

## Managing Electromagnetic Fields. 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: |                |

## RISK MATRIX

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

### 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         | EMF exposure, equipment malfunction | 3H           | <ul style="list-style-type: none"> <li>- Conduct a site survey to identify potential EMF sources.</li> <li>- Ensure equipment used is regularly maintained and tested.</li> <li>- Train staff on EMF awareness and safe work practices.</li> <li>- Display warning signs in high EMF areas.</li> <li>- Establish and communicate safe work procedures.</li> <li>- Provide personal protective equipment (PPE) if necessary.</li> <li>- Limit duration of exposure for workers.</li> <li>- Ensure proper grounding of electrical equipment.</li> <li>- Regularly review and update risk assessments.</li> <li>- Minimise time spent near sources of strong EMF.</li> </ul> | 2M            |
| 2. Equipment Setup     | electrical shock, EMF exposure      | 3H           | <ul style="list-style-type: none"> <li>- Use equipment that meets Australian standards.</li> <li>- Train workers in safe setup procedures.</li> <li>- Check cables and connectors for damage before use.</li> <li>- Use locking mechanisms on all switches and plugs.</li> <li>- Position equipment to minimise EMF exposure.</li> <li>- Implement use of EMF shielding where applicable.</li> <li>- Conduct pre-start inspection routines.</li> <li>- Isolate power supply when installing equipment.</li> <li>- Provide ongoing supervision during setup.</li> <li>- Ensure equipment is labelled with maximum EMF output.</li> </ul>                                   | 2M            |
| 3. Equipment Operation | EMF emission, overheating           | 3H           | <ul style="list-style-type: none"> <li>- Operate equipment according to manufacturer's guidelines.</li> <li>- Provide continuous monitoring of EMF levels.</li> <li>- Restrict access to areas with high EMF levels.</li> <li>- Use automated systems where possible to limit human exposure.</li> <li>- Implement regular maintenance checks on equipment.</li> <li>- Train operators on emergency shutdown procedures.</li> <li>- Regularly calibrate EMF detection devices.</li> <li>- Keep equipment clean and free of dust.</li> </ul>   | 2M            |

| 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 |
|                       |   |              | <ul style="list-style-type: none"> <li>- Use thermal monitoring systems to detect overheating.</li> <li>- Ensure adequate ventilation in equipment areas.</li> </ul>                                  |               |
| 4. Maintenance        | electrical burns, EMF exposure          | 3H           | <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> | 1L            |
| 5. Decommissioning    | released stored energy, EMF residual    | 2M           | <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> | 1L            |
| 6. Emergency Response | uncontrolled EMF, injury from equipment | 3H           | <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>   | 2M            |

| 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 |
|                     |   |              |  |               |
| 7. Monitoring       | inaccurate data collection, equipment failure | 2M           |  | 1L            |
| 8. Reporting        | data misinterpretation, incorrect records     | 2M           |  | 1L            |
| 9. Staff Training   | knowledge gaps, improper handling             | 3H           |  | 1L            |

| 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 |
|   |  |              |  |               |
| 10. Regular Audits                      | overlooked risks, non-compliance       | 2M           |  | 1L            |
| 11. Signage and Labelling               | lack of awareness, incorrect labelling | 2M           |  | 1L            |
| 12. Collaboration with External Experts | misinformation, lack of expertise      | 2M           |  | 1L            |

| 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 |
|                           |  |              |  |               |
| 13. Wearable Technology   | personal data privacy, equipment malfunction | 2M           |  | 1L            |
| 14. Communication Systems | information delay, system failure            | 2M           |  | 1L            |
| 15. Policy Development    | incomplete policies, failure to update       | 2M           |  | 1L            |

| 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 |
|                     |                        |              | <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></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 IF 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-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/workplace-safety-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>

### 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

### 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.