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Excavator			
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:	

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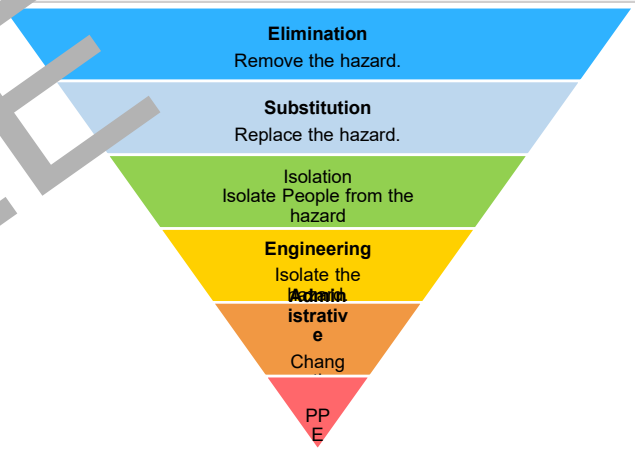
RISK MATRIX

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



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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.*

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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, Legal Compliance and WHS Duties	• Failure to identify and comply with WHS Act 2011, WHS Regulation and relevant Australian Standards for earthmoving plant and attachments • Unclear allocation of PCBU, officer, worker and contractor duties for excavator operations, attachments and transport • Absence of documented WHS management plan for excavation and rock breaking activities involving excavators, mini-diggers and associated attachments • Ineffective consultation with workers and Health and Safety Representatives (HSRs) regarding excavator-related risks and controls • Poor change management when introducing new equipment (e.g. transverse drum cutter, excavator mulcher, hydraulic breaker, quick hitch system) or new work methods • Inadequate contractor management for hire companies, transport providers and specialist attachment suppliers • Lack of due diligence by officers in verifying that systems for safe excavator operation, application of ground anchors and unloading excavators are implemented and effective	High	• Develop and maintain a documented WHS management system referencing WHS Act 2011, WHS Regulation and applicable codes of practice for plant and excavation work • Define and document responsibilities and accountabilities for officers, managers, supervisors, operators, maintenance personnel and contractors involved with excavators and attachments • Implement a formal legal and standards compliance register covering excavators, mini excavators, attachments (mulchers, rock breakers, hydraulic hammers, transverse drum cutters), transport, and ground anchoring systems • Establish structured contractor management procedures including prequalification, review of SWMS, licences, training records, maintenance evidence and insurances for all excavator related contractors • Introduce a documented management of change procedure for new plant, new attachments, new work methods (including rock breaking activities and use of ground anchors) and significant modifications • Ensure regular WHS consultation processes (toolbox talks, HSR meetings, safety committees) include excavator hazards such as rear end swing, quick hitching risks and unloading procedures • Require officers to periodically review WHS performance indicators for excavator operations (incidents, near misses, inspection findings) and verify corrective actions are implemented	Medium
2. Plant Procurement, Design and Suitability of Excavators and Attachments	• Selection of excavators, mini diggers and mini excavators that are not fit for purpose for the intended terrain, loads, lifting, mulching or rock breaking tasks • Procurement of attachments (hydraulic breakers, rock breakers, rock hammer, excavator mulchers, transverse drum cutters, buckets, quick hitches and ground anchor tools) that are incompatible with the base machine or operating environment • Failure to obtain or consider manufacturer specifications, load charts	High	• Implement a formal plant procurement procedure requiring WHS review, risk assessment and verification of suitability prior to purchase or long-term hire of excavators and attachments • Require written confirmation from suppliers that excavators, mini excavators and all attachments (mulchers, hydraulic breakers, rock breakers, transverse drum cutters, buckets and quick hitches) meet relevant Australian Standards and are compatible with each specific machine model • Obtain and retain manufacturer documentation, load charts, operating envelopes, rear end swing dimensions and any special requirements for each excavator and attachment • Engage competent engineering or technical specialists to assess high-risk applications, including ground anchor installation, rock breaking near sensitive structures and use of drum cutters in confined or vibration-sensitive environments	Medium

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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
	and limitations for safe operation including slew radius and rear end swing • Lack of engineering assessment for specialised tasks such as application of ground anchors, rock breaking activities and use of drum cutters near structures or services • Insufficient protective structures (ROPS/FOPS), guarding and isolation for rotating or cutting components such as mulchers and drum cutters • No standardisation of quick hitch systems across the fleet, increasing risk of mis-matching attachments • Inadequate consideration of transport configuration, tie-down points and unloading requirements during procurement		• Standardise quick hitch types and attachment connection systems across the fleet where reasonably practicable to reduce compatibility and training issues • Specify safety features during procurement, including certified ROPS/FOPS, emergency stops, guarding of rotating parts on mulchers and drum cutters, attachment retention devices and reversing cameras or proximity detection where appropriate • Ensure procurement specifications require suitable transport lugs, tie down points and documented unloading procedures from the supplier	
3. Planning, Job Design and Site Risk Management	• Inadequate pre-job planning for excavator operations near live traffic, services, structures and personnel • Failure to assess and manage risks from rear end swing, slew radius and attachment reach in congested work areas • Poor planning for rock breaking activities including flying debris, vibration, noise and interaction with other plant and workers • Insufficient assessment of ground conditions, stability and the need for ground anchors, benching or other ground support systems • Lack of designated work zones and exclusion zones for excavator operation, loading and unloading, including mini excavators in tight spaces • Inadequate planning for work with specialised attachments such as excavator mulchers, hydraulic breakers, rock breakers, drum cutters and ground anchor equipment	High	• Implement a formal planning and risk assessment process for all excavator-related tasks, requiring site-specific assessment of ground conditions, services, access, egress and adjacent activities • Require development and approval of task-specific Safe Work Method Statements (SWMS) for high-risk activities such as rock breaking, operation of hydraulic hammers, drum cutters, ground anchor application and work near live services • Mandate documented layout plans or sketches for complex sites, clearly showing excavator paths, rear end swing envelopes, attachment reach, exclusion zones and no-go areas • Establish and enforce exclusion zones around excavators, particularly when using mulchers, rock breakers or quick-hitched attachments, with systems for controlling worker and public access • Require pre-start site meetings to confirm sequences of work, interaction controls for multiple items of plant and traffic management requirements • Include in planning the specific requirements for unloading and loading excavators and attachments, including suitable ground, gradients, ramps and spotter requirements • Integrate environmental considerations into planning, including noise and vibration management for rock breaking and drum cutting, dust control for excavation and mulching, and erosion or sediment risks	Medium

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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
	• Failure to plan safe methods for unloading excavators and attachments from trucks or floats on variable sites • No consideration of environmental conditions (weather, visibility, noise sensitivity) during planning of high-impact tasks like rock breaking and mulching			
4. Operator Competency, Licensing and Training	• Excavator, digger and mini excavator operators lacking formal training or verification of competency for the specific machines and attachments they use • Insufficient training on operation of hydraulic hammers, rock breakers, excavator mulchers, transverse drum cutters and quick hitching systems • Inadequate understanding of hazards associated with rear end swing, ground stability, underground services and working near people or traffic • Failure to train operators and doggers in safe methods for loading and unloading excavators and attachments • No formal induction or refresher training program addressing changes in plant, technology or procedures • Over-reliance on informal, on-the-job learning with no competency assessment	High	[redacted]	Medium
5. Procedures for Attachment Management and Quick Hitch Systems	• Uncontrolled changeover of buckets, rock breakers, hydraulic hammers, mulchers, transverse drum cutters and other attachments leading to detachment or incorrect installation • Failure of quick hitching systems due to lack of procedural controls, incomplete locking or use of incompatible components • Use of damaged or unsuitable excavator buckets and attachments without systematic inspection	High	[redacted]	Medium

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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
	• Lack of documented procedures for application of ground anchors and specialist tools connected to the excavator • Inadequate verification steps following hitching or de-hitching, especially under schedule pressure or poor supervision • Workers entering crushing or pinch points during manual guidance or alignment of attachments		[redacted]	
6. Maintenance, Inspection and Pre-Start Systems	• Lack of planned preventative maintenance for excavators, mini excavators and attachments leading to mechanical failure during operation • Poor maintenance of excavator buckets, teeth and wear parts causing instability of loads and increased forces during excavation or rock breaking • Inadequate inspection of hydraulic systems, breakers, rock hammers and drum cutters for leaks, cracks or excessive wear • Pre-start checks not be[illegible]rformed, or being performed s[illegible]erficially, due to absence of robust [illegible]stems or supervision • Failure to detect de[illegible] affecting s[illegible]e operation, including brakes, slew rin[illegible] safety interlocks, quick hitch mechanisms and emerge[illegible]ops • Neglect of safety-critical components on transport and unloading equipment such as ramps, tie-downs and anchor points	High	[redacted]	Medium
7. Traffic Management, Rear End Swing and Interaction with People	• Collision between excavators (including mini excavators) and pedestrians or other plant due to inadequate traffic management systems • Striking workers or structures with rear end swing, boom or attachments in confined work areas	High	[redacted]	Medium

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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
	• Uncontrolled interaction between trucks, floats and excavators during loading and unloading activities • Lack of designated pedestrian routes and separation from operating zones, particularly where ground anchors or rock breaking works are conducted • Inadequate communication systems between operators, spotters and ground workers • Poor visibility around the excavator, especially when using bulkier attachments like mulchers or drum cutters		[redacted]	
8. Transport, Loading and Unloading of Excavators and Attachments	• Uncontrolled movement or rollover of excavators during loading or unloading from trucks or floats • Failure of ramps, tie-downs or anchor points due to inadequate systems or inspection • No standard procedure for unloading excavators on uneven ground, soft surfaces or near edges • Attachments such[redacted] rock breakers, mulchers or bucke[redacted] not secured properly during tra[redacted] shifts or falls • Lack of coordination and communication between [redacted] operators and spotters during loading and unloading • Time pressure causing deviation from safe unloading and securing practices	[redacted]igh	[redacted]	Medium
9. Rock Breaking, Hydraulic Hammer and High-Energy Attachment Management	• Flying rock and debris during rock breaker operation, rock breaking activities and use of hydraulic hammers and drum cutters • Excessive vibration and noise affecting workers, nearby structures and the public	High	[redacted]	Medium

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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
	• Inadequate control of energy release, leading to unexpected fracture paths or destabilisation of rock faces • Incorrect selection or configuration of hydraulic breakers, rock breakers and drum cutters for the material and excavator size • Failure to monitor and manage heat build-up, hydraulic pressures and tool wear, leading to mechanical failure • Insufficient system-level controls for exclusion zones, PPE enforcement and supervision of rock breaking activities		[redacted]	
10. Emergency Preparedness, Incident Management and Continuous Improvement	• Delayed or ineffective emergency response to excavator incidents including rollovers, contact with services, attachment failures or ground collapses • Lack of clear procedures for rescue, first aid and site control in the event of serious incidents during excavation, r… breaking or unloading • Under-reporting of near misses and minor incidents involvi… …vators, attachments or unlo…ing activities • Failure to learn fr… n incidents …lving rear end swing, qui… …ilures … incorrect operation of attachments lik… mulchers and drum cutters • Poor integration of exca… …ciated risks into overall emergency plans for the workplace	Hig…	[redacted]	Low

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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

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