

# Safe Work Method Statement (SWMS)



<b>Division:</b>	<b>Business Unit:</b>	<b>Date:</b>	<b>SWMS No:</b>
<b>Site Address:</b>			
<b>Work Activity:</b> Blast area remediation works, make safe for later rock extraction - Removal of overheight, wall scaling and removal of loose rocks overhanging the main eastern access road.			
<b>Plant and Equipment to be Used:</b> Excavator supported by bulldozer.		<b>Competencies and Qualifications:</b> Excavator supported by bulldozer.	
<b>Emergency Planning Required? Yes:</b> <input type="checkbox"/> <b>No:</b> <input checked="" type="checkbox"/> Follow site emergency response procedure		<b>Relevant Legislation and/or Guidance Material:</b> OHS Act 2017, OHS Regulation 2007	

Step No.	What are the Tasks Involved?	What are the Hazards?	Initial Risk			What Controls Must Be Used?	Residual Risk			Who is Responsible?
			C	L	R		C	L	R	
1	Establishing safe access and egress	Uncontrolled vehicle / equipment movement Rock and debris fall Mobile plant Slips/Trips/Falls Pedestrians Working near edge Light vehicles	3	3	H	Ensure there is adequate lighting to perform the inspection, i.e. daylight hours only. Selected excavator operator to be competent in excavator use and in wall scaling activities. Works to be undertaken in suitable weather conditions. Task to be continually monitored by quarry supervisor. Conduct a visual inspection 'walk through' of the proposed alternative access route via neighbouring property. Entry point from public road to be signposted. Specific vegetation clearing to be identified and facilitated to ensure sufficient cleared width for the proposed excavation equipment. Road access surface, width and grade to be inspected for trafficability. Areas of low traction, insufficient width to be widened and sheeted with suitable crushed rock.	3	1	M	HM Operators/ Supervisor

2	Removal of overheight	Overhanging hazards (loose rock, unstable ledges, overhanging trees) Working at heights Mobile Plant Slips/Trips/Falls Working near edge	4	3	H	<p>Conduct a visual inspection of Bench 3 and the crest of Bench 2 to verify the following before tracking into position:</p> <ul style="list-style-type: none"> <li>– Stability of material</li> <li>– Ground movement &amp; cracking</li> <li>– Steepness of ramp</li> <li>– Width of the ramp</li> </ul> <p>Clearly demarcate an exclusion zone for any nearby personnel</p> <p>Install suitable signage and barriers</p> <p>Ensure 2-way communication and that positive communication can be maintained</p> <p>Identify any areas where a spotter may be required</p> <p>Work in an east to west fashion with excavator tracks perpendicular to the crest, displacing overhanging material from the wall to the blasted rock muckpile below. Working 'below grade'.</p> <p>Excavator tracks to not approach within ½ maximum reach of excavator being used.</p> <p>Once completed, construct a bund, ½ wheel height of largest vehicle travelling along Bench 3, 2 metres from the crest of Bench 2.</p>	4	1	M	HM Operators/ Supervisor
3	Work into muckpile, development of safe work bench	Uncontrolled equipment movement Working at heights Mobile Plant Slips/Trips/Falls Working near edge Struck by falling material Struck By/Strike Against	4	2	H	<p>Conduct a visual inspection of the blasted muckpile and the resultant crest of Bench 2, to verify the following before working into position.</p> <ul style="list-style-type: none"> <li>– Stability of material</li> <li>– Potential ground movement</li> <li>– Steepness and width of proposed access</li> <li>– Ensure signage and barriers are in place</li> </ul> <p>Clearly demarcate an exclusion zone for any nearby personnel</p> <p>Install suitable signage and barriers</p> <p>Ensure 2-way communication and that positive communication can be maintained</p> <p>Identify any areas where a spotter may be required</p> <p>Excavator to work into the muckpile, developing an access to within reach of the blasted wall, the crest of Bench 2.</p> <p>Once the access is established, the excavator is to scale the remaining wall below the crest of Bench 2, removing all loose material from the wall.</p> <p>Work in an east to west fashion with excavator tracks perpendicular to the crest, displacing overhanging material from the wall to the blasted rock muckpile below. Working 'above grade'.</p>	4	1	M	HM Operators/ Supervisor

						Care should be taken not to displace rock from the scaling activities onto the excavator.				
4	Removal of large rocks	Equipment damage Mobile Plant Slips/Trips/Falls Working near edge Struck by falling material Struck By/Strike Against	3	2	H	<p>Conduct a visual inspection of the blasted muckpile and the resultant crest of Bench 1, to verify the following before working into position.</p> <ul style="list-style-type: none"> <li>– Stability of material</li> <li>– Potential ground movement</li> <li>– Steepness and width of proposed access</li> <li>– Ensure signage and barriers are in place</li> </ul> <p>Clearly demarcate an exclusion zone for any nearby personnel</p> <p>For this activity, ensure the eastern ramp access is sealed and the area between, the designated 'drop zone' is free from personnel and equipment.</p> <p>A spotter is to be used, and must maintain a clear line of sight to the excavator and the drop zone to ensure no 'inadvertent' public access.</p> <p>Install suitable signage and barriers</p> <p>Ensure 2-way communication, positive communication can be maintained between the spotter and the excavator operator.</p> <p>Excavator to work into the muckpile, developing an access to within reach of the blasted wall, the crest of Bench 1.</p> <p>Excavator is to remain, 2 x maximum reach distance away from the crest.</p> <p>A loaded bucket is to be used, ahead of the excavator, to test 'ground truth' the proposed access path.</p> <p>Work in an east to west fashion with excavator tracks perpendicular to the crest, no closer than ½ the maximum reach of the excavator being used.</p> <p>Displace the large rocks upon the crest of Bench 1 to the 'drop zone' below, working 'below grade'.</p> <p>Once complete, the excavator should install a rock bund to prevent access to the crest of Bench 1.</p>	3	1	M	HM Operators/ Supervisor
5	Final inspection of muckpile	Mobile Plant Light Vehicles Pedestrians Weather Conditions Struck by falling material Struck By/Strike Against Lighting Visibility	5	2	H	<p>Conduct a visual inspection of the final muckpile to verify the following:</p> <ul style="list-style-type: none"> <li>– Stability of muckpile</li> <li>– Bunds are installed along the crest of Bench 2 and at the access to the crest of Bench 1.</li> <li>– The highwall is clear of loose rock.</li> <li>– That there is no loose debris above the main eastern access</li> </ul>	5	1	M	HM Operators/ Supervisor

6	Preparations of site for quarry rock removal	Light Vehicles Other Mobile Plant Weather Conditions Struck By/Strike Against Fixed plant Working near edge Lighting Visibility	5	2	H	Once the wall above the eastern access has been cleared and no visible loose rock is sighted, the main eastern access can be re-opened.  The excavator operator can no resume 'normal' quarrying activities. i.e. The excavator operator should establish a safe working area, bench, which can be accessed safely by the haul trucks. Suitable bunds should be installed.  The excavator operator should signal to the haul trucks that they are in position via sounding the horn and communicating over the UHF radio.  Before loading the excavator operator will wait for confirmation from the operator of the truck operator  Maintain 2 way communication at all times  Ensure that the recovery loader / secondary breaking activities are positioned at a safe distance from the excavator digging area	5	1	M	HM Operators/ Supervisor
7	Community disturbance	Noise Dust Vibration	2	5	H	Working during allowable hours (7am-5pm Mon-Fri and 8am-1pm on Sat) No rock breaking before 9am or work on Sundays and Public holidays Public notices on blast days Essential works only on high wind days Use of water carts Minimal tracking of dozers	1	5	M	HM Operators, Supervisor, Site Management
8	Site access and public exclusion	Unauthorised access Slips/Trips /Falls	5	2	H	Locking entrance gates at the end of the day Visible Signage Establishment of safety bunds	4	1	M	Supervisor, Site Management
9	Equipment selection	Light Vehicles Other Mobile Plant Weather Conditions Struck By/Strike Against Fixed plant	4	3	H	Suitable type, size and reach of equipment for the task Limitations of equipment are known Pre-start checks Ensure all equipment is serviceable and regularly maintained Ensure the rules for HME are followed.	2	1	L	HM Operators, Supervisor
10	Competency	Mobile Plant Light Vehicles Struck By/Strike Against	4	2	H	Verify all competencies and Ensure the rules for HME are followed. Follow the site Load & Haul Protocol Read and understand SWMS Conduct regular emergency drills and training	4	1	M	HM Operators, Supervisor, Site Management

Table 1 Daily Operations

Step No.	What are the Tasks Involved?	What are the Hazards?	Initial Risk			What Controls Must Be Used?	Residual Risk			Who is Responsible?
			C	L	R		C	L	R	
1	Complete toolbox and Equipment pre-start	Slips/Trips /Falls Mobile Plant Light Vehicles Pedestrians Weather Conditions Struck by falling material Struck By/Strike Against Lighting Visibility	3	3	H	Ensure that you maintain 3 points of contact when accessing and exiting the Excavator Ensure all defects identified on pre-start are actioned prior to commencing work Ensure there is adequate lighting to perform the inspection	3	1	L	Excavator Operator/ Supervisor
2	Track to the designated loading or operating area	Other Mobile Plant Light Vehicles Pedestrians Weather Conditions Struck by falling material Struck By/Strike Against Lighting Visibility	5	2	H	Ensure the Golden Rules for HME are followed at all times. Follow the site Load & Haul Protocol Follow the site Traffic Management Plan Only Operators deemed to be competent by the Quarry Manager permitted to operate equipment Excavator fitted with radio for communication UHF Channel TBC.	5	1	M	Excavator Operator
<b>The activities below are listed for the benefit of the contractor for the later recovery of the blasted rock, post the completion of the remediation or make safe work.</b>										
3	Position the excavator next to the stockpile	Light Vehicles Other Mobile Plant Weather Conditions Struck By/Strike Against Fixed plant Working near edge Lighting Visibility	5	2	H	Conduct a visual inspection of the bench and pad to verify the following before tracking into position: Stability of material Ground movement & cracking Steepness of ramp Width of the ramp Ensure the Golden Rules for HME are followed at all times. Follow the site Load & Haul Protocol Follow the site Traffic Management Plan	5	1	M	Excavator Operator
4	Prepare the area to safely load dump truck. Consider the following: Tidy up floor Clean and flat work surface	Light Vehicles Other Mobile Plant Weather Conditions Struck By/Strike Against Fixed plant	5	2	H	Conduct a visual inspection of the bench and pad to verify the following before tracking into position: Stability of material Ground movement & cracking Steepness of ramp	5	1	M	Excavator Operator

	Working next to faces	Working near edge Lighting Visibility				Width of the ramp Ensure edge protection is in place for all bench edges Ensure the Golden Rules for HME are followed at all times. Follow the site Load & Haul Protocol Follow the site Traffic Management Plan				
5	Load truck	Light Vehicles Other Mobile Plant Weather Conditions Struck By/Strike Against Fixed plant Working near edge Lighting Visibility	5	2	H	The excavator operator has control over the loading area The excavator operator will signal that they are in position via sounding the horn and communicating over the UHF radio Before loading the excavator operator will wait for conformation from the operator of the truck operator Maintain communication at all times Ensure that the loader are positioned at a safe distance from the excavator digging area	5	2	M	Excavator Operator, Crusher operator, Loader operator
6	Repeat the process until designated break or the end of shift or advised by Supervisor or Site Management.	Mobile Plant Light Vehicles Pedestrians Weather Conditions Struck by falling material Struck By/Strike Against Lighting Visibility	5	2	H	As per controls for step 5 Continually inspect the work area/pad throughout the course of work. Do not undercut the work area. If changes are identified notify Supervisor & Site Management Task continually monitored by Supervisor & Site Management	5	2	M	Excavator Operator Supervisor, Site Management
7	At the designated break, end of shift, park the excavator on the lower level. If at completion of task walk excavator off the pad and track to next work location as advised by Supervisor or Site Management If at end of shift, complete fuel and grease and complete shut down inspection.	Slips/Trips /Falls Mobile Plant Light Vehicles Pedestrians Weather Conditions Struck by falling material Struck By/Strike Against Lighting Visibility	5	2	H	When parking up equipment consider the following; Secure & isolated away from traffic flow Ensure there is clear visibility from all directions Ensure the Golden Rules for HME are followed at all times. Follow the site Load & Haul Protocol Follow the site Traffic Management Plan When exiting the excavator maintain 3 points of contact Be aware of other HME and vehicles operating in the area PPE – Hard hat, high visibility clothing, steel capped boots Wear full face shield when refuelling with eye protection	5	2	M	Excavator Operator, Supervisor, Site Management

This Safe Work Method Statement (SWMS) was prepared and reviewed by:

Prepared By / Review Team			
Name: (Please print)	Position: (Please print)	Signature:	Date:

**Authorisation**

Declaration:  
I have checked this Safe Work Method Statement (SWMS) and confirm that it is authorised for use.

Responsible Supervisor Name:	Signature:	Date:

Work Activity Instruction/Training Record		
Declaration: I confirm that the persons listed below have reviewed and been given instruction in this Safe Work Method Statement (SWMS) and were given the opportunity to ask questions and clarify any areas of uncertainty. To the best of my knowledge these persons gained a full understanding of the work method and required health and safety controls to be applied for this job.		
Responsible Supervisor Name:	Signature:	Date:

The following employees/contractors have reviewed and been given instruction in this Safe Work Method Statement (SWMS):

Training Record				
Name: (Please Print)	Position/Company:	Employee/Contractor:	Signature:	Date:

**Training Record**

Name: (Please Print)	Position/Company:	Employee/Contractor:	Signature:	Date:



### Training Record

Name: (Please Print)	Position/Company:	Employee/Contractor:	Signature:	Date:

### To do a SWMS you:

1. Discuss with relevant employees, contractors and Health and Safety Representatives the tasks, associated hazards, risks and controls.
2. Write the work tasks in the sequence they will be done in the 'What are the tasks involved?' column.
3. Write the hazards and risks for each work task in the 'What are the hazards?' column.
4. Assess the hazards for the risk they present without any controls in place using the appropriate tables. Write the consequence in the 'C' column, Likelihood in the 'L' column and risk rating in the 'R' column. This is the initial risk rating.
5. In the 'What controls must be used?' column, select the hazard or risk and then work through the controls. Choose a control measure (and how it is to be used). Use the Hierarchy of Controls and Priority for Action tables to work out the appropriate controls.
6. Re-assess the risk of each hazard after controls have been put in place and write it in the 'Final Risk' column. This is the residual risk. NOTE—you cannot start work until the residual risk is at least 'Medium'.
7. In the 'Who is Responsible?' column write in the initials of the person who will be responsible for that step.
8. The people who did the SWMS fill in the fields in the 'Prepared by/Review Team' section.
9. The SWMS is given to a Supervisor responsible for the work who reviews and then fills in the fields the 'Authorisation' section, including signing off the declaration.
10. Each team member is briefed on the SWMS before they start work. Ensure the team knows that the work is to stop immediately if the SWMS is not being followed.
11. All persons involved in the task must write their details and sign in the 'Training Record' section to state that they understand and agree with the control measures to be implemented before starting work.
12. The Supervisor of the task must sign off that all persons involved in the task have been consulted in the development and implementation of the identified control measures.
13. Observe work being carried out. If controls are not adequate, stop the work, review the SWMS, adjust as required and re-brief the team.
14. Keep this SWMS for the duration of the work. If the task is likely to be repeated in the future, consider writing a site Standard Operating Procedure (SOP).

**To do a SWMS you:**

NOTE — in the Company you can only write a SWMS if you have been assessed and signed off as competent.

**TABLE 1: Qualitative Measurement of the Maximum Credible Outcome of an Event**

Value	Description	Impact
1	Incidental	<p><b>Health:</b> Illness or effect with limited or no impact on ability to function and treatment is not necessary.</p> <p><b>Safety:</b> Injury such as First Aid, usually dealt with in-house.</p> <p><b>Environment:</b> No discernible impact or measurable impairment on habitat, species or natural environment (air, water, land).</p> <p><b>Regulatory:</b> No risk of punitive actions and any intervention limited to an observation.</p> <p><b>Community/Reputation:</b> Isolated complaint from a local individual.</p>
2	Minor	<p><b>Health:</b> Mild illness or health effect which requires some treatment and/or has some functional impairment but is usually easily medically manageable.</p> <p><b>Safety:</b> One or more injuries which require treatment by a medical professional or as a hospital outpatient, but are not serious (e.g. no time lost).</p> <p><b>Environment:</b> Localised and measurable short term impact on habitat, species or natural environment.</p> <p><b>Regulatory:</b> Risk of punitive action unlikely and any intervention limited to field report (or similar).</p> <p><b>Community/Reputation:</b> Clustering of complaints and risk of local media interest.</p>
3	Moderate	<p><b>Health:</b> Illness or significant adverse health effect needing a high level of medical treatment or management.</p> <p><b>Safety:</b> One or more injuries which are serious enough to result in lost time, non-permanent disabling injuries, or overnight hospitalisation as an inpatient.</p> <p><b>Environment:</b> Localised and measurable medium term impact on habitat, species or natural environment.</p> <p><b>Regulatory:</b> Formal intervention, typically issuing of an Improvement Notice at a site and unlikely to escalate if complied with. Fine up to AUD 100K (or equivalent) without criminal proceedings.</p> <p><b>Community/Reputation:</b> Coordinated community concern at a local level, and limited local media coverage.</p>
4	Major	<p><b>Health:</b> Illness or chronic exposure resulting in significant life impacting effects</p> <p><b>Safety:</b> Minor permanent disabling injury e.g. loss of finger(s) or extended temporary impairment and/or hospitalisation.</p> <p><b>Environment:</b> Extensive and measurable medium term impact on habitat, species, or natural environment.</p> <p><b>Regulatory:</b> Formal, high level intervention (e.g. prohibition notice) at a site, and risk of further interventions at other sites. Significant fine or penalty likely for Corporate (greater than AUD 100K or equivalent).</p> <p><b>Community/Reputation:</b> Community alarm at a regional level, and adverse and longer running local/regional media coverage.</p>
5	Severe	<p><b>Health:</b> Serious illness or chronic exposure resulting in fatality or significant life shortening effects.</p> <p><b>Safety:</b> Death or significant permanently disabling injury e.g. blindness, loss of hand(s), quadriplegia.</p> <p><b>Environment:</b> Destruction of important populations of habitat, species, or natural environment.</p> <p><b>Regulatory:</b> Significant prosecution action, including risk to Company Officers.</p> <p><b>Community/Reputation:</b> Widespread community unrest and/or adverse national/international media coverage.</p>

**TABLE 2: Qualitative Measurement of How Likely or Probable the Consequence will Occur**

Description	Impact
Almost Certain	The event is expected to occur several times a year at a site/local level.
Likely	The event is expected at a site/local level in the foreseeable future (next few years) / Occurs within the Company more than once per year.
Possible	The consequence is possible at a Company workplace at some time in the foreseeable future (next 10 years) / Has happened at the Company in past 10 years / Occurs annually within the Industry.
Unlikely	The consequence is possible in the Company / Has occurred in the Industry.
Rare	The consequence is not expected in the Company / Has never been heard of in the Industry.

**TABLE 3: Qualitative Risk Matrix – Levels of Risk**

Consequence \ Likelihood	Incidental (1)	Minor (2)	Moderate (3)	Major (4)	Severe (5)
Almost Certain (5)	M	H	E	E	E
Likely (4)	M	M	H	E	E
Possible (3)	L	M	H	H	E
Unlikely (2)	L	L	M	H	H
Rare (1)	L	L	L	M	M

**TABLE 4: Hierarchy of Control**

Control	Description/Example
Elimination	Is there a need to use the plant, process or substance that created the risk (e.g. using a cordless drill to eliminate tripping or snagging of a power lead or using CCTV to observe a silo being filled to eliminate climbing up a ladder to observe)?
Substitution	Can the hazardous item be substituted with another item that has less risk (e.g. using a scaffold rather than a ladder, using extra-low voltage

**TABLE 5: Priority for Action**

Risk Level	Action
E - Extreme Risk	Intolerable. Stop and seek specialist advice. Immediate interim risk reduction required. Long-term risk reduction plan must be developed, approved by Divisional Management, and implemented.
H - High Risk	Tolerability to be endorsed by management. Additional long-term risk reduction required. If no further action can be reasonably taken,

TABLE 4: Hierarchy of Control		TABLE 5: Priority for Action	
Control	Description/Example	Risk Level	Action
	<50 Volt for switchgear, package cement in 20kg bags rather than 40kg bags)?		Divisional management (DMD/EGM) approval must be sought to continue the activity.
Isolation	Can the hazard be isolated from the person (e.g. machine guards, sound enclosures, lagging on hot pipes)?	M - Medium Risk	Tolerable, provided risk is ALARP (As Low As Reasonably Practicable). Reasonable safeguards and management systems must be in place commensurate with risks.
Engineering	Can the risk be minimised by isolating, enclosing or redesigning the plant, substance or process (e.g. machine guards, mechanical lifting aids, exhaust ventilation, relocation, trolleys or workstation design)?	L - Low Risk	Tolerable and continual improvement required. Manage risk in accordance with agreed procedures and seek to reduce risk over time.
Administrative	E.g. job rotation, SOP, training and signs.		
Personal Protective Equipment (PPE)	The least-desirable method which shall only be used in combination with other controls or if other controls are not suitable. Employees issued with PPE shall have it fitted correctly and be trained in its use and maintenance.		

NOTE: In all cases risk must be reduced to as low as reasonably practicable (ALARP).