

Aquaculture Fish Farming and Marine Agriculture

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:

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. WHS Governance, Responsibilities and Safety Leadership	<ul style="list-style-type: none"> Lack of clear WHS roles and responsibilities for shore-based and marine operations Inadequate integration of WHS Act 2011 duties into corporate governance and decision-making Insufficient officer due diligence in monitoring health and safety performance and compliance Inadequate consultation mechanisms with workers, contractors and fish farm managers Absence of a formal WHS management system specific to aquaculture and marine agriculture risks Poor safety culture leading to under-reporting of hazards, near misses and incidents Failure to consider WHS implications in business changes (new cages, new vessels, new farm sites) 	4A	<ul style="list-style-type: none"> Develop and implement a documented WHS Management System aligned with WHS Act 2011, Regulations, and relevant Codes of Practice for marine and aquaculture operations Define and document WHS roles, responsibilities and accountabilities for officers, managers, supervisors, vessel masters, divers and farm hands, including delegated authority Ensure officers exercise due diligence through regular review of WHS performance reports, audit findings and compliance status, and record these reviews in board or leadership minutes Establish formal consultation arrangements such as Health and Safety Representatives (HSRs), work groups, and WHS committees covering shore-based, vessel and cage operations Integrate WHS risk management into strategic and operational planning, including capital projects (e.g. new cage systems, feeding infrastructure, harvest facilities) Set measurable WHS objectives and targets (e.g. incident reduction, close-out timeframes, audit completion) and review performance at senior leadership meetings Implement a Just Culture / fair and blame-aware reporting framework to encourage transparent reporting and learning from incidents Include WHS criteria and leadership behaviours in manager and supervisor performance reviews and position descriptions Ensure contractors and labour hire providers are integrated into governance arrangements and WHS consultation processes Undertake periodic independent WHS system audits specific to aquaculture operations and implement corrective action plans 	3H
2. Regulatory Compliance, Licencing and Approvals	<ul style="list-style-type: none"> Non-compliance with WHS Act 2011 and WHS Regulations regarding marine and remote work Failure to comply with maritime and vessel safety regulations (AMSRA, State marine authorities) Inadequate management of environmental approvals, biosecurity and chemical use obligations that intersect with WHS Use of unlicensed or uncertified plant, vessels and pressure systems (e.g. compressors for diving, feed systems) Insufficient recordkeeping to demonstrate compliance to regulators Lack of monitoring of changes in legislation, standards or codes of 	4A	<ul style="list-style-type: none"> Maintain a legal and other requirements register covering WHS, maritime safety, environmental, biosecurity, dangerous goods and diving standards applicable to aquaculture operations Assign a competent person or team responsible for monitoring legislative changes and communicating implications to management and affected workers Ensure all vessels, skippers and crew comply with relevant maritime safety legislation, including vessel registration, survey, crewing, and safety equipment requirements Verify licencing and certification for specialised equipment such as pressure vessels, breathing air compressors, cranes, davits and lifting equipment used for cage installation and reclamation Implement formal procedures for permitting and approvals for new or modified farm sites, cages, moorings and shore facilities, including WHS review during planning stages Maintain auditable records of inspections, licences, registrations, training, permits to operate and competency assessments Conduct periodic compliance audits and regulatory gap assessments, with documented action plans for any non-conformances Establish protocols for engagement and information sharing with regulators, including notifiable incident reporting as required by WHS legislation 	2M

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	practice relevant to aquaculture and cage reclamation			
3. Risk Management Framework and Change Management	<ul style="list-style-type: none"> Inconsistent identification and assessment of WHS risks across fish farming and cage reclamation activities Failure to consider system-level risks when introducing new technology (e.g. automated feeders, remote monitoring, new cage designs) Poor management of organisational and operational change, including rapid scaling of production or expansion to new marine sites Lack of structured review of new processes (e.g. new net cleaning method, new predator control system) Inadequate consideration of cumulative risks from concurrent operations (diving, vessel movements, heavy lifting, net handling) Risk assessments focused only on task level SWMS without addressing broader organisational and system-level issues 	4A	<ul style="list-style-type: none"> Implement a standardised WHS risk management procedure that mandates identification, assessment, control and review of risks at system, project and task levels Maintain a risk register for aquaculture operations, including fish farming, cage installation, reclamation, harvesting and shore-based processing interfaces Establish a formal Management of Change (MoC) process requiring WHS review for new plant, new sites, major design changes, new operating procedures, or organisational restructuring Include multi-disciplinary review (operations, WHS, maintenance, vessel master, divers) for significant changes impacting marine and cage operations Regularly document risk assessments for concurrent operations (e.g. diving while vessel manoeuvring, lifting nets during adverse weather) Conduct periodic reviews of risk controls effectiveness using incident trends, worker feedback and audit results Integrate risk management into project planning for new farms, including modelling of environmental and weather-related hazards and logistics constraints Train managers and supervisors in risk management principles, including system-level risk thinking rather than only task-based SWMS 	2M
4. Marine Vessel Management and Water Transport Systems	<ul style="list-style-type: none"> Use of unsuitable or poorly maintained vessels for open water aquaculture operations Lack of journey planning and weather assessment for crew and equipment transport to fish cages and farms Overloading vessels with feed bags, nets, cages or personnel beyond safe limits Inadequate marine communication systems between vessels, shore base and cage sites Poor separation and traffic management for service vessels, feed barges and other marine users Insufficient emergency preparedness for man-overboard, collision, grounding or capsized events 	4A	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	2M

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	<ul style="list-style-type: none"> Fatigue of skippers and crew due to long marine travel times and early/late feeding runs 		[REDACTED]	
5. Cage, Mooring and Infrastructure Engineering Design	<ul style="list-style-type: none"> Inadequate engineering design of cages, moorings, walkways and barges for local sea states, currents and wind conditions Structural failure of cages or walkways due to under-specification or corrosion, leading to falls into water or entrapment Incompatibility between cage system and vessels, cranes or reclamation equipment Insufficient design consideration of safe access, egress and working platforms for routine fish farming operations and cage reclamation Failure to consider load paths and dynamic forces on moorings and cage structures during storms or heavy swell Lack of documented engineering verification or certification for custom-built or modified systems 	4A	[REDACTED]	2M
6. Plant, Equipment and Lifting Systems Management	<ul style="list-style-type: none"> Failure of cranes, winches, davits or lifting gear used to move cages, nets, feed and equipment Use of non-certified lifting points on cages or barges during reclamation or relocation Inadequate maintenance and inspection regimes for mechanical plant 	4A	[REDACTED]	2M

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	<p>such as feed systems, net cleaners, generators and pumps</p> <ul style="list-style-type: none"> • Uncontrolled interaction between moving plant and workers on barges, pontoons and cages • Lack of plant isolation and lockout systems during maintenance or breakdowns • Unverified modifications to plant to suit aquaculture operations (guards removed, limit switches bypassed) 		[REDACTED]	
7. Work at Heights, Over Water and Fall Prevention Systems	<ul style="list-style-type: none"> • Falls from walkways, barges, cages and structures into water during fish farming and cage reclamation activities • Lack of systematic controls for work at height on feed silos, cranes and elevated platforms • Inadequate fall prevention systems for workers operating above water or on partially submerged structures • Slips and trips due to wet, icy, algae-covered or uneven surfaces on pontoons and walkways • Absence of formalised inspection and maintenance of guardrails, ladders, access systems and fall arrest anchors 	4A	[REDACTED]	2M
8. Diving, Underwater Operations and Cage Reclamation Activities	<ul style="list-style-type: none"> • Inadequate control of occupational diving used for net inspection, cage repair and mooring work 	4A	[REDACTED]	2M

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	<ul style="list-style-type: none"> Failure to manage decompression sickness, gas supply integrity and diver tracking Poor coordination between diving operations and vessel movements, lifting or net handling Inadequate procedures for underwater cutting, use of hydraulic tools or high-pressure cleaners on nets and cages Insufficient emergency response planning for trapped, lost or injured divers during cage reclamation or underwater maintenance Use of non-compliant breathing air or untested diving equipment 		<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	
9. Hazardous Substances, Chemicals and Biosecurity Management	<ul style="list-style-type: none"> Inadequate control of chemicals used for fish health treatments, antifouling cleaning and disinfection Poor segregation and labelling of hazardous substances on board, feed barges, shore tanks and hatcheries Lack of biosecurity controls leading to disease transfer between cages, sites or wild populations Insufficient ventilation and handling systems when using fumigants, disinfectants or gases Inadequate planning for accidental chemical release into marine environment impacting workers and ecosystem Failure to consider combined exposure to chemicals, biological agents and cold/wet conditions 	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>	2M

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			[REDACTED]	
10. Environmental and Weather Exposure, Remote and Isolated Work	<ul style="list-style-type: none"> Exposure to extreme weather, cold water, heat, UV and storms during marine farming activities Remote or isolated work at sea farms with delayed emergency medical support Inadequate weather monitoring and stop-work decision criteria for high-risk conditions Fatigue and stress associated with long shifts, travel and limited shelter on cages and barges Limited communication coverage between farms, vessels and emergency services Failure to plan for evacuation or shelter-in-place for severe weather or marine incidents 	4A	[REDACTED]	2M
11. Worker Competency, Training and Induction Systems	<ul style="list-style-type: none"> Deployment of inexperienced or untrained workers into marine aquaculture, cage reclamation or fish farming roles Inconsistent induction across different sites, vessels and contractors Lack of formal verification of competency for high-risk roles (skippers, crane operators, divers, net handlers) Insufficient refresher training leading to skill fade, especially for emergency procedures and rescue techniques Limited literacy or language support for seasonal or migrant workers affecting understanding of WHS information 	4A	[REDACTED]	2M

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			[REDACTED]	
12. Fatigue, Mental Health and Psychosocial Risk Management	<ul style="list-style-type: none"> • Long and irregular working hours due to tides, feeding schedules and weather windows • Isolation and limited social support for workers on remote marine farms or during extended shifts • Stress arising from fish mortality events, environmental incidents or production pressure • Bullying, harassment or poor supervisory practices in small crews and close working environments • Inadequate systems for workers to raise psychosocial concerns confidentially and receive support 	3H	[REDACTED]	2M
13. Contractor, Labour Hire and Supply Chain WHS Management	<ul style="list-style-type: none"> • Inconsistent WHS processes between company operations and contractors performing cage reclamation, diving net cleaning or transport • Poor coordination of activities between multiple PCBU entities at shared marine sites • Lack of clarity over responsibilities for plant, equipment and training provided by contractors or labour hire firms • Inadequate prequalification of suppliers and service providers regarding WHS capability • Fragmented incident reporting, investigation and learning across different organisations 	3H	[REDACTED]	2M

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			[REDACTED]	
14. Incident Reporting, Investigation and Emergency Management	<ul style="list-style-type: none"> • Delayed or incomplete notification of marine and aquaculture-related incidents and near misses • Inadequate investigation of serious or recurring incidents, leading to repeated system failures • Lack of integrated emergency response capability across vessels, cages and shore bases • Insufficient drills for scenarios such as man-overboard, vessel fire, diver emergency or cage structural failure • Failure to meet legal obligations for notifiable incidents under WHS Act 2011 	4A	[REDACTED]	2M
15. Health Monitoring, Occupational Hygiene and Ergonomics	<ul style="list-style-type: none"> • Long-term musculoskeletal injuries from repetitive net handling, feed bag lifting and awkward postures on vessels and cages • Exposure to noise from engines, generators, compressors and high pressure cleaners • Health impacts from prolonged cold and wet exposure, including hypothermia and reduced dexterity increasing accident risk • Lack of health surveillance for workers exposed to specific hazards (e.g. divers, chemical handlers) • Inadequate design of workstations on barges, feed systems and grading equipment 	3H	[REDACTED]	2M

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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 FOR 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 2025
 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) Regulation 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>

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>

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

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.