



Tunnel Boring Machi	ne SAFE WORK METHOD	STATEMENT (SWMS)	
TASK	OR ACTIVITY: Tunnel Boring Ma	achine	
Business Name: [Company Name]		ABN: [ABN]	SWMS#
Business Address: [Company Address]			
Contact Person:	Phone: [Phone]	E qil:	
THIS SAFE WORK METHOD	STATEMENT IS APPROVED BY	THE PLOOF THE PROJECT	
Under the Work Health and Safety Regulation (WHS Regulation), a person conduct the proposed work starts.	eting a business or undertaking (N 3U) is	required to ture at a safe work method s	tatement (SWMS) is prepared before
Full Name:			
Signature:		Title:	Date:
Details of the person(s) responsible for ensuring implementation, monitoring a	ompliance of the SWMS well as review	s and modifications of the SWMS.	
Full Name:		Title:	Phone:
ALL PERSONNEL PARTICIPATING IN ANY ACTIVITY ON THIS WMS. ST HAVE THE FOLLOWING COMMUNICATED	N. 1E AND DATED SIGNATURE OF A CO. MUNICATED TO IN THE DEVELO	LL RELEVANT PERSONNEL WHO HAVE BI PMENT AND APPROVAL OF THIS SWMS	EEN CONSULTED AND
Safety meetings or toolbox talks will be sched ed in accordance with egislative requirements to first identify any site hazards, conditions unical those hazards and then to further take steps to either the conditions of the conditions are or conditions.	NAME	SIGNATURE	DATE
If an incident or a near miss occurs, all work must standardly. Depending on the severity of the incident, a meeting will be called with all workers to amend the SWMS if required. The meeting may also be an educational opportunity.			
Any changes made to the SWMS after an incident or a near miss must be approved by the Person Conducting Business or Undertaking and communicated to all relevant personnel.			
The SWMS must be kept and be available for inspection at least until the work is completed. Where a SWMS is revised, all versions should be kept. If a notifiable incident occurs in relation to which the SWMS relates, then the SWMS must be kept for at least two years from the occurrence of the notifiable incident.			

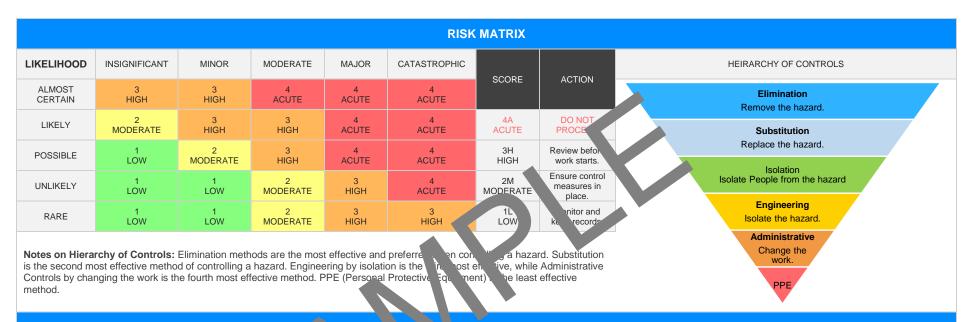
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		CL	IENT OR PRINCIPAL	CONTRACTOR D	DETAILS		
Client:						SCOPE OF WORKS	
Project Name:					Provide a detailed description	n of the specific work being	carried out (otherwise
Project Address:					known as cope of works).		
Project Manager:							
Contact Phone:							
Project Manager Sig	gnature:						
Date SWMS supplie	ed to Project Manager	:					
		ANY HIGH	-RISK CON YUC)	N' JRK BEING	CARRIED OUT		
☐ involves a risk of a p	erson falling more than 2 r	meters.		is carried out on	or near pressurised gas mains	s or piping.	
is carried out on a te	lecommunication tower.			is carried out on	or near chemical, fuel or refrig	erant lines.	
☐ involves demolition of	of an element of a structure	e that is load-be n.		is carried out on	or near energised electrical in	stallations or services.	
☐ involves demolition of	of an element related to the	e physical integrit of a str	2	is carried out in	an area that may have a conta	minated or flammable atmo	sphere.
☐ involves, or is likely t	o involve, disturbing a	stos.		☐ involves tilt-up o	r precast concrete.		
involves structural al	teration or repair that re	upp to	prevent collapse.	is carried out on	, in or adjacent to a road, railwa	ay, shipping lane or other tr	affic corridor.
is carried out in or ne	ear a confined space.			is carried out in	an area of a workplace where t	there is any movement of po	owered mobile plant.
is carried out in/near	a shaft or trench deeper t	han 1.5m or tunnel involvi	ng use of explosives.	is carried out in	areas with artificial extremes of	f temperature.	
is carried out in or ne	ear water or other liquid tha	at involves a risk of drowni	ng.	involves diving v	vork.		
		ANY H	IGH-RISK MACHINER	RY OR EQUIPMEN	NT NEARBY		
☐ Forklift	☐ Crane/s	☐ Hoist/s	☐ Excavator	☐ Backhoe/Loader	r Boom Lift	☐ EWP	☐ Genie Lift
☐ Trencher	☐ Drilling Rig	☐ Trucks	Formwork	☐ Bobcat	☐ Flammable Gas	☐ Fuel	☐ Dozer
☐ High Voltage	☐ Mulcher	☐ Tilt-up Panels	Roller	☐ Scissor Lift	☐ Tractor	Other -	





PERL NAL TECTIVE EQUIPMENT (PPE)

FOOT PROTECTION	HAND PROTECTION	HEAD PROTECTION	HEARING PROTECTION	PROTE	SPIRATORY P STECTION	FACE PROTECTION	HIGH-VIS CLOTHING	PROTECTIVE CLOTHING	FALL PROTECTION	SUN PROTECTION	HAIR/JEWELLERY SECURED
			A								

Select me appropriate PPE above suitable for the equipment used or the job task being performed (if applicable).

Note: A SWMS must be reviewed regularly to make sure it remains effective. A SWMS must be reviewed (and revised if necessary) if relevant control measures are revised. The review process should be carried out in consultation with workers (including contractors and subcontractors) who may be affected by the operation of the SWMS and their health and safety representatives who represented that work group at the workplace.

When a SWMS has been revised, the person conducting a business or undertaking must ensure all:

- 1. persons involved in the work are advised that a revision has been made and how they can access the revised SWMS;
- 2. persons who will need to change a work procedure or system as a result of the review are advised of the changes in a way that will enable them to implement their duties consistently with the revised SWMS: and.
- 3. workers that will be involved in the work are provided with the relevant information and instruction that will assist them to understand and implement the revised SWMS.



JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR	RESPONSIBLE PERSON
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK	NAME OF PERSON
1. Preparation	Incorrect setup, equipment failure	ЗН	 Ensure all operators are properly trained and certified in the use of Tunnel Boring Machines (TBMs). This reduces the risk of incorrect of tup. Conduct regular machine inspections. Assure to that all machine parts are in working order can prevent a sudden equipped at failure. Implement a thorough pre-operational check at. This caps to identify any overlooked elements during setup, reducing check of operation error or machine breakdown. Establish communication proceols between work and of operation error or machine breakdown. Establish communication proceols between work and of operation error or machine breakdown. Use only hide quality TBN equipments. Sub-participation and the substantial processed. Use only hide quality TBN equipments. Sub-participation and proceeding the substantial processed. Have the expense echois an on-site. The unimediate presence of someone who under the state of the counterly inside out means any issues can be addressed promptly, reductor to untime and potential hazards. Put in leads the regular procedures. Prior planning for any unexpected events, such as a quipment failure, ensures everyone knows how to react safely and potential protective equipment (PPE) usage. Proper usage of PPE like safety helmets, gloves, boots and high-visibility jackets reduce risk of injury during operations. Schedule regular maintenance and timely replacement of faulty parts. Strict adherence to manufacturer's guide prolongs equipment life and minimises chance of equipment failure. Appoint qualified personnel to supervise site preparation. Experienced supervisors can spot potential issues before they become problems and guide the setup process to ensure it adheres to best practices. 	2M	
2. Mobilisation	Electrocution, trip hazards	2M	Routine equipment checks: Ensure all electrically powered machinery is checked for faulty wiring and potential damage before use to prevent electrical hazards. Training: Provide sufficient training on how to safely operate the Tunnel Boring Machine, focusing on alertness to trip hazards and electrocution prevention. Personal Protective Equipment (PPE): Staff should wear appropriate PPE at all times, such as non-conductive gloves, safety boots, hard hats, and high-visibility clothing. Signage: Make sure all potential hazard areas are clearly marked with appropriate signage to alert workers of possible risks.	1L	



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			- Enclosed Electrical Sources: All power sources and outlets should be properly enclosed to limit direct contact and reduce the risk of electric shock.		
			- Cordon off work area: Isolate the work area using arrier tape or cones to prevent unauthorized personnel from wandering into be adous zones.		
			- Safe Cable Practices: Cables should always be secured astened and out of walkways to prevent tripping incidents.		
			- Scaffolding: Securely install temporary platform or scaffolds to provide workers with a safe and even surface to operate on, reducing trip have us.		
			- Lighting: Good illumination in workplace can prediction and falls.		
			- Clear Comparication: Margain op lines of symmunication on site to alert team members projectly about a lidentifie of		
			- Reg Breaks is sudequate breaks to workers for rest which helps them stay focuse a lalert.		
			- Spill I nate ment: an up any liquid spills immediately to prevent slipping and tripping azar		
			- Cle nlines Practice good housekeeping habits onsite, keeping equipment near, to d and work areas clean and free from clutter.		
			mergency planning: Implement an emergency response plan so that every worker k, ws what to do in case of electrocution or trip-related injuries.		
			- Ensure the work area for excavation is properly barricaded and has warning signs placed around it to prevent unauthorised access.		
			- Before commencing work, evaluate ground conditions to identify any risks of potential collapse or instability.		
			- Conduct regular inspections of the site to assess the stability of excavated areas and mitigate any potential hazards.		
3. Excavation	Collapse of ground, dust exposure	4A	- Utilise support systems such as shoring, pilling, underpinning or ground improvement techniques where necessary to prevent collapsing of the tunnel during and after excavation.	3H	
			- Create a proper ventilation system within the tunnel to dissipate hazardous dust caused by drilling operations.		
			- Ensure all workers undertaking the excavation process are provided with personal protective equipment such as hard hats, safety goggles, gloves, high visibility vests and appropriate footwear.		
			- Implement an effective dust management plan including wetting down surfaces, using dust extraction systems, and providing respiratory protective equipment if required.		



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			- Enforce strict adherence to safe work procedures with workers trained in Tunnel Boring Machine operation.		
			- Pre-plan the excavation process by ensuring the running through the designated excavation site		
			- Maintain clear and adequate communical amongst in members regarding the work progress and any potential safety hazar idention.		
			- Carry out regular maintenance checks on Tunian Boring Machine (TBM) to ensure its safe functionality.		
			- Have an emergency response, an in place, outline, our evacuation routes and procedures in case, wishas sulting in the collapse of ground or excessive dust exposure		
4. Tunnel Boring	Machinery malfunction use pollution	ВН		2M	



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5. Material Removal	Overexertion, struck by moving object	ЗН		2M	
6. Safe Access/ Egress	Slips, trips and falls	2M		1L	



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7. Maintenance Work	Inadequate safety measures, mechanical errors	ЗН		2M	



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8. Emergency Procedures	Panic, insufficient training	ЗН		2M	



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9. Mechanical Lifting	Dropped loads, rigging failure	4A		ЗН	



SPECIFIC WORK STEPS HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK	PERSON NAME OF PERSON
10. Shift Changeover Communication breakdow.	2M		1L	



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11. Machine Operation	Non-compliance v procedures, unauthorised acc	2M		1L	
12. Breaks/ Meal Times	Poor hygiene practices, allergens	2M		1L	





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13. Finishing Work	Inadequate housekeeping, improper storage	2M		1L	
14. Demobilisation	Equipment damage, lax safety standards	3H		2M	



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15. Post-operation Review	Inadequate feedback, overlooked issues	2M		1L	



SPECIFIC WORK STEPS HAZARDS TH	AL HAZARDS IR	CONTROL MEASURES	RR	RESPONSIBLE PERSON
	HAT MAY ARISE INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK	NAME OF PERSON





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. ANY STATE OF AT 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 2017

Legislation NSW: https://www.safework.nsw.gov.au/legal-obligations/legislative

Codes of Practice NSW: https://www.safework.nsw.gov.au/resource-library/lis codes-of ractice NSW: https://www.safework.nsw.gov.au/resource-library/lis codes-of-ractice NSW

Northern Territory

Work Health and Safety (National Uniform Legislation) Act 2011

Work Health and Safety (National Uniform Legislation) Regulation 201

Legislation NT: https://worksafe.nt.gov.au/laws-and-compliance/wo_place-

Codes of Practice NT: https://worksafe.nt.gov.au/5

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/le_lation

Codes of Practice for SA: https://www.safework.sa.gov.au/work_aces/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 al. Safety Act

Occupational Health and Infety gulations 2017

Legis on VIC: https://www.xsafe.vic.gov.au/occupational-health-and-safety-act-and-

qulat

des of actice VIC attps://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





SIGNATORIES OF THE SAFE WORK METHOD STATEMENT

The signed and dated personnel listed below have cooperated in the consultation and development of this Safe Work Method Statement which has been approved by the Person/s Conducting a Business or Undertaking (PCBU). In signing this Safe Work Method Statement each individual acknowledges and confirms that they have read this SWMS in full, having raised any questions for items on this Safe Work Method Statement that require clarification, and confirms that they are competent, skilled and knowledgeable for the task assigned to them. Every person acknowledges that they have received the relevant training and qualifications where required, before carrying out any work contained in this Safe Work Method Statement. By signing this Safe Work Method Statement each individual agrees to work safely, to follow any safe work instructions which are provided, and agrees to use all Personal Protective Equipment where appropriate.

Worker Name	Pos	sition	Signature	Date	Time	Sup	ervisor
				Date:			
				Datu			
				L te:			
				Date:			
				Date:			
				Date:			
				Date:			
		SAF WC	STATEMENT	MONITORING AND RE	VIEW		
The SWMS must be review revised if necessary) if relevations consultation with workers (into the SWMS and their health workplace. When the SWMS has been radvised that a revision has been who will need to change a what a way that will enable them to will be involved in the work makes the service of the se	ant control measucluding contractors and sub- h and safety representatives revised the PCBU must ensure made and how they call ork procedure or system as o implement their duties consust be provided with the rel	contract s) who may be affected that work who processes the revised SWMS a result of the revised SWMS are sult of the revised SWMS a	chould be carried out in fected by the operation of the desired by the operation of the desired by the operation of the desired by the operation of the changes in the changes in the operation of the		k of incidents, keeping the hitoring the effectiveness broach which includes but h workers, contractors are a continual basis. Improvement, promptly a corrective action and considerations.	e workplace safe for all of the Safe Work Meth is not limited to: and sub-contractors. recording inconsistenci sultation with all releva	If personnel. The sod Statement should statement should see or deficiencies, not personnel ensures
REVIEW NUMBER	□ 1	□ 2	□ 3	□ 4	□ 5	□ 6	□ 7
NAME							
INITIALS							
DATE							

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SAFE WORK METHOD STATEMENT REVIEW CHECKLIST

This Safe Work Method Statement Review Checklist is to be followed and used upon initial development of the SWMS to help ensure that all steps have been adequately taken before work commences. Think of this document as an internal audit review checklist before commencing work, and may form part of a Toolbox Talk (safety meeting) and may be used as an opportunity for education and training.

ITEMS WHICH MUST BE INCLUDED IN THE SWMS	COMPLETED	TO BE DONE	COMMENTS
The company details have been entered, including the project name and address.			
Names and signatures of all relevant personnel consulted during the development of the SWMS.		P A	
Name, signature, position and date signed of the person approving the SWMS.			
Specific personnel and qualifications, experience is noted in the SWMS.	P		
Provides a step-by-step process of tasks required to carry out the activity or task.			
Adequate risk assessment of any identified hazards has been completed.			
Foreseeable hazards are identified and documented for each step.			
Any hazards listed in any site risk assessments have been added to the SWI			
SWMS initial risk (IR) column as well as residual risk (RR) columns completed.			
Check control measures added to the SWMS are the most effecting sections.			
Responsible person is assigned and listed on the SWMS for the imperent of contameasures.			
Permit requirements specified, such as Hot Work, Electrical Work, Vorat Heights etc.			
SWMS identifies plant and equipment to be u d.			
Details of inspection checks required for any equipment listed approted on the SWMS.			
Describes any mandatory qualifications, experience raining skills required to perform the work.			
Applicable personal protective equipment is selected on the SWMS.			
Lists any required permits or licenses.			
Reflects and documents any legislative references and/or Australian Standards.			
Identifies any hazardous substances used with specific control measures in line with any SDS.			
REVIEWED BY	DATE R	EVIEWED	
SIGNATURE	DATE CC	MPLETED	