

**Rail Safety**

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:	

SAMPLE

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.	Administrative Change	
								PPE	

  

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. Rail Safety Governance, WHS Duties & Legislative Compliance	<ul style="list-style-type: none"> <li>Lack of clear governance framework for rail safety responsibilities under WHS Act 2011 and Rail Safety National Law (where applicable)</li> <li>Failure to identify and manage rail-specific WHS obligations for PCBUs, officers, workers and contractors</li> <li>Inadequate integration of rail safety management system with broader organisational WHS management system</li> <li>Poor consultation and communication with workers, Health and Safety Representatives (HSRs) and rail safety regulators</li> <li>Absence of documented due diligence processes for officers overseeing rail operations</li> <li>Failure to monitor legal changes relating to rail corridors, road-rail vehicles and rail infrastructure work</li> </ul>	4A	<ul style="list-style-type: none"> <li>Establish and document a Rail Safety Governance Framework that aligns WHS Act 2011 duties with Rail Safety National Law obligations and relevant Rail Infrastructure Manager requirements</li> <li>Clearly define and record roles, responsibilities and accountabilities for rail safety across executives, managers, supervisors, workers and contractors</li> <li>Integrate rail safety risks into the organisation's WHS management system, including risk registers, audit schedules and incident reporting processes</li> <li>Implement formal consultation arrangements with workers and HSRs specifically covering rail corridor and rail vehicle activities</li> <li>Provide officers with documented due diligence processes, including regular briefings on critical rail risks, performance metrics and compliance status</li> <li>Undertake scheduled legal and standards compliance reviews (e.g. WHS Act 2011, Rail Safety National Law, AS 7460 series, electrical codes, relevant Codes of Practice)</li> <li>Maintain documented agreements or interface coordination plans with Rail Infrastructure Managers and other duty holders for shared rail corridors and level crossings</li> </ul>	3H
2. Rail Corridor Access, Permits & Possession Management	<ul style="list-style-type: none"> <li>Unauthorised access to corridors, rail reserves or track ways by workers or subcontractors</li> <li>Failure to obtain necessary rail access permits, safe working authorisations or track possessions</li> <li>Inadequate planning for work in or near live rail lines, including rail grinding and freight unloading locations</li> <li>Insufficient separation between work groups and operating train movements inside job sites</li> <li>Confusion over rail operator control, authority to enter track and limits of work zones</li> <li>Inadequate interface coordination when multiple contractors or disciplines operate within the same rail corridor</li> </ul>	4A	<ul style="list-style-type: none"> <li>Implement a formal Rail Corridor Access Procedure covering entry criteria, permit requirements, safe working roles and authorisations</li> <li>Require written track access approvals and possession documentation from the Rail Infrastructure Manager before works commence</li> <li>Use a centralised work planning and permit system that records possession times, boundaries, access conditions and isolations</li> <li>Define and document worksite protection arrangements (e.g. protection officers, lookouts, track force protection) in accordance with local rail rules</li> <li>Establish physical and administrative controls for rail corridor boundaries, including fencing, signage, exclusion zones and controlled entry points</li> <li>Coordinate interface agreements and pre-work coordination meetings with other contractors and operators sharing the corridor</li> <li>Conduct pre-start briefings that clearly communicate track status (live/isolated/possessed), safe access routes and emergency evacuation paths</li> </ul>	3H

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3. Rail Operations Planning & Scheduling (Trains, Trams & Road-Rail Vehicles)	<ul style="list-style-type: none"> <li>• Poorly planned interaction between train movements, trams, road-rail excavators and other plant</li> <li>• Inadequate separation of rail grinding operations, freight unloading and construction activities</li> <li>• Uncoordinated scheduling leading to congestion, time pressure and unsafe decision-making</li> <li>• Lack of defined operating parameters for rail transport inside the job site (speed, routes, priority)</li> <li>• Insufficient night-work planning, including visibility and supervision for rail movements</li> <li>• Over-reliance on informal communication between drivers, shunters and work groups</li> </ul>	4A	<ul style="list-style-type: none"> <li>• Develop a Rail Operations Plan for each project that documents train, tram and road-rail vehicle movements, including routes, speed limits and operating windows</li> <li>• Use structured planning tools (e.g. movement diagrams, Gantt charts) to sequence rail grinding, coupling/decoupling, loading/unloading and construction tasks</li> <li>• Apply hierarchy of controls to separate rail traffic from workers and other vehicles via dedicated haul routes, barriers and designated crossing points</li> <li>• Implement formal speed management policies for work areas, including reduced speeds, whistle requirements and speed limit protocols</li> <li>• Establish a traffic control or movement coordination role with authority to approve and monitor all on-site rail movements</li> <li>• Use standardised communication protocols (e.g. two-way radio channels, call-and-response procedures) for all movements within the worksite</li> <li>• Review and approve night-shift rail operations with a specific focus on lighting, fatigue management and supervision levels</li> </ul>	2M
4. Competency, Training & Authorisation for Rail Safety Workers	<ul style="list-style-type: none"> <li>• Workers performing rail safety roles without appropriate competency or accreditation</li> <li>• Inadequate training in rail rules, safe working systems and corridor-specific procedures</li> <li>• Lack of understanding of hazards associated with coupling/decoupling rail grinding and road-rail plant</li> <li>• Insufficient skills in communication protocols, hand signals and emergency procedures</li> <li>• Failure to verify subcontractor and labour hire worker competencies for rail corridor work</li> <li>• No systematic refresher training or assessment to maintain competency over time</li> </ul>	4A	<p>[REDACTED]</p>	2M
5. Rail Vehicle, Rolling Stock & Road-Rail Plant Management	<ul style="list-style-type: none"> <li>• Use of unsuitable or poorly maintained locomotives, wagons, trams or road-rail excavators</li> </ul>	4A	<p>[REDACTED]</p>	2M

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	<ul style="list-style-type: none"> <li>• Failure of braking, coupling, lifting and steering systems on rail vehicles or road-rail plant</li> <li>• Inadequate systems to ensure correct configuration of road-rail vehicles when transitioning on/off track</li> <li>• Lack of safeguards against runaways, roll-away events or unintended movements during coupling/decoupling</li> <li>• Insufficient inspection regimes for rail grinding units and rail-bound maintenance equipment</li> <li>• Inadequate protection against line-of-fire and crush hazards around rolling stock and plant</li> </ul>		[REDACTED]	
6. Coupling and Decoupling Train Carriages & Wagon Movements	<ul style="list-style-type: none"> <li>• Crush and pinch injuries during coupling/decoupling operations</li> <li>• Uncontrolled movement of rolling stock during shunting and marshalling</li> <li>• Workers entering between vehicles without effective protection and communication</li> <li>• Poor visibility, inadequate lighting and limited line-of-sight between shunters</li> <li>• Miscommunication between driver, ground staff and signaller leading to unexpected movements</li> <li>• Inadequate systems for securing trains during loading, unloading or maintenance</li> </ul>	4A	[REDACTED]	2M
7. Rail Grinding, Track Maintenance & On-Track Plant Operations	<ul style="list-style-type: none"> <li>• Exposure to sparks, noise, vibration and dust from rail grinding operations</li> <li>• Fire ignition from grinding activities in dry vegetation or near flammable materials</li> <li>• Strike or collision between rail-borne plant and workers, other equipment or rolling stock</li> </ul>	4A	[REDACTED]	2M

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	<ul style="list-style-type: none"> <li>• Failure of worksite protection or incorrect positioning of rail grinders and track machines</li> <li>• Inadequate control of noise and vibration impacts on workers and community</li> <li>• Insufficient maintenance and inspection of grinding equipment and track plant</li> </ul>		[REDACTED]	
8. Rail Transport of Materials, Loading/Unloading & Freight Handling	<ul style="list-style-type: none"> <li>• Material falls, collapses or movement during unloading raw materials from freight trains</li> <li>• Overloading or uneven loading of wagons affecting stability and braking performance</li> <li>• Workers in the line-of-fire between rolling stock, mobile plant and fixed structures</li> <li>• Uncontrolled interaction between forklifts, loaders, cranes and rail vehicles inside the job site</li> <li>• Inadequate securing of loads during shunting or transport within the worksite</li> <li>• Exposure to hazardous substances (e.g. dusts, chemicals, bulk materials)</li> </ul>	4A	[REDACTED]	2M
9. Working In and Near Rail Corridors, Tracks and Tramways	<ul style="list-style-type: none"> <li>• Workers struck by trains, trams or rail plant when working near tracks</li> <li>• Unclear safe approach distances and exclusion zones around tracks and overhead wiring</li> <li>• Distraction, complacency or poor situational awareness in busy rail environments</li> <li>• Public interface risks where worksites are adjacent to level crossings, stations or roads</li> <li>• Inadequate control of third-party access during vegetation removal or construction</li> </ul>	4A	[REDACTED]	2M

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	<ul style="list-style-type: none"> <li>Confusion over responsibilities between principal contractor and rail infrastructure manager</li> </ul>		[REDACTED]	
10. Vegetation Management and Civil Works Near Railways	<ul style="list-style-type: none"> <li>Contact with live tracks, overhead lines or signalling equipment during vegetation removal</li> <li>Falling trees or branches striking tracks, trains, overhead wiring or workers</li> <li>Plant and equipment encroaching into rail envelopes or fouling the track</li> <li>Debris left on or near the track causing derailment or damage to rolling stock</li> <li>Inadequate environmental and erosion controls impacting track stability</li> <li>Uncontrolled interaction between vegetation crews and rail operations</li> </ul>	3H	[REDACTED]	2M
11. Traffic Management, Level Crossings and Site Access Interfaces	<ul style="list-style-type: none"> <li>Collision between trains, trams and road vehicles at level crossings or temporary access points</li> <li>Poorly designed internal haul roads that intersect with rail tracks or tramways</li> <li>Inadequate signage, signals and barriers during construction near public roads and rail lines</li> <li>Conflicting instructions from traffic controllers and rail protection personnel</li> <li>Reduced visibility due to vegetation, structures, dust or lighting conditions at crossings</li> <li>Unauthorised use of temporary crossings or access tracks by the public or workers</li> </ul>	4A	[REDACTED]	2M

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12. Worker Health, Fatigue, Fitness for Duty and Environmental Exposures	<ul style="list-style-type: none"> <li>Fatigue from shift work, night operations and extended rail possessions</li> <li>Workers not fit for duty due to medical conditions, alcohol or other drugs</li> <li>Exposure to noise, vibration, dust, fumes and weather extremes during rail grinding and rail-side work</li> <li>Psychological stress from working in high-risk rail environments or isolated locations</li> <li>Inadequate amenities, rest areas and shelter for extended rail works</li> <li>Failure to consider individual worker limitations when allocating tasks</li> </ul>	3H	[REDACTED]	2M
13. Emergency Management, Incident Response and Derailment Preparedness	<ul style="list-style-type: none"> <li>Delayed or ineffective response to collisions, derailments or worker strikes within the rail corridor</li> <li>Confusion over emergency roles, responsibilities and communication channels</li> <li>Lack of access/egress routes for emergency services to rail corridor locations or remote areas</li> <li>Failure to manage hazardous materials or environmental releases from freight trains</li> <li>Inadequate testing of emergency plans for rail-specific scenarios</li> <li>Poor coordination with rail authorities and emergency services during incidents</li> </ul>	1A	[REDACTED]	2M
14. Contractor, Subcontractor and Interface Management for Rail Works	<ul style="list-style-type: none"> <li>Contractors undertaking rail corridor work without adequate systems, competencies or supervision</li> <li>Misalignment between principal contractor and subcontractor procedures for working near rail lines and tramways</li> </ul>	3H	[REDACTED]	2M

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	<ul style="list-style-type: none"> <li>Unclear division of responsibilities between multiple PCBUs within the same corridor or worksite</li> <li>Insufficient verification of plant, equipment and rail safety certifications for external providers</li> <li>Inconsistent induction and briefing practices across different contractor groups</li> <li>Inadequate management of design changes, variations or scope creep affecting rail safety controls</li> </ul>		[REDACTED]	
15. Documentation, Monitoring, Audit and Continuous Improvement	<ul style="list-style-type: none"> <li>Incomplete or outdated procedures, permits and safe work plans for rail activities</li> <li>Poor record-keeping for inspections, maintenance, training and incidents</li> <li>Inadequate supervision and field verification of rail safety controls</li> <li>Failure to detect defective conditions on tracks, vehicles or work practices</li> <li>Limited analysis of incidents and near misses involving rail operations</li> <li>No systematic approach to learning from external rail incidents and regulatory findings</li> </ul>	3H	[REDACTED]	1L

**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.