Overhead Power and External Electrical Infrastructure			
Business Name:		ABN:	
Business Address:			
Contact Person:	Phone:	Email:	

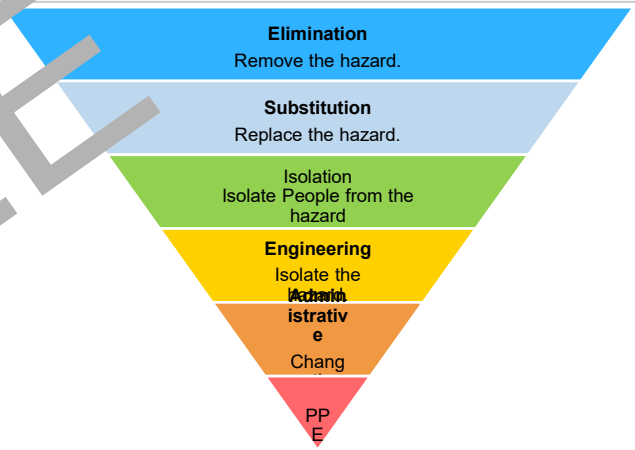
THIS RISK ASSESSMENT IS APPROVED BY THE PCBU OF THE PROJECT		
Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a RISK ASSESSMENT is prepared before the proposed work starts.		
Full Name:		
Signature:	Title:	Date:

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. Strategic Planning, Design and Network Interface	• Inadequate early consultation with Distribution Network Service Provider (DNSP) leading to unsafe design interface with existing overhead power • Design not compliant with AS/NZS 3000, AS/NZS 7000 or DNSP service & installation rules resulting in unsafe clearances or loading • Underestimation of electrical load, fault levels or earthing requirements causing unsafe operation of street lighting and poles • Failure to identify existing underground and overhead services during planning, increasing the risk of contact or service clashes • Lack of consideration for future network augmentation causing overloaded infrastructure and unsafe backfeeds • Insufficient consideration of public exposure (schools, playgrounds, high pedestrian areas) incr sk profile but not reflected in sign • Inadequate incor ration of authority requireme ight lin clear zones) creating vehicle strike a pole stability risks	4A	• Implement a formal concept and detailed des w process involving WHS, electrical engineering, civil engineering, traffic safety and DNSP repres atives • Mandate compliance of all de ns with WHS Act 11 HS Regulations, AS/NZS 3000, AS/NZS 7000, AS/NZS 3012, AS 174 eries a relevant DNSP a oad authority standards • Use a docume d servic detect and verif ion procedure (dial-before-you-dig, as-built review, ground pene ing radar w re requ d) at nning and design stage • Inclu a struc red ha d identificati and risk assessment workshop (HAZID) for each project, with speci us on ead and external electrical infrastructure • Deve p a d maint standard pole, footing and street light design templates that are pre-approved by a compet t e trical a structural engineer • Requir ndep dent design verification and sign-off by a Registered Professional Engineer (R O/R Eng or equivalent) for all new or modified pole and lighting designs • Embed blic safety, vehicle impact zones and maintainability considerations into design criteria and sign briefs • Implement a formal change management process for any mid-project design alterations, including risk review and DNSP approval where required	3H
2. Asset Information, Network Mapping and Service Location	• Incomplete or inaccurate asset registers and as-built drawings leading to unrecognised live conductors or cables • Failure to update drawings after pole removals, relocations or street light installations resulting in future work on unknown live infrastructure • Inadequate system for recording private vs DNSP-owned assets causing gaps in inspection and maintenance responsibilities • Poor integration between GIS, work management and field mobility systems	4A	• Maintain a centralised geographic information system (GIS) for all overhead power and external lighting assets with version control and audit trails • Implement a documented process to update as-built drawings, GIS data and asset registers within defined timeframes after any installation, removal or modification • Define and document ownership boundaries (DNSP vs client vs council) and embed them in asset management and maintenance procedures • Integrate GIS with permit-to-work and job planning systems so that current asset information is automatically presented during work planning • Establish a mandatory service location procedure (including dial-before-you-dig, electronic location and potholing where required) for any excavation near poles and cables • Tag and record legacy or high-risk assets (e.g. asbestos cement poles, non-standard earthing) with clear flags in asset systems and on-site labelling	2M

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	leading to out-of-date information in the field • Lack of formal service location procedures prior to excavation near poles and footings • Loss of historical information about older infrastructure (e.g. asbestos poles, legacy earthing systems) creating unmanaged health and electrical risks		• Conduct periodic audits comparing field conditions to recorded data and rectify discrepancies through a formal corrective action process	
3. Governance, Roles, Competency and Authorisations	• Unclear delineation between PCBU, principal contractor, DNSP and subcontractor responsibilities for electrical safety • Workers performing work near or on overhead power without appropriate electrical authorisations or network access permits • Inadequate competency standards for lineworkers, plant operators, riggers and supervisors involved with pole work ar street lighting • Lack of formal verification of licences, authorisations and refres ining prior to allocation to gh-risk tasks • Supervisors lack specific competency in ma ing ne e overhead power lines and associate exclusion zones • Insufficient resources a or competent electrical supervision and authorised persons on each site	A	• Dev and im em an electrical safety governance framework clearly assigning statutory and contra u respon ities in line with WHS Act 2011 and relevant Codes of Practice • Maint a mpete y matrix for all roles involved in overhead power, pole work and street lighting, includin mar tory qu fications, units of competency and refresher intervals • quire vide of current electrical authorisations, high-risk work licences and relevant tickets before enga ntractors or assigning internal staff mplement a formal authorisation process for persons in control of electrical work, switching coordinators a access permit holders under DNSP rules Provide targeted training for supervisors on management of work near energised conductors, safe approach distances and isolation/permit requirements • Include competency and authorisation checks in pre-start mobilisation audits and contractor management processes • Undertake periodic external or internal competency assessments and field verifications for critical roles	2M
4. Contractor and Subcontractor Management	• Engagement of contractors without proven experience in overhead power, pole installation/removal and street lighting projects • Inadequate evaluation of contractor WHS management systems, particularly around electrical safety and plant operation • Fragmented subcontracting chains leading to poor coordination and	3H	[redacted]	2M

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	unmanaged interface risks between trades • Contractual pressures encouraging unsafe shortcuts, such as working too close to live lines or bypassing isolation • Lack of monitoring of contractor compliance with exclusion zones, permits and isolation procedures		[redacted]	
5. Electrical Isolation, Access Authorities and Exclusion Zones	• Work undertaken within unsafe approach distances to live overhead conductors due to misunderstood or unenforced exclusion zones • Absence of formal isolation and access authority processes when working on or near network assets • Confusion regarding who controls the network isolation (DNSP vs private network) leading to unauthorised energisation • Failure to verify de-energisation and earthing before pole removal, installatio or temporary support activi • Inadequate manag ment of induced voltages, backfeed sks and auto-reclose features • Poor communication of live line sta s and safe work boundaries to plant operators, riggers and gr nd s	4A	[redacted]	2M
6. Plant, Equipment and Lifting Systems for Pole Works	• Use of non-rated or inadequately maintained cranes, EWPs, pole borers and lifting gear near live overhead infrastructure • Plant selection not suited to ground conditions or clearances, creating collision or electrical arcing risks • Failure of pole lifting or temporary support gear due to poor design, incompatibility or lack of engineering sign-off • Inadequate systems preventing plant encroachment into electrical exclusion	4A	[redacted]	2M

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	zones during slewing, elevating or travelling • Lack of standardisation and inspection of pole temporary support systems and bracing arrangements		[redacted]	
7. Structural Integrity, Pole Foundations and Temporary Support	• Undertaking pole removal or installation without adequate assessment of soil conditions, existing footings and adjacent infrastructure • Unplanned pole collapse or rotation during removal, installation or temporary support due to inadequate bracing or support design • Progressive structural degradation of poles (rot, corrosion, impact damage) not detected by inspection program • Inappropriate reuse of old foundations for new poles or street lights without engineering verification • Temporary supports installed without consideration of wind loading, conductor tension or vehicle impact	3H	[redacted]	2M
8. Street Lighting System Design, Earthing and Protection	• Street lighting circuits designed without appropriate fault protection RCDs or disconnection times in accordance with AS/NZS 3000 • Inadequate earthing and bonding of metallic poles and lighting columns increasing electric shock risk to the public • Overloading of circuits due to incremental addition of lighting or attachments without reassessment • Use of inappropriate luminaires, control gear or cable types for environmental conditions (corrosion, UV, moisture)	3H	[redacted]	2M

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	• Lack of surge protection leading to equipment failure and exposed live parts after storm activity • Incorrect integration of smart controls, timers and PE cells leading to unintended energisation or inability to isolate		[redacted]	
9. Traffic, Public Interface and Community Safety Management	• Pole removal, installation and temporary support activities conducted adjacent to live traffic without adequate traffic management planning • Members of the public entering work areas and coming into contact with plant, temporary supports or live electrical components • Inadequate management of street lighting outages around high-risk locations (intersections, pedestrian crossings) increasing crash risk • Lack of coordination with road authorities and local councils regarding lane closures, detours and lighting interruptions • Failure to manage community expectations and complaints, leading to work being rushed, altered, or to mitigate inconvenie	3H	[redacted]	2M
10. Environmental Conditions, Emergency Preparedness and Incident Response	• Work on overhead power and pole proceeding during adverse weather (storms, high winds, lightning, extreme heat) without formal triggers to cease work • Unplanned network events (faults, auto-reclose operations, vehicle impacts) affecting poles under installation or temporary support • Inadequate emergency response planning for pole collapse, plant contact with live lines or fallen conductors • Insufficient coordination with DNSP control rooms and emergency services during incidents or switching operations	4A	[redacted]	2M

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	• Delayed or ineffective first aid and rescue arrangements for electrical shock, falls from height or crush injuries		[redacted]	
11. Fatigue, Work Scheduling and Remote/After-Hours Operations	• Extended shifts and night works for street lighting and pole activities leading to fatigue-impaired decision-making around live assets • Inadequate resourcing causing critical tasks (e.g. temporary pole support) to be rushed or undertaken by reduced crews • Remote or isolated locations without effective communication or escalation pathways in the event of electrical incidents • Insufficient consideration of circadian impacts and visibility for night works near overhead lines and traffic • Lack of formal rest breaks and rotatio for high cognitive-load roles such as plant operators and aut electrica persons	3H	[redacted]	2M
12. WHS Documentation, Permits, Consultation and Change Management	• Critical WHS docu n (risk assessments, permits, design verifications) not available, not use or not understood on site • Permit-to-work systems (electrical, excavation, working at height) not integrated or consistently applied across projects • Poor consultation with workers and health and safety representatives leading to practical risks not being identified or escalated • Uncontrolled design or scope changes during construction (e.g. changed pole location, different luminaire) introducing new electrical and structural risks	3H	[redacted]	1L

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	• Inadequate document control resulting in outdated procedures or drawings being used in the field		[redacted]	
13. Inspection, Testing, Maintenance and Continuous Improvement	• Lack of systematic inspection and testing of poles, conductors, street lights and associated hardware leading to undetected deterioration • Reactive-only maintenance culture resulting in assets being run to failure, sometimes in-service and energised • Inadequate periodic testing of earthing, insulation resistance and protection devices • Deficient fault and defect reporting systems causing repeat failures and near misses to go unaddressed • Poor learning from incidents, audits and industry alerts in relation to overhead electrical infrastructure	3H	[redacted]	1L

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