

Hot Work On Flammable Materials Risk Assessment

Business Name:	ABN:	
Business Address:		
Contact Person:	Phone:	Email:

THIS RISK ASSESSMENT IS APPROVED BY THE PCBU ON THIS PROJECT

Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a RISK ASSESSMENT is prepared before the proposed work starts.

Full Name:		
Signature:	Title:	Date:

CLIENT OR PRINCIPAL CONTRACTOR DETAILS

Client:	SCOPE OF WORKS
Project Name:	
Project Address:	
Project Manager:	
Contact Phone:	
Date Risk Assessment supplied to Project Manager:	

RISK MATRIX									
LIKELIHOOD	INSIGNIFICANT	MINOR	MODERATE	MAJOR	CATASTROPHIC	SCORE	ACTION	HIERARCHY OF CONTROLS	
ALMOST CERTAIN	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4 ACUTE			Elimination Remove the hazard.	
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED	Substitution Replace the hazard.	
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE	3H HIGH	Review before work starts.	Isolation Isolate People from the hazard	
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	2M MODERATE	Ensure control measures in place.	Engineering Isolate the hazard	
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 HIGH	1L LOW	Monitor and keep records.	Administrative Change	
								PPE	

Risk Rating & Required Action:

4A	Stop work. The risk is intolerable. Eliminate the hazard or redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or higher-level authorisation is required.
3H	Review and approve additional controls before task starts. Senior supervisor sign-off needed.
2M	Ensure all nominated controls are in place and effective. Proceed with caution; monitor conditions.
1L	Proceed, following standard operating procedures. Monitor and keep records.

Consequence Scale:

Consequence	People (injury/illness)	Project / Assets	Compliance / Reputation
Catastrophic	Fatality or permanent total disability	project shutdown	Significant regulator intervention; criminal prosecution
Major	Serious injury/illness (hospital > 5 days)	critical delay	Improvement notice; major media coverage
Moderate	Medical-treatment injury; lost-time > 1 day	moderate delay	Minor breach; adverse client comment
Minor	First-aid only, no lost time	negligible delay	Isolated non-conformance
Insignificant	No injury	no schedule impact	Deviation caught and corrected on site

Notes on Hierarchy of Controls:

Remember to apply controls in the preferred order shown by the coloured pyramid:

- Eliminate**
- Substitute
- Isolate
- Engineering
- Administrative
- PPE

Always document **why** a lower-order control is accepted if elimination or substitution is not reasonably practicable.

aligned with Safe Work Australia's Managing the risk of fatigue at work (2023) and ISO 45001:2018 clauses 6–8.

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
1. Preparation	Flammable materials present, Inadequate ventilation	3H	<ul style="list-style-type: none"> - Conduct a risk assessment for flammable materials. - Ensure appropriate ventilation in the work area. - Remove or cover nearby flammable materials. - Ensure all personnel are trained in hot work procedures. - Conduct gas monitoring for flammable vapours. - Obtain necessary permits for hot work. - Check that all fire extinguishers are operational. - Ensure emergency exits are clear. - Assign a fire watch for the duration of hot work. - Keep communication devices accessible for emergencies. 	2M
2. Site Inspection	Obstructed evacuation routes, Unstable work surfaces	3H	<ul style="list-style-type: none"> - Inspect all egress routes and keep them unobstructed. - Check the condition of work surfaces for stability. - Secure equipment to a stable surface. - Remove trip hazards from the work area. - Ensure adequate lighting is provided. - Use signage to indicate hot work zone. - Limit access to authorised personnel only. - Check weather conditions if work is outdoors. - Conduct a final inspection before starting work. - Have a checklist for site readiness. 	2M
3. Tool Selection	Incorrect tool use, Faulty equipment	3H	<ul style="list-style-type: none"> - Ensure all tools are rated for flammable environments. - Inspect all equipment prior to use. - Use non-sparking tools in flammable zones. - Ensure electrical tools are tested and tagged as safe. - Train workers on the correct use of tools. - Have spare tools and parts on hand. - Maintain tools according to manufacturer specifications. - Remove faulty or damaged tools from service immediately. 	2M

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			<ul style="list-style-type: none"> - Check compatibility of tools with materials. - Use personal protective equipment (PPE) as recommended. 	
4. Personal Protective Equipment	Inadequate PPE, Improper fit	3H	<ul style="list-style-type: none"> - Wear appropriate PPE (hard hat, safety glasses, gloves, etc.) - Ensure PPE is in good condition and properly maintained. - Verify proper fit and use of PPE. - Receive training on correct use of PPE. - Perform regular safety checks. - Establish a safety protocol for PPE use. - Conduct regular safety audits. - Provide ongoing safety training. - Encourage a safety culture. - Report any PPE issues immediately. - Keep PPE clean and dry. - Store PPE properly. - Replace PPE as needed. - Inspect PPE before use. - Use PPE for all tasks. - Do not tamper with PPE. - Follow manufacturer's instructions. - Keep PPE accessible. - Use PPE for all tasks. - Do not tamper with PPE. - Follow manufacturer's instructions. - Keep PPE accessible. 	1L
5. Hazardous Material Identification	Unknown flammable substances, Improper labelling	4A	<ul style="list-style-type: none"> - Identify all hazardous materials. - Read and understand labels and SDS. - Use appropriate PPE. - Store hazardous materials properly. - Handle hazardous materials with care. - Dispose of hazardous materials properly. - Train employees on hazardous material handling. - Conduct regular safety audits. - Establish a safety protocol for hazardous material handling. - Provide ongoing safety training. - Encourage a safety culture. - Report any hazardous material issues immediately. - Keep hazardous materials clean and dry. - Store hazardous materials properly. - Handle hazardous materials with care. - Dispose of hazardous materials properly. - Train employees on hazardous material handling. - Conduct regular safety audits. - Establish a safety protocol for hazardous material handling. - Provide ongoing safety training. - Encourage a safety culture. - Report any hazardous material issues immediately. 	2M
6. Fire Extinguisher Readiness	Inoperable extinguishers, Expired inspection tags	3H	<ul style="list-style-type: none"> - Inspect fire extinguishers regularly. - Ensure fire extinguishers are in good condition. - Replace expired inspection tags. - Train employees on fire extinguisher use. - Conduct regular safety audits. - Establish a safety protocol for fire extinguisher use. - Provide ongoing safety training. - Encourage a safety culture. - Report any fire extinguisher issues immediately. - Keep fire extinguishers clean and dry. - Store fire extinguishers properly. - Handle fire extinguishers with care. - Dispose of fire extinguishers properly. - Train employees on fire extinguisher handling. - Conduct regular safety audits. - Establish a safety protocol for fire extinguisher handling. - Provide ongoing safety training. - Encourage a safety culture. - Report any fire extinguisher issues immediately. 	2M

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7. Hot Work Permit	Lack of permit, Improper permit documentation	3H		1L
8. Fire Watch Assignment	No designated fire watch, Fatigue	4A		2M
9. Work Platform Evaluation	Unstable scaffolding, Unsafe ladders	3H		1L

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10. Material Storage Safety	Improper storage, Access interference	3H		1L
11. Ignition Source Control	Sparks from equipment, Static electricity buildup	4A		2M
12. Emergency Response Planning	Delayed emergency response, Lack of awareness	3H		1L

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13. Monitoring of Work Area	Inadequate monitoring, Unanticipated hazard development	4A		2M
14. Hot Work Execution	Equipment malfunction, Accidental ignition	4A		2M
15. Area Cleanup and Debrief	Debris causing ignition, Post-work hazards left uncontrolled	3H		1L

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SAMPLE

EMERGENCY RESPONSE – CALL 000 FOR EMERGENCIES

Ensure to have an Emergency Management Plan in place as well as adequate numbers of trained first aid staff with easy access to fully stocked first aid kits, rescue equipment, material safety data sheets, adequate access to emergency communication equipment and fire-fighting equipment suitable for all classes of fire and ignition sources.

LEGISLATIVE REFERENCES

RELEVANT LEGISLATION AND CODES OF PRACTICE. DELETE THE LEGISLATIVE REFERENCES IF ANY STATE THAT ARE NOT APPLICABLE

Queensland & Australian Capital Territory

Work Health and Safety Act 2011

Work Health and Safety Regulations 2011

Legislation QLD: <https://www.worksafe.qld.gov.au/laws-and-compliance/work-health-and-safety-laws>

Codes of Practice QLD: <https://www.worksafe.qld.gov.au/laws-and-compliance/codes-of-practice>

Legislation ACT: <https://www.worksafe.act.gov.au/laws-and-compliance/acts-and-regulations>

Codes of Practice ACT: <https://www.worksafe.act.gov.au/laws-and-compliance/codes-of-practice>

Victoria

Occupational Health and Safety Act 2004

Occupational Health and Safety Regulations 2017

Legislation VIC: <https://www.worksafe.vic.gov.au/occupational-health-and-safety-act-and-regulations>

Codes of Practice VIC: <https://www.worksafe.vic.gov.au/compliance-codes-and-codes-practice>

New South Wales

Work Health and Safety Act 2011

Work Health and Safety Regulations 2017

Legislation NSW: <https://www.safework.nsw.gov.au/legal-obligations/legislation>

Codes of Practice NSW: <https://www.safework.nsw.gov.au/resource-library/list-codes-of-practice>

Western Australia

Work Health and Safety Act 2020

Work Health and Safety Regulations 2022

Legislation Western Australia: <https://www.commerce.wa.gov.au/worksafe/legislation>

Codes of Practice WA: <https://www.commerce.wa.gov.au/worksafe/codes-practice>

Northern Territory

Work Health and Safety (National Uniform Legislation) Act 2011

Work Health and Safety (National Uniform Legislation) Regulations 2011

Legislation NT: <https://worksafe.nt.gov.au/laws-and-compliance/workplace-safety-laws>

Codes of Practice NT: <https://worksafe.nt.gov.au/laws-and-compliance/codes-of-practice>

Safe Work Australia Links

Law and Regulation (All States): <https://www.safeworkaustralia.gov.au/law-and-regulation>

Model Codes of Practice: <https://www.safeworkaustralia.gov.au/resources-publications/model-codes-of-practice>

Model Codes of Practice

- Managing noise and preventing hearing loss at work
- Confined spaces
- Labelling of workplace hazardous chemicals
- Managing risks of hazardous chemicals in the workplace
- Welding processes
- First aid in the workplace
- Managing the risk of falls at workplaces
- Hazardous manual tasks
- Managing the risk of falls in housing construction
- Managing electrical risks in the workplace
- Demolition work
- Excavation work
- Work health and safety consultation, cooperation and coordination
- Managing the work environment and facilities
- How to manage work health and safety risks
- Managing risks of plant in the workplace
- Construction work

South Australia

Work Health and Safety Act 2012 (SA)

Work Health and Safety Regulations 2012 (SA)

Legislation for SA: <https://www.safework.sa.gov.au/resources/legislation>

Codes of Practice for SA: <https://www.safework.sa.gov.au/workplaces/codes-of-practice#COPs>

Tasmania

Work Health and Safety Act 2012

Work Health and Safety (Transitional and Consequential Provisions) Act 2012

Work Health and Safety Regulations 2012

Work Health and Safety (Transitional) Regulations 2012

Legislation for TAS: <https://worksafe.tas.gov.au/topics/laws-and-compliance/acts-and-regulations>

Codes of Practice for TAS: <https://worksafe.tas.gov.au/topics/laws-and-compliance/codes-of-practice>

Details of permits, licenses or access required by regulatory bodies (add or delete as required):

- Permits from local council
- Authorisation to commence work
- Any required documents.