

## Underwater Drilling 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			<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>
<b>Risk Rating &amp; Required Action:</b>						<b>Notes on Hierarchy of Controls:</b>		
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. <b>Eliminate</b>		
2M Ensure all nominated controls are in place and effective. Proceed with caution; monitor conditions.						2. <b>Substitute</b>		
1L Proceed, following standard operating procedures. Monitor and keep records.						3. <b>Isolate</b>		
						4. <b>Engineering</b>		
						5. <b>Administrative</b>		
						6. <b>PPE</b>		
<b>Consequence Scale:</b>						Always document <b>why</b> 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			
						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	Insufficient planning, Incomplete equipment checklist	3H	<ul style="list-style-type: none"> <li>- Conduct thorough site assessment</li> <li>- Develop comprehensive safety plan</li> <li>- Review equipment list against requirements</li> <li>- Ensure permits are obtained and valid</li> <li>- Schedule all necessary personnel</li> <li>- Verify communication devices are operational</li> <li>- Revisit risk assessment regularly</li> <li>- Incorporate feedback from previous operations</li> <li>- Ensure adequate logistical support</li> <li>- Prepare emergency response procedures</li> </ul>	2M
2. Transportation of Equipment	Heavy lifting injuries, Equipment damage	3H	<ul style="list-style-type: none"> <li>- Use mechanical aids for heavy lifting</li> <li>- Train staff in manual handling techniques</li> <li>- Ensure equipment is securely fastened</li> <li>- Conduct pre-transport equipment check</li> <li>- Hire experienced logistics personnel</li> <li>- Use only approved transportation routes</li> <li>- Check weather conditions before transport</li> <li>- Limit exposure to vibration and shock</li> <li>- Implement strict loading/unloading protocols</li> <li>- Ensure presence of qualified spotters</li> </ul>	2M
3. Site Setup	Slip, trip, and fall, Incorrect equipment assembly	3H	<ul style="list-style-type: none"> <li>- Level and clear ground before setup</li> <li>- Use slip-resistant mats</li> <li>- Provide formal training for assembly tasks</li> <li>- Use guidance from equipment manuals</li> <li>- Implement checks by supervising personnel</li> <li>- Assemble during daytime with adequate lighting</li> <li>- Ensure site is cordoned off during setup</li> <li>- Regularly inspect the footing and stability of the setup</li> </ul>	1L

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			<ul style="list-style-type: none"> <li>- Keep pathways clear of obstructions</li> <li>- Wear personal protective equipment</li> </ul>	
4. Equipment Inspection	Faulty equipment, Incorrect calibration	4A	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	2M
5. Drilling Commencement	Underwater visibility issues, High-pressure water jet hazards	4A	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	2M
6. Monitoring Operations	Communication breakdown, Environmental changes	3H	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	1L

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7. Post-Drilling Inspection	Structural integrity compromise, Marine life disruption	3H		2M
8. Equipment Recollection	Injury during disassembly, Equipment loss underwater	3H		2M
9. Site Restoration	Pollution of marine environment, Disturbance to seabed	4A		2M

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10. Debriefing	Omission of critical safety information, Inaccurate logging of events	2M		1L
11. Equipment Maintenance	Wear and tear, Delayed detection of faults	3H		1L
12. Surface Support Setup	Incorrect resource allocation, Inadequate supplies	3H		2M

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13. Diver Safety Checks	Decompression sickness, Failure of life support systems	4A		2M
14. Incident Management	Delayed response to emergencies Inadequate incident documentation	3H		1L
15. Completion and Handover	Incomplete documentation, Issues with handover accuracy	3H		1L

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16. Permits and Compliance Check	Expired permits, Regulatory non-compliance	3H		2M
17. Environmental Monitoring	Inadequate assessment of ecological impact, Release of pollutants	4A		1L
18. Stakeholder Communication	Miscommunication with stakeholders, Conflict arising from project outcomes	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.