Crusher			
Business Name:		ABN:	
Business Address:			
Contact Person:	Phone:	Email:	

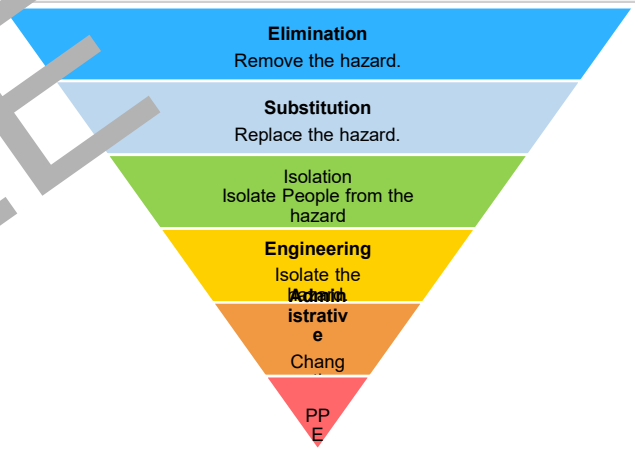
THIS RISK ASSESSMENT IS APPROVED BY THE PCBU OF THE PROJECT		
Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a RISK ASSESSMENT is prepared before the proposed work starts.		
Full Name:		
Signature:	Title:	Date:

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, Design and Selection of Crusher and Screener Plant	• Plant selected without verification of compliance with WHS Act 2011, WHS Regulations and relevant Australian Standards (e.g. AS 4024 series for machinery safety) • Inadequate guarding and interlocks on crushers, screens, conveyors and transfer points leading to entanglement, crushing and shearing hazards • Insufficient consideration of noise levels, dust generation and vibration in equipment selection leading to chronic health risks and regulatory non-compliance • Lack of engineering controls for oversize rock management (e.g. rock hammers, hydraulic breakers, remotely operated systems) • Mobile concrete crusher and mobile crushing plant not designed for safe access (maintenance platforms, fixed ladders, walkways, anchor points) • Inadequate emergency stop systems, pull wires and isolation points across the crushing and screening spread • Insufficient capacity or structural integrity of feed hoppers, chutes and screen decks for expected rock size and load, increasing risk of collapse or ejection of material • Incompatible combination of crusher, screener and conveyors (mismatched throughputs) causing chronic blockages, overloading and spillage • Lack of built-in fire protection or separation of fuel and hydraulic systems on mobile crushers and screeners • Absence of OEM safety documentation, manuals and conformity/inspection records for second-hand or imported crushing equipment	High	• Implement a formal plant procurement procedure that requires documented verification of compliance with WHS Act 2011, WHS Regulations and relevant Australian Standards (including AS 4024 series for safeguarding of machinery, AS/NZS 3000 for electrical, AS 1755 for conveyors where applicable) • Require suppliers of crushers, mobile concrete crushers, mobile crushing plants, rock crushers and screener crushers to provide written declarations of conformity, risk assessments, manuals and maintenance schedules prior to purchase or hire • Specify engineering controls in procurement documents (e.g. fully enclosed guards, interlocked access doors, emergency stops, lockable isolation points, guarding around nip points and rotating components, chute and hopper rock curtains, belt skirting) • Include whole-of-system design reviews prior to purchase to ensure crushers, screens and conveyors are capacity-matched and arranged to minimise blockages, spillage and manual intervention • Require that all mobile crushers and mobile screening plants have safe access systems (fixed walkways, compliant stairs/ladders, handrails, kickboards, non-slip surfaces, and fall-arrest anchor points where necessary) verified at pre-acceptance • Mandate that new and hired plant is subject to a pre-acceptance safety inspection using a standardised WHS plant checklist covering guarding, isolation, stability, noise, dust, fire risks and access • Specify integrated dust and noise control options (e.g. water spray bars, misting systems, dust suppression skirting, acoustic panels, quieter power units) in procurement specifications for all crushing and screening equipment • Ensure design accounts for oversize rock and tramp steel management (e.g. grizzly bars, hydraulic rock breakers, remotely operated clearing systems, metal detectors and magnets) to reduce need for manual intervention • Require fitment of compliant emergency stop systems (including pull-wire switches along conveyors and accessible e-stops around crushers and screeners) as a condition of purchase or hire • Procure mobile plant with fire-resistant hydraulic hoses, fire detection/suppression options near engines and fuel systems, and separation/shielding of hot surfaces from combustible materials	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
2. WHS Governance, Legal Compliance and Risk Management System	• Absence of a formal WHS management system for crushing and screening operations leading to ad-hoc controls and inconsistent standards • Failure to identify, assess and control specific risks associated with crushers, mobile concrete crushers, mobile crushing plants and screening equipment • Non-compliance with WHS Act 2011 duties for PCBUs, officers and workers, including consultation, provision of safe systems of work and information, training and supervision • Inadequate formal risk assessments for changes to plant configuration, introduction of new rock types, different feed materials or mobile crushing locations • Lack of integration of contractor and hire plant operations into the site WHS risk management framework • Insufficient review of incidents, near misses and maintenance data leading to repeated crusher blockages, belt failures or structural defects • Poor recordkeeping for inspections, maintenance, training and risk assessments making it difficult to demonstrate due diligence • Failure to monitor compliance with licence, permit and environmental conditions related to dust, noise, vibration and traffic associated with crushing and screening	High	• Implement and maintain a documented WHS management system aligned with WHS Act 2011 and relevant Codes of Practice, specifically addressing crushing, screening and mobile plant operations • Establish a formal risk management procedure requiring initial and periodic WHS risk assessments for all crusher systems (fixed and mobile), including mobile concrete crushers, rock crushers and screener crushers • Define PCBU, officer and worker responsibilities for crusher safety, including clear accountability for plant risk management, maintenance supervision and contractor control • Integrate crushing and screening risks into the site-wide WHS risk register, with identified controls, action owners and review dates • Require formal change management and risk assessment processes for modifications to plant layout, capacity upgrades, relocation of mobile crushing plants and introduction of new materials (e.g. reinforced concrete with steel, highly abrasive rock) • Implement structured consultation mechanisms (e.g. HSRs, toolbox meetings, joint site inspections) to capture worker input on crusher and screener risks and control effectiveness • Establish procedures to ensure contractors and hire companies operate under the site WHS system, including verification of their risk assessments, licences and safe systems of work • Create a system for logging, investigating and trending all incidents, near misses and hazard reports involving crushing and screening plant, with corrective actions tracked to completion • Maintain comprehensive WHS records (risk assessments, plant registrations where applicable, inspection sheets, training records, maintenance logs, dust/noise monitoring data) in a central, auditable system • Conduct periodic internal audits and management reviews focusing on WHS legal compliance and the effectiveness of controls for the crushing and screening operation	Medium
3. Organisational Structure, Roles, Competency and Training	• Crusher operators, mobile plant operators and maintenance personnel lacking competency in crushing and screening hazards and safe systems of work • Supervisors without adequate knowledge of WHS obligations or	High	• Develop a competency framework that clearly defines the skills, experience, licences and training required for crusher operators, screen operators, mobile plant operators, fitters and supervisors • Implement a structured induction program specific to crushing and screening that covers plant layout, exclusion zones, principal hazards, emergency procedures, dust and noise risks and reporting expectations	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
	crushing system risks, leading to poor enforcement of controls • Inconsistent induction processes for employees, labour hire and contractors working around crushers and mobile crushing plants • No verification of licences, tickets or VOC (verification of competency) for excavator, loader and mobile crusher operators feeding the plant • Inadequate training on specific risks such as entanglement, isolation, stored energy, working around mobile crushers and screeners, and exposure to respirable crystalline silica • Lack of clarity on who is authorised to start/stop plant, clear blockages, perform inspections or make parameter changes (e.g. crusher settings, screen configurations) • Insufficient training in emergency response for events such as entrapment, plant fires, structural failure or catastrophic belt fail • Poor understandi of communication protocols betwee ader ope spotters and crushe rs, particularly in mobile crushing plant setups		• Require and verify appropriate licences and tickets (e.g. for excavators, loaders, telehandlers) and conduct formal VOC assessments for all operators involved in feeding or operating crushers and screeners • Provide task-specific training on crusher and s ener systems, including start-up/shut-down logic, interlocks, emergency stops, isolation point arding, and limits of safe operation • Deliver WHS training on the hierarchy of c ol, loc t/tag-out, stored energy hazards, pinch points, working near conveyors, and managing oversi s and blockages without entering danger zones • Ensure supervisors receive ditional training in HS Act 2 duties, hazard identification, incident investigation and enforcement safe work proced s w crushing operations • Issue written auth s and e statements that define who may operate, adjust, isolate and maintain specifi rushers, reens d conve • Provide reg refresher ining an x talks using real incidents and near misses from the crushi and s ening i ustry to reinf e learnings • Train elevant sonnel in site-specific emergency response procedures for entrapment, ingestion of foreign bj s, plan e, structural failure and medical emergencies around crushing plant • Maint a c rolled ining and competency matrix for all staff and contractors working in or around shing nd s ening operations, with expiry dates and refresher requirements	
4. Planning, Scheduling and Production Pressure Management	• Excessive production ta leading to bypassing of safety systems or shortcuts (e.g. clearing blockages without full isolation) • Inadequate planning for rock quality, oversize material and reinforcing steel in concrete feed, causing frequent blockages and unplanned downtime • Poor coordination between drilling/blasting, rock supply, mobile concrete crushing and screening activities causing surge loading or starvation of crushers	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
	• Insufficient allowance in schedules for plant inspections, maintenance and housekeeping around crushers and screeners • Operating mobile crushing plants in unsuitable ground conditions or constrained sites without adequate site planning • Inadequate assessment of traffic routes for loaders, haul trucks and support vehicles interacting with mobile crushers and screeners • Failure to plan for adverse weather, restricted visibility and environmental constraints in outdoor crushing operations		[redacted]	
5. Safe Systems of Work, Procedures and Permits	• Lack of documented safe operating procedures (SOPs) for crushers, screeners and associated conveyors • Unclear processes for isolation, lock-out/tag-out and verification of zero energy on crushing and screening plant • Inadequate permit-to-work systems for high-risk activities such as confined space entry, hot work, fuel/hydraulic systems and work at height on crushers and screens • No formalised system for managing oversize rocks, blockages and bridging in hoppers, jaws, impactors and screens • Inconsistent use of exclusion zones around mobile crushers, loader feed areas and discharge conveyors • Poorly defined interface procedures when multiple contractors operate within the same crushing and screening area • Lack of standardised pre-start and shutdown procedures for mobile crushing plant and screener operations	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]	
6. Engineering Controls, Guarding and Physical Safeguards	• Exposed nip points, rotating shafts, pulleys and idlers on conveyors feeding and discharging crushers and screens • Inadequate guarding around crusher inlets, crusher drive components, screener decks and transfer points • Ejection of rocks, metal and concrete fragments from crushers and screens due to impact or structural failure • Unprotected access to elevated walkways, platforms and maintenance areas on crusher structures and mobile crushing plants • Insufficient physical barriers to preve unauthorised entry into hazardous zon around mobile crushers and screeners • Poor design of access and platforms increasing k of falls during maintenance or ins ections • Lack of engineere dust and extraction at key transfer and crushing points	High	[redacted]	Medium
7. Maintenance Management and Asset Integrity	• Unplanned crusher and screener breakdowns due to inadequate preventive maintenance, causing unsafe reactive work • Failure of critical components such as crusher jaws, bearings, screen decks, chutes, hoppers, belts and structural supports • Uncontrolled release of stored energy during maintenance of springs, hydraulic accumulators or belt tensioning systems	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
	• Maintenance performed without adequate isolation, permits or supervision on mobile and fixed crushing plants • Use of non-OEM parts or poor-quality repairs compromising structural integrity and safety systems • Lack of systematic inspection of wear parts leading to catastrophic failure or ejection of material • Inadequate housekeeping around crushers and screeners contributing to slips, trips, fires and restricted access to emergency stops		[redacted]	
8. Mobile Crusher Deployment, Traffic and Site Layout	• Mobile crushers and mobile screening plants positioned in unstable or poorly drained ground leading to subsidence tipping • Conflicts between mobile plant (loaders, excavators, haul trucks) and the crusher unit due to inadequate traffic management • Restricted visibility around mobile crushing spreads increasing the risk of collision with people, vehicles or structures • Uncontrolled movement of mobile crushers during set-up, relocation or tramming between locations • Crushing and screening plant located too close to public roads, property boundaries or other work areas, increasing third-party exposure to noise, dust and projectiles • Inadequate separation between fuel storage, generators, hydraulic power units and hot surfaces on mobile crushers	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]	
9. Health Hazards: Dust, Silica, Noise and Vibration	• Exposure of workers to respirable crystalline silica from crushing and screening of rock, concrete and other mineral materials • High noise levels from crushers, screens, engines and conveyors leading to noise-induced hearing loss • Whole-body and hand-arm vibration exposure among operators of mobile crushers, loaders and hand tools used around crushing plant • Inadequate monitoring of airborne dust, including silica, around rock crushing and concrete crushing operations • Secondary exposure of other site workers and neighbouring properties to dust and noise generated by crushing and screening • Heat stress and fatigue for workers stationed near hot engines, hydraulic systems and exposed parts of the crushing spread	High	[redacted]	Medium
10. Emergency Preparedness, Response and Rescue	• Delayed or ineffective response to entrapment or crushing incidents in or around crushers and screens • Lack of clear emergency stop, isolation and communication protocols in the event of a serious incident • Inadequate on-site first aid resources for trauma typically associated with crushing and screening operations	High	[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
	• Fire in mobile crushers or fixed crushing plants due to fuel leaks, hydraulic failures or electrical faults • Incomplete or untested emergency plans for events such as structural collapse, rockfall, catastrophic belt failure or plant runaway • Poor coordination with external emergency services due to unfamiliarity with crushing plant layout and hazards		[redacted]	
11. Contractor, Hire Plant and Interface Management	• Contractor crushing crews operating under different WHS standards or procedures to the principal PCBU • Hire of mobile crushers and screeners without adequate review of their condition, guarding and documentation • Confusion over responsibility for inspection, maintenance and rectification for hired contractor-owned plant • Inadequate exchange of information between site management and contract crushing and screening operators • Concurrent operations (e.g. civil works, blasting, earthworks) overlapping with mobile crushing plant operation without coordinated controls	High	[redacted]	Medium

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