

**Pedestrian Safety Around Mobile Plant**

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.	Isolation 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. WHS Governance, Roles and Legal Compliance	<ul style="list-style-type: none"> <li>Lack of clear organisational accountability for managing pedestrian-plant interactions</li> <li>Senior management not aware of duties under WHS Act 2011 and WHS Regulations</li> <li>Policies and procedures not aligned with current Codes of Practice and Australian Standards relating to mobile plant and traffic management</li> <li>Insufficient consultation with Health and Safety Representatives (HSRs), workers, contractors and PCBUs sharing the workplace</li> <li>No formal process to review WHS performance data for mobile plant and pedestrian safety</li> <li>Inadequate due diligence by officers leading to under-resourcing of critical controls</li> </ul>	4A	<ul style="list-style-type: none"> <li>Establish and document a Mobile Plant and Pedestrian Interaction Policy endorsed by the PCBU and officers, referencing WHS Act 2011 duties and relevant Regulations and Codes of Practice</li> <li>Define and communicate clear WHS roles, responsibilities and delegations for persons managing mobile plant and pedestrian safety (officers, managers, supervisors, plant coordinators, contractors)</li> <li>Implement a documented governance structure (e.g. WHS Committee or Traffic Management Working Group) to oversee pedestrian-plant risks and review incident trends, audits and corrective actions</li> <li>Formalise consultation, cooperation and coordination arrangements with other PCBUs on shared sites, including written agreements for traffic management responsibilities</li> <li>Schedule periodic compliance reviews against WHS legislation, Codes of Practice and applicable Australian Standards (e.g. mobile plant, cranes, safeguarding of machinery, rotating equipment)</li> <li>Ensure officers complete due diligence training focusing on high-consequence risks from powered mobile plant and rotating machinery near pedestrians</li> </ul>	3H
2. Site Layout, Traffic Management Planning and Segregation	<ul style="list-style-type: none"> <li>Poorly designed site layout leading to shared operating zones between pedestrians and mobile plant</li> <li>Absence of a documented traffic management plan for mobile plant, cranes and other machines operating near pedestrians</li> <li>Inadequate separation between walkways and operating envelopes of mobile plant and rotating equipment</li> <li>Pedestrian exposure to blind spots around high-powered machinery, cranes and articulated plant</li> <li>Uncontrolled crossing points between pedestrian walkways and plant travel routes</li> <li>Temporary works and changes to layout not reflected in traffic management controls</li> </ul>	4A	<ul style="list-style-type: none"> <li>Develop, document and implement a site-specific Traffic Management Plan (TMP) that clearly separates pedestrian routes from mobile plant, cranes and rotating machinery operating zones</li> <li>Design and maintain dedicated pedestrian walkways with physical barriers (e.g. guardrails, bollards, kerbing) in high-risk areas to prevent encroachment into plant operating zones</li> <li>Define and clearly mark exclusion zones around mobile plant, cranes, rotating shafts and high-powered machinery, including minimum separation distances and no-go areas</li> <li>Implement controlled pedestrian crossing points with engineering controls such as boom gates, automatic barriers, speed humps and visual/audible warning systems</li> <li>Integrate traffic management requirements into site planning, design and change management processes to ensure new equipment or layout changes do not degrade segregation controls</li> <li>Install and maintain compliant signage and ground markings indicating plant-only routes, pedestrian-only routes and shared zones, using standardised colour coding and symbols</li> <li>Conduct periodic traffic flow studies and inspections to verify actual pedestrian and plant movements align with the TMP</li> </ul>	2M

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3. Mobile Plant and Machinery Selection, Design and Procurement	<ul style="list-style-type: none"> <li>• Selection of mobile plant or machinery without adequate pedestrian safety features</li> <li>• Insufficient guarding around exposed rotating shafts, belts, couplings and other moving parts</li> <li>• Equipment with poor visibility, inadequate cameras or proximity detection for pedestrian-heavy environments</li> <li>• Lack of engineered interlocks or presence-sensing devices to prevent plant operation when pedestrians are in hazardous zones</li> <li>• Procurement driven solely by cost without considering WHS performance and compatibility with site traffic systems</li> </ul>	4A	<ul style="list-style-type: none"> <li>• Establish procurement standards requiring mobile plant and machinery to meet or exceed relevant Australian Standards and to incorporate advanced pedestrian safety features (e.g. proximity detection, 360° cameras, reversing alarms, load indicators, slew restrictions)</li> <li>• Specify that plant with exposed rotating equipment must include compliant fixed guarding, interlocked guards or physical barriers to prevent pedestrian contact, in accordance with machine guarding standards</li> <li>• Require engineering risk assessments and design reviews for new or significantly modified plant to verify compatibility with existing pedestrian routes and exclusion zones</li> <li>• Mandate that cranes and high-powered machinery used near pedestrian areas are equipped with slew restriction systems, rated capacity indicators and emergency stop systems accessible from safe locations</li> <li>• Include WHS performance, maintenance support and safety upgrade options as key evaluation criteria in supplier selection and tender processes</li> <li>• Document and enforce a pre-acceptance inspection checklist to verify all specified safety features and guarding are installed and functional before plant is commissioned for use</li> </ul>	2M
4. Pedestrian and Operator Competency, Induction and Training	<ul style="list-style-type: none"> <li>• Operators of mobile plant, cranes or rotating machinery lacking competency in operating near pedestrians</li> <li>• Pedestrians unaware of exclusion zones and emergency procedures</li> <li>• Supervisors not enforcing pedestrian-plant controls or recognizing unsafe behaviours</li> <li>• No verification of high-risk licences or VOCs (Verification of Competency) for plant operators</li> <li>• Inadequate refresher training leading to drift from established safe systems of work</li> </ul>	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
5. Contractor and Visitor Management around Mobile Plant	<ul style="list-style-type: none"> <li>• Contractors and visitors unfamiliar with site-specific traffic arrangements and rotating machinery hazards</li> <li>• Inconsistent safety standards between PCBUS sharing plant and work areas</li> </ul>	3H	<p>[REDACTED]</p> <p>[REDACTED]</p>	2M

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	<ul style="list-style-type: none"> <li>• Uncontrolled access of visitors into operational areas with moving plant and exposed rotating shafts</li> <li>• Contractor work methods conflicting with established exclusion zones and traffic flows</li> </ul>		[REDACTED]	
6. Engineering Controls for Pedestrian Detection, Guarding and Separation	<ul style="list-style-type: none"> <li>• Reliance on administrative controls alone to keep pedestrians clear of moving plant and rotating equipment</li> <li>• Failure of visual-only controls (paint lines, signage) to prevent encroachment into high-risk zones</li> <li>• Inadequate guarding on exposed rotating shafts, drums and mechanical components within reach</li> <li>• Lack of automated pedestrian detection or interlocks in congested or noisy environments</li> </ul>	3H	[REDACTED]	2M
7. Operating Procedures for Plant-Pedestrian Interaction Management	<ul style="list-style-type: none"> <li>• Absence of documented procedures governing how plant operates in areas where pedestrians may be present</li> <li>• Inconsistent communication methods between operators, spotters and pedestrians</li> <li>• Unclear rules for spotter use, signalling and authority to stop work</li> </ul>	3H	[REDACTED]	2M

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	<ul style="list-style-type: none"> <li>Plant operation continuing while pedestrians enter exclusion zones or approach rotating equipment</li> </ul>		[REDACTED]	
8. Maintenance, Pre-Use Checks and Reliability of Safety Systems	<ul style="list-style-type: none"> <li>Inadequate maintenance program for mobile plant, cranes and rotating machinery leading to failure of safety features</li> <li>Pre-start checks not completed or not documented, allowing plant with faulty alarms, lights, brakes or guarding to operate</li> <li>Bypassing or disabling of proximity detection, interlocks or guards to keep plant running</li> <li>Unplanned breakdown causing abnormal plant movements and unexpected pedestrian exposure</li> </ul>	4A	[REDACTED]	2M
9. Scheduling, Fatigue and Workload Management for Operators and Pedestrians	<ul style="list-style-type: none"> <li>Fatigued plant operators or operators with reduced vigilance around pedestrians</li> <li>High workload, time pressure and production demands driving shortcuts in traffic management controls</li> <li>Extended shifts, night work and monotonous driving tasks increasing the risk of operator error</li> <li>Inadequate planning of crane lifts and machinery operations leading to congestion and rushed activities near pedestrians</li> </ul>	3H	[REDACTED]	2M

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			[REDACTED]	
10. Change Management, Project Staging and Temporary Works	<ul style="list-style-type: none"> <li>• Temporary changes to site layout, routes or plant types not assessed for pedestrian safety implications</li> <li>• Staged construction or shutdown works introducing new crane locations and rotating equipment near established walkways</li> <li>• Rapid mobilisation of hired plant without integration into existing traffic management systems</li> <li>• Informal workarounds created when barriers or walkways are relocated for short-term works</li> </ul>	3H	[REDACTED]	2M
11. Emergency Preparedness, Incident Response and Isolation	<ul style="list-style-type: none"> <li>• Lack of clear procedures for responding to collisions, entanglement or contact with rotating equipment</li> <li>• Delayed emergency response due to unclear site access routes for emergency services</li> <li>• Inadequate plant isolation and lockout procedures when pedestrians must enter high-risk areas for rescue or maintenance</li> <li>• Workers not trained in emergency stop locations and functions on mobile plant, cranes and machinery</li> </ul>	3H	[REDACTED]	1L

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			[REDACTED]	
12. Environmental Conditions, Visibility and Housekeeping	<ul style="list-style-type: none"> <li>Poor lighting reducing visibility of pedestrians and plant operators, particularly around rotating equipment and cranes</li> <li>Dust, glare, rain or fog obscuring sightlines and signage</li> <li>Cluttered walkways, stored materials and debris forcing pedestrians into plant routes or near exposed machinery</li> <li>Uncontrolled noise masking audible alarms and pedestrian warnings</li> </ul>	3H	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]	2M
13. Monitoring, Supervision, Inspections and Behavioural Compliance	<ul style="list-style-type: none"> <li>Inconsistent enforcement of pedestrian-plant rules by supervisor and leading hands</li> <li>Normalisation of deviance, where workers routinely walk through plant zones or bypass guards without challenge</li> <li>Lack of systematic inspections focussed on mobile plant and pedestrian interface risks</li> <li>Under-reporting of near misses involving pedestrians and mobile plant</li> </ul>	3H	[REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED]	2M

SAMPLE

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14. Remote Areas, Communications and Lone Working Near Plant	<ul style="list-style-type: none"> <li>• Pedestrians and spotters working alone or in remote parts of site with limited visibility and no immediate assistance if struck or entangled</li> <li>• Communication failures between operators and ground personnel due to radio blackspots or incompatible equipment</li> <li>• Delayed detection of incidents where pedestrians are injured by mobile plant or rotating equipment out of line-of-sight</li> <li>• Inadequate procedures for working near mobile plant in remote laydown, stockpile or crane set-up areas</li> </ul>	3H	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	2M

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.