neutropaenic period</li> <li>• Non -myeloablative transplantation patents</li> <li>• Children with SCIDS</li> <li>• Patients with prolonged neutropaenia ( &gt; 14 days) following chemotherapy or immunosuppressive therapy</li> <li>• Aplastic anaemia patients</li> </ul>	
<b>Class III Type D: Major external Non - Containable Activity</b>	✓		
External construction activities that generate large levels of dust. Such activities would include, but are not limited to, major soil excavation, demolition of buildings & any other construction activity not covered under Type C.			

**Table 3:**

<b>Table 3: Class I Preventive Measures are recommended for Minor Internal Containable Construction Activities (Type A2)</b>	Tick	<b>Table 3: Class II Preventive Measures are recommended for Major Internal Containable Construction Activities (Type B) Continued</b>	
Dust Control <b>Contractor</b> <ul style="list-style-type: none"> <li>• Immediately replace ceiling tiles displaced for visual inspection</li> <li>• Execute work by methods to minimise dust generation from construction or renovation activities</li> <li>• Provide active means to minimise dust generation and migration into the atmosphere</li> </ul>		intake vents or filtered through a minimum of an F9 filter <ul style="list-style-type: none"> <li>• Ensure the ventilation system is functioning properly and is cleaned if contaminated by soil or dust after construction or renovation project is complete</li> </ul> Debris Removal and Cleaning <b>Contractor</b> <ul style="list-style-type: none"> <li>• Contain debris in covered containers or</li> </ul>	

<p>Cleaning <b>Contractor</b></p> <ul style="list-style-type: none"> <li>Wet mop and vacuum area as needed and when work is completed</li> <li>Wipe horizontal and vertical work surfaces with hot soapy water</li> </ul> <p>Infection Prevention and Control <b>HSE</b></p> <ul style="list-style-type: none"> <li>Approval must be sought from IPCT for the construction activity and the permit to be issued <ul style="list-style-type: none"> <li>Ensure that the construction zone remains sealed and that the cleaning is adequate at all times</li> </ul> </li> </ul> <p>Patient Risk Reduction <b>HSE</b></p> <ul style="list-style-type: none"> <li>Move at-risk patients (Groups 2-4) away from construction zone.</li> <li>Minimise patients' exposure to the construction/renovation area</li> <li>Minimise dust and increase cleaning in patient area</li> </ul>		<p>cover with either an impermeable or moistened sheet before transporting for disposal</p> <ul style="list-style-type: none"> <li>Remove debris at end of the work day</li> <li>An external chute will need to be erected if the construction is not taking place at ground level</li> <li>Vacuum work area with HEPA-filtered vacuums daily or more frequently if required –NB when creating opes into old build</li> </ul> <p>Infection Prevention and Control <b>HSE</b></p> <ul style="list-style-type: none"> <li>Approval must be sought from IPCT for the construction activity and the permit to be issued</li> <li>In collaboration with cleaners and Capital &amp; Estates, ensure that the construction zone remains sealed and that the cleaning is adequate at all times</li> </ul>	
<p><b>Class II Preventive Measures are recommended for Major Internal Containable Construction Activities (Type B) In addition to the Class I</b></p>	<p>Tick</p>	<p>Patient Risk Reduction <b>HSE</b></p> <ul style="list-style-type: none"> <li>Move all patients from within the construction zone</li> <li>If possible move at-risk patients (Groups 2-4) who are adjacent or near to the construction zone</li> <li>Ensure that patients do not go near construction zone</li> <li>All windows, doors, air intake and exhaust vents should be sealed in areas of the hospital containing patients who are classified as at increased risk (Groups 2-4), if the construction or demolition work is considered likely to result in Aspergillus contaminated air <b>Contractor as per HSE</b></li> </ul>	
<p>Dust Control <b>Contractor</b></p> <ul style="list-style-type: none"> <li>Execute work by methods to minimise dust generation from construction or renovation activities</li> <li>Erect an impermeable dust barrier from floor to slab/floor</li> <li>Ensure windows and doors are sealed as directed by HSE</li> <li>A separate entrance away from patient traffic should be created for use by construction workers</li> <li>Protective clothing should be worn by construction workers and removed when leaving the construction site</li> </ul> <p>Dust barrier should not be removed until the project is complete</p> <p>Ventilation of Construction Zone <b>Contractor</b></p> <ul style="list-style-type: none"> <li>Seal windows – externally as directed by HSE</li> <li>Maintain negative pressure within construction zone by using a portable extract fan</li> </ul> <p>Ensure air is exhausted directly to the outside where feasible and away from</p>		<p>High and very high-risk patients (Groups 3-4) should preferably be treated in HEPA-filtered, positive pressure isolation rooms or facilities or if not available, do a risk assessment to identify alternative options.</p> <p><b>HSE</b></p> <p>Traffic Control <b>Contractor &amp; HSE</b></p> <ul style="list-style-type: none"> <li>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 zone.</li> </ul>	
<p><b>Table 3: Class II Preventive Measures are recommended for Major Internal Containable Construction Activities (Type B) Continued</b></p>		<p><b>Table 3: Class III Preventive Measures are recommended for All External Non Containable Construction Activities (Type C&amp;D)</b></p>	<p>✓</p>
<ul style="list-style-type: none"> <li>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.</li> <li>All delivery equipment used (delivery wheels, pallet truck, specialist lift truck, rubbish bins etc.) must be clean and free dust, grime and dirt. All wheels to be cleaned prior to entering and leaving site ensuring no dust/dirt shed on hospital roadways.</li> </ul>		<ul style="list-style-type: none"> <li>The <b>Contractor</b> shall be obliged to conduct the works to minimise the risk of spread of Aspergillus, on the basis that this is a dust- and airborne spore which occurs naturally in organic materials and soils, and he shall do everything necessary to reduce the risk of its spread insofar as practicable throughout the period of the works, and especially during excavation, site works, demolition and cutting. Measures shall be based on dust control in this context and as</li> </ul>	

<p><b>Class III Preventive Measures are recommended for All External Non Containable Construction Activities (Type C&amp;D)</b></p>	<p>Tick ✓</p>	<p>otherwise required and on tactile barriers in general and on special procedures where direct intervention in hospital areas is required</p>	
<p>Dust Control <b>Contractor</b></p> <ul style="list-style-type: none"> <li>• Execute work by methods to minimise dust generation from construction or renovation activities</li> <li>• Provide active means to minimise dust generation and migration into the atmosphere. During dry weather soil must be regularly dampened for the period involving any ground work</li> <li>• Hoarding around construction site including the access and egress gates into the site must be fully enclosed minimising horizontal transfer of dust from site to surrounding areas</li> <li>• The Contractor shall undertake continuous dust monitoring @ locations agreed with HSE. Acceptable parameters PM<sub>10</sub> based on receptor sensitivity, no of receptors and distance from the source. Report these to the Project Manager at regular intervals of once a week. All such records shall be maintained by the contractor for the purposes of inspection during the course of the works</li> <li>• The contractor shall in all cases ensure that adequate retention measures are in place and maintained to ensure the minimum practicable dust transmission to areas retained in use by the Employer.</li> <li>• In the event of dust transmission to areas retained in use by the Employer, the Contractor shall at no expense to the Employer take such action as the Employer's representative may consider reasonable in the circumstances to minimise the risk.</li> <li>• The Contractor shall maintain the site in a clean condition at all times, and shall not allow situations to arise in which cleaning will result in higher dust concentration than required for the proper execution of the works. Organic refuse and spoil shall be removed from the site where not required – and all top soil to be moved shall be dampened if necessary to minimise resulting dust generation.</li> </ul>		<ul style="list-style-type: none"> <li>• The Contractor shall ensure that site staff do not use hospital facilities, save where necessary, and shall ensure that through Safety Statements, instruction, and general notices, all persons on-site are fully informed in relation to Aspergillus risk and are obliged to take all reasonably practicable measures to avoid such risk, and shall cooperate with the Hospital representatives on an on-going basis in respect of the same</li> <li>• Spray excavation works, demolished works or other dust generating works during dry weather or where dust is likely to be generated</li> <li>• The Contractor shall provide cold water, at regular intervals for local watering of the site to control dust transmission at regular intervals throughout</li> <li>• Vehicular exits shall provide a drain grid, over which all vehicles shall pass and shall be hosed by a person maintained for that purpose, to ensure that wheels are clean and dust is dampened in all cases.</li> <li>• The Contractor shall manage the programme for the installation of all site services by specialist subcontractors to ensure that, where all such site services are to be installed in trenches formed by the Contractor, such works shall be carried out immediately on the forming of such trenches by the Contractor. The Contractor shall further ensure that all such site services trenches are temporarily covered with a concrete topping on completion of the services installation where such trenches would otherwise remain open for any duration during the course of the works</li> </ul>	
<p><b>Table 3: Class III Preventive Measures are recommended for All External Non Containable Construction Activities (Type C&amp;D)</b></p>	<p>✓</p>	<p><b>Table 3: Class III Preventive Measures are recommended for All External Non Containable Construction Activities (Type C&amp;D)</b></p>	<p>✓</p>
<p>Debris removal &amp; cleaning <b>Contractor</b></p> <ul style="list-style-type: none"> <li>• The Contractor shall ensure that all containers, skips or vehicles entering or leaving the site and containing soil, debris or any material, which may generate dust, are enclosed on all sides and sprayed down with water or are covered with dampened dust proof sheets.</li> </ul>		<p>Traffic Control <b>Contractor &amp; HSE</b></p> <p>The Contractor shall in particular and without prejudice to the generality of this document</p> <ul style="list-style-type: none"> <li>• Ensure that site traffic and hospital traffic remain separated throughout the period of risk</li> <li>• Cover / dampen and not overload all</li> </ul>	

<p>Infection Prevention and Control <b>HSE</b></p> <ul style="list-style-type: none"> <li>• Approval must be sought from IPCT for the construction activity and the permit to be issued</li> <li>• Ensure that dust is minimised from the construction site and that the construction site measures are being adhered to Infection Prevention and Control</li> <li>• Approval must be sought from IPCT for the construction activity and the permit to be issued</li> <li>• In collaboration with Capital &amp; Estates ensure that dust is minimised from the construction site and that the construction site measures are being adhered to</li> <li>• Ensure that cleaning is adequate to minimise dust within the hospital</li> </ul> <p>Patient Risk Reduction <b>HSE</b></p> <ul style="list-style-type: none"> <li>• No specific requirement for risk group 1</li> <li>• If possible move at-risk patients (Groups 2-4) who are adjacent or near to the construction zone</li> <li>• Ensure that patients do not go near construction zone</li> <li>• All windows, doors, air intake and exhaust vents should be sealed in areas of the hospital containing at-risk patients (Groups 2-4), if the construction or demolition work is considered likely to result in Aspergillus-contaminated air entering these areas <b>Contractor as per HSE direction</b></li> <li>• High and very high-risk patients (Groups 3-4) should preferably be treated in HEPA-filtered, positive pressure isolation rooms or facilities or if not available, do a risk assessment to identify alternative options</li> </ul>		<p>vehicles carrying friable or granulated material, in order to contain dust</p> <ul style="list-style-type: none"> <li>• In collaboration with the <b>HSE</b> 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 zone.</li> <li>• 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</li> <li>• All delivery equipment used (delivery wheels, pallet truck, specialist lift truck , rubbish bins etc.) must be clean and free dust, grime and dirt and must be suitable for movement through the hospital road network. All wheels to be cleaned prior to entering and leaving site ensuring no dust/dirt shed on hospital roadways</li> </ul>
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**Table 3 (above): Measures as per National Guidelines for the prevention of Nosocomial Aspergillosis (2018)**