Vessel Operations and Seamanship			
Business Name:		ABN:	
Business Address:			
Contact Person:	Phone:	Email:	

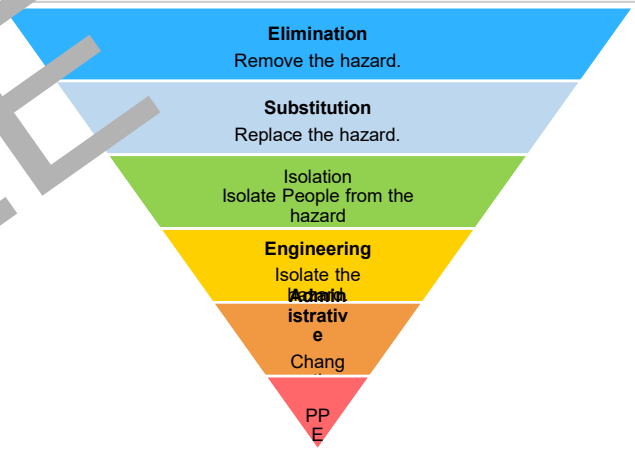
THIS RISK ASSESSMENT IS APPROVED BY THE PCBU OF THE PROJECT		
Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a RISK ASSESSMENT is prepared before the proposed work starts.		
Full Name:		
Signature:	Title:	Date:

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
ALMOST CERTAIN	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4 ACUTE		
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE	3H HIGH	Rev before work
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACU	2M MO RATE	Ensure control measures in place.
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 H	1L LOW	Monitor and keep records.

HIERARCHY OF CONTROLS



Risk Rating & Required Action:

4A	Stop work. The risk is intolerable. E inate the hazar redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or hi er-level authorisati is required.
3H	Review and approve additional c rols b ask arts. Senior supervisor sign-off needed.
2M	Ensure all nominated controls are in ace and effe ive. 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. Safety Leadership, Governance and WHS Duties	• Lack of clear WHS governance structure for vessel operations and seamanship activities • Officers and PCBUs not fully understanding or discharging due diligence obligations under WHS Act 2011 in a marine context • Inadequate integration of Safety Management System (SMS) with WHS risk management for vessel and offshore operations • Failure to allocate sufficient resources (people, time, budget) to manage maritime WHS risks • No formal review of WHS performance data specific to vessel operations (e.g. mooring incidents, crew transfer near misses) • Contracts and charter agreements th do not clearly allocate WHS responsibilities between parties (owner operator, client, port authority)	4A	• Establish and document a WHS governance f mework that clearly articulates roles, responsibilities and accountabilities for vessel operations in lin h WHS Act 011 and Marine Orders • Ensure Officers demonstrate due diligence regul y verifying that appropriate resources, competent people and processes are in place for safe ves d offshore o erations • Integrate the vessel Safety nagement System SMS) wi he organisation's WHS management system (e.g. ISO 45001) to cre a single coheren k mework • Include WHS ob ations consul on arrangements and incident reporting expectations in all vessel-related contra charters d serv agreem s • Implement s duled WH governan eetings (e.g. quarterly) specifically reviewing marine risk indica (moo line ures, navigation near misses, gangway security issues, crew transfer events) • Crea a maint a WHS legal register capturing applicable Commonwealth and state WHS legislat n, ritime islation and port authority requirements and review it annually • Manda WH leader ip training for Masters, Chief Engineers and senior shore-based managers using n due igence and safety leadership behaviours • Con periodic independent audits of marine WHS governance, including verification of compliance th WHS ct 2011, Marine Orders and AMSA guidance	3H
2. Vessel Procurement, Design and Modification	• Vessels procured c artered without systematic WHS a marine safety assessment • Inadequate design f anchor hand g, mooring, crew transfers and Ro-Ro passenger operations (poor line- ight, hazardous line leads, res access) • Insufficient redundancy of critical systems such as steering gear, bow thrusters, bilge and ballast systems, watertight doors and navigation equipment • Modifications to vessel structure or systems (e.g. gangways, transfer ladders, ballast piping, store handling arrangements) without engineering review of WHS impact • Lack of ergonomic design causing manual handling risks in galley waste disposal, ship store inventory	4A	• Implement a formal vessel selection and acceptance process requiring documented WHS and marine safety criteria, including compliance with AMSA, class rules and relevant Australian Standards • Require independent naval architect or marine engineer review of design for operations such as anchor handling, heavy weather sailing, crew transfers and ship-to-ship transfer to confirm safe arrangements • Specify minimum design standards for redundancy of critical systems (dual steering gear, independent bilge and ballast pumps, UPS for navigation and communication systems) • Establish a Management of Change (MoC) procedure for any vessel modifications, requiring risk assessment, engineering sign-off and update of drawings, SMS procedures and training • Require ergonomic assessment of high-use work areas (galley, engine room, mooring decks, Ro-Ro decks, stores areas) to minimise manual handling and access risks • Design or retrofit clear separation and traffic management plans for Ro-Ro decks and vehicle ferries, including marked pedestrian routes, physical barriers and signage • Ensure vessel design supports safe ballasting/de-ballasting and bilge operations, including clearly labelled valves, remote operation where practicable and prevention of cross-contamination • Mandate provision of certified access systems for water working in, over or adjacent to water (gangways, pilot ladders, work platforms) within procurement specifications	2M

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SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	management and engine room watchkeeping • Poor segregation of pedestrian and vehicle flows on Ro-Ro passenger ships and ferries, leading to collision and crush hazards			
3. Navigation, Passage Planning and Restricted Waters Management	• Inadequate voyage planning for heavy weather sailing, restricted water manoeuvring and navigation around water hazards • Poor system for issuing, reviewing and complying with Master's night orders and standing orders • Insufficient bridge resource management leading to loss of situational awareness during sea and anchor watch duties and offshore operations • Over-reliance on electronic navigation systems without appropriate cross-checking, increasing the risk near shoals, reefs and submerged hazards • Lack of standardised ri[illegible]ed procedures for ferry [illegible]erations and Ro-Ro passenger ship[illegible]outes through congested waterw[illegible]s	4A	• Implement a formal passage p[illegible]nning procedure a[illegible]with industry best practice (e.g. IMO guidelines) that mandates risk a[illegible]ent f[illegible]estricted waters, h[illegible]avy weather and known hazards • Standardise M[illegible]ster's star[illegible]ng and [illegible]ght orde[illegible], including requirements for call-outs, changes of course, speed reduc[illegible]s and visibi[illegible]y or traffi[illegible]ds • Ado[illegible] Bridge [illegible]esou[illegible]e Management (BRM) framework, including role clarity on the bridge, closed-loop c[illegible]unicati[illegible]and challenge-and-response protocols • Requ[illegible] d[illegible]-navig[illegible]n verification (e.g. ECDIS plus radar or paper chart cross-checks) in restricted waters [illegible]d n[illegible]-know[illegible]ater hazards, documented in the SMS [illegible]plem[illegible]t form[illegible]navigation risk reviews for ferry, Ro-Ro and offshore operation routes, taking into acc[illegible]t t[illegible]al windows, traffic density, port rules and environmental zones Conduct periodic simulator or desktop exercises for Masters and watchkeepers focusing on near-miss n[illegible]igation scenarios, including steering gear failure and bow thruster malfunction • Ensure navigation and watchkeeping procedures explicitly reference WHS Act duties regarding risk management and fatigue control for officers on watch	2M
4. Mooring, Anchoring and Berthing Systems	• Inadequate system design and procedures for carry out mooring operations, leading to line snap[illegible]ck and crushing hazards • Poorly engineered anchor handling and chain management systems creating uncontrolled movement or loss of anchor • Lack of formal mooring risk assessments for specific berths, offshore terminals and ship-to-ship transfer operations • Inconsistent use and maintenance of mooring equipment, winches, fairleads and bollards across fleet • Insufficient training and competency management for personnel involved in	4A	[redacted]	2M

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SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	sea and anchor watch duties and operation of anchoring gear		[redacted]	
5. Ballast, Bilge and Stability Management	• Inadequate procedures for ballasting and de-ballasting operations leading to compromised vessel stability or structural stress • Incorrect or unauthorised operation of bilge and ballast systems causing pollution, flooding or inadvertent transfer between tanks • Failure of stability management systems, including outdated stability data, poor loading calculations or ignored loading limitations • Unclear controls around overboard discharges, including oily water, greywater and treated sewage, resultin in legal non-compliance • Inadequate segreg on between bilge, ballast and fuel sy ms creating contamination haz ds	4A	[redacted]	2M
6. Machinery, Engine Room and Critical System Management	• Unreliable engine room watch dut and monitoring systems leadin machinery failure, fire or lo propulsion • Inadequate testing regime for steering gear, bow thrusters and emergency systems • Poorly controlled maintenance program for watertight doors, bilge and fire pumps, generators and essential auxiliaries • Lack of clear isolation, lockout and permit-to-work systems for high-risk maintenance on engines, propulsion and auxiliary equipment	4A	[redacted]	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
	• Deficient procedures for engine room alarm management and response during unmanned or reduced manning periods		[redacted]	
7. Crew Competency, Training and Fatigue Management	• Inadequate competency frameworks for seamanship tasks such as mooring, anchor handling, offshore operations and ship-to-ship transfers • Insufficient training for crew transfers, water working in-over-adjacent to water, and security checks at gangways • Poor fatigue risk management, especially for watchkeeping personnel and crew involved in irregular ferry or offshore schedules • Lack of refresher training on emergency procedures, including heav weather sailing, abandon ship and man overboard • Inconsistent indu on processes for new crew, contrac s and a ff unfamiliar with vess ic risks	4A	[redacted]	2M
8. Offshore Operations, Ship-to-Ship and Crew Transfer Management	• Lack of standardised pr s for conduct offshore operations and ship-to-ship transfer operations • Poorly controlled crew transfers between vessel and boat or barge, especially in adverse weather or swell • Inadequate coordination with client, offshore facility or other vessel regarding roles, communications and emergency arrangements • Insufficient assessment of simultaneous operations (SIMOPS) such as lifting, bunkering, crew transfer and ballasting occurring together	4A	[redacted]	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
	• Limited oversight of smaller support craft engaged in crew transfers or water work in-over-adjacent to water		[redacted]	
9. Ro-Ro, Ferry and Passenger Operations Management	• Inadequate control of passenger and vehicle movements during Ro-Ro passenger ship operations and ferry operation • Poor communication systems for safety announcements, emergency instructions and crowd management • Insufficient procedures for securing vehicles, cargo and dangerous goods on Ro-Ro decks • Overloading or improper distribution of passenger and vehicle loads affecting stability and evacuation routes • Failure to integrate WHS risk management with mari[redacted]y for passenger handling[redacted]erminals and gangways	4A	[redacted]	2M
10. Gangway Control, Access and Security Management	• Uncontrolled access to vessel via gangway leading to security breach[redacted], unauthorised persons on board o[redacted]WHS incidents • Inadequate security checks at gangway to detect contraband, weapons or prohibited items • Poorly managed access for contractors, stevedores and visitors unfamiliar with vessel hazards • Unsafe gangway installation, maintenance or monitoring, especially in tidal or swell conditions • Insufficient integration between maritime security levels (ISPS) and WHS risk controls	3H	[redacted]	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
			[redacted]	
11. Working Over, In and Adjacent to Water	• Systemic weaknesses in planning and control of water working in-over-adjacent to water, including wharf operations and small craft use • Lack of engineering controls such as guardrails, rescue systems and fall prevention on open decks and transfer points • Inconsistent standards for personal flotation and recovery equipment across vessels and worksites • Inadequate emergency response planning for man overboard incidents during mooring, crew transfers and offshore operations • Poor coordination with shore-based emergency services for over-water rescues and medical response	4A	[redacted]	2M
12. Galley, Waste and Stores Management Systems	• Poorly planned galley waste disposal systems causing slips [illegible]sts or contamination • Inadequate segr[illegible]ation, stor[illegible]d disposal systems f[illegible]ste, recyclables and hazardous wastes (e[illegible]. oils, chemicals, galley cleaning age[illegible]s) • Manual handling risks a[illegible]ed with ship store inventory management, lifting provisions and moving stores in heavy weather • Inaccurate inventory controls leading to overstocking, poor housekeeping and blocked access or egress routes • Insufficient training on waste streams that may have WHS implications (e.g. sharps, broken glass, aerosol cans)	3H	[redacted]	2M
13. Emergency Preparedness, Drills and Incident Management	• Emergency response arrangements that do not adequately address vessel-specific risks such as heavy weather	4A	[redacted]	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
	sailing, steering loss, fire, pollution and man overboard • Infrequent or poorly planned drills resulting in untested procedures and confused roles during real incidents • Lack of integration between onboard emergency plans, shore-based crisis management and client/port emergency arrangements • Inconsistent incident reporting and investigation practices, leading to repeated failures in vessel operations and seamanship systems • Limited learning from external marine incidents and regulatory notices relevant to vessel operations		[redacted]	
14. WHS Consultation, Reporting and Continuous Improvement	• Limited consultation with crew on WH matters relating to vessel operations a seamanship • Under-reporting of ha ear misses and minor in ents on board due to cultural or p cedural barriers • Inadequate trend ta specific to vessel and offshore operations • Failure to update proce ining and engineering controls in response to lessons learned • Lack of effective communication of WHS changes and safety information to all roster patterns and vessels	3H	[redacted]	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 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

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-of-codes-of-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/forms-and-resources/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

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.

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

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

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