

## Operating Excavation Equipment 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.	<b>Isolation</b> 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:

1. **Eliminate**
2. **Substitute**
3. **Isolate**
4. **Engineering**
5. **Administrative**
6. **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	unfamiliarity with equipment, incorrect PPE	3H	<ul style="list-style-type: none"> <li>- Conduct thorough training sessions for operators on equipment use</li> <li>- Perform an initial site walk to identify potential hazards</li> <li>- Ensure all workers are wearing appropriate PPE including hard hats, gloves, and steel-toe boots</li> <li>- Issue operation manuals for review</li> <li>- Designate a safety officer to oversee preparation</li> <li>- Provide refresher courses regularly</li> <li>- Establish a buddy system for new operators</li> <li>- Verify controls for credentials before work commences</li> <li>- Regularly inspect PPE for wear and tear</li> <li>- Ensure clear communication channels are established</li> </ul>	2M
2. Site Evaluation	unstable terrain, unexpected underground utilities	4H	<ul style="list-style-type: none"> <li>- Obtain geotechnical reports before excavation begins</li> <li>- Use ground-penetrating radar to locate underground utilities</li> <li>- Consult utility companies for updated maps</li> <li>- Mark identified utilities clearly on site</li> <li>- Implement regular site surveys to assess terrain stability</li> <li>- Ensure a qualified geotechnical engineer is present during evaluation</li> <li>- Restrict access to unstable areas</li> <li>- Maintain clear documentation of utility locations</li> <li>- Keep equipment away from marked utilities</li> <li>- Install signage warning of unstable areas</li> </ul>	3H
3. Equipment Inspection	mechanical failure, damaged safety controls	4A	<ul style="list-style-type: none"> <li>- Conduct daily pre-start mechanical checks</li> <li>- Ensure regular maintenance schedules are adhered to</li> <li>- Check all safety controls and emergency stops for functionality</li> <li>- Log all inspections and repairs</li> <li>- Engage certified technicians for any repairs</li> <li>- Replace faulty equipment immediately</li> <li>- Maintain a stock of essential spare parts on-site</li> <li>- Provide operators with a checklist for inspections</li> </ul>	2M

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			<ul style="list-style-type: none"> <li>- Implement a tag-out system for malfunctioning machinery</li> <li>- Ensure all equipment has a valid service record</li> </ul>	
4. Work Area Setup	poor visibility, restricted working space	3H	<ul style="list-style-type: none"> <li>- Establish a clear work area with adequate lighting</li> <li>- Use reflective tape on equipment and personnel</li> <li>- Limit the number of workers in the area</li> <li>- Use spotters to monitor blind spots</li> <li>- Maintain clear exit routes</li> <li>- Use barriers to restrict access to the work area</li> <li>- Communicate with all workers before starting work</li> <li>- Use hand signals or radios for communication</li> <li>- Avoid working in adverse weather conditions</li> <li>- Use proper tie-off techniques when working at heights</li> <li>- Inspect equipment before use</li> <li>- Follow manufacturer's instructions for equipment operation</li> <li>- Use fall protection when working at heights</li> <li>- Avoid overloading equipment</li> <li>- Use proper lifting techniques</li> <li>- Take regular breaks to avoid fatigue</li> <li>- Stay hydrated</li> <li>- Use appropriate PPE for the task</li> <li>- Keep work area clean and free of clutter</li> <li>- Use proper storage for materials and equipment</li> <li>- Avoid working alone</li> <li>- Have a first aid kit and emergency contact information available</li> <li>- Follow all safety protocols and procedures</li> <li>- Report any safety concerns immediately</li> <li>- Participate in safety training and drills</li> <li>- Stay alert and focused at all times</li> <li>- Avoid distractions while working</li> <li>- Use proper communication techniques</li> <li>- Follow the lead of the supervisor or experienced workers</li> <li>- Take responsibility for your own safety and the safety of others</li> <li>- Stay calm in emergency situations</li> <li>- Know the location of fire extinguishers and exits</li> <li>- Follow all safety signs and warnings</li> <li>- Use proper work practices and procedures</li> <li>- Avoid taking shortcuts</li> <li>- Use common sense and good judgment</li> <li>- Stay motivated and committed to the task</li> <li>- Work as a team and support each other</li> <li>- Follow the company's safety policy and procedures</li> <li>- Stay up to date on safety regulations and standards</li> <li>- Use proper work practices and procedures</li> <li>- Avoid taking shortcuts</li> <li>- Use common sense and good judgment</li> <li>- Stay motivated and committed to the task</li> <li>- Work as a team and support each other</li> <li>- Follow the company's safety policy and procedures</li> <li>- Stay up to date on safety regulations and standards</li> </ul>	2M
5. Loading and Unloading	slips and trips, load instability	4A	<ul style="list-style-type: none"> <li>- Use proper tie-off techniques when working at heights</li> <li>- Inspect equipment before use</li> <li>- Follow manufacturer's instructions for equipment operation</li> <li>- Use fall protection when working at heights</li> <li>- Avoid overloading equipment</li> <li>- Use proper lifting techniques</li> <li>- Take regular breaks to avoid fatigue</li> <li>- Stay hydrated</li> <li>- Use appropriate PPE for the task</li> <li>- Keep work area clean and free of clutter</li> <li>- Use proper storage for materials and equipment</li> <li>- Avoid working alone</li> <li>- Have a first aid kit and emergency contact information available</li> <li>- Follow all safety protocols and procedures</li> <li>- Report any safety concerns immediately</li> <li>- Participate in safety training and drills</li> <li>- Stay alert and focused at all times</li> <li>- Avoid distractions while working</li> <li>- Use proper communication techniques</li> <li>- Follow the lead of the supervisor or experienced workers</li> <li>- Take responsibility for your own safety and the safety of others</li> <li>- Stay calm in emergency situations</li> <li>- Know the location of fire extinguishers and exits</li> <li>- Follow all safety signs and warnings</li> <li>- Use proper work practices and procedures</li> <li>- Avoid taking shortcuts</li> <li>- Use common sense and good judgment</li> <li>- Stay motivated and committed to the task</li> <li>- Work as a team and support each other</li> <li>- Follow the company's safety policy and procedures</li> <li>- Stay up to date on safety regulations and standards</li> <li>- Use proper work practices and procedures</li> <li>- Avoid taking shortcuts</li> <li>- Use common sense and good judgment</li> <li>- Stay motivated and committed to the task</li> <li>- Work as a team and support each other</li> <li>- Follow the company's safety policy and procedures</li> <li>- Stay up to date on safety regulations and standards</li> </ul>	3H
6. Equipment Operation	operator error, overloading	4A	<ul style="list-style-type: none"> <li>- Use proper tie-off techniques when working at heights</li> <li>- Inspect equipment before use</li> <li>- Follow manufacturer's instructions for equipment operation</li> <li>- Use fall protection when working at heights</li> <li>- Avoid overloading equipment</li> <li>- Use proper lifting techniques</li> <li>- Take regular breaks to avoid fatigue</li> <li>- Stay hydrated</li> <li>- Use appropriate PPE for the task</li> <li>- Keep work area clean and free of clutter</li> <li>- Use proper storage for materials and equipment</li> <li>- Avoid working alone</li> <li>- Have a first aid kit and emergency contact information available</li> <li>- Follow all safety protocols and procedures</li> <li>- Report any safety concerns immediately</li> <li>- Participate in safety training and drills</li> <li>- Stay alert and focused at all times</li> <li>- Avoid distractions while working</li> <li>- Use proper communication techniques</li> <li>- Follow the lead of the supervisor or experienced workers</li> <li>- Take responsibility for your own safety and the safety of others</li> <li>- Stay calm in emergency situations</li> <li>- Know the location of fire extinguishers and exits</li> <li>- Follow all safety signs and warnings</li> <li>- Use proper work practices and procedures</li> <li>- Avoid taking shortcuts</li> <li>- Use common sense and good judgment</li> <li>- Stay motivated and committed to the task</li> <li>- Work as a team and support each other</li> <li>- Follow the company's safety policy and procedures</li> <li>- Stay up to date on safety regulations and standards</li> <li>- Use proper work practices and procedures</li> <li>- Avoid taking shortcuts</li> <li>- Use common sense and good judgment</li> <li>- Stay motivated and committed to the task</li> <li>- Work as a team and support each other</li> <li>- Follow the company's safety policy and procedures</li> <li>- Stay up to date on safety regulations and standards</li> </ul>	3H

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7. Material Transport	load spillage, collision	4A		3H
8. Excavation	cave-ins, falling objects	4A		3H
9. On-Site Communication	miscommunication, emergency coordination	3H		2M

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10. End of Day Procedures	equipment not secured, residual hazards	3H		2M
11. Emergency Response	delayed response, panic	4A		3H
12. Weather Monitoring	sudden weather changes, increased risk in adverse conditions	3H		2M

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13. Training and Competency	lack of operator capability, incorrect responses to situations	3H		2M
14. Environmental Management	soil contamination, improper waste disposal	3H		2M
15. Reviewing and Updating Procedures	outdated procedures, incomplete documentation	2M		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.