

**Handouts -
WORKING IN
CEILING SPACES**

March 2022



Emergencies - who is going to save you and what is the best course of action to take?

Note: reference WHS Regulations NSW 2017 (Division 4 – Emergency Plans)

You must prepare, maintain and implement an Emergency Rescue Plan that would also be referenced in the site-specific safe work method statement (control measures).

WORKING IN CEILING SPACES – EMERGENCY RESCUE PLAN			
Site Supervisor Name / Number:		Site Rescuers Name/s:	
		Site rescuers’ training Examples: <ul style="list-style-type: none"> • First aid • Confined space • Fire fighting • Working at heights 	List:
Site Address:		Nearest cross street:	
Work zone location:		Can Emergency Services have direct access to the work zone location?	Yes = Name of spotter to direct Emergency Services to area:
Communications with height workers(circle)	Verbal/visual Mobile phone Walkie talkies Other: _____	Yes/No (Circle) Estimate Emergency Services response time:	No = nominate how
Removal Method:	Lowering to EWP Lowering with safety harness Lowering on stretcher	Rescue equipment (circle)	<ul style="list-style-type: none"> • Emergency rapid response kit • EWP • Platform ladder • Safety harnesses • Stretcher • Rope • Lanyard

Appendix A – Hazard Identification Checklist –Working in Ceiling Spaces

Section 1.0 Work Activities

1. Electrical and/or communications installation or maintenance?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
2. Mechanical Installation or maintenance?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
3. Fire Detection Installation/ maintenance?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
4. Hydraulic services installation/maintenance?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
5. Gas services installation/maintenance?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
6. Inspection only, pre-purchase, pest, plant?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
7. Removal of asbestos?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
8. Installation or removal of insulation?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
9. Vermin/pest removal?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
10. Hotworks?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
11. Structural alterations/additions?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
12. Roofing repairs/access hatches?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
13. Other please specify?.....	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>

Section 2.0 Access

1. Access to ceiling space via manhole/access panel?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
2. Access to ceiling space via ceiling tiles?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
3. Access to ceiling space via plant room door?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
4. Access to ceiling space via roof?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
5. Access and egress to the work area?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
6. Entry space adequate to permit tools equipment and required materials?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
7. Access via platform ladder?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
8. Access via extension ladder?			
9. Access via mobile plant e.g. EWP?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
10. Access via mobile scaffold?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
11. Access via existing fixed access ladder?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
a. Handrails present?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
b. In good working order?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>

Section 3.0 Workspace Environment

1. Ceiling layout - joists and plasterboard?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
2. Suspended/false ceiling?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
3. Existing working boards - platforms present?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
4. Roof or anchor points present? Evidence of recent Inspection?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
5. Adequate lighting present?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
6. Structural stability to take loads?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
7. Clear exclusion zone beneath space available?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
8. Roofing mesh present if accessing via roof?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
9. Adequate ventilation present?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
10. Is the ceiling void a confined space?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>

Section 4.0 Hazards

1. Working at heights?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
2. Electrical?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
3. Solar panels - alternate electricity supply i.e. battery banks/ inverters timed circuits/generator backups?			
4. Mechanical ducts?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
5. Fire detection?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
6. Water or gas piping?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
7. Asbestos containing material present?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
8. SMF Insulation or metalised foil Insulation present?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
9. Evidence of pest - vermin/snakes/possums other animals present?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
10. Hazardous dust present? e.g. lead, asbestos, faecal.	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
11. Visible dust present?			
12. Evidence of mould or water penetration?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
13. Confined Space?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
14. Oxygen levels to be monitored – 21% to be maintained	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
15. Temperature of work area to be monitored?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
16. Manual handling - gaining access difficulties/lifting materials/equipment to work area?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
17. Adequate space to work in?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
18. Structural stability of work platforms?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
19. Isolated work?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
20. Are there any lifts, service risers, voids, penetrations?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>

Section 5.0 Emergency Response

1. Spotter present and monitoring works?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
2. What is the communication method in an emergency?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
3. Has the rescuer been trained? Is the training current?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
4. First aid/firefighting equipment present?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
5. Safe measures of lowering person/s to ground level?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
6. How will emergency services be notified?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>
7. What is the likely response time for emergency services? Has the plan been tested?	Y <input type="checkbox"/>	N <input type="checkbox"/>	N/A <input type="checkbox"/>

Appendix B – Sample Safe Work Method Statement – Working in Ceiling Spaces

<p>NOTE: Work must be performed in accordance with this SWMS.</p> <p>This SWMS must be kept and be available for inspection until the high-risk construction work to which this SWMS relates is completed. If the SWMS is revised, all versions should be kept.</p> <p>If a notifiable incident occurs in relation to the high-risk construction work in this SWMS, the SWMS must be kept for at least two years from the date of the notifiable incident.</p>			
[PCBU Name, contact details]		Principal Contractor (PC)	[Name, contact details]
Works manager:		Date SWMS provided to PC:	
Contact phone:			
Work activity:	WORKING IN CEILING SPACES	Workplace location:	
High-risk construction work:	<input checked="" type="checkbox"/> Risk of a person falling more than two metres (<i>note: in some jurisdictions, this is three metres</i>)	<input type="checkbox"/> Work on a telecommunication tower	<input type="checkbox"/> Demolition of a load-bearing structure
	<input checked="" type="checkbox"/> Likely to involve disturbing asbestos	<input type="checkbox"/> Temporary load-bearing support for structural alterations or repairs	<input checked="" type="checkbox"/> Work in or near a confined space
	<input type="checkbox"/> Work in or near a shaft or trench deeper than 1.5 m or a tunnel	<input type="checkbox"/> Use of explosives	<input type="checkbox"/> Work on or near pressurised gas mains or piping
	<input type="checkbox"/> Work on or near chemical, fuel or refrigerant lines	<input checked="" type="checkbox"/> Work on or near energised electrical installations or services	<input type="checkbox"/> Work in an area that may have a contaminated or flammable atmosphere
	<input type="checkbox"/> Tilt-up or precast concrete elements	<input type="checkbox"/> Work on, in or adjacent to a road, railway, shipping lane or other traffic corridor in use by traffic other than pedestrians	<input type="checkbox"/> Work in an area with movement of powered mobile plant
	<input checked="" type="checkbox"/> Work in areas with artificial extremes of temperature	<input type="checkbox"/> Work in or near water or other liquid that involves a risk of drowning	<input type="checkbox"/> Diving work
Person responsible for ensuring compliance with SWMS:		Date SWMS received:	
What measures are in place to ensure compliance with the SWMS?	Note: How do you intend to monitor SWMS Compliance		
Person responsible for reviewing SWMS control measures:		Date SWMS received by reviewer:	
How will the SWMS control measures be reviewed?			
Review date:		Reviewer's signature:	

What are the tasks involved?	What are the hazards and risks?	What are the control measures?
List the work tasks in a logical order.	Identify the hazards and risks that may cause harm to workers or the public.	Describe what will be done to control the risk. What will you do to make the activity as safe as possible?
Note: HRCW activities are listed in this column.	Note: These hazards and risks refer to High-Risk construction work as defined in Clause 291.	Keep it simple and practical – this is what you will need to monitor your compliance against.
Before entering the ceiling space.	Exposure to hazardous substances and airborne contaminants	Request a hazardous substance register from the building owner/manager.
Before entering the ceiling space, isolate the electricity supply or circuits. Once electricity is turned off assess the ceiling space.	Electrocution	<p>Obtain sign off from a licensed electrician that the electricity has been isolated or shut off.</p> <p>Check the building or property appliances/lights etc. to ensure the electricity (circuit) has been turned off or removed to isolate the power source.</p> <p>Use a volt stick to check wiring and any exposed metallic material (metalised or reflective foil insulation can become energised, resulting in electrocution, serious injury or death if you encounter the exposed wire or metal).</p> <p>Do not walk over cables. Keep all tools clear of cables. Never assume cables are de-energised, treat all cables as live.</p> <p>Report any damaged wiring or circuits to the building manager/client so repair can be undertaken by a licensed electrician before works commence.</p> <p>Consider potential circuits on timers such as lights that may test dead but switch on during work and generator-backed circuits that may be labelled at the circuit breaker but not necessarily at the wiring. These could become live in a blackout or other power loss event.</p> <p>Be aware of the location of electrical cables, fittings and equipment and avoid contact with them.</p>
<p>Conduct a pre-work risk assessment of the ceiling space – refer to Appendix A.</p> <p>Look within the ceiling space/cavity to identify hazards that may pose risks.</p>	<p>Falls from heights</p> <p>Falls through ceiling space falling object from heights hazardous substances in space</p>	<p>Review ceiling space from platform ladder through manhole/access panel.</p> <p>Review ceiling space from plant room access door.</p>

<p>These may include:</p> <ul style="list-style-type: none"> ● high temperatures/humidity ● evidence of vermin/pests/animals ● sharp objects ● asbestos/hazardous materials/hazardous dust ● type or no lighting ● type of insulation material ● accessibility to the work area (i.e., amped and awkward positions) ● location of electrical wiring and water or gas piping ● stability of ceiling joists/platforms etc. ● Excessive noise generated from equipment ● Type/size of materials and/or equipment that needs to enter the space ● PPE requirements ● Working alone 		<p>Review ceiling space through removal of ceiling tile within ceiling grid.</p>
<p>Develop an emergency rescue plan include – what emergency equipment is required to safely rescue the worker from the ceiling space?</p>	<p>Unable to rescue the worker Unable to provide first aid to the worker</p>	<p>Identify emergency responders.</p> <p>List emergency equipment required.</p> <p>List the communication method to be used when working within the ceiling space, e.g. spotter with visual view of the worker/s, voice, two-way radios, mobile phones, hand signals.</p> <p>Document the process of completing an emergency evacuation of the worker/s or providing first aid to the worker/s.</p>
<p>Set up exclusion zone beneath the works</p>	<p>Person/s hit by falling objects</p>	<p>Ensure an exclusion zone below the works has been set up. Cordon off the area below with safety bollards, safety tape and other barricades. Notify personnel below and in surrounding area that workers are above.</p>
<p>Entering/gaining access to the ceiling space</p>	<p>Falls from heights manual handling</p>	<p>Ensure ladders have been checked prior to use and in good working order. Ensure ladders are fit for purpose.</p> <p>Ensure ladders are set up on a secure base and locked into position. Ensure worker has 3 points of contact on the ladder when using.</p> <p>Ensure ladders/platform ladders/EWPs are positioned and secured to enable the worker can gain access to the ceiling space without lifting themselves up into the ceiling space.</p>

<p>Set up work area in the ceiling space</p>	<p>Falls from heights</p> <p>Person/s hit by falling objects</p> <p>Manual handling – lifting equipment</p> <p>Manual handling – moving equipment</p>	<p>Wear appropriate footwear.</p> <p>Identify access paths – location of ceiling joists, method of travel to the work zone.</p> <p>Install working platforms e.g. aluminium planks with handrails, structural ply, check structural stability and load requirements of planks/existing beams/joists, ensure allowance for access and egress paths.</p> <p>Identify method of moving materials/equipment to work zone, equipment/materials to be tied to ceiling beams to stop them falling through ceiling.</p> <p>Install a safety line system to tie equipment too to stop from falling through the existing ceiling.</p> <p>Wear a safety harness and attached to certified anchor points.</p> <p>Install mobile scaffold as catch scaffold beneath the work area within the exclusion zone below, to reduce the height of fall through the ceiling.</p> <p>Working from mobile scaffold directly into ceiling space.</p> <p>Working from mechanical platform i.e. EWP boom/scissor lift directly into ceiling space.</p> <p>Limit the weight of materials to be lifted into the ceiling i.e., lift one item at a time.</p> <p>Use mechanical means e.g., hoists, genie lifts, forklifts depending on ceiling opening size, pulley system, crane for large items onto roofs.</p> <p>Two-man lifts for heavier items.</p> <p>Use dolly trolleys where planks are installed.</p> <p>Push equipment rather than pulling.</p> <p>Two-man movements where possible.</p>
<p>Carry out works in a ceiling space – high temperatures/humidity</p>	<p>Heat stress/dehydration</p>	<p>Monitor temperatures in the ceiling space.</p> <p>Reschedule works to a milder day or earlier or later in the day when the temperatures are likely to be lower.</p> <p>Take extra fluids (water, electrolytes) into the ceiling space, keep</p>

		<p>hydrated.</p> <p>Set up a fan into the ceiling space.</p> <p>Remove ceiling tiles if possible, to increase cross flow ventilation and airflow.</p> <p>Limit the duration of time in the ceiling space. Rotate workers in/out of the ceiling space.</p> <p>PPE – provide workers with cooling vests to wear.</p>
Carry out works near mechanical ductwork/hydraulic pipes/gas pipes	<p>Hitting objects</p> <p>Equipment failure/falling objects</p> <p>Lacerations</p> <p>Hazardous substances – asbestos</p> <p>Trip Hazards</p>	<p>Identify ductwork locations within the ceiling space – avoid areas for hitting objects with your head or body.</p> <p>Do not stand on ductwork or fans, these could be suspended and cannot take increased loads.</p> <p>Watch for sharp edges on ductwork or booker rods.</p> <p>Identify pipework. Look for any lagging, this could contain asbestos – do not touch or disturb.</p> <p>Identify water pipe locations within the ceiling space – avoid areas for hitting objects with your head or tripping hazards.</p> <p>Do not stand on water pipes, these could burst.</p> <p>Do not stand or lean on gas pipes, these could fracture and cause a gas leak or a full rupture.</p>
Carry out works in a ceiling space – hazardous substances	Asbestos	<p>Check the buildings hazardous substance register (if available).</p> <p>Do not touch any building materials unless a building materials audit, register or NATA testing report has been completed or provided to determine if any of the existing building materials are class A (friable) or class B (non- friable) asbestos (e.g., cladding, pipe lagging, limpet/sprayed, guttering, etc).</p> <p>Wear suitable Australian Standards approved personal protective equipment (PPE) that aligns to the nature of the work and associated hazards (e.g., disposable coveralls, P2 mask/respirator, eye protection, gloves, etc) when working in the ceiling space.</p>
Carry out works in a ceiling space – hazardous substances	Inhalation	Check the buildings hazardous substance register if available.

<p>Insulation, such as:</p> <ul style="list-style-type: none"> • asbestos (Class A – friable) • synthetic mineral fibres (SMF) • old insulation 	<p>Respiratory irritation</p> <p>Asbestosis</p>	<p>Wear appropriate PPE/disposable coveralls, P2 mask/respirator, eye protection, gloves at all times when in the ceiling space.</p> <p>Do not disturb or remove SMF insulation unless necessary.</p> <p>Do not cut any SMF insulation unless necessary, if cutting is required use of hand tools should be used.</p>
<p>Carry out works in a ceiling space – hazardous dust</p> <ul style="list-style-type: none"> • asbestos dust • SMF • lead dust • faecal dust 	<p>Inhalation</p> <p>Respiratory irritation</p> <p>Asbestosis</p>	<p>Check the buildings hazardous substance register if available.</p> <p>Do not touch any building materials unless a building materials audit, register or NATA testing report has been completed or provided to determine if any of the existing building materials are hazardous.</p> <p>Do not touch faeces – unless you are the professional engaged to clean the area.</p> <p>Wear appropriate PPE/disposable coveralls, P2 mask/respirator, eye protection, gloves at all times when in the ceiling space.</p> <p>Dispose of PPE correctly, wash hands with soap thoroughly.</p> <p>Wear appropriate, well maintained and correctly-fitted PPE when working in dusty ceiling spaces, including:</p> <ul style="list-style-type: none"> – a half-face (class P1 or P2) disposable particulate respirator, in accordance with AS/NZS 1715. – a head-covering and goggles, long-sleeved, loose-fitting clothing and gloves, to minimise skin contact with insulation material or dust. <p>Keep your work areas clean and clear of fibres and dust and place waste in plastic bags capable of containing the dust.</p> <p>Check oxygen levels regularly, 21% to be maintained.</p>
<p>Carry out works in a ceiling space – mould or water penetration present</p>	<p>Mould exposure</p>	<p>Do not touch or disturb mould areas – unless you are the professional engaged to remove the mould.</p> <p>Wear appropriate PPE/disposable coveralls, P2 mask/respirator, eye protection, gloves at all times when in the ceiling space.</p> <p>Dispose of PPE correctly, wash hands with soap thoroughly.</p>
<p>Carry out works in a ceiling space – pests/vermin/snakes/ possums or other Rare Endangered or Threatened Species (RETS) present</p>	<p>Biological Hazards</p> <p>Animal faeces</p>	<p>Inspect ceiling space prior to entering, contact a pest removal contractor to remove and clean before completing the works.</p>

	Air contamination	<p>Do not touch pests or vermin/animals – unless you are the professional engaged to remove the pests/vermin/animals.</p> <p>Wear appropriate PPE/disposable coveralls, P2 mask/respirator, eye protection, gloves at all times when in the ceiling space.</p> <p>Dispose of PPE correctly, wash hands with soap thoroughly.</p>
Carry out works in a ceiling space – excessive noise	Hearing damage	<p>Use manual tools within the ceiling space.</p> <p>Use battery operated equipment within ceiling space.</p> <p>Ensure hearing protection is worn during the works.</p> <p>Shutdown plant/air conditioners/fans if possible. If not, limit exposure – split up shifts, take regular breaks from the ceiling space, worker rotation.</p>
Carry out works in a ceiling space – working alone/isolated work		<p>Don't work in a ceiling space when you are on site/within a building alone.</p> <p>If working in an isolated area, ensure the building manager/owner/occupier or other person is notified and assign a first responder that can gain access and retrieve you from the ceiling space in line with the site/task specific Emergency Rescue Plan.</p>
Carry out works in a ceiling space – tool/equipment/material safety	<p>Falling objects</p> <p>Hitting persons</p>	<p>Restrain tools with specifically designed tool belts.</p> <p>Tools to be tied to ropes/lanyards and a bucket, secured to fixed structures i.e., rafters or ceiling grids.</p> <p>Exclusion zone beneath to be set up during the works.</p> <p>If a spotter is present and able, pass tool/equipment up/down to the worker.</p>
Housekeeping during works in ceiling space and upon completion	Trip hazards	<p>Once work has been completed:</p> <ul style="list-style-type: none"> ● Replace any insulation material that may have been disturbed or moved for access to the work area, ensuring that it is not covering any electrical fittings or equipment, especially downlights. ● Dispose of debris and waste appropriately. ● Do not leave any materials, equipment within ceiling space.
Completion of work in the ceiling space	Environmental hazards	When leaving the area, close and lock entry hatches, doors, plant

		<p>room access doors. Replace ceiling tiles.</p> <p>Personal hygiene - wash your hands, face, neck and hair with soap and water.</p> <p>Dispose of any materials at a suitably licensed facility where required.</p> <p>If working alone, notify first responder of completion of works.</p>
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Name of Worker(s)	Signature of Worker(s)
Date SWMS received by Worker(s)	