Electrical Tools and Cable Preparation Equipment

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:

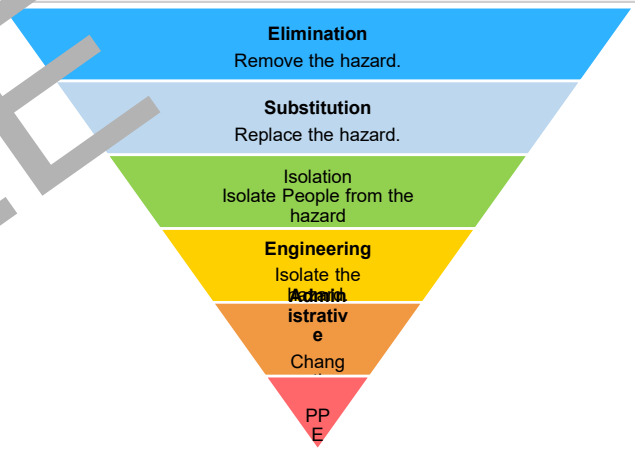
CLIENT OR PRINCIPAL CONTRACTOR DETAILS

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, WHS Responsibilities and Consultation	• Unclear WHS roles and responsibilities for electrical tool and cable preparation activities • Inadequate consultation with electrical workers, apprentices and subcontractors on tool-related risks • Lack of officer due diligence in verifying that electrical equipment risks are being effectively managed • Inadequate resourcing for WHS (time, budget, competent people) to implement safe systems for cable tools • Poor communication of WHS expectations to labour-hire workers and contractors using company tools	4A	• Establish and document a WHS governance struct[illegible] that allocates clear responsibilities for electrical tools and cable preparation equipment in line wit[illegible]HS Act 2011, including PCBU, officers, workers and contractors • Implement a formal WHS consultation proc[illegible]s (e.g. [illegible]ks, toolbox talks, safety committees) that regularly reviews risks associated with gas-po[illegible]rs[illegible]able fixing tools, cable strippers and wire stripping tasks • Require officers to periodical[illegible]eview WHS repor[illegible]and [illegible]intenance data relating to electrical and gas-powered tools, and docume[illegible]due diligence acti[illegible]n meeting minutes • Integrate elect[illegible]l tool ris[illegible]manag[illegible]ent requi[illegible]ents into WHS policy, including expectations for competency, [illegible]pervision, in[illegible]pection, [illegible]d inc[illegible]ent reporting • Ensu[illegible]contra[illegible]r man[illegible]ement proce[illegible]es clearly specify WHS obligations, minimum competencies and e[illegible]ment s[illegible]d[illegible]s for any party supplying or using electrical and cable preparation equipment on site	2M
2. Tool Selection, Procurement and Design Standards	• Procurement of non-compliant or unsuitable electrical tools and gas-powered cable fixing tools • Use of older or modified tools without safety features such as guards, interlocks, dead-man triggers or insulation • Lack of formal ass[illegible]sment for intrinsic safety or suitability[illegible]confined s[illegible]es or potentially explosiv[illegible]tm[illegible]res • Purchase of cheap, low-quality cab[illegible] strippers that promote unsafe forc[illegible]poor grip or blade exposure • Inconsistent electrical ratings (voltage, IP rating, insulation level) with site electrical systems and conditions	4A	• Implem[illegible]a centralised procurement procedure requiring only AS/NZS compliant electrical tools, [illegible]ulated cable strippers and certified gas-powered cable fixing tools to be purchased and used • A[illegible]opt standard specifications for electrical tools (e.g. double-insulated, RCD compatible, appropriate IP [illegible]ating, ergonomic design) that must be met before supplier approval • Require pre-purchase WHS and technical review of new tool types, including risk assessment for use in switch rooms, ceilings, pits and other restricted environments • Prohibit procurement and use of unapproved aftermarket modifications (e.g. removed guards, altered triggers, non-standard gas canisters) and specify this in procurement contracts and site rules • Maintain an approved tools register that documents make, model, standards compliance, maximum voltage rating, and any specific limitations or PPE requirements	2M
3. Asset Management, Inspection, Testing and Tagging	• Undetected deterioration of electrical insulation, plugs, leads and tool housings • Failure to identify damaged guards, sticky triggers, inoperative safety interlocks or faulty gas ignition on cable fixing tools	4A	• Implement a formal asset management system for all electrical and gas-powered tools, including unique ID, location, responsible person and inspection schedule • Establish and enforce a documented test and tag program for portable electrical tools and RCDs in line with AS/NZS 3760 and organisational procedures • Introduce a mandatory pre-use inspection checklist (paper or digital) for all electrical and cable preparation tools, focusing on cords, plugs, guards, triggers, insulation and gas canisters • Set up a quarantine and repair procedure that requires immediate tagging-out of defective tools, with controlled access to repair by competent persons only	2M

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	• Use of tools that have not been tested and tagged in accordance with AS/NZS 3760 or site procedures • Inadequate tracking of inspection intervals for high-use tools and portable RCDs • Lack of process for quarantine and repair of faulty cable strippers or gas-powered tools		• Conduct periodic internal audits of inspection records, test tags and repair logs to verify that the asset management system is being followed	
4. Competency, Licensing and Training Systems	• Workers using electrical tools and cable stripping equipment without appropriate electrical trade qualifications where required • Insufficient training on specific risks of gas-powered cable fixing tools, including misfires, burns and projectile hazards • Inadequate instruction on correct selection and use of cable strippers, leading to blade slips, lacerations and conductor damage • Lack of competency assessment for apprentices and labour-hire workers before independent use • Over-reliance on informal buddy systems with no verification of competency	4A	[redacted]	2M
5. Work Planning, Task Authorisation and Permits	• Unplanned or ad-hoc use of electrical tools in live or energised environments without risk assessment • Cable preparation conducted in congested switch rooms or ceiling spaces without coordination with other trades • Lack of formal permit to work when required for work near live electrical parts or in confined spaces • Poor scheduling of high-volume stripping work leading to time pressure and cutting of safety corners	3H	[redacted]	2M

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	• Inadequate identification of isolation requirements before using powered cable tools on existing installations			
6. Electrical Safety, Isolation and RCD Protection Systems	• Uncontrolled contact with live conductors during cable stripping or use of power tools • Failure of RCD protection or absence of RCDs on temporary power circuits • Bypassing of lock-out/tag-out systems leading to unintentional re-energisation • Use of damaged extension leads and power boards in wet or confined environments • Inadequate system for testing RCDs and detecting earth leakage faults	4A	[redacted]	2M
7. Gas-Powered Cable Fixing Tool Management	• Gas leaks or cartridge failures causing fire or explosion risk • Misfires or unintentional discharges sending fasteners or projectiles • Use of gas-powered tools in poorly ventilated or confined spaces increasing fume exposure • Incorrect gas canister storage or transport within vehicles or site compounds • Inadequate maintenance of ignition systems and safety interlocks	4A	[redacted]	2M
8. Ergonomics, Manual Handling and Repetitive Tasks	• Repetitive strain injuries from prolonged stripping of wires and cables • Shoulder, neck and back strain from overhead or awkward use of cable fixing and stripping tools	3H	[redacted]	2M

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	• Use of poorly designed cable strippers requiring excessive grip force • Inadequate planning for rotation of workers engaged in high-volume cable preparation • Lack of consideration for left-handed or smaller-stature workers in tool selection		[redacted]	
9. Workspace Layout, Housekeeping and Access/Egress	• Trip hazards from poorly managed extension leads, cables and tools across walkways • Restricted access and egress in ceiling spaces, risers and plant rooms where electrical tools are used • Poor lighting in switch rooms, roof spaces and basements affecting accurate cable stripping and tool handling • Inadequate storage solutions leading t tools being left on lad s, pl forms or walkways • Uncontrolled acc ulation offcuts, stripped ins and packaging materials increasing slip a d fire risk	3H	[redacted]	1L
10. Personal Protective Equipment (PPE) Management	• Inadequate eye protecti ring cable fixing and stripping resulting in foreign body injuries • Incorrect selection of gloves that reduce dexterity and increase risk of slips with knives or strippers • Inconsistent use of hearing protection near gas-powered tools or in echo-prone plant rooms • Lack of insulated glove policy where work is conducted in proximity to energised parts (where permitted)	3H	[redacted]	1L

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	• PPE programs that rely solely on worker behaviour without supporting systems or monitoring		[redacted]	
11. Contractor, Labour-Hire and Visitor Management	• Contractors bringing non-compliant electrical tools or untested equipment onto site • Labour-hire workers unfamiliar with site-specific procedures for cable preparation and electrical safety • Inconsistent supervision arrangements for subcontractors performing cable fixing and stripping tasks • Poor verification of contractor competency to use gas-powered cable fixing tools • Visitors entering work areas where electrical tools are in use without awareness of exclusion zones	3H	[redacted]	2M
12. Hazardous Substances, Fumes and Dust from Cable Work	• Inhalation of fumes from gas-powered cable fixing tools in confined or poorly ventilated areas • Exposure to dust, particulates or residues from drilling and chasing associated with cable • Accumulation of fine plastic insulation offcuts presenting inhalation and housekeeping issues • Inadequate assessment of interaction between fumes and other ignition sources in switch rooms or plant areas	3H	[redacted]	2M
13. Emergency Preparedness and Incident Management	• Delayed response to electric shock, burns, eye injuries or lacerations from cable strippers and cutting tools • Lack of clear procedures for misfire, jam or gas leak events with cable fixing tools • Inadequate first aid coverage for remote or after-hours electrical work	3H	[redacted]	1L

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	• Under-reporting of near misses and minor incidents involving electrical tools and cable preparation equipment		[redacted]	
14. Fatigue, Work Scheduling and Psychosocial Factors	• Fatigue from extended periods of repetitive cable stripping or overhead tool use increasing error and injury rates • Workload and schedule pressures leading to shortcuts with isolation, inspection or PPE • Psychosocial stressors (e.g. production targets, conflict between trades) contributing to reduced focus on electrical safety • Inadequate rest breaks during intensive installation phases or night works	3H	[redacted]	2M
15. Information, Documentation and Change Management	• Workers not acce[illegible] understanding manufacturer's instructions for new or specialised t[illegible]s • Outdated procedures a[illegible] instructions not reflecting current standards or equipment • Poor management of change when introducing new models of cable strippers or gas-powered tools • Inadequate record-keeping of training, inspections, incidents and corrective actions related to electrical tools	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