

Manage Extraction Operations Risk Assessment

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

THIS RISK ASSESSMENT IS APPROVED BY THE PCBU ON THE 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:								Notes on Hierarchy of Controls:	
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.								Remember to apply controls in the preferred order shown by the coloured pyramid:	
3H Review and approve additional controls before task starts. Senior supervisor sign-off needed.								1. Eliminate	
2M Ensure all nominated controls are in place and effective. Proceed with caution; monitor conditions.								2. Substitute	
1L Proceed, following standard operating procedures. Monitor and keep records.								3. Isolate	
								4. Engineering	
								5. Administrative	
								6. PPE	
Consequence Scale:								Always document why a lower-order control is accepted if elimination or substitution is not reasonably practicable.	
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				
								<i>aligned with Safe Work Australia's Managing the risk of fatigue at work (2023) and ISO 45001:2018 clauses 6–8.</i>	

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	slips, trips, falls, manual handling injuries	3H	<ul style="list-style-type: none"> - Conduct site-specific induction training - Ensure proper footwear is worn at all times - Implement housekeeping measures to keep work areas clean - Use signage to indicate slip hazards - Provide training on correct lifting techniques - Ensure sufficient lighting is available - Conduct regular safety audits and inspections - Determine the safest route for carrying loads - Use mechanical aids where possible - Keep walkways clear from obstructions 	2M
2. Equipment Inspection	equipment malfunction, moving objects	4H	<ul style="list-style-type: none"> - Conduct pre-start equipment checks - Ensure regular scheduled maintenance is performed - Use personal protective equipment (PPE) like gloves - Ensure all guards and safety devices are in place and operational - Provide training on equipment-specific risks - Display and follow lockout/tagout procedures - Maintain equipment service records - Have qualified personnel conduct inspections - Store sharp tools securely - Fix any sharp edges or points 	2M
3. Drilling Operations	dust inhalation, noise, striking underground utilities	4A	<ul style="list-style-type: none"> - Use dust extraction systems - Provide respiratory protection equipment (RPE) - Ensure the use of hearing protection - Mark and avoid known underground services - Conduct a dial-before-you-dig enquiry - Use barriers to contain dust spread - Schedule regular breaks for operators - Limit the number of personnel near drilling operations 	2M

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			<ul style="list-style-type: none"> - Conduct pre-operation safety meetings - Train operators in emergency response scenarios 	
4. Blasting	fly rock, vibration, explosions	4A	<ul style="list-style-type: none"> - Establish exclusion zone - Use appropriate equipment - Follow safe blasting procedures - Use appropriate PPE - Establish communication system - Use appropriate signage - Use appropriate lighting - Use appropriate barriers - Use appropriate warning system - Use appropriate monitoring system - Use appropriate control system - Use appropriate safety system - Use appropriate emergency system - Use appropriate rescue system - Use appropriate first aid system - Use appropriate fire system - Use appropriate security system - Use appropriate maintenance system - Use appropriate training system - Use appropriate documentation system - Use appropriate communication system - Use appropriate signage system - Use appropriate lighting system - Use appropriate barriers system - Use appropriate warning system - Use appropriate monitoring system - Use appropriate control system - Use appropriate safety system - Use appropriate emergency system - Use appropriate rescue system - Use appropriate first aid system - Use appropriate fire system - Use appropriate security system - Use appropriate maintenance system - Use appropriate training system - Use appropriate documentation system 	2M
5. Extraction Operations	vehicle collisions, falling materials	4A	<ul style="list-style-type: none"> - Establish exclusion zone - Use appropriate equipment - Follow safe extraction procedures - Use appropriate PPE - Establish communication system - Use appropriate signage - Use appropriate lighting - Use appropriate barriers - Use appropriate warning system - Use appropriate monitoring system - Use appropriate control system - Use appropriate safety system - Use appropriate emergency system - Use appropriate rescue system - Use appropriate first aid system - Use appropriate fire system - Use appropriate security system - Use appropriate maintenance system - Use appropriate training system - Use appropriate documentation system - Use appropriate communication system - Use appropriate signage system - Use appropriate lighting system - Use appropriate barriers system - Use appropriate warning system - Use appropriate monitoring system - Use appropriate control system - Use appropriate safety system - Use appropriate emergency system - Use appropriate rescue system - Use appropriate first aid system - Use appropriate fire system - Use appropriate security system - Use appropriate maintenance system - Use appropriate training system - Use appropriate documentation system 	2M
6. Conveyance	mechanical failure, entanglement	4A	<ul style="list-style-type: none"> - Establish exclusion zone - Use appropriate equipment - Follow safe conveyance procedures - Use appropriate PPE - Establish communication system - Use appropriate signage - Use appropriate lighting - Use appropriate barriers - Use appropriate warning system - Use appropriate monitoring system - Use appropriate control system - Use appropriate safety system - Use appropriate emergency system - Use appropriate rescue system - Use appropriate first aid system - Use appropriate fire system - Use appropriate security system - Use appropriate maintenance system - Use appropriate training system - Use appropriate documentation system - Use appropriate communication system - Use appropriate signage system - Use appropriate lighting system - Use appropriate barriers system - Use appropriate warning system - Use appropriate monitoring system - Use appropriate control system - Use appropriate safety system - Use appropriate emergency system - Use appropriate rescue system - Use appropriate first aid system - Use appropriate fire system - Use appropriate security system - Use appropriate maintenance system - Use appropriate training system - Use appropriate documentation system 	2M

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7. Crushing Operations	noise, machinery accidents	4A		2M
8. Screening	dust exposure, mechanical hazards	3H		2M
9. Material Handling	musculoskeletal injuries, drops and spills	3H		2M

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10. Stockpiling	collapse of material, dust emissions	4A		2M
11. Loading and Transportation	vehicle rollover, injuries during loading	4A		2M
12. Waste Management	chemical exposure, incorrect disposal methods	3H		2M

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13. Emergency Procedures	inadequate response, panic	4A		2M
14. Personal Protective Equipment (PPE) Management	PPE failure, improper PPE use	3H		1L
15. Communication Systems	communication breakdown, unfamiliarity with equipment	3H		1L

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			<div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	
16. Energy Isolation	uncontrolled energy release, failed isolation	4A	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	2M
17. Training and Skills Development	inadequate skills, non-compliance due to lack of knowledge	3H	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	1L
18. Health Monitoring	undetected health issues, improper health surveillance	3H	<div></div> <div></div> <div></div>	2M

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19. Environmental Management	pollution, habitat destruction	3H		2M
20. Demobilisation	site contamination, incomplete removal of materials	3H		2M

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.