Electrical Installation and Maintenance			
Business Name:		ABN:	
Business Address:			
Contact Person:	Phone:	Email:	

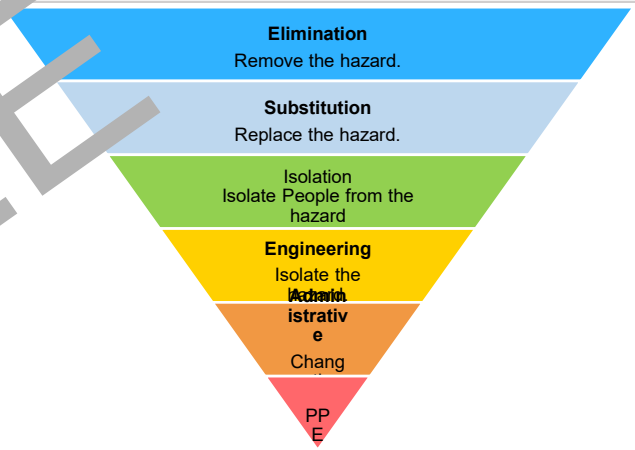
THIS RISK ASSESSMENT IS APPROVED BY THE PCBU OF THE PROJECT		
Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a RISK ASSESSMENT is prepared before the proposed work starts.		
Full Name:		
Signature:	Title:	Date:

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. Governance, Legal Compliance and Due Diligence	• Failure to understand and implement duties under WHS Act 2011 and WHS Regulations (e.g. electrical work, energised work, licensing) • Inadequate WHS governance structure for electrical activities (unclear roles, accountabilities and reporting lines) • Absence of documented electrical safety management system or integration of electrical risk into existing WHS management system • Inadequate consultation with workers and Health and Safety Representatives on electrical risks and controls • No formal process to keep abreast of changes in Australian Standards and Codes of Practice relating to electrical work • Insufficient due diligence by Officers in monitoring electrical safety performance and resource allocation	High	• Develop, implement and maintain a document Electrical Safety Management Plan aligned with WHS Act 2011, WHS Regulations and relevant Australian Standards (e.g. AS/NZS 3000, AS/NZS 3012, AS/NZS 4836) • Define and document WHS governance arrangements for electrical installation and maintenance, including clear roles, responsibilities and reporting lines for PCBUs, Officers, electrical engineers, supervisors and contractors • Establish a legal register identifying all applicable WHS legislation, standards and codes of practice for electrical work and assign responsibility for monitoring and updating requirements • Integrate electrical risk management into the corporate WHS management system, including planning, consultation, risk assessment, incident management and audit processes • Implement structured consultation processes (toolbox talks, WHS committee, HSR engagement) specifically addressing electrical hazards, changes to systems, new equipment and lessons learnt • Require Officers to demonstrate due diligence through regular review of electrical safety KPIs, incident trends, audit outcomes and resourcing for training, supervision and engineering controls • Conduct periodic external reviews of the electrical safety management system by a competent WHS or electrical safety specialist to verify compliance and effectiveness	Medium
2. Design, Engineering and Technical Standards Management	• Poorly specified or outdated electrical design standards for installations and maintenance activities • Failure to apply appropriate Australian Standards and industry guidelines in system design (e.g. fault current, discrimination, earthing, protection systems, arc flash energy) • Inadequate engineering review of design changes, upgrades or temporary installations • Lack of formal process for verification, testing and commissioning of new or modified electrical installations • Insufficient engineering consideration of maintenance access, isolation points and safe work clearances in the design phase	High	• Establish and maintain a formal Electrical Engineering Design Standard referencing relevant Australian Standards and specifying minimum design, protection and labelling requirements • Require that all electrical designs, including modifications and temporary works, are completed or reviewed by a suitably qualified and competent electrical engineer or designer • Implement a management of change (MOC) process for electrical design alterations, ensuring risk assessment, peer review and documented approval prior to implementation • Develop standard design templates and typical schematics for common installations that embed safety-by-design principles and access considerations • Implement a formal verification and commissioning procedure, including pre-commissioning checklists, insulation resistance testing, protective device verification, and sign-off by a competent person • Specify approved brands and component types through a controlled technical standards library or approved products list, with change control for any deviations • Ensure major projects and complex installations undergo independent design verification or third-party review proportionate to risk	Medium

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SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	• Uncontrolled use of non-approved or incompatible components and equipment			
3. Contractor, Supplier and Procurement Management	• Engagement of unlicensed or incompetent electrical contractors or workers • Procurement of electrical equipment and materials that do not meet Australian Standards or are not suitable for the environment • Inadequate pre-qualification and vetting of contractors' WHS and electrical safety systems • Lack of clarity between PCBU and contractor about responsibilities, interfaces and communication for electrical safety • Price-driven procurement decisions that compromise safety features, quality or lifecycle maintenance requirements • Inadequate controls for imported or second-hand electrical equipment without local compliance verification	High	• Implement a formal contractor pre-qualification process requiring evidence of electrical licences, insurances, WHS management systems, training records and incident history • Develop procurement standards that specify minimum electrical safety requirements, including Australian approvals, ingress protection ratings, isolation and lockable switchgear, and compatibility with existing systems • Include clear WHS and electrical safety requirements in contracts, including obligations under WHS Act 2011, reporting requirements, supervision arrangements and stop-work provisions • Use a preferred contractor and supplier list based on demonstrated performance, audit results and technical capability, with regular re-evaluation • Mandate that all electrical contractors provide project-specific WHS documentation (e.g. risk assessments, procedures, testing plans) for review prior to commencing work • Establish a process for verifying compliance certificates, test reports and commissioning documentation before accepting new equipment or installations • Prohibit procurement of electrical items from non-verified online or overseas suppliers unless formally assessed, tested and approved by a competent electrical engineer or test lab	Medium
4. Competency, Licensing, Training and Supervision	• Workers or contractors undertaking electrical tasks beyond their licensed competency or authority • Lack of current knowledge of WHS electrical obligations, safe work practices and isolation procedures • Inadequate supervision of apprentices, new workers or contractors performing high-risk electrical work • Insufficient training on site-specific electrical systems, protection schemes and emergency response • No systematic verification of licences, endorsements and ongoing competency for electrical personnel • Complacency or normalisation of deviance due to lack of refresher training and reinforcement of expectations	High	[redacted]	Medium

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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]	
5. Risk Management, Planning and Work Authorisation	• Absence of a formal risk management process specific to electrical installation and maintenance activities • Inadequate identification and assessment of system-level electrical hazards (e.g. backfeed, multiple sources, embedded generation, harmonics) • Unstructured planning for high-risk electrical work leading to rushed decisions and shortcuts • No formal permit or authorisation process for live work, switching or work on complex networks • Poor coordination between multiple PCBUs working on or near the same electrical systems • Failure to capture and review previou incidents, near misses and risk assessments to improve f planning	High	[redacted]	Medium
6. Isolation, Lockout, Tagout and System Control	• Inadequate orga ational procedures for isolation and lo ut of installations • Unclear ownership and control of switchboards, distributio and isolation points • Failure to manage multiple energy sources such as generators, UPS, solar PV, batteries and remote supplies • No overarching system for managing access authorities or switching sheets on complex installations • Inconsistent lock and tag practices between employees and contractors, leading to confusion and possible re-energisation • Inadequate verification of dead (test before you touch) due to lack of	High	[redacted]	Medium

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SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	procedure or test equipment management		[redacted]	
7. Asset Management, Inspection, Testing and Maintenance Systems	• Lack of an accurate asset register for electrical installations, switchboards, protective devices and portable equipment • Inadequate scheduled inspection and test regimes for fixed and portable electrical equipment • Failure to identify and manage ageing infrastructure, obsolescent components and degraded insulation • Poor documentation and retention of test results, commissioning records and maintenance history • Inconsistent approach to defect identification, prioritisation and rectification of electrical issues • No formal system for managing temporary electrical installations, construction power and site sheds	High	[redacted]	Medium
8. Documentation, Labelling and Information Management	• Incomplete or out[redacted]trical drawings, single line diagrams and schematics • Inadequate labelling of [redacted]boards, circuits, isolation points and emergency shutdown devices • Lack of accessible information for workers and contractors about the configuration and status of electrical systems • Poor version control and change management for electrical documentation • Confusing or inconsistent nomenclature between documentation, labelling and field equipment	Medium	[redacted]	Low

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SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	• Failure to record and communicate temporary alterations, isolations and bypasses		[redacted]	
9. Emergency Preparedness, Incident Response and Reporting	• Lack of coordinated emergency response plans for electrical incidents such as shock, arc flash, fire or equipment failure • Inadequate training of workers in responding to electrical emergencies, including safe rescue and first aid for electric shock • Insufficient availability or maintenance of emergency equipment (e.g. rescue kits, fire extinguishers suitable for electrical fires, first aid equipment) • Failure to report and investigate electrical incidents, near misses and equipment damage • Poor communication with emergency services and regulators regarding serious electrical incidents and notifiab events • No structured process t ly lessons learnt from past elec al events across the organisation	High	[redacted]	Medium
10. Audit, Monitoring, Consultation and Continuous Improvement	• No systematic mo ori the effectiveness of electrical safety con ls and management systems • Failure to identify deteri ti afety culture, rule-breaking or informal workarounds in electrical activities • Limited worker consultation on the practicality and effectiveness of electrical safety procedures • Infrequent or superficial WHS inspections of electrical installations and work practices • Lack of meaningful performance indicators for electrical safety at management level • Inadequate follow-up of audit findings and agreed improvement actions	Medium	[redacted]	Low

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			[redacted]	

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