

Road Pavement Construction

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, Duties and Consultation	<ul style="list-style-type: none"> Lack of clear allocation of WHS duties and due diligence under WHS Act 2011 leading to unmanaged systemic risks in road pavement construction and asphalt repair activities Inadequate WHS governance structure, including absence of documented WHS policy, objectives and performance indicators specific to road construction and maintenance Poor consultation and communication with workers, health and safety representatives (HSRs), principal contractors, subcontractors and clients regarding WHS issues and changes to work methods Failure to consider WHS implications during early project planning and tender stages, resulting in unrealistic timeframes, resourcing and budget that drive unsafe decision-making Inadequate processes to ensure officers exercise due diligence by regularly reviewing safety performance, resources and risk controls for asphalt and road pavement operations No formal process to ensure compatibility of WHS systems between principal contractor and subcontractors, creating gaps in responsibility and controls Insufficient review and update of WHS management system to reflect legislative, code of practice and standards changes relevant to road and traffic works 	High	<ul style="list-style-type: none"> Develop, implement and maintain a documented WHS Management System aligned with WHS Act 2011, WHS Regulation and relevant Codes of Practice (e.g. Construction Work, Managing Risks of Plant in the Workplace, Traffic Management for Construction and Maintenance Work) Define and document WHS roles, responsibilities and authorities for officers, managers, supervisors, engineers and workers involved in road pavement construction and asphalt repair, and communicate these clearly Establish a formal WHS governance framework including WHS committee and/or HSR structures, regular meetings and a standing agenda item for high-risk construction work (HRCW) such as work near traffic, mobile plant and hot bitumen Embed WHS requirements in all project planning and tender documentation, including clear expectations for traffic management, plant safety, fatigue management, exposure to bitumen fumes, silica dust and noise Implement due diligence program for officers, including scheduled WHS performance reviews, site walks, review of incident trends, resourcing needs, and verification of control effectiveness for road pavement works Engage in robust consultation processes in line with WHS Act consultation duties, including pre-start briefings, toolbox talks, WHS planning workshops and documented consultation records for changes to methods, materials or equipment Develop interface and bridging arrangements where multiple PCBUs operate on the same site, clarifying shared and overlapping duties, including for principal contractor, traffic management provider and asphalt supplier Establish a documented management-of-change procedure requiring WHS risk assessment and consultation before introducing new plant, materials (e.g. new asphalt mix designs), technologies or work methods Implement a regular WHS legislative and standards review schedule, assigning responsibility to a competent person to identify changes relevant to road construction and update procedures, training and documentation accordingly Set WHS performance targets and key performance indicators (KPIs) specific to road and asphalt operations (e.g. near-hit reporting rates, plant interaction incidents, compliance with traffic control plans) and report trends to management and workers 	Medium
2. Project Planning, Design and Pre-Construction Risk Management	<ul style="list-style-type: none"> Insufficient early-stage risk assessment of the road corridor, traffic volumes, utilities, topography and environmental constraints leading to inadequate controls during construction and asphalt repair 	High	<ul style="list-style-type: none"> Implement a formal pre-construction WHS risk assessment and project planning process for all road pavement and asphalt repair projects, involving engineers, supervisors, workers and traffic management specialists Ensure road design and pavement design reviews include WHS considerations such as safe access for plant, laydown areas, turning paths for trucks, segregation of pedestrians, and safe positioning of asphalt plants or mobile batch units 	Medium

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	<ul style="list-style-type: none"> Design decisions that do not adequately consider constructability and WHS risks, such as narrow work zones, steep grades, poor access/egress or night works near live traffic Failure to incorporate safe systems for staging, work sequencing and traffic diversions at the planning stage, resulting in ad-hoc decisions on site Inadequate review of underground and overhead services information (e.g. dial-before-you-dig data, powerlines) leading to unplanned service strikes Poor consideration of environmental and weather risks (e.g. heat stress during asphalt placement, rain affecting skid resistance, fog or smoke affecting visibility) at project planning stage Unrealistic program durations and production targets encouraging unsafe shortcuts such as reduced traffic control, compressed compaction times or operating plant in close proximity Lack of formal processes to review client design documentation for WHS impacts and to feed back improvement recommendations 		<ul style="list-style-type: none"> Require documented Construction Hazard Assessment and Implication Review (or equivalent) for each project, including identification of high-risk construction work and required Safe Work Method Statements (SWMS) Integrate traffic impact assessments, traffic management design and staging into the project planning phase, ensuring adequate work zone width, safe taper lengths, buffer zones and provision for emergency access Formalise processes for locating and protecting services, including mandatory use of current utility plans, ground-penetrating radar where required, and consultation with service authorities during planning Include environmental and seasonal factors in planning such as heat stress risk during summer asphalt works, night work scheduling, lighting design, noise controls and management of fumes and odours Incorporate WHS criteria into program planning, ensuring realistic production rates and adequate time for set-up, inspection, traffic switches and curing periods, and include WHS hold-points in schedules Develop standardised project start-up checklists that cover design review, risk assessments, traffic management plan, permits, utilities clearances and stakeholder notifications prior to site establishment Establish formal process to review client or designer documentation for WHS implications and document any risk-related queries, clarifications or requests for design alterations Require management approval for any significant deviation from approved staging, traffic management or construction methodology, supported by updated risk assessment and consultation records 	
3. Contractor, Subcontractor and Supplier Management	<ul style="list-style-type: none"> Engagement of contractors and suppliers (e.g. asphalt suppliers, traffic management providers, etc.) without adequate assessment of their WHS competence and systems Inconsistent WHS standards between principal contractor and subcontractors leading to confusion, gaps in controls and unsafe practices on road pavements and asphalt repair sites Lack of clear contractual WHS requirements for high-risk activities such as working adjacent to live traffic, operating heavy mobile plant, hot bitumen use and night works Inadequate induction and integration of subcontractor workers into site-specific 	High	<ul style="list-style-type: none"> Develop and implement a structured pre-qualification process for all contractors and suppliers assessing WHS management systems, incident history, competency, licences and relevant experience in road and asphalt works Include explicit WHS requirements in contracts, purchase orders and service agreements, covering compliance with WHS Act 2011, principal contractor WHS procedures, traffic management standards and site-specific rules Require submission and review of contractor WHS documentation (e.g. SWMS, plant risk assessments, training records, insurance) prior to mobilisation to site, with documented approval processes Ensure site-specific WHS induction programs include all subcontractors and suppliers, with emphasis on traffic interfaces, exclusion zones, communication methods, PPE standards, emergency response and reporting expectations Establish clear supervision arrangements including named site supervisors, lines of authority and escalation pathways for WHS issues between principal contractor and subcontractors 	Medium

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	asphalt, spills, traffic intrusions or medical emergencies • Lack of refresher training, verification of competency and assessment of practical skills in operating specialised equipment like pavers, rollers and spray seal plant		[REDACTED]	
5. Plant, Vehicle and Equipment Management Systems	<ul style="list-style-type: none"> • Inadequate system for selection, procurement and verification of safe plant and equipment suitable for road pavement construction and asphalt concrete application • Poorly maintained or inspected plant (e.g. pavers, rollers, asphalt trucks, spray units, loaders) increasing risk of mechanical failure, loss of control, leaks or fires • Absence of systematic controls for plant-person interface (e.g. no standard requirements for flashing lights, reverse alarms, cameras, proximity detection spotters) • Inconsistent use of pre-start and post-use checks leading to unreported defects such as faulty brakes, steering issues, worn tyres or leaking hydraulic hoses • Lack of standardisation and control over small tools and equipment (e.g. compactors, cutters, blowers, generators, lighting towers) including noise and vibration exposure • No clear hierarchy for plant approval on high-risk sites (e.g. near live traffic or on steep grades), allowing unsuitable plant to be used • Inadequate system for isolations, lockout/tagout and maintenance scheduling for critical plant used in asphalt and road repair works 	High	[REDACTED]	Medium
6. Traffic and Road User Interaction Management	<ul style="list-style-type: none"> • Systemic failure to adequately manage interface between construction activities 	High	[REDACTED]	Medium

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	<ul style="list-style-type: none"> Lack of documented systems for storage, handling and emergency response for bitumen and related chemicals, increasing risks of burns, fires and environmental releases Insufficient assessment and management of airborne contaminants such as respirable crystalline silica from cutting or milling operations, and dust from unsealed surfaces Poor controls for noise and vibration exposure from plant and tools, leading to long-term health impacts for workers and disturbance to nearby residents Inadequate management of hot material handling temperatures and processes increasing risk of thermal burns and heat stress No integrated approach to environmental obligations, including stormwater protection, spill management and odour complaints, that interfaces with WHS controls 		[REDACTED]	
8. Fatigue, Rostering and Health Management	<ul style="list-style-type: none"> Systemic fatigue risks arising from long shifts, night works, rotating rosters and extended travel to remote road work sites Insufficient fatigue management policies and procedures for drivers, plant operators and asphalt crews, increasing risk of errors, near hits and vehicle incidents Lack of formal health monitoring and wellbeing programs addressing heat stress, dehydration, musculoskeletal strain and mental health impacts of high-pressure projects Poorly planned shift changes and handovers, leading to communication breakdowns, task duplication or omissions under tired supervision 	High	[REDACTED]	Medium

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	<ul style="list-style-type: none"> • Use of ad-hoc or last-minute overtime arrangements to meet program demands without assessing cumulative fatigue • Inadequate systems for identifying and supporting workers with health conditions that may impact safety in safety-critical roles (e.g. machine operation, traffic control, driving) 		[REDACTED]	
9. Documentation, Communication and Information Management	<ul style="list-style-type: none"> • Critical WHS documents (e.g. SWMS, TMPs, plant risk assessments, permits) not readily accessible, understood or implemented by onsite personnel • Inconsistent or informal communication of changes to work methods, traffic arrangements or asphalt materials, resulting in misalignment between planning and execution • Poor version control of documents leading to use of outdated procedures or drawings on road works • Inadequate recording and retention of WHS records such as inductions, training, inspections, incident and maintenance for regulatory and due diligence purposes • Language, literacy and cultural barriers not adequately addressed in communication, increasing the risk of misunderstanding critical WHS requirements • Over-reliance on verbal briefings without written or visual reinforcement, particularly in noisy environments and during night works 	Medium	[REDACTED]	Low

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			[REDACTED]	
10. Incident, Near Hit Reporting and Continuous Improvement	<ul style="list-style-type: none"> Under-reporting of incidents, near hits and unsafe conditions in road pavement and asphalt operations, leading to missed opportunities for learning and prevention Lack of clear procedures for incident notification, investigation, regulatory reporting and corrective action tracking Inadequate root cause analysis of significant events such as plant collisions, burns, service strikes or traffic intrusions Failure to share lessons learned across crews, projects and regions, resulting in repeated similar incidents Weak follow-up on corrective action with no verification that controls have been implemented and are effective A blame-focused culture discouraging reporting and worker participation in investigations 	Medium	[REDACTED]	Low
11. Emergency Preparedness and Crisis Management	<ul style="list-style-type: none"> Inadequate emergency planning for incidents such as vehicle collisions, plant rollovers, burns from hot asphalt, fires, chemical spills and medical emergencies on road worksites Lack of coordination with emergency services regarding site access, traffic 	High	[REDACTED]	Medium

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	<p>arrangements and response protocols during major road or freeway works</p> <ul style="list-style-type: none"> • Insufficient first aid resources, equipment and trained personnel relative to the risks associated with remote or night-time asphalt operations • Poor communication systems and redundancy planning for emergencies in areas with weak mobile coverage • No structured drills, simulations or testing of emergency procedures, leading to confusion and delay during real events • Failure to consider environmental emergencies (e.g. significant spills to waterways, major fuel leaks) that also have WHS implications 		<p>[REDACTED]</p>	
12. Monitoring, Audit and Management Review	<ul style="list-style-type: none"> • Lack of systematic monitoring and auditing of WHS performance in road pavement construction and asphalt repair projects • Failure of management to regularly review WHS performance data and adjust strategies, resources or controls accordingly • Over-reliance on lag indicators such as lost time injuries without adequate use of leading indicators (e.g. near hits, inspections, training completion, TMP compliance) • Inconsistent follow-up on audit findings leading to recurring non-conformances and uncontrolled systemic risks 	Medium	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	Low

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	<ul style="list-style-type: none"> Fragmented WHS data across multiple systems (e.g. plant maintenance, incidents, training) making it difficult to identify trends and high-risk areas Limited worker and HSR involvement in monitoring, auditing and management review processes 		<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.