SAFE WORK METHOD STATEMENT	**SWMS Work on or near Energised Electrical Installations or Services**		
Reference documents	Work Health & Safety Act 2011, Work Health & Safety Regulation's 2017, Code of Practice - Work Near Overhead Power Lines - P18 Electrical Safety Procedure, P18.F01 Risk Assessment Checklist – Working Near Overhead Power Lines		
SWI:	SWI46 – Measuring Clearance to Overhead Power Lines		
Training and Competencies	Working below overhead powerlines, underground assets identification training. Locators training. Isolation training, Electrician qualifications.		
Safety data Sheets	As required and determined by the risk assessment		
Personal Protective Equipment	As required and determined by the risk assessment, Isolation locks		
Plant and Equipment	As determined by the Risk assessment		
Inspection and Testing	Pre-start checks for plant and equipment		
Hazardous Chemicals and Dangerous Goods			
High Risk Work *Indicate if any of the HIGH risk activities are performed by workers*	☐ Where there is a risk of a person falling more than two metres.	☐ On in or adjacent to roadways, railways, shipping lanes or other traffic corridor.	☐ In, over or adjacent to water or other liquids where there is a risk of drowning.
	☐ At workplaces where there is any movement of powered mobile plant.	☐ Involving the use of explosives.	☐ In an area where there are artificial extremes of temperature.
	☒ On or near energised electrical installations or services.	☐ Involving a trench or shaft if the excavated depth is more than 1·5 metres.	☐ On or near pressurised gas distribution mains or piping.
	☐ Involves structural alterations or repairs that require temporary support to prevent collapse.	☐ Involving a confined space.	☐ On or near chemical, fuel or refrigerant lines.
	☐ Involving tilt-up or precast concrete.	☐ On telecommunications towers.	☐ Involving diving.
	☐ Involving removal or likely disturbance of asbestos	☐ In an area that may have a contaminated or flammable atmosphere.	☐ Involves demolition of an element of a structure that is load-bearing or otherwise related to the structural integrity of the structure.
	☐ Involving a tunnel.		

SWMS Prepared by:	**Name and signature:**	**Date:**	
Authorised by:	**Name and signature:**	**Date:**	

Persons Responsible for Ensuring Compliance with SWMS:			
Methods used to Ensure Compliance with SWMS:			
Persons Responsible for Reviewing SWMS Control Measures:			
When should Risk Control Measures be reviewed:			
Review Date:		**Reviewer's Signature:**	

SWMS are to be reviewed as per the Document Control Procedure or when there has been a change to the Task / Process or Legislation.

Job Step	Hazard	Risk	Initial Risk Rating E,H,M,L	Control Measures *Controls have been identified using the hierarchy of controls*	Responsibility *Who*	Residual Risk Rating E,H,M,L
Prior to works conducted – the site supervisor is to conduct a risk assessment to ensure adequate clearance between planned works and electrical cables can be maintained at all times. If the plant or work will encroach in the "exclusion zone (cable clearances) – table provided at end of SWMS" Energy provider MUST be consulted, and a safety advice MUST be provided prior to work commencement (this can take up to 7 days to respond to request).						
Pre-Start and Planning	Lack of information provided to workers Design of work not identifying the hazard	Injury or illness.	H	• Pre-start briefing to ensure all staff are fully aware of the scope of work before work commences. • Ensure all persons have undertaken a site-specific induction. • Site specific risk assessment to be completed. • Check all spotters' tickets before work commencement to ensure in date and competency. • Comply with all requirements from Energy provider.	Supervisors, competent person and worker	M
Investigations, Inspections Viewing and Measuring	Being hit by vehicles	Injury or death	H	• Spotter may be required for activity. • Park vehicle clear of roadway. • Vehicle to have warning devices • Workers to wear Hi-Vis clothing. • Completed a risk assessment.	Supervisors, competent person and worker	L

Job Step	Hazard	Risk	Initial Risk Rating E,H,M,L	Control Measures *Controls have been identified using the hierarchy of controls*	Responsibility *Who*	Residual Risk Rating E,H,M,L
Excavation Near underground: **A/ Electrical Services** **B/ Poles and Stay Wires**	Contact with live parts.	Injury or death Interruption to services Plant severing live parts	H	• All underground services are to be identified prior to commencing work (Dial before you dig 1100). • Ensure services locations are correctly verified by a plan, on the ground and depth indicated either by high visible paint or flags. • Pothole to ensure adequate clearance from underground services. (DON'T rely on sand or caution tape to assist with marking of services). Energy provider recommends potholing every 4 meters to ensure depth and location have not changed. • Sought advice from cable owners before commencing work in flooded or wet trenches where the trench is in close proximately to underground power cables. • Consider the use of barricades, if possible, to exclude work in the danger zone. • Work not to be attempted within 5m horizontal distance of pole stays where excavation depth is >250mm before contacting electrical Provider. • Work not to be attempted within 5m of pole with earth leads or cables running down into the ground before contacting the Electrician Provider.	Supervisors, competent person and worker	M

Job Step	Hazard	Risk	Initial Risk Rating E,H,M,L	Control Measures *Controls have been identified using the hierarchy of controls*	Responsibility *Who*	Residual Risk Rating E,H,M,L
Electrical Overhead Services	Contact with live parts.	Injury or death Interruption to services Plant severing live parts	H	• ALL overhead cables shall be treated as live electrical cables unless confirmed in writing by the cable Provider. • Check "Exclusion Zone Chart "for allowed operating distance near live parts. • Contact Energy provider and request for safety advise if plant or work activity will encroach the 3m exclusion zone. • Organise with Energy provider to de-energise to protect power cables, electrical equipment where safe distance cannot be maintained, when applicable request measure of electrical cable height. • If required request 'Tiger Tails' to be fitted if working within the 3-metre exclusion zone before work commences. This will be a cost to council. • Plant operators and safety observer must have completed the "Safe Working around Live Electrical Parts" awareness course if working within 3 metres of overhead power lines and a safety spotter is required to assist.	Supervisors, competent person and worker	M

Job Step	Hazard	Risk	Initial Risk Rating E,H,M,L	Control Measures *Controls have been identified using the hierarchy of controls*	Responsibility *Who*	Residual Risk Rating E,H,M,L
				• Adequate measures shall be in place to prevent objects, people or plant operating in the "Safety Observer Zone" for entering the "Exclusion Zone". • Examining an alternative way to complete work without the need to enter the Safety Observer Zone. • Erecting a physical barrier to prevent plant or equipment entering the "Exclusion Zone". • Erection of warning signs either side of the power line. • Having authorised person on site when plant is operating in the safety observer zone. • Providing training, instruction and toolbox talks on the tasks and work prior to commencement. • Loads containing construction material are unloaded away from power line areas.		
Safety Observer	Contact with live parts.	Injury or death	H	Plant shall not enter a "safety observer zone" unless: • Authorised by the energy provider "authorised person" is on site to monitor the work. • To have adequate training to perform the role. • The authorised person has provided instruction on safety issues regarding the overhead cable to the person operating the plant.	Supervisors, competent person and worker	M

Job Step	Hazard	Risk	Initial Risk Rating E,H,M,L	Control Measures *Controls have been identified using the hierarchy of controls*	Responsibility *Who*	Residual Risk Rating E,H,M,L
				• To warn the operator if any part of load, equipment is about to enter the exclusion zone. • The Safety Observer is to have no other job except to observe work conducted near power lines and maybe more than one may be required if structures/trees limit good visibility between spotter and plant. • Safety Observer must maintain a suitable line of sight position at all times to observe and communicate with hand signals and/or 2 two way that the person or plant is operating a safe distance from live power lines. • To ensure site facilities, work and parking areas are kept clear of potential low overhead cable may fall if contact with plant. • To maintain a safe distance from the work, plant, and equipment they are observing. • To wear appropriate personal equipment (cotton long shirt and pants, non-conductive helmet, footwear, and gloves). • **An exclusion zone of 1 metre shall be maintained for ALL overhead power lines.**		
Site Barricading	Contact with live parts.	Injury or death	H	• Ensure that the site is adequately barricaded. • Ensure appropriate warning signs are erected.	Supervisors, competent	L

Job Step	Hazard	Risk	Initial Risk Rating E,H,M,L	Control Measures *Controls have been identified using the hierarchy of controls*	Responsibility *Who*	Residual Risk Rating E,H,M,L
				• Ensure exclusion zone is flagged and the safety observer zone is highlighted within the barricaded area.	person and worker	
Other work conducted around live electrical parts	Contact with live parts.	Injury or death Interruption to services.	H	• Where operating a **hydro vac equipment** to excavate in vicinity of underground electrical assets – maintain distance of 200mm between end of pressure wand and underground assets and not directly aimed at electrical asset. • Water pressure not to exceed 2000psi. • **Directional boring** near underground cables – trail holes are carefully dug to prove actual location of conduits/cables before using boring machinery. • **Heavy crawler/vibration equipment** is operated on top of cables a minimum cover of 450mm to cable protective cover must be maintained. • **Explosives** must not be used within 5m of cables/conduits unless engineering report is provided indicating no damage will be sustained. • **Plant and heavy equipment are not to travel with arms or tippers in the air**	Supervisors, competent person and worker	M
Public Safety / Pedestrians	Contact with live parts.	Injury or death	H	• Keep unauthorised persons out of the work site.	Supervisors,	L

Job Step	Hazard	Risk	Initial Risk Rating E,H,M,L	Control Measures *Controls have been identified using the hierarchy of controls*	Responsibility *Who*	Residual Risk Rating E,H,M,L
	Contact with cranes or loads. Contact with moving plant.			• Instigate Traffic Management Plans and Traffic Control if necessary. • Pedestrian signage is to be installed. • Reduce vehicle speed around the work site. • Where required, clearly signed alternative safe laneways shall be made available for pedestrians. • Laneways crossing kerb and channelling shall have nonslip ramps suitable for wheelchairs, baby strollers, pedestrian scooters and aged or disabled persons. • Plan and use safe vehicle access. • Schedule working hours to limit exposure to the public.	competent person and worker	
Work conducted around live electrical sources	Contact with live sources	Injury or death	H	• Rescue plan P18.F01 (see example below) • Rescue plan is communicated at pre – start brief to all persons	Supervisors, competent person and worker	M

RESCUE PLAN FOR WORKING NEAR OVERHEAD POWER LINES

INSTRUCTION: In the event a person needs rescuing due to injury or exposure to a dangerous environment and it's **not** life threatening, the rescue plan in that situation will be to Call 000 or 112 (mobile) thereafter the emergency services will undertake the rescue. Thereafter only if it's safe to do so, apply first aid *(if required)* whilst waiting for the emergency services to arrive.

The `Rescue Plan` *(other than in the above circumstances)* will be as described below;

RESCUE EQUIPMENT for RESCUE PLANS

✓ required equipment;

[ ] Roofing Rescue Kit
[ ] Electrical Rescue Kit
[ ] Safety Net
[ ] Catch Platform
[ ] Rescue Pole (on site)
[ ] Safety Harness
[ ] Mobile Phone (on site)
[ ] Two Way Radios (on site)
[ ] Fire Extinguisher
[ ] First Aid Kit
[ ] Rescue Stretcher & spreader bar
[ ] Respirator
[ ] EWP
[ ] Anchorage / Tripod
[ ] Extension Ladder
[ ] Others

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[ ] Others

.....

[ ] Others

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RESCUE PLAN

LIVE - HIGH VOLTAGE MAINS OR APPRATUS RESCUES

1. Never attempt to rescue person(s) from a live high voltage mains or appratus, this can only be performed by a competent person.

LOW - VOLTAGE RESCUES

2. Rescue Plan inclusive comunication system to be discussed at toolbox meeting and checklist / risk assessment and SWMS made available for workers.
3. Inspect rescue & electrical rescue kits before plannned work commences, ensure rescue kits are located outside the rescue area and easily accessible.
4. Ensure all other emergency rescue equipment is available and correctly located for quick access.
5. PPE & Clothing identified must be worn.
6. Act promptly, but not at the risk of putting yourself in danger, check for hazards i.e. hazards around the rescue area,climatic conditions and control any new identified hazards.
7. If rescue cannot be carried out safety without putting self in danger of harm, Call 000 or 112 (mobile) the emergency service will perform the rescue.
8. A competent person to de–energise/ isolate if possible the electrical appratus and verifly it has been de-energise, if not possible use the electrial rescue kit equipment to assist in performing the rescue.
9. If all hazards identified **i.e.** *(in checklist)* can be controlled and the rescue can be performed safety the nominated rescue person to execute the rescue.
10. Obtain and fit rescue equipment.
11. Assess the casualties injuries, if they are life threatening or they are exposed to a dangerous environment, rescue quickly and move the victim to a safe location and if not breathing commence CPR for other injuries apply first aid and wait for emergency service to arrive.
12. Secure the site so that an accident investigation can be undertaking.
13. Notify the immediate supervisor and or unit manager also the WHS Risk Unit of the incident.

Rescue Plan Approved by;
(Competent Person)

Name (*Print*): .....

Signature: .....

LIKELIHOOD How likely is it to happen? ↓	**E=EXTREME H=HIGH M=MEDIUM L=LOW** ← CONSEQUENCES – How severely could it affect health and safety? →				
	CATASTROPHIC Kill or cause Permanent Disability	**MAJOR** Serious Illness or Injury	**MODERATE** Medical Attention, Time off Work	**MINOR** First Aid Required	**INSIGNIFICANT** No Injuries
ALMOST CERTAIN Is expected to occur	**E**	**E**	**H**	**H**	**M**
LIKELY Will probably occur	**E**	**H**	**H**	**M**	**M**
POSSIBLE Might occur	**H**	**H**	**H**	**M**	**L**
UNLIKELY Could occur	**H**	**M**	**M**	**L**	**L**
RARE May occur only in exceptional circumstances	**H**	**M**	**M**	**L**	**L**

Risk Level	Required Action
Extreme	**Act immediately**: The proposed task or process activity must not proceed. Steps must be taken to lower the risk level to as low as reasonably practicable using the hierarchy of controls.
High	**Act today**: The proposed activity can only proceed, provided that: The risk level has been reduced to as low as reasonably practicable using the hierarchy of controls. The risk controls must include those identified in legislation, Australian Standards, Codes of Practice etc. and The document has been reviewed and approved by the supervisor and A Safe Working Procedure or Safe Work Method has been prepared and The supervisor must review and document the effectiveness of the implemented risk controls
Medium	**Act this week**: The proposed task or process can proceed, provided that (i) The risk level has been reduced to as low as reasonably practicable using the hierarchy of controls and The document has been reviewed and approved by the supervisor and A Safe Working Procedure or Safe Work Method has been prepared.

Low	**Act this month**: Managed by local documented routine procedures which must include application of the hierarchy of controls.

Ordinary Person Zone

a) Tables 1 provides approach distances for:

i. ordinary persons performing work near overhead power lines (including plant, hand tools, or other equipment held by a person).

ii. cranes and their loads and items of mobile plant operated by an ordinary person near overhead power lines.

Table 1: Approach Distances for Work Performed by Ordinary Persons

Nominal phase to phase a.c. voltage (volts)	**Approach Distance (m)**
Up to and including 132,000	3.0
Above 132,000 up to and including 330,000	6.0
Above 330,000	8.0
Nominal pole to earth d.c. voltage (volts)	**Approach distance (m)**
Up to and including +/- 1500 volts	3.0

Accredited Person Zone

a) Tables 2 provides approach distances for:

i. accredited persons, with a safety observer who are performing work near overhead power lines (including plant, hand tools, or other equipment held by a person).

ii. cranes and their loads and items of mobile plant operated by accredited persons, with a safety observer who are performing work near overhead power lines.

Table 2: Approach Distances for work performed by Certified Persons, with a Safety Observer

Nominal phase to phase a.c. voltage (volts)	Approach Distance (m)
Insulated low voltage cables up to 1000, including LV ABC	0.5
Un – insulated low voltage conductors up to 1000	1.0
Above 1000 up to and including 33,000	1.2
Above 33,000 up to and including 66,000	1.4
Above 66,000 up to and including 132,000	1.8
Above 132,000 up to and including 220,00	2.4
330,000	3.7
500,000	4.6
Nominal pole to earth d.c. voltage (volts)	Approach distance (m)
Up to +/- 1,500	1.0

Acknowledgement register

All workers are to sign this register to indicate they have read and understood this document prior to commencing work.

Name	Signature	Date	Name	Signature	Date