

## Engine Crane Risk Assessment

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	4A ACUTE	DO NOT PROCEED	Elimination Remove the hazard.	
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE			Substitution Replace the hazard.	
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE			Isolation Isolate People from the hazard	
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACUTE			Engineering Isolate the hazard	
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 HIGH			Administrative Change	
						1L LOW	Monitor and keep records.	PPE	
<b>Risk Rating &amp; Required Action:</b>								<b>Notes on Hierarchy of Controls:</b>	
4A		Stop work. The risk is intolerable. Eliminate the hazard or redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or higher-level authorisation is required.						Remember to apply controls in the preferred order shown by the coloured pyramid:	
3H		Review and approve additional controls before task starts. Senior supervisor sign-off needed.						1. Eliminate	
2M		Ensure all nominated controls are in place and effective. Proceed with caution; monitor conditions.						2. Substitute	
1L		Proceed, following standard operating procedures. Monitor and keep records.						3. Isolate	
<b>Consequence Scale:</b>								4. Engineering	
Consequence		People (injury/illness)		Project / Assets		Compliance / Reputation		5. Administrative	
Catastrophic		Fatality or permanent total disability		project shutdown		Significant regulator intervention; criminal prosecution		6. PPE	
Major		Serious injury/illness (hospital > 5 days)		critical delay		Improvement notice; major media coverage		Always document <b>why</b> a lower-order control is accepted if elimination or substitution is not reasonably practicable.	
Moderate		Medical-treatment injury; lost-time > 1 day		moderate delay		Minor breach; adverse client comment		<i>aligned with Safe Work Australia's Managing the risk of fatigue at work (2023) and ISO 45001:2018 clauses 6–8.</i>	
Minor		First-aid only, no lost time		negligible delay		Isolated non-conformance			
Insignificant		No injury		no schedule impact		Deviation caught and corrected on site			

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. Selecting Equipment	Incorrect capacity selection, Defective equipment	3H	<p>Verify crane capacity meets job requirements</p> <p>Inspect crane for visible damage or defects</p> <p>Check certification and maintenance records</p> <p>Only use approved lifting attachments</p> <p>Ensure all equipment is labelled with SWL (Safe Working Load)</p> <p>Select appropriate lifting accessories for the task</p> <p>Consult the equipment manual for limitations</p> <p>Use manufacturers' guidelines for load chart</p> <p>Consider environmental conditions during selection</p> <p>Involve a competent person in the selection process</p>	2M
2. Preparing the Worksite	Slips, trips, and falls, Obstructions	3H	<p>Clear the area of unnecessary objects and debris</p> <p>Ensure worksite lighting is adequate</p> <p>Mark and barricade the work zone</p> <p>Inspect ground conditions for stability</p> <p>Ensure adequate space for crane maneuverability</p> <p>Identify overhead obstructions such as power lines</p> <p>Set up exclusion zones around the operational area</p> <p>Ensure easy access for emergency situations</p> <p>Use signage and barriers to restrict access</p> <p>Provide a high visibility vest to personnel</p>	2M
3. Assembling the Crane	Incorrect assembly, Pinching points	3H	<p>Follow manufacturer's assembly instructions</p> <p>Assign only trained personnel for assembly</p> <p>Inspect components before fitting</p> <p>Use necessary tools and safety gear</p> <p>Secure all pins and bolts during assembly</p> <p>Conduct a final inspection after assembly</p> <p>Brief team on potential pinch points</p> <p>Keep hands clear of moving parts</p>	1L

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			Use taglines to control the load handling Ensure only authorised personnel are present	
4. Conducting Pre-operational Checks	Mechanical failure, Hydraulic leaks	3H	[REDACTED]	2M
5. Planning the Lift	Load miscalculation, Poor communication	3H	[REDACTED]	2M
6. Attaching the Load	Load instability, Improper connection	3H	[REDACTED]	2M

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7. Lifting the Load	Overloading, Swinging load	4A		2M
8. Moving the Load	Collision, Crane tip	4A		2M
9. Setting Down the Load	Incorrect load placement, Crushing hazards	3H		1L

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10. Dismantling the Crane	Collapse, Pinch points	3H		1L
11. Inspecting the Crane Post-Operation	Hidden damage, Maintenance negligence	3H		2M
12. Training and Induction	Untrained personnel, Lack of procedural knowledge	4A		2M

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13. Emergency Procedures	Inadequate response, Panic during emergencies	4A		2M
14. Review and Record Keeping	Inaccurate reporting, Loss of records	2M		1L
15. Hazard Identification and Risk Assessment	Unidentified hazards, Ineffective risk assessment	4A		2M

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			<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	
16. Communication	Miscommunication, Unclear instructions	3H	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	1L
17. Lifting Permit System	Unauthorised lifting, Permit breaches	3H	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	2M
18. Monitoring Weather Conditions	Adverse weather impact, Visibility issues	4A	<div></div> <div></div> <div></div>	2M



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19. Contractor Management	Non-compliance, Lack of coordination	3H		2M
20. Maintaining Equipment	Wear and tear, Unscheduled breakdown	3H		2M

## 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 IF 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 2017

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>

### 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/laws-and-compliance/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