Work Instruction

Infrastructure and Assets Infection Prevention During Construction, Renovation, Repairs and Maintenance

1. Purpose

This document describes cleaning required during and following completion of construction, repairs or maintenance works in West Moreton Health (WMH) facilities and sites to ensure the provision of clean healthcare environment and to prevent and control healthcare associated infections.

2. Scope

This document applies to permanent, temporary or casual staff including contractors, consultants and students engaged in construction, renovation, repairs and maintenance work at any WMH site.

3. Instruction

Infection prevention is a priority for West Moreton and is an integral part of construction, renovation and maintenance activities to prevent contamination of health care facilities. Current construction practices can impact on patient wellbeing by disseminating bacteria and filamentous fungi that can cause nosocomial infections. Lack of planning, risk identification and risk control practices to abate airborne contaminants during construction can lead to serious environmental contamination within a health care facility.

This work instruction sets out the risk management process that is to be adopted when undertaking construction, renovation and maintenance activities within WMH facilities.

It is informed by the manual for "Infection Control Principles for the Management of Construction, Renovation, Repairs and Maintenance within Health Care Facilities" (the manual) and the Australasian Health Facility Guidelines Part D: Infection Prevention and Control guideline. Please refer to the manual and the guidelines when undertaking work on WMH facilities.

3.1 Risk Assessment and Control Plan

For all construction, renovation and maintenance activities an "Infection Prevention Risk Assessment" must be undertaken in accordance with Appendix C at the start of infrastructure works. This assessment will determine potential hazards to susceptible patients, and will prevent unnecessary exposures of patients, visitors and staff to infectious agents. The risk assessment and action plan comprising five key steps should include:

- 1. Identification of the construction activity type.
- 2. Selecting the infection control risk group.
- 3. Determining the construction classification class.
- Implementation of the infection prevention and control construction manual.
- 5. Issuing a permit for all class III and class IV work undertaken





Note: Information on activity, groups, construction classification class and guidelines are detailed within the Appendix 2 of the manual.

3.2 Additional WMH requirements before work starts

An "Environmental Disturbance Control" permit must be issued for all class III and class IV work undertaken in accordance with Appendix B.

Where indicated as a result of the type of construction activity, the risk assessment must determine the effect of the construction work on ventilation upstream and downstream. An assessment of the requirements for dust barriers and HEPA filter units should be included in the risk assessment.

The risk assessment should determine if air sampling and particle counts will be required during works and before handover. (Air sampling is recommended for commissioning and recommissioning of operating rooms and clean rooms or in areas that may impact on immunocompromised patients. Air sampling requirements are detailed in the manual).

Risk controls must include: -

- Establishing a process for building material transport and storage considering additional cleaning needs if common area (e.g. lifts) are used during material transportation.
- Establishing daily cleaning requirements of the site by maintenance and building staff.
- Provision of education about the infection prevention impact of construction to staff and construction workers.

3.3 Additional WMH requirements during work

For class III and class IV work a daily survey is to be completed in accordance with Appendix A

The appropriate level of infection prevention precautions will be undertaken in accordance with the completed risk assessment.

Clean hands as required, including before applying and after removing PPE

Where maintenance work is undertaken in isolation rooms, ensure correct personal protective equipment (PPE) is used based on the requirements noted outside the room. Wipe tools and trolleys down using detergent or detergent and disinfectant wipes.

Floor mats or similar should be placed at the entrance to the work site to reduce the amount of dust and dirt to be carried out into hallways and other common areas.

During construction, renovation and maintenance work a 'clean as you go' philosophy is to be used. It is expected the requirements outlined in "Appendix 2: Risk Matrix for Acute Facilities' of the manual for "Infection Control Principles for the Management of Construction, Renovation, Repairs and Maintenance within Health Care Facilities" will be followed.

For occupied areas, remove all trolleys, equipment and tools from clinical areas and return to the maintenance area. Under no circumstances should building materials or tools be left unattended in public areas or clinical space.

Note: This general daily cleaning will not be done by Operational Support Services staff and is to be completed by the staff undertaking construction, renovation and maintenance work.

Where common areas such as lifts and hallways will be used to transport construction materials, it may be necessary to negotiate increased cleaning with Operational Support Services to make sure public areas are kept to an accepted standard. This should be negotiated between the Project Manager/Maintenance Manager and the Manager Hotel Services.

3.4 Additional West Moreton requirements after works

It is the responsibility of the maintenance and building contractors to undertake a full 'builders clean' of the work site prior to a 'clinical clean' being undertaken by Operational Support Services staff. A builder's clean should be undertaken in accordance with "Appendix No1: Risk Matrix for Sub-Acute Facilities" as outlined in the manual.

A clinical clean is required after a builder clean has been completed. Operational Support Services or an external cleaning contractor can be engaged to conduct a clinical clean. Clinical cleans will only be undertaken by Operational Support Services when project funding is provided, and the following notice is given to the Manager Hotel Services by the Project Manager to allow for appropriate rostering:

- Full ward area/ large area/ major works 2 weeks' notice.
- Small room/ small room/ minor works 48 hours' notice.

NB: If it has been determined air sampling and particle counts are required allow enough time for culturing and results prior to handover.

4. Roles and Responsibilities

Role	Responsibility
Facility Maintenance Manager	Desk top review of forms, and random visual observations of activities

5. Monitoring and Evaluation

Level of risk	Medium
What will be monitored	Evidence of clinical cleans undertaken following maintenance work in clinical areas
How (method)	Desk top review of forms, and random visual observations of activities
Frequency	Annual
Responsible officer	Facility Maintenance Manager
Reporting to	Chief Engineer

6. Related West Moreton Documents

List alphabetically only those that are directly referenced within the body of the document.

Policy and Procedure Documents	• Nil
Located on the WMH Policies and Procedures A-Z Listing page	
Clinical Guidelines/Pathways	• Nil
Other	• Nil

7. Compliance Requirements and Obligations

Legislation and other compliance requirements	Australasian Health Facility Guidelines Part D: Infection Prevention and Control
National Safety and Quality Health Service (NSQHS) Standards	3. Preventing and Controlling Healthcare-Associated Infection
Other Standards	Infection prevention and control systems

8. References and Resources

WMHHS2014120 WSW - Work Health and Safety, policy

WMHHS2016097 WSW - Permit to Work, procedure

WMHHS2013371 Infection prevention – Standard Precautions, procedure

Australasian Health Facility Guidelines Part D: Infection Prevention and Control

Queensland Health Cleaning Services Policies, Standards and Operational Guidelines – Environmental Cleaning http://gheps.health.gld.gov.au/sosu/html/cleaning_man.htm

Health Hand Hygiene Australia - http://hha.org.au/

Australian Commission on Safety and Quality in Healthcare (2010) -

http://www.safetyandquality.gov.au/our-work/healthcare-associated-infection/

Manual for "Infection Control Principles for the Management of Construction, Renovation, Repairs and Maintenance within Health Care Facilities" https://www.health.qld.gov.au/clinical-practice/guidelines-procedures/diseases-infection/infection-prevention/management-plans-guidance

9. Development, Revision and Approval History

ID & Version No.	Approval Date	Effective Date	Review Date	Document Custodian/Author	Approving Authority			
WMHHS2016089V1	24/10/2016		24/10/2019	Director, Service Support	Director, Service Support			
WMHHS2016089V1.1	16/12/2016		16/12/2019	Director, Service Support	Director, Service Support			
WMHHS2016089V2	23/10/2020	26/10/2020	23/10/2023	Chief Engineer, Infrastructure and Assets	Position: Director, Service Support			
					Signature:			
	Summary of o	changes						
		de information/bac	kground as to why the	ne document was developed e.g. r	new treatment for an identified			
	risk) Scheduled review, substantial changes including: Scheduled review, minor changes including: Additional information added into 3. Instruction, Additional information added regarding Environmental Disturbance Control" permit, 4. Roles and Responsibilities added, Appendices updated. Scheduled review, nil changes Reviewed due to: (e.g. legislative change, recommendations from coronial inquiry/RCA, change in service delivery model, new equipment), changes include:							

10. Key Words

Repair, Maintenance, Infection Prevention, Renovation

11. Appendices

Appendix A - Infection prevention survey

Appendix B - Environmental Disturbance Control Permit

Appendix C - Infection prevention risk assessment and control plan

Appendix A - Infection prevention survey

West Moreton Health

Infection prevention daily compliance survey

Work order

T CHINCHAINDEL.		number:				
Company:		Vendor OIC name:				
Date:		Time:				
Reviewer:						
Location:						
Work description:						
Special conditions:						
Clinical considerations:						
Construction barricade	Yes	NA	Corrected			
Barriers sealed, no penetrations						
Walk off mats in place and clean						
Barrier doors have closers and they are working						
Door frames have gaskets, doors close and seal properly						
Signs posted informing about spread of dust						
Adjacent ceiling areas intact						
Adjacent floor is clean and no dust tracked						
Comments:						
Negative air		_				
Negative pressure at barrier entrance						
All windows and doors closed behind barrier						
Negative air units or exhaust fans running						
Negative air units filters clean						
Negative air units discharge ducts intact						
Comments:						
Jobsite						
Project/work area is clean and debris removed daily						
Debris removed in suitable containers						
Debris removed at time specified						
Comment						





Occupied Areas	Yes	NA	Corrected	
Work authorised and scheduled		П		231125122
Barrier in place and properly sealed				
Ceiling access sign posted			<u> </u>	
Surrounding areas are clean				
Comments				
REVIEW ACKNOWLEDGEME		n site:		
		n site:		
REVIEW ACKNOWLEDGEME I understand the conditions of this review and will abide by all safe work procedures. I agree to make	Officer in charge o	ın site:		
I understand the conditions of this review and will abide by all safe	Officer in charge of	ın site:		
I understand the conditions of this review and will abide by all safe work procedures. I agree to make the required infection prevention	Officer in charge o Name: Signature:	ın site:		
I understand the conditions of this review and will abide by all safe work procedures. I agree to make the required infection prevention	Officer in charge o Name: Signature:	n site:		
I understand the conditions of this review and will abide by all safe work procedures. I agree to make the required infection prevention changes. REVIEW CLOSEOUT I hereby certify that issues identified	Officer in charge of Name: Signature: Date: Officer in charge:	n site:		
I understand the conditions of this review and will abide by all safe work procedures. I agree to make the required infection prevention changes. REVIEW CLOSEOUT	Officer in charge of Name: Signature: Date:	in site:		

Work order number:

Permit number:

Appendix B - Environmental Disturbance Control Permit

West Moreton Health

Environmental Disturbance Control Permit

Permit for the control of construction dust, debris and excavation dust to prevent outbreaks of aspergillosis or related nosocomial fungal infections in immunocompromised patients.

Permit number		Work order number:					
Requested by name:		Phone number:					
Company:		Vendor OIC name:	Vendor OIC name:				
Start date:		Finish date:					
Finish date:		Finish time:					
Location:							
Work Description:							
Special considerations:							
Clinical considerations:							
Associated Permits on Issue							
☐ Working at height	□ Excav	ation	☐ Communications room acce			n access	
☐ Fire services isolation	☐ Electri	cal/Mechanical isolation	□ Fi	ire pene	etration		
☐ Asbestos work area acce	ess 🗆 Hotwo	ork	☐ Live (En				
☐ Confined space							
Environmental Disturbance C	Control Measures						
☐ Infection prevention risk assessment completed		uction barricades in place ea sealed off	Negative pressure air within construction area			within	
 Area access control to be implemented 		oning and/or temporary be installed	 Ceiling access risk assessme completed 			sessment	
☐ Site cleaning procedures in place	filtered vacuum cleaner ised						
Conditions of Permit	Conditions of Permit						
Communication and risk contr			☐ Yes	□ No			
Daily compliance survey:							
Monitoring required:					☐ Yes	□ No	
Clinical clean to be undertaker	n:				☐ Yes	□ No	

Approval

I understand the conditions of this permit and will abide by all safe

work procedures.	Name:							
	Signature:	Date						
I am satisfied that persons impacted have been consulted. I approve the	Infrastructure and Assets author Name:	ised person						
works specified in this permit.	Signature:	Date						
Completion of Work								
Did the work create dust or potentially or patient areas (including plants room			☐ Yes	No				
Specify areas affected:								
Has a clinical clean been undertaken	Has a clinical clean been undertaken in the identified areas:							
Specify the cleaning process (i.e. was	ste removal, vacuum with HEPA fi	ter, wet wipe with bacterial agent)						
Is a "Certificate of Analysis" required f	or the areas impacted (attach a co	opy of the report)	□ Yes	□ No				
Report Details (provide a summary of nominated intervals):	the air monitoring process under	aken i.e. passive or active, and the	reported Ci	FU at				
Service Provider		Date						
Can the impacted area be re-occupied	d		☐ Yes	□ No				
I hereby certify that the work is complete, and areas inspected have been made safe. All services have	Officer in charge on site: Name:							
been restored. Impacted staff have been notified	Signature:	Date						
Endorsement								
I hereby advise that the work is	Infection Prevention Control Offi	per						
complete, and areas inspected have been made safe	Name:							
	Signature:	Date						
Close Out Permit								
I hereby certify that the work is complete, and areas inspected have	Infrastructure and Assets author	ised person						
been made safe. All services have been restored. Impacted staff have	Name:							
been notified	Signature:	Date						

Officer in charge on site:

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Appendix C - Infection prevention risk assessment and control plan

West Moreton Health

INFECTION PREVENTION RISK ASSESSMENT & CONTROL PLAN

Work De	etail								
Title:	Title: Work Description:								
Work Le	ad	٧	Work Order No:				Permit No:		
WMH Facility:			Building Name /No.				Facility Ad	dress:	
Contract	Contractor Name: Contra			l:			Contractor	Phone I	No.:
Where is conducte	s the work going to be ed		☐ High Risk Treatme ☐ Treatment Area ☐ Ward / Patient Ca		□ External				as
Start Date:		Start Time:			Finish Date:			Finish Time:	
Approva									
Control F All work Individua Assessm	formation on activity, gi Principles for the Mana identified as class III o als approving this docu nent and Control Plan. or Name (PRINT):	gement of r class IV is	Construction, Renova s required to have a p	ation, permit e app	Repairs ar issued be	nd Mainte fore the v ss of cor	enance withii vork comme	n Health (nces.	Care Facilities".
Supervis	or Signature:		Date:	Date	E:				
1 - Ident	ify the Services that	may be Ir	mpacted by the wo	rk					
☐ Elect			☐ Natural / LP Gas			☐ Fire Detection / Prevention			
	munications		□ HVAC				☐ Lift / Access		
☐ Wate	er		☐ Medical Gas	as Other (specity)	
2 – Iden	tify the Construction	n Activity	Туре						
The con the Heat	struction activity type ting, Ventilation and A type that applies.	is defined	by the amount of du		at is gene	rated, du	ration of the	activity	and any impact on
☐ Type		☐ Type	R.	Тп	Type C:			⊠ Tvr	ne D:
Inspect upkeep	tions and general activities	Small se duration creates	cale, short n activities, which minimal dust	☐ Type C: ☑ Type D: Any work that generates a moderate to high level of dust ☑ Type D: Major demolition and construction projects				demolition and uction projects	
to: remo for vi (limit m²); paint sand wall elect mino any a gene cuttir acce than	by but is not limited eval of ceiling tiles isual inspection ted to 1 tile per 5 ting (but not ding); installation of covering; trical trim work; or plumbing; activities that do not erate dust or require tess to ceiling other for visual ection.	to: illing tiles section le per 5 not allation of telephone and computer cabling; access to chase spaces; cutting into walls or ceiling where dust migration can be controlled. work; ng; that do not to require alls or ling other			or wall o	or painting covering / g tiles and action; or bove	to: • hea • rem	es, but is not limited any demolition; noval of a complete ling system; w construction.	

3 - Identify the Infection Control Risk Groups Note: The infection control risk groups as defined in the table below are indicative only. Where possible, work should be conducted after patient care hours. If more than one area will be affected, select the higher risk category. Tick the group that applies.							
☐ Group 1 - Low	☐ Group 2 - Medium	1	☐ Group	3 –	Medium / High		Group 4 - Highest
Office areas Public areas Non-patient / low risk areas not listed elsewhere i.e. workshops, plant rooms (subject to risk assessment)	Patient care and of areas not listed und Groups 3 or 4 Laundry Cafeteria Dietary Materials managen Allied Health Admissions / disch MRI Nuclear medicine Echocardiography Laboratories not spunder Group 3 Public corridors uspatients and to trar linen & supplies	Emergency department Medical imaging - general Recovery rooms High dependency units Newborn nurseries Paediatrics (except paediatric ICU) Microbiology labs Virology labs Long stay-sub-acute units Pharmacy Endoscopy Bronchoscopy Dialysis			• F • C • C • C • C • C • C • C • C • C	Oncology units Radiation therapy Oncology clinical areas Chemotherapy Pharmacy admixture / clean rooms Operating rooms Sterile supply units Cardiac catheterisation Angiography rooms Outpatient invasive orocedure rooms Anaesthetic and pump ooms All intensive care units - adult, paediatric, neonatal	
	Type A		Туре В		Type C		Type D
Group 1 - Low	☐ Class I	□а	☐ Class II ☐ Class II		☐ Class II		☐ Class III / IV
Group 2- Medium	□ Class I	□а	ass II	☐ Class III			☐ Class IV
Group 3 – Medium / High	☐ Class I	Па	ass III		☐ Class III / IV		☐ Class IV
Group 4 - Highest	☐ Class III	□ a	ass III / IV		☐ Class III / IV		☐ Class IV
5 – Implement the Infec	tion Control Construction	n Risk Pl	lan				
Class Guideline			Tick selected control	De	tails of Controls		
raising of Class I operation							
Replace any ceiling tile displaced for visual inspection as soon as possible.							
Notes: (outline of any	additional controls and c	ommuni	cations. Atta	ch s	sketches and floor	plans	as required)
Class Guidelin		Tick selected control	De	tails of Controls			
Class II borne di atmospl	active means to prevent ust from dispersing into nere. Consider spray mis n work surfaces while cu						
water or	I WOLK SULIACES WILLE CO	turiy.					

	2.	Seal unused doors with duct tape or		
		similar.	_	
	3.	Isolate HVAC system in areas where		
		work is being performed or cover air		
		vents with filters.		
	4.	Place dust-mat at entrance and exit of		
		work area and replace or clean when		
		no longer effective.		
	5.	Contain construction waste before		
		transport in tightly covered containers.		
	6.	Wet mop and/or vacuum with HEPA		
		filtered vacuum.		
	7.	Wipe casework and horizontal		
		surfaces at completion of project.	П	
Notes: (9	Subn	nit drawings and details of construction of	necessary to	emporary barriers, and description of procedures
		achieve and maintain control of construc		
				•
			Tick	
Class	Gu	ideline	selected	Details of Controls
			control	
	1.	,	_	
		work is being done to prevent		
	_	contamination of the duct system.		
	2.	Complete all construction barriers		
	L	before construction begins.		
	3.	Place dust-mat at entrance and exit of	_	
		work area and replace or clean when		
	_	no longer effective.		
	4.	Maintain negative air pressure within		
		work site utilising HEPA filtered		
		ventilation units or other methods of	_	
		maintaining negative pressure. In		
		each jurisdiction, the relevant public		
		safety officers will monitor air		
	L_	pressure.		
Class	5.	Wet mop or vacuum twice per eight-		
III		hour period of construction activity or		
		as required in order to minimise		
	_	tracking.		
	6.	Contain construction waste before		
	L_	transport in tightly covered containers.		
	7.	Remove barrier materials carefully to		
		minimise spreading of dirt and debris		
		associated with construction. Barrier		
		material should be wet wiped, HEPA		
		vacuumed or water misted prior to		
	_	removal.		
	8.	Do not remove barriers from work	_	
		area until complete project is		
	_	thoroughly cleaned.		
	9.	Wipe casework and horizontal		
	<u> </u>	surfaces at completion of project.		
Notes: (S	Subn	nit drawings and details of construction of	necessary to	emporary barriers, and description of procedures
to be use	ed to	achieve and maintain control of construc	tion-related a	airborne contaminants).

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Class	Guideline	Tick selected control	Details of Controls
	Isolate HVAC system in area where	COILLO	
Class IV	work is being done to prevent		
	contamination of the duct system.	_	
	Complete all construction barriers		
	before construction begins.		
	3. Place dust-mat at entrance and exit of		
	work area and replace or clean when		
	no longer effective.		
	Seal holes, pipes, conduits, and		
	punctures to prevent dust migration.	1	
	Construct Anteroom and require all		
	personnel to pass through the room.		
	Wet mop or HEPA vacuum the	_	
	Anteroom daily.		
	During demolition, dust producing		
	work, or work in the ceiling, disposable shoes and coveralls are to be worn		
	and removed in the Anteroom when		
	leaving work area.		
	Maintain negative air pressure within		
	work site utilising HEPA filtered		
	ventilation units or other methods of	_	
	maintaining negative pressure. In each		
	jurisdiction, the relevant public safety		
	officers will monitor air pressure.		
	8. Keep work brooms clean and remove		
	debris daily.		
	Contain construction waste before		
	transport in tightly covered containers.		
	Barrier material should be wet wiped,		
	HEPA vacuumed or water misted prior		
	to removal.		
	11. Remove barrier materials carefully to		
	minimise spreading of dirt and debris associated with construction.		
	12. Do not remove barriers from work area		
	until complete project is thoroughly		
	cleaned.	_	
	13. Wipe casework and horizontal	_	
	surfaces at completion of project.		
	14. Wet mop hard surface areas at		
	completion of project, HEPA vacuum		
	carpeted surfaces at completion of		
	project.		
Notes: (Submit drawings and details of construction of necessary temporary barriers, and description of procedures			
to be use	d to achieve and maintain control of construct	tion-related a	airborne contaminants).

Printed copies are uncontrolled. Refer to the Policy and Procedures Listings Page for the latest version.