

**Arc Flash Hazard Avoidance Risk Assessment**

Business Name:		ABN:
Business Address:		
Contact Person:	Phone:	Email:

**THIS RISK ASSESSMENT IS APPROVED BY THE PCBU ON THIS 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:	

SAMPLE

RISK MATRIX									
LIKELIHOOD	INSIGNIFICANT	MINOR	MODERATE	MAJOR	CATASTROPHIC	SCORE	ACTION	HIERARCHY OF CONTROLS	
ALMOST CERTAIN	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4 ACUTE			<b>Elimination</b> Remove the hazard.	
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED	<b>Substitution</b> Replace the hazard.	
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE	3H HIGH	Review before work starts.	Isolation Isolate People from the hazard	
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	2M MODERATE	Ensure control measures in place.	<b>Engineering</b> Isolate the hazard	
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 HIGH	1L LOW	Monitor and keep records.	Administrative Change	
								PPE	

  

Risk Rating & Required Action:	
<b>4A</b>	Stop work. The risk is intolerable. Eliminate the hazard or redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or higher-level authorisation is required.
<b>3H</b>	Review and approve additional controls before task starts. Senior supervisor sign-off needed.
<b>2M</b>	Ensure all nominated controls are in place and effective. Proceed with caution; monitor conditions.
<b>1L</b>	Proceed, following standard operating procedures. Monitor and keep records.

  

Consequence Scale:			
Consequence	People (injury/illness)	Project / Assets	Compliance / Reputation
<b>Catastrophic</b>	Fatality or permanent total disability	project shutdown	Significant regulator intervention; criminal prosecution
<b>Major</b>	Serious injury/illness (hospital > 5 days)	critical delay	Improvement notice; major media coverage
<b>Moderate</b>	Medical-treatment injury; lost-time > 1 day	moderate delay	Minor breach; adverse client comment
<b>Minor</b>	First-aid only, no lost time	negligible delay	Isolated non-conformance
<b>Insignificant</b>	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. Preparation	Improper PPE usage, Untrained personnel	3H	<ul style="list-style-type: none"> <li>- Conduct a pre-job briefing including hazard identification</li> <li>- Ensure all personnel are trained for arc flash situations</li> <li>- Verify PPE compliance including arc-rated clothing</li> <li>- Secure area by restricting unauthorized access</li> <li>- Confirm all tools are arc flash rated</li> <li>- Verify calibration of testing equipment</li> <li>- Obtain necessary permits and approvals</li> <li>- Review MSDS for electrical equipment</li> <li>- Implement an incident response plan</li> <li>- Ensure communication devices are operational</li> </ul>	1L
2. Work Area Arrangement	Unauthorized personnel, Insufficient workspace	2H	<ul style="list-style-type: none"> <li>- Designate work zone with visible barriers and signage</li> <li>- Control access with entry checkpoints</li> <li>- Arrange tools and equipment to minimize trip hazards</li> <li>- Ensure adequate lighting throughout the work area</li> <li>- Remove all flammable materials from vicinity</li> <li>- Confirm clearance distances from other equipment</li> <li>- Provide safety briefings to all entering personnel</li> <li>- Implement a buddy system for monitoring</li> <li>- Post emergency contact numbers visibly</li> <li>- Regularly inspect the work area during the task</li> </ul>	1L
3. Electrical Isolation	Residual current, Inadequate lockout/tagout	3H	<ul style="list-style-type: none"> <li>- De-energize circuits using approved procedures</li> <li>- Verify isolation with multimeter testing</li> <li>- Apply lockout/tagout devices to all disconnects</li> <li>- Ensure tags contain clear information of work in progress</li> <li>- Engage supervisory sign-off for lockout/tagout</li> <li>- Confirm with all team members that isolation is complete</li> <li>- Utilize arc-rated gloves during operation</li> <li>- Document isolation steps completed</li> </ul>	1L

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			<ul style="list-style-type: none"> <li>- Communicate isolation status to involved parties</li> <li>- Conduct additional training if equipment is unfamiliar</li> </ul>	
4. Verification of Absence of Voltage	Faulty testing equipment, Failure to follow procedures	4A	[REDACTED]	2M
5. PPE Adornment	Incorrect PPE selection, Improper donning techniques	3H	[REDACTED]	1L
6. Equipment Setup	Equipment malfunction, Incorrect setup procedures	3H	[REDACTED]	1L

SAMPLE

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			[REDACTED]	
7. Energization	Unexpected energization, Arc flash from equipment faults	4A	[REDACTED]	2M
8. Live Work Conduct	Exposure to high-voltage, surface insulation	4A	[REDACTED]	2M
9. Shutdown Procedures	False shutdown indication, Equipment failure during operation	3H	[REDACTED]	2M

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			[REDACTED]	
10. Post-Operation Review	Poor documentation, Failure to identify issues	2M	[REDACTED]	1L
11. Maintenance	Residual energy, Part failure	3H	[REDACTED]	2M
12. Demobilisation	Conflict with in-use equipment, Inadequate site safety	2M	[REDACTED]	1L

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			[REDACTED]	
13. Reporting	Data inadequacies, Delayed feedback	2M	[REDACTED]	1L
14. Documentation	Inaccurate records, Loss of documents	3H	[REDACTED]	2M
15. Continuous Improvement	Stagnation in safety culture, Lack of innovative solutions	2M	[REDACTED]	1L

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			<div style="background-color: black; height: 15px; width: 100%;"></div> <div style="background-color: black; height: 15px; width: 95%;"></div> <div style="background-color: black; height: 15px; width: 85%;"></div> <div style="background-color: black; height: 15px; width: 75%;"></div> <div style="background-color: black; height: 15px; width: 65%;"></div>	

SAMPLE

**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>

**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>

**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/legislation>  
 Codes of Practice NSW: <https://www.safework.nsw.gov.au/resource-library/list-of-codes-of-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>

**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/workplaces-and-laws>  
 Codes of Practice NT: <https://worksafe.nt.gov.au/laws-and-compliance/codes-of-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>

**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>

**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

**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.

