

Stump Grinder

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:	

SAMPLE

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			Elimination Remove the hazard.	
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED	Substitution 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.	Engineering 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:	
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.
3H	Review and approve additional controls before task starts. Senior supervisor sign-off needed.
2M	Ensure all nominated controls are in place and effective. 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, Legal Compliance and Environmental Ethics	<ul style="list-style-type: none"> Failure to comply with WHS Act 2011 and WHS Regulation leading to unsafe systems of work for stump grinding operations Lack of clear organisational policy on ethical environmental practices for stump grinding (e.g. unnecessary use of stump grinding, excessive soil disturbance, failure to protect biodiversity) Inadequate consideration of local council by-laws, vegetation protection orders and environmental legislation (including native vegetation and habitat protections) Absence of a documented framework to avoid excessive use of stump grinding chemicals or unapproved herbicides Failure to incorporate principles of waste minimisation, recycling and responsible disposal of stump grinding chips and root material into organisational policies Poor consultation mechanisms with workers and subcontractors resulting in inconsistent understanding of legal and ethical obligations Use of generic or imported procedures that do not reflect Australian standards, codes of practice and local conditions 	High	<ul style="list-style-type: none"> Establish and maintain a WHS management system aligned with WHS Act 2011, WHS Regulation and relevant Australian Standards (e.g. AS/NZS 4024 series for machinery safety, AS 2727 for chainsaws as a reference for powered cutting equipment) Develop a company stump grinding policy that explicitly addresses ethical environmental considerations, including when stump grinding is appropriate, when stumps should be retained for habitat, and when manual removal or alternative methods are preferred Implement an environmental management procedure that sets clear rules for avoiding excessive use of stump grinding chemicals, specifying permitted products, application limits, and authorisation requirements consistent with pesticide legislation Create a legal and regulatory register covering WHS, environmental, waste and local council requirements relevant to stump grinding and review it at least annually or when regulations change Integrate environmental impact considerations into job approval processes, including assessment of root spread, soil stability, nearby waterways, heritage trees, and habitat value before approving stump grinding Require work planning to check local council permits, tree protection controls and any native vegetation overlays prior to approving stump grinding or root removal Conduct written environmental risk assessments for complex sites (e.g. steep slopes, erosion-prone areas, protected vegetation) before work is scheduled Include clear organisational requirements for recycling or repurposing stump grindings and chips where practicable (mulch on-site, green waste recycling) and documented procedures for safe transport and disposal when off-site removal is required Formalise worker consultation processes (HSC/H&S rep meetings, toolbox talks) specifically covering stump grinding system risks and environmental ethics at least annually or when procedures change Develop a documented chain-of-responsibility for stump grinding decisions, including roles of managers, supervisors, planners and operators for WHS and environmental sign-off Conduct periodic internal audits and management reviews to verify that stump grinding practices and documentation remain compliant with WHS and environmental obligations, and close out corrective actions in a tracked system 	Medium
2. Procurement of Stump Grinders, Attachments and Chemicals	<ul style="list-style-type: none"> Procurement of stump grinders that do not comply with Australian standards or are poorly suited to site conditions, including uneven terrain and sloping ground Inadequate guarding, emergency stop systems or safety features on stump grinders and associated mechanical attachments Selection of machines without effective controls for managing flying debris and wood chips during grinding 	High	<ul style="list-style-type: none"> Implement a formal procurement procedure that requires WHS and environmental criteria to be considered alongside cost for all stump grinders, attachments and chemicals Specify minimum safety features in purchase specifications, including compliant guarding, emergency stops, deadman controls, lockable isolation, appropriate access panels and clear labelling Include requirements for integrated or compatible debris and chip control solutions (e.g. guards, deflectors, shrouds, screens) in all stump grinder procurement specifications Ensure all purchased stump grinders are fit-for-purpose for anticipated use on uneven terrain, including stability characteristics, braking capacity, track or wheel design and rated operating angles Standardise, as far as reasonably practicable, on a limited range of stump grinder models to simplify training, maintenance, spare parts and risk control verification 	Medium

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
	<ul style="list-style-type: none"> • Purchase and use of stump grinding chemicals or herbicides that are hazardous, unnecessary, or not approved for intended application • Lack of standardisation in equipment types and controls leading to operator confusion and inconsistent risk controls • Acquisition of machines without adequate vibration and noise controls resulting in long-term health risks (HAVS, hearing loss) • Procurement decisions based solely on cost without reference to WHS, environmental performance, service support and training availability 		<ul style="list-style-type: none"> • Require suppliers to provide detailed WHS information, manuals, risk assessments and machine-specific training materials at the point of purchase • Establish a chemical procurement approval process that requires verification of legal status, Safety Data Sheets (SDS), environmental impact assessments and justification for use before purchase • Adopt a hierarchy-of-control approach in selection of chemicals, preferring elimination or mechanical/physical methods of stump removal before approving chemical options • Require procurement agreements to include service, maintenance and inspection support, and explicit commitments around availability of spare parts and technical advice • Incorporate noise and vibration performance criteria into equipment selection to reduce long-term health impacts and support compliance with exposure standards • Maintain a central asset register of all stump grinders and related equipment, including specifications, safety features and intended operating purposes 	
3. Planning, Site Selection and Job Approval	<ul style="list-style-type: none"> • Inadequate pre-planning for stump grinding on uneven or unstable terrain, increasing risk of machine rollover or loss of control • Failure to assess underground and surface services, structures and root spread before determining grinding depth and method • Planning stump grinding activities where root removal may compromise nearby structures, pavements, retaining walls or soil stability • Insufficient assessment of potential impact on waterways, drainage lines or erosion-prone areas when grinding or removing roots • Failure to identify sensitive receptors (neighbours, public spaces, schools, traffic corridors) that may be affected by noise, dust, and flying debris • Poor scheduling of stump grinding during unsuitable weather conditions, such as heavy rain, high winds or extreme heat • Inadequate consideration of manual removal alternatives where mechanical grinding poses excessive environmental or stability risks 	High	<ul style="list-style-type: none"> • Implement a formal job planning process requiring a documented site assessment before stump grinding is approved, including terrain profile, access, escape routes and exclusion zones • Require site-work assessment of uneven terrain and slopes, including reference to manufacturer limits and triggers for using smaller machinery or alternative methods • Introduce mandatory underground services checks (dial-before-you-dig services, utility plans, on-site locating where required) prior to authorising grinding depth or root removal near services • Define planning criteria for minimum safe distance from structures, kerbs, retaining walls and utilities when determining permissible grinding depth and extent of root removal • Integrate environmental and geotechnical considerations into planning (soil type, erosion risk, drainage patterns) and require higher-level review for high-risk sites • Implement a decision framework that compares mechanical stump grinding with manual removal or partial retention of root systems where full removal could destabilise soil or nearby structures • Establish rules for timing of stump grinding works to minimise disturbance (e.g. avoiding school drop-off times, night work in residential areas unless specifically approved) • Require planners to specify how stump grindings, wood chips and root material will be handled (left on-site, reused, or hauled away) with reference to client requirements, erosion risk and environmental considerations • Mandate documented assessment of the need for temporary barriers, screens or protective structures to manage risk from flying debris in pedestrian or traffic areas • Ensure that high-risk sites (steep slopes, limited access, public interfaces) receive supervisor or competent person review before approval to proceed • Maintain records of all job planning assessments and approvals for audit and continuous improvement 	Medium

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
	<p>controls such as planning, supervision and environmental management</p> <ul style="list-style-type: none"> • Inconsistent application of controls for flying debris, exclusion zones and public interface across different jobs and crews • No documented process for setting maximum grinding depth relative to root spread, underground services and surrounding infrastructure • Absence of standardised process for decision-making on whether to leave grindings in place, remove chips, or conduct additional cleanup activities • Inadequate guidance on manual handling and ergonomic controls for manual stump removal and handling of heavy grindings or root segments • Failure to integrate chemical use (if any) into safe work procedures, including environmental and WHS safeguards 		<p>[REDACTED]</p>	
6. Maintenance, Inspection and Equipment Integrity	<ul style="list-style-type: none"> • Inadequate preventative maintenance of stump grinders leading to mechanical failure, loss of control or emissions and noise • Failure to inspect and maintain safety systems such as guards, emergency stops, interlocks and debris control devices • Use of stump grinders with worn or damaged cutting components increasing risk of kickback, flying debris and uncontrolled movement • Lack of documented inspection criteria for machines used on uneven terrain and slopes (e.g. brakes, tracks, tyres, stability devices) 	High	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	Low

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
	<ul style="list-style-type: none"> Poor maintenance of attachments, trailers and vehicles used for hauling chips, grindings and root material Inadequate inspection and management of tools and equipment used for manual stump removal and root cleanup Failure to manage out-of-service equipment, leading to accidental use of unsafe grinders 		[REDACTED]	
7. Environmental Management and Chemical Use	<ul style="list-style-type: none"> Excessive or inappropriate use of stump grinding chemicals or herbicides leading to soil and water contamination, harm to non-target species and regulatory breaches Over-grinding of stumps beyond what is necessary, resulting in excessive soil disturbance, erosion and damage to adjacent root systems or vegetation Grinding stumps below minimum safe root spread near structures, retaining walls or slopes causing instability or damage over time Poor management of grinding chips and root debris leading to blocked drains, nutrient loading in waterways or spread of pathogens and weeds Failure to manage stump grindings left on uneven terrain, creating erosion channels, trip hazards or unsafe walking surfaces Removal of stumps and root systems that should ethically be retained for habitat, heritage or soil stabilisation purposes 	High	[REDACTED]	Medium

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
			[REDACTED]	
8. Debris, Chip Handling and Waste Logistics	<ul style="list-style-type: none"> • Unsafe collection, loading and hauling of stump grindings, chips and root material leading to manual handling injuries and vehicle incidents • Unsecured loads of grinding chips and root debris falling from vehicles or trailers and endangering road users • Inadequate planning for on-site stockpiling of chips and roots creating fire hazards, access obstructions or instability on slopes • Poor segregation of contaminated material (e.g. chemically treated stump diseased wood) from general green waste streams • Failure to manage dust and airborne particles when moving or dumping dry grindings • Environmental harm from grinding chips or roots in unauthorised locations or sensitive environments 	High	[REDACTED]	Medium
9. Traffic, Public Interface and Community Impact	<ul style="list-style-type: none"> • Inadequate segregation of stump grinding work areas from public and vehicle traffic leading to potential contact with machines or flying debris • Insufficient communication with nearby residents, businesses and road users about noise, access changes and timing of stump grinding work • Failure to provide appropriate wayfinding or detours for pedestrians 	High	[REDACTED]	Medium

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
	<ul style="list-style-type: none"> and cyclists around grinding sites and debris stockpiles • Public exposure to airborne dust, noise and vibration from stump grinding operations and hauling of grindings and root material • Inconsistent application of traffic management plans when stump grinding occurs near roads, driveways or carparks • Reputational damage and complaints due to poor cleanup, noise at inappropriate times and perceived environmental harm 		[REDACTED]	
10. Incident Management, Monitoring and Continuous Improvement	<ul style="list-style-type: none"> • Lack of effective incident and near miss reporting related to stump grinding, manual stump removal and root clearing • Failure to investigate system-level causes of incidents, focusing only on worker behaviour rather than training, equipment and supervision • No structured process to update stump grinding risk assessments and procedures following incidents or regulatory changes • Inadequate emergency preparedness for foreseeable stump grinding incidents such as contact with underground services, flying debris injuries or equipment rollovers • Poor monitoring of long-term health impacts such as noise-induced hearing loss, vibration-related disorders and chemical exposure where applicable • Failure to identify emerging risks from new equipment, new chemicals or changes to work practices 	Medium	[REDACTED]	Low

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
			[REDACTED]	
			[REDACTED]	
			[REDACTED]	

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.