General Concreting Pouring and Footings

Business Name:	ABN:	
Business Address:		
Contact Person:	Phone:	Email:

THIS RISK ASSESSMENT IS APPROVED BY THE PCBU OF THE 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:

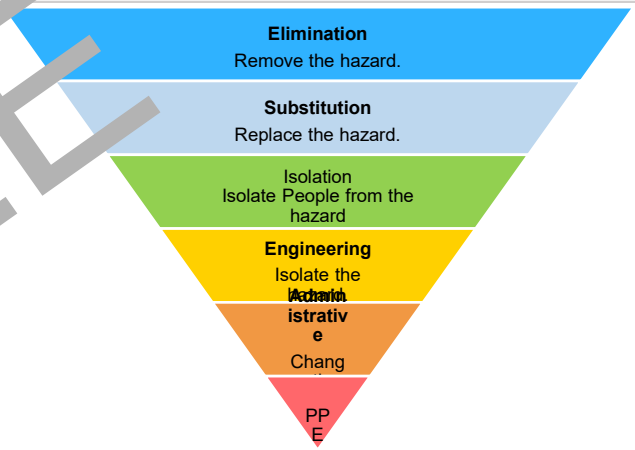
CLIENT OR PRINCIPAL CONTRACTOR DETAILS

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
ALMOST CERTAIN	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4 ACUTE		
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE	3H HIGH	Rev before work
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACU	2M MO RATE	Ensure control measures in place.
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 H	1L LOW	Monitor and keep records.

HIERARCHY OF CONTROLS



Risk Rating & Required Action:

4A	Stop work. The risk is intolerable. E inate the hazar redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or hi er-level authorisati is required.
3H	Review and approve additional c rols b ask arts. Senior supervisor sign-off needed.
2M	Ensure all nominated controls are in ace and effe ive. 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, Roles and Consultation for Concreting Works	• Lack of clearly defined WHS responsibilities for concreting activities under WHS Act 2011 (PCBUs, officers, workers, subcontractors) • Inadequate consultation with workers and Health and Safety Representatives about concreting risks and control measures • Poor integration of concreting risk management into overall project WHS management plan • No formal process to review and approve concreting methodologies (e.g. slab on ground, footing pours, fibre-reinforced concrete) before work starts • Insufficient oversight of high-risk construction work obligations (e.g. work near excavations, plant movement, formwork and temporary works) • Failure to coordinate WHS responsibilities between principal contractor, concrete supplier, pump operator, steel fixers and finishing crews • No documented escalation process for WHS concerns identified during concrete pours (e.g. unsafe weather conditions, plant defects, rushed pours)	4A	• Establish a project WHS management plan that explicitly covers general concreting pouring and footings, including slab preparation, ground slab construction, pours, and footings • Clearly define and document WHS roles and responsibilities for all parties involved in concreting (principal contractor, subcontractors, suppliers, engineers, supervisors) in accordance with WHS Act 2011 • Implement a formal consultation process (toolbox talks, pre-pour coordination meetings, HSR involvement) to identify and review concreting hazards and controls before each significant pour • Require written method statements and risk assessments for key concreting activities (e.g. cold/hot weather concreting practices, fibre-reinforced casting, pouring from a mixer, vibrating of wet concrete) to be reviewed and approved by a competent person • Ensure high-risk construction work Safe Work Method Statements (SWMS) are prepared, reviewed, and monitored for activities involving formwork, excavations, working near mobile plant, and work at height associated with pours • Develop interface agreements or coordination plans that clarify how WHS duties are shared and managed between concrete supplier, pump contractor, reinforcing installers, and site management • Implement a WHS issue escalation and stop-work procedure empowering supervisors and workers to pause concreting operations when serious risks are identified (e.g. structural instability, weather extremes, plant defects)	3H
2. Design, Engineering and Structural Adequacy of Footings and Slabs	• Inadequate engineering design of foundations, footings, slabs on ground and paths for soil conditions and loadings • Poor communication of design intent to site (misinterpretation of reinforcement details, footing dimensions, concrete strength, fibre content) • Lack of verification that temporary works (formwork, edge boards, bracing) are designed for concrete pressures and pour sequences • Inadequate consideration of construction joints, pour breaks, and	4A	• Require all foundations, footings, slabs and paths to be designed and certified by a suitably qualified engineer in accordance with relevant Australian Standards (e.g. AS 3600, AS 2870) and NCC requirements • Implement a formal design review and sign-off process prior to construction, including review of reinforcement detailing, cover requirements, concrete grades, admixtures, fibre specifications, and curing requirements • Ensure formwork and temporary works are designed or verified by a competent person, with documented maximum pour heights, pour rates and bracing details for footings and slabs • Use clear, standardised drawings and site-ready detailing sheets, including diagrams of footing layouts, slab thickenings, and construction joint locations • Implement a design change management procedure so that any field changes (e.g. footing depth changes due to unexpected ground conditions) are reviewed and approved by the designer	2M

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	sequencing leading to cold joints and structural weaknesses • No formal design review for non-standard solutions (e.g. fibre-reinforced concrete casting, complex ground slab construction) • Failure to address environmental and ground conditions (e.g. reactive soils, groundwater, frost, subsidence) in design documentation • Insufficient engineering input into cold weather and hot weather concreting practices, leading to reduced long-term performance		• Develop project-specific engineering criteria for hot and cold weather concreting (e.g. allowable temperature ranges, modified mix designs, curing regimes) and ensure they are communicated to site teams • Require engineering sign-off that the ground slab preparation, subgrade treatment, vapour barriers and compaction meet design assumptions before any pour proceeds	
3. Planning, Programming and Pour Management	• Inadequate planning for pour durations, crew size and staging leading to rushed or uncontrolled concrete placement and finishing • Poor coordination of concrete supply, pump availability, reinforcing installation and inspections • Failure to assess weather forecasts and environmental conditions (hot/cold/wet/windy) and their impact on pour quality and safety • No contingency planning for interruptions (pump breakdown, traffic delays, sudden weather changes) • Inadequate time allocation for slab preparation, mould preparation and pre-pour checks prior to concrete truck arrival • Insufficient planning for after-pour tasks such as blanket laying over freshly placed concrete and site cleaning after pouring • Lack of consideration for access and egress routes for concrete trucks, pump booms, and workers during busy pour periods	4A	• Develop a project-specific concreting pour plan that sets out pour areas, sequence, estimated volumes, durations, crew numbers and responsibilities for each major pour • Implement a scheduling process that coordinates reinforcing installation, formwork, inspections, concrete delivery times, and finishing resources to avoid congestion and rework • Introduce a pre-pour planning checklist that includes verification of weather forecasts, temperature ranges, wind conditions, and any required adjustments to hot or cold weather concreting practices • Establish contingency plans for pump failure, late deliveries, or sudden weather deterioration (e.g. backup pump arrangements, additional labour for rapid finishing, additional blankets or curing compounds) • Specify minimum lead times for pour notification to suppliers and subcontractors to ensure adequate preparation and resourcing • Incorporate time in the program for post-pour curing measures (blanket placement, curing compounds, joint cutting scheduling) and systematic site clean-up • Review and map traffic management, plant movements and pedestrian routes for each pour and adjust the pour plan to minimise conflicting movements • Require supervisor authorisation before changing pour sequences or start times to maintain control over resourcing and risk	2M

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4. Ground Conditions, Excavations and Slab Preparation Systems	• Inadequate geotechnical assessment or undocumented assumptions about soil bearing capacity for foundations and slabs on ground • Uncontrolled excavations for footings leading to wall collapse, undermining of adjacent structures or services damage • Poorly managed slab on ground prep work (insufficient compaction, uneven subgrade, ponding water) affecting stability and worker footing • No systematic verification of underground services before excavation or footing placement • Lack of procedure for managing contaminated soils or unexpected ground conditions (e.g. soft spots, groundwater ingress) • Inadequate drainage planning causing standing water in excavations or on sl prep areas • Failure to control access around open footings and trenches (f excavations, plant e ering edges)	4A	[redacted]	2M
5. Concreting Plant, Equipment and Maintenance Systems	• Inadequate maint d inspection of concrete pumps, mixer vibrators and compactors leading t mechanical failure or unc trol movement • Use of unsuitable or uncertified plant for pumping, placing or vibrating wet concrete • Lack of standardised pre-start checks for concrete trucks, pumps and portable mixers used for pouring concrete from a mixer or manually mixing cement and sand • Failure to implement guarding and lock-out systems for moving parts on mixers and vibrators	4A	[redacted]	2M

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	• Poorly controlled power supplies and leads to vibrators and other equipment (trip, electrocution and fire hazards) • No system to verify that hired or subcontractor plant meets site WHS and maintenance requirements • Inadequate procedures for removing blocked lines, cleaning hoppers or dealing with pump pressure issues		[redacted]	
6. Material Specification, Handling and Storage (Cement, Aggregates, Admixtures)	• Incorrect concrete mix specification or delivery (wrong strength, slump, admixture content, fibre dosage) due to poor communication or ordering systems • Unsafe handling of raw materials such as cement, water, aggregates and admixtures leading to dust inhalation, skin and eye contact burns, and manual handling injuries • Exposure to hydrated lime and other alkaline constituents in cement produc without adequate controls • Inadequate storage of bagged cemen hydrated lime and additi using spills, deterioration, water ingress • Lack of segregat n between incompatible subst es poor labelling of additives and surface treatments • No procedure for mana ted or returned concrete, wash-out water and residual raw materials • Use of non-conforming materials (e.g. contaminated aggregates, expired admixtures) due to insufficient quality controls	3H	[redacted]	2M
7. Chemical and Health Exposure Control for Cement and Lime	• Chronic exposure to cement and hydrated lime dust leading to respiratory conditions and skin sensitisation • Acute eye and skin burns from wet concrete, grout, and lime-containing mixes during placement and finishing	3H	[redacted]	1L

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	• Lack of systems to manage prolonged contact with wet concrete on legs, hands and feet during engaging in concreting and vibrating of wet concrete • Inadequate training on the health effects of cementitious products, including alkali burns and dermatitis • Failure to control exposure during cutting, grinding or breaking existing concrete surfaces adjacent to pours • Improper storage and use of chemical curing compounds, release agents and sealers creating inhalation and fire hazards		[redacted]	
8. Manual Handling, Ergonomics and Work Organisation in Concreting	• Poorly planned manual handling of formwork, mesh, bar chairs, edge boards and screeds during slab preparation and laying of concrete floor slabs • Excessive pushing, pulling and bending during concrete placement an finishing, particularly for large slabs and paths • Inadequate syste to limit repetitive or sustained postu s when vibrating wet concrete or ha finis edge and rebates • Lack of mechanical aids or poor l out resulting in long carry dis of bagged cement, sand and aggregate during manually mixing cement and sand • Insufficient job rotation, breaks and crew size leading to fatigue and musculoskeletal disorders • Design of work not considering access constraints around footings, ground slabs and paths	3H	[redacted]	2M
9. Weather, Environment and Curing Management	• Failure to adjust work practices for hot weather concreting practices leading to rapid setting, cracking, reduced strength and heat stress	4A	[redacted]	2M

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(Hot/Cold/Wet Conditions)	• Inadequate controls for cold weather concreting practices causing delayed setting, frost damage, and compromised structural performance • Poor curing management, including lack of blanket laying over freshly placed concrete or insufficient curing compounds leading to shrinkage and surface defects • Unmanaged rain and wind events during pours causing wash-out, laitance formation and unsafe slippery surfaces • Lack of heat and cold stress management systems for workers placing, vibrating and finishing concrete in extreme temperatures • Improper management of run-off from wash-out, slurry and cleaning the site after pouring concrete leading to environmental contamination		[redacted]	
10. Traffic, Mobile Plant and Site Access Around Concreting Areas	• Uncontrolled interaction between concrete trucks, pumps, excavators an pedestrians during slab and footing pouring • Inadequate traffi anagement for narrow residential eets or sites when concreti ths and driveways • Poor management of reversing vehicles and swing radius mp booms near workers and public areas • Insufficient planning for emergency access during large pours when access routes are blocked by vehicles and hoses • No formal controls for plant stability when setting up pumps or placing plant near excavations and soft ground • Lack of clear delineation between active pour zones, curing areas and general site traffic routes	4A	[redacted]	2M
11. Training, Competency, Induction	• Insufficient competency of workers and supervisors in general concreting	3H		2M

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and Supervision in Concreting	methods, including ground slab construction, pouring foundation footings and slab on ground prep work • Lack of formal training and verification for specific tasks such as vibrating wet concrete, fibre-reinforced concrete casting and preparation of moulds • Inadequate inductions covering concreting-specific hazards (cement burns, formwork collapse, pump line hazards, hot and cold weather practices) • Reliance on undocumented on-the-job learning without assessment of skills and knowledge • Supervision levels not matched to risk, especially for new workers and complex pours • No structured refresher training or lessons-learned process after incidents or near-misses		[redacted]	
12. Safe Work Documentation, SWMS Integration and Change Management	• Fragmented or incomplete WHS documentation for concreting activities, leading to inconsistent ri trols • Failure to integrat his high-level risk assessment with t k-specific SWMS for pouring, finishing, ti d cle ng the site after pouring concrete • Outdated SWMS and procedures ot reflecting current design, methods (e.g. adoption of fibre-reinforced mixes, new curing compounds) • No formal process for managing changes during pours (sequence changes, late design amendments, plant substitutions) • Workers not understanding documented procedures due to language or literacy barriers • Lack of verification that documented control measures are implemented in the field	3H	[redacted]	1L

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13. Emergency Preparedness, Incident Response and First Aid for Concreting	• Lack of specific emergency procedures for concreting incidents such as formwork failure, pump line rupture or person entrapped in wet concrete • Inadequate provision for first aid treatment of cement and hydrated lime burns, eye splashes and inhalation exposures • Poor planning for rescue from excavations and footing trenches in the event of wall collapse or worker fall • No rehearsed response to major concrete spills, pump failures or environmental releases of slurry and wash-out water • Delayed emergency response due to blocked access routes or unclear site address and entry instructions • Under-reporting of minor concreting incidents and near-misses, limiting opportunities for system improvement	3H	[redacted]	1L
14. Fatigue, Work Hours and Psychosocial Risk in Concreting Operations	• Extended work hours during large or time-critical pours leadi[redacted] fatigue-related error[redacted]d incidents • Pressure to com[redacted]te pours q[redacted] due to concrete se[redacted] rushed decisions and risk-taking behaviour • Inadequate planning fo[redacted] and shift handovers during night pours or extreme weather rescheduling • Poor communication and conflict between contractors (pump operators, concrete suppliers, finishing crews) under schedule pressure • Insufficient systems for workers to raise psychosocial concerns (stress, bullying, unrealistic timeframes) relating to concreting works	3H	[redacted]	2M
15. Housekeeping, Post-Pour Clean-Up	• Poor housekeeping during and after pours leading to slips, trips and falls on	3H		1L

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and Waste Management	concrete residues, offcuts, hoses and tools • Uncontrolled concrete wash-out and equipment cleaning activities contaminating soil and waterways • Inadequate systems for removal and disposal of surplus concrete, damaged formwork and curing materials • Residual protruding steel, stakes or formwork after pouring concrete footings and slabs creating impalement and trip hazards • No formal allocation of responsibility for cleaning the site after pouring concrete and returning it to safe condition for subsequent trades		[redacted]	
16. Exclusions, Misuse of Materials and Non-Work Activities	• Improper or ad hoc use of cementitious products for non-construction activities (e.g. so-called cooking with cement or other unsafe experimentation) on or associated with the workplace • Lack of clarity that cement and concrete products are i[illegible]d materials not to be u[illegible]ed for personal or recreational purpo[illegible]s at work • Potential ingestio[illegible]n or sk[illegible] exposure from inappropriate handlin[illegible]f cement outside controlled work tas[illegible] • Reputational and legal r[illegible]CBU where workers engage in unsafe or non-compliant use of cement products on site	2M	[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

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-of-codes-of-practice

Northern Territory
Work Health and Safety (National Uniform Legislation) Act 2011
Work Health and Safety (National Uniform Legislation) Regulations 2011
Legislation NT: https://worksafe.nt.gov.au/laws-and-compliance/workplace-safety-laws
Codes of Practice NT: https://worksafe.nt.gov.au/forms-and-resources/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

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.

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

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

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

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