



# THE ELECTRICAL CONTRACTOR SAFETY PROGRAM GUIDE

December 2013

## Electrical Hazard Warning Sign



### Disclaimer

Whilst this guide endeavours to provide general information on work health and safety issues relating to electrical contractors it is important to note that it is a guide only and should not be relied upon as evidence of total compliance with your legal obligations or legal or professional advice. You must obtain your own legal and professional advice and satisfy yourself regarding your legal obligations and responsibilities regarding such issues.

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# CREATING SAFER WORKPLACES FOR ALL

## What is Austrade and why was this guide created?

The Australian Trade Commission – Austrade – contributes to Australia's economic prosperity by helping Australian businesses, education institutions, tourism operators, governments and citizens as they:

- develop international markets;
- win productive foreign direct investment;

- promote international education;
- strengthen Australia's tourism industry; and
- seek consular and passport services.

The Guide has been developed to provide a consistent approach for the procurement of electrical services. It is aimed to assist government, business, and the electrical industry in the provision of safe electrical services.

This guide aims to achieve safe workplace for all by:

## Consistency

- An understanding of 'best practice' electrical contracting
- Access to templates to assist in compliance with legislation and standards
- Establishing the safety systems of contracted electrical businesses

## Responsibility

- Ensuring compliance with due diligence requirements
- Understanding the requirements and responsibilities of the relevant parties
- Being able to protect the safety of all workers, particularly apprentices



# THE PRINCIPLES OF THE GUIDE

Electricity is an energy that provides great benefits but also presents great risk. Importantly, poorly or inappropriately wired circuits can cause injury or death, while electrical faults can damage property by fire. To prevent injury, death and fire there are strict rules for the installation and use of electrical equipment in Australia and overseas.

This guide will navigate you through the electrical procurement process to comply with electrical standards and assist you in reaching a safe conclusion to works. This can be achieved by following the principles, processes and tools outlined in this guide.

## Principles

### Principle 1: Legislative Requirements

All persons conducting a business or undertaking (PCBU) have a responsibility to provide a safe and healthy workplace for their workers and those that visit their workplaces. It is the responsibility of the client and the electrical contractor to identify all relevant legislation and to ensure they have the necessary systems to secure compliance. Within Australia health and safety law is largely harmonised with similar requirements in each workplace. The same can be said with the legislation and standards governing electrical work. Electrical work is considered high risk and therefore has more specific requirements in the form of regulations. Failure to comply with requirements can result in criminal and/or civil prosecution with penalties including imprisonment, fines, and other sanctions. To determine the legislation relevant to you visit the Safe Work Australia [website](#). This guide provides templates to assist you in meeting your legislative requirements.

### Principle 2: Risk Management

Procuring electrical services is an activity of managing risk. The cost of work, completion timeframes, the effect on existing workers and those introduced to perform work, and legislative compliance are just some of the risks to be managed. Communication and consultation with stakeholders maximises the opportunities to identify and manage risk. The templates in this guide will assist you to assess, evaluate, monitor and manage risk.

### Principle 3: Safe Systems of Work

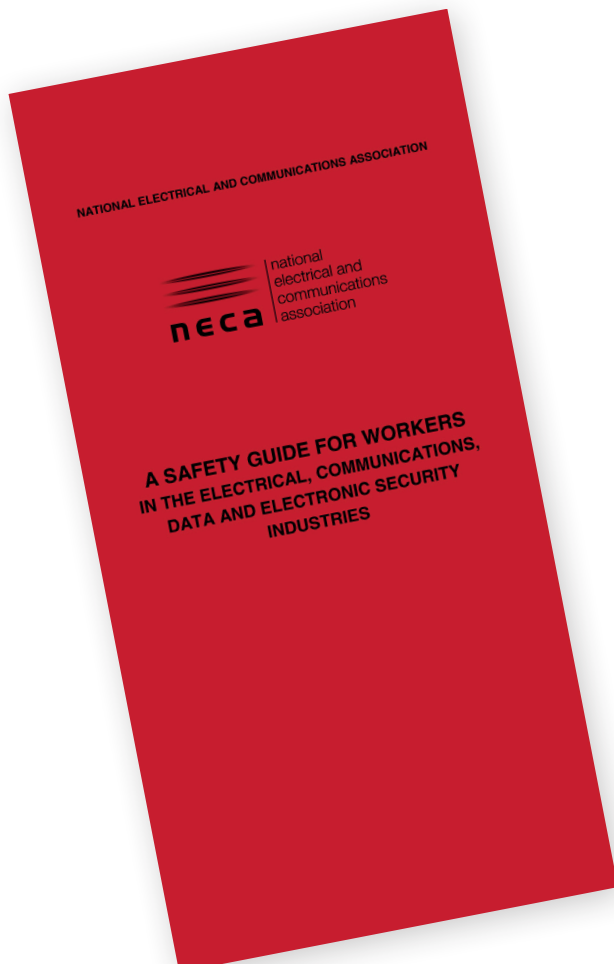
Worker safety and compliance with legislation is best achieved when an organisation has adopted a work health and safety management system (WHSMS). A WHSMS examines and explains safe work activities for all elements of an organisation and its activities. At the core of every system is a policy or statement from the senior officer stating their commitment to healthy and safe work. To reflect this commitment this guide contains a Work Health and Safety Policy for Electrical Work at Appendix 1.



# RESOURCE MATERIAL

## Procurement and electrical safety

In 2006 the Australian Safety and Compensation Council published Guidance on Occupational Health and Safety in Government Procurement, which remains available at [www.safeworkaustralia.gov.au](http://www.safeworkaustralia.gov.au). The guidelines formed part of the National Occupational Health and Safety Strategy 2002-2012 and were based on the Occupational Health and Safety Act 1991 (Cwlth). In 2011, the Work Health and Safety (WHS) Act (Cwlth) was introduced, updating the previous legislation. Importantly, many of the principles of the 2006 guidelines remain current for WHS procurement. Commencing on page 11 of this guide is a 'Best Practice' Model for safety in Electrical Procurement. This model was developed incorporating the framework of the 2006 guidelines.



## The Red Book

The National Electrical and Communications Association (NECA) is the peak industry body representing the interests of the electrical and communications contracting industry in Australia. NECA provides its members with a suite of tools and member services to safely conduct their work. One of the available tools is known as 'The Red Book', which is a pocket safety guide for workers in the electrical contracting, communication and data industries. On occasion this guide will reference The Red Book to assist electricians in their safe provision of services to you. The Red Book can be obtained by contacting your local NECA office

[www.neca.asn.au](http://www.neca.asn.au).

# ‘BEST PRACTICE’ MODEL FOR SAFETY IN ELECTRICAL PROCUREMENT

The model will guide you through the stages of procurement where aspects of health and safety must be considered, including the roles and responsibilities of the client, contractor and worker. Throughout this process you should consider the principles of: 1 Legislative Requirements, 2. Risk Management, and 3. Safe Systems of Work.

## Applying the model

### Step 1: Planning

Planning is a strategic activity that can improve the effectiveness and efficiency of the procurement process. Effort expended in the planning stage will ensure the best possible outcomes and should be consistent with the nature of the procurement (e.g. size, value, complexity and level of risk). Planning should be conducted in consultation with all key stakeholders. You should consider the following steps in your planning process:

1. Define the work
2. Identify the risks
3. Know the legislation
4. Establish the safety framework

### Step 2: Develop tendering documentation

Government agencies have specific requirements to meet when conducting a procurement process. The documentation is generally determined by the cost, complexity and risk profile of the procurement. This guide contains WHS templates to assess the legislative compliance of the tender. You should consider the following steps when developing tendering documentation:

1. Select the procurement method
2. Detail your requirements
3. Develop safety requirements

### Step 3: Tender release

Government agencies have specific requirements that must be met when conducting a tender process. When issuing tender documents to prospective tenderers you should supply the relevant WHS checklists to identify the safety requirements that must be met. You should also consider the following when you provide your tender

to the market:

1. Invite tenders
2. Provide safety requirements

### Step 4: Evaluate the tenders

Your tendering process will have a number of requirements. Predominately these will be about value for money and provision of a quality and fit for purpose service or product. Consideration should also be given to the level of risk involved in the tendered solution, and the tenderers capacity and capability to comply with all health and safety requirements. Notably, electrical work is considered within the electrical industry as high-risk work. An implemented WHSMS is considered best practice for electrical contractors. A WHSMS assists both the client and contractor in meeting their legislative due diligence requirements. The following steps will assist you to assess the contractor's safety requirements:

1. Assess safety systems
2. Confirm suitability of documents

### Step 5: Contract negotiation and award

You can use the evaluation plan you developed in Step 2 to assess the tenders you have received. It is important to examine the history of the tenderer to conduct a full assessment of their past safety performance. Your client project safety management plan (SMP) will inform the successful tender of your requirements and any hazards or risks that have been identified. The successful contractor is required to address these issues in their project site SMP prior to commencing works. The following steps will assist you with contractor selection:

1. Select electrical contractor
2. Prepare final project information



3. Provide reporting requirements

#### Step 6: Contract management

Management of the contract will involve monitoring and supervising the works to ensure they are being undertaken in accordance with legislation, electrical standards and the contract. Pre-work induction briefings need to be conducted on starting and every time a new worker is introduced to the site. A list of designated inspections should be implemented following each stage of works. Safe work plans and risk assessments should be reviewed during works and updated as required. In addition to the usual requirements for effective contract management, the following steps will assist you to assess, monitor and manage the contractor's legislative and safety requirements in relation to health and safety:

1. Management plans and induction briefing
2. Observe safety systems
3. Monitor and review

#### Step 7: Contract completion

On completion of the contract identify any outstanding work health and safety issues. This includes any remaining work required by the contractor to address identified non-conformance and the process for resolution. You must receive

a certificate of compliance for electrical work from the contractor. You should also receive information regarding the results of other completed electrical tests. You should also consider the removal of waste and the safe return of the worksite to you. The following steps will assist you:

1. Review reports
2. Conduct handover

#### Step 8: Post contract evaluation

On completion of the works you should conduct a whole of project evaluation critically examining the electrical contractor's ability to comply with their contract requirements. You should review the competency of the work and the contractors' safety performance including the adequacy of their WHSMS, safety plans, and incident reports. This information should inform any future contracts with the contractor and can be provided to others who enquire into the safety record of the contractor. The evaluation will identify any strengths and weaknesses within your own processes to inform any future procurement:

1. Evaluate performance



## Responsibilities for the ‘best practice’ model

| Step                       | Task                                    | Responsibilities / Involvement |                       |             |
|----------------------------|-----------------------------------------|--------------------------------|-----------------------|-------------|
|                            |                                         | client                         | electrical contractor | electrician |
| 1. Planning                | Define the work                         | X                              |                       |             |
|                            | Identify the risks                      | X                              |                       |             |
|                            | Know the legislation                    | X                              |                       |             |
|                            | Establish the safety framework          | X                              |                       |             |
| 2. Tendering documentation | Select the procurement method           | X                              |                       |             |
|                            | Detail your requirements                | X                              |                       |             |
|                            | Develop safety requirements             | X                              |                       |             |
|                            | Invite tenders                          | X                              | X                     |             |
| 3. Tender release          | Provide safety requirements             | X                              | X                     |             |
|                            | Assess safety systems                   | X                              | X                     |             |
| 4. Evaluate tenders        | Confirm suitability of documents        | X                              | X                     |             |
|                            | Select an electrical contractor         | X                              | X                     |             |
| 5. Contract award          | Prepare final project information       | X                              | X                     |             |
|                            | Provide reporting requirements          | X                              | X                     |             |
|                            | Management plans and induction briefing | X                              | X                     | X           |
| 6. Contract management     | Observe safety systems                  | X                              | X                     | X           |
|                            | Monitor and review                      | X                              | X                     | X           |
|                            | Review reports                          | X                              | X                     | X           |
| 7. Contract completion     | Conduct handover                        | X                              | X                     | X           |
|                            | Evaluate performance                    | X                              | X                     | X           |
| 8. Contract evaluation     |                                         |                                |                       |             |

# ELECTRICAL WORK – MINIMUM STANDARDS OF SAFETY SYSTEMS

There are a number of safety processes that should be followed for all electrical work. To assist you in understanding the level of safety documentation required this Guide separates electrical work into commonly procured services. The table on the following page references the Appendices within this Guide and when they should be used. It is important to note these are minimum standards for low voltage electrical works and further documentation may be required to manage identified risks. Electrical works are deemed low voltage when the nominal voltage is greater than 50 volts AC and up to 1000 volts AC.

## Definition of the Electrical Service

### **Service Work**

Service work includes the repair and maintenance of an existing installation. The task may include replacing individual residual current devices (RCDs), circuit breakers, socket outlets, light fittings and other appliances, and typically less than a day's work for any tasks.

### **Small Project**

A small project may include installing RCDs without the necessity to replace the switchboard or conduct extensive rewiring. Installing a new sub-circuit or replacing a bank of light fittings/ fixtures is typically a small project. Typically less than three days work.

### **Term Contract for Service Work**

Service work is where a term contract for those services exists. A higher standard of safety systems would be expected for these contractors.

### **Medium to Large Project**

Medium to large project work may include replacing a switchboard, wiring or rewiring an office or residential premises. This work may include tracing and rewiring mixed neutrals. The project may require extensive shutdowns of power. Any work that might involve exposure (working near or on) to exposed energised conductors on switchboards rated at 400 Amps or greater, or where the short circuit fault current can reasonably be expected to be greater than 15,000 Amps (as determined by a competent person) would require the safety systems as listed for a medium to large project on the following reference table.

## Reference table: minimum standards of safety systems

Control of Low Voltage Electrical Work for electrical installations

| Appendix | Safety System Components                               | Service Work | Small Project/ Contract for Service Work | Medium to Large project |
|----------|--------------------------------------------------------|--------------|------------------------------------------|-------------------------|
| 1        | WHS Policy                                             | X            | X                                        | X                       |
| 2        | Safety Management Plan (SMP)                           | X            | X                                        | X                       |
| 3        | Contractor WHSMS Checklist                             |              | P                                        | X                       |
| 4        | Training and Competency Register                       | X            | X                                        | X                       |
| 5        | Induction Briefing                                     | X            | X                                        | X                       |
| 6        | Site Safety Rules                                      | X            | X                                        | X                       |
| 7        | Emergency Plan                                         | X            | X                                        | X                       |
| 8        | Checklist for Contractor Reporting / Records           | P            | P                                        | X                       |
| 9        | Checklist for Contractor's SMP                         | P            | X                                        | X                       |
| 10       | Electrical Installation Testing Record Sheet           | X            | X                                        | X                       |
| 11       | Electrical Inspection and Test Plan                    |              |                                          | X                       |
| 12       | Contract Evaluation Report                             | P            | X                                        | X                       |
| 13       | Sample Electrical Certificate of Safety                | X            | X                                        | X                       |
| 14       | Electrical Wiring Schedule                             | X            | X                                        | X                       |
| 15       | Checklist for Monitoring Workplace Hazards             | X            | X                                        | X                       |
| 16       | Template for Hazard Identification and Risk Assessment |              | P                                        | X                       |
| 17       | SWMS – Electrical Testing                              | X            | X                                        | X                       |
| 18       | High Risk Construction Work SWMS                       | X            | X                                        | X                       |
| 19       | Electrical SWMS                                        | X            | X                                        | X                       |
| 20       | Safe Work Procedure                                    | X            | X                                        | X                       |
| 21       | Job Safety Assessment                                  | X            | X                                        | X                       |
| 22       | Incident and Injury Report                             | X            | X                                        | X                       |
| 23       | Electrical Drawing                                     |              |                                          |                         |
| 24       | Key Environmental Considerations                       | X            | X                                        | X                       |
| 25       | Key WHS Duties and Obligations                         | X            | X                                        | X                       |
| 26       | Electrical Regulators in Australia                     |              |                                          |                         |
| 27       | Safety Regulators in Australia                         |              |                                          |                         |

**Key:**    **X** is required    **P** is partial requirement    Blank is not essential

# APPLYING RESPONSIBILITIES TO THE PROCUREMENT MODEL

What do I need to do?

## STEP 1: PLANNING

Define the work

### Job specification

Broadly define the work you want undertaken. The volume of work and the required timeframes for completion may impact the tender. In large construction works the electrical element may interface with other elements of construction. This process will be detailed in the Step 2 – Develop tender documentation.



### Checkpoint

Broadly define the work to be completed including time frames.

Identify the risks

Risk management is one of the key principles of this guide. Managing risk within the WHS Regulations for electrical work is an essential process. You are responsible for ensuring the electrical contractor complies with all of their obligations. Later in this guide you will be provided with templates to assess the contractor's safety systems and their response to risk. In addition to electrical risks there may be other site risks that impact workers e.g. hazardous manual tasks, falls, hazardous chemicals and the environment. Refer to 'Risk Management' in the Education Resource.

Communicate and consult

Electrical works should be communicated to affected workers in advance. Work health and safety legislation requires you to communicate and consult with these workers. The consultation process can be used to identify hazards and risks. This will enable you to plan early to resolve or mitigate those hazards or include the risks in your procurement documentation.



### Checkpoint

Communicate with workers and consult with them on the work to be undertaken.



# Know the legislation

## WHS and electrical legislation

Australia introduced model Work Health and Safety legislation, developed in participation with Commonwealth, State and Territory safety regulators. At this time, with the exception of Western Australia and Victoria, the harmonised legislation has been introduced (with some omissions) into Australian jurisdictions, including the Commonwealth. This guide adopts a 'best practice' model. Each jurisdiction has its own WHS and electrical safety legislation. While safety standards are similar across jurisdictions it is your responsibility to ensure you comply with your local legislation. Refer to 'WHS Legislation' in the Education Resource. Visit the Safe Work Australia website or contact your jurisdiction's WHS and/or electrical regulator to determine the legislation relevant to you (provided at Appendices 26 & 27).



### Checkpoint

Obtain a copy of your local WHS legislation.

## Australian Standards - Electrical

The Australian and New Zealand Standard AS/NZS 3000:2007 Electrical Installations applies in Australia and New Zealand and is also known as the Australian and New Zealand Wiring Rules. AS/NZS3000:2007 is used in some countries in the Asia/Pacific region and there are comparable standards internationally. Within Australia you should ensure electrical works meet or exceed the requirements of AS/NZS3000:2007. Tests should be undertaken in accordance with the requirements of AS/NZS3000:2007 (or as detailed in AS/NZS 3017:2007 Electrical Installations – Verification Guidelines). Refer to 'Wiring Standards' in the Education Resource for these and other relevant Standards.



### Checkpoint

Obtain a copy of the relevant electrical standard.

## Know the licencing and registration requirements for electricians

Australia is moving to a national licencing and registration system for electricians; however it is not currently in place. Licencing and registration is State and Territory based and administered by individual departments. Ensuring electricians hold the appropriate authority to work is an important element of your due diligence requirements under health and safety legislation.



### Checkpoint

Know the local licencing and registration requirements for electricians.

## Seek technical input where requirements are complex

Electrical procurements can often be complicated. If you have technical issues you may wish to consult an electrical expert and/or the State or Territory electricity regulator in your jurisdiction. You can access an expert by contacting your local NECA office.

## Establish the safety framework

### Safety systems

Electrical contractors should have a safety management system in place. These systems are commonly referred to as work health and safety management systems (WHSMS). Safety management systems typically address areas of an Australian or international standards such as AS/NZS 4801:2001, SafetyMap or ISO18001. Tendering electrical contractors may have a verified WHSMS and you will need to determine if it sufficiently meets your needs and your local legislative requirements. Refer to 'Safety Systems' in the Education Resource.



#### Checkpoint

Select a safety system appropriate to your location.

## STEP 2: DEVELOP TENDERING DOCUMENTATION

### Select the procurement method

Government agencies have specific internal requirements to meet when conducting a procurement process. Often the documentation required is determined by the cost and timeframe for delivery of the procured service and the level of risk involved. Government agencies should consult their relevant local procurement guidelines. Procurement templates can be obtained through AusTender. Depending on the size of your agency or business you may be able to seek assistance from your tendering or property team. Non-government businesses can obtain tendering documents through open source material on the Internet.



#### Checkpoint

Select the correct procurement process for your project.

### Detail your requirements

The more descriptive you are with your requirements the easier it is for tenderers to quote for the work. Being specific will assist you to audit the work later to ensure it meets the contract. Emphasising safety requirements establishes the safety standard and safety culture throughout the project. State the legislation and wiring standards you require the contractor to meet.

#### Design

Safety in design is an important element of all recently produced health and safety legislation. This recognises the importance of safety in the planning stages and design of all products to ensure they do not impact the workplace where the product is installed or used.

Poor design in electrical systems affects reliability and safety of those installations. Many of these matters are addressed by the application of product and wiring standards for electrical equipment and installations. Refer to 'Wiring Standards' in the Education Resource.



#### Checkpoint

Ensure the tender documents identify 'design' as a key requirement for the contractor to address.

# Develop safety requirements

## Educate on safety expectations

The electrical contractor will have legislative requirements to meet but these are the minimum standard. As the client you set the health and safety standard for your project and can impose higher standards. This guide aims to achieve best practice in electrical work. The guide contains documents for you to establish safety requirements and checklists to assess a contractor's compliance. Your project SMP (Appendix 2) and checklist for the contractor's WHSMS (Appendix 3) will assist the contractor to understand their requirements.



### Checkpoint

Set the safety standard.

## Contractor assessment - Safety performance

Prepare the evaluation tool that will enable you to assess the health and safety management system of each tender. Appendix 3 provides an example evaluation tool to assess a WHSMS. The checklist includes an assessment of the contractor's previous work and their ability to adhere to their WHSMS, SMP and SWMS. The Training and Competency Register at Appendix 4 records information on the skills and qualifications of the contractor's workers. This will allow you to assess the skills of workers to competently complete tasks. This information will also assist to arrange security clearances if it is a requirement to access the work site.



### Checkpoint

Ensure you have a template to evaluate the tenders.

## Other considerations

### Residual current devices

Perhaps the most important initiative in electrical safety has been the progressive tightening of requirements for RCDs or safety switches as they are often called. They are now required for all new wiring installations to socket outlets and lighting. You should consider a program to retrospectively fit RCD's to your existing wiring. Refer to 'Safety Devices' in the Education Resource.

### Hazardous chemicals

The need to use hazardous chemicals should be eliminated where possible. If hazardous chemicals are required (e.g. gluing electrical conduit) the quantities should be minimised to those required for immediate use. This will reduce the quantities of hazardous chemicals requiring storage. Refer to 'Hazardous Chemicals' in the Education Resource.

### Environmental impact

The contractor is expected to deliver services in an environmentally responsible manner. The contractor should plan and manage their activities in accordance with best practice environmental management principles. Refer to 'Environmental Considerations' in the Education Resource.

Tenders from other agencies conduct research to locate other organisations that have tendered for electrical work. Request access to their templates and lessons learned.

## STEP 3: TENDER RELEASE

### Invite tenders

Government agencies have specific requirements to meet in a tendering process. The Australian Government Procurement Policy Framework establishes the principles for the government's acquisition of property and services. This can include publishing tender documents on AusTender. Request for tenders are often advertised in newspapers. State and Territory governments have other requirements and you should check with them regarding your obligations. You can access more information on tenders at the Department of Finance website.



#### Checkpoint

Comply with jurisdictional requirements when releasing tender documents to the market.

### Provide safety requirements

When issuing tender documents provide the relevant safety requirements and checklists. The guide provides you with a number of documents the tenderer should complete to demonstrate they can comply with your safety standards. The Table of Appendices within this guide will assist you to identify which documents should be used at each stage of the procurement process.



#### Checkpoint

Provide all safety requirements with your tender package.

## Other considerations

### How to contact electrical contractors

Consider the use of NECA and other industry bodies to circulate your tender and engage a wider audience.

## STEP 4: EVALUATE THE TENDERS

### Confirm suitability of documents

Tendering documents are evaluated on a number of grounds. Value for money and quality of work are important factors. An assessment on the contractor's ability to address your requirements is essential. Record your decision making and make note of any matters you may raise with the contractor if a pre-award briefing is required. Poor workplace safety practices and incidents have an impact on all workers. They can result in work disruption, injuries, as well as management and regulatory investigations and action. The cost of any rehabilitation and legal action may continue long after your project has finished. Be diligent in your evaluation duties.



#### Checkpoint

Record your decision making.

## Assess safety systems

Professional electrical contractors may submit an audited and certified WHSMS. Regardless of the WHSMS you receive, you must review the system to ensure it meets your requirements. A contractor's safety system and prior performance provide an insight into the manner in which work will be undertaken and the impact it may have on the workplace. Use the checklist at Appendix 3 to evaluate each WHSMS. Obtain information of previously completed projects and make enquiries regarding their level of competency.

Ensure the documents provided meet the contractor's WHSMS. The documents should be clear and easy to understand. During the construction phase of the project you will be relying on those documents to check the contractor's systems of work. A number of template documents have been provided in the appendices to help you recognise the forms you should receive. Appendix 8 provides a list of documents you may be given by the contractor as part of their WHSMS. To obtain a further understanding of the documents and their use refer to 'Safety Systems' and 'Testing and Verification' in the Education Resource.



### Checkpoint

Assess safety systems against your requirements.

## STEP 5: CONTRACT NEGOTIATION AND AWARD

### Select electrical contractor

You can use the evaluation checklist developed in Step 2 to assess the received tenders. It is important to examine the history of the tenderer to conduct a full assessment of their safety performance. Compare the tenders and select the most appropriate contractor. Ensure your process for selection is fair and transparent.



### Checkpoint

Select the most appropriate contractor.

### Prepare final project information

You have a responsibility to induct all workers to your workplace (Appendix 5). Your project SMP (Appendix 2) will inform the successful contractor of your requirements. Information typically provided includes site safety rules (Appendix 6), emergency procedures and assembly points in an emergency plan (Appendix 7), and any hazards or risks to be aware of. The contractor is required to address these matters in their site SMP prior to commencing works. The information you provide may be incorporated into the contractor's plan or otherwise appended to it. You will need to assess the contractor's SMP when provided (Appendix 9).



### Checkpoint

Prepare your project safety management plan.



## Provide reporting requirements

The tendering documentation established your expectations and attitude towards workplace safety. As part of this process you developed a reporting timeframe for the contractor within the SMP. This may have included daily inspections of work and thorough examinations as project milestones are achieved. Provide the reporting templates and timeframes to the contractor. A copy of the reports you should provide are at Appendices 10 to 13. Receipt of these reports enables you to monitor and manage the conduct of the contractor to comply with legislative obligations and to achieve best practice outcomes.



### Checkpoint

Provide the contractor with reporting templates.

## STEP 6: CONTRACT MANAGEMENT

### Management plans and induction

#### Management plans

Management plans establish the foundation for how work is going to be managed through your project. Management plans are required to be developed by you and the contractor. Each plan informs the other party of key stakeholder information to ensure the smooth running of the project.

#### Client safety management plan (SMP)

You have a responsibility to induct all workers to your workplace as well as advise them of any hazards or risks. Your site management plan will inform the successful tenderer of your requirements and any hazards or risks. The contractor is required to address these issues in their site SMP prior to commencing works.

The outline of a SMP is provided at Appendix 2. You will provide site-specific information that may be incorporated into the body of the contractor's plan or otherwise appended to the contractor's plan. An example of the information contained within a plan is at Appendix 2. This information can take the form of broad or universal requirements (site safety rules Appendix 6) or may be specific to the location of the office or facility (emergency plan Appendix 7).

#### Contractor SMP

The model WHS Regulations 2011 (Chapter 6) addresses the requirements for construction work. It is mandatory for the principal contractor to prepare and maintain a Work Health and Safety Site Management Plan for projects with a value of \$AUD250,000.00 or more.

While many projects will be less than this amount, a SMP is considered best practice for any protracted electrical construction project. The SMP establishes requirements and can be used as an effective tool for communication and agreement on appropriate measures. The contractor's SMP serves as a useful audit tool. It will allow you to assess if all relevant aspects have been considered and addressed.



### Checkpoint

Provide and receive a safety management plan.

## Project management

Appoint a project manager or site supervisor from your organisation. This person will be the conduit between your workers and the electrical contractor and their workers. The work may require the electrical contractor to turn the power off. This may be to a section of a room, a floor, or at times the complete building. Where the task will take some time it will be necessary for the electrical contractor to co-ordinate with your Project Manager to minimise disruption to workers. It may be necessary to consider temporary relocation of your workers. Alternatively the electrical contractor may be required to work outside your normal business hours.



### Checkpoint

Appoint a project manager.

## Induct all workers to the site

All workers are required to be inducted to the workplace. The contractor, prior to work starting, should conduct inductions and briefings. Pay particular attention to the induction of apprentices as they are at higher risk of workplace accidents resulting in significant injuries.<sup>1</sup> The workers on your site may include qualified electricians, trade apprentices and trade assistants. Each will bring a different level of experience and knowledge of risks. For more information on each of these workers refer to 'Qualifications and Supervision' in the Education Resource.



### Checkpoint

Induct all workers to the site.

## Observe safety systems

### Due diligence and risk management

Management of the contract will involve monitoring and supervising the works to ensure they are being undertaken in accordance with legislation, standards and the contract. A list of designated inspections should be implemented following each stage of completion. Safe work plans and risk assessments should be reviewed during works and updated as required. Conduct sufficient enquiries to be satisfied the contractors are identifying hazards (Appendix 15), assessing risks (Appendix 16), and following their safe work method statements (SWMS). Examples of SWMS are at Appendices 17 - 19. Safe work procedures (Appendix 20), risk assessment and job safety assessment (Appendix 21) can be used as tools to identify hazards and document risk control measures.



### Checkpoint

Monitor the contractor's safety systems.

<sup>1</sup>T. Driscoll & M. Hanson (1997) Work-related injuries in trade apprentices, *Australian & NZ Journal of Public Health*

## De-energised - No Live work

The term 'no live work' is common in the electrical industry. This means the absence of electrical current when work is being conducted on the circuit. In this state the system is referred to as de-energised. Put simply, the power should be switched off (isolated) whilst works are occurring.

## Energised - Live work

Live work means energised work. The model WHS Regulations (Part 4.7) has provisions for undertaking energised electrical work. While there is a general prohibition on energised electrical work, the definition of electrical work includes testing. Energised electrical testing is required to be undertaken as routine when confirming isolation as well as during commissioning and fault-finding. An exception to the prohibition (Regulation 154) is provided in Regulation 157, and is subject to a set of strict criteria. Refer to 'Energised - Live Work' in the Education Resource and Appendix 17.

# Monitoring and reporting

## Monitor work and conduct reviews

The client Project Manager or site supervisor will be responsible for ensuring the works are proceeding as planned. The electrical contractor was provided with a number of review documents and monitoring exercises as part of their contract in Step 5. Ensure these are undertaken as stipulated. These checklists and reports are an early warning system for possible errors. They also assist to satisfy your due diligence under work health and safety legislation. The checklists and reports you should complete are at Appendices 12 & 15.

## Inspection and test plans

Inspection and test plans (ITPs) are most commonly used during the construction phase of installations to set out planned inspections and tests at various checkpoints. ITPs assure quality and technical compliance. A typical ITP is provided at Appendix 11.

## Test report sheets

A number of tests are required as works progress. These tests should be undertaken in accordance with the requirements of AS3000:2007 (or as detailed in AS/NZS 3017:2007 Electrical Installations – Verification Guidelines) at the time of installation, prior to energisation (where appropriate) and handover. A test report sheet should contain the results of testing for residual current devices (RCDs). It is expected that RCDs be tested for operating time. A typical test report sheet is provided at Appendix 10.

## Safety performance

Safety performance can be evaluated using the 'Contract Evaluation Report' at Appendix 12. Safety systems can be evaluated against the safe work procedures at Appendix 20. Any safety concerns should be raised immediately with the contractor.

## Incidents

You are required to report notifiable incidents occurring at your workplace to your State or Territory WHS regulator or electricity regulator as appropriate. This includes fatalities, serious injuries, and dangerous incidents to your workers, contractors and visitors. The contractor also has a responsibility to report to their regulator if the incident involves their workers. Refer to your organisation's reporting and investigation processes regarding incidents. The contractor should provide you an incident report. A template incident report is provided at Appendix 22.



### Checkpoint

Report any notifiable incidents.

## Regulatory or independent inspections

An inspector from the relevant Commonwealth, State or Territory WHS regulator or electricity regulator may attend and conduct an inspection of the work. Attendance may occur at any time, regardless of whether an incident has occurred. The regulator's role is to ensure the work has been undertaken safely and to the legislated standard. At all times you should co-operate with the regulator or independent inspectors.



### Checkpoint

Prepare your project safety management plan.

## STEP 7: CONTRACT COMPLETION

### Review electrical reports

On termination or transition of the contract define any outstanding issues. This could include the commissioning of equipment, actions required for non-conformance and a process for undertaking corrective actions.

#### Verification and test reports

The electrical wiring is expected to meet set criteria depending on the function and application. The contractor is required to undertake certain inspections and tests of the wiring installation to confirm that appropriate standards are met. This is to verify that the installations comply with the requirements of AS/NZS 3000:2007, where applicable. The contractor should record the results. This information should be obtained and retained for future reference. Examples of the reports are at Appendices 10 - 14.

#### Wiring schedules (running list)

A wiring schedule or running list is a document describing electrical protective components such as fuses, circuit breakers and residual current devices (safety switches) in a switchboard. These items protect the individual sub-circuit wiring and associated equipment.

Wiring schedules are generally produced for each switchboard (or distribution board). A copy of the schedule is typically held within the door of each switchboard on each floor level. A wiring schedule template is provided at Appendix 14. You should obtain all wiring schedules from the electrical contractor. Refer to 'Wiring Schedules' in the Education Resource.

#### Wiring drawings/diagrams

A wiring drawing or diagram is typically shown as a single line with electrical equipment such as a switch or light shown as symbols. A simple example of a wiring diagram for a light with a light switch is provided at Appendix 23. You should obtain all wiring drawings from the electrical contractor. Refer to 'Wiring Drawings' in the Education Resource.

#### Certificate of electrical compliance

At the completion of electrical work an electrician is required to provide you a 'Certificate of Electrical Compliance'. This certificate is your guarantee the work complies with the relevant legislation and Australian Standards. An example of a certificate of electrical compliance is provided at Appendix 13.



### Checkpoint

Obtain all testing report and compliance certificates.

## Plan for an orderly handover

Be thorough, this is your last chance to ensure the contract has been fulfilled.

### **Functional assessment**

The electrical contractor will be required to perform a functional assessment of the installation. You should also connect equipment that will be reliant on the circuit to ensure there is sufficient power load for it to operate. This may include a test of lighting, information technology points, and socket outlets - commonly known as power points.

### **Handling outstanding issues**

Document any outstanding issues and liaise with the contractor's project manager to agree a resolution. This issue is one you should consider in the initial drafting of your work requirements and tender documents. The more descriptive you are in work design the easier it is to identify incomplete work.

### **Waste removal – hazardous chemicals**

Ensure the contractor removes all hazardous chemicals from storage and they are disposed of as agreed in the contract. The site should be returned in clean and orderly state. Refer to Appendix 24 for environmental considerations.

### **Work sign-off**

When you are satisfied the work has been completed to the standards stipulated in the contract you will be required to authorise it as complete. This is often referred to as 'signing off' the work as it often involves a signature to certify completion.

### **Payment processes**

On large projects the electrical contractor may request part payment as works progress. Where payment is requested for electrical work that has been completed and handed over to you, ensure you receive a 'certificate of electrical compliance' for the completed work.

## STEP 8: CONTRACT EVALUATION

### Review safety performance

On completion of the works you should conduct a whole of project evaluation. You should review the contractor's safety performance including the adequacy of their WHSMS, safety plans, and incident reports. This information should inform any future contracts with the contractor and can be provided to others who enquire into the contractor's safety record. The evaluation will identify any strengths and weaknesses within your own processes to inform any future procurement.

# EDUCATION RESOURCE

The order of material in this resource aligns with this Guide's principles: Legislative Requirements, Risk Management and Safe Systems of Work.

## WHS Legislation

Australia has introduced model Work Health and Safety legislation, which was developed in participation with Commonwealth, State and Territory jurisdictions. With the exception of Western Australia and Victoria, the harmonised legislation has been introduced into Australian jurisdictions, including the Commonwealth.

Some Commonwealth Government agencies and self-insured businesses have offices and workers overseas. These agencies and business are expected to adopt, where reasonably practicable, Australian requirements, including Acts, Regulations, Codes of Practice and Australian Standards. It is the responsibility of each individual business to ensure their work health and safety systems and work practices comply with the applicable legislation, however clients commissioning work activities also have these obligations.

Copies of the model WHS Act, Regulations and Codes of Practice are accessible from the Safe Work Australia website at [www.safeworkaustralia.gov.au](http://www.safeworkaustralia.gov.au). To determine if a model Code of Practice has been approved as a Code of Practice in a particular jurisdiction, check with the relevant regulator.

Model WHS Codes of Practice relevant to the work practices of electrical contractors include:

- Managing electrical risks in the workplace
- Working in the vicinity of overhead and underground electric lines
- How to manage work health and safety risks
- Managing the risk of falls at workplaces
- Hazardous manual tasks
- Construction work
- Excavations work

## Energised - Live Work

Live work means energised work. There is a general rule of 'No live work' however there are occasions where it is permitted. One of the criteria is model WHS Regulation 158(1)(d) which requires the electrical contractor to consult with "the person with management or control of the workplace." In this circumstance it will be your project manager. The requirement for energised testing typically occurs from the start of work and ongoing as necessary

through to completion. This means that in practice that consultation will be a formality based on the above requirements. Any ongoing consultation is more about timing of work and notification of those that might be affected.

If energised electrical work other than testing is contemplated that should be a matter of serious examination for both the electrical contractor and the project manager. Typical cases of energised work that might be justified are when lives might be endangered, such as in hospitals or in relation to airport navigation systems. In these cases strict controls are put in place to assure worker safety. Working on energised exposed conductors so you don't interrupt work is not acceptable. Such requirements cannot be justified and should be resolved by planning works outside of normal business hours.

## Safety Observer

The model WHS regulations 2011 (regulation 161(1)(c)) require energised electrical work to be carried out in the presence of a safety observer who has the prerequisite competence and qualifications. There is an exception where the energised electrical work consists only of testing and the electrical contractor has conducted a risk assessment under regulation 158(1)(a) that demonstrates there is no serious risk associated with the proposed work.

Generally, energised testing is undertaken without serious risk where appropriate precautions are observed. These precautions are detailed in Appendix 17 and provide controlled conditions. There will be circumstances where it is appropriate to engage a safety observer. The circumstances where that will be assessed as appropriate is where the potential fault current rating of the electrical equipment is high or the wiring is poorly maintained, unbundled, untidy or there is evidence of uncertainty, such as mixed circuits.

## Wiring Standards

Safety in design is an important element of all recently produced health and safety legislation. This recognises the importance of safety in the planning stages and design of all products to ensure they do not impact the workplace where the product is installed or used.

Poor design in electrical systems affects performance reliability and safety of those installations. Many of these matters are addressed by the application of product and wiring standards for electrical equipment and installations.



In Australia and New Zealand this standard is AS/NZS 3000:2007 Electrical Installations, also known as the Australian and New Zealand Wiring Rules.

AS/NZS3000:2007 is also used in some other countries in the Asia/Pacific region and there are comparable standards internationally. Within Australia you should ensure the electrical works meet or exceed AS/NZS3000:2007.

There are other electrical standards you should also consider and these include;

**AS/NZS 3017:2007** Electrical Installations – Verification Guidelines

**AS/NZS 4836:2011** Safe working on or near low-voltage electrical installations and equipment

**AS/NZS 3012:2010** Electrical Installations – Construction and demolition sites

**AS 1674.2:2007** Safety in welding and allied processes - Electrical

## Testing and Verification

Testing and verification of the electrical installation are the final stages of the project. The wiring rules require the use of quality products including wire, switchgear, terminations and other equipment. There is a mandatory requirement to confirm quality. This is achieved by way of visual inspection and testing of the installation to verify it operates correctly and safely. Testing should assure the client of longevity and reliability of the installed product. Certain tests are required before energisation (putting the power back on).

The following six tests are required to be carried out on any low voltage electrical installations in accordance with AS3000:2007 for each relevant sub circuit:

- Continuity of the earthing system. An effective earthing system will ensure that exposed conductive parts of electrical equipment do not reach dangerous voltages when earth faults occur.
- Insulation resistance. Low level of insulation resistance between conductors or to earth cause current to flow and potential for shock, fire and equipment damage.
- Polarity. That the active phases, neutral or earth are all correctly connected and not transposed which can result in erratic performance and energising of exposed conductive parts.
- Correct circuit connections. Checking for interconnection, transposition and short circuits between conductors.

- Fault loop impedance. Verification of impedance required for automatic disconnection of supply. Verified by resistance test and confirmation that the value is less than tabulated/computed values for the protection device.
- RCD test. Operation of RCDs may be by use of the integrated push-button test device or by use of special test equipment at the socket outlet.

Note: It is not necessary to undertake all tests in certain circumstances as described in AS/NZS3000 and AS/NZS3017, however it is encouraged as best practice.

If the electrical installation fails a test, that test and any preceding tests influenced by the indicated fault should be repeated after the fault has been fixed. Information on the normal test methods is detailed in AS/NZS3017. The test results must be recorded and provided to the client for their records. A suitable test record sheet is provided at Appendix 10.

The date of initial energisation or certification of the installation should be available on-site by marking on or in an accessible record.

## Qualifications and Supervision

### Qualified electricians

Licensed electricians are qualified to work without supervision and can supervise others, such as Electrical Apprentices and unlicensed workers (often described as trades assistants or TAs). As a rule, both apprentices and TAs must be directly supervised to a level that will ensure that their workmanship and safety is of an appropriate standard and as permitted by law.

### Electrical Apprentices

Pay particular attention to the induction of apprentices as they are at higher risk of workplace accidents resulting in significant injuries. The level of supervision of apprentices may be reduced subject to training received and experience, and the licensed electrician determining a reduced level of supervision is appropriate. This will be assessed considering the work task, any risks involved, and the implementation of risk control measures. It is incumbent on the supervising electrician to assess the competence and behaviour of the apprentice to determine the required level of supervision. A reduced level of supervision over a period of time is important in the development of apprentices.

## Trades assistants

Trades assistants may have sound knowledge of electrical systems; however they are not qualified nor undertaking an apprenticeship. There is no provision for trades assistants to work alone and they must be supervised at all times when performing electrical work.

## Environmental Considerations

The main focus of this guide is safety. However contractors are expected to comply with environmental legislation, codes of practice and contractual conditions. The contractor is expected to deliver services in an environmentally responsible manner. The contractor should plan and manage their activities in accordance with best practice environmental management principles. In addition to complying with legislative requirements, there is a need for the contractor to show a commitment to the environment. A list of environmental considerations is attached at Appendix 24.

## Risk Management

### Safe Work Method Statements (SWMS)

The risk management process requires all work activities to be considered as part of the risk assessment no matter the size of the task. The risk management process under WHS Regulations for electrical work is complex, even for simple electrical work in an existing office. Any new electrical installation or alterations are considered as construction work under WHS Regulations (chapter 6). Only minor repairs and maintenance are exempt. This means that there must be safe work method statements (SWMS) for any activity that could be described as high-risk construction work (HRCW) as detailed in Appendix 25. Examples include working with asbestos (sometimes found in old switchboards or overseas facilities), fall from heights greater than two metres, such as in foyers or when installing external lighting or if operating on or near energised electrical circuits. The main purpose of the SWMS for HRCW is to inform the client project manager of the risk controls that they should look for when monitoring the contractor's work practices. Workers must follow the requirements in a SWMS or work must stop.

### Electrical Safe Work Method Statement (E-SWMS)

Electrical work is defined and governed by Part

4.7 of the WHS Regulations and there are specific requirements regarding risk assessment under Division 4 – Energised (live) Electrical Work. The main “energised work” activity is testing to prove de-energised, testing in commissioning and fault finding, and some testing to ensure correct polarity, power is correct voltage, and to measure fault loop impedance. In these circumstances the electrical contractor needs to provide the electrical worker with an electrical safe work method statement (E-SWMS) as required under WHS Regulation 161(1)(b) to address these activities. This E-SWMS is aimed at informing the electrical worker of correct practice (rather than the client), but it would be reflected in a corresponding SWMS for HRCW relating to “on or near energised electrical work”. The E-SWMS should be a complete instruction for the electrical worker for energised work e.g. it would describe the complete isolation process not just the stage where the electrical worker undertakes the energised test. An example of an E-SWMS is provided at Appendix 19.

### Safe Work Procedures (SWPs)

The SWMS for HRCW can be fractured and may not be adequate to satisfactorily provide safe work instruction for the electrical worker. For this reason it is likely that an electrical contractor will provide further documentation in the form of Safe Work Procedures to cover broader areas of safety. This in turn meets a legislative obligation to provide information and instruction under WHS Regulation 39. Training for all workers, including electrical contractors, should be undertaken to fully meet this obligation and it should include training on the content of the SWMS for HRCW, E-SWMS and all relevant SWPs. When preparing a SWP refer to the relevant Code of Practice. Codes of Practice are available on the Safe Work Australia website. A sample SWP template is provided at Appendix 20.

## Hazardous Chemicals

The need to use hazardous chemicals should be eliminated where possible. If hazardous chemicals are required the quantities should be minimised to those required for immediate use. This will reduce the quantities of hazardous chemicals requiring storage. Refer to the relevant safety data sheet (SDS) for the hazardous chemical for handling and storage information. Exposure to the body, inhaling or ingestion of certain hazardous chemicals can cause reaction and illness to the user and other persons in the area. It is important to be aware of possible health and safety risks and to use appropriate controls measures to minimise any likelihood of adverse effects.

## Wiring Drawings / Diagrams    Wiring Schedules

A wiring drawing or diagram is typically shown as a single line with electrical equipment such as a switch or light shown as symbols. A simple example of a wiring diagram for a light with a light switch is provided at Appendix 23.

It is uncommon to have wiring diagrams for simple wiring installations such as lighting and power points. Wiring diagrams become most useful where the circuitry has a complex control element, such as where there are multiple drives and functions. An example of this is the control circuits for a lift or elevator installation. The wiring diagram is a useful tool for understanding the sequence of controls that exist and again assists in processes for troubleshooting and equipment maintenance.

Any updates to a wiring diagram should include a description of the work, why it was undertaken, the date, and the details of the electrician making the changes.

### Reliability

Reliability is the ability of an electrical system to operate as and when required without failure. This may include when part of the system is shut down through a fault. Reliability is achieved through good design and proper selection and installation of electrical equipment and wiring. System design is not typically the direct cause of equipment failure or system shutdown; however design will affect system availability and length of shutdowns when it occurs. If the system has been designed with redundancies, it provides for maintenance outages and limits the extent of outages caused during a circuit failure. Common reliability analysis tools allow the contractor to predict the reliability and availability of the electrical system.

To provide continuous operation under all foreseeable circumstances, including utility outages and equipment breakdown, reliability must be designed into an electrical system. Investigating the number of redundancies designed into the electrical system is one of the common analytical approaches. It identifies the normal source and any redundant circuits/sources or equipment that would provide alternate paths for electrical power to flow.

Redundant circuits can be designed and used to permit de-energised electrical maintenance and other work without disrupting critical services such as computing and communications. Ensure you consider reliability as part of your contract.

A wiring schedule or running list consists of electrical protective components such as fuses, circuit breakers and residual current devices (safety switches) in a switchboard. These components protect the relevant sub-circuit wiring and associated equipment.

Typically there will be separate (and possibly multiple) sub-circuits for different types of equipment such as lighting, socket outlets (power points), appliances such as ovens, air conditioners, large computers, communications equipment, and essential services (such as emergency lighting).

Wiring schedules are generally produced for each switchboard (or distribution board). A copy of the schedule is typically held within the door of each switchboard on each floor level. A wiring schedule template is provided at Appendix 14. You should obtain all wiring schedules from the electrical contractor.

A wiring schedule will assist other electricians following completion of the electrical installation. The schedule will enable them to identify faults and troubleshoot, and to consider appropriate strategies for further electrical expansion. Wiring schedules also help to identify areas affected when power is removed (electrical isolation) for the purpose of undertaking electrical work. Any modifications to a circuit should include an update to the wiring schedule including a description of the work, why it was undertaken, the date, and the details of the electrician making the changes.

### Safety Systems

There are a number of safety management systems available for use. These are commonly referred to as work health and safety management systems (WHSMS). Safety management systems typically address areas of an Australian or international standard such as AS/NZS 4801:2001, SafetyMap or ISO18001. The contractor should examine these systems and select one appropriate to your requirements. Tendering electrical contractors may have a verified WHSMS and will need to determine if it sufficiently meets your needs and your local legislative requirements.

Important aspects of legislative requirements considered to directly affect safety when undertaking electrical work are attached at Appendix 25. The electrical contractor should demonstrate a commitment to addressing legislative requirements by way of their systems and processes. A checklist



for the assessment of safety management systems is provided at Appendix 3.

Safety management systems typically address areas of an Australian or international standard. Key components are:

- Organisational policy commitment to safety
- Administrative procedures for risk management, worker consultation and participation, training, audits, management review, systems for improvement, document control and record keeping
- Safe work instructions or procedures for identifying and communicating safety information, safe practices, emergency plans and actions
- Record keeping and reporting systems

## Safety Devices

Perhaps the most important initiative in electrical safety has been the progressive tightening of

requirements regarding Residual Current Devices (RCDs) or Safety Switches as they are often called. These devices are able to detect a small out-of-balance current between the neutral and active and in these circumstances can cut the power before death, serious injury or damage occurs. They are now required for all new wiring installations to socket outlets and lighting under the current wiring rules.

The model WHS Regulations have retrospective requirements for RCDs, specifically for socket-outlets to electrical equipment and appliances that operate in a hostile work environment. A hostile work environment is one likely to result in damage to the equipment (such as a construction site). This does not include equipment normally found in an office (such as computers, printers and projectors) or an associated office kitchen (such as a kettle and microwave). Established workplaces with existing electrical wiring are encouraged to start a program of works to retrospectively fit RCD's where not installed.



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# Appendix 1 - Work Health and Safety Policy for Electrical Work

## Introduction

This policy outlines (client) commitment to providing a healthy and safe work environment and complying with all applicable WHS legislation and electrical legislation. This policy specifically addresses electrical works.

## Scope

This policy applies to all (client) workers and to others on (client) premises involved with, engaged in, or present during electrical works.

## Principles

(client) has an obligation to provide and maintain a safe and healthy working environment. (client) commits to best practice in work health and safety and adheres to 'no energised work' for electrical works.

(client) workers have a legal obligation to comply with WHS Laws including relevant Codes of Practice. (client) workers must take every reasonable care for their own safety and the safety of others.

(client) acknowledges the high risk nature of electrical work and does not permit work on energised circuits – 'no live work', other than the exceptions provided by law, and only then in consultation and agreement with the (client). Energised electrical testing for the purpose of isolation, fault finding and commissions is agreed by all parties to the extent permitted by law and under the conditions of safe work procedures and systems of work.

(client) will take all practicable steps to provide WHS information, instruction, and processes for use by workers including contractors and others engaged with (client) to ensure electrical work is conducted safely.

## Compliance

Compliance with the relevant WHS legislation or electrical legislation is a legal requirement for the (client), the electrical contractor, and their respective workers.

(client) will monitor electrical contractor compliance throughout the procurement process. This will include checks of the contractor's past safety history, systems of work, and inspections during and after works to ensure WHS obligations are met.

Inspectors from the WHS regulator or electrical regulator can attend workplaces to inspect, investigate, and audit compliance with the applicable WHS regulations or electrical regulations. These laws include penalties for non-compliance that can be applied to each PCBU, its Officers and its workers.

At the completion of works the electrical contractor will test the works in accordance with the standard and provide (client) with the required certification.

## Authority

## Review Date



## Appendix 2 - Safety Management Plan (SMP)

**Organisation or Business Name**

**Safety Management Plan**

**Name of project**

**Site address**

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|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------------------------|--------------------------|
| Supplier's name                                                                                                                            |                            |                               |                          |
| Supplier's ABN number                                                                                                                      |                            |                               |                          |
| Supplier's registered address                                                                                                              |                            |                               |                          |
| Supplier's authorised representative                                                                                                       |                            |                               |                          |
| Summary of the Works:                                                                                                                      |                            |                               |                          |
| Works to be provided if engaged as a Client Supplier under this Agreement are categorised as (check all relevant categories):              |                            |                               |                          |
| Electrical/communications                                                                                                                  | <input type="checkbox"/>   | Transportation                | <input type="checkbox"/> |
| General building construction                                                                                                              | <input type="checkbox"/>   | Engineering services          | <input type="checkbox"/> |
| General building maintenance                                                                                                               | <input type="checkbox"/>   | Professional consultancy      | <input type="checkbox"/> |
| Waste management                                                                                                                           | <input type="checkbox"/>   | Provision of accommodation    | <input type="checkbox"/> |
| Cleaning                                                                                                                                   | <input type="checkbox"/>   | Other (please specify below): | <input type="checkbox"/> |
| Other:                                                                                                                                     |                            |                               |                          |
| Jurisdictions within which Works are to be undertaken and relevant WHS legislation and electrical legislation (check all relevant states): |                            |                               |                          |
| NSW                                                                                                                                        | : <input type="checkbox"/> | (                             | )                        |
| ACT                                                                                                                                        | : <input type="checkbox"/> | (                             | )                        |
| WA                                                                                                                                         | : <input type="checkbox"/> | (                             | )                        |
| NT                                                                                                                                         | : <input type="checkbox"/> | (                             | )                        |
| SA                                                                                                                                         | : <input type="checkbox"/> | (                             | )                        |
| QLD                                                                                                                                        | : <input type="checkbox"/> | (                             | )                        |
| VIC                                                                                                                                        | : <input type="checkbox"/> | (                             | )                        |
| TAS                                                                                                                                        | : <input type="checkbox"/> | (                             | )                        |
| CWLTH                                                                                                                                      | : <input type="checkbox"/> | (                             | )                        |
| Overseas                                                                                                                                   | : <input type="checkbox"/> | (                             | )                        |
|                                                                                                                                            |                            |                               |                          |

| Part B Supplier's Work Health and Safety Policy & Management System |                                                                                                                                                                                                       |           |                   |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------|
| #                                                                   | Aspect                                                                                                                                                                                                | Y/N (N/A) | Reference/Comment |
| 1.                                                                  | Work Health and Safety policy & management                                                                                                                                                            |           |                   |
| 1.1                                                                 | Policy<br>Is there a written company Work Health and Safety policy?                                                                                                                                   |           |                   |
|                                                                     | ➤ If Yes, provide a signed copy of policy.                                                                                                                                                            |           |                   |
|                                                                     | • signed by CEO or equivalent                                                                                                                                                                         |           |                   |
|                                                                     | • outline a clear statement of objectives                                                                                                                                                             |           |                   |
|                                                                     | • clear statement of senior management commitment                                                                                                                                                     |           |                   |
|                                                                     | • relevant to company's operations                                                                                                                                                                    |           |                   |
| 1.2                                                                 | Work Health and Safety Management System<br>Is there a company WHSMS manual or plan?                                                                                                                  |           |                   |
|                                                                     | ➤ If Yes, provide a copy of Table of Contents                                                                                                                                                         |           |                   |
|                                                                     | ➤ Does the manual include:                                                                                                                                                                            |           |                   |
|                                                                     | • a WHS policy and electrical work policy                                                                                                                                                             |           |                   |
|                                                                     | • statement of responsibilities                                                                                                                                                                       |           |                   |
|                                                                     | • outline of general Work Health and Safety procedures                                                                                                                                                |           |                   |
|                                                                     | • issue resolutions                                                                                                                                                                                   |           |                   |
|                                                                     | • Work Health and Safety consultation process                                                                                                                                                         |           |                   |
| 1.3                                                                 | Work Health and Safety manual<br>Is the company WHSM manual certified?                                                                                                                                |           |                   |
|                                                                     | ➤ If Yes, provide a copy of signed certificate.                                                                                                                                                       |           |                   |
|                                                                     | Note: Certification demonstrates the system meets minimum standards verified by an independent party<br>These may include: AS4801, SafetyMap, NSCA 5 Star System, International Safety rating System. |           |                   |
| 1.4                                                                 | Responsibilities<br>Are WHS responsibilities clearly identified for all levels of workers?                                                                                                            |           |                   |
|                                                                     | ➤ If Yes, provide contact details for person/s responsible for the Works if engaged as a Client Group Supplier                                                                                        |           |                   |
|                                                                     | ➤ Are Work Health and Safety responsibilities:                                                                                                                                                        |           |                   |
|                                                                     | • documented                                                                                                                                                                                          |           |                   |
|                                                                     | • included in the job descriptions                                                                                                                                                                    |           |                   |
|                                                                     | • part of the performance appraisal                                                                                                                                                                   |           |                   |
| 2.                                                                  | Safe work practices and procedures                                                                                                                                                                    |           |                   |
| 2.1                                                                 | Procedures<br>Has the company prepared safe work procedures or specific safety Instructions relevant to its operations?                                                                               |           |                   |
|                                                                     | ➤ If Yes, provide a summary listing of procedures or instructions                                                                                                                                     |           |                   |
|                                                                     | ➤ Do the procedures:                                                                                                                                                                                  |           |                   |
|                                                                     | • have relevance to the operations                                                                                                                                                                    |           |                   |
|                                                                     | • contain a description of tasks and methods to minimise Work Health and Safety risks                                                                                                                 |           |                   |
|                                                                     | • meet all relevant legislative requirements, Standards and Codes of Practice                                                                                                                         |           |                   |

| Part B Supplier's Work Health and Safety Policy & Management System |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |           |                   |
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| #                                                                   | Aspect                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Y/N (N/A) | Reference/Comment |
| 2.2                                                                 | Safe Work Method Statements<br>Does the company have experience in preparing safe work method statements (SWMS) for relevant operations?                                                                                                                                                                                                                                                                                                                                                                                               |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>➤ If Yes, provide a summary listing of SWMS</li> <li>➤ Do the SWMS: <ul style="list-style-type: none"> <li>• address relevant High Risk Construction Activities</li> <li>• address energised (live) electrical work including testing for de-energised, fault finding and commissioning</li> </ul> </li> </ul>                                                                                                                                                                                  |           |                   |
| 2.3                                                                 | Permits<br>Does the company have any permit to work systems?                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>➤ If Yes, provide a summary listing or permits</li> <li>➤ Permit system should be: <ul style="list-style-type: none"> <li>• relevant to the operations</li> <li>• identify training requirements</li> <li>• contain description of tasks and methods to minimise Work Health and Safety risks</li> </ul> </li> </ul>                                                                                                                                                                            |           |                   |
| 2.4                                                                 | Risk management<br>Does the company have a hazard identification, risk assessment and control process?                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>➤ If Yes, provide a copy of a standard risk assessment form and risk control action plan form</li> <li>➤ Does the process for the company's workers: <ul style="list-style-type: none"> <li>• identify and assess the risks is required to ensure that the appropriate controls are established for identified risks</li> <li>• preparing and implementing Safe Work Method Statements and Safe Work Procedures</li> <li>• preparing and communicating Site Safety Rules</li> </ul> </li> </ul> |           |                   |
| 2.5                                                                 | Incident reporting<br>Is there a documented incident investigation and reporting procedure?                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>➤ If Yes, provide a copy of a standard incident report form</li> <li>➤ Are there: <ul style="list-style-type: none"> <li>• procedures for the company's workers to report incidents</li> <li>• processes for incident investigation</li> <li>• procedures for reporting notifiable incidents to the authorities</li> </ul> </li> </ul>                                                                                                                                                          |           |                   |
| 2.6                                                                 | Incident reporting for Client Sites<br>Reporting procedures for incidents including dangerous incidents associated with Works performed on Client Sites are required.                                                                                                                                                                                                                                                                                                                                                                  |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>➤ If Yes, provide details <ul style="list-style-type: none"> <li>• How will incidents associated with the Works on Client Sites be reported to the Client?</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                               |           |                   |
| 2.7                                                                 | Plant<br>Are there procedures for maintaining, inspecting and assessing the hazards of plant/equipment operated / owned by the company?                                                                                                                                                                                                                                                                                                                                                                                                |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>➤ If Yes, provide details</li> <li>➤ Do procedures include: <ul style="list-style-type: none"> <li>• documented plant hazard identification checklists</li> <li>• risk assessments and risk control action plans</li> <li>• registers for plant/equipment that require registration</li> </ul> </li> </ul>                                                                                                                                                                                      |           |                   |

| Part B Supplier's Work Health and Safety Policy & Management System |                                                                                                                                                                                                                       |           |                   |
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| #                                                                   | Aspect                                                                                                                                                                                                                | Y/N (N/A) | Reference/Comment |
|                                                                     | <ul style="list-style-type: none"> <li>safe operating procedures</li> </ul>                                                                                                                                           |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>plant maintenance program</li> </ul>                                                                                                                                           |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>plant fault reporting procedures</li> </ul>                                                                                                                                    |           |                   |
| 2.8                                                                 | Hazardous chemicals<br>Are there procedures for storing and handling hazardous chemicals or substances?                                                                                                               |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>➤ If Yes, provide details</li> <li>➤ Procedures should demonstrate an understanding of safe handling of hazardous chemicals, and this would include procedures for:</li> </ul> |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>Safety Data Sheet (SDS)</li> </ul>                                                                                                                                             |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>maintenance of a register</li> </ul>                                                                                                                                           |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>appropriate labelling</li> </ul>                                                                                                                                               |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>safe handling and storage procedures for chemicals</li> </ul>                                                                                                                  |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>Personal Protective Equipment (PPE)</li> </ul>                                                                                                                                 |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>relevant information and training</li> </ul>                                                                                                                                   |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>spills</li> </ul>                                                                                                                                                              |           |                   |
| 2.9                                                                 | Manual handling<br>Are there procedures for identifying, assessing and controlling risks associated with hazardous manual handling?                                                                                   |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>➤ If Yes, provide details</li> <li>➤ Documentation should contain:</li> </ul>                                                                                                  |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>hazard identification</li> </ul>                                                                                                                                               |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>risk assessment and</li> </ul>                                                                                                                                                 |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>control plans for hazardous manual handling tasks</li> </ul>                                                                                                                   |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>systems used to minimise exposure to manual handling risks</li> </ul>                                                                                                          |           |                   |
| 2.10                                                                | Purchasing<br>Do the management systems or plans ensure that work health and safety is addressed in procurement?                                                                                                      |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>➤ If Yes, provide details</li> <li>➤ Provide information of documented procedures for</li> </ul>                                                                               |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>pre-purchase identification of potential WHS risks that may be introduced to the work site from supplied plant and materials</li> </ul>                                        |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>assessing suppliers ability to comply with WHS specifications for the provision of plant, materials and services</li> </ul>                                                    |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>checking that suppliers provide all relevant WHS information for their plant and materials</li> </ul>                                                                          |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>verifying that Client-supplied plant and materials meet WHS specifications</li> </ul>                                                                                          |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>maintaining records of supplied plant and materials identified as having potential WHS risks.</li> </ul>                                                                       |           |                   |
| 2.11                                                                | Handling, storage, packaging and delivery<br>Do the management systems or plans manage work health and safety in handling, storage, packaging and delivery?                                                           |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>➤ If Yes, provide details</li> <li>➤ Provide information of documented procedures for</li> </ul>                                                                               |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>appropriate licensing, certification and qualification of anyone who will be engaged in hazardous processes?</li> </ul>                                                        |           |                   |



| Part B Supplier's Work Health and Safety Policy & Management System |                                                                                                                                                                               |           |                   |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------|
| #                                                                   | Aspect                                                                                                                                                                        | Y/N (N/A) | Reference/Comment |
|                                                                     | <ul style="list-style-type: none"> <li>checking compliance with registration requirements of plant and plant design?</li> </ul>                                               |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>assessment and control of materials handling risks?</li> </ul>                                                                         |           |                   |
| 3.                                                                  | Work Health and Safety training                                                                                                                                               |           |                   |
| 3.1                                                                 | Training<br>Does the company provide Work Health and Safety training for workers?                                                                                             |           |                   |
|                                                                     | ➤ If Yes, describe how Work Health and Safety training is conducted in the company                                                                                            |           |                   |
| 3.2                                                                 | Training records<br>Is a record maintained of all training and induction programs undertaken for workers in the company?                                                      |           |                   |
|                                                                     | ➤ If Yes, provide examples of safety training records<br>➤ Evidence of records of training and competencies of workers                                                        |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>licenses, permits, and certificates</li> </ul>                                                                                         |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>induction training program and</li> </ul>                                                                                              |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>Health and Safety Representative (HSR) training if required.</li> </ul>                                                                |           |                   |
| 3.3                                                                 | Trained workers<br>Are training and induction records referenced to ensure that only appropriately trained workers are utilised on specific tasks and/or at particular sites? |           |                   |
|                                                                     | ➤ If Yes, provide details<br>➤ Evidence of                                                                                                                                    |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>training matrix cross-referencing tasks with training and competency requirements.</li> </ul>                                          |           |                   |
| 4.                                                                  | Apprentice management                                                                                                                                                         |           |                   |
| 4.1                                                                 | Management<br>Does the company safety management system or plan include how the company manages apprentices?                                                                  |           |                   |
|                                                                     | ➤ If Yes, provide details<br>➤ Provide information of documented procedures for                                                                                               |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>training</li> </ul>                                                                                                                    |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>development and experience</li> </ul>                                                                                                  |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>monitoring and assessment</li> </ul>                                                                                                   |           |                   |
| 4.2                                                                 | Supervision<br>Does the company safety management system or plan include how the company supervises apprentices?                                                              |           |                   |
|                                                                     | ➤ If Yes, provide details<br>➤ Provide information of documented procedures for                                                                                               |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>role of supervisor</li> </ul>                                                                                                          |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>assessment for task and level of supervision</li> </ul>                                                                                |           |                   |
| 5.                                                                  | Work Health and Safety workplace inspection                                                                                                                                   |           |                   |
| 5.1                                                                 | Inspections<br>Are regular Work Health and Safety inspections conducted at work sites?                                                                                        |           |                   |
|                                                                     | ➤ If Yes, provide details<br>➤ Evidence of                                                                                                                                    |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>workplace inspection schedules</li> <li>completed inspection reports are required.</li> </ul>                                          |           |                   |

| Part B Supplier's Work Health and Safety Policy & Management System |                                                                                                                |           |                   |
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| #                                                                   | Aspect                                                                                                         | Y/N (N/A) | Reference/Comment |
| 5.2                                                                 | Checklists<br>Are standard workplace inspection checklists used to conduct Work Health and Safety inspections? |           |                   |
|                                                                     | ➤ If Yes, provide details or examples                                                                          |           |                   |
|                                                                     | ➤ Evidence of sample documents showing                                                                         |           |                   |
|                                                                     | • types of inspections undertaken                                                                              |           |                   |
|                                                                     | • procedures for completion of inspections                                                                     |           |                   |
|                                                                     | • type of inspection checklists to be used are required.                                                       |           |                   |
| 5.3                                                                 | Hazard reporting<br>Is there a procedure for workers to report workplace hazards?                              |           |                   |
|                                                                     | ➤ If Yes, provide details or examples                                                                          |           |                   |
|                                                                     | ➤ Evidence would include                                                                                       |           |                   |
|                                                                     | • documented hazard reporting procedures                                                                       |           |                   |
|                                                                     | • completed hazard registers.                                                                                  |           |                   |
| 6.                                                                  | Work Health and Safety consultation                                                                            |           |                   |
| 6.1                                                                 | Committee<br>Is there a workplace Work Health and Safety committee?                                            |           |                   |
|                                                                     | ➤ If Yes, provide details                                                                                      |           |                   |
|                                                                     | ➤ Provide samples of                                                                                           |           |                   |
|                                                                     | • Work Health and Safety committee/workers                                                                     |           |                   |
|                                                                     | • Work Health and Safety meeting minutes                                                                       |           |                   |
|                                                                     | • meeting schedules                                                                                            |           |                   |
| 6.2                                                                 | Decision making<br>Are workers involved in decision making over Work Health and Safety matters?                |           |                   |
|                                                                     | ➤ If Yes, provide details or examples                                                                          |           |                   |
|                                                                     | ➤ Provide sample of                                                                                            |           |                   |
|                                                                     | • site meeting minutes                                                                                         |           |                   |
|                                                                     | • management meeting minutes                                                                                   |           |                   |
| 6.3                                                                 | Representatives<br>Are there workers elected as Health and Safety Representatives (HSRs)?                      |           |                   |
|                                                                     | ➤ If Yes, provide details                                                                                      |           |                   |
|                                                                     | ➤ Evidence may include                                                                                         |           |                   |
|                                                                     | • a list of Health and Safety Representatives                                                                  |           |                   |
|                                                                     | • documented consultation procedures                                                                           |           |                   |
|                                                                     | • company workers involvement in incident investigations                                                       |           |                   |
| 7.                                                                  | Work Health and Safety performance monitoring                                                                  |           |                   |
| 7.1                                                                 | Statistics<br>Is there a system for recording and analysing Work Health and Safety performance statistics?     |           |                   |
|                                                                     | ➤ If Yes, provide details                                                                                      |           |                   |
|                                                                     | ➤ Evidence may include                                                                                         |           |                   |
|                                                                     | • Work Health and Safety injury trend data                                                                     |           |                   |
|                                                                     | • performance targets, e.g. LTI's, MTI's                                                                       |           |                   |
|                                                                     | • records of serious/notifiable incidents                                                                      |           |                   |

| Part B Supplier's Work Health and Safety Policy & Management System |                                                                                                                                                                                  |           |                   |
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| #                                                                   | Aspect                                                                                                                                                                           | Y/N (N/A) | Reference/Comment |
| 7.2                                                                 | Work Health and Safety record<br>Does the company have safety records for the last two calendar years?                                                                           |           |                   |
|                                                                     | ➤ If Yes, provide details                                                                                                                                                        |           |                   |
| 7.3                                                                 | Workers information<br>Are workers regularly provided with information on company Work Health and Safety performance?                                                            |           |                   |
|                                                                     | ➤ If Yes, provide details                                                                                                                                                        |           |                   |
|                                                                     | ➤ Evidence may include                                                                                                                                                           |           |                   |
|                                                                     | • worker safety notices                                                                                                                                                          |           |                   |
|                                                                     | • minutes of worker meetings                                                                                                                                                     |           |                   |
|                                                                     | • records of toolbox meetings                                                                                                                                                    |           |                   |
| 7.4                                                                 | Work Health and Safety convictions<br>Has the company been convicted of any Work Health and Safety offence in the last five years?                                               |           |                   |
|                                                                     | ➤ If Yes, provide details                                                                                                                                                        |           |                   |
|                                                                     | ➤ Provide details such as                                                                                                                                                        |           |                   |
|                                                                     | • the nature and circumstances of the incident and any corrective action taken                                                                                                   |           |                   |
| 7.5                                                                 | Work Health and Safety breaches<br>Are you aware of any current investigations into your company by any statutory regulator?                                                     |           |                   |
|                                                                     | ➤ If Yes, provide details                                                                                                                                                        |           |                   |
|                                                                     | ➤ Provide details such as                                                                                                                                                        |           |                   |
|                                                                     | • the nature and circumstances of the incident and any corrective action to be undertaken                                                                                        |           |                   |
| 8.                                                                  | Sub-Suppliers                                                                                                                                                                    |           |                   |
| 8.1                                                                 | Sub-Suppliers responsibility<br>Does the company WHSMS or plan include how the company's responsibility for sub-Supplier's safety is managed?                                    |           |                   |
|                                                                     | ➤ If Yes, provide details                                                                                                                                                        |           |                   |
|                                                                     | ➤ Provide information of documented procedures for                                                                                                                               |           |                   |
|                                                                     | • sub-Supplier's management                                                                                                                                                      |           |                   |
|                                                                     | • inductions                                                                                                                                                                     |           |                   |
|                                                                     | • training requirements                                                                                                                                                          |           |                   |
| 8.2                                                                 | Sub-Supplier compliance<br>Are there procedures in place to ensure sub-Suppliers comply with and work to the safety management system or plan?                                   |           |                   |
|                                                                     | ➤ If Yes, provide details                                                                                                                                                        |           |                   |
|                                                                     | ➤ Evidence of procedures to ensure                                                                                                                                               |           |                   |
|                                                                     | • sub-Suppliers comply with safe work practices and with the company's SMP                                                                                                       |           |                   |
| 8.3                                                                 | Sub-Supplier management<br>If sub-Suppliers are to be utilised, will they be managed to ensure that the Client and project specific Work Health and Safety requirements are met? |           |                   |
|                                                                     | ➤ If Yes, provide details.                                                                                                                                                       |           |                   |

| Part B Supplier's Work Health and Safety Policy & Management System |                                                                                                                                                                                    |           |                   |
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| #                                                                   | Aspect                                                                                                                                                                             | Y/N (N/A) | Reference/Comment |
| 9.                                                                  | Design                                                                                                                                                                             |           |                   |
| 9.1                                                                 | Design control<br>Are there plans to use original or new designs on this project?                                                                                                  |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>➤ If Yes, provide details</li> <li>➤ Evidence of procedures for</li> </ul>                                                                  |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>• identifying responsibilities of those undertaking WHS design and design reviews are defined</li> </ul>                                    |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>• verifying that design meets legislative requirements</li> </ul>                                                                           |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>• holding and recording WHS design review meetings</li> </ul>                                                                               |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>• identifying, investigating, assessing and controlling WHS risks associated with the site or inherent in the design</li> </ul>             |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>• identifying in WHS management plans the design related risks to workers on site</li> </ul>                                                |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>• reviewing and approving changes and modifications to designs</li> </ul>                                                                   |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>• considering and documenting WHS issues relating to the maintenance and eventual removal or demolition of the designed facility</li> </ul> |           |                   |
| 10.                                                                 | Internal reviews                                                                                                                                                                   |           |                   |
| 10.1                                                                | Internal audits<br>Does the management system clearly define procedures for systematically auditing WHS management systems and plans, and activities?                              |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>➤ If Yes, provide details</li> <li>➤ Evidence of procedures to ensure</li> </ul>                                                            |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>• periodic audits of implementation and compliance with the WHS Management System and plans are conducted</li> </ul>                        |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>• the responsibilities of those carrying out the audits are specified</li> </ul>                                                            |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>• any deficiencies are identified</li> </ul>                                                                                                |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>• corrective action and improvements are implemented</li> </ul>                                                                             |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>• followed-up to assess the effectiveness of any improvements</li> </ul>                                                                    |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>• outcomes are reported to management</li> </ul>                                                                                            |           |                   |
| 10.2                                                                | Management reviews<br>Does the management system clearly define procedures for reviewing and confirming the effectiveness of the WHS management systems and plans?                 |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>➤ If Yes, provide details</li> <li>➤ Evidence of procedures to ensure</li> </ul>                                                            |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>• reviews are carried out at regular intervals</li> </ul>                                                                                   |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>• the responsibilities of those carrying out the review are specified</li> </ul>                                                            |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>• performance in relation to reported incidents, non-conformances and audits are reviewed</li> </ul>                                        |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>• reviews are documented</li> </ul>                                                                                                         |           |                   |
| 11.                                                                 | Documentation and records                                                                                                                                                          |           |                   |
| 11.1                                                                | Document control<br>Do the Systems clearly define document control procedures for WHS documents and data?                                                                          |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>➤ If Yes, provide details</li> <li>➤ Evidence of procedures to ensure</li> </ul>                                                            |           |                   |

| Part B Supplier's Work Health and Safety Policy & Management System |                                                                                                                                                                                                                               |           |                   |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-------------------|
| #                                                                   | Aspect                                                                                                                                                                                                                        | Y/N (N/A) | Reference/Comment |
|                                                                     | <ul style="list-style-type: none"> <li>identification, approval, maintenance, dissemination, retention, withdrawal and disposal of documents and data</li> </ul>                                                              |           |                   |
| 11.2                                                                | Record control<br>Do the Systems clearly define record control procedures for WHS records?                                                                                                                                    |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>➤ If Yes, provide details</li> <li>➤ Evidence of procedures to ensure</li> </ul>                                                                                                       |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>maintaining WHS records, including their identification, legibility, filing, retrieval and retention</li> <li>critical records are identified and retention periods are set</li> </ul> |           |                   |
| 11.3                                                                | Record keeping<br>Are the following WHS records maintained?                                                                                                                                                                   |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>project WHS Management Plan or WHS Management Plan</li> </ul>                                                                                                                          |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>site inspection checklist</li> </ul>                                                                                                                                                   |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>hazard register</li> </ul>                                                                                                                                                             |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>hazard identification and risk assessments</li> </ul>                                                                                                                                  |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>safe Work Method Statements</li> </ul>                                                                                                                                                 |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>safe work procedures</li> </ul>                                                                                                                                                        |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>work permits</li> </ul>                                                                                                                                                                |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>details of qualifications held by individuals</li> </ul>                                                                                                                               |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>safety equipment register</li> </ul>                                                                                                                                                   |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>training records</li> </ul>                                                                                                                                                            |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>training matrix</li> </ul>                                                                                                                                                             |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>induction checklist and record</li> </ul>                                                                                                                                              |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>record of Toolbox Talks</li> </ul>                                                                                                                                                     |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>plant and equipment records</li> </ul>                                                                                                                                                 |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>electrical equipment test and tag register</li> </ul>                                                                                                                                  |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>inspection, testing and servicing records (plant)</li> </ul>                                                                                                                           |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>hazardous chemicals register</li> </ul>                                                                                                                                                |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>safety Data Sheets</li> </ul>                                                                                                                                                          |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>emergency plan and procedures</li> </ul>                                                                                                                                               |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>incident and illness / injury / investigation reports</li> </ul>                                                                                                                       |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>first aid treatment records</li> </ul>                                                                                                                                                 |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>injury and workers compensation management records</li> </ul>                                                                                                                          |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>corrective and improvement actions report</li> </ul>                                                                                                                                   |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>WHS design review records</li> </ul>                                                                                                                                                   |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>internal review reports</li> </ul>                                                                                                                                                     |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>minutes of workplace WHS meetings</li> </ul>                                                                                                                                           |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>audit reports</li> </ul>                                                                                                                                                               |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>management reviews</li> </ul>                                                                                                                                                          |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>supplier WHS performance report</li> </ul>                                                                                                                                             |           |                   |
|                                                                     | <ul style="list-style-type: none"> <li>contractor evaluation report</li> </ul>                                                                                                                                                |           |                   |

| Part B Supplier's Work Health and Safety Policy & Management System |                                                                                                                                                       |              |                   |
|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------|
| #                                                                   | Aspect                                                                                                                                                | Y/N<br>(N/A) | Reference/Comment |
| 114                                                                 | Electrical installation records<br>Are the following electrical records maintained?                                                                   |              |                   |
|                                                                     | • electrical inspection and test plan                                                                                                                 |              |                   |
|                                                                     | • electrical installation test sheet to cover test results for                                                                                        |              |                   |
|                                                                     | • continuity of the earthing system                                                                                                                   |              |                   |
|                                                                     | • insulation resistance                                                                                                                               |              |                   |
|                                                                     | • polarity                                                                                                                                            |              |                   |
|                                                                     | • correct circuit connections                                                                                                                         |              |                   |
|                                                                     | • verification of impedance required for automatic disconnection of supply (earth fault-loop impedance)                                               |              |                   |
|                                                                     | • operation of RCDs                                                                                                                                   |              |                   |
|                                                                     | • electrical safety certificate<br>• certification of installation, verification and test to a recognised Standard such as AS/NZS3000 and AS/NZS3017. |              |                   |
|                                                                     | • electrical product data records                                                                                                                     |              |                   |
|                                                                     | • site installation records                                                                                                                           |              |                   |



## Appendix 4 – Training and Competency Register

Having regard to the hazards and risks of the work activities, we have assured that workers are trained and competent to perform all task activities in a way that is safe and does not adversely impact on themselves, others or the environment. The following register contains details of the skills and competencies of workers.

[illegible]

## Appendix 5 – Induction Briefing

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| Contractor worker's name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Position    |
| Supervisor's name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Start date  |
| <b>Tick off each item and enter the date as a record of completion</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Date</b> |
| 1. Explain health and safety and electrical laws<br><input type="checkbox"/> PCBU has a legal obligation for workers and visitors.<br><input type="checkbox"/> Workers have a legal obligation for self, fellow workers and visitors.<br><input type="checkbox"/> PCBU expects workers to behave in a safe manner and not put themselves or others at risk.<br><input type="checkbox"/> PCBU expects workers to use the personal protective equipment (PPE), which has been provided, and they have been trained to use.                                                                                                                                                                                      |             |
| 2. How to report an incident, injury or hazard<br><input type="checkbox"/> If you are injured, no matter how minor, report it immediately to your supervisor.<br><input type="checkbox"/> If you see something unsafe, report it to your supervisor.<br><input type="checkbox"/> The first aid officer/emergency warden is.....<br><input type="checkbox"/> Explain what to do if a fire breaks out.<br><input type="checkbox"/> Explain how to activate fire alarms.                                                                                                                                                                                                                                         |             |
| 3. Take new worker for a workplace tour, show them:<br><input type="checkbox"/> Toilets/ sink/ showers.<br><input type="checkbox"/> Fire extinguishers, fire hoses/ fire blankets, fire exits, exits, break glass alarms.<br><input type="checkbox"/> Assembly point (where to go if evacuating).<br><input type="checkbox"/> Drinking water.<br><input type="checkbox"/> First aid kit location.<br><input type="checkbox"/> Workplace hazard signs and what they mean.<br><input type="checkbox"/> Dangerous areas in the workplace (slips, trips, falls).<br><input type="checkbox"/> Areas where workers can smoke.<br><input type="checkbox"/> Introduce them to the first aid officer/emergency warden. |             |
| 4. How to deal with hazardous chemicals<br><input type="checkbox"/> Show worker where hazardous chemicals are stored.<br><input type="checkbox"/> Explain any important storage details.<br><input type="checkbox"/> Show worker where the Safety Data Sheet (SDS) register is kept.<br><input type="checkbox"/> Show the worker an SDS.<br><input type="checkbox"/> Get the worker to read an SDS and explain the information contained on it.                                                                                                                                                                                                                                                               |             |
| 5. How equipment can be dangerous<br><input type="checkbox"/> List all equipment that could present a hazard e.g. ladder, forklift.<br><br>.....<br><br>.....<br><br>.....                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |             |
| 6. Show and explain:<br><input type="checkbox"/> Risks/hazards with each piece of equipment.<br><input type="checkbox"/> Guards.<br><input type="checkbox"/> Danger/out of service tags.<br><input type="checkbox"/> Lock out procedures.<br><input type="checkbox"/> Emergency stop.<br><input type="checkbox"/> Inspection and maintenance.<br><input type="checkbox"/> What to do if the machine requires repairs.<br><input type="checkbox"/> Anything specific you must not do.                                                                                                                                                                                                                          |             |
| Induction sign off                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |             |
| Contractor worker's signature:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Date:       |
| Client signature:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Date:       |

## Appendix 6 - Site Safety Rules

Construction and minor maintenance, repairs and alteration.

| These site safety rules are brief safety reminders.<br>If you are unsure of <u>any</u> safety issue, always ask. |                         |                                                                                                                                                                                                                                                                                                             | Red Book     |
|------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| 1.                                                                                                               | Site Induction          | All workers working on the site must attend a workplace induction.<br>Visitors that have not been inducted must be accompanied and under the control of a competent person at all times.<br>All workers to be made aware of:                                                                                | S1.1<br>S2.6 |
| 1.1                                                                                                              | Site management plan    | Refer to the Site Management Plan for full requirements for this project and site.<br>Take particular note of site specific hazards and issues.                                                                                                                                                             |              |
| 1.2                                                                                                              | Policy                  | All workers are authorised and expected to safely stop work and immediately notify their supervisor if a task carries an unacceptable level of risk.                                                                                                                                                        | C.1          |
| 1.3                                                                                                              | No energised work       | No working near exposed energised electrical wiring unless electrically qualified and approved.<br>Qualified electrical workers may only make contact with exposed energised electrical wiring with suitable instruments for the purpose of testing.<br>Electrical workers must observe safety precautions. | S1.3         |
| 1.4                                                                                                              | Drugs and Alcohol       | The consumption of alcohol and illegal drugs on this site is prohibited.                                                                                                                                                                                                                                    | S1.4         |
| 1.5                                                                                                              | Behaviour               | No unsafe behaviour such as pranks, skylarking and horseplay.                                                                                                                                                                                                                                               | S1.10        |
| 1.6                                                                                                              | Fatigue                 | Persons must ensure they have a break of at least 10 hours before the start of shift. Persons are to declare when they feel fatigued.                                                                                                                                                                       | S1.5         |
| 1.7                                                                                                              | Access control          | All hazardous areas and activities must be isolated with lockout/ tagout systems, barricades, guardrails, or handrails as appropriate and with standard safety danger/warning signs conspicuously displayed.                                                                                                | S4.1         |
| 1.8                                                                                                              | Public access           | Implement security measures to prevent unauthorised access to the construction area (as for Access Control).<br>Effective barricades, fencing and overhead protection will be used where applicable.                                                                                                        | S1.13        |
| 1.9                                                                                                              | Traffic control         | All entry to, movement on, passage adjacent to, and exit from the work site of persons, vehicles and equipment will be controlled in accordance with required site procedures.                                                                                                                              | S4.12        |
| 1.10                                                                                                             | Emergency plans         | All workers to be aware of plans and procedures for alarm, orderly evacuation, assembly point and emergency notifications.                                                                                                                                                                                  | S3.1         |
| 1.11                                                                                                             | Fire prevention         | Be aware of the nearest fire fighting equipment to your place of work.<br>Fire extinguishers must be nearby when performing hot work.                                                                                                                                                                       | S3.4         |
| 1.12                                                                                                             | Accidents and Incidents | Report <u>all</u> incidents including accidents, injuries and dangerous incidents to your Supervisor immediately.<br>Notify the office of injuries and complete incident report.                                                                                                                            | S1.11        |
| 1.13                                                                                                             | First Aid               | Workers requiring first aid treatment are to contact the first aid officer who will administer the treatment and record the injury in the Register of Injuries and Treatments including the person's name and the nature of the injury or ailment.                                                          | S3.1<br>S3.6 |
| 1.14                                                                                                             | PPE                     | All workers, including contractors & visitors, must wear the appropriate PPE, commensurate with documentation, signage, identified hazards and work activities.<br>Maintain PPE in sound condition, wear correctly and store securely.                                                                      | C.6          |
| 1.15                                                                                                             | Housekeeping            | Housekeeping procedures must be followed, and the workplace must remain clean and tidy at all times.                                                                                                                                                                                                        | S4.3         |
| 1.16                                                                                                             | Noise                   | All noise levels to be maintained below 85db.<br>Fit noise suppression to all plant and equipment.<br>Notify if that level is to be exceeded and ensure protective measures are in place.                                                                                                                   | S5.9         |

| <b>These site safety rules are brief safety reminders.<br/>If you are unsure of <u>any</u> safety issue, always ask.</b> |                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                | <b>Red Book</b>          |
|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 1.17                                                                                                                     | Hazardous atmospheres               | Suitable risk control measures must be in place to protect against the potential impact of contaminated or flammable atmospheres.<br>Confirm as safe before entry.                                                                                                                                                                                                                                                             | S4.7                     |
| 1.18                                                                                                                     | Airborne contaminants               | Apply containment and/or extraction techniques for possible dust emissions and wear PPE where there are potential risks.                                                                                                                                                                                                                                                                                                       | S14.6<br>S6.1            |
| 1.19                                                                                                                     | Smoking                             | Smoking is prohibited in all site offices, crib sheds and company vehicles.<br>Smoking shall only be permitted in designated areas.                                                                                                                                                                                                                                                                                            | S1.7                     |
| 1.20                                                                                                                     | Falling objects                     | Use lanyards, wrist straps, kick boards, nets or barriers to remove risk of falling objects hitting persons below. Restrict access to areas below where necessary.                                                                                                                                                                                                                                                             | S8.2                     |
| 1.21                                                                                                                     | Mobile phones                       | Phones can be a distraction. Stop work and move to a safe location before use.                                                                                                                                                                                                                                                                                                                                                 | S1.8                     |
| 2.                                                                                                                       | Site hazards                        | If you see a hazard you must inform your Supervisor.<br>Don't wait for someone to get hurt and don't assume someone else will report it.<br>If you think it is unsafe don't proceed, contact and report to your Supervisor.<br>The following hazards may be present:                                                                                                                                                           | C.2                      |
| 2.1                                                                                                                      | Chemicals                           | Hazardous chemicals must be used and stored in compliance with safety data sheets (SDSs).                                                                                                                                                                                                                                                                                                                                      | S7.7                     |
| 2.2                                                                                                                      | Flammable or combustible substances | Confirm flammability levels and use appropriate equipment, tools and instruments to avoid possible ignition.<br>Flammable and combustible chemicals must be declared and stored in designated areas.                                                                                                                                                                                                                           | S4.7<br>S13.5 to<br>13.8 |
| 2.3                                                                                                                      | Asbestos                            | Workers must be trained for asbestos awareness and immediately report any suspect materials and take all necessary precautions if there is a likelihood of disturbance including PPE, dust suppression and waste disposal.                                                                                                                                                                                                     | S7.11                    |
| 2.4                                                                                                                      | Electricity                         | No energised work – except for testing. Test before you touch.<br>Undertake a risk assessment and isolate the work area before commencing work. Work to SWMSs.<br>All electrical work, plant and equipment must comply with relevant WHS regulations, electrical safety regulations, Australian Standards (where cited), Codes of Practice and procedures.                                                                     | S1.3                     |
| 2.5                                                                                                                      | Electrical tools                    | Do not use electrical power tools or cords unless they have been tested and tagged within the last 3 months. Inspect leads before use for damage. Keep leads off the ground using insulated lead stands or hooks. Observe requirements for AS/NZS3012:2010.<br>Always use earth leakage devices (e.g. safety switches/RCDs).                                                                                                   | S13.3                    |
| 2.6                                                                                                                      | Plant and Equipment                 | All plant and equipment must be inspected before use to check it is in good working order. High risk plant must be periodically inspected and tested as well, and should be tagged to show that it is in date. If it is out of date do not use it and report it to your Supervisor.<br>All safety devices fitted to plant must be fully functional and be used, e.g. seat belts, guards, warning beepers and flashing beacons. | C.5                      |
| 2.7                                                                                                                      | Hazardous areas                     | Substations, confined spaces, trenches and working at heights have specific requirements, training, permits and precautions. Know what is required - follow the SMP.<br>Similarly for areas with Polychlorinated biphenyl (PCB), lead or asbestos materials, unless properly instructed don't work on these.                                                                                                                   | C4<br>C.7                |
| 2.8                                                                                                                      | Slips and trips                     | Construction sites by their nature have uneven surfaces, work materials and objects protruding from the floor. Take due care, follow clear designated access ways and maintain housekeeping standards.                                                                                                                                                                                                                         | S4.3                     |
| 3.                                                                                                                       | Work preparation                    | Have a clear understanding of the work to be undertaken and how it is to be done. Ensure that all hazards and risks are identified and suitable risk control measures are in place before commencing the work.                                                                                                                                                                                                                 | S2.1                     |
| 3.1                                                                                                                      | Training                            | Site-specific and necessary work specific safety training will be provided and undertaken by all workers on site prior to starting work and will be documented. All workers on the work site must attend appropriate refresher training and be involved in regular discussion of work site WHS and general matters.                                                                                                            | S1.1                     |

| <b>These site safety rules are brief safety reminders.<br/>If you are unsure of <u>any</u> safety issue, always ask.</b> |                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>Red Book</b>                        |
|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| 3.2                                                                                                                      | Certificates of Competency                        | All workers must carry certificates of competency on them e.g. Electrical worker / Electrician. These must be presented on request.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                        |
| 3.3                                                                                                                      | Apprentice supervision                            | Apprentice electricians must have a designated supervisor (qualified electrician) and the level of supervision can be less than direct subject to relevant training and confirmation of competence.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | S13.2                                  |
| 3.4                                                                                                                      | Risk management                                   | Conduct a risk assessment prior to commencing work.<br>You need to have suitable risk control measures in place for all hazards and risks. If they are not already documented then prepare a record and communicate to all that may be affected.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | C.2                                    |
| 3.5                                                                                                                      | Safe Work Method Statement (SWMS)                 | All high risk construction work (HRCW) must be covered by an applicable SWMS. Workers must have been instructed in all of the applicable SWMS.<br>SWMS must be readily accessible to workers.<br>Stop work if a SWMS for HRCW is not being followed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | S2.7                                   |
| 3.6                                                                                                                      | Pre-work briefings                                | Supervisors must conduct Pre-work briefings on site before the start of each shift or when work conditions/location change.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | S2.6                                   |
| 4.                                                                                                                       | Work practices                                    | Always use the highest available form of safety protection and risk control measures. Eliminate the hazard wherever possible.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | C.2                                    |
| 4.1                                                                                                                      | Electrical Safety                                 | All cables, underground, overhead and in conduits and troughing must be considered energised and electrical clearances maintained.<br>The presence and location of all electrical cables will be identified before starting adjacent work.<br>Isolate electrical equipment before commencing work – Test Before You Touch.<br>You must be briefed and sign onto risk assessment / permit to confirm understanding of conditions.                                                                                                                                                                                                                                                                                                       | S1.3<br>C.12<br>C.9<br><br>C.10<br>C.2 |
| 4.2                                                                                                                      | Work at height                                    | Prevent falls. All work at heights must comply with the relevant WHS regulations, electrical safety regulations, Australian Standards (where cited), Codes of Practice and procedures.<br>Ensure that barriers, barricades, covers secure openings.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | C.6                                    |
| 4.3                                                                                                                      | Ladders                                           | Observe rules for safe ladder use - Short duration work and access.<br>Stable positioning and footing, three points of contact at all times, and your feet at least 1m from the top.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | S8.3                                   |
| 4.4                                                                                                                      | Hazardous manual handling                         | Before doing any manual tasks assess the task and see if there is a way it can be done using mechanical aids such as forklifts, excavators, trolleys, winches, cranes, etc. Where this is not possible you may need to seek assistance to share the load and take breaks. Where manual lifting is unavoidable, correct manual handling techniques should be used e.g. keep the back straight, bend the knees – not the back, keep loads close to the body and between waist and shoulder height. Do not twist at the waist, do not reach or overstretch. Avoid lifting loads above shoulder height.<br>Ensure all hazardous manual handling tasks are risk assessed and control measures are implemented to reduce the risk of injury. | S7.1                                   |
| 4.5                                                                                                                      | Excavating and Services                           | Call “Dial Before You Dig” 1100 to locate buried services. Never assume that plans and maps are accurate – pothole by hand or non-destructive methods to identify the exact location of services before starting mechanical excavation, earthmoving, boring or grading.                                                                                                                                                                                                                                                                                                                                                                                                                                                                | S4.9                                   |
| 4.6                                                                                                                      | Scaffolding, formwork and other structural frames | All scaffolding, formwork, and work with other structural frames must comply with relevant WHS regulations, electrical safety regulations, Australian Standards (where cited), Codes of Practice and procedures.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | S8.5                                   |
| 4.7                                                                                                                      | Body jewellery                                    | Jewellery items that are conductive or may become entangled are not to be worn.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | S6.1                                   |

## Appendix 7 – Emergency Plan

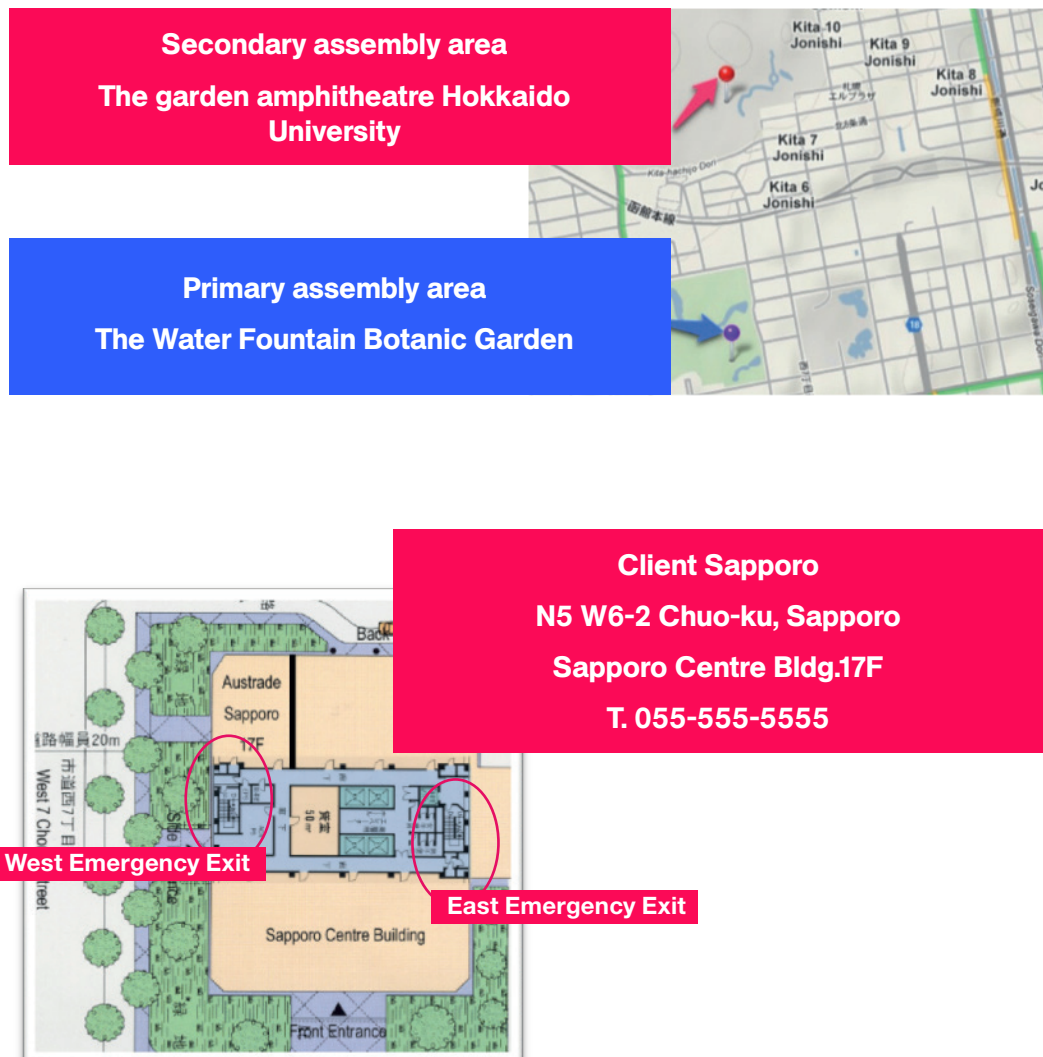
| Emergency plan                              |                                                                                                                                                      |                                                        |                        |               |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|------------------------|---------------|
| Contracting Business agency or trading name |                                                                                                                                                      |                                                        |                        |               |
| Location of works                           |                                                                                                                                                      |                                                        |                        |               |
| Key Contacts                                | Name                                                                                                                                                 |                                                        | Company                | Phone Numbers |
| Site Supervisor – Client Organisation       |                                                                                                                                                      |                                                        |                        |               |
| Site Supervisor – Contractor                |                                                                                                                                                      |                                                        |                        |               |
| Site Supervisor – Sub-Contractor            |                                                                                                                                                      |                                                        |                        |               |
| Contract Manager – Client Organisation      |                                                                                                                                                      |                                                        |                        |               |
| Contract Manager – Contractor               |                                                                                                                                                      |                                                        |                        |               |
| Office Manager – Client Organisation        |                                                                                                                                                      |                                                        |                        |               |
| Fire Warden                                 |                                                                                                                                                      |                                                        |                        |               |
| Emergency Services                          | Police<br>Fire<br>Ambulance<br>All Services                                                                                                          | 000 or 131444<br>000<br>000<br>112 from a mobile phone | Site First Aid Officer |               |
|                                             |                                                                                                                                                      |                                                        |                        |               |
| Site Rules                                  | Site rules are to be obeyed at all times. Site rules are attached to this plan.                                                                      |                                                        |                        |               |
| First Aid                                   | First aid is available on site. Refer to the attached emergency evacuation plan.                                                                     |                                                        |                        |               |
| Emergency Assembly                          | Refer to the attached emergency evacuation plan.                                                                                                     |                                                        |                        |               |
| Nearest Medical Facility                    | Name of Facility                                                                                                                                     |                                                        | Phone Numbers          |               |
|                                             |                                                                                                                                                      |                                                        |                        |               |
| Workplace safety inspections                | Specify areas of attention                                                                                                                           |                                                        | Dates of inspections   |               |
| On starting                                 | All workers are following procedures and site rules as outlined in management plans. Apprentices and new workers are appropriately supervised        |                                                        |                        |               |
| During works                                | Check work processes; especially lock out/tag out, exclusion zones, fall protection and other safety systems, to ensure effectiveness and compliance |                                                        |                        |               |
| On completion                               | Work area is returned without hazards. All circuits have been properly tested, results recorded and certificate of electrical compliance issued.     |                                                        |                        |               |



## Example Emergency Evacuation Plan

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | <p>In the case of an emergency/evacuation an announcement will be broadcasted through the building speaker system.</p> <p><b>Emergency Evacuation</b></p> <p>The emergency signal in this building is a series of beeps, which may be accompanied by a verbal message. When the beeps change tone (into a longer whooping sound), evacuation is mandatory. The floor wardens will be the point of contact and can be identified by a red helmet. Please adhere to instructions. The emergency assembly point is the "Botanic Gardens" next to the water fountain. Please wait here for further instructions. (Map next page).</p>                                     |
| 2. | <p>We have two emergency exits which are marked as follows:</p> <div style="text-align: center;">  <span>or</span>  </div> <p>The entrance to the exits are located:</p> <p>Opposite the Large Open Plan Office<br/>At the End of the Back Corridor<br/>Opposite Main Entrance to the Office</p> <p>The following illuminated signs will guide you to these exits:</p> <div style="text-align: center;">  </div> |
| 3. | <p>Each Emergency Exit is secured with a Break Glass Device which in the Case of an Emergency and the door does not automatically open can be pushed this will automatically release the lock on the door and allow free access.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 4. | <p>Emergency Phone Numbers:<br/>Police, Ambulance &amp; Fire 000</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 5. | <p>Fire Extinguisher located opposite the Large Open Plan Office.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 6. | <p>First-aid kit is located in the Kitchen behind the door on the wall, a further First-aid kit is located in the HR Office with John Smith our First Aid Officer - Phone 555 5555</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Example Emergency Evacuation Diagram



## Appendix 8 – Checklist for Contractor Reporting / Records

| WHS Records / Pro Formas                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Checklist | Comments |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------|
| <ul style="list-style-type: none"> <li>• Site inspection checklist</li> <li>• Register of hazards</li> <li>• Hazard identification and risk assessments</li> <li>• Safe Work Method Statements</li> <li>• Safe work procedures</li> <li>• Work permits</li> <li>• Traffic management plan</li> <li>• Details of qualifications held by individuals</li> <li>• Safety equipment register</li> <li>• Training / qualifications records</li> <li>• Training matrix</li> <li>• Induction checklist and record</li> <li>• Record of Toolbox Talks</li> <li>• Minutes of workplace WHS meetings</li> <li>• Plant and equipment records</li> <li>• Electrical equipment inspection and test register</li> <li>• Inspection, testing and servicing records</li> <li>• Hazardous chemicals register</li> <li>• Safety Data Sheets</li> <li>• Emergency plan and procedures</li> <li>• Incident and illness/injury reports</li> <li>• First aid treatment records</li> <li>• Injury and workers compensation management records</li> <li>• Corrective and improvement actions</li> <li>• Supplier WHS performance report</li> <li>• Contractor evaluation report</li> </ul> |           |          |
| Electrical installation records and pro formas                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |          |
| Electrical inspection and test plan                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |          |
| Electrical installation test sheet to cover test results for: <ul style="list-style-type: none"> <li>• Continuity of the earthing system</li> <li>• Insulation resistance</li> <li>• Polarity</li> <li>• Correct circuit connections</li> <li>• Verification of impedance required for automatic disconnection of supply (earth fault-loop impedance)</li> <li>• Operation of RCDs</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |          |

## Appendix 9 - Checklist for Electrical Contractor SMP

| Organisation and Project Details                                                                                                                                                   |                          |                               |                          |            |             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|--------------------------|------------|-------------|
| Electrical Contractor business or trading name                                                                                                                                     |                          |                               |                          |            |             |
| ACN/ABN                                                                                                                                                                            |                          | Number of workers             |                          |            |             |
| Scope of works                                                                                                                                                                     |                          |                               |                          |            |             |
| Works to be provided if engaged as a 'Client' Group Supplier under this Agreement are categorised as (check all relevant categories):                                              |                          |                               |                          |            |             |
| Electrical/communications                                                                                                                                                          | <input type="checkbox"/> | Transportation                | <input type="checkbox"/> |            |             |
| General building construction                                                                                                                                                      | <input type="checkbox"/> | Engineering services          | <input type="checkbox"/> |            |             |
| General building maintenance                                                                                                                                                       | <input type="checkbox"/> | Professional consultancy      | <input type="checkbox"/> |            |             |
| Waste management                                                                                                                                                                   | <input type="checkbox"/> | Provision of accommodation    | <input type="checkbox"/> |            |             |
| Cleaning                                                                                                                                                                           | <input type="checkbox"/> | Other (please specify below): | <input type="checkbox"/> |            |             |
| Other:                                                                                                                                                                             |                          |                               |                          |            |             |
| Insurances (Attach copies of certificates of currency)                                                                                                                             | Insurer                  | Policy number                 | Limit per claim          | Limit year | Expiry date |
| Workers compensation                                                                                                                                                               |                          |                               |                          |            |             |
| Public liability                                                                                                                                                                   |                          |                               |                          |            |             |
| Professional indemnity                                                                                                                                                             |                          |                               |                          |            |             |
| Sickness and accident                                                                                                                                                              |                          |                               |                          |            |             |
| Contractor licence number                                                                                                                                                          |                          |                               |                          |            |             |
| Name of director or manager                                                                                                                                                        |                          |                               |                          |            |             |
| Business address                                                                                                                                                                   |                          |                               |                          |            |             |
| Telephone                                                                                                                                                                          |                          | Mobile                        |                          |            |             |
| Facsimile                                                                                                                                                                          |                          | Email                         |                          |            |             |
| Person responsible for managing WHS on site                                                                                                                                        |                          | Contact details               |                          |            |             |
| We <b>do/do not</b> intend to sub-contract all or part of the works. If engaged, the sub-contractors intended to be used on this site are:                                         |                          |                               |                          |            |             |
| Business                                                                                                                                                                           |                          | Contact details               |                          |            |             |
| We shall ensure that the above sub-contractors provide a SWMS for their specialised high-risk construction work, check for adequacy and monitor the work activities to those SWMS. |                          |                               |                          |            |             |
| Signed (director or manager)                                                                                                                                                       |                          |                               |                          | Date       |             |

| #  | Aspect                                                                                                                                                  | Y/N<br>(N/A) | Reference/Comment |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------|
| 1. | Electrical Contractor's written WHS management plan. Addressing:                                                                                        |              |                   |
|    | • Processes for communication to workers                                                                                                                |              |                   |
|    | • Processes for review and revision and communication                                                                                                   |              |                   |
|    | • Provision of a copy to the client prior to starting                                                                                                   |              |                   |
|    | • Process for document control and approval, release and distribution                                                                                   |              |                   |
|    | Record retention and readily accessible and available for inspection until<br>1. project is complete, or<br>2. if notifiable incident, then for 2 years |              |                   |
| 2. | Site safety policy/policies                                                                                                                             |              |                   |
| 3. | Description of contract                                                                                                                                 |              |                   |
|    | • Site address                                                                                                                                          |              |                   |
|    | • Brief summary of Scope of work                                                                                                                        |              |                   |
| 4. | Persons and roles of persons with WHS responsibilities                                                                                                  |              |                   |
|    | • Position and WHS role                                                                                                                                 |              |                   |
|    | • Site management structure                                                                                                                             |              |                   |
|    | • Statement of responsibilities                                                                                                                         |              |                   |
|    | • Register of names against positions                                                                                                                   |              |                   |
| 5. | Consultation, co-operation and co-ordination of activities                                                                                              |              |                   |
|    | Processes for consultation with workers and other contractors                                                                                           |              |                   |
|    | • Involvement in safety decisions                                                                                                                       |              |                   |
|    | • Induction                                                                                                                                             |              |                   |
|    | • Made aware of content of plan                                                                                                                         |              |                   |
|    | • Toolbox talks                                                                                                                                         |              |                   |
|    | • Pre-work briefings                                                                                                                                    |              |                   |
|    | • WHS review meetings                                                                                                                                   |              |                   |
| 6. | Incident management                                                                                                                                     |              |                   |
|    | • Emergency plans and procedures                                                                                                                        |              |                   |
|    | • First aid facilities                                                                                                                                  |              |                   |
|    | • System for notifications to Client<br>- All safety incidents including dangerous incidents                                                            |              |                   |
|    | Notifiable incidents<br>Notify regulator<br>Preserve incident site                                                                                      |              |                   |
|    | Safety performance monitoring and reporting to Client                                                                                                   |              |                   |
| 7. | Risk management process                                                                                                                                 |              |                   |
|    | Process and schedule of workplace inspections                                                                                                           |              |                   |
|    | • Register of hazards                                                                                                                                   |              |                   |
|    | • Process for conducting risk assessments                                                                                                               |              |                   |
|    | • Identification of hazards                                                                                                                             |              |                   |
|    | • Assessing risk (where required)                                                                                                                       |              |                   |
|    | • Implementation of risk control measures                                                                                                               |              |                   |
|    | • Review                                                                                                                                                |              |                   |
|    | • Records if prepared                                                                                                                                   |              |                   |
|    | Do you use Safe Work Procedures as risk management tool                                                                                                 |              |                   |
|    | • Register of relevant procedures                                                                                                                       |              |                   |
|    | Process for Safe Work Method Statements                                                                                                                 |              |                   |

| #   | Aspect                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Y/N<br>(N/A) | Reference/Comment |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------|
|     | SWMSs are required for: <ul style="list-style-type: none"> <li>• High Risk Construction Work</li> <li>• Permitted Energised Electrical Work (specifically testing)</li> </ul>                                                                                                                                                                                                                                                                                              |              |                   |
|     | • Preparation                                                                                                                                                                                                                                                                                                                                                                                                                                                              |              |                   |
|     | • Readily accessible to workers                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                   |
|     | • Communicating and informing workers, others                                                                                                                                                                                                                                                                                                                                                                                                                              |              |                   |
|     | • Method of use                                                                                                                                                                                                                                                                                                                                                                                                                                                            |              |                   |
|     | • Assessment and Review                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |                   |
|     | Method of obtaining SWMS from Sub contractors (if applicable)                                                                                                                                                                                                                                                                                                                                                                                                              |              |                   |
|     | Arrangements for ensuring <ul style="list-style-type: none"> <li>• work is carried out in accordance with SWMSs</li> <li>• Supervision and monitoring</li> <li>• Stopping immediately (when safe) if not to SWMS</li> </ul>                                                                                                                                                                                                                                                |              |                   |
|     | Managing risk regarding <ul style="list-style-type: none"> <li>• the storage, movement and disposal of construction materials and waste at the workplace</li> <li>• the storage at the workplace of plant that is not in use</li> <li>• traffic in the vicinity of the workplace that may be affected by construction work carried out in connection with the construction project</li> <li>• essential services at the workplace</li> </ul>                               |              |                   |
| 8.  | Site specific health and safety rules                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                   |
| 9.  | WHS Training <ul style="list-style-type: none"> <li>• Arrangements for induction training</li> <li>• Provision of information, training and instruction</li> </ul>                                                                                                                                                                                                                                                                                                         |              |                   |
| 10. | Other issues to address in the SMP <ul style="list-style-type: none"> <li>• Processes for remote and isolated workers (if relevant)</li> <li>• General work environment</li> <li>• Workplace security and public safety</li> <li>• Personal protection equipment (PPE)</li> <li>• Managing risk of airborne contaminants</li> <li>• Hazardous atmospheres</li> <li>• Storage of flammable or combustible substances</li> <li>• Falling objects</li> <li>• Falls</li> </ul> |              |                   |

| #   | Aspect                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Y/N<br>(N/A) | Reference/Comment |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------|
| 11. | WHS Records / Pro Formas                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |              |                   |
|     | <ul style="list-style-type: none"> <li>• Site inspection checklist</li> <li>• Register of hazards</li> <li>• Hazard identification and risk assessments</li> <li>• Safe Work Method Statements</li> <li>• Safe work procedures</li> <li>• Work permits</li> <li>• Traffic management plan</li> <li>• Details of qualifications held by individuals</li> <li>• Safety equipment register</li> <li>• Training / qualifications records</li> <li>• Training matrix</li> <li>• Induction checklist and record</li> <li>• Record of Toolbox Talks</li> <li>• Minutes of workplace WHS meetings</li> <li>• Plant and equipment records</li> <li>• Electrical equipment inspection and test register</li> <li>• Inspection, testing and servicing records</li> <li>• Hazardous chemicals register</li> <li>• Safety Data Sheets</li> <li>• Emergency plan and procedures</li> <li>• Incident and illness/injury reports</li> <li>• First aid treatment records</li> <li>• Injury and workers compensation management records</li> <li>• Corrective and improvement actions</li> <li>• Supplier WHS performance report</li> <li>• Contractor evaluation report</li> </ul> |              |                   |
| 12. | Electrical installation records and pro formas                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |              |                   |
|     | <ul style="list-style-type: none"> <li>• Electrical inspection and test plan</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |              |                   |
|     | <ul style="list-style-type: none"> <li>• Electrical installation test sheet to include test results for:</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |              |                   |
|     | <ul style="list-style-type: none"> <li>• Continuity of the earthing system</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |                   |
|     | <ul style="list-style-type: none"> <li>• Insulation resistance</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                   |
|     | <ul style="list-style-type: none"> <li>• Polarity</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |                   |
|     | <ul style="list-style-type: none"> <li>• Correct circuit connections</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |              |                   |
|     | <ul style="list-style-type: none"> <li>• Verification of impedance required for automatic disconnection of supply (earth fault-loop impedance)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |              |                   |
|     | <ul style="list-style-type: none"> <li>• Operation of RCDs</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |              |                   |



## Appendix 10 – Electrical Installation Testing Record Sheet

[illegible]

## Appendix 11 – Electrical Inspection and Test Plan

| Client:       |                               | Project:                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                     |                                                 |                                          |                                                   |                              |                      |                     |          |  |
|---------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------|------------------------------------------|---------------------------------------------------|------------------------------|----------------------|---------------------|----------|--|
| Site address: |                               | Contact number:                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                     |                                                 |                                          |                                                   |                              |                      |                     |          |  |
| Ref           | Operation or Stage of Work    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Stage/<br>Frequency | Records                                         | Requirement Stan-<br>dard/ specification | Acceptance Criteria                               | Inspection/test<br>procedure | Inspection: What/Who |                     |          |  |
|               | Description                   | Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                     |                                                 |                                          |                                                   |                              | Worker               | Service<br>Provider | Customer |  |
| 1             | Incoming materials inspection | Conform to order                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Each delivery       | Delivery Dock-<br>ets                           | Orders as placed                         | Specification and codes                           | Check against<br>orders      | H                    | S                   |          |  |
| 2             | Storage and protection        | As specified                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Each week           | Visual                                          | Protected from<br>weather                | Safe, secure/adequate<br>protection               | Visual                       | X                    | S                   | S        |  |
| 3             | Preliminary activities        | Task completion                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Each work<br>area   | Hazard Assess-<br>ment procedure                | Specification, as<br>attached            | All tasks completed                               | Visual                       | H                    | W                   | S        |  |
| 4             | Pre-start                     | Ready to start work                                                                                                                                                                                                                                                                                                                                                                                                                                               | Each work<br>area   | Fencing /<br>signage/<br>Protective<br>clothing | As per site specific<br>procedure        | To authority requirements                         | Checked                      | H                    | W                   | S        |  |
| 5             | Carry out work                | To trade codes & authority<br>requirements                                                                                                                                                                                                                                                                                                                                                                                                                        | Each<br>sequence    | Checklist                                       | Specification as per<br>SWMS attached    | Checklist and test panel                          | Checked                      | H (A)                | W                   | S        |  |
| 5a            | Conduit installation          | To trade codes & authority<br>requirements                                                                                                                                                                                                                                                                                                                                                                                                                        | Each<br>sequence    | Checklist                                       | SWMS002                                  | Checklist                                         | Checked                      | X                    | W                   | S        |  |
| 5b            | Cable installation            | To trade codes & authority<br>requirements                                                                                                                                                                                                                                                                                                                                                                                                                        | Each<br>sequence    | Checklist                                       | SWMS012                                  | Checklist<br>Earth test report                    | Checked                      | X                    | W                   | S        |  |
| 5c            | Cable connections             | To trade codes & authority<br>requirements                                                                                                                                                                                                                                                                                                                                                                                                                        | Each<br>Sequence    | Checklist                                       | SWMS013                                  | Checklist<br>HV test report                       | Checked                      | X                    | W                   | S        |  |
| 6.            | Pre-handover activities       | All matters finalised, clean<br>and tidy                                                                                                                                                                                                                                                                                                                                                                                                                          | Each work<br>area   | Wiring<br>diagrams/<br>checklist                | Specification, as<br>attached            | All items completed to<br>specification           | Final inspection             | H                    | H                   | H        |  |
| W =<br>Point  | Witness                       | A 'witness point provides a party (such as the customer, service provider and regulatory authority) with the opportunity to witness the inspection or test or aspect of the work, at their discretion.                                                                                                                                                                                                                                                            |                     |                                                 |                                          |                                                   |                              |                      |                     |          |  |
| H =           | Hold Point                    | A 'hold' point defines a point beyond which work may not proceed without the authorisation of a designated service provider or authority. This 'designated service provider or authority' might be an agency or other customer's representative/ authorised person, or a regulatory authority (such as Integral Energy, Sydney Water, Council and/or WorkCover etc.) representative, or it may be the service provider inspecting its service provider or worker. |                     |                                                 |                                          |                                                   |                              |                      |                     |          |  |
| H (A) =       | Inspection/test by authority  | S = Surveillance or monitoring by supervisor                                                                                                                                                                                                                                                                                                                                                                                                                      |                     |                                                 |                                          | X = Self inspection by worker performing the work |                              |                      |                     |          |  |

Electrical work to AS3000:2007 and Installation and Wiring Rules unless otherwise required.

## Appendix 12 – Contract Evaluation Report

This evaluation report should be completed at the conclusion of the contract by the person within the agency responsible for monitoring and supervising the contract.

|                         |              |
|-------------------------|--------------|
| Project name:           |              |
| Project number:         | Prepared by: |
| Electrical Contractor:  | Date:        |
| Project specific risks: |              |

| Supplier's performance                        |       |
|-----------------------------------------------|-------|
|                                               | Total |
| Number of first aid treatments                |       |
| Number of lost time injuries                  |       |
| Number of days lost due to injury             |       |
| Number of deaths                              |       |
| Number of dangerous incidents                 |       |
| Number of hazard inspections conducted        |       |
| Number of non-conformance reports issued      |       |
| Hours worked on the project (per worker days) |       |

| Contractor WHS performance               | Comments |
|------------------------------------------|----------|
| Contract WHS structure and system        |          |
| Consultation practices and procedures    |          |
| Contract induction and safety training   |          |
| Safe work practices and procedures       |          |
| Risk assessment                          |          |
| Workplace health and safety inspections  |          |
| Incident recording and investigation     |          |
| Health and safety performance monitoring |          |
| Emergency procedures                     |          |
| Name:                                    |          |
| Signature:                               | Date:    |

## Appendix 13 – Sample Electrical Certificate of Safety (Electrical Compliance)

Refer to your State or Territory electricity supply authority or your electricity regulator for approved certificate. Details of installation:

|                               |              |               |  |
|-------------------------------|--------------|---------------|--|
| <b>Name of owner/occupier</b> |              | Phone         |  |
| <b>Installation Address</b>   |              |               |  |
| Building:                     | Floor/level: | Unit/Shop No: |  |

### Installation work details:

|                                |                                             |                                           |                                                                   |                                                                    |                                           |
|--------------------------------|---------------------------------------------|-------------------------------------------|-------------------------------------------------------------------|--------------------------------------------------------------------|-------------------------------------------|
| <b>Type of installation</b>    | <input type="checkbox"/> Residential        | <input type="checkbox"/> Commercial       | <input type="checkbox"/> Industrial                               | <input type="checkbox"/> Rural                                     | <input type="checkbox"/> Other            |
| <b>Special conditions</b>      | <input type="checkbox"/> over 100A          | <input type="checkbox"/> High voltage     | <input type="checkbox"/> Hazardous area                           | <input type="checkbox"/> Generator                                 | <input type="checkbox"/> Unmetered supply |
| <b>Type of work</b>            | <input type="checkbox"/> Network connection | <input type="checkbox"/> New installation | <input type="checkbox"/> Additions and alterations to switchboard | <input type="checkbox"/> Additions and alterations to sub-circuits | <input type="checkbox"/> Repair           |
| <b>Date of electrical work</b> | Started:                                    |                                           | Finished:                                                         |                                                                    |                                           |

### Details of equipment

| Equipment                                            | Rating                           | Number                         | Particulars of work                                                                             |
|------------------------------------------------------|----------------------------------|--------------------------------|-------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> Switchboard                 |                                  |                                |                                                                                                 |
| <input type="checkbox"/> Circuit                     |                                  |                                |                                                                                                 |
| <input type="checkbox"/> Lighting                    |                                  |                                |                                                                                                 |
| <input type="checkbox"/> Socket outlet               |                                  |                                |                                                                                                 |
| <input type="checkbox"/> Appliance                   |                                  |                                |                                                                                                 |
| Estimated increase in load A/Phase                   |                                  |                                | <input type="checkbox"/> Increase load is within capacity of installation/service mains         |
| <input type="checkbox"/> Work is connected to supply |                                  |                                | <input type="checkbox"/> Work is not connected to supply pending inspection by Supply Authority |
| <b>Work carried out by or supervised by</b>          | <b>Electrical licence number</b> | <b>Signature (Electrician)</b> | <b>Date</b>                                                                                     |
|                                                      |                                  |                                |                                                                                                 |

### Test Report (please submit all electrical test report sheets to the client)

|                                                                                                                                                                                            |                                                                     |                                |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|--------------------------------|-------------|
| Earthing system integrity (ohms)                                                                                                                                                           | Residual current device operation                                   |                                |             |
| Insulation resistance (Meg ohms)                                                                                                                                                           | Visual check that installation is suitable for connection to supply |                                |             |
| Polarity                                                                                                                                                                                   | Stand-alone power system complies with AS4509                       |                                |             |
| Correct circuit connections                                                                                                                                                                | Fault loop impedance                                                |                                |             |
| I hereby confirm that the electrical wiring work described in this report has been tested in accordance with AS/NAS3017 by the following persons and complies with AS/NZS3000 Wiring Rules |                                                                     |                                |             |
| <b>Work carried out by or supervised by</b>                                                                                                                                                | <b>Electrical licence number</b>                                    | <b>Signature (Electrician)</b> | <b>Date</b> |
|                                                                                                                                                                                            |                                                                     |                                |             |

### Certification

|                                                                                                                                                              |                       |                               |             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-------------------------------|-------------|
| I hereby notify that the electrical wiring work described in this report has been tested in accordance with relevant Electrical Legislation and requirements |                       |                               |             |
| <b>Name of Electrical Contractor</b>                                                                                                                         | <b>Licence number</b> | <b>Signature (Contractor)</b> | <b>Date</b> |
|                                                                                                                                                              |                       |                               |             |

## Appendix 14 – Electrical Wiring Schedule

Building: ..... Address: .....

Floor: ..... Distribution Board number: .....

Supplied from: .....

Date energised: .....

| CB Number | RCD Y/N | CB Size | Wire size | Description of service | Approximate Locations / Rooms |
|-----------|---------|---------|-----------|------------------------|-------------------------------|
|           |         |         |           |                        |                               |
|           |         |         |           |                        |                               |
|           |         |         |           |                        |                               |
|           |         |         |           |                        |                               |
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## Appendix 15 – Checklist for Monitoring Workplace Hazards

This table is a guide only and is not an exhaustive list of hazards and risk controls. You should consider the type of work being undertaken and identify and control hazards accordingly.

| Hazard                        | Possible Cause                                | Suggested Control Measure                                                                                                                                                                                                                                                                                                                                          |
|-------------------------------|-----------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Traffic Hazards            | Working in close proximity to roads           | <ul style="list-style-type: none"> <li>• Use witches hats or temporary barriers to cordon off sections of road</li> <li>• Closure of road</li> <li>• Use safety signs</li> <li>• Speed restriction signs displayed and enforced</li> </ul>                                                                                                                         |
| 2. Manual Handling            | Handling of large items                       | <ul style="list-style-type: none"> <li>• Use of lifting aids</li> <li>• Imposed restrictions on certain activities</li> <li>• Requirements for two person lifts</li> <li>• Training of workers</li> </ul>                                                                                                                                                          |
|                               | Use of heavy hand held tools e.g. jack hammer | <ul style="list-style-type: none"> <li>• Use of support harness, where appropriate</li> <li>• Limits on duration of use</li> </ul>                                                                                                                                                                                                                                 |
|                               | Handling of heavy objects                     | <ul style="list-style-type: none"> <li>• Provide mechanical aids</li> <li>• Redesign object or task</li> </ul>                                                                                                                                                                                                                                                     |
| 3. Contact with Heat          | Hot Materials                                 | <ul style="list-style-type: none"> <li>• Provide appropriate protective clothing and training</li> </ul>                                                                                                                                                                                                                                                           |
|                               | Fire in the workplace                         | <ul style="list-style-type: none"> <li>• Keep workplace clear of waste materials</li> <li>• Issue of hot work permit</li> <li>• Remove flammable materials or store correctly</li> <li>• Provide adequate fire fighting equipment</li> <li>• Provide fire fighting training to workers</li> <li>• Eliminate ignition sources from flammable atmospheres</li> </ul> |
| 4. Contact with Electricity   | Faulty electric leads and tools               | <ul style="list-style-type: none"> <li>• Tools and leads used by Contractors are inspected as per inspection and testing requirements</li> </ul>                                                                                                                                                                                                                   |
|                               | No earth leakage detectors                    | <ul style="list-style-type: none"> <li>• Residual current devices in all circuits</li> <li>• Residual current devices tested monthly</li> </ul>                                                                                                                                                                                                                    |
|                               | Electric leads on ground                      | <ul style="list-style-type: none"> <li>• Electrical leads kept elevated and clear of work areas</li> </ul>                                                                                                                                                                                                                                                         |
|                               | Electrical leads in damp areas                | <ul style="list-style-type: none"> <li>• All electric leads kept dry and off the ground</li> </ul>                                                                                                                                                                                                                                                                 |
|                               | Electric leads tied to metal rails            | <ul style="list-style-type: none"> <li>• All electric leads are kept insulated</li> </ul>                                                                                                                                                                                                                                                                          |
|                               | Electrical items not isolated                 | <ul style="list-style-type: none"> <li>• Ensure permit to work system followed</li> <li>• Lock-out and equipment tag procedure</li> </ul>                                                                                                                                                                                                                          |
|                               | Contact with underground or overhead cables   | <ul style="list-style-type: none"> <li>• Location of services to be established</li> <li>• Services to be isolated when working in proximity</li> <li>• Establish safe clearance distances</li> </ul>                                                                                                                                                              |
| 5. Exposure to Noise          | Equipment not silenced                        | <ul style="list-style-type: none"> <li>• Fit noise suppression to noisy plant and equipment</li> </ul>                                                                                                                                                                                                                                                             |
|                               | Not wearing appropriate protection            | <ul style="list-style-type: none"> <li>• All workers to wear appropriate personal protective equipment (PPE) (hearing protectors)</li> </ul>                                                                                                                                                                                                                       |
|                               | Excessive exposure time to noisy areas        | <ul style="list-style-type: none"> <li>• Regulate worker exposure to noise</li> </ul>                                                                                                                                                                                                                                                                              |
| 6. Contact with High Pressure | Burst air lines                               | <ul style="list-style-type: none"> <li>• Air hoses in good condition and regularly inspected</li> </ul>                                                                                                                                                                                                                                                            |
|                               | Hoses becoming disconnected                   | <ul style="list-style-type: none"> <li>• All hose connections fitted with pins or chains</li> </ul>                                                                                                                                                                                                                                                                |
|                               | Using compressed air to clean clothing        | <ul style="list-style-type: none"> <li>• Prohibit and instruct workers on dangers</li> </ul>                                                                                                                                                                                                                                                                       |
|                               | Improper handling of gas cylinders            | <ul style="list-style-type: none"> <li>• Cylinders stored upright and secured</li> </ul>                                                                                                                                                                                                                                                                           |
|                               | Defective pressure gauges                     | <ul style="list-style-type: none"> <li>• All pressure gauges inspected regularly for defects</li> </ul>                                                                                                                                                                                                                                                            |

| Hazard                              | Possible Cause                                              | Suggested Control Measure                                                                                                                                                                                                                                                         |
|-------------------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7. Contact with Hazardous Chemicals | Incorrect handling procedures                               | <ul style="list-style-type: none"> <li>All workers trained in SDS requirements</li> </ul>                                                                                                                                                                                         |
|                                     | Lack of information                                         | <ul style="list-style-type: none"> <li>Review SDS's and assess risks</li> </ul>                                                                                                                                                                                                   |
|                                     | Not wearing appropriate PPE                                 | <ul style="list-style-type: none"> <li>Hazardous chemicals stored and labelled correctly</li> </ul>                                                                                                                                                                               |
|                                     | Incorrect storage                                           | <ul style="list-style-type: none"> <li>Hazardous chemicals stored and labelled correctly</li> </ul>                                                                                                                                                                               |
|                                     | Elevated exposure levels                                    | <ul style="list-style-type: none"> <li>Provide mechanical ventilation</li> <li>All workers provided with appropriate PPE</li> </ul>                                                                                                                                               |
| 8. Contact with Radiation           | Exposure to arc welding                                     | <ul style="list-style-type: none"> <li>Welding operations shielded</li> </ul>                                                                                                                                                                                                     |
|                                     | Not wearing appropriate PPE                                 | <ul style="list-style-type: none"> <li>All workers wear appropriate PPE</li> </ul>                                                                                                                                                                                                |
| 9. Struck Against                   | Protruding objects in access routes                         | <ul style="list-style-type: none"> <li>Protruding objects are removed or marked</li> <li>Provide appropriate PPE (hard hat, safety boots)</li> </ul>                                                                                                                              |
|                                     | Not wearing appropriate PPE                                 | <ul style="list-style-type: none"> <li>Provide appropriate PPE &amp; training</li> </ul>                                                                                                                                                                                          |
|                                     | Personnel running in the workplace                          | <ul style="list-style-type: none"> <li>Workers exercise restraint and walk</li> </ul>                                                                                                                                                                                             |
| 10. Struck By Object                | Objects falling from work platforms                         | <ul style="list-style-type: none"> <li>All work platforms fitted with toe-boards</li> <li>Fence off areas below to prevent access</li> <li>Materials stacked securely</li> <li>All workers wear appropriate PPE (hard hats)</li> <li>Secure loose objects to structure</li> </ul> |
|                                     | Debris from grinding operations                             | <ul style="list-style-type: none"> <li>Workers wear appropriate PPE</li> <li>Shield grinding operations</li> </ul>                                                                                                                                                                |
|                                     | Wind-blown particles                                        | <ul style="list-style-type: none"> <li>All workers wear appropriate PPE</li> </ul>                                                                                                                                                                                                |
| 11. Fall from Height                | No handrails                                                | <ul style="list-style-type: none"> <li>All work platforms have secure handrails</li> </ul>                                                                                                                                                                                        |
|                                     | Working outside handrails                                   | <ul style="list-style-type: none"> <li>Workers wear full fall arrest type harness</li> </ul>                                                                                                                                                                                      |
|                                     | Floor penetrations not covered                              | <ul style="list-style-type: none"> <li>All floor penetrations covered or barricaded</li> </ul>                                                                                                                                                                                    |
|                                     | Ladders not secured                                         | <ul style="list-style-type: none"> <li>All ladders secured to prevent movement</li> <li>Ladders to extend at least 9mm above landings</li> </ul>                                                                                                                                  |
|                                     | Unsafe area                                                 | <ul style="list-style-type: none"> <li>Tag and fence to prevent access</li> </ul>                                                                                                                                                                                                 |
| 12. Slips and Falls                 | Access routes obstructed by materials/objects               | <ul style="list-style-type: none"> <li>All access routes kept clear of materials and debris</li> <li>Mobility impaired access provisions addressed</li> </ul>                                                                                                                     |
|                                     | Leads and hoses across access routes                        | <ul style="list-style-type: none"> <li>All leads kept clear of ground or covered</li> </ul>                                                                                                                                                                                       |
|                                     | Slippery surfaces                                           | <ul style="list-style-type: none"> <li>All surfaces used for access kept dry and in good condition</li> </ul>                                                                                                                                                                     |
|                                     | Safety footwear not appropriate                             | <ul style="list-style-type: none"> <li>Workers wear appropriate safety footwear</li> </ul>                                                                                                                                                                                        |
|                                     | Poor visibility                                             | <ul style="list-style-type: none"> <li>Provide adequate lighting</li> </ul>                                                                                                                                                                                                       |
| 13. Caught Between                  | Operating plant                                             | <ul style="list-style-type: none"> <li>Guarding of rotating plant and hand tools</li> <li>Safe work procedures to be followed</li> <li>Provide roll over cage protection</li> <li>Pre-start daily safety inspection</li> </ul>                                                    |
|                                     | Moving plant                                                | <ul style="list-style-type: none"> <li>Workers kept clear when operating plant</li> <li>Fit reverse alarms to plant and check operation</li> </ul>                                                                                                                                |
|                                     | Moving loads                                                | <ul style="list-style-type: none"> <li>All workers kept clear during crane operations</li> </ul>                                                                                                                                                                                  |
|                                     | Loads tipping or swinging                                   | <ul style="list-style-type: none"> <li>Load slings properly secured</li> </ul>                                                                                                                                                                                                    |
|                                     | Materials being positioned                                  | <ul style="list-style-type: none"> <li>Safe Work Procedures (SWP) for moving heavy loads</li> </ul>                                                                                                                                                                               |
| 14. Overstress                      | Safe Working Loads (SWL) exceeded during lifting operations | <ul style="list-style-type: none"> <li>Compliance with SWL and radius charts on cranes</li> <li>All lifting gear checked regularly</li> </ul>                                                                                                                                     |
|                                     | Sprains and strains                                         | <ul style="list-style-type: none"> <li>All workers trained in safe manual handling techniques</li> </ul>                                                                                                                                                                          |



| Hazard                               | Possible Cause                            | Suggested Control Measure                                                                                                                                                                                                                                                                        |
|--------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15. Ergonomic Hazards                | Poor work posture                         | <ul style="list-style-type: none"> <li>• Work station to conform with ergonomic standards</li> <li>• Seating to conform with ergonomic standards</li> <li>• Training of workers</li> <li>• Provide adequate task lighting</li> </ul>                                                             |
|                                      | Use of excessive force                    | <ul style="list-style-type: none"> <li>• Provide mechanical aids</li> <li>• Modify workplace design</li> </ul>                                                                                                                                                                                   |
|                                      | Repetitive movements                      | <ul style="list-style-type: none"> <li>• Modify task requirements</li> <li>• Job rotation</li> </ul>                                                                                                                                                                                             |
| 16. Asbestos Hazards                 | Accidental disturbance or contact         | <ul style="list-style-type: none"> <li>• Asbestos materials identified and labelled</li> <li>• Asbestos materials removed from workplace</li> <li>• SWPs developed</li> </ul>                                                                                                                    |
| 17. Biological Hazards               | Needle stick injury                       | <ul style="list-style-type: none"> <li>• Provide appropriate waste disposal containers</li> <li>• Provide workers with PPE</li> <li>• Develop safe work procedures and train workers</li> <li>• Provide immunisation program</li> </ul>                                                          |
|                                      | Potential exposure to HIV, hepatitis      | <ul style="list-style-type: none"> <li>• Develop safe work procedures and train workers</li> <li>• Immunisation program</li> </ul>                                                                                                                                                               |
|                                      | Potential exposure to Legionella bacteria | <ul style="list-style-type: none"> <li>• Provide workers with PPE</li> <li>• Implement microbial control procedures</li> </ul>                                                                                                                                                                   |
| 18. Emergency Management/ Evacuation | Inadequate access/egress routes           | <ul style="list-style-type: none"> <li>• Provide appropriate entry and exit routes</li> <li>• Provide appropriate entry and exit signage</li> <li>• Ensure access ways are clear</li> <li>• Implement emergency control plan</li> <li>• Provide emergency evacuation procedures/plans</li> </ul> |
|                                      | No exit signage                           | <ul style="list-style-type: none"> <li>• Provide appropriate signage</li> </ul>                                                                                                                                                                                                                  |
|                                      | Blocked access ways                       | <ul style="list-style-type: none"> <li>• Ensure blocked access ways are clear</li> <li>• Periodical workplace inspections</li> </ul>                                                                                                                                                             |
|                                      | Inoperable emergency equipment            | <ul style="list-style-type: none"> <li>• Ensure fire equipment is periodically maintained</li> <li>• Ensure that a fire equipment schedule is implemented</li> </ul>                                                                                                                             |

## Appendix 16 – Hazard Identification and Risk Assessment

HRA Part 1

|                                                                            |                     |                |                   |                                   |                      |
|----------------------------------------------------------------------------|---------------------|----------------|-------------------|-----------------------------------|----------------------|
| <b>Contractor Name</b>                                                     |                     |                |                   |                                   | <b>Revision date</b> |
| <b>Contractor Address</b>                                                  |                     |                |                   |                                   |                      |
| <b>Client Name</b>                                                         | <b>Project Name</b> | <b>Section</b> | <b>Issue Date</b> | <b>Electrical Site Supervisor</b> | <b>Prepared by</b>   |
|                                                                            |                     | Electrical     |                   |                                   |                      |
| <b>Risk Level (likelihood and severity): 1 = High, 2 = Medium, 3 = Low</b> |                     |                |                   |                                   |                      |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                |                   |                                           |                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-------------------------------------------|--------------------|
| <b>Job stage description:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                |                   |                                           | <b>Start date:</b> |
| <b>Refer to inspection checklist below, relevant WHS legislation and electrical legislation, Codes of Practice, Australian Standards, applicable SWMS, SWP, workplace procedures and the NECA Red Book.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                |                   |                                           |                    |
| <b>Job task / activity</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Hazard and Risk</b>                                                                                                                                         | <b>Risk Level</b> | <b>Control Measures / Applicable SWMS</b> |                    |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                |                   |                                           |                    |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                |                   |                                           |                    |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                |                   |                                           |                    |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                |                   |                                           |                    |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                |                   |                                           |                    |
| 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                |                   |                                           |                    |
| 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                |                   |                                           |                    |
| ✓                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | The applicable SWMSs and SWPs accompanying this HRA have been reviewed and confirmed as appropriate for these activities on this worksite.                     |                   |                                           |                    |
| ✓                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Site conditions and rules have been assessed and communicated to relevant workers. Consult with other trades / workers in the area.                            |                   |                                           |                    |
| ✓                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Safety observer for testing not required. Appropriate energised testing is critical to ensure that electrical workers are aware of the status of energisation. |                   |                                           |                    |
| <p>Test for de-energised every time before you touch any exposed conductors.</p> <p>The identified Control Measure/s are designed to eliminate the risk (wherever possible) or otherwise minimise to a tolerable level.</p> <p>The persons responsible for ensuring the risk Control Measures are in place are the electrical supervisor / worker doing the job.</p> <p>All PPE and test equipment shall be inspected prior to use, to ensure it is safe to use/operate and is fit for purpose.</p> <p>All workers to be vigilant in relation of changes in safety conditions and workplace environment.</p> <p>All workers are authorised and expected to safely stop work and immediately notify their supervisor if a task carries an unacceptable level of risk.</p> |                                                                                                                                                                |                   |                                           |                    |

Pre-Start Preparation and Site Inspection checklist (Below are some areas to consider – not required to be marked) HRA Part 2

|                                                                                                  |   |                                                                      |   |                                                                                                   |   |
|--------------------------------------------------------------------------------------------------|---|----------------------------------------------------------------------|---|---------------------------------------------------------------------------------------------------|---|
| Authority has been given to proceed with works                                                   | ✓ | Location of nearest first aid kit is known                           | ✓ | Safety equipment check                                                                            | ✓ |
| Others in the area are aware of the works                                                        | ✓ | Location of fire extinguishers known                                 | ✓ | Test equipment check                                                                              | ✓ |
| Hot Work Permit completed                                                                        | ✓ | Those doing the work are inducted                                    | ✓ | Hand tools (and power tools) check                                                                | ✓ |
| Confined spaces certification required                                                           | ✓ | Barricades and signage are in-place                                  | ✓ | Ladders check                                                                                     | ✓ |
| Precautions for working near water are in place                                                  | ✓ | Alarm and/or detection isolations completed                          | ✓ | Electrical leads and tools tagged, connected to RCD                                               | ✓ |
| Necessary Safety Data Sheets are accessible and hazardous chemicals labeled and stored correctly | ✓ | Scaffolding or platforms secure and clear, edge protection in place. | ✓ | Weather, wet, sun, wind, temp., dust, noise<br>Excessive heat or cold                             | ✓ |
| Lockout kit and Danger Tags                                                                      | ✓ | Work area adequately ventilated and well lit                         | ✓ | WHS and electrical legislation, Codes of Practice, Australian Standards and client specifications | ✓ |
| Documentation and information available                                                          | ✓ | Work area and access clear, tidy and dry                             | ✓ | Polychlorinated biphenyl (PCBs), Asbestos, Synthetic mineral fibres (SMFs) etc.                   | ✓ |
| Work near live exposed conductors, cabling or equipment                                          | ✓ | Emergency exit routes known, clear and well lit                      | ✓ | Clean-up and rubbish disposal plan                                                                | ✓ |
| Manual Handling                                                                                  | ✓ |                                                                      |   |                                                                                                   |   |

| HRA Signoff:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |             | (Worker consultation, instruction, training, toolbox talks, review, acceptance record) |           |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|----------------------------------------------------------------------------------------|-----------|------|
| I, the undersigned, acknowledge, that:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |             |                                                                                        |           |      |
| <ul style="list-style-type: none"> <li>I have been consulted regarding the content of the PRE-START INSPECTION HAZARD IDENTIFICATION AND RISK ASSESSMENT (HRA), SWMSs and SWPs, the relevant hazards, control measures, rules and requirements have been explained to me and are clearly understood by me,</li> <li>I have read, understand and accept, this HRA and documents referenced in the control measures, including “No Live Work Policy”, SWMSs and SWPs, and</li> <li>I, the undersigned, acknowledge, understand and accept that:</li> <li>I shall only carry out work for which I am trained, instructed, equipped and competent,</li> <li>I have advised my supervisor of any individual needs in relation to carrying out the work safely,</li> <li>I will comply with the HRA, “No Live Work Policy”, SWMSs and SWPs, otherwise work must stop immediately,</li> <li>I will be vigilant regarding hazards and the suitability of the HRA, SWMS and SWPs for the task at hand and implement further control measures where required,</li> <li>I understand that I am authorised and expected to safely stop work and immediately notify my supervisor if a task carries an unacceptable level of risk.</li> </ul> |             |                                                                                        |           |      |
| #                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | WORKER NAME | ROLE                                                                                   | SIGNATURE | DATE |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                                                                                        |           |      |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                                                                                        |           |      |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                                                                                        |           |      |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |             |                                                                                        |           |      |

## Appendix 17 – Safe Work Method Statement – Electrical Testing

|                                                                                                                                 |                                                                 |                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <b>Work activity:<br/>Job description</b>                                                                                       |                                                                 | <b>E-SWMS #</b>                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>E-SWMS 001</b> |
| <b>Electrical Contractor:<br/>contact details</b>                                                                               |                                                                 | <b>Client:<br/>contact details</b>                        |                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |
| <b>Electrical Supervisor:<br/>Contact phone</b>                                                                                 |                                                                 | <b>Workplace<br/>location:</b>                            |                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |
| <b>Person responsible for ensuring compliance with SWMS:<br/>What measures are in place to ensure compliance with the SWMS?</b> |                                                                 | <b>Date SWMS received:</b>                                |                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |
| <b>Person responsible for reviewing SWMS control measures:</b>                                                                  |                                                                 | <b>Date SWMS received by reviewer:</b>                    |                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |
| <b>How will the SWMS control measures be reviewed?</b>                                                                          |                                                                 |                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |
| <b>Review date:</b>                                                                                                             |                                                                 |                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |
| <b>Task Step</b>                                                                                                                | <b>What are the tasks involved?</b>                             | <b>What are the hazards and risks?</b>                    | <b>Reviewer's signature:</b>                                                                                                                                                                                                                                                                                                                                                                                                              |                   |
| 1                                                                                                                               | Conduct / confirm workplace risk assessment HRA and secure area | Electric shock                                            | <b>What are the control measures?</b><br>Test before you touch<br>Identify tasks and appoint competent personnel for work <ul style="list-style-type: none"> <li>• Qualified licensed electrician</li> <li>• Instructed persons under supervision</li> </ul> Inspect the work area and identify potential hazards<br>Identify and review available SWMSs and SWPs<br>Confirm suitability of work processes and record additional measures |                   |
| 2                                                                                                                               | Plan and ensure coordination of activities                      | Unscheduled disruptions to others<br>Lack of coordination | Consult person/s with management control<br>Consult with workers and other trades in the area<br>Notify those potentially affected by power disruption                                                                                                                                                                                                                                                                                    |                   |
| 3                                                                                                                               | Is a Safety Observer required?                                  | N/A                                                       | Not required if no serious level of risk exposure                                                                                                                                                                                                                                                                                                                                                                                         |                   |
| 4                                                                                                                               | Safety Observer instruction (if required)                       | Unresponsive                                              | Ensure Safety Observer is competent and trained in electrical rescue and cardio-pulmonary resuscitation (CPR) – current in last 12 months<br>Instruct Safety Observer regarding: <ul style="list-style-type: none"> <li>• Planned work process</li> <li>• Emergency Procedures</li> <li>• Isolation point/s</li> <li>• Focus on the role of observing</li> </ul>                                                                          |                   |

|    |                                                                                                 |                                                   |                                                                                                                                                                                                                                                                                                           |
|----|-------------------------------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5  | Select tools, test equipment and PPE                                                            | Cuts, abrasions and shocks                        | Well maintained, suitably rated, checked & tested<br>Rated for the application and calibrated (if applicable)<br>Used properly                                                                                                                                                                            |
| 6  | Identify ALL energy sources to be isolated                                                      | Electric shock                                    | Test before you touch<br>Check labelling, wiring schedules and drawings<br>Confirm by switching where appropriate                                                                                                                                                                                         |
| 7  | Identify and assess isolation point/s                                                           | Electric shock<br>Difficult access                | Avoid touching exposed conductive parts<br>Clearly mark or label<br>Ensure unobstructed access of electrical workers<br>Capable of being operated quickly                                                                                                                                                 |
| 8  | Keep work area clear of obstruction                                                             | Unnecessary distraction leading to electric shock | Clear area and use appropriate barricades and signage (where necessary)<br>Maintain good housekeeping, tidy and clean                                                                                                                                                                                     |
| 9  | Confirm and record phase rotation if required for commissioning purposes prior to de-energising | Electric shock                                    | Avoid touching exposed conductive parts                                                                                                                                                                                                                                                                   |
| 10 | Switch power at isolation point on switchboard                                                  | Electric shock                                    | Prevent inadvertent contact with exposed energised components                                                                                                                                                                                                                                             |
| 11 | Secure the isolation point with lock and tag                                                    | N/A                                               | Use lock and tag or personalised lock<br>Provide contact details                                                                                                                                                                                                                                          |
| 12 | Move to work area and confirm indication of power off                                           | Strains and sprains<br>Electric shock             | Confirm power off with minimal lifting of electrical covers, e.g.<br><ul style="list-style-type: none"> <li>• Appliance not working</li> <li>• Lights off</li> <li>• Power point dead</li> </ul>                                                                                                          |
| 13 | Lift electrical cover/s as required                                                             | Electric shock from exposed electrical conductors | Test before you touch<br>Use test meter, lamp or bell to detect energised<br>Make positive contact with ALL the near exposed conductor<br>Don't use a Proximity Sensors to prove de-energised                                                                                                             |
| 14 | Check that testing meter/device is operational                                                  | Electric shock                                    | Avoid touching exposed conductive parts                                                                                                                                                                                                                                                                   |
| 15 | Undertake designated de-energised work                                                          | Strains and sprains<br>Electric shock             | Be alert to possible changes to workplace conditions, including: <ul style="list-style-type: none"> <li>• Possible new safety hazards or risks</li> <li>• Stop work if unsafe and immediately rectify or notify your supervisor</li> </ul> Use SWPs where appropriate<br>TEST EVERY TIME BEFORE YOU TOUCH |
| 16 | Before leaving, make safe                                                                       | Electric shock                                    | Ensure that no isolated conductors can be energised by switching<br>Terminate and test all conductors before energising<br>Follow re-energisation procedure                                                                                                                                               |
| 17 | On return, confirm integrity of isolation                                                       | Electric shock                                    | Check switch/s and confirm isolation by re-testing, as above                                                                                                                                                                                                                                              |
| 18 | Retain record for Supervisor / Electrical Office                                                | N/A                                               | Retain if the SWMS is revised or a Risk Assessment was prepared<br>Return to Supervisor / Office for ongoing review and improvement                                                                                                                                                                       |

**Worker consultation, instruction, training, toolbox talks, review, acceptance record:**

**Only persons who have completed the signoff are authorised to work on the relevant tasks covered by this document.**

NOTE: Work must be performed in accordance with this E-SWMS, any Risk Assessment prepared in relation to this work and any relevant Safe Work Procedures.  
Work on or near energised electrical installations or services is high risk construction work.  
This SWMS must be accessible for inspection until the energised electrical work to which this SWMS relates is completed. If the SWMS is revised, all versions should be kept.  
If a notifiable incident occurs in relation to the high risk construction work in this SWMS, the SWMS must be kept for at least 2 years from the date of the notifiable incident.

I, the undersigned, acknowledge, understand and accept that:

1. the WHS Policy, relevant Risk Assessments, SWMSs and SWPs for this task have been reviewed, explained and are clearly understood by me,
2. I shall only carry out work for which I am equipped and competent and advised my supervisor of any individual needs,
3. I will comply with all relevant Risk Control Measures, otherwise work must stop immediately,
4. I will be vigilant regarding hazards and the suitability of the identified Risk Control Measures, and
5. I understand that I am authorised and expected to safely stop work and immediately notify my supervisor if a task carries an unacceptable level of risk.

| Name of Worker(s)              | Worker signature(s) |
|--------------------------------|---------------------|
|                                |                     |
|                                |                     |
|                                |                     |
|                                |                     |
|                                |                     |
| Date SWMS received by workers: |                     |

## Rules for testing for de-energised

The process steps for Electrical Isolation are:

### Identify, Switch/Isolate, Lock, Tag and Test

This work is primarily the work of an electrician or a competent person under their supervision and this instruction template is addressed to them and relates to isolation of the low voltage circuit or sub-circuit you are intending to work on (or near).

When you isolate you must test for de-energised. You must not just depend on a proximity indicator, but you must make positive / physical contact with your probe on the conductor. You can use a test lamp; bell or meter and you must check your instrument both before and after to prove de-energised.

Note: Proximity sensors are non-contact indicators and must not to be used to prove isolation. They can be useful to detect electrical signals but are not a reliable confirmation of safe de-energisation or isolation.

Testing electrical isolation, or testing for integrity and operability (fault-finding and commissioning) of energised circuits and equipment of an electrical installation, must be conducted in a safe manner. You must have a safe system of work for live testing that includes, as a minimum, all of the following measures:

### Remember: TEST EVERY TIME BEFORE YOU TOUCH

Preparation:

1. Consult with person with management or control of the workplace before commencing, and ensure no adverse impacts, e.g. workers should be advised of possible power disruption
2. All live testing must be undertaken by competent workers:
  - a. Qualified licensed electrician
  - b. Apprentice assessed as competent by supervising licensed electrician and under their supervision
3. Use tools, test equipment and PPE that is:
  - a. suitable, checked & tested and well maintained
  - b. rated for the application and calibrated (if applicable)
  - c. used properly
4. Work in accordance with well proven Electrical Safe Work Method Statements (Appendix 17) and relevant Safe Work Procedures (Appendix 20)
5. Conduct a risk assessment prior to starting and make sure the E-SWMS is suitable for the work to be carried out. If not then document the findings either by marking up the SWMS, SWP or a Hazard Identification and Risk Assessment (HRA) form (Appendix 16)
6. Appoint a trained competent Safety Observer - not required if the only testing AND risk assessment (SWMS, SWP or HRA) shows no serious risk
  - a. Note: Any safety observer must be competent in electrical rescue and cardio-pulmonary resuscitation (CPR), instructed and have full attention to the task of observing. The observer should be aware of emergency measures including the location of the isolation point
7. Ensure the isolation point is:
  - a. clearly marked or labelled
  - b. unobstructed for easy access and exit
  - c. capable of being operated quickly
  - d. Note that this is not generally applicable to work on the supply side of main switch.

Getting started:

1. Consult with the workers who are involved and those that may be affected
2. Prevent unauthorised access to immediate work area
3. Keep work area clear of obstructions
4. Prevent inadvertent contact with exposed energised components
5. Be alert to possible changes to workplace conditions, including:
  - a. Possible new safety hazards or risks
  - b. Stop work if unsafe and immediately rectify or notify your supervisor
  - c. TEST EVERY TIME BEFORE YOU TOUCH

On completion of job:

1. Make safe – terminate all conductors before re-energising
2. If risk assessment has been prepared, retained as a record for 28 days.



## Appendix 18 - High Risk Construction Work Safe Work Method Statement

|                                                                |                                                                                                                     |                                                                                                                                                       |                                                                                               |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Work activity:<br>Job description                              |                                                                                                                     |                                                                                                                                                       | SWMS #                                                                                        |
| Electrical Contractor:<br>contact details                      | Client:<br>contact details                                                                                          |                                                                                                                                                       |                                                                                               |
| Electrical Supervisor:<br>Contact phone                        | Workplace location:                                                                                                 |                                                                                                                                                       |                                                                                               |
| High risk construction work:                                   | <input type="checkbox"/> Risk of a person falling more than 2 metres (note: in some jurisdictions this is 3 metres) | <input type="checkbox"/> Work on a telecommunication tower                                                                                            | <input type="checkbox"/> Demolition of load-bearing structure                                 |
|                                                                | <input type="checkbox"/> Likely to involve disturbing asbestos                                                      | <input type="checkbox"/> Temporary load-bearing support for structural alterations or repairs                                                         | <input type="checkbox"/> Work in or near a confined space                                     |
|                                                                | <input type="checkbox"/> Work in or near a shaft or trench deeper than 1.5 m or a tunnel                            | <input type="checkbox"/> Use of explosives                                                                                                            | <input type="checkbox"/> Work on or near pressurised gas mains or piping                      |
|                                                                | <input type="checkbox"/> Work on or near chemical, fuel or refrigerant lines                                        | <input type="checkbox"/> Work on or near energised electrical installations or services                                                               | <input type="checkbox"/> Work in an area that may have a contaminated or flammable atmosphere |
|                                                                | <input type="checkbox"/> Tilt-up or precast concrete elements                                                       | <input type="checkbox"/> Work on, in or adjacent to a road, railway, shipping lane or other traffic corridor in use by traffic other than pedestrians | <input type="checkbox"/> Work in an area with movement of powered mobile plant                |
|                                                                | <input type="checkbox"/> Work in areas with artificial extremes of temperature                                      | <input type="checkbox"/> Work in or near water or other liquid that involves a risk of drowning                                                       | <input type="checkbox"/> Diving work                                                          |
| Person responsible for ensuring compliance with SWMS:          | Date SWMS received:                                                                                                 |                                                                                                                                                       |                                                                                               |
| What measures are in place to ensure compliance with the SWMS? |                                                                                                                     |                                                                                                                                                       |                                                                                               |
| Person responsible for reviewing SWMS control measures:        | Date SWMS received by reviewer:                                                                                     |                                                                                                                                                       |                                                                                               |
| How will the SWMS control measures be reviewed?                |                                                                                                                     |                                                                                                                                                       |                                                                                               |
| Review date:                                                   | Reviewer's signature:                                                                                               |                                                                                                                                                       |                                                                                               |

| Task Step | What are the tasks involved?            | What are the hazards and risks?                                              | What are the control measures?                                                                             |
|-----------|-----------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| #         | List the work tasks in a logical order. | Identify the hazards and risks that may cause harm to workers or the public. | Describe what will be done to control the risk. What will you do to make the activity as safe as possible? |
| 1         |                                         |                                                                              |                                                                                                            |
| 2         |                                         |                                                                              |                                                                                                            |
| 3         |                                         |                                                                              |                                                                                                            |
| 4         |                                         |                                                                              |                                                                                                            |
| 5         |                                         |                                                                              |                                                                                                            |
| 6         |                                         |                                                                              |                                                                                                            |
| 7         |                                         |                                                                              |                                                                                                            |
| 8         |                                         |                                                                              |                                                                                                            |
| 9         |                                         |                                                                              |                                                                                                            |

#### Worker consultation, instruction, training, toolbox talks, review, acceptance record:

##### Only persons who have completed the signoff are authorised to work on the relevant tasks covered by this document.

NOTE: Work must be performed in accordance with this E-SWMS, any Risk Assessment prepared in relation to this work and any relevant Safe Work Procedures.  
 Work on or near energised electrical installations or services is high risk construction work.  
 This SWMS must be accessible for inspection until the energised electrical work to which this SWMS relates is completed. If the SWMS is revised, all versions should be kept.  
 If a notifiable incident occurs in relation to the high risk construction work in this SWMS, the SWMS must be kept for at least 2 years from the date of the notifiable incident.

I, the undersigned, acknowledge, understand and accept that:

1. the WHS Policy, relevant Risk Assessments, SWMSs and SWPs for this task have been reviewed, explained and are clearly understood by me,
2. I shall only carry out work for which I am equipped and competent and advised my supervisor of any individual needs,
3. I will comply with all relevant Risk Control Measures, otherwise work must stop immediately,
4. I will be vigilant regarding hazards and the suitability of the identified Risk Control Measures, and
5. I understand that I am authorised and expected to safely stop work and immediately notify my supervisor if a task carries an unacceptable level of risk.

| Name of Worker(s)              | Worker signature(s) |
|--------------------------------|---------------------|
|                                |                     |
|                                |                     |
|                                |                     |
|                                |                     |
| Date SWMS received by workers: |                     |

## Appendix 19 – Electrical Safe Work Method Statement

|                                                                |                                 |  |          |
|----------------------------------------------------------------|---------------------------------|--|----------|
| Work activity:<br>Job description                              |                                 |  | E-SWMS # |
| Electrical Contractor:<br>contact details                      | Client:<br>contact details      |  |          |
| Electrical Supervisor:<br>Contact phone                        | Workplace location:             |  |          |
| Person responsible for ensuring compliance with SWMS:          | Date SWMS received:             |  |          |
| What measures are in place to ensure compliance with the SWMS? |                                 |  |          |
| Person responsible for reviewing SWMS control measures:        | Date SWMS received by reviewer: |  |          |
| How will the SWMS control measures be reviewed?                |                                 |  |          |
| Review date:                                                   | Reviewer's signature:           |  |          |

| Task Step | What are the tasks involved? | What are the hazards and risks? | What are the control measures? |
|-----------|------------------------------|---------------------------------|--------------------------------|
| 1         |                              |                                 |                                |
| 2         |                              |                                 |                                |
| 3         |                              |                                 |                                |
| 4         |                              |                                 |                                |
| 5         |                              |                                 |                                |
| 6         |                              |                                 |                                |
| 7         |                              |                                 |                                |
| 8         |                              |                                 |                                |
| 9         |                              |                                 |                                |

**Worker consultation, instruction, training, toolbox talks, review, acceptance record:**

**Only persons who have completed the signoff are authorised to work on the relevant tasks covered by this document.**

NOTE: Work must be performed in accordance with this E-SWMS, any Risk Assessment prepared in relation to this work and any relevant Safe Work Procedures.  
Work on or near energised electrical installations or services is high risk construction work.  
This SWMS must be accessible for inspection until the energised electrical work to which this SWMS relates is completed. If the SWMS is revised, all versions should be kept.  
If a notifiable incident occurs in relation to the high risk construction work in this SWMS, the SWMS must be kept for at least 2 years from the date of the notifiable incident.

I, the undersigned, acknowledge, understand and accept that:

1. the WHS Policy, relevant Risk Assessments, SWMSs and SWPs for this task have been reviewed, explained and are clearly understood by me,
2. I shall only carry out work for which I am equipped and competent and advised my supervisor of any individual needs,
3. I will comply with all relevant Risk Control Measures, otherwise work must stop immediately,
4. I will be vigilant regarding hazards and the suitability of the identified Risk Control Measures, and
5. I understand that I am authorised and expected to safely stop work and immediately notify my supervisor if a task carries an unacceptable level of risk.

| Name of Worker(s)              | Worker signature(s) |
|--------------------------------|---------------------|
|                                |                     |
|                                |                     |
|                                |                     |
|                                |                     |
|                                |                     |
| Date SWMS received by workers: |                     |

## Appendix 20 - Safe Work Procedure

A safe work procedure (SWP) is a written instruction outlining the preferred method of performing a task/activity and how work is to be carried out in a safe and consistent manner. The safe work procedure identifies the task steps and outlines the hazards, risks and associated controls measures to be applied to ensure the task/activity is conducted in a manner that reduces the risk of incident and injury. A SWP should be prepared and used where there is a risk to health and safety, typically greater than “low”.

Safe work procedures are sometimes called safe operating procedures (usually in relation to the operation of plant and machinery) and safe work method statements (SWMS) for both High Risk Construction Work (HRCW) and for Energised Electrical Work. SWP need not be used where a SWMS exists, but some SWMS overlook high-risk activities because they are not categorised as HRCW. In these cases a SWP may be prepared and used by the worker in place of the SWMS so long as the relevant risk control measures are consistent with that SWMS.

Safe work procedures fulfil several purposes:

- outline a safe method of work for all activities in a specific job,
- provide an induction document that workers must read and understand before starting the job,
- help meet legal responsibilities for such requirements as hazard identification, risk assessment and risk control as well as being a means of providing instruction, information and training,
- help to effectively coordinate the work, the materials needed, the time required and the people involved to achieve a safe and efficient outcome, and
- can be used as a tool in quality assurance.

A SWP template is similar in appearance to a SWMS. An example SWP is on the following page.

| Task / Activity: |                          | SWP#:            |                       |
|------------------|--------------------------|------------------|-----------------------|
| Organisation:    |                          | Contact details  |                       |
| Approved by:     |                          | Phone:           | Date:                 |
| Task step #      | Work process description | Hazard and risks | Risk Control Measures |
| 1                |                          |                  |                       |
| 2                |                          |                  |                       |
| 3                |                          |                  |                       |
| 4                |                          |                  |                       |

| <p>Worker consultation, instruction, training, toolbox talks, review, acceptance record:</p> <p>Only workers who have completed the signoff are authorised to work on the relevant tasks covered by this document.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| <p>I, the undersigned, acknowledge, understand and accept that:</p> <ul style="list-style-type: none"> <li>• the WHS Policy, relevant Risk Assessments, SWMSs and SWPs for this task have been reviewed, explained and are clearly understood by me,</li> <li>• I shall only carry out work for which I am equipped and competent and will advise my supervisor of any individual needs,</li> <li>• I will comply with all relevant Risk Control Measures, otherwise work must stop immediately,</li> <li>• I will be vigilant regarding hazards and the suitability of the identified Risk Control Measures, and</li> <li>• I understand that I am authorised and expected to safely stop work and immediately notify my supervisor if a task carries an unacceptable level of risk.</li> </ul> |                  |
| Name of Worker/s                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Worker signature |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                  |

## Appendix 21 – Job Safety Assessment

### Job safety assessment sheet 1

|                                       |           |
|---------------------------------------|-----------|
| Supplier's name:                      | Date:     |
| Client:                               | Location: |
| Activity:                             |           |
| Prepared by:                          | Signed:   |
| Name of Supervisor for this activity: |           |
| Contact number/s:                     |           |

| Client approvals                                                      |     |    |                                                  |     |    |
|-----------------------------------------------------------------------|-----|----|--------------------------------------------------|-----|----|
| Do all workers have a Site Pass                                       | Yes | No | Have workers been inducted                       | Yes | No |
| Have workers been briefed on the Site Management Plan                 | Yes | No |                                                  | Yes | No |
| Have workers been briefed / inducted on emergency plan and procedures | Yes | No |                                                  | Yes | No |
| Work permits issued:                                                  |     |    |                                                  |     |    |
| Working at heights                                                    | Yes | No | Welding, oxy cutting, grinding or other hot work | Yes | No |
| Accessing the roof                                                    | Yes | No | Working on any part of the fire system           | Yes | No |
| Electrical work                                                       | Yes | No | Driving posts in the ground or digging holes     | Yes | No |
| Accessing risers                                                      | Yes | No | High risk construction work                      | Yes | No |
|                                                                       |     |    | Fire system impairment                           | Yes | No |

| JOB PREPERATION                                                                          |                                                                                                                                                       |                                                                                               |
|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Safe Work Method Statement/s for Construction Work required for (where applicable):      |                                                                                                                                                       |                                                                                               |
| <input type="checkbox"/> Risk of a person falling more than 2 metres                     | <input type="checkbox"/> Work on a telecommunication tower                                                                                            | <input type="checkbox"/> Demolition of load-bearing structure                                 |
| <input type="checkbox"/> Likely to involve disturbing asbestos                           | <input type="checkbox"/> Temporary load-bearing support for structural alterations or repairs                                                         | <input type="checkbox"/> Work in or near a confined space                                     |
| <input type="checkbox"/> Work in or near a shaft or trench deeper than 1.5 m or a tunnel | <input type="checkbox"/> Use of explosives                                                                                                            | <input type="checkbox"/> Work on or near pressurised gas mains or piping                      |
| <input type="checkbox"/> Work on or near chemical, fuel or refrigerant lines             | <input type="checkbox"/> Work on or near energised electrical installations or services                                                               | <input type="checkbox"/> Work in an area that may have a contaminated or flammable atmosphere |
| <input type="checkbox"/> Tilt-up or precast concrete elements                            | <input type="checkbox"/> Work on, in or adjacent to a road, railway, shipping lane or other traffic corridor in use by traffic other than pedestrians | <input type="checkbox"/> Work in an area with movement of powered mobile plant                |
| <input type="checkbox"/> Work in areas with artificial extremes of temperature           | <input type="checkbox"/> Work in or near water or other liquid that involves a risk of drowning                                                       | <input type="checkbox"/> Diving work                                                          |
| Electrical Safe Work Method Statement/s                                                  |                                                                                                                                                       |                                                                                               |
| <input type="checkbox"/> Testing for energised / de-energised                            | <input type="checkbox"/> Live testing for fault-finding and commissioning                                                                             | <input type="checkbox"/> Other permitted Energised Electrical Work (specify)                  |
|                                                                                          |                                                                                                                                                       |                                                                                               |
|                                                                                          |                                                                                                                                                       |                                                                                               |
|                                                                                          |                                                                                                                                                       |                                                                                               |



**Risk controls must be in place for the following hazards:**

|                                                                                  |     |    |                                                                                      |     |    |
|----------------------------------------------------------------------------------|-----|----|--------------------------------------------------------------------------------------|-----|----|
| Members of the public or other unauthorised workers entering or in the work area | Yes | No | Are barricades installed?                                                            | Yes | No |
| Weather, strong winds, electrical storms, rain                                   | Yes | No | Is it safe to continue working in these weather conditions?                          | Yes | No |
| Working alone                                                                    | Yes | No | Can you communicate in the event of emergency?                                       | Yes | No |
| Working on mechanical plant                                                      | Yes | No | Have you isolated and secured the plant to prevent starting?                         | Yes | No |
| Drilling holes in walls, floors or other surfaces                                | Yes | No | Have you verified electrical or other services in the area?                          | Yes | No |
| Driving posts in the ground or digging holes                                     | Yes | No | Have you contacted dial before you dig?                                              | Yes | No |
| Noise, dusts, eye hazards, traffic                                               | Yes | No | Do you have the appropriate PPE, gloves, hi vis, glasses etc. as appropriate?        | Yes | No |
| Working in or near client controlled areas                                       | Yes | No | Has the client been notified?                                                        | Yes | No |
|                                                                                  |     |    | Has the client authorised work?                                                      | Yes | No |
| Using fall arrest equipment, anchor points etc.                                  | Yes | No | Is the equipment and anchor points certified, undamaged and within inspection dates? | Yes | No |
| Are young workers involved                                                       | Yes | No | Is there a nominated supervisor for this job?                                        | Yes | No |
| Are licences required for the work                                               | Yes | No | Do workers have required licences for the work?                                      | Yes | No |
| Using hazardous chemicals that have vapours or are flammable                     | Yes | No | Is the area well ventilated?                                                         | Yes | No |
| Using electrical hand tools or leads                                             | Yes | No | Have electrical leads and equipment been inspected, tested and tagged?               | Yes | No |
| Working with or near electricity supply                                          | Yes | No | Do you know where to isolate and lockout the electricity supply?                     | Yes | No |

**Specify other hazards and risk controls:**

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |
|  |  |

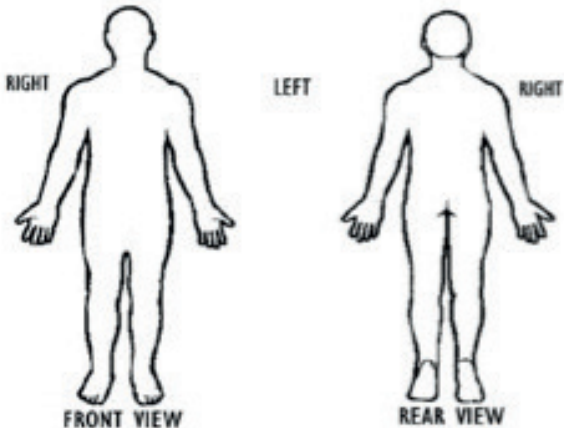
|                                                                               |     |    |
|-------------------------------------------------------------------------------|-----|----|
| Are all the above hazards and risks covered by a SWMS or Safe Work Procedure? | Yes | No |
| Have those SWMSs and SWPs been provided to the Client?                        | Yes | No |
| Have workers signed off on SWMSs relevant to their work?                      | Yes | No |
| Have workers signed off on SWPs relevant to their work?                       | Yes | No |
| Have workers signed off on this JSA (below)?                                  | Yes | No |

**Worker sign-off**

| Name | Signature | Date |
|------|-----------|------|
|      |           |      |
|      |           |      |
|      |           |      |
|      |           |      |
|      |           |      |

## Appendix 22 – Incident and Injury Report

Adapter from NSW WorkCover (HISSP)

| Details of incident (e.g. to a worker or visitor) and treatment                             |                                                                                                                                                                     |                                                                                                     |               |
|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|---------------|
| Date of incident                                                                            |                                                                                                                                                                     |                                                                                                     |               |
| Time of incident                                                                            | <input type="checkbox"/> am <input type="checkbox"/> pm                                                                                                             |                                                                                                     |               |
| Nature of incident                                                                          | <input type="checkbox"/> Dangerous incident <input type="checkbox"/> First aid <input type="checkbox"/> Medical treatment/doctor <input type="checkbox"/> Lost time |                                                                                                     |               |
| Name of injured person                                                                      |                                                                                                                                                                     |                                                                                                     |               |
| Address                                                                                     |                                                                                                                                                                     |                                                                                                     |               |
| Occupation                                                                                  |                                                                                                                                                                     |                                                                                                     |               |
| Date of birth                                                                               |                                                                                                                                                                     |                                                                                                     |               |
| Telephone                                                                                   |                                                                                                                                                                     |                                                                                                     |               |
| PCBU                                                                                        |                                                                                                                                                                     |                                                                                                     |               |
| Activity in which the person was engaged at the time of injury                              |                                                                                                                                                                     |                                                                                                     |               |
| Exact site location where injury occurred                                                   |                                                                                                                                                                     |                                                                                                     |               |
| Nature of injury – eg fracture, burn, sprain, foreign body in eye                           |                                                                                                                                                                     |                                                                                                     |               |
| Body location of injury (indicate location of injury on the diagram)                        |                                                                                 |                                                                                                     |               |
| Treatment given on site                                                                     |                                                                                                                                                                     | Name of treating person                                                                             |               |
| Referral for further treatment?<br>Yes <input type="checkbox"/> No <input type="checkbox"/> | Name of doctor or hospital                                                                                                                                          | WorkCover medical certificate received?<br>Yes <input type="checkbox"/> No <input type="checkbox"/> | Attach copies |
| Injury management required?<br>Yes <input type="checkbox"/> No <input type="checkbox"/>     | Notify return to work coordinator                                                                                                                                   | Name of return to work Coordinator                                                                  |               |
| Witness to incident (each witness may need to provide an account of what happened)          |                                                                                                                                                                     |                                                                                                     |               |
| Witness name                                                                                |                                                                                                                                                                     | Witness contact                                                                                     |               |
| Witness name                                                                                |                                                                                                                                                                     | Witness contact                                                                                     |               |

| Details of incident (e.g. property, plant or environmental damage) |  |                  |                                                         |
|--------------------------------------------------------------------|--|------------------|---------------------------------------------------------|
| Date of incident                                                   |  | Time of incident | <input type="checkbox"/> am <input type="checkbox"/> pm |
| Location of incident                                               |  |                  |                                                         |
| Details of damage to Equipment or property                         |  |                  |                                                         |
| Name of person who Received the report                             |  | Telephone        |                                                         |
| Witness name                                                       |  | Witness contact  |                                                         |

| Description of incident |
|-------------------------|
|                         |
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|                         |
|                         |

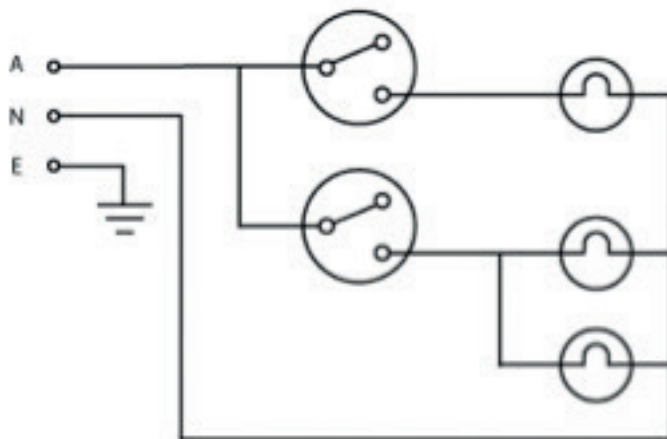
| Immediate response actions (e.g. barricades, isolation of power) to stabilise the situation |
|---------------------------------------------------------------------------------------------|
|                                                                                             |
|                                                                                             |

| Reported to                                                                                           |                                                      |
|-------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Reported to client?<br>Yes <input type="checkbox"/> No <input type="checkbox"/>                       | Provide details (when, reported to and reported by): |
| Reported to authorities / WHS regulator<br>Yes <input type="checkbox"/> No <input type="checkbox"/>   | Provide details (when, reported to and reported by): |
| Reported to workers compensation insurer?<br>Yes <input type="checkbox"/> No <input type="checkbox"/> | Provide details (when, reported to and reported by): |

| Completed by     |  |                 |  |
|------------------|--|-----------------|--|
| <b>Name</b>      |  | <b>Position</b> |  |
| <b>Signature</b> |  | <b>Date</b>     |  |

## Appendix 23 – Electrical Drawing

Example of wiring diagram of a simple switched lighting circuit



## Appendix 24 - Key Environmental Considerations

Whilst the main focus of this guide is on safety it is expected that all relevant environmental legislation, regulations, codes of practice and contractual conditions will be observed.

The contractor is expected to deliver services in an environmentally responsible manner with due consideration to the principles of Ecological Sustainable Development (ESD). The contractor should plan and manage their activities in accordance with best practice environmental management principles.

In addition to complying with legislative requirements the contractor needs to show their commitment to:

- Prevent environmental pollution from work activities they control
- Conduct business with suppliers who have a commitment to responsible environmental management
- Prevent serious or irreversible environmental damage
- Conserve biological diversity and ecological integrity
- Use the real cost of environmental factors in project decisions
- Provide training and education to workers and contractors, and
- Continually improve environmental management performance by regular reviews and setting realistic environmental objectives and targets, and reporting and investigating any significant incidents.
- Work should not proceed where there is risk of any significant environmental impact.

Broad areas of consideration may include:

- Environmental permits approvals and licences
- Heritage and cultural significance
- Protection of vegetation and wildlife
- Energy conservation
- Noise management (Environmental)
- Air quality and dust control
- Management of waste water
- Liquid chemical spill management and response
- Soil disposal (including contamination)
- Recycling and disposal of trade waste.

For further information on environmental protection you should consult:

Environmental legislation

Research Ecologically Sustainable Development (ESD)

Standards for Environmental Management System addressing AS14001 and legislation

## Appendix 25 - Key WHS Duties and Obligations

**WARNING:** The key duties in the model WHS Act and Regulations listed below apply to an Electrical Contractor when working with a client. While Part 4.7 General Electrical Safety in Workplaces and Energised Electrical Work applies in jurisdictions which have enacted the model WHS Act and Regulations, some States have retained their Electricity Safety Acts and Regulations. It is the Electrical Contractor's responsibility to ensure compliance with all relevant legislation.

The information provided is applicable to Electrical Work conducted in a commercial office or residential environment.

| SUBJECT AREA                                       | WHS REFERENCE               |
|----------------------------------------------------|-----------------------------|
| THE PRIMARY WHS DUTY OF THE BUSINESS               | Section 19                  |
| DUTY OF OFFICERS                                   | Section 27                  |
| DUTIES OF WORKERS                                  | Section 28                  |
| INCIDENT NOTIFICATION AND REPORTING                | Sections 35 - 39            |
| CONSULTATION AND COMMUNICATION                     | Sections 46 - 103           |
| MANAGING RISKS TO HEALTH AND SAFETY                | Regulations 32 - 38 and 147 |
| PROVIDE INFORMATION, TRAINING AND INSTRUCTION      | Regulation 39               |
| TRAINING                                           | Regulation 39               |
| WORKPLACE FACILITIES AND WORK ENVIRONMENT          | Regulation 40 and 41        |
| FIRST AID                                          | Regulation 42               |
| EMERGENCY PLANS                                    | Regulation 43               |
| PERSONAL PROTECTIVE EQUIPMENT                      | Regulations 44 - 47         |
| REMOTE OR ISOLATED WORK - EFFECTIVE COMMUNICATIONS | Regulation 48               |
| MANAGING RISKS FROM AIRBORNE CONTAMINANTS          | Regulations 49 and 50       |
| HAZARDOUS ATMOSPHERES                              | Regulations 51 and 52       |
| FLAMMABLE OR COMBUSTIBLE SUBSTANCES                | Regulation 53               |
| FALLING OBJECTS                                    | Regulation 54 and 55        |
| HAZARDOUS WORK - NOISE                             | Regulations 56 - 59         |
| HAZARDOUS MANUAL TASKS                             | Regulations 60 and 61       |
| CONFINED SPACES                                    | Regulations 62 - 77         |
| FALLS                                              | Regulations 78 - 80         |
| ELECTRICAL EQUIPMENT AND ELECTRICAL INSTALLATIONS  | Regulations 148 - 151       |
| ELECTRICAL WORK ON ENERGISED ELECTRICAL EQUIPMENT  | Regulations 152 - 162       |
| ENERGISED ELECTRICAL EQUIPMENT - RECORD KEEPING    | Regulation 162              |
| SAFETY OBSERVERS                                   | Regulation 161              |
| WORK NEAR OVERHEAD AND UNDERGROUND ELECTRIC LINES  | Regulation 166              |
| PLANT AND STRUCTURES                               | Regulations 185 - 288       |
| HAZARDOUS CHEMICALS                                | Regulations 328 - 418       |
| ASBESTOS CONTAINING MATERIAL                       | Regulations 419 - 529       |

## The primary WHS duty of the business

The contractor must ensure, so far as is reasonably practicable, the health and safety of all workers under their control, nor put other persons at risk from work carried out. This should include:

- a. the provision and maintenance of a work environment without risks to health and safety
- b. the provision and maintenance of safe plant and structures
- c. the provision and maintenance of safe systems of work
- d. the safe use, handling and storage of plant, structures and substances
- e. the provision of adequate facilities for the welfare at work of workers in carrying out work for the business, including ensuring access to those facilities
- f. the provision of any information, training, instruction or supervision that is necessary to protect all persons from risks to their health and safety arising from work carried out as part of the conduct of the business
- g. that the health of workers and the conditions at the workplace are monitored for the purpose of preventing illness or injury of workers arising from the work.

## Duty of Officers

An officer of the business must exercise due diligence to ensure that the business complies with their duties or obligations. Many of the key duties and obligations are listed in this Appendix.

Due diligence includes taking reasonable steps:

- a. to acquire and keep up-to-date knowledge of work health and safety matters
- b. to gain an understanding of the nature of the operations of the business and generally of the hazards and risks associated with those operations
- c. to ensure that the business has available for use, and uses, appropriate resources and processes to eliminate or minimise risks to health and safety of work activities
- d. to ensure that the business has appropriate processes for receiving and considering information regarding incidents, hazards and risks and responding in a timely way
- e. to ensure that the business has, and implements, processes for complying with any duty or obligation
- f. to verify the provision and use of the resources and processes referred to in paragraphs (c) to (e), above.

For the purposes of paragraph (e), the duties or obligations may include:

- a) reporting notifiable incidents;
- b) consulting with workers;
- c) ensuring compliance with notices issued under this Act;
- d) ensuring the provision of training and instruction to workers about work health and safety;
- e) ensuring that health and safety representatives receive their entitlements to training.

## Duties of Workers

While at work, a worker must:

- a. take reasonable care for his or her own health and safety
- b. take reasonable care that his or her acts or omissions do not adversely affect the health and safety of other persons
- c. comply, so far as the worker is reasonably able, with any reasonable instruction that is given by the person conducting the business to allow the business to comply with their duties or obligations
- d. co-operate with any reasonable policy or procedure of the business relating to health or safety at the workplace that has been notified to workers.

## Incident notification and reporting

Ensure that all incidents (including injuries and dangerous incidents) are reported to the supervisor and are recorded on the incident and injury report and provide a copy to the client upon request.

Notify the authorities if an incident results in a person being killed or if it could be defined as a 'serious injury or illness' and a 'notifiable incident'.

Preserve the incident area at the place of work so it is 'not to be disturbed' except by actions relating to emergency rescue.

A '*serious injury or illness*' of a person means an injury or illness requiring the person to have:

- (a) immediate treatment as an in-patient in a hospital; or
- (b) immediate treatment for:
  - (i) the amputation of any part of his or her body
  - (ii) a serious head injury
  - (iii) a serious eye injury
  - (iv) a serious burn
  - (v) the separation of his or her skin from an underlying tissue (such as degloving or scalping)
  - (vi) a spinal injury
  - (vii) the loss of a bodily function
  - (viii) serious lacerations; or
- (c) medical treatment within 48 hours of exposure to a substance.

A '*dangerous incident*' means an incident in relation to a workplace that exposes a worker or any other person to a serious risk to a person's health or safety emanating from an immediate or imminent exposure to:

- (a) an uncontrolled escape, spillage or leakage of a substance
- (b) an uncontrolled implosion, explosion or fire
- (c) an uncontrolled escape of gas or steam
- (d) an uncontrolled escape of a pressurised substance
- (e) electric shock
- (f) the fall or release from a height of any plant, substance or thing
- (g) the collapse, overturning, failure or malfunction of, or damage to, any plant that is required to be authorised for use in accordance with the regulations
- (h) the collapse or partial collapse of a structure
- (i) the collapse or failure of an excavation or of any shoring supporting an excavation
- (j) the inrush of water, mud or gas in workings, in an underground excavation or tunnel
- (k) the interruption of the main system of ventilation in an underground excavation or tunnel
- (l) any other event that may be required.

## Consultation and Communication

### Consultation with other duty holders

The duty holders at the worksite have a duty to consult, co-operate and co-ordinate activities where matters may overlap.

### Consultation with workers

The business must consult with workers who are, or are likely to be, directly affected by a matter relating to work health or safety. The process of consultation must be documented and consistent with the following:

- relevant information about the matter is shared
- workers are given a reasonable opportunity to:
  - express their views and to raise work health or safety issues in relation to the matter
  - contribute to the decision-making process relating to the matter



- the views of workers are taken into account by the business
- the workers consulted are advised of the outcome of the consultation in a timely manner.

Consultation is required with workers and/or HSR in relation to the following health and safety matters:

- when identifying hazards and assessing risks to health and safety arising from the work carried out or to be carried out by the business;
- when making decisions about ways to eliminate or minimise those risks;
- when making decisions about the adequacy of facilities for the welfare of workers;
- when proposing changes that may affect the health or safety of workers;
- when making decisions about the procedures for:
  - consulting with workers
  - resolving work health or safety issues at the workplace
  - monitoring the health of workers
  - monitoring the conditions at any workplace under the management or control of the business
  - providing information and training for workers; or
- when otherwise required.

Records of Consultation should include at least the following information:

- date
- location or workplace
- names and signatures of people present and consulted
- items or issues raised
- corrective actions to be undertaken and the people responsible for implementing those actions.

If the workers are represented by a health and safety representative (HSR), the consultation must involve the duly elected representative.

## Risk Management

The Electrical Contractor has a general obligation to manage the risk within the workplace.

'Harm' to a person might be injury, illness or death, resulting from a hazard.

A 'hazard' is a situation or circumstance that has the potential to harm a person.

A 'risk' is the possibility that harm might occur when exposed to a hazard.

You have a general obligation to manage risk to health and safety associated with all work processes and activities.

The process of risk management involves the following steps:

- Identify any potential hazards – find out what could cause harm.

Report any hazards that do not have a control record in the site diary or hazard listing.

- Assess the risk if necessary – understand the nature of the harm that could be caused by the hazard, how serious the harm could be and the likelihood of it happening.
- Control risks – identify and implement risk control measure/s that either eliminate the hazard or risks, or minimise the risks as far as practicable by:
  - Substituting the hazard
  - Isolating the hazard from any person exposed to it
  - Implementing engineering controls
  - If risk then remains, implement administrative controls
  - If risk still remains, use suitable personal protective equipment.

- Maintain the controls – to be effective and remain:
  - Fit for purpose
  - Suitable for the nature and duration of the work
  - Installed, set up and used correctly.
- Review and where necessary revise risk control measures so as to maintain a work environment that is without risks to health and safety. Be alert to change in information, circumstances and risk. This should occur as an ongoing process on each activity and across the project.

For further information refer to Part 3.1 of the WHS Regulations 2011, and to the model WHS Code of Practice – How to manage work health and safety risks.

In practice, before the work starts, the contractor will conduct a risk assessment, identifying hazards and assessing risks and identifying appropriate risk controls to ensure a safe work environment. If the hazards were such that the potential for serious injury, illness or death was assessed as high or significant then there will be a need to communicate this information and it should be documented. The document so prepared may take any form but could be a simple table such as the HRA in Appendix 16, however the documentation might already exist in the form of Safe Work Procedures (SWPs Appendix 20) or it may be in the form of Safe Work Method Statements (SWMSs, Appendices 18 and 19), and in that case it may only be necessary to confirm its relevance and suitability for the application or circumstance.

### **What is a safe work procedure?**

#### *Safe work procedure (SWP)*

Your PCBU may maintain a range of safe work procedures that have been developed over many years. They identify safe work practices and provide effective controls for many common workplace activities within our industry and help to create and maintain a safe workplace.

These procedures have been most effective in communicating to the skilled workers actually doing the work, suitable safety standards and safe work practices. They identify the sequence of task steps for work activities and appropriate risk control measures. The SWPs may be more detailed than the SWMSs, but the information and controls in the SWPs should be clear and succinct and must be consistent with the SWMSs relevant to the job.

SWPs assist in providing you with information and instruction; and should be confirmed as suitable for the task at hand, you need to understand the requirements and be competent in their use.

If you have any concerns then talk with your supervisor.

### **What is a safe work method statement?**

#### *Safe work method statement (SWMS)*

There are two parts to SWMSs: an administrative part that describes the circumstances of use, reviews and signoffs; and a “control table” for the work being undertaken. The control table has three columns that:

- identify the high risk construction work or energised electrical work
- specify hazards and risks associated with that work
- describe the control measures to be implemented to eliminate or minimise the risks.

The SWMS may be prepared for the specific job on hand or your company may already have a range of model SWMSs pre-prepared for common tasks and the work on hand may use several SWMSs. Where more than one SWMS applies, ensure that there are no inconsistencies between the control measures. The SWMS can reference other safe work methods, procedures or practices (e.g. SWMS or SWP) including Codes of Practice and the Red Book. Where applicable these should reference the specific chapter, section or clause.

NECA maintains a range of pre-prepared model SWMSs that have the advantage of being tested and proven over time with extensive industry input, review and improvement through ongoing consultation and feedback. The issues that are specific to the worksite (including any WHS management plan, rules or circumstances at the workplace that may affect the way the work is carried out) can be recorded in a risk assessment prepared for the relevant work. The documented risk assessment then forms part of the SWMS for that job. On longer term jobs such as on building sites it may be better to combine this information into the SWMS.

Competent workers are expected to be familiar with the requirements and control measures of SWMSs that apply to their normal work activities. They don't need to have them in the immediate work area but a copy of the SWMSs and other such material should be readily accessible to those workers.

Two types of SWMS in WHS legislation:

In WHS Regulations, SWMSs are called up in two areas:

- E-SWMS – under R.161, Division 4 of Part 4.7 – when undertaking electrical work on energised electrical equipment, and
- SWMS for HRCW – under R.299, Division 2 of Part 6.3 – in relation to high risk construction work.

The purpose of both types of SWMS is to provide details of risk control measures specifically for HRCW or specifically for energised electrical work. Other hazards such as those relating to work environment (slip and trips), hazardous manual tasks and falls from height also need to have risk control measures and these can be provided in Safe Work Procedures

*SWMS for high-risk construction work (Red Book)*

SWMS for high-risk construction work need only address work that directly involves 18 work activities identified as HRCW as listed in the following table:

| HR-ID | Types of High Risk Construction Work                                                                                                           |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | Involves a risk of a person falling more than 2 metres                                                                                         |
| 2     | Is carried out on a telecommunication tower                                                                                                    |
| 3     | Involves demolition of an element of a structure that is load-bearing or otherwise related to the physical integrity of the structure          |
| 4     | Involves, or is likely to involve, the disturbance of asbestos                                                                                 |
| 5     | Involves structural alterations or repairs that require temporary support to prevent collapse                                                  |
| 6     | Is carried out in or near a confined space                                                                                                     |
| 7     | Is carried out in or near a shaft or trench with an excavated depth greater than 1.5 metres, or a tunnel                                       |
| 8     | Involve the use of explosives                                                                                                                  |
| 9     | Is carried out on or near pressurised gas distribution mains or piping                                                                         |
| 10    | Is carried out on or near chemical, fuel or refrigerant lines                                                                                  |
| 11    | Is carried out on or near energised electrical installations or services                                                                       |
| 12    | Is carried out in an area that may have a contaminated or flammable atmosphere                                                                 |
| 13    | Involves tilt-up or precast concrete                                                                                                           |
| 14    | Is carried out on, in or adjacent to a road, railway, shipping lane or other traffic corridor that is in use by traffic other than pedestrians |
| 15    | Is carried out in an area at a workplace in which there is any movement of powered mobile plant                                                |
| 16    | Is carried out in an area in which there are artificial extremes of temperature                                                                |
| 17    | Is carried out in or near water or other liquid that involves a risk of drowning                                                               |
| 18    | Involves diving work                                                                                                                           |

On construction projects (valued at AU\$250,000 or more) the electrical contractor will provide the builder with a copy of relevant SWMS/s for HRCW. The builder has an obligation to use these SWMSs to ensure that the relevant risk control measures are in place, otherwise the work must immediately stop.

The workers that observe the risk control measures on behalf of the builder are unlikely to be qualified in the trade, so the controls listed in the SWMS for HRCW need to be phrased in a manner that is clear and understood by those workers. It may be necessary to work with the builder to prepare suitable wording for the control measures specified in the SWMS for HRCW, but all the requirements must be consistent with the contractor's SWPs.

The circumstances may arise where the SWMS for HRCW cannot be used to effectively communicate to the electrical worker, the necessary safe work procedures and practices, work steps and controls that are appropriate to the industry. In these circumstances the electrical worker may need to reference and work to their SWPs. Those SWPs need for consistent, but there is no obligation for the builder to use the SWPs to monitor the work.

Further information of SWMSs for HRCW is provided in the Code of Practice Construction Work. Note also that electrical wiring used for the purposes of construction work should be consistent with the requirements of AS/NZS3012:2010.

## Provision of information, training and instruction

Workers must be provided with suitable and adequate information, training and instruction that are readily understandable, having regard to the:

- Nature of work
- Nature of hazards and risks associated with the work
- Control measures implemented.

## Training

Regarding training, the worker should be sufficiently aware, informed, instructed and equipped so as not to place themselves in way of harm.

### General construction induction

There should be evidence that the individual workers have had general training in relation to the nature of the work and work environment. In Australia this will be the General Construction Induction described in Part 6.5 of the WHS Regulations.

### Workplace / site specific induction

This workplace specific training may cover:

- safety documents, policies and plans, including the WHS management plan Safe work procedures and SWMS
- supervisory, consultation and reporting arrangements
- workplace safety rules, including first aid provisions and emergency procedures
- workplace facilities, including their location, use and maintenance
- emergency procedures, including after-hours emergency contacts
- health monitoring requirements and procedures
- access, egress and security
- workplace specific hazards and control measures
- how safety issues are resolved, including health and safety representative arrangements
- how to report hazards and unsafe work practices
- how to report accidents, incidents and dangerous incidents
- what to do if a person is injured, including first aid provisions
- other training, such as task-specific training.

## Record worker training

Typically use a form such as:

- Worker training register
- Record of tool box talk.

Where training is not adequate, the worker should be accompanied or supervised to protect them from harm.

## Workplace facilities and work environment

So far as is reasonably practicable, the workplace should facilitate the following to control any risk to health and safety:

- Workers to enter and exit and to move
- Sufficient space
- Appropriate floors and surfaces
- Sufficient lighting to enable safe work and movement
- Ventilation
- Protection from extreme heat and cold
- Work in relation to or near essential services.

Ensure provision of adequate facilities for workers including toilets, drinking water, washing facilities and eating facilities.

## First aid

For first aid in the workplace ensure:

- the provision of first aid equipment
- that each worker has access to the equipment
- an adequate number of workers are trained to administer first aid or that workers have access to an adequate number of people who have been trained to administer first aid
- workers have access to facilities for the administration of first aid.

## Emergency preparedness

All workplaces must have an emergency plan that has been specifically developed, proven and periodically tested for the particular workplace and its specific hazards and covers the range of potential incidents. All workers at the workplace must receive information, training and instruction about implementing the emergency plan.

Develop an Emergency Plan, if a plan has not already been developed for the workplace.

In developing an emergency plan, take into account the following:

- Evacuation procedures
- Notifying emergency service organisations at the earliest opportunity
- Medical treatment and assistance
- Effective communication between the person authorised to coordinate the emergency response and all people at the workplace
- Testing of the emergency procedures – including the frequency of testing
- Information, training and instruction to relevant workers in relation to implementing the emergency procedures.

If a plan has already been developed, ensure that your workers are aware of its content.

A sample Emergency Plan is provided in the Red Book and further information is provided in Appendix 7.

## Personal protective equipment

The PCBU must provide the personal protective equipment (PPE) identified for risk control where not already provided. It must be:

- suitable having regard to the nature of the work and any hazard
- suitable in size, fit and reasonably comfortable
- maintained, repaired or replaced, including:
  - (i) clean and hygienic
  - (ii) in good working order
- used or worn by the worker

The PCBU must provide the worker with information, training and instruction in the:

- proper use and wearing of the PPE
- the storage and maintenance of PPE

The worker and others must:

- use and wear the PPE in accordance with any information, training and reasonable instruction
- must not intentionally misuse or damage the PPE
- inform the PCBU of any damage to, defect in or need to clean or decontaminate any of the PPE

## Effective communications

Where due to location, time or the nature of the work, a worker may be isolated from assistance of other persons for rescue, medical assistance and the attendance of emergency service workers; the systems of work will include suitable effective communications with the worker to give timely attention.

## Exposure to substances

You must ensure that no person is exposed to a substance or mixture in an airborne concentration that exceeds the exposure standard for the substance or mixture. Refer to each substances safety data sheet for exposure levels.

If you are not certain if the airborne concentration exceeds the relevant exposure standard; or monitoring is necessary to determine whether there is a risk to health, the PCBU must ensure that air monitoring is carried out. Records of monitoring must be retained for 30 years.

## Hazardous atmospheres

The risks (including ignitions sources) associated with a hazardous atmosphere must be managed. An atmosphere is hazardous if:

- the atmosphere does not have a safe oxygen level; or
- the concentration of oxygen in the atmosphere increases the fire risk; or
- the concentration of flammable gas, vapour, mist or fumes exceeds 5% of the LEL for the gas, vapour, mist or fumes; or
- combustible dust is present in a quantity and form that would result in a hazardous area.

## Flammable or combustible substances

All flammable or combustible substances must be kept at the lowest practicable quantity for the workplace and stored correctly.

Flammable or combustible substances include:

- flammable and combustible liquids, including waste liquids, in containers, whether empty or full; and
- gas cylinders, whether empty or full.

## Falling objects

The PCBU must eliminate or minimise the risk of an object falling and injuring a person by providing adequate protection, e.g. by maintaining a safe system of work, including:

- preventing an object from falling freely; or
- providing a system to arrest the fall of a falling object.

Examples:

1. Providing a secure barrier
2. Providing a safe means of raising and lowering objects
3. Providing an exclusion zone people are prohibited from entering

## Noise

If sounds and noises are too loud, they can cause stress and fatigue, temporary hearing loss, tinnitus (ringing of the ears), but more importantly, permanent damage to your hearing. The damage depends on how loud the noise is and how long you are exposed to it. The damage builds up gradually and you may not notice changes from one day to another. There is no cure for most of the harmful effects caused by excessive noise and preventing excessive exposure to noise is the only way to avoid hearing loss.

It should be noted that 85 decibels (dB) over an 8 hours period is the level where protection becomes essential. The risk of permanent damage increases rapidly from this level, meaning that permissible exposure times reduce quickly: a halving of time for each increase of 3 dB. The problem is that the damage at these levels is painless but the loss can well be permanent.

Generally speaking, noise is likely to be harmful when:

- the noise is as loud or louder than heavy city traffic
- you have to raise your voice to speak to someone a metre away
- things sound different after exposure to the noise
- you hear ringing or other noises in your ears after the exposure has stopped.

If this is the case then you should be wearing ear protection independent of the duration, move further away or otherwise reducing the exposure time. Options for reducing or protecting against excessive noise exposure include quieting the source, use of sound proof enclosures, closing a door or moving the source away from the work area.

To get a rough but useful measure of sound level you can download an App for your smart phone or buy good low cost sound meters. In an open space, the sound level from a single source will reduce by about 6 dB for each doubling of that distance. Sound is reduced less when spreading inside an enclosed space because of reflecting surfaces.

Machines may have the noise level displayed on the frame however the working environment and conditions including multiple sources can affect levels significantly and may make noise control difficult. Where a noise level is considered to be excessive and suitable controls cannot be found, it might be appropriate to use a trained person to measure the noise and advise on possible control measures.

Persistent noise at levels that do not damage hearing may interfere with concentration and communication causing stress and fatigue and can have other adverse health effects including high blood pressure and heart disease. It is desirable to keep noise levels below:

- 50 dB(A) – work requiring high concentration or effortless conversation
- 70 dB(A) – routine work requiring speed or attentiveness and some conversation.



## Manual handling

Manual handling (or a hazardous manual task) is a task that requires a person to lift, lower, push, pull, carry or otherwise move, hold or restrain any person, animal or thing that involves one or more of the following:

- (a) repetitive or sustained force;
- (b) high or sudden force;
- (c) repetitive movement;
- (d) sustained or awkward posture;
- (e) exposure to vibration.

This includes tasks requiring a person to lift or move loads that are unstable or unbalanced or are difficult to grasp or hold.

You need to identify, assess and control risks involved in manual handling. Things to consider relating to the hazardous manual task are:

- (a) postures, movements, forces and vibration;
- (b) the duration and frequency;
- (c) workplace environmental conditions that may affect the worker;
- (d) the design of the work area;
- (e) the layout of the workplace;
- (f) the systems and procedures of work used; and
- (g) the nature, size, weight or number of workers, animals or things involved in carrying out the task.

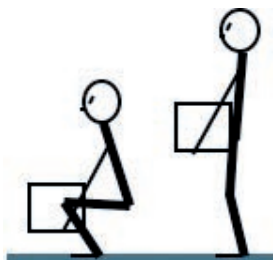
Many injuries are caused by incorrect methods of lifting and moving awkward and heavy loads. Avoid injury by observing a few simple rules:

- Do not attempt to lift or undertake any other manual task that you are not strong enough to undertake. Match your strength and fitness to the job.
- Use mechanical lifting aids where possible.
- When lifting, size up the load – if it is too heavy or awkward, get help.
- Position your feet as close as possible to the load.
- Adopt a balanced position with your knees bent.
- Get a safe, secure grip, diagonally opposite the object, with the palms of your hands, not just your fingertips.
- Beware of sharp edged materials – wear safety gloves.
- Keep your upper body erect and as straight as possible.
- Tuck your chin in, draw your shoulders back and use your body weight to take-up load weight – ensure a proper grip.
- Take a deep breath, keep your head up and begin to raise the load by straightening your legs.
- Complete the lift with your back held straight.
- Hold and carry the load close to your body to reduce the strain on your arms, shoulders and back.
- Use your body weight to counter-balance the load weight by leaning slightly backwards as you move.
- Use your feet to change direction – do not twist your body, hips or shoulders.
- Avoid carrying loads that obstruct your view, particularly on inclines, declines and stairways.
- Avoid repetitive lifts from below mid-thigh height and above shoulder height.
- Avoid single handed repetitive lifts and avoid lifting while leaning over to reach the load.
- Use team lifts for heavy, long or awkward loads, and control and coordinate team movements by signals.

## Correct lifting methods

Awkward or heavy – seek assistance.

1. Back straight and lift with your legs.
2. Back straight and hold close to chest.
3. Turn using your feet.





## Confined space

A confined space is defined in the WHS Regulations and they are not generally relevant to office and residential situations.

Where there is a need to work in a confined space, there are strict risk controls that must be observed and these are described in the WHS Regulations. Additional useful information can be obtained by referencing the Red Book.

## Areas of reduced mobility

Other areas may not be classified as a confined space but care must be taken where there is reduced mobility because of restricted movement and the inability to readily escape. Examples include working from ladders, within ceiling and roof spaces and under floors, in pits and trenches and restricted areas in and around plant and electrical equipment. Carry out a risk assessment to determine if isolation of the electricity supply is required. If in doubt contact your electricity supply authority.

## Falls

When working anywhere where there is a risk of falling from one level to another in close proximity to an opening or edge, control measures must be put in place to eliminate or minimise this risk. Control measures may include providing approved fencing, barriers, handrails, covers or edge protection that is capable of preventing the fall of a person.

Where it is not practicable to provide fixed barriers or safety mesh, the wearing of safety harnesses complete with safety lanyards should be worn. Lanyards must be fixed to an approved anchorage point.

When using a fall arrest device ensure that:

- all permanent anchorage points for the device are inspected by a competent person before their first use and then on a regular basis so they are capable of supporting the design loads (they should be labelled with the label showing the last inspection date); and
- if the load-bearing capacity of an anchorage point is impaired, the anchorage is immediately made inoperable so as to prevent its use; and
- any harness, safety line or other component of the device that shows wear or weakness must be taken out of service and inspected by a competent person; and
- all workers using the device have received training in the selection, inspection, assembly and use of the system; and
- adequate provision is made for the rescue of a person whose fall is arrested by a fall arrest device.

## Use of electrical equipment

### **Don't use unsafe electrical equipment**

Electrical equipment or a component of electrical equipment is unsafe if there are reasonable grounds for believing it to be unsafe. These reasonable grounds may be formed by observing damage to electrical equipment or electrical equipment failing testing.

The PCBU must ensure that any unsafe electrical equipment at the workplace:

- (a) is disconnected (or isolated) from its electricity supply; and
- (b) once disconnected (or isolated):
  - (i) is not reconnected until it is repaired or tested and found to be safe; or
  - (ii) is replaced or permanently removed from use.

### **Inspection and testing of electrical equipment where the environment could be hostile**

The PCBU must ensure that any electrical equipment that is to be used is regularly inspected and tested by a

competent person if the electrical equipment is:

- (a) supplied with electricity through an electrical socket outlet; and
- (b) used in a hostile environment; e.g. a construction site or where the normal use of electrical equipment exposes the equipment to operating conditions that are likely to result in damage to the equipment or a reduction in its expected life span, including conditions that involve exposure to moisture, heat, vibration, mechanical damage, corrosive chemicals or dust.

A record must be kept until the electrical equipment is the next tested; or the equipment is permanently removed from the workplace.

The record of testing may be in the form of a tag and must specify:

- (i) the name of the competent person who carried out the testing
- (ii) the date of the testing
- (iii) the outcome of the testing
- (iv) the date on which the next testing must be carried out.

In a construction environment (AS/NZS3012:2010) the test period is 3 months.

Use residual current devices (RCDs) in hostile operating environments

A 'hostile operating environment' (including all construction sites) is where:

- (a) electrical equipment is used in an environment in which the normal use of electrical equipment exposes the equipment to operating conditions that are likely to result in damage to the equipment or a reduction in its expected life span, including conditions that involve exposure to moisture, heat, vibration, mechanical damage, corrosive chemicals or dust
- (b) electrical equipment is moved between different locations in circumstances where damage to the equipment or to a flexible electricity supply cord is reasonably likely
- (c) electrical equipment is frequently moved during its normal use
- (d) electrical equipment forms part of, or is used in connection with, an amusement device.

Electrical equipment supplied through a socket outlet and used in an environment likely to reduce its expected life span must be inspected and tested by a competent person and protected by an RCD. A record of any testing must be kept.

Generally, the RCD must have a tripping current that does not exceed 30 milliamps if electricity is supplied to the equipment through a socket outlet not exceeding 20 amps.

If the supply through the electrical installation is not suitably protected then the equipment must be connected through a portable RCD.

### **Regularly test residual current devices**

The residual current devices used at the workplace must be tested regularly by a competent person to ensure that the devices are operating effectively and a record of the testing must be kept.

Portable RCDs should be push button tested daily before use (no record required) and trip time tested each three months.

Fixed RCDs in a hostile operating environment should be trip time tested each 12 months.

## **Electrical installation work**

'Electrical work' is the work of connecting electricity supply wiring to electrical equipment or disconnecting electricity supply wiring from electrical equipment; or installing, removing, adding, testing, replacing, repairing, altering or maintaining electrical equipment or an electrical installation, where:

- 'Electrical equipment' is any apparatus, appliance, cable, conductor, fitting, insulator, material, meter or

wire that uses electricity at a voltage greater than extra-low voltage.

- 'Electrical installation' is a group of items of electrical equipment that are permanently electrically connected together and can be supplied with electricity from the works of an electricity supply authority or from a generating source.

There are special exceptions and inclusions that are detailed in the Part 4.7 of the WHS Regulations, but these are not generally relevant to an office or residential workplaces.

### **Manage electrical risks**

The Electrical Contractor must manage risks to health and safety associated with electrical hazards at the workplace. This will include any risks associated with the design, construction, installation, protection, maintenance and testing of electrical equipment and electrical installations.

Electric shock is the greatest risk and the Electrical Contractor and Electrical Worker must take all steps to ensure that unsafe contact with energised conductors does not occur:

### **Prohibition on energised (live) electrical work**

With few exceptions the Electrical Contractor must ensure that electrical work is not carried out on electrical equipment while the equipment is energised.

### **Electrical Isolation**

Before electrical work is carried out, the equipment must be electrically isolated. Any exposed parts must be treated as energised until it is isolated and determined not to be energised. The normal process steps for isolation are:

*Consult, identify, switch/isolate, lock, tag and test*

### **Testing for de-energised during isolation**

This requires testing where there is a possibility that the conductors may be energised. For the test to be conclusive it is necessary for the test probes to make contact with the electrical conductors and if those conductors are exposed then this is energised electrical work. This need to test is the key exception to live work.

The step of testing to determine whether or not it is energised is paramount and must be undertaken by a competent person.

The steps to secure isolation must be sufficient to prevent possible inadvertent re-energised while the work is being carried out. In the case of high-voltage (HV) equipment, any HV exposed part must also be earthed after being de-energised.

*Remember: TEST EVERY TIME BEFORE YOU TOUCH*

### **Exceptions to the prohibition on energised (live) electrical work**

For the vast majority of other circumstances there is a prohibition on working on energised electrical equipment.

Specific activities where live work can be justified under legislation are:

- a. it is approved work on the electricity supply network and controlled by relevant electrical legislation, or
- b. it is necessary in the interests of health and safety that the electrical work is carried out on the equipment while the equipment is energised, (e.g. life support equipment in hospitals), or
- c. it is necessary that the electrical equipment to be worked on is energised in order for the work to be carried out properly, (e.g. testing, fault finding and commissioning), or
- d. it is necessary for the purposes of testing to determine the status of energisation, or
- e. there is no reasonable alternative means of carrying out the work.

The key exception is testing and it is incumbent on all electrical workers to know the status of electrical conductors for the purpose of isolation, fault finding, commissioning and testing.

It is a requirement that all electrical work on energised electrical equipment (i.e. energised electrical work or live work) is carried out using a safe system of work.

## Safe system of work

### Preparation:

1. Consult with person with management or control of the workplace before commencing, and ensure no adverse impacts, e.g. workers should be advised of possible power disruption
2. All energised testing must be undertaken by competent workers, i.e.
  - a. Qualified licensed electrician
  - b. Apprentice assessed as competent by supervising licensed electrician and under their supervision
3. Use tools, test equipment and PPE that is:
  - a. suitable, checked & tested and well maintained
  - b. rated for the application and calibrated (if applicable)
  - c. used properly
4. Work in accordance with well proven Electrical Safe Work Method Statements (E-SWMSs in Appendix 19) and relevant Safe Work Procedures (SWPs in Appendix 20).
5. Conduct a risk assessment before starting work and make sure the E-SWMS is suitable for the work to be carried out. If not then document the findings either by marking up the SWMS, SWP or a Hazard Identification and Risk Assessment form (HRA in Appendix 16).
6. Appoint a trained competent Safety Observer - not required if only testing and risk assessment (SWMS, SWP or HRA) shows no serious risk.
7. Note: Any 'safety observer' must be competent in electrical rescue and cardio-pulmonary resuscitation (CPR), instructed and have full attention to the task of observing. The observer should be aware of emergency measures including the location of the isolation point. See further information on Safety Observers below.
8. Ensure the isolation point is:
  - a. clearly marked or labelled
  - b. unobstructed for easy access and exit
  - c. capable of being operated quickly
9. Note that this is not generally applicable to work on the supply side of main switch.

### Getting started:

1. Consult with the workers that are involved and those that may be affected
2. Prevent unauthorised access to immediate work area
3. Keep work area clear of obstructions
4. Prevent inadvertent contact with exposed energised components, such as by insulation, shielding and barricades
5. Be alert to possible changes to workplace conditions, including:
  - a. Possible new safety hazards or risks
  - b. Stop work if unsafe and immediately rectify or notify your supervisor
  - c. TEST EVERY TIME BEFORE YOU TOUCH

### On completion of job:

1. Make safe – terminate all conductors before re-energising
2. If risk assessment has been prepared, retain as a record for 28 days.

## Record keeping in relation to energised work

A record of a risk assessment conducted on energised electrical work must be retained for at least 28 days after the work to which it relates is completed.

A copy of the safe work method statement must be retained until the work to which it relates is completed.

If a notifiable incident occurs in connection with the work to which the assessment or statement relates the assessment or statement (as applicable) must be retained for at least two years.

## Safety observers

With some exceptions, a Safety Observer is generally required for energised electrical work and generally when working in the Authorised Zone around overhead power lines.

For electrical work on energised electrical equipment, unless that energised work consists only of testing and the risk assessment (or SWMS) shows that there is no serious risk associated with the proposed testing, a qualified, competent Safety Observer is required to be in full attendance.

Typically, when undertaking energised electrical testing on low voltage equipment, there could be serious risks if any of the following exist:

- The electrical workers are not competent or experienced regarding the complexity and nature of the testing activity, or don't understand the strict conditions for energised testing
- The equipment to be worked on is not well maintained or in good order, and all conductors are not properly terminated or of doubtful integrity
- The nominal supply current of the section of electrical equipment is more than 400 amps per phase
- Fault currents might reasonably be more than 15kA.

The risks should be assessed to determine the need for an observer and all other precautions. The safety observer must be competent to implement control measures in an emergency; and to rescue the worker who is carrying out the work, if necessary. The safety observer must have been assessed in the previous 12 months as competent to rescue and resuscitate a person.

In performing their role, the safety observer should:

- Not carry out any other work or function that compromises their role
- Not be situated in the immediate space of the person/s undertaking the work, e.g. within the work basket of an EWP
- Be able to communicate quickly and effectively with the worker/s
- Not have any known temporary or permanent disability that might affect their role and performance
- Ready and able to act in an emergency.

## Work near overhead and underground electric lines

No person, plant, or thing at the workplace is permitted to come within an unsafe distance of an overhead or underground electric line. The safe approach distance will be determined by a risk assessment of the proposed work and the limits set in each State and Territory WHS legislation or electrical legislation. Further information is in the Red Book.

## Plant and equipment

Ensure that workers have received training in the use of plant and equipment and are familiar with hazards and risks associated with their use.

Carry out regular inspection and maintenance of all plant and equipment used.

- Ensure that plant and equipment is inspected and maintained in accordance with the relevant standards and manufacturer's recommendations. Document the inspection and maintenance history

- of each item of plant and make it available with the relevant item or plant or equipment.
- Ensure that pre-start checks, schedules of maintenance and fault reports are notified to the supervisor, documented in plant log books and made available to relevant parties on request.

Where plant and equipment is hired, the same requirements apply.

A SWMS must be prepared and implemented where high risk construction work is carried out in an area at a workplace where there is any movement of powered mobile plant.

Ensure workers using or operating plant and equipment are trained and appropriately qualified and licensed.

## Hazardous chemicals

Maintain a Hazardous Chemicals Register and advise the controller of the premises.

- Make available the relevant safety data sheet (SDS) (no older than 5 years old) and ensure risk controls are implemented as per SDS.
- Provide workers with any additional information, training and instruction on the storage, use and handling of hazardous chemicals.

## Asbestos containing material

The PCBU must not carry out, or direct or allow a worker to carry out, work involving asbestos, including manufacturing, supplying, transporting, storing, removing, using, installing, handling, treating, disposing of or disturbing asbestos or asbestos containing material (ACM).

Subject to strict guidelines, this prohibition does not apply to the following:

- maintenance of, or service work on, non friable asbestos or ACM, fixed or installed before 31 December 2003
- removal or disposal of asbestos or ACM, including demolition
- management of in situ asbestos that was installed or fixed before 31 December 2003
- laundering asbestos contaminated clothing.
- soil that a competent person has determined:
  - does not contain any visible ACM or friable asbestos; or
  - if friable asbestos is visible—does not contain more than trace levels of asbestos determined in accordance with AS 4964:2004 (Method for the qualitative identification of asbestos in bulk samples);
- naturally occurring asbestos managed in accordance with an suitable asbestos management plan.

The PCBU must ensure that exposure to airborne asbestos is eliminated where practicable or minimised and the exposure standard for asbestos is not exceeded or otherwise where the work area is effectively enclosed and negative pressure is used to prevent the release of respirable asbestos fibres.

### Asbestos removal training and licensing

The person doing the asbestos removal work must be a duly licensed asbestos removalist who is licensed to carry out the work.

This does not apply if the asbestos to be removed is minor:

- 10 square metres or less of non-friable asbestos or asbestos-contaminated dust or debris (ACD) associated with the removal of that amount of non-friable asbestos; or
- ACD that is not associated with the removal of friable or non-friable asbestos and is only a minor contamination.

For any minor asbestos removal work or where there is a likelihood of disturbance or exposure, the workers must be trained in the identification and safe handling of, and suitable control measures for, asbestos and ACM and the training records retained for 5 years after the day the worker stops working for the business.

## Appendix 26 – Electrical Regulators in Australia

Technical and safety electrical regulatory functions are performed by Commonwealth, State and Territory Electrical Regulators. These agencies regulate electrical safety standards through the administration of Electrical Acts, Regulations, Codes of Practice and electrical licensing. Electrical Regulators are provided below.

| Jurisdiction                    | Electricity Regulator                                                                                                               | Contact                                                                                                                                  |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Australia                       | Clean Energy Regulator<br>Department of Climate Change and Energy Efficiency,<br>Regulatory Division.                               | Ph: 1300 553 542 or<br>(02) 6159 3100<br>Web: <a href="http://www.cleanenergyregulator.gov.au">www.cleanenergyregulator.gov.au</a>       |
| Australian<br>Capital Territory | ACT Planning and Land Authority (ACTPLA)<br>Environment and Sustainable Development Directorate,<br>Regulation and Services Branch. | Ph: (02) 6207 1923<br>Fax: (02) 6207 1925<br>Web: <a href="http://www.actpla.act.gov.au">www.actpla.act.gov.au</a>                       |
| New South<br>Wales              | Industry and Investment NSW<br>NSW Department of Trade and Investment,<br>Minerals Resources and Energy Division,<br>Energy Branch. | Ph: 1300 136 888<br>Web: <a href="http://www.trade.nsw.gov.au/energy">www.trade.nsw.gov.au/energy</a>                                    |
|                                 | Office of Fair Trading NSW<br>NSW Department of Finance and Services.                                                               | Ph: 13 32 20 or (02) 9895 0111<br>Fax: (02) 9895 0222<br>Web: <a href="http://www.fairtrading.nsw.gov.au">www.fairtrading.nsw.gov.au</a> |
| Northern<br>Territory           | NT WorkSafe<br>Department of Employment, Education and Training,<br>Electrical Safety Team.                                         | Ph: 1800 019 115<br>Web: <a href="mailto:ntworksafe@nt.gov.au">ntworksafe@nt.gov.au</a>                                                  |
| Queensland                      | Electrical Safety Office<br>Department of Justice and Attorney General, Work<br>Health and Safety Queensland.                       | Ph: 1300 650 662<br>Web: <a href="http://www.justice.qld.gov.au">www.justice.qld.gov.au</a>                                              |
|                                 | Department of Mines and Energy<br>Department of Employment, Economic Development<br>and Innovation (DEEDI)                          | Ph: 13 25 23 (local) or<br>(07) 3404 6999<br>Web: <a href="http://www.deedi.qld.gov.au">www.deedi.qld.gov.au</a>                         |
| South Australia                 | Office of Consumer and Business Services<br>Attorney-General's Department (SA)                                                      | Ph: 131 882<br>Fax: (08) 8204 9697<br>Web: <a href="http://www.ocba.sa.gov.au">www.ocba.sa.gov.au</a>                                    |
|                                 | Office of the Technical Regulator<br>Department for Manufacturing, Innovation, Trade,<br>Resources and Energy, Energy Division.     | Ph: (08) 8226 5500<br>Fax: (08) 8226 5523<br>Web: <a href="http://www.sa.gov.au">www.sa.gov.au</a>                                       |
| Tasmania                        | Office of Electricity Standards and Safety Department<br>of Justice, Workplace Standards Tasmania.                                  | Ph: 1300 366 322 (local) or<br>(03) 6233 7657<br>Fax: (03) 6233 8338<br>Web: <a href="http://www.wst.tas.gov.au">www.wst.tas.gov.au</a>  |
| Victoria                        | Energy Safe Victoria<br>Independent Statutory Body.                                                                                 | Ph: (03) 9203 9700<br>Fax: (03) 9686 2197<br>Web: <a href="http://www.esv.vic.gov.au">www.esv.vic.gov.au</a>                             |
| Western<br>Australia            | EnergySafety<br>Department of Commerce WA.                                                                                          | Ph: (08) 9422 5200<br>Web: <a href="http://www.commerce.wa.gov.au">www.commerce.wa.gov.au</a>                                            |



## Appendix 27 – Safety Regulators in Australia

Health and safety regulatory functions are performed by Commonwealth, State and Territory Regulators. These agencies regulate workplaces to ensure the health and safety of workers. The contact details for the Work Health and Safety regulators of each jurisdiction across Australia are provided below. This information is also available at the Safe Work Australia website:

[www.safeworkaustralia.gov.au](http://www.safeworkaustralia.gov.au)

Complete an [enquiry form](#)

Email: [info@swa.gov.au](mailto:info@swa.gov.au)

Phone: 1300 551 832

| Jurisdiction                 | Health and Safety Regulator                                                                  | Contact                                                                                                                                                                                                                              |
|------------------------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Commonwealth                 | Comcare                                                                                      | Website: <a href="http://www.comcare.gov.au">www.comcare.gov.au</a><br>Email: <a href="mailto:general.enquiries@comcare.gov.au">general.enquiries@comcare.gov.au</a><br>Phone: 1300 366 979                                          |
| Australian Capital Territory | WorkSafe ACT                                                                                 | Website: <a href="http://www.worksafe.act.gov.au">www.worksafe.act.gov.au</a><br>Email: <a href="mailto:worksafe@act.gov.au">worksafe@act.gov.au</a><br>Phone: 02 6207 3000                                                          |
| New South Wales              | WorkCover NSW                                                                                | Website: <a href="http://www.workcover.nsw.gov.au">www.workcover.nsw.gov.au</a><br>Email: <a href="mailto:contact@workcover.nsw.gov.au">contact@workcover.nsw.gov.au</a><br>Phone: 13 10 50                                          |
| Northern Territory           | NT WorkSafe                                                                                  | Website: <a href="http://www.worksafe.nt.gov.au">www.worksafe.nt.gov.au</a><br>Email: <a href="mailto:ntworksafe@nt.gov.au">ntworksafe@nt.gov.au</a><br>Phone: 1800 019 115                                                          |
| Queensland                   | Workplace Health and Safety Queensland,<br>Department of Justice and Attorney-General (WHSQ) | Website: <a href="http://www.worksafe.qld.gov.au">www.worksafe.qld.gov.au</a><br>Online enquiry form<br>Email: <a href="mailto:safetyinfo@justice.qld.gov.au">safetyinfo@justice.qld.gov.au</a><br>Phone: 1300 369 915               |
| South Australia              | SafeWork SA                                                                                  | Website: <a href="http://www.safework.sa.gov.au">www.safework.sa.gov.au</a><br>Email: <a href="mailto:help@safework.sa.gov.au">help@safework.sa.gov.au</a><br>Phone: 1300 365 255                                                    |
| Tasmania                     | Workplace Standards Tasmania                                                                 | Website: <a href="http://www.wst.tas.gov.au">www.wst.tas.gov.au</a><br>Email: <a href="mailto:wstinfo@justice.tas.gov.au">wstinfo@justice.tas.gov.au</a><br>Phone: 03 6233 7657 (outside Tasmania) or 1300 366 322 (inside Tasmania) |
| Victoria                     | WorkSafe Victoria                                                                            | Website: <a href="http://www.worksafe.vic.gov.au">www.worksafe.vic.gov.au</a><br>Email: <a href="mailto:info@worksafe.vic.gov.au">info@worksafe.vic.gov.au</a><br>Phone: 1800 136 089 or 03 9641 1444                                |
| Western Australia            | WorkSafe WA                                                                                  | Website: <a href="http://www.commerce.wa.gov.au/WorkSafe/">www.commerce.wa.gov.au/WorkSafe/</a><br>Email: <a href="mailto:safety@commerce.wa.gov.au">safety@commerce.wa.gov.au</a><br>Phone: 08 9327 8777                            |



## Definitions / Glossary

|                               |                                                                                                                                                                                                                                                                                                                |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>AusTender:</b>             | AusTender is the Australian Government website containing tender information.                                                                                                                                                                                                                                  |
| <b>Client:</b>                | The PCBU that engages the electrical contractor for the provision of electrical services.                                                                                                                                                                                                                      |
| <b>Electrical Contractor:</b> | The PCBU engaged by the client to perform electrical services.                                                                                                                                                                                                                                                 |
| <b>Energised Work:</b>        | Energised work means energised circuits - those which have electricity flowing through them and have the potential to cause harm. This is commonly called 'live work' in the electrical industry.                                                                                                              |
| <b>HRA:</b>                   | Hazard Identification and Risk Assessment.                                                                                                                                                                                                                                                                     |
| <b>HRCW:</b>                  | High Risk Construction Work.                                                                                                                                                                                                                                                                                   |
| <b>HSMA:</b>                  | The Health and Safety Management Arrangements detail a PCBU's consultative arrangements in achieving a healthy and safe workplace and includes the PCBU's WHS committees and worker representative structure.                                                                                                  |
| <b>HSR:</b>                   | A Health and Safety Representative (HSR) is elected from a work group to represent the WHS interests of workers within the group. The HSR monitors measures taken by the PCBU to comply with legislation, investigates WHS complaints, and enquires into WHS issues raised by workers within their work group. |
| <b>ITP's:</b>                 | Inspection and Test Plans are documents used to record the testing of an electrical system.                                                                                                                                                                                                                    |
| <b>NECA:</b>                  | The National Electricity and Communications Association.                                                                                                                                                                                                                                                       |
| <b>Officer:</b>               | An Officer is a senior manager involved in making key decisions about the PCBU's operations and must exercise due diligence to ensure the PCBU complies with its WHS obligations and duties.                                                                                                                   |
| <b>PCBU:</b>                  | The Person Conducting a Business or Undertaking has the primary accountability for the organisation's compliance with the WHS Act and Regulations. In general terms the PCBU means the employer.                                                                                                               |
| <b>RCD:</b>                   | Residual Current Device                                                                                                                                                                                                                                                                                        |
| <b>SDS:</b>                   | Safety Data Sheet                                                                                                                                                                                                                                                                                              |
| <b>SOP:</b>                   | Safe Operating Procedure                                                                                                                                                                                                                                                                                       |
| <b>SWMS:</b>                  | Safe Work Method Statement                                                                                                                                                                                                                                                                                     |
| <b>SWP:</b>                   | Safe Work Procedure.                                                                                                                                                                                                                                                                                           |
| <b>WHS:</b>                   | Work Health and Safety. Prior to the implementation of the new WHS legislation this was known as Occupational Health and Safety (OHS).                                                                                                                                                                         |
| <b>Worker:</b>                | A person is a worker if the person carries out work in any capacity for the PCBU. Employees, contractors and volunteers are all workers.                                                                                                                                                                       |
| <b>Workplace:</b>             | A workplace is a place where work is carried out for the PCBU. This includes any place where a worker goes, or is likely to be, while performing work and includes home based work and events.                                                                                                                 |
| <b>WHSMS:</b>                 | A Work Health and Safety Management System is the entire collection of documents, systems and processes to achieve and maintain healthy and safe workers within a healthy and safe workplace.                                                                                                                  |
| <b>WHS Committees:</b>        | WHS Committees comprise management representatives and workers. Committees ensure the PCBU and workers develop and carry out actions to ensure the health and safety of workers at work. They also help develop WHS policies and procedures.                                                                   |

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Master Electricians Australia  
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National Electrical and Communications Association  
NECA Safety Committee  
NSW Business Chamber  
Queensland Government - Department of Employment and Industrial Relations  
Safe Work Australia  
WorkCover Authority of NSW

