Excavator Mulcher

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:

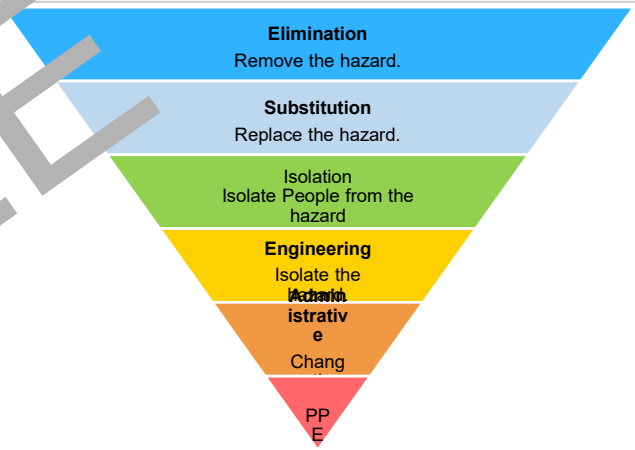
CLIENT OR PRINCIPAL CONTRACTOR DETAILS

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. Procurement and Design Selection	• Selection of excavator and forest mulcher attachment that are not compatible in size, weight, hydraulic capacity or duty cycle, increasing likelihood of structural failure or loss of control • Procurement decisions driven solely by cost without considering WHS performance, safety features or reliability of supplier support • Lack of consideration of Australian Standards, manufacturer recommendations and WHS Act 2011 general duty of care requirements during specification and purchase • Inadequate assessment of guarding, debris containment, operator protection and emergency stop provisions on mulcher attachment • Failure to obtain or review technical documentation, load charts and stabilit data before purchase or hire	High	• Establish a formal plant procurement proced that requires WHS review and sign-off (by WHS advisor and competent engineer or mechanic) bef purchasing hiring any excavator or forest mulcher attachment • Specify minimum safety requirements for exca or and mulch in procurement documents, including compliance with relevant Aus lian Standards, m ufacturer mpatibility, rated capacity, hydraulic flow and pressure, guarding and op tor protective str ures • Require suppliers p de writ confirmation of compatibility between specific excavator model and mulcher attach t (includ quick itch type, ydraulic requirements and maximum permitted mulcher mass and ce e of gravity) • Inclu evalua n of s y features in purchasing decisions, such as FOPS/ROPS cabins, guarding again ing deb ergency stop locations, lock-out capability and hose burst protection • Ensu a technica anuals, load charts, maintenance schedules and risk information are supplied and stored in a co rolled ument management system accessible to operators, supervisors and mainten ce p sonnel • In po e safe y performance, incident history and WHS management capability of suppliers into vendor qualification and selection criteria	Medium
2. Organisational WHS Governance and Legislative Compliance	• Lack of clear allocati of WHS duties under WHS Act 201 for persons conducting a busin ss or undertaking (PCBU), officers, w kers contractors in relation excavator mulcher operations • Inadequate WHS policy fram rk addressing high-risk plant, forestry mulching activities and remote or rugged worksites • Poor consultation mechanisms resulting in limited worker input to risk management, leading to unidentified hazards and impractical procedures • Failure to implement and review a formal risk management process specific to excavator mulchers, contrary to WHS Regulation requirements for plant and high-risk work • Insufficient due diligence by officers to ensure resources and systems are in	High	• Develop and implement a WHS governance framework that clearly defines roles, responsibilities and accountabilities for excavator mulcher operations in line with WHS Act 2011 and relevant state regulations • Ensure officers demonstrate due diligence by regularly reviewing mulching operations, receiving WHS performance reports, and verifying that adequate resources are provided for plant, training and supervision • Implement a documented plant-specific risk management procedure that includes hazard identification, risk assessment, control implementation and periodic review for excavator mulchers and forest operations • Establish formal consultation arrangements (toolbox talks, safety committees, pre-start meetings) to involve operators, maintenance staff and supervisors in reviewing mulcher-related risks and control measures • Integrate excavator mulcher risk controls into the organisation's WHS policy, including commitments to safe design, hierarchy of control, competent supervision and continual improvement • Conduct regular internal audits and management reviews of compliance with WHS Act and Regulations in relation to plant, remote work, noise, vibration and hazardous manual tasks associated with mulching	Medium

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	place to manage risks associated with excavators and mulcher attachments			
3. Contracting, Outsourcing and Supplier Management	• Engagement of contractors or hire companies that lack adequate WHS systems for high-risk forestry mulching operations • Ambiguity over control of the worksite and plant when excavators and mulcher attachments are hired with or without operators, leading to gaps in risk management • Inadequate pre-qualification of contractors in relation to plant maintenance, operator competency and incident management • Poor communication of site-specific hazards and client WHS requirements to contractors using excavator mulchers • Subcontractor pressure to prioritise productivity over safe work practices, leading to risk-taking behaviour	High	• Implement a formal contractor management procedure that includes WHS pre-qualification for all suppliers providing excavator mulcher plant or operators • Define and document PCBU relationships and responsibilities in contracts, including who controls the worksite, who controls the plant and how WHS duties will be shared and coordinated • Require contractors to provide evidence of plant compliance, maintenance records, operator licences/ VOCs, insurances and WHS procedures specific to forestry mulching • Include explicit WHS performance requirements and right-of-access for audits and inspections within contractual terms for mulching work • Conduct joint pre-start meetings with contractors to communicate site-specific hazards (terrain, overhead lines, underground services, public interface, environmental constraints) and agree on control measures • Monitor contractor performance through site inspections, review of incident reports and periodic WHS performance meetings, taking corrective action or suspending work if unsafe systems are observed	Medium
4. Planning, Site Assessment and Job Design	• Inadequate pre-planning of vegetation management tasks, resulting in excavator mulcher being used on unsuitable terrain, slopes or ground conditions • Failure to identify proximity to public roads, utilities, buildings, waterways and high-consequence assets that may be impacted by flying debris or machine roll-over • Poor consideration of access and egress routes for heavy plant, including emergency access for rescue and medical response • Lack of formal process to define safe work zones, exclusion zones and interface with other workers or machinery on forestry or construction sites • Insufficient planning for environmental factors such as bushfire risk, extreme	High	[redacted]	Medium

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SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	weather, dust and noise impacts to neighbours or public			
5. Plant Registration, Documentation and Configuration Control	• Missing or outdated plant risk assessments, manuals, data plates and configuration records for excavator and forest mulcher attachment • Changes to plant (such as different quick-hitch, guarding, hydraulic modifications or forestry guarding kits) not documented, assessed or approved • Failure to maintain a current inventory of excavators, mulcher heads and associated attachments, leading to uncontrolled mixing and mismatching • Lack of formal plant registration or notification where required under state WHS Regulations • Inadequate management of safety critical information, such as maximum mulcher speed, pressure settings and balancing requirements	High	[redacted]	Low
6. Training, Competency and Verification of Competency	• Operators using excavator mulchers without formal training [redacted] excavator operation and specific mulcher attachment risks • Inconsistent comp[redacted]tween direct employees, labour hire and contractor operators, leading to var[redacted]le safety performance • No structured Verification of Competency (VOC) program to confirm skills remain current and aligned to company procedures and site hazards • Limited supervisor understanding of mulcher-specific hazards, reducing their ability to identify unsafe practices • Inadequate training on WHS obligations, emergency procedures, communication protocols and fatigue management for remote or extended operations	High	[redacted]	Medium

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7. Operating Procedures and Safe Systems of Work	• Absence of documented procedures and guidance for safe use of excavator mulcher in different environments (forestry, roadside, easements, steep slopes) • Operators relying on informal practices or previous employer habits that may not align with current risk controls or site conditions • Procedures not adequately addressing set-up of exclusion zones, communications, machine isolation and interaction with other plant or workers • Failure to consider limitations of the mulcher attachment, including maximum material size, type and moisture content, leading to overloading or misuse • Infrequent review of procedures following incidents, changes in equipment or regulatory updates	High	[redacted]	Medium
8. Maintenance, Inspection and Reliability Management	• Failure of critical components such as mulcher rotor, bearings, drive belts, hydraulic hoses or quic due to inadequate mainten ce systems • Unplanned break owns in re or sloping areas incre sk of environmental release, fire or secon y incidents • Inconsistent applicatio se inspections, leading to operation with damaged guarding, missing bolts or worn cutting tools • Use of non-approved parts or modifications that compromise structural integrity or safety performance • Maintenance tasks undertaken by untrained personnel without formal procedures or isolation processes	High	[redacted]	Medium
9. Engineering Controls, Guarding and Cabin Protection	• Insufficient guarding on the forest mulcher head leading to ejection of rocks, timber and metal fragments with	High		Low

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	potential to strike the cabin or bystanders • Cabins not fitted with appropriate FOPS/ROPS or forestry guarding to withstand flying debris and falling branches • Poorly designed or maintained guards that are easily removed or bypassed, reducing protection over time • Hydraulic failures without hose burst protection or load-holding valves, increasing risk of uncontrolled movement of attachment • Emergency stop controls not clearly identified, accessible or functional from operator position		[redacted]	
10. Traffic Management, Public Interface and Exclusion Zones	• Excavator mulcher operating near public roads, tracks or recreation area without effective separation from pedestrians or vehicles • Inadequate definition and enforcement of exclusion zones for flying debris, leading to injuries to workers, contractors or members of the • Interaction between excavator mulcher and other mobile plant on shared work faces, increasing collision risk • Poor signage and lack of spotters where visibility is restricted by dense vegetation, topography or weather • Uncontrolled public entry into remote forestry work areas due to absence of barriers or communication	High	[redacted]	Medium
11. Environmental and Fire Risk Management	• Mulcher attachment generating sparks or hot material that can ignite vegetation, especially in high fire danger conditions • Hydraulic or fuel leaks leading to soil and water contamination in sensitive forest or riparian environments	High	[redacted]	Medium

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SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	• Dust, noise and debris impacting nearby communities, wildlife or protected areas • Inadequate planning for work in high fuel load areas or during total fire ban periods • Lack of integration between environmental approvals/requirements and WHS risk controls for mulching operations		[redacted]	
12. Fatigue, Remote Work and Health Management	• Extended operating hours and monotonous mulching work leading to operator fatigue and reduced vigilance • Remote or isolated work locations increasing response time in emergencies and compounding health risks • Exposure to whole-body vibration, noise and poor cabin ergonomics contributing to long-term musculoskeletal disorders and hearing loss • Limited access to amenities, rest breaks, shade and drinking water affecting worker wellbeing and decision-making • Insufficient systems to identify and manage fitness for work risks, including fatigue, medical conditions and substance use	High	[redacted]	Medium
13. Emergency Preparedness and Incident Management	• Inadequate planning for foreseeable emergencies such as plant roll-over, fire, serious injury from flying debris or entrapment in vegetation • Lack of rescue equipment or trained personnel on or near remote mulching sites	High	[redacted]	Medium

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SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	• Delayed emergency response due to poor location information, communication failures or difficult terrain • Incidents not reported, investigated or analysed systematically, leading to repeated failures • Confusion over roles and authority during emergencies when multiple PCBUs are present		[redacted]	
14. Monitoring, Audit and Continuous Improvement	• Risk controls for excavator mulcher operations degrading over time due to complacency, production pressure or organisational change • Lack of systematic monitoring of leading indicators such as pre-start completion, defect close-out times or training currency • Audits and inspections focusing only on paperwork rather than actual field practices and behavio • Failure to incorpo e regulatory updates, industry dance an manufacturer safet into existing systems • Inadequate feedback loops from incidents, near misses a er suggestions into management decision-making	Med	[redacted]	Low

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