

**Mobile Crane**

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			<b>Elimination</b> Remove the hazard.	
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED	<b>Substitution</b> Replace the hazard.	
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE	3H HIGH	Review before work starts.	Isolation Isolate People from the hazard	
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	2M MODERATE	Ensure control measures in place.	<b>Engineering</b> Isolate the hazard	
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 HIGH	1L LOW	Monitor and keep records.	Administrative Change	
								PPE	

  

Risk Rating & Required Action:	
<b>4A</b>	Stop work. The risk is intolerable. Eliminate the hazard or redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or higher-level authorisation is required.
<b>3H</b>	Review and approve additional controls before task starts. Senior supervisor sign-off needed.
<b>2M</b>	Ensure all nominated controls are in place and effective. Proceed with caution; monitor conditions.
<b>1L</b>	Proceed, following standard operating procedures. Monitor and keep records.

  

Consequence Scale:			
Consequence	People (injury/illness)	Project / Assets	Compliance / Reputation
<b>Catastrophic</b>	Fatality or permanent total disability	project shutdown	Significant regulator intervention; criminal prosecution
<b>Major</b>	Serious injury/illness (hospital > 5 days)	critical delay	Improvement notice; major media coverage
<b>Moderate</b>	Medical-treatment injury; lost-time > 1 day	moderate delay	Minor breach; adverse client comment
<b>Minor</b>	First-aid only, no lost time	negligible delay	Isolated non-conformance
<b>Insignificant</b>	No injury	no schedule impact	Deviation caught and corrected on site

  

**Notes on Hierarchy of Controls:**  
Remember to apply controls in the preferred order shown by the coloured pyramid:

1. **Eliminate**
2. **Substitute**
3. **Isolate**
4. **Engineering**
5. **Administrative**
6. **PPE**

Always document **why** a lower-order control is accepted if elimination or substitution is not reasonably practicable.

*aligned with Safe Work Australia's Managing the risk of fatigue at work (2023) and ISO 45001:2018 clauses 6–8.*

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
1. Governance, WHS Duties and PCBU Management	<ul style="list-style-type: none"> <li>Lack of clear allocation of WHS duties between PCBU, officers and workers in relation to mobile crane operations</li> <li>Inadequate due diligence by officers under WHS Act 2011 (Qld/NSW/Model) leading to under-resourced crane safety systems</li> <li>Weak WHS policy framework that does not explicitly address high-risk plant such as mobile cranes</li> <li>Failure to consult, cooperate and coordinate with other PCBUs on sites where the crane is operating</li> <li>Inadequate review of safety performance data, incident trends and regulatory updates relating to cranes</li> </ul>	High	<ul style="list-style-type: none"> <li>Establish and maintain a documented WHS governance framework that explicitly identifies mobile crane operations as high-risk work and defines responsibilities for PCBUs, officers, managers, supervisors and workers</li> <li>Ensure officers fulfil due diligence obligations by regularly acquiring and keeping up-to-date knowledge of crane-related WHS risks, relevant Australian Standards (e.g. AS 2550 series), Codes of Practice and regulator alerts, and by verifying the effectiveness of controls through audits and inspections</li> <li>Embed mobile crane risk management requirements within the organisation's WHS policy, risk management procedure and plant safety procedure, including specific reference to high-risk work licensing and plant registration where applicable</li> <li>Implement formal consultation, cooperation and coordination arrangements (e.g. written interface agreements, pre-start coordination meetings, principal contractor engagement) with host employers, principal contractors, trade management providers and rigging subcontractors</li> <li>Require senior management to review crane-related WHS performance at defined intervals (e.g. quarterly), including incidents, near misses, non-conformances, audit findings, and to allocate resources for continual improvement</li> <li>Include mobile crane safety KPIs (e.g. completion of pre-use inspections, competency verification, closure of corrective actions) in leadership performance plans</li> <li>Ensure documented process exists to approve deviations from standard crane procedures, involving risk assessment, consultation, and officer oversight where significant risk variations are proposed</li> </ul>	Medium
2. Procurement, Selection and Design of Mobile Crane and Attachments	<ul style="list-style-type: none"> <li>Procurement of mobile cranes not compliant with Australian Standards, manufacturer specifications or local road and registration requirements</li> <li>Crane capacity, configuration or safety features not suited to the intended tasks, loads or typical sites, increasing risk of overloading or instability</li> <li>Attachments, lifting gear and auxiliary equipment (e.g. fly jibs, man boxes, spreader bars) not fit for purpose, incompatible or lacking design registration where required</li> <li>Insufficient consideration of environmental and site conditions (e.g. tight urban sites, slopes, wind, powerlines, ground bearing capacity) during selection of crane type and configuration</li> <li>Failure to specify safety-critical systems such as rated capacity limiters, anti-two-block, load moment indicators,</li> </ul>	High	<ul style="list-style-type: none"> <li>Implement a formal plant procurement procedure that requires mobile cranes and related equipment to comply with relevant Australian Standards (e.g. AS 1418 and AS 2550 series), WHS Regulations for plant, and road authority registration and permit requirements</li> <li>Require documented engineering and operational criteria for crane selection (e.g. maximum radius, capacity, typical load types, site constraints, ground conditions, road travel distances) and ensure all new or hired mobile cranes meet these criteria</li> <li>Include in procurement specifications mandatory safety features such as rated capacity indicators/limiters, anti two-block devices, load charts for all configurations, emergency stop systems, boom angle and radius indicators, and, where relevant, outrigger load monitoring</li> <li>Ensure lifting attachments and accessories (e.g. spreader bars, man cages, concrete kibbles) are subject to design verification and registration where required, are compatible with the crane, and supplied with load ratings, user instructions and inspection requirements</li> <li>Undertake a documented pre-hire or pre-purchase risk assessment that considers typical site conditions (including overhead services, access, ground conditions and prevailing weather) to guide selection of crane type (e.g. all-terrain, rough terrain, pick and carry, truck-mounted)</li> <li>Prequalify crane suppliers and hire companies through a formal process that reviews their WHS management systems, maintenance records, operator competency systems and incident history</li> </ul>	Medium

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	<ul style="list-style-type: none"> <li>slew and boom limiting devices, and emergency stop systems</li> <li>Inadequate supplier prequalification, resulting in hire cranes being supplied without adequate documentation or maintenance history</li> </ul>		<ul style="list-style-type: none"> <li>Require suppliers to provide complete documentation for each crane (e.g. logbooks, maintenance records, test certificates, load charts, operating manuals, design registration details) prior to acceptance and mobilisation</li> <li>Include clauses in procurement and hire agreements that specify WHS requirements, responsibilities for inspections, maintenance, and provision of competent operators and doggers/riggers</li> </ul>	
3. Legal Compliance, Licensing and Documentation Management	<ul style="list-style-type: none"> <li>Failure to identify and comply with WHS Act 2011 and WHS Regulation requirements relating to high-risk work, plant registration and crane operations</li> <li>Use of crane operators, doggers and riggers without current and appropriate high-risk work licences or evidence of competency</li> <li>Lack of current plant registration (where required) or missing commissioning/inspection certificates and load test records</li> <li>Poor control of documentation leading to outdated procedures, risk assessments, load charts or emergency plans being used</li> <li>Inadequate record keeping for inspections, maintenance, incident investigations and training, limiting ability to demonstrate compliance trends</li> </ul>	High	<ul style="list-style-type: none"> <li>Maintain a legal register that identifies all applicable WHS legislative requirements, Codes of Practice and Standards relevant to mobile crane operations, and assign responsibility for monitoring changes and communicating updates</li> <li>Implement licensing and competency verification procedure that requires sighting, recording and periodically re-checking high-risk work licences (e.g. CV, CN, C2, C6, C1, C0, DG, RB, RI, RA) and driver licences for all relevant personnel</li> <li>Ensure systems in place to verify and record registration of registrable plant and to maintain current certificates of inspection, commissioning records, load tests and third-party verifications where applicable</li> <li>Establish a controlled document management system for crane-related documents (e.g. SWMS, procedures, lift studies, emergency plans, load charts) with version control, approval processes and clear communication of updates to affected workers</li> <li>Retain inspection, maintenance, modification and repair records for each mobile crane in accordance with legislative and manufacturer requirements, accessible for audits and regulator inspections</li> <li>Conduct periodic internal audits to verify that licences, registrations, inspection records and SWMS are current, complete and accurately reflect site and crane conditions</li> <li>Require contractors and crane hire providers to submit evidence of compliance (licences, qualifications, registration, inspections) as part of mobilisation, with verification by the engaging PCBU</li> </ul>	Medium
4. Competency, Training and Verification of Operators and Support Personnel	<ul style="list-style-type: none"> <li>Inadequate competency of crane operators, doggers, riggers, supervisors and planners for the complexity of lifts undertaken</li> <li>Over-reliance on formal high-risk work licences without assessment of actual skills, experience or familiarity with specific crane models and lifting environments</li> <li>Insufficient training on site-specific hazards such as proximity to powerlines, public interfaces, traffic, and ground instability</li> <li>Lack of competency in using safety systems and technology (e.g. load</li> </ul>	High	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	Medium

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	<ul style="list-style-type: none"> <li>moment indicators, anti-two-block, rated capacity limiters, telematics)</li> <li>Poor communication skills and lack of standardised hand signals, radio protocols and language proficiency among lifting team members</li> </ul>		[REDACTED]	
5. Planning, Lift Engineering and Risk Management Systems	<ul style="list-style-type: none"> <li>Lifts undertaken without adequate planning, engineering input or risk assessment for non-routine, heavy or complex lifts</li> <li>Failure to identify and control critical site constraints such as overhead powerlines, underground services, structures, roadways and adjacent activities</li> <li>Inadequate process for categorising lifts (e.g. routine vs critical) leading to insufficient control of high-consequence risks</li> <li>Lack of integration of crane plans into broader construction site planning, causing clashes with other high-risk work</li> <li>Poor change management when lift parameters, crane configuration or site conditions change from the original plan</li> </ul>	High	[REDACTED]	Medium
6. Site Access, Traffic Management and Public Interface	<ul style="list-style-type: none"> <li>Conflicts between mobile cranes and other vehicles, pedestrians or plant due to inadequate traffic management systems</li> <li>Crane travel on public roads or shared access ways without appropriate permits, route assessments or escort arrangements</li> </ul>	High	[REDACTED]	Medium

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	<ul style="list-style-type: none"> <li>Uncontrolled public access into crane operational zones, especially in urban or brownfield environments</li> <li>Poor management of loading/unloading areas for crane components, counterweights and loads, leading to manual handling risks and struck-by incidents</li> <li>Inadequate coordination with external stakeholders such as local councils, road authorities and utilities when operating near public infrastructure</li> </ul>		[REDACTED]	
7. Ground Conditions, Set-Up Systems and Structural Interfaces	<ul style="list-style-type: none"> <li>Inadequate assessment and verification of ground bearing capacity at crane set-up locations leading to outrigger or tyre failure and crane overturning</li> <li>Failure to identify underground services, basement voids, pits or backfilled areas that may not support crane loads</li> <li>Poor coordination with temporary works and structural engineers regarding loads imposed on slab pavements, bridges or temporary platforms</li> <li>Lack of standardised process for specifying and verifying outrigger mats, crane pads and ground improvement measures</li> <li>Insufficient monitoring or reassessment of ground conditions over time, particularly after rain, flooding or adjacent excavation</li> </ul>	High	[REDACTED]	Medium
8. Maintenance, Inspection and Asset Management of Mobile Cranes	<ul style="list-style-type: none"> <li>Inadequate preventative maintenance and inspection regimes for cranes and lifting accessories leading to mechanical failure or loss of control</li> </ul>	High	[REDACTED]	Medium

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	<ul style="list-style-type: none"> <li>• Reliance on ad hoc repairs and breakdown response rather than planned servicing in accordance with manufacturer and standards</li> <li>• Lack of systems for tracking defects, isolating unsafe plant and verifying corrective action completion</li> <li>• Use of lifting gear (slings, shackles, hooks, spreader bars) without current inspection tags or records, or beyond safe service life</li> <li>• Insufficient verification of maintenance quality for contractor or hire cranes</li> </ul>		[REDACTED]	
9. Operational Control Systems, Procedures and Safe Work Method Statements	<ul style="list-style-type: none"> <li>• Absence of, or outdated, written procedures and SWMS for one operations, including for high risk activities such as tandem lifts or lifting near powerlines</li> <li>• Inconsistent application of procedures between sites, shifts or supervisors leading to variable risk levels</li> <li>• SWMS documents that are excessively generic, not reflecting specific crane types, site constraints or tasks</li> <li>• Lack of clear criteria for when higher level controls (e.g. engineered solutions, physical barriers) must be implemented rather than administrative measures</li> <li>• Inadequate verification that workers understand and follow approved procedures and SWMS</li> </ul>	High	[REDACTED]	Medium

SAMPLE

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			[REDACTED]	
10. Contractor and Crane Hire Management	<ul style="list-style-type: none"> <li>Engagement of crane contractors or hire companies with inadequate WHS systems or poor safety performance</li> <li>Unclear allocation of responsibilities between host PCBU and crane contractor regarding planning, supervision, maintenance, and emergency response</li> <li>Inconsistent standards where multiple crane providers operate on the same or different sites</li> <li>Failure of contractors to follow site-specific procedures, traffic management plans or SWMS</li> <li>Insufficient oversight of subcontracted doggers, riggers and transport providers used by crane companies</li> </ul>	High	[REDACTED]	Medium
11. Emergency Preparedness, Incident Response and Recovery	<ul style="list-style-type: none"> <li>Lack of coordinated emergency response planning for crane-related incidents such as overturning, drops, contact with powerlines or mechanical failure</li> <li>Workers not trained or drilled in specific emergency scenarios associated with mobile cranes</li> <li>Ineffective communication with emergency services and regulators due to unclear notification procedures or inaccurate site information</li> <li>Unplanned and unsafe recovery operations following crane incidents, leading to secondary harm</li> </ul>	High	[REDACTED]	Medium

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	<ul style="list-style-type: none"> <li>Inadequate incident investigation and learning processes, resulting in repeat events</li> </ul>		[REDACTED]	
12. Health, Fatigue, Fitness for Work and Psychosocial Risks	<ul style="list-style-type: none"> <li>Operator fatigue due to long shifts, night work, extended travel or irregular rosters, impairing judgement and reaction time</li> <li>Fitness for work issues (e.g. medical conditions, medications, alcohol and other drugs) affecting safe crane operation</li> <li>Stress and psychosocial pressures on crane crews arising from production targets, client pressure or complex high-risk lifts</li> <li>Insufficient system for disclosure and management of medical or psychological conditions that may impact crane safety</li> <li>Poor cabin ergonomics and vibration exposure leading to musculoskeletal disorders and reduced concentration over time</li> </ul>	Medium	[REDACTED]	Low
13. Monitoring, Audit, Consultation and Continuous Improvement	<ul style="list-style-type: none"> <li>Lack of systematic monitoring to confirm that crane safety controls are implemented and effective</li> <li>Limited worker consultation leading to unreported hazards, near misses and practical issues with procedures</li> <li>Infrequent or superficial safety inspections and audits that do not focus on high-risk crane activities</li> </ul>	Medium	[REDACTED]	Low

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	<ul style="list-style-type: none"> <li>• Failure to act on audit findings, incident trends or regulator notices, allowing known issues to persist</li> <li>• Poor integration of crane safety performance into broader business reporting and improvement processes</li> </ul>		<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.