

Boat Building

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 Leadership, Governance and Consultation	<ul style="list-style-type: none"> Lack of clear WHS governance structure for boat building and shipbuilding activities Inadequate officer due diligence in accordance with WHS Act 2011 Insufficient worker consultation and failure to establish effective health and safety committees Poor communication of WHS expectations to labour hire, contractors and visitors Inadequate worker participation in risk assessment and control design for hull assembly tasks Failure to review WHS objectives, targets and performance specific to boat building operations 	4A	<ul style="list-style-type: none"> Establish a documented WHS governance framework clearly defining PCBU, officer and worker duties under the WHS Act 2011 Create a WHS policy endorsed by senior management that explicitly covers boat hull assembly, shipbuilding and associated marine fabrication works Formally appoint WHS responsibilities and accountabilities in role descriptions for supervisors, leading hands and project managers Implement regular WHS consultation mechanisms including health and safety representatives (HSRs), committees and toolbox talks for all shifts Ensure officers undertake due diligence training focused on high-risk construction and marine manufacturing hazards (e.g. confined spaces, welding fumes, plant) Maintain a consultation procedure for changes to plant, layout or work methods, requiring worker involvement in risk assessments before implementation Schedule periodic WHS leadership walkarounds in production, fit-out and hull assembly areas with follow-up actions recorded and closed out Set measurable WHS objectives (e.g. audit scores, corrective action close-out times, leading indicators) and review them at management meetings 	3H
2. WHS Legal Compliance and Risk Management System	<ul style="list-style-type: none"> Failure to identify and comply with applicable WHS legislation, regulations and Codes of Practice for boat building and construction work Inconsistent application of formal risk management processes across projects and facilities Incomplete or outdated risk register for shipbuilding, hull assembly and workshop activities Poor integration of WHS requirements in contracts with suppliers, designers and subcontractors Lack of systematic evaluation of new technology, chemicals or plant used in boat construction Inadequate review of regulatory updates or safety alerts relevant to marine manufacturing 	4A	<ul style="list-style-type: none"> Maintain a WHS legal and other requirements register referencing the WHS Act 2011, WHS Regulation, relevant Codes of Practice and Australian Standards applicable to boat and ship construction Implement a formal risk management procedure (identify, assess, control, review) and require its use for all projects and major process changes Develop and maintain a corporate WHS risk register with specific entries for hull assembly, shipbuilding, fit-out, painting, lifting operations and confined spaces Integrate WHS obligations into procurement and contract templates, requiring contractors and designers to demonstrate compliance and provide relevant documentation Establish a pre-implementation review process (safety in design / change management) for new plant, resins, coatings, adhesives and fabrication methods Nominate a competent person to monitor regulator safety alerts, standards changes and industry guidance, and to coordinate updates to procedures and training Schedule annual independent WHS system audits and internal audits focusing on high-risk boat building processes Ensure corrective actions from audits and incidents are recorded in a central system with responsible persons and due dates 	2M
3. Workplace and Yard Layout, Traffic and Access Management	<ul style="list-style-type: none"> Unplanned interaction between pedestrians, mobile plant, forklifts and 	4A	<ul style="list-style-type: none"> Develop a traffic management plan covering vehicles, forklifts, cranes, travel towers and pedestrian routes for all boat building facilities 	2M

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	<ul style="list-style-type: none"> vehicle movements in yards and workshops Inadequate segregation of hull assembly areas, storage zones and traffic routes Congested workspaces around large hulls leading to trip, crush or impact risks Poor access and egress for emergency response, including around dry docks and slipways Insufficient lighting, signage and line-marking in indoor and outdoor fabrication areas Uncontrolled loading and unloading of materials, hull sections and modules Inadequate edge protection and fall prevention around elevated work platforms and dock edges 		<ul style="list-style-type: none"> Design and maintain clearly marked pedestrian walkways separated from mobile plant routes using barriers and physical controls where practicable Implement a layout planning process for hull assembly bays to ensure adequate clearance, material staging areas and safe access around vessels Provide engineered edge protection, guardrails and exclusion zones around dry docks, slipways and water edges in accordance with relevant standards Ensure adequate fixed and portable lighting is provided for internal hull work, night shift activities and external yard operations Install and maintain signage, mirrors and speed limits at blind corners, intersections and access gates Establish controlled loading and unloading zones with documented procedures for securing loads, marshalling and spotter requirements Periodically review yard and workshop layout to reflect changing vessel sizes, production volumes and traffic patterns, including workers in the review 	
4. Plant, Equipment and Tooling Management	<ul style="list-style-type: none"> Lack of systematic inspection, maintenance and tagging of cranes, hoists, forklifts and lifting gear used for hull sections Use of unsuitable or uncertified lifting attachments and slings for large boat modules Uncontrolled introduction of new plant or tooling without risk assessment/guarding review Inadequate isolation and lockout systems for fixed plant, compressors and automated cutting equipment Use of damaged or untested portable electrical equipment in wet or corrosive environments Failure to manage plant registration requirements and high-risk work licensing Insufficient storage, calibration and maintenance of specialised jigs and fixtures used in hull assembly 	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>	2M

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5. Hazardous Chemicals, Resins, Solvents and Coatings	<ul style="list-style-type: none"> Exposure to isocyanates, styrene, epoxy resins, solvents and marine coatings used in hull fabrication and finishing Inadequate storage and segregation of flammable and combustible liquids in workshops and paint sheds Lack of up-to-date Safety Data Sheets (SDS) and incorrect labelling of decanted products Poor ventilation and fume extraction in enclosed hull spaces during coating, fibreglass layup or adhesive application Inadequate controls for skin contact, sensitisation and respiratory exposure to chemicals Insufficient spill containment, emergency shower/eyewash and waste disposal arrangements 	4A	<p>[REDACTED]</p>	2M
6. Welding, Cutting, Hot Work and Fire Safety	<ul style="list-style-type: none"> Uncontrolled hot work near flammable materials, resins, solvents and wood dust Inadequate hot work permits and supervision in hull confinement spaces and near fuel systems Poor maintenance and inspection of welding equipment, gas cylinders and hoses Lack of fire detection, fire watch arrangements and suitable extinguishers in shipbuilding areas Accumulation of combustible waste, offcuts and dust in fabrication and fit-out zones Insufficient management of ignition sources during repair work on existing vessels Inadequate training and competency of workers undertaking hot work 	4A	<p>[REDACTED]</p>	2M

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7. Confined Spaces, Enclosed Hull Areas and Atmospheric Risks	<ul style="list-style-type: none"> • Entry into confined or poorly ventilated compartments within hulls and superstructures without formal controls • Atmospheric contamination from welding fumes, solvent vapours, fuel residues or inert gases • Oxygen-deficient atmospheres in sealed compartments, tanks or voids • Difficulty in rescue and emergency response from internal hull spaces and double bottoms • Confusion or lack of clarity about what constitutes a confined space in boat building context • Multiple PCBUs conducting work simultaneously in or near confined spaces without coordination 	4A	[REDACTED]	2M
8. Manual Handling, Ergonomics and Hull Assembly Methods	<ul style="list-style-type: none"> • Repetitive and forceful manual tasks during hull layup, fitting frames, installing components and finishing work • Awkward postures and overhead work inside hulls, under decks and in cramped compartments • Inadequate use of mechanical aids for lifting, turning and positioning heavy or awkward boat sections • Poor design of jigs, benches and fixtures leading to unnecessary bending, reaching and twisting • Insufficient job rotation or task variation in labour-intensive shipbuilding activities • Lack of ergonomic considerations in tool selection and work sequencing 	3H	[REDACTED]	2M
9. Working at Height, Access Systems and Fall Prevention	<ul style="list-style-type: none"> • Falls from height when working on hulls, superstructures, scaffolds and staging 	4A	[REDACTED]	2M

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	<ul style="list-style-type: none"> • Use of makeshift access (ladders, planks, crates) instead of designed access systems • Inadequate inspection and certification of scaffolds, mobile platforms and EWPs • Poor control of fall objects from staging onto workers below • Inadequate edge protection and access control on partially completed vessels • Insufficient planning and rescue arrangements for work using fall arrest systems 		[REDACTED]	
10. Noise, Vibration and Occupational Health Monitoring	<ul style="list-style-type: none"> • Prolonged exposure to high noise levels from grinding, cutting, hammering compressors and plant in enclosed workshops • Vibration exposure from hand-held tools during hull fabrication and fitting • Lack of systematic noise surveys and mapping of high-risk areas • Inadequate health surveillance for hearing loss or vibration-related disorders • Poor communication of noise hazards to workers and contractors in shared shipbuilding facilities 	3H	[REDACTED]	2M
11. Competency, Training and Supervision for Boat Building Operations	<ul style="list-style-type: none"> • Workers and supervisors lacking competency in high-risk construction activities specific to shipbuilding and hull assembly • Inadequate verification of licences, trade qualifications and contractor competencies 	3H	[REDACTED]	2M

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	<ul style="list-style-type: none"> • Insufficient induction for new workers, apprentices and visitors to boat building hazards • Poor supervision ratios for complex multi-trade tasks on and around vessels • Informal on-the-job training without structured assessment or documentation • Language, literacy and cultural barriers affecting understanding of WHS requirements 		<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	
12. Contractor, Labour Hire and Multi-PCBU Coordination	<ul style="list-style-type: none"> • Lack of clarity over WHS responsibilities between the primary boat builder, shipyard operator and contractors • Inconsistent safety standards and procedures across different PCBUs working on the same vessel • Inadequate induction and training for specialist contractors (e.g. electrical, engines, coatings) • Labour hire workers not integrated into the host PCBU's WHS systems and consultation arrangements • Conflicting schedules and simultaneous operations creating unplanned interactions and elevated risk 	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>	2M
13. Fatigue, Work Scheduling and Welfare Facilities	<ul style="list-style-type: none"> • Extended shifts, overtime and high production pressure during major shipbuilding projects • Irregular work hours tied to tides, launch windows and dock availability 	3H	<p>[REDACTED]</p> <p>[REDACTED]</p>	2M

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	<ul style="list-style-type: none"> Inadequate planning of rest breaks for physically demanding hull assembly and fitting work Insufficient welfare facilities (amenities, shade, hydration) in yard and dock areas Limited consideration of travel, remote work or night shift impacts on fatigue 		[REDACTED]	
14. Emergency Preparedness, Marine Environment and First Aid	<ul style="list-style-type: none"> Delayed response to injuries, fires or medical events in large yards, docks or on board vessels Inadequate emergency planning for falls into water, vessel instability or sinking risk during construction Poor communication of emergency alarms and evacuation routes within complex shipbuilding facilities Insufficient first aid equipment and equipment considering the physical nature of hull and ship construction Lack of coordination of emergency arrangements between multiple PCEs and emergency services 		[REDACTED]	2M
15. Health Monitoring, Injury Management and Incident Learning	<ul style="list-style-type: none"> Delayed identification of work-related illnesses from chemical, noise or ergonomic exposures Inconsistent reporting and investigation of near misses and incidents in shipbuilding activities Poor return-to-work and rehabilitation processes leading to prolonged injury impacts Failure to share lessons learned between projects, yards or shifts 	3H	[REDACTED]	2M

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	<ul style="list-style-type: none"> Stigma or fear of reporting safety concerns or minor injuries among workers 		<div style="background-color: black; height: 15px; width: 100%;"></div> <div style="background-color: black; height: 15px; width: 100%;"></div> <div style="background-color: black; height: 15px; width: 100%;"></div>	

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.