

## Shaft Sinking 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			<b>Elimination</b> Remove the hazard.	
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED	<b>Substitution</b> 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.	<b>Engineering</b> Isolate the hazard	
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 HIGH	1L LOW	Monitor and keep records.	<b>Administrative</b> Change	
								<b>PPE</b>	

### Risk Rating & Required Action:

<b>4A</b>	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.
<b>3H</b>	Review and approve additional controls before task starts. Senior supervisor sign-off needed.
<b>2M</b>	Ensure all nominated controls are in place and effective. Proceed with caution; monitor conditions.
<b>1L</b>	Proceed, following standard operating procedures. Monitor and keep records.

### Consequence Scale:

Consequence	People (injury/illness)	Project / Assets	Compliance / Reputation
<b>Catastrophic</b>	Fatality or permanent total disability	project shutdown	Significant regulator intervention; criminal prosecution
<b>Major</b>	Serious injury/illness (hospital > 5 days)	critical delay	Improvement notice; major media coverage
<b>Moderate</b>	Medical-treatment injury; lost-time > 1 day	moderate delay	Minor breach; adverse client comment
<b>Minor</b>	First-aid only, no lost time	negligible delay	Isolated non-conformance
<b>Insignificant</b>	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	Physical injury from equipment, Exposure to dust	3H	<ul style="list-style-type: none"> <li>- Conduct a pre-start safety briefing</li> <li>- Utilise appropriate personal protective equipment (PPE)</li> <li>- Ensure all equipment is inspected and certified</li> <li>- Implement dust suppression methods</li> <li>- Establish exclusion zones around work area</li> <li>- Provide adequate ventilation systems</li> <li>- Conduct awareness training on health hazards</li> <li>- Ensure first aid facilities are available</li> <li>- Use ergonomic tools and practices</li> <li>- Install and use signage indicating hazardous areas</li> </ul>	2M
2. Site Survey	Slips, trips, and falls, Unstable ground conditions	3L	<ul style="list-style-type: none"> <li>- Perform a comprehensive site inspection</li> <li>- Mark and secure unstable areas with barriers</li> <li>- Conduct ground stability testing</li> <li>- Train workers on safe walking techniques</li> <li>- Use non-slip footwear</li> <li>- Minimise walk paths on unstable surfaces</li> <li>- Implement a buddy system for surveys</li> <li>- Ensure proper lighting of the area</li> <li>- Survey equipment regularly maintained</li> <li>- Communicate hazards via toolbox meetings</li> </ul>	1L
3. Drilling	Equipment malfunction, Flying debris	4A	<ul style="list-style-type: none"> <li>- Use equipment from reputable manufacturers</li> <li>- Train operators on equipment handling</li> <li>- Implement regular equipment maintenance schedules</li> <li>- Install protective barriers around drilling point</li> <li>- Use face shields and protective eyewear</li> <li>- Pre-check equipment before every shift</li> <li>- Establish emergency stop procedures</li> <li>- Monitor equipment for abnormal vibrations</li> </ul>	2M

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
			<ul style="list-style-type: none"> <li>- Inspect drill bits for integrity</li> <li>- Secure loose materials</li> </ul>	
4. Blasting	Explosions, Vibration damage	4A	<ul style="list-style-type: none"> <li>- Establish exclusion zone</li> <li>- Use appropriate blasting techniques</li> <li>- Ensure all personnel are clear of the blast area</li> <li>- Use proper timing and sequencing</li> <li>- Monitor vibration levels</li> <li>- Use appropriate protective equipment</li> <li>- Establish communication protocols</li> <li>- Conduct pre-blast inspection</li> <li>- Use appropriate signage and warnings</li> <li>- Ensure proper storage and handling of explosives</li> <li>- Use appropriate personnel for blasting activities</li> <li>- Conduct post-blast inspection</li> <li>- Establish emergency procedures</li> <li>- Use appropriate weather conditions</li> <li>- Ensure proper ventilation</li> <li>- Use appropriate lighting</li> <li>- Establish clear lines of sight</li> <li>- Use appropriate communication methods</li> <li>- Ensure proper training and experience</li> <li>- Use appropriate safety gear</li> <li>- Establish a safety culture</li> <li>- Conduct regular safety training</li> <li>- Use appropriate risk assessment methods</li> <li>- Establish a safety committee</li> <li>- Use appropriate safety protocols</li> <li>- Ensure proper documentation</li> <li>- Use appropriate safety equipment</li> <li>- Establish a safety record</li> <li>- Conduct regular safety audits</li> <li>- Use appropriate safety standards</li> <li>- Establish a safety policy</li> <li>- Use appropriate safety procedures</li> <li>- Ensure proper safety equipment maintenance</li> <li>- Establish a safety plan</li> <li>- Use appropriate safety training materials</li> <li>- Establish a safety culture</li> <li>- Conduct regular safety training</li> <li>- Use appropriate risk assessment methods</li> <li>- Establish a safety committee</li> <li>- Use appropriate safety protocols</li> <li>- Ensure proper documentation</li> <li>- Use appropriate safety equipment</li> <li>- Establish a safety record</li> <li>- Conduct regular safety audits</li> <li>- Use appropriate safety standards</li> <li>- Establish a safety policy</li> <li>- Use appropriate safety procedures</li> <li>- Ensure proper safety equipment maintenance</li> <li>- Establish a safety plan</li> <li>- Use appropriate safety training materials</li> </ul>	2M
5. Air Quality Monitoring	Toxic gas exposure, Inhalation of dust	3H	<ul style="list-style-type: none"> <li>- Use appropriate personal protective equipment (PPE)</li> <li>- Monitor air quality levels</li> <li>- Establish exclusion zones</li> <li>- Use appropriate ventilation systems</li> <li>- Conduct regular air quality testing</li> <li>- Use appropriate signage and warnings</li> <li>- Establish communication protocols</li> <li>- Conduct pre-work inspection</li> <li>- Use appropriate safety gear</li> <li>- Establish a safety culture</li> <li>- Conduct regular safety training</li> <li>- Use appropriate risk assessment methods</li> <li>- Establish a safety committee</li> <li>- Use appropriate safety protocols</li> <li>- Ensure proper documentation</li> <li>- Use appropriate safety equipment</li> <li>- Establish a safety record</li> <li>- Conduct regular safety audits</li> <li>- Use appropriate safety standards</li> <li>- Establish a safety policy</li> <li>- Use appropriate safety procedures</li> <li>- Ensure proper safety equipment maintenance</li> <li>- Establish a safety plan</li> <li>- Use appropriate safety training materials</li> </ul>	1L
6. Muck Handling	Manual handling injuries, Exposure to nearby equipment	3H	<ul style="list-style-type: none"> <li>- Use appropriate lifting techniques</li> <li>- Establish exclusion zones</li> <li>- Use appropriate PPE</li> <li>- Conduct regular equipment inspection</li> <li>- Use appropriate signage and warnings</li> <li>- Establish communication protocols</li> <li>- Conduct pre-work inspection</li> <li>- Use appropriate safety gear</li> <li>- Establish a safety culture</li> <li>- Conduct regular safety training</li> <li>- Use appropriate risk assessment methods</li> <li>- Establish a safety committee</li> <li>- Use appropriate safety protocols</li> <li>- Ensure proper documentation</li> <li>- Use appropriate safety equipment</li> <li>- Establish a safety record</li> <li>- Conduct regular safety audits</li> <li>- Use appropriate safety standards</li> <li>- Establish a safety policy</li> <li>- Use appropriate safety procedures</li> <li>- Ensure proper safety equipment maintenance</li> <li>- Establish a safety plan</li> <li>- Use appropriate safety training materials</li> </ul>	1L

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7. Ventilation Installation	Asphyxiation, Structural collapse	4A		2M
8. Electrical Installation	Electric shock, Fire	4A		1L
9. Water Management	Flooding, Contamination	3H		1L

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10. Shaft Lining	Falling objects, Poor structural integrity	4A		2M
11. Personnel Access and Egress	Restricted access, Accidents during egress	3H		1L
12. Communication	Miscommunication, Signal interference	3H		1L

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13. Lighting	Insufficient lighting, Glare	3H		1L
14. Emergency Preparedness	Unprepared for emergencies, Injuries during evacuation	4A		2M
15. Debrief and Reporting	Incomplete reporting, Delayed hazard recognition	2M		1L

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16. Machinery Maintenance	Unexpected machinery failure, Improper maintenance	4A		2M
17. Waste Management	Pollution, Improper disposal	3H		1L
18. Worker Health Monitoring	Health deterioration, Missed symptoms	3H		1L



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19. Training and Competency	Skill gaps, Misinterpreting procedures	3H		1L
20. Operational Review	Not identifying inefficiencies, Unaddressed operational hazards	3H		1L

## 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.