Mobile Crane Operation			
Business Name:		ABN:	
Business Address:			
Contact Person:	Phone:	Email:	

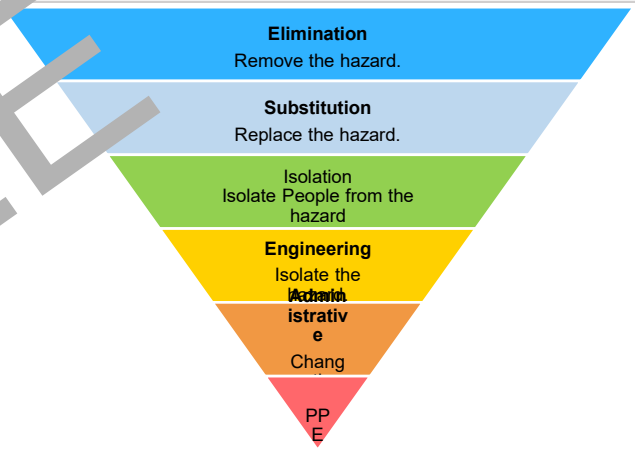
THIS RISK ASSESSMENT IS APPROVED BY THE PCBU OF THE PROJECT		
Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a RISK ASSESSMENT is prepared before the proposed work starts.		
Full Name:		
Signature:	Title:	Date:

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. Governance, WHS Duties and PCBU Responsibilities	• Lack of clearly defined WHS responsibilities for crane operations across PCBU, principal contractor, crane supplier and crane crew • Failure to implement and monitor compliance with the WHS Act 2011, WHS Regulation and relevant Codes of Practice (e.g. Managing the risks of plant in the workplace, Construction work Code) • Inadequate consultation, cooperation and coordination between PCBUs involved in crane operations (builder, crane contractor, riggers, doggers, transport companies) • Absence of an integrated WHS management system specific to cranes and lifting operations • Inadequate resourcing for safe crane operations (e.g. supervision, planning time, engineering support, inspection budgets) • Failure to monitor leg[illegible]ges, Australian Standard[illegible]e.g. AS 2550, AS 1418) and manufa[illegible]urer guidance for mobile cranes	4A	• Establish and document a WHS governance [illegible]work that assigns clear crane-related duties and accountabilities to officers, ma[illegible]agers, supervisor[illegible]nd crane o[illegible]rators in line with WHS Act 2011 • Implement a documented Cra[illegible]and Lifting Opera[illegible]s [illegible]anagement Plan aligned with the organisation's WHS M[illegible]gemen[illegible]ystem, covering r[illegible]bile, truck-mounted, Franna, crawler, mini and rough terrain cra[illegible] • Formalise c[illegible]sultation, co[illegible]peration [illegible]d c[illegible]rdination arrangements between all PCBUs on site (e.g. interfa[illegible]agree[illegible]nts, pre[illegible]tart coordin[illegible]n meetings, documented roles for principal contractor and crane [illegible]tractor) • Ensu[illegible]o[illegible]ers ex[illegible]ise due diligence by regularly reviewing crane risk assessments, incident data, mainte[illegible]nce [illegible]eports [illegible]d compliance audits, and by providing adequate resources to implement controls • Maintai[illegible]a leg[illegible]and standards register referencing WHS legislation, relevant Codes of Practice and A[illegible]ralia[illegible]Standa[illegible]ds for cranes, and review procedures whenever these are updated • Includ[illegible]ne operations in internal and external WHS audits, with corrective actions tracked to [illegible]mpletion through a formal action management system	3H
2. Crane Procurement, Design Suitability and Configuration Control	• Selection of cranes not fit for inte[illegible]d purpose, terrain, load type[illegible]or lifti[illegible]g configuration (e.g. inappro[illegible]riate boom truck, Franna or mini crane for complex lifts) • Failure to consider load charts, outrigger footprint, boom length, jib configuration and counterweight system requirements during procurement • Inadequate evaluation of compatibility of accessories such as concrete kibbles, man boxes, lifting frames and spreader bars with crane capacity and design • Use of cranes or attachments that do not comply with relevant Australian	4A	• Develop and implement a crane procurement procedure requiring engineering review of proposed cranes (mobile, truck-mounted, crawler, mini, rough terrain) against intended tasks, terrain and load profiles • Require that all cranes and major attachments comply with relevant Australian Standards and manufacturer specifications, with documented evidence obtained before purchase or hire • Implement a configuration control process for cranes covering boom length options, jib configurations, counterweights, outrigger systems and accessories, including a formal approval pathway for any changes • Require pre-hire and pre-purchase technical evaluations to verify compatibility of concrete kibbles, lifting beams, spreader bars and other devices with crane capacity and load charts • Prohibit unauthorised alterations to structural components, counterweight systems, LMIs, height limiters, overload indicators and fire suppression systems via a documented modification and engineering sign-off procedure • Maintain an approved equipment register for all cranes and attachments, including rated capacities, design parameters and limitations for special applications such as lifting from water	2M

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	Standards or manufacturer specifications • Unauthorised modifications to cranes, counterweight systems, height limiter systems, overload indicators, Load Moment Indicators (LMIs) and fire suppression systems • Failure to ensure cranes used near water, for lifting from water, or for rough terrain applications are suitably rated and protected			
3. Planning, Lift Engineering and Task Risk Management	• Inadequate lift planning for complex lifts (e.g. heavy lifts, tandem lifts, lifting from water, dynamic weight testing, derrick assembly and dismantling) • Failure to consider environmental conditions such as wind speed, rain, lightning and ground conditions in planning • Underestimation of dynamic loads, load swing, boom deflection and the ri of dropped objects during crane operations • Inadequate assess nt of obstructions and structures lea g to striking overhead structure or plant • Poor integration of crane risk assessment with project WHS risk assessments and Safe Work Met d Statements for lifting ope • Insufficient planning for emergency descent, crane evacuation and failure of lifting equipment	4A	• Imple ent a formal planning procedure that requires risk-based categorisation of lifts (routine, non-rou ne, c ical, ta em, lifting from water, dynamic testing) with corresponding engineering input evels • Re ire documented lift plans for all non-routine or high-risk lifts, including load data, crane onfigu n, boom length, counterweights, outrigger deployment, boundary marking and exclusion zones • andate engineering verification of calculations for critical lifts, including dynamic loading, wind loading, boo n deflection and suspended loads handling, using manufacturer data and load charts • Integrate crane lift plans with site-wide WHS risk assessments and SWMS for associated high-risk construction work, ensuring alignment of controls across workgroups • Embed requirements for pre-lift risk reviews (JHAs or similar) that consider obstructions, overhead services, underground services, adjacent structures and potential for dropped objects • Develop and implement emergency and abnormal operation procedures covering emergency descent from the crane, failure of lifting equipment, loss of power and partial collapse scenarios	2M
4. Site Layout, Ground Conditions and Crane Set-Up Management	• Inadequate assessment and verification of ground bearing capacity for outriggers, crawler tracks and stabilisers • Poor outrigger placement and deployment leading to crane instability and overturning	4A	[redacted]	2M

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	• Insufficient boundary marking for crane operations, including swing radius and exclusion zones for suspended loads • Uncontrolled on-site crane navigation leading to collisions with people, vehicles, structures or underground/overhead services • Inadequate control of arrival and departure of cranes to and from site, including transport routes, escorts and traffic interfaces • Failure to identify and control risks from nearby excavations, underground services or soft ground under outriggers and tracks		[redacted]	
5. Mobile Crane Movement, Transport and On-Site Navigation	• Uncontrolled movement of mobile, truck-mounted, Franna, boom truck and rough terrain cranes on and off public roads and within sites • Operation of cranes in confined or congested areas without adequate spotters or traffic separation • Failure to manage cra[redacted]ility during travel with bo[redacted]raised or partially extended • Lack of procedur[redacted]for s[redacted]g up cranes for transporting, including securing booms, jib sections and counterweights • Unmanaged risks during on-site crane navigation near overhead structures, services and other plant • Inadequate procedures for operation of stabilisers and transition between travel and lifting modes	3H	[redacted]	2M
6. Operator Competency, High-Risk Licensing and Training Systems	• Unqualified or inadequately trained operators, doggers and riggers operating or assisting with cranes and derricks use • High-risk work licences (HRWL) not current, not verified, or not appropriate	4A	[redacted]	2M

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	for crane type (e.g. mobile vs vehicle loading vs tower vs Franna) • Insufficient training in crane-specific systems such as LMIs, height limiter systems, overload indicators, fire suppression systems and emergency descent equipment • Lack of competency in specialised operations including lifting from water, rough terrain crane operation, dynamic weight testing and hoisting services • No formal verification of competence for site-specific hazards (e.g. blind lifts, operation without clear sightlines, remote controls, mini cranes) • Inadequate induction for new personnel regarding organisational crane policies, procedures and reporting expectations		[redacted]	
7. Safe Systems of Work, Procedures and SWMS Integration	• Lack of overarching procedures governing planning, set-up, lifting, post-lifting and dismantling activities involving cranes • SWMS for crane o[redacted]ations focusing only on operator a[redacted]ons and not integrated with br[redacted]der site s[redacted]or management contro[redacted] • Inconsistent or outdated procedur[redacted] across different crane types and [redacted] contractors on the same [redacted] • Failure to address controlling risks from suspended loads handling, removing obstructed loads and securing loads prior to hoisting • Inadequate procedural controls for crane dismantling, derrick assembly and dismantling, and crane servicing interfaces with operations • Poor communication of procedure changes or new controls to affected workers and subcontractors	3H	[redacted]	2M
8. Lifting Gear, Load Attachment Systems	• Failure of lifting equipment including slings, shackles, spreader bars, lifting	4A		2M

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and Inspection Regimes	beams, hooks and concrete kibbles due to poor inspection and maintenance • Use of lifting gear without documented LOLER-style inspections (or equivalent in Australian context) or without traceable certification and identification • Incompatible or incorrectly rated lifting gear selected for the load, lift configuration or environmental conditions • Inadequate systems to control the use, storage and retirement of damaged or out-of-test lifting gear • Lack of procedures for test lifting operations, dynamic weight testing and load testing without a load (system function tests) • Poor control of tag lines, restraints and attachment points, contributing to dropped object hazards during crane operations		[redacted]	
9. Safety-Critical Systems, Indicators and Limiters	• Improper adjustment or bypassing of Load Moment Indicators [illegible] to overloading • Failure or incorrect calibration of height limiter systems, overload indicators and anti-two-block devices • Inadequate testing of safety-critical controls including overload [illegible] testing and load testing of interlocks without a load • Lack of clear responsibility for periodic inspection, testing and calibration of electronic and mechanical safety systems • Defeating or overriding alarms and limiters to complete lifts under production pressure • Poor records and traceability of safety system maintenance and performance issues	4A	[redacted]	2M

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10. Environmental, Wind and Weather Management for Lifts	• Failure to assess and monitor wind speed before lifting loads, especially large surface-area loads and concrete kibbles • Inadequate management of weather conditions such as rain, lightning, fog, heat and reduced visibility during crane operations • No clear criteria or authority for suspending and resuming lifting operations under adverse weather • Insufficient planning for environmental impacts on crane stability, load behaviour and communication (e.g. radio interference in storms) • Lack of appropriate anemometers or wind measuring devices on or near cranes • Inadequate communication to downstream contractors when lifts are cancelled or rescheduled due to weath	3H	[redacted]	2M
11. Access, Egress and Working at Height on Cranes	• Unsafe climbing into cranes, accessing cabs, booms and superstructures without proper access systems • Inadequate fall protection and restraint use while hoisting equipment or conducting inspections on the crane structure • Lack of planned emergency egress from crane cabs, booms or elevated work positions • Poor housekeeping on crane decks and access ways leading to slips, trips and falls • Absence of procedures for safe use of ladders, walkways and platforms on cranes during servicing and maintenance • Insufficient training and equipment for controlled evacuation from cranes in case of fire or mechanical failure	3H	[redacted]	2M

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12. Communication, Visibility and Coordination of Lifts	• Operation of a crane or hoist without clear sightlines, leading to collisions, load strikes or entrapment • Inadequate communication protocols between operators, doggers, riggers and spotters, especially during blind lifts and operation of pedestrian operated cranes • Radio communication failures or interference during critical lift operations • Lack of standardised hand signals, role clarity and escalation pathways during lifting operations • Multiple cranes or lifting operations occurring concurrently without adequate coordination and spatial separation • Insufficient communication about boundary marking, exclusion zones and changes to lift sequencing	3H	[redacted]	2M
13. Maintenance, Inspection, Servicing and Change Management	• Inadequate crane servicing and maintenance systems leading to mechanical or structural failure during operation • Deferred or undocumented inspections, including statutory inspections, thorough examinations and manufacturer-recommended checks • Poor management of defects identified during pre-start checks, LEEA-style inspections or dynamic testing of cranes • Lack of integration between maintenance activities and operational planning, resulting in cranes being used while unsafe or out of certification • Insufficient control of changes after major repairs, crane dismantling, reassembly or component replacement • Failure to maintain and test fire suppression on cranes and other emergency systems	4A	[redacted]	2M
14. Contractor Management and	• Use of crane contractors and crane hire providers without adequate	3H		2M

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Interface with Crane Service Providers	verification of their safety systems and compliance with WHS legislation • Inconsistent standards between principal contractor and crane contractor for risk assessment, SWMS quality and supervision • Poor coordination between crane operators, rigging crews and other subcontractors performing hoisting services or working nearby • Lack of clarity in contracts regarding responsibilities for crane inspection, dynamic weight testing and certification • Insufficient monitoring of contractor performance and non-conformance management relating to crane operations • Inadequate integration of contractor emergency procedures with site emergency arrangements		[redacted]	
15. Fatigue, Work Scheduling and Human Factors	• Fatigue mismanagement for crane operators, doggers and riggers due to extended shifts, night w… high workload • Production press…e leading to shortcuts in crane … up, …dary marking, post-lifting safety checks a… lock-out procedures • Cognitive overload duri… …lex lifting operations, increasing the risk of error in reading indicators or radios • Inadequate job rotation and breaks for personnel performing repetitive hoisting and signalling tasks • Insufficient consideration of human factors in the placement of controls, displays and alarms within crane cabs • Under-reporting of near misses and human error events due to blame culture	3H	[redacted]	2M
16. Emergency Preparedness, Incident	• Lack of coordinated emergency response procedures for crane-related	3H		1L

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Response and Post-Incident Review	incidents such as load drops, plant strikes, overturning or structural failure • Inadequate planning for rescue and emergency descent from crane cabs, booms or suspended work platforms • Poor integration of crane-specific fire risks with site fire and evacuation plans • Failure to control the area and prevent secondary incidents following a crane event or dropped object incident • Insufficient investigation of crane-related near misses, failures of lifting equipment and abnormal operations • Lack of mechanisms to ensure lessons learned from incidents are translated into system improvements		[redacted]	

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 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