

**Concreting**

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.	<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 Responsibilities for Concreting	<ul style="list-style-type: none"> <li>Lack of clearly defined WHS responsibilities for concreting activities at officer, manager, supervisor and worker levels</li> <li>Inadequate due diligence by PCBU's and officers regarding concreting-specific risks under WHS Act 2011</li> <li>No formal WHS objectives, KPIs or performance monitoring for concreting operations</li> <li>Insufficient consultation mechanisms with Health and Safety Representatives (HSRs) and workers on concreting risks and controls</li> <li>Failure to integrate concreting risk management into overall organisational WHS management system</li> <li>Inadequate resourcing (time, funding, competent personnel) to manage concreting risks</li> <li>Poor coordination of WHS responsibilities between principal contractor, subcontractors, suppliers and pump operators</li> </ul>	4A	<ul style="list-style-type: none"> <li>Develop and implement a WHS governance framework that explicitly addresses concreting operations and aligns with WHS Act 2011 and WHS Regulations</li> <li>Define and document WHS roles, responsibilities and accountabilities for officers, project managers, site supervisors, leading hands and workers involved in concreting</li> <li>Establish measurable WHS objectives and KPIs specific to concreting (e.g. pre-pour verification completion rates, audit findings, incident trends) and review them regularly at management meetings</li> <li>Implement robust consultation arrangements including toolbox talks, pre-starts and HSC meetings that routinely address concreting hazards and control effectiveness</li> <li>Ensure officers exercise due diligence by regularly reviewing concreting risk assessments, audit reports and incident investigations and allocating adequate resources to address findings</li> <li>Formalise WHS responsibilities for all contractors involved in concreting through contract clauses, WHS schedules and site-specific induction requirements</li> <li>Establish a line of authority for work stoppage where supervisors and workers are empowered and required to stop concreting works if critical controls are not in place</li> </ul>	3H
2. Design, Planning and Engineering Controls for Concreting Works	<ul style="list-style-type: none"> <li>Inadequate structural design information or constructability review for slabs, beams, walls and footings</li> <li>Lack of early consideration of concrete pump access, set-up zones, boom reach and exclusion zones in design phase</li> <li>Design not accounting for loadings on formwork, falsework and supporting structures during pour</li> <li>Omission of embedded services and penetrations from drawings leading to onsite rework and uncontrolled cutting or drilling</li> <li>Insufficient planning for curing requirements, early-age load restrictions and joint layout</li> </ul>	4A	<ul style="list-style-type: none"> <li>Implement a formal design review and constructability process that includes experienced concreting personnel, engineers and WHS advisers</li> <li>Require certified structural engineering documentation for formwork, falsework and temporary works subject to concreting loads, with clear load limits and bracing requirements</li> <li>Integrate concrete pump and delivery vehicle access, outrigger set-up pads, boom operating envelopes and overhead service clearances into early design and site logistics plans</li> <li>Mandate coordination between structural, architectural and services drawings to minimise onsite cutting, coring and unplanned penetrations in concrete elements</li> <li>Include specifications addressing curing regimes, early-age load restrictions, joint layouts and slab protection in project documentation and method statements</li> <li>Use the hierarchy of control in design stages to minimise manual handling and awkward postures, including allowance for mechanical placing, screeding and finishing equipment</li> <li>Implement a design change control procedure requiring risk assessment and approval before any significant modification affecting concreting methodology or loads is adopted</li> </ul>	2M

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	<ul style="list-style-type: none"> <li>Poor coordination between designers, builders and concreters resulting in late design changes and rushed work</li> <li>Failure to engineer out manual handling and repetitive tasks where practicable (e.g. use of placing booms vs hand barrowing)</li> </ul>			
3. Contractor and Supplier Selection, Competency and Management	<ul style="list-style-type: none"> <li>Engagement of concreting subcontractors without verification of competency, licences and WHS performance</li> <li>Inadequate vetting of concrete pump operators, boom inspectors and line hands</li> <li>Use of labour hire workers or short-term casuals who lack site-specific concreting experience and induction</li> <li>Poor management of third-party suppliers such as ready-mix concrete providers and admixture suppliers</li> <li>Lack of clear contractual WHS requirements for concreting activities, including incident reporting and participation in risk assessments</li> <li>Inadequate supervision of new or young workers assigned to concreting tasks</li> <li>Failure to verify that contractors have and implement safe systems of work that align with site requirements</li> </ul>	4A	<ul style="list-style-type: none"> <li>Implement pre-qualification process for concreting contractors and pump suppliers that evaluates WHS systems, incident history, training records and references</li> <li>Specify minimum competency requirements for key roles (e.g. certified boom pump operators, doggers, rigger/supervisors) and verify licences and VOCs before mobilisation</li> <li>Include detailed WHS obligations in contracts, including requirements for provision and review of SWMS, risk assessments, inspection records and participation in site WHS activities</li> <li>Implement a contractor onboarding process that includes site-specific inductions emphasising concreting hazards, traffic interfaces and emergency procedures</li> <li>Assign experienced supervisors to oversee crews with new or young workers and apply mentoring arrangements and closer monitoring during high-risk pours</li> <li>Require ready-mix concrete suppliers to provide product data sheets, temperature and slump information and assurance that deliveries will comply with agreed traffic and safety protocols</li> <li>Conduct periodic WHS audits and performance reviews of concreting contractors and suppliers, with corrective action plans for non-compliances</li> </ul>	2M
4. Concreting Methodology, Procedures and Documentation	<ul style="list-style-type: none"> <li>Absence of a documented, project-specific concreting methodology addressing key risks and interfaces</li> <li>Relying on generic SWMS and procedures that do not reflect site conditions, structural complexity or pour sequence</li> <li>Inadequate definition of hold points, sign-offs and inspection requirements before, during and after pours</li> </ul>	4A	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	2M

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	<ul style="list-style-type: none"> <li>• Failure to integrate formwork, steel fixing, services and finishing trades into a coordinated methodology</li> <li>• Lack of clear criteria for go/no-go decisions regarding weather, temperature, wind and light conditions</li> <li>• Inadequate planning for contingency situations such as pump breakdowns, supply interruptions or cold joints</li> <li>• Poor communication of methodology to crews, leading to inconsistent or unsafe practices</li> </ul>		[REDACTED]	
5. Site Layout, Traffic Management and Concrete Delivery Interface	<ul style="list-style-type: none"> <li>• Uncontrolled interaction between concrete trucks, pumps, pedestrians and other mobile plant</li> <li>• Inadequate traffic management planning for peak delivery periods and large pours</li> <li>• Poorly designed access routes causing vehicle instability, rollovers or bogging especially on unsealed or sloping ground</li> <li>• Insufficient segregation between public areas, site entries and concrete truck queuing zones</li> <li>• Lack of designated washout areas leading to ad hoc washout in unsafe environmentally sensitive locations</li> <li>• Inadequate communication systems between traffic controllers, pump operators and delivery drivers</li> <li>• Failure to control reversing movements and blind spots around pump set-up locations</li> </ul>	4A	[REDACTED]	2M
6. Formwork, Falsework and Structural Stability Management	<ul style="list-style-type: none"> <li>• Failure or collapse of formwork or falsework due to under-design, overloading or poor erection practices</li> <li>• Inadequate inspection and certification of formwork systems prior to loading with wet concrete</li> </ul>	4A	[REDACTED]	2M

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	<ul style="list-style-type: none"> <li>• Uncontrolled modifications to formwork, propping or bracing without engineering approval</li> <li>• Inadequate documentation of load paths into slabs, beams, columns and ground</li> <li>• Progressive overloading from simultaneous pours or stacked materials on partially cured structures</li> <li>• Lack of clear stripping and reshoring criteria leading to premature removal of supports</li> <li>• Poor communication between supervisors, engineers and formwork crews about load limits and pour rates</li> </ul>		[REDACTED]	
7. Concrete Pumping Systems and Plant Management	<ul style="list-style-type: none"> <li>• Use of concrete pumps or booms without current inspections, certifications or maintenance records</li> <li>• Inadequate verification of ground conditions leading to outrigger failure pump overturning</li> <li>• Failure of pipelines, hoses or clamps causing hose whipping or concrete blow outs</li> <li>• Proximity of booms to overhead powerlines and other electrical hazards</li> <li>• Poor communication protocols between pump operator, hose and placers during priming, pumping and cleaning</li> <li>• Inadequate lock-out/tag-out or isolation procedures during maintenance, cleaning or blockage clearing</li> <li>• Subcontracted pump operators not integrated into site WHS procedures and emergency plans</li> </ul>	4A	[REDACTED]	2M
8. Manual Handling, Ergonomics and Task Design in Concreting	<ul style="list-style-type: none"> <li>• High manual handling demands when placing, screeding and finishing concrete</li> <li>• Repetitive and sustained awkward postures, especially during trowelling, edging and jointing</li> </ul>	3H	[REDACTED]	2M

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	<ul style="list-style-type: none"> <li>Inadequate planning leading to hand barrowing or carrying concrete over long distances</li> <li>Lack of systems to manage exposure to hand-arm vibration from power tools and equipment</li> <li>Insufficient job rotation or task variation contributing to musculoskeletal disorders</li> <li>Poor selection and maintenance of ergonomic tools and equipment</li> <li>Absence of early reporting and management of musculoskeletal discomfort or minor injuries</li> </ul>		[REDACTED]	
9. Chemical, Environmental and Health Exposure Control	<ul style="list-style-type: none"> <li>Exposure to wet concrete and cementitious products causing skin irritation, burns and dermatitis</li> <li>Inhalation of cement dust, silica dust or curing compound vapours due to inadequate controls</li> <li>Poor management of admixtures, sealers and curing agents including lack of SDS information</li> <li>Inadequate systems for controlling noise from pumps, vibrators and power tools</li> <li>Heat stress or cold stress during late pours in extreme weather conditions</li> <li>Uncontrolled washout water and slurry causing environmental contamination and slip hazards</li> <li>Insufficient health monitoring for workers with ongoing exposure to hazardous substances or extreme conditions</li> </ul>	4A	[REDACTED]	2M
10. Working at Height, Edge Protection and Access Systems	<ul style="list-style-type: none"> <li>Falls from height during placement of concrete on decks, slabs, stairs and edges</li> <li>Inadequate edge protection, void protection or fall prevention systems around pours</li> </ul>	4A	[REDACTED]	2M

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	<ul style="list-style-type: none"> <li>• Uncontrolled access to incomplete or partially cured elevated slabs and structures</li> <li>• Improvised access systems such as makeshift platforms or ladder misuse</li> <li>• Lack of integration between concreting activities and overall site fall prevention planning</li> <li>• Insufficient inspection and maintenance of scaffolds, formwork decks and access stairs used during pours</li> <li>• Poor control of loads and equipment near unprotected edges and penetrations</li> </ul>		[REDACTED]	
11. Fatigue, Scheduling, Resourcing and Workforce Welfare	<ul style="list-style-type: none"> <li>• Extended work hours and night pours leading to fatigue, reduced vigilance and increased error rates</li> <li>• Compressed schedules and programme slippage resulting in rushed work and shortcuts</li> <li>• Insufficient staffing leading to inadequate skill mix during critical pours</li> <li>• Inadequate planning for break, hydration and amenities during continuous or large pours</li> <li>• Psychosocial stress from high production pressures, competing priorities and poor supervision</li> <li>• Lack of systems to monitor and manage fatigue for workers who also drive heavy vehicles or plant</li> <li>• Insufficient induction and support for workers who are inexperienced, young or from culturally diverse backgrounds</li> </ul>	3H	[REDACTED]	2M
12. Emergency Preparedness, Incident Management and First Aid	<ul style="list-style-type: none"> <li>• Lack of specific emergency procedures for concreting-related incidents such as pump failures, collapses, entrapments and chemical burns</li> </ul>	3H	[REDACTED]	2M

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	<ul style="list-style-type: none"> <li>Inadequate first aid arrangements for remote or large sites with dispersed concreting areas</li> <li>Poor communication and location identification methods for rapid emergency response during large pours</li> <li>Failure to plan for structural instability or partial collapse during or after pours</li> <li>Insufficient training of supervisors and key personnel in incident response and initial scene control</li> <li>Inadequate reporting and investigation of near misses and minor incidents associated with concreting activities</li> <li>Lack of integration between contractor and principal contractor emergency arrangements</li> </ul>		[REDACTED]	
13. Consultation, Communication and Change Management for Concreting	<ul style="list-style-type: none"> <li>Insufficient worker consultation on concreting risks and controls leading poor ownership of safety procedures</li> <li>Inadequate communication of change to pour schedules, methods or plant configurations</li> <li>Language barriers and low literacy affecting understanding of procedures, signage and instructions</li> <li>Lack of formal change management for variations in concrete mix, pump selection or site layout</li> <li>Information silos between design, engineering, site management and concreting crews</li> <li>Inconsistent pre-start and toolbox processes across different contractors involved in concreting</li> <li>Delayed sharing of lessons learned from incidents or non-conformances on other projects or earlier pours</li> </ul>	3H	[REDACTED]	2M

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14. Compliance, Monitoring, Inspection and Continuous Improvement	<ul style="list-style-type: none"> <li>• Non-compliance with WHS legislation, Australian Standards and codes of practice applicable to concreting</li> <li>• Infrequent or superficial inspections of concreting activities, plant and work areas</li> <li>• Failure to verify that critical controls for high-consequence risks are implemented and effective</li> <li>• Inadequate documentation and record-keeping for inspections, maintenance and training</li> <li>• Lack of trend analysis of incidents, defects and audit findings related to concreting</li> <li>• No structured process for reviewing and updating risk assessments as project conditions change</li> <li>• Over-reliance on individual competence rather than systematic checks and verifications</li> </ul>	3H	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	1L

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.