

ELECTRICAL SAFETY MANAGEMENT PLAN

(7th REVISION)

Amendment: 01 December 2014

Revisions

No.	Revision	Date	By
5.2	Changes to supervision of 3rd and 4th year apprentice brought in line with State of Victoria's requirements; Updated safety document coding in line with changes introduced with the new safety website. Removed references to deleted Safety Tool Box training documents	5th August 2009	Yin Taw Fung
5.3	Added scope of document, which is applicable to electrical work carried out in Australia (Section 1.3). Update references to legislation, Standards and Code of Practices (Section 2.2, 2.3 and 2.4) Removed references to Safety Induction and First Impressions handbooks (Section 3.1) Reference to As-built drawings/plans prior to excavation works (Section 4.7) Clarified that Live Work Permit, except for testing or fault finding, is required in Section 7.3	5th October 2009	Yin Taw Fung
5.4	Changed Section 7.3 to be applicable to Testing and Fault Finding only.	21st October 2009	Yin Taw Fung
6.0	Major revision incorporating changes introduced in AS/NZS 4836:2011 – Safe Working on or near low-voltage electrical installations and equipment, and various changes in States and Territories legislations.	10th February 2012	Yin Taw Fung
6.1	Minor amendments and updates	01-January 2013	David Kramer/ Robert Mosterd
7.0 7.1 7.2	Removal of reference to TRAIN-PF-OHS-ELEC-07-01 form not required with e-learning modules Add reference to AS2467 under HV section 4.5 Update form and standards references. Updated references to forms, Require of D license holders to complete ESMP Qld safety regulation 2013 HV refresher every 3 years; safety observer 12months refresher	01 August 2014 01 December 2014	David Kramer/

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1 INTRODUCTION

1.1 OVERVIEW

This Electrical Safety Management Plan (ESMP) sets the minimum compliance, risk and safety standards for Electrical Work conducted on behalf of Spotless.

The Electrical Safety Management Plan applies to all Electrical Workers. Electrical Workers includes the following groups:

- Spotless employees who are licensed Electrical Workers
- Supervisors and Managers of licensed Electrical Workers
- Electrical Contractors
- All other Electrical licence holders conducting Electrical Work on behalf of Spotless.
- All electrical associated trades (eg: trades with D licences where restricted electrical work is undertaken or where a risk assessment refers to this requirement)

1.2 PURPOSE

The purpose of the ESMP is to ensure the safety of Electrical Workers, clients, the public and to minimise the potential harm to human health and property when working with electricity.

1.3 SCOPE

The scope of the ESMP is applicable to Electrical Works carried out in Australia & New Zealand.

1.4 SPOTLESS' COMMITMENT TO ELECTRICAL SAFETY

Spotless is committed to:

- Strictly adhering to all legislative requirements and national Standards
- Using only Electrical Workers who hold relevant and current licences and who are competent in carrying out Works
- Maintaining the competency and skill of Electrical Workers at a high level
- Maintaining a safe environment when Electrical Work is being conducted
- Ensuring that Electrical Workers have appropriate electrical safety equipment and resources to work safely
- Ensuring that all work is tested and electrically safe
- Monitoring and evaluating the work of Electrical Workers to ensure compliance with Spotless standards and procedures
- Auditing the ESMP to ensure continuous improvement

2 LEGAL REQUIREMENTS

2.1 STANDARDS

All Electrical Work shall be carried out in accordance with the respective State's or Territory's legislative requirements, in compliance to Standard AS/NZS 3000 and AS/NZS 4836 and any other relevant standards.

Electrical installations or electrical equipment will not be connected to supply with any known defect.

2.2 LEGISLATION

Spotless will fulfil their obligation under each of the following State or Territory's electrical safety legislation:

State	Legislation
Australian Capital Territory	<ul style="list-style-type: none"> • Electricity Safety Act 1971 • Electricity Safety Regulation 2004 • Construction Occupations (Licensing) Act 2004 • Utilities Act 2000
New South Wales	<ul style="list-style-type: none"> • Electrical (Consumer Safety) Act 2004 • Electricity (Consumer Safety) Regulation 2006 • Electricity Supply (Safety and Network Management) Regulation 2008 • Occupational Licensing National Law (Transitional) Regulation 2011
Northern Territory	<ul style="list-style-type: none"> • Electrical Workers and Contractors Act 2011 • Electrical Workers and Contractors Regulation 2009 • Electricity Reform Act 2011 • Electricity Reform (Safety and Technical) Regulations 2011 • Work Health and Safety (National Uniform Legislation) Regulations 2012 • Workplace Health and Safety Regulations 2011
Queensland	<ul style="list-style-type: none"> • Electrical Safety Act 2002 • Electrical Safety Regulation 2013 • Electrical Safety (Codes of Practice) Notice 2002 • Work Health and Safety Act 2011 • Work Health and Safety Regulation 2011
South Australia	<ul style="list-style-type: none"> • Electricity Act 1996 • Electricity (General) Regulations 1997 • Electricity (Principles of Vegetation Clearance) Regulations 1996 • Plumbers, Gas Fitters and Electricians Act 1995 • Plumbers, Gas Fitters and Electricians Regulations 2010
Tasmania	<ul style="list-style-type: none"> • Electricity Industry Safety and Administration Act 1997 • Electricity Industry Safety and Administration Regulations 1999

State	Legislation
	<ul style="list-style-type: none"> Occupational Licensing Act 2005 Occupational Licensing (Electrical Work) Regulations 2008 Workplace Health and Safety Act 1995 Workplace Health and Safety Regulations 1998
Victoria	<ul style="list-style-type: none"> Electricity Safety Act 1998 Electricity Safety (Electric Line Clearance) Regulations 2010 Electricity Safety (Equipment) Regulations 2009 Electricity Safety (Installations) Regulations 2009 Electricity Safety (Management) Regulations 2009 Electricity Safety (Registration and Licensing) Regulations 2010
Western Australia	<ul style="list-style-type: none"> Electricity Act 1945 Electricity Regulations 1947 Electricity (Licensing) Regulations 1991 Electricity (Supply Standards and System Safety) Regulations 2001

Electrical Workers will fulfil their obligations under each State's or Territory's current electrical safety legislation by:

- Complying with Spotless instructions and ensuring that all Electrical Work is electrically safe.
- Only performing Electrical Work within the scope of their relevant Electrical Worker's licence.
- Using Personal Protective Equipment (PPE), instruments, tools and safety equipment to complete all work in a safe manner and in compliance with legislative requirements.
- Adopting a "test before touch" approach and treating all electrical conductors, parts and equipment including Neutral and Earthing conductors as live until proven de-energized.
- Not wilfully interfering or misusing anything that may create an unsafe situation for themselves and others.

2.3 REFERENCE DOCUMENTS

All Electrical Workers must have ready access to safety@spotless Standards, State's or Territory's Electrical Legislations, Codes of Practice and Australian Standards.

The relevant Australian Standards are but not limited to:

- AS2067 – Substations and high voltage installations exceeding 1kV AC
- AS2467 – Maintenance of Electrical Switchgear.
- AS3000 - Electrical installations (Australian and New Zealand wiring rules)
- AS3003 - Electrical installations - patient areas of hospitals, medical and dental practices
- AS3006 - Adequate electrical installations in domestic premises
- HVAS3008 - Electrical installations - Selection of cables
- AS3010 - Electrical installations - Generating Sets
- AS3012 - Electrical installations - Construction and demolition sites
- AS3017 - Electrical installations - Verification guidelines
- AS3019 - Electrical installations – Periodic verification

- AS3100 - Approval and test specification - General requirements for electrical equipment
- AS3760 - In-service safety inspection and testing of electrical equipment
- AS3820 - Essential safety requirements for low voltage electrical equipment
- AS4836 - Safe work on low voltage electrical Installations

2.4 CODES OF PRACTICE

State	Code of Practice
Australian Capital Territory	ACT Legislation Register - Nil
New South Wales	WorkCover <ul style="list-style-type: none"> • Low Voltage Electrical Work • Electrical Practices for Construction Work • Work Near Overhead Power Lines • Work Near Underground Assets - Guide • Managing electrical risks at the workplace (Ref www.safeworkaustralia.gov.au)
Northern Territory	NT Work Safe, Electrical Safety – Bulletins issued by NT Work Safe are available on www.worksafe.nt.gov.au
Queensland	Dept of Justice and Attorney General, Electrical Safety Office <ul style="list-style-type: none"> • Electrical safety code of practice 2010 - Electrical equipment rural industry • Electrical safety code of practice 2013 - Managing electrical risks in the workplace • Electrical safety code of practice 2010 - Working near overhead and underground electric lines • Electrical safety code of practice 2010 - Works
South Australia	Office of the Technical Regulator, Energy Safety <ul style="list-style-type: none"> • Guidelines for Working Safely near Overhead Powerlines
Tasmania	Workplace Standards Tasmania <ul style="list-style-type: none"> • Occupational Licensing - Standards of Electrical Work • Occupational Licensing - Classification of Electrical Work and Defective Electrical Work • Occupational Licensing - Supervision of Prescribed Work
Victoria	Energy Safe & Work Safe Victoria <ul style="list-style-type: none"> • Code of Practice for Safe Electrical Work • Electrical Installation Work on Construction Sites • Victorian Electricity Supply Industry Code of Practice • The Blue Book

Western Australia	Dept of Consumer and Employment Protection, Energy Safety <ul style="list-style-type: none"> • Safe Electrical Work on Low Voltage Electrical Installations • Safe Low Voltage Work Practices by Electricians • Personnel electrical safety for vegetation control work • Management of vegetation near power lines • Safe guidelines for electrical workers
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2.5 REQUIREMENTS FOR ELECTRICAL WORKERS

CLASSIFICATIONS OF ELECTRICAL LICENCES

Licence Type	Licensed Tasks
Test and Tag	<p>In most States, this licence is issued to people who are deemed qualified after completing a task specific “Test and Tag” short course. This allows for testing and tagging of portable electrical appliances only and not for maintenance or repairs. In some states, this is not a licensed qualification but a qualification for competent people who can test and tag portable electrical appliances.</p> <p>Generally, these people are not qualified or licensed to carry out electrical maintenance or repairs.</p>
Restricted Class	<p>Issued to, for example, air conditioning and refrigeration mechanics, mechanical fitters and plumbers. People issued with a Restricted Class Licences can only undertake Electrical Work associated with their specified trade. This work is generally disconnect and reconnect only.</p>
A Class/ A Grade / Unrestricted Electrician Licence	<p>This is an open class electrical licence issued to trade qualified Electrical Workers who can generally complete all facets of electrical wiring, installation, repairs and maintenance. This allows the Electrical Worker to carry out electrical installation work without supervision. This licence holder may be able to perform the task of Technical Nominee for the employer as required for a Contractor’s Licence (additional qualifications may apply which varies between States and Territories).</p>

The Electrical Supervisor must, as a minimum, have an equivalent or a higher class of licence to those people that they supervise.

Example: A restricted class Electrical Worker must not be the Electrical Supervisor of an Electrician.

All site safety management plans are, where applicable, to include a list of the Electrical Supervisors.

The Electrical Supervisor is to ensure that Electrical Workers in their charge are performing their duties in a safe manner.

It is the responsibility of the Electrical Supervisor to ensure that all Electrical Workers in their charge comply with the ESMP by ensuring that:

- Electrical Workers are licensed and competent to carry out their allocated duties.
- All work is carried out in an Electrically Safe manner and that the work site is safe for all persons and documented.
- Work complies with the appropriate standards, and the correct electrical tests have been performed and documented.

Table of Spotless Forms/Documents referenced

Cross Reference Page No	Document & Hyperlink	Document Name
11	ESMP	Electrical Safety Management Plan
11	Spotless Occupational Health and Safety (OH&S) Policy	
	Process and Procedures are located at Safety@Spotless	
12 ; 13	Standard 14; Process 14a & Process 14b	Reporting and managing incidents and incident investigation and close out
13	PROCESS-GRP-ALLD-ALLS-OHS-4a-1	Process 4a - assessing safety risk
13	PROCESS-GRP-ALLD-ALLS-OHS-04b-1	Process 4b - conducting a risk assessment
13	PROCESS-GRP-ALLD-ALLS-OHS-04c-1	Process 4c - developing safe work procedures
13	FORM-GRP-ALLD-ALLS-OHS-78	Tool - Safe Work Procedures template
12	Standard 15 - Safety@Spotless	Injury Management Pack
13	FORM-GRP-ALLD-ALLS-OHS-20	Electrical Worker's Training Register
13	FORM-GRP-ALLD-ALLS-OHS-15-1	Electrical Risk Assessment – Maintenance/Service Work (utilise generic risk assessment form)
13	Process 13h	observing uniform, personal hygiene and jewellery rules
13	Standard 10	doing your job safely
13	FORM-GRP-ALLD-ALLS-OHS-130	PPE Register
14	FORM-GRP-ALLD-ALLS-OHS-128-2	Electrical Equipment (Test) Register
14	FORM-GRP-ALLD-ALLS-OHS-48	Equipment calibration log
24, 24	FORM-GRP-ALLD-ALLS-OHS-29-1	Live Electrical Work Permit
19	FORM-GRP-ALLD-ALLS-OHS-132-1	Electrical Supervisor
22, 22	FORM-CORP-OHS-GEN-127-1	Electrical test results/Certificate of test/compliance
28, 28	AUDIT-GRP-ALLD-ALLS-OHS-10-1	Electrical Safety Management Plan Audit Report
28	FORM-CORP-OHS-GEN-128-1	Electrical Supervisor
29	GUIDE -GRP ALDALLSOHS -41	Action Plan

3 ELECTRICAL SAFETY

3.1 INDUCTION

All Electrical Workers must be inducted prior to commencement of employment.

Inductions will be as per the following safety@spotless tools:

- **Standard 11 - Learning Safety Skills @ spotless** (STD-GRP-ALLD-ALLS-OHS-11-1).
- **Process 11a - Welcoming New People @ spotless** (PROCESS-GRP-ALLD-ALLS-OHS-11a-1).
- **Workplace Welcome Checklist** (CKLIST-GRP-ALLD-ALLS-OHS-11-10).
- Electrical Contractors must be inducted using the online Spotless – Contractor Induction available on the safety@spotless online Learning SPOT website. In addition each Electrical Contractor must be provided with the **safety@spotless Quick Reference Guide**. Contractors must also attend a site based induction and orientation prior to starting any job.
- Electrical Workers are required to complete an electrical safety induction on the requirements of the ESMP prior to commencement and/or are required to demonstrate compliance with the ESMP. They are also required to undergo annual ESMP refresher induction.

3.2 SAFE SYSTEM OF WORK

All Electrical Workers on Spotless worksites will adhere to:

- The ESMP located on FITZ
- The safety@spotless OHS Management System
- State or Territory Electrical Legislative requirements and Codes of Practice
- Australian Standards.

This is to minimise potentially fatal risks whilst exposed to or using electrical equipment relevant to the work being carried out.

3.3 ADHERENCE TO OH&S POLICY

All Electrical Workers must comply with the **Spotless Occupational Health and Safety (OH&S) Policy**.

In order to achieve this, Spotless will:

- Develop an ESMP which incorporates an Electrical Safe System of Work.
- Provide appropriate training to ensure all work is electrically safe.
- Ensure appropriate electrical supervision of all Electrical Workers. This will be achieved by ensuring each Electrical Worker has a nominated Electrical Supervisor for their Electrical Work.

- Ensure all tools and safety equipment are regularly tested and examined to enable all work to be completed in a safe manner.
- Provide and instruct Electrical Workers in the correct use and maintenance of Personal Protective Equipment (PPE).
- Report all notifiable electrical incidents to the relevant electrical safety authority.

3.4 BASIC ELECTRICAL SAFETY PRINCIPLE

A person engaging or preparing to engage in work on or near electricity infrastructure or an electrical installation must treat exposed conductors as live until they are -

- Isolated from all sources of electricity supply and proven to be de-energized
- If they are high voltage conductors – earthed.

3.5 INCIDENT REPORTING

When an Incident occurs, the following process shall be followed:

- The person involved in the Incident reports it to their Supervisor.
- If an incident occurs with a Contractor or Sub-contractor's Electrical Worker, the relevant Spotless Supervisor must be notified to manage the process.
- The Supervisor notifies their Manager.
- The Manager notifies the local Spotless Safety Advisor and reports the Incident in the Spotless Incident Reporting and Investigation Management System (IRIM).
- The Safety Advisor reports the Incident to the relevant regulatory authority.

All Incidents must be reported in IRIM using safety@spotless:

- **Standard 14 - reporting and managing incidents**
- **Process 14a – reporting incidents**
- **Process 14b - incident investigation and close out**

A qualified medical practitioner must treat any person who receives an electrical shock of any magnitude.

The injured person shall be accompanied at all times to the medical practitioner, by the injured person's Manager or their representative. The Manager is to refer to the **Injury Management Pack** (Refer to Standard 15 – Safety@ Spotless for guidance).

An electric shock shall be reported to the Electrical Worker's Manager immediately and, where applicable, the area isolated as far as practicable, and the relevant authority notified via the local Safety Advisor for investigation and reporting in IRIM.

3.6 RISK ASSESSMENTS

All Electrical Workers associated with and who perform Electrical Work shall be provided with Risk Assessment and Job Safety Analysis (JSA) training.

This training must be recorded on the Electrical Worker's **Training Register** (FORM-GRP-ALLD-ALLS-OHS-20).

A Risk Assessment is to be conducted for all planned and repair jobs and projects. This is a mandatory OH&S legislative requirement. Spotless' generic risk assessment form ([FORM-GRP-ALLD-ALLS-OHS-15-1](#)) may be used for this purpose.

The Risk Assessment process will adhere to **Process 4a - Assessing Risk @ spotless** (PROCESS-GRP-ALLD-ALLS-OHS-4a-1).

The Risk Assessment may identify the need for Job Safety Analysis (JSA) or Safe Work Procedure (SWP) for specific tasks. An existing SWP may be used, but must be reviewed to ensure it is appropriate for the task. Where there is no formal SWP available that is appropriate for the Electrical Work being undertaken, a JSA is to be undertaken to identify the basic logical sequence of the tasks, associated hazards, level of risk, and appropriate control measures to be implemented prior to commencement of work, and is to be monitored for effectiveness.

The Risk Assessment and JSA process is to be conducted in accordance with:

- Australian Standard AS4836 Safe Working on Low Voltage Electrical Installations
- safety@spotless processes and tools:
 - **Process 4a - assessing safety risk** (PROCESS-GRP-ALLD-ALLS-OHS-4a-1).
 - **Process 4b - conducting a risk assessment** (PROCESS-GRP-ALLD-ALLS-OHS-04b-1)
 - **Process 4c - developing safe work procedures** (PROCESS-GRP-ALLD-ALLS-OHS-04c-1)
 - **Tool - Safe Work Procedures** template (FORM-GRP-ALLD-ALLS-OHS-78)

3.7 PERSONAL PROTECTIVE EQUIPMENT

Spotless will ensure that appropriate Personal Protective Equipment (PPE) is selected, issued, used and maintained in accordance with current State or Territory workplace safety legislation and Australian Standards.

Contractors and Sub-Contractors are to ensure their Electrical Workers have the appropriate Personal Protective Equipment (PPE) for the task performed and that the PPE is used and maintained in accordance with current State's or Territory's workplace safety legislation and Australian Standards.

PPE for Electrical Workers will at all times include a full length uniform made of 100% cotton or flame resistant material with no metal components.

Spotless requirements for selection, use and maintenance of PPE are outlined in safety@spotless and include:

- Process 13h - observing uniform, personal hygiene and jewellery rules
- Standard 10 - **doing your job safely**
- and other job specific associated safe work procedures and use of PPE.

All issued PPE must be recorded in the **PPE Register** (FORM-GRP-ALLD-ALLS-OHS-130).

It is the responsibility of every Electrical Worker to regularly examine their PPE to ensure it is in a satisfactory condition so that their work tasks can be safely completed.

3.8 ELECTRICAL SAFETY EQUIPMENT AND INSTRUMENTATION

It is the responsibility of every Electrical Worker to regularly examine all items of Electrical Safety Equipment they are using to ensure the equipment is within the 'in-test' date and is in an electrically safe condition for the work being carried out.

All issued Electrical Safety Equipment must be recorded on the Electrical Worker's **Electrical Equipment (Test) Register**. All Electrical Safety Equipment, including insulating gloves, crooks/rescue hooks and mats, shall be tested at least every six months. The next test date shall be marked on each item. The test shall be documented in the **Electrical Equipment (Test) Register** and records kept for seven years.

Audits will be conducted every six months to ensure safety equipment is being used appropriately, is in an electrically safe condition and complies with current State or Territory electrical safety legislation.

On each occasion before an Electrical Safety Equipment is used, it shall be visually inspected for any damage or defect to ensure that it is in a safe condition and that the 'in-test' date is current.

If the equipment has any defect or is out of calibration/ test date it shall be withdrawn from service, tagged as faulty and not used until it is repaired and/or re-calibrated/ tested.

It is the responsibility of every Electrical Worker to ensure that the equipment used shall have the appropriate function, range, and accuracy for the work and condition. There are four categories of test equipment, however, for Spotless, only Categories 3 and 4 (as defined in IEC 61010-1 and IEC 61010-2-31) are to be used.

Categories are:

- **Installation Category 3:** Relates to the distribution level, main switchboards etc. This category of instrument may be used on a sub/board or a main switchboard that is not supplied directly from a transformer.
- **Installation Category 4:** Relates to the primary supply level and this is the only category of instrument that is to be used to identify voltage on a main switchboard supplied directly by a transformer. Electricians that are required to work on or test package-sub or overhead service supplies, right through to the Main Switchboard, must use Category 4-type test equipment.

Electrical Instrumentation that is used for accuracy or compliance testing, i.e., Certificates of Test (CoT) or Certificates of Compliance (CoC) must be tested and calibrated at a minimum annually or as per the equipment manufacturer's recommendations whichever is most frequent, and the next test date marked on each item with records of calibration kept for seven years. The **Equipment calibration log** (FORM-GRP-ALLD-ALLS-OHS-48) is to be used for record keeping purposes.

Electrical Instrumentation that is used simply for checking of electrical presence need not be calibrated six monthly, but must be checked for correct operation before, during and after isolation.

The test must be documented in the **Electrical Equipment (Test) Register** and records kept for seven years.

All electrical safety instrumentation, whether it is Spotless issued or personal property, must be recorded on the Electrical Worker's **Electrical Equipment (Test) Register**

3.9 SAFETY IN CUSTOMER'S INSTALLATIONS

If an unsafe situation is discovered in a customer's installation, the following process is to be taken:

Defect	Action
Repair Defect	Discussion will be held with the customer to repair/rectify the defect.
Disconnect Defect	If the customer will not agree to repair the defect, the customer is to be advised that the defect must be disconnected.
Temporary Repair of Defect (Ensure Repair is Electrically Safe)	If the customer does not agree to disconnection an attempt will be made to obtain permission to carry out temporary repairs to make safe.
Report Defect	If this cannot be achieved the Electrical Safety Office and/or the electrical supply authority is to be advised immediately. The name of the person to whom the report was given will be recorded including the time and date of the report.
Document Defect (Disconnection or Repair or Report)	If the defect is disconnected or temporary repairs made follow local contract requirements ensuring that the client is advised in writing clearly stated that permanent repairs are required. The Electrical Worker will retain a copy of the report, and a copy will be kept in his personal file.
Electrical Supervisor Notification	The Electrical Supervisor must be notified and appropriate action to be taken to ensure the defect is left electrically safe or the defect is reported.
Electrical Work Defective	If defective Electrical Work is discovered, an Electrical defect report will be completed and forwarded to the relevant State or Territory electrical safety body and or electrical supply authority.

4 AUTHORISATIONS AND APPROVALS

4.1 REQUEST TO ELECTRICAL SUPPLY AUTHORITY

Prescribed forms such as metering changes, connections and disconnections of supply from the electrical supply authority shall be complied with as per relevant State's or Territory's legislative requirements and forwarded to the distributor whenever an initial connection or metering change is required.

4.2 DEFECTS REPORTED BY THE RELEVANT STATE OR TERRITORY ELECTRICAL SAFETY BODY

Improvement or Prohibition Notices issued by the State's or Territory's electrical safety regulatory authority shall be rectified as soon as practicable, or as specified in the Notice. These notices are to be reported in Spotless' IRIM.

Defect reports issued by the State's or Territory's electrical safety regulatory authority or a network distributor shall be actioned according to the respective State's or Territory's legislative requirements.

4.3 IMPLICIT APPROVAL

Implicit Approval must comply with relevant State's or Territory's legislative requirements.

It is understood that upon receipt of a job request, either verbal or written, provided the instruction is documented on a Job Docket and the site contact is named with contact details, it will be implied the Person in Control (normally the owner) of the Electrical Installation or Electrical Equipment, has authorised the Electrical Work to be performed.

All contracts will address the specific requirement of **Approval to Perform Electrical Work** with the approval of the Person in Control of the Electrical Installation or Electrical Equipment.

Where the Person in Control does not allow their Implicit Approval then contractual arrangements with designated procedures must be written and approved.

4.4 LIVE WORK

Live Electrical Work must only be carried out in exceptional circumstances and only upon one of the following conditions:

- It is necessary in the interest of safety, whether or not electrical safety, for the work to be performed while the electrical equipment (which is the subject of electrical work) is energized;
- A supply of electricity is necessary for the proper performance of the electrical work;
- There is no reasonable alternative to performing the electrical work by live work;

It must be emphasized that only upon the above conditions is Live Work permitted.

As such, it should never be assumed that Implicit Approval is given for Electrical Work that is Live Work, with the exception of Testing or Fault Finding. Testing or Fault Finding can be done following the completion of a Risk Assessment process to ensure that the Testing or Fault Finding task is safe to proceed with.

In all cases, the Person in Control must be notified, be fully aware that the work is being performed, and sign off their authorisation, prior to the work being completed on the **Live Electrical Work Permit** (FORM-GRP-ALLD-ALLS-OHS-29-1). The Live Electrical Work Permit must also be signed and approved by the Spotless Manager and the respective state electrical nominee/endorsee prior to the work being completed.

If there is no authorisation, there must be no Electrical Work whereby Live Work is performed.

4.5 HIGH VOLTAGE WORK

Only suitably competent and licensed Electrical Workers in accordance with respective State's or Territory's legislation and regulations are to carry out High Voltage work. Attendance records for High Voltage switching or maintenance training shall be maintained for seven years. Refresher training shall be completed at least every three years or in accordance with local legislation whichever is the more frequent.

All High Voltage switching, testing and certification is to be carried out with complete consultation and under the control of the relevant High Voltage System Controller.

All High Voltage connect or reconnection to a source of supply must be carried out in accordance with the relevant State's or Territory's legislative requirements and under the control of the relevant High Voltage System Controller.

The Safety Rules in accordance with AS2467 Appendix A apply as the minimum safety rules under this Electrical Safety Management Plan as well as additional requirements of the state:

Example: Queensland's requirement to have a High Voltage Auditor duly licensed and registered to certify High Voltage electrical line work that is Electrical Work, stating the Electrical Work is electrically safe.

NSW: Section 7 of the Service and Installation Rules of New South Wales (specifically Attachment A of section 7 provides a Schedule of minimum operating procedure and safety equipment – HV Installation for NSW).

4.6 HAZARDOUS LOCATIONS

Only suitably trained and licensed personnel in accordance with respective State's or Territory's legislation and regulations are to carry out Hazardous Location Electrical Work.

All Hazardous Location Electrical Work for connect or reconnection to a source of supply shall be in accordance to the respective State's or Territory's legislative requirement.

Example: Queensland's requirement to have a Hazardous Location Auditor duly licensed and registered to certify Hazardous Location Electrical Work which by definition is Electrical Installation Work stating the Electrical Work is electrically safe.

4.7 WORKING IN THE VICINITY OF OVERHEAD OR UNDERGROUND SERVICES

All Electrical Work in the vicinity of electrical services, whether overhead or underground, must comply with the respective State's or Territory's legislative requirements including permits and/or exclusions zones/approach limits.

Example: Queensland (QLD) Code of Practice 'Working Near Exposed Live Parts'.

The Electrical Worker must complete a written Risk Assessment before any excavation or Elevated

Work Platform (EWP) works are to proceed.

Example: Queensland Electrical Safety Regulation 2013, Section 62A and NSW, LV Electrical Work Code of practice 2001, Section 7.

With regard to excavation works, the Risk Assessment must include information from appropriate sources such as As-built drawings/plans, "Dial Before You Dig" and Underground Service Locating Sub-Contractors. This information shall include the following:

- What underground electrical services are at or near excavation works.
- Location of electrical services.
- Type and depth of services.
- Whether it is live, ie energised.
- That the above information be provided to workers working near the excavation or near the location of the electrical service.

Location information provided on plans is to be regarded as a field guide only. An electronic cable detector is to be used when locating electrical services.

Machine excavation is only permitted to a distance no closer than 300mm from a service, material within this distance from the service is to be removed by hand excavation.

The Electrical Supervisor or Electrical Contractor must sign off their approval on the Risk Assessment for the excavation or EWP works. The Risk Assessment must identify appropriate control measures to prevent any inadvertent contact with any electrical cables.

Example: Excavation; Hand digging or the use of Suction Trucks and high-pressure water blasters. EWP; Must have a Safety Observer.

Excavation or EWP works must never be performed within the respective State's or Territory's legislative exclusion zones/approach limits of live High Voltage cables.

5 SUPERVISION

5.1 ELECTRICAL WORKERS SUPERVISION

All Spotless Electrical Workers must, for all Electrical Work, report to a nominated Electrical Supervisor. The Electrical Workers file identifies their **Electrical Supervisor** FORM-GRP-ALLD-ALLS-OHS-132-1).

Electrical Workers will only be supervised by persons who have at least the same level of Electrical Licence.

A nominated Electrical Supervisor must be:

- A qualified and licensed Electrical Worker, or
- A qualified and licensed Electrical Worker who is already a Works Supervisor or Manager, or
- An electrical nominee or electrical endorsee (Electrical Contractors licence holder)

An electrical nominee or electrical endorsee is a person who is an open class, licensed Electrical Worker who is also the nominee for the company's Electrical Contractor License.

Example: A site Licensed Electrician who is issued Electrical Work by a Supervisor or Manager who is not electrically licensed, must have a nominated Electrical Supervisor to report to. The Electrical Supervisor must be electrically qualified and the Electrical Worker will report to this person for their Electrical Work, if required. This is for general electrical compliance reasons and to ensure that every Electrical Worker has a qualified person to discuss their Electrical Work with if need be.

The Electrical Supervisor assists in ensuring that legislative electrical compliance obligations are being met by Spotless.

Compliance obligations include:

- A clear and concise description of the work completed on Job Dockets and Certificates of Test/ Compliance (where applicable).
- The site address, including the building number, floor number and the room number.
- The circuit number and current rating of the protection device.
- That a task specific Risk Assessment is attached, dated and signed.
- Where appropriate that compliance testing has been completed and a Certificate of Compliance has been issued
- That compliance test results are attached to the Certificate of Compliance as proof of testing. Mandatory tests can include earth continuity, insulation resistance, polarity, RCD testing and correct circuit connections.

5.2 CONTRACTOR SUPERVISION

Spotless Contract Managers/Supervisors, Project Managers/Supervisors, Site Supervisors and/or Team Leaders must not directly supervise Electrical Contractors for Electrical Work (i.e. whether it complies with Australian Standards and the Electrical Safety Legislation) unless they have the necessary and appropriate qualification as an Electrical Supervisor.

Spotless Contracts Managers/Supervisors, Project Managers/Supervisors, Site Supervisors and/or Team Leaders who manage or administrate Electrical Contractors, but are not appropriately qualified as an Electrical Supervisor, are to ensure that all Spotless Electrical Contractors in their charge comply with the Spotless ESMP.

- The Electrical Contractor and their Electrical Workers are familiar with, and comply with, all aspects of the ESMP to ensure they are competent to carry out Electrical Work in the required manner including all required documentation. This is to be achieved via annual ESMP refresher training.
- The Electrical Contractor verifies through documented and signed Inspection and Test Plans (ITP's) that all Electrical Work is carried out in an Electrically Safe manner.
- The Electrical Contractor verifies that all work, undertaken by their company and any sub-contract staff in their employ, complies with the relevant State or Territory legislative requirements and Australian Standards and that the correct electrical tests have been performed, documented and signed.

5.3 APPRENTICE SUPERVISION

Spotless will comply with all current State or Territory electrical safety legislation requirements for the training and supervision of Apprentices.

All Apprentices, regardless of standard of training or trade, must be under the direct control of a nominated Electrical Supervisor or nominated Electrical Worker whilst performing Electrical Work. Direct control means knowledge of the person, where they are and what activity they are doing.

The name of both the Apprentice and the nominated Electrical Supervisor or nominated Electrical Worker will be documented on the Job Docket or Job Sheet.

State and Territory electrical safety legislation makes reference to Apprentice supervision. This, together with National Supervision Policy Guideline for Electro-technology Apprenticeships forms the basis of the supervision requirements for Spotless Apprentices.

Apprentices Year 1 and 2

Year 1 and 2 Apprentices must have direct supervision*. These Apprentices are to be under the direct supervision of a person who is authorised to do the Electrical Work. Refer (Section 42B 1(a), NT Electrical Workers and Contractors Act 2002) The Electrical Supervisor or Nominated Electrical Worker must decide and instruct the Apprentice for the safe completion of electrical work. The Apprentice must not make these decisions.

(Direct supervision means at all times on a direct and constant basis, Direct means being within visual contact and/or earshot (audible range) and Constant basis refers to those tasks being performed by the apprentice for the first time and until skill is demonstrated for the complexity of the task and the work environment.)

Apprentices Years 3 and 4

Year 3 and 4 Apprentices in the context they are being trained to be a Tradesperson must have appropriate site supervision and the Electrical Supervisor must make the decisions having regards to:

- The type of Electrical Work performed

- The adequacy of the Apprentice's training
- The competency of the Apprentice

Refer (Section 42B (b) NT Electrical Workers and Contractors Act 2002) and (Qld Elect Safety Regs, Section 209 (3))

In addition, Year 3 Apprentices must be directly supervised while performing the following electrical works:

- Distribution Board and Main Switchboard installation (Not accessible to contact with electricity supply)
- Testing of installation for compliance, labelling, preparation of DB legends (Not accessible to contact with electrical supply)
- Fault Finding

Year 4 Apprentices must be directly supervised while performing the following electrical works:

- Fault finding
- Confirmation of Isolation

Year 3 and 4 Apprentices must not be responsible for the isolation of an electrical installation.

Refer Supervision Guidelines for Apprentices Working on Electrical Installations - EnergySafe Victoria.

The Electrical Supervisor or Nominated Electrical Worker in all cases must make the decisions on the competency of the person performing electrical works. Instructions should not be relayed to an Apprentice through a third party who is not the Electrical Supervisor or Nominated Electrical Worker.

Example: An instruction is never to be issued in passing on a message.

6 QUALITY CONTROL

6.1 TESTING OF ELECTRICAL WORK

All Electrical Work will be tested to ensure it complies with legislative requirements and is electrically safe. Electrical testing must be in accordance with Section 8 of Australian Standards AS/NZS 3000 - Wiring Rules and AS/NZS 3017 - Electrical Installations - Verification Guidelines.

Electrical test results will be recorded on a test record in the specified test record format dictated by the State or Territory legislation.

These test results will be attached to the job card as proof of test. The Electrical Worker who carried out testing must be recorded on the job card.

6.2 SITE INSPECTION BEFORE LEAVING

Before leaving the site a visual inspection must be conducted to ensure all cables have been correctly terminated and the installation and/or equipment and ancillaries is electrically safe.

All completed Electrical Work must comply with relevant standards and be in accordance with the customer's requirements.

6.3 CERTIFICATE OF TEST/COMPLIANCE

The Certificate of Test/Compliance must be issued to the customer and/or the electrical supply authority following all Electrical Work.

The Certificate of Test/Compliance must be issued in accordance with the relevant State or Territory legislative requirements. If State or Territory legislation dictates a specified test record format, and then these MUST be attached to every Job Card for work that is tested as proof of test.

6.4 STANDARDS AUDIT

Audits will be conducted on a regular basis to ensure that the Electrical Work completed has been conducted in accordance with all relevant legislative and Australian Standards requirements.

The relevant Electrical Supervisor, Contract or Project Managers/Supervisors, Site Supervisor and or Team Leaders will be responsible to ensure ESMP compliance audits are conducted. Completed ESMP audit forms (Refer procedure **Electrical Safety Management Plan Audit Report** (AUDIT-GRP-ALLD-ALLS-OHS-10-1) will be retained in the site Spotless contract file for a period of at least seven years.

The auditor must be a person who is electrically qualified, competent to assess the accuracy and relevance of company procedures and is familiar with electrical safety requirements. The auditor will understand the responsibilities of electrical contractors in accordance with current State or Territory electrical safety legislation.

6.5 CONTROL OF DOCUMENTS

All recommended changes to the ESMP and associated documentation will be reviewed through consultation with appropriately qualified personnel.

Any change to procedures, amendments to manuals or new documents will be issued to relevant Electrical Workers. Electrical Workers will be required to remove redundant documents from their manuals at this time. Discussions on changes will be held and minuted at staff meetings.

A record of all documents issued to each person will be maintained.

A signature from the Electrical Worker will be required for the issue of PPE, standards and any other significant documents.

This record will be maintained in the Electrical Worker's personnel record file.

6.6 CONTROL OF RECORDS

The following documents will be retained for seven years:

- Certificate of test/compliance issued to the customer and or electrical supply authority
- Electrical test result figures to be retained with job docket/ work order.
- Record of tests on testing instruments
- Record of tests on safety equipment
- Safety, Competency and Procedure Audit Schedule
- Training records

7 WORKING LIVE

All Electrical Workers must comply with the following Live Work procedures.

Live Electrical Work is only to be carried out in exceptional circumstances; such that a break in supply to isolate the relevant parts of the installation for the particular work proposed will endanger the safety and health of users of the installation, or that a supply of electricity is necessary for the proper performance of electrical work, or is not possible in practice.

In all these exceptional circumstances, a written case must be prepared to justify Live Electrical Work to be carried out.

Live Electrical Work, excluding testing, fault finding and commissioning, must be undertaken in the presence of a safety observer who is competent to perform the particular task involved and is competent in electrical rescue and cardio-pulmonary resuscitation. Live Electrical Work for testing, fault finding and commissioning, may still require a safety observer pending outcome of application of risk control measures in accordance to Australian Standard AS 4836 Section 3.

7.1 RISK ASSESSMENTS

A task specific Risk Assessment must be completed prior to commencement of any Live Work.

Any Electrical Work, which is by definition Live Work, including testing, fault finding, installation, repairs or maintenance to electrical cables or components must only occur following a written Risk Assessment (QLD Electrical Regulations S. 12 b) and the implementation of appropriate control measures as outlined in Australian Standard AS 4836 Section 3.1.

7.2 LIVE WORK PERMITS

All Live Work, other than testing and fault finding, performed by Electrical Workers will be in accordance with the **Live Electrical Work Permit** (FORM-GRP-ALLD-ALLS-OHS-29-1) and that the permit must be completed before the work commences.

The owner/customer, the relevant Spotless Manager and the respective state's electrical nominee/endorsee must acknowledge their approval for the Live Work on the Live Electrical Work Permit prior to the task being commenced.

A customer who requires Live Work to be carried out, with the exception of testing or fault-finding, will be required to sign an acknowledgment on the Live Electrical Work Permit. This must state they are aware of the responsibilities of Live Work and there is no reasonable alternative.

Important Note: Additional cost and/or commercial convenience is not accepted as a reason for Live Work.

7.3 LIVE WORK METHOD FOR TESTING & FAULT FINDING ONLY

Access to Energised terminals for the purpose of **TESTING AND FAULT FINDING** will be permitted only when:

- A Risk Assessment is conducted and completed
- Test equipment complies with Australian Standard AS 61010.1
- The appropriate test equipment is tested and is within 'in-test' date
- The appropriate PPE and Electrical Safety Equipment is used and is within 'in-test' date
- No hand tools or power tools are used
- There is no direct contact with, or movement of, exposed (uninsulated) energised conductors
- The isolation point of the relevant electrical supply has been clearly identified and is able to be reached and operated quickly without any need to negotiate or remove obstacles
- The work area is clear of obstruction so as to enable entry and exit quickly and safely
- Unauthorised persons are prevented from entering work area by signage and barriers

8 GENERAL PROCEDURES

8.1 LOCK AND TAG

To ensure the safety of Electrical Workers, our clients and the public, isolation points are to be identified prior to commencing the work, and will be isolated, Locked and Tagged in accordance with relevant State or Territory legislative requirements and Australian Standard AS 4836.

Spotless will issue a Lockout Kit to every directly employed Spotless Electrical Worker. This will be signed for and added to their **Electrical Equipment (Test) Register** (FORM-GRP-ALLD-ALLS-OHS-128-2). This kit is to be returned to Spotless on resignation or termination from the company.

Spotless Electrical Contractors must also have their own Lockout Kit. It must be supplied by the Electrical Contractor to their Electrical Workers and be suitable and effective to be able to lock out electrical equipment.

Electrical equipment requiring work to be performed must be isolated from all sources of supply either by opening switches, removing fuses or switching circuit breakers.

Appropriate warning tags and lockout devices must also be placed at points of switching, isolation or disconnection.

To safeguard against inadvertent reconnection by others after being absent from the immediate work areas, checks and tests must be carried out to ensure that electrical equipment being worked on is still isolated.

- All tags must be checked and removed by approved signatories.
- No one must remove a tag belonging to another person.
- The person who has placed the tag on in the first instance has exclusive authority to remove the tag.

Only in very extreme circumstances can another person remove a tag, and in this case, it may only be removed by the Supervisor or Contract Manager or at their direction, and only after it has been deemed safe to do so.

When removal of "Danger Do Not Operate" tags for electrical equipment under repair, maintenance or decommissioning is required; the electrical equipment must be isolated from supply and appropriate tests made to ensure the equipment is de-energised. An "Out of Service" tag is placed at the Isolation Point.

8.2 TEST AND TAG

All portable electrical equipment and safety switches or Residual Current Devices (RCD's) requiring testing to ensure the item is electrically safe must be fitted with a Test Tag that complies with Australian Standard AS 3760 and complies with current State or Territory electrical safety legislation. Frequency of inspections and testing shall be completed in accordance with AS3760 and AS3012.

All Spotless used portable electrical equipment will be Tested and Tagged. This is irrespective of State or Territory electrical safety legislation that states Testing and Tagging of portable electrical equipment protected by safety switches in some circumstances is not required. If the Spotless requirement is greater than state or territory legislation, then the Spotless standard will be maintained.

Details of the portable electrical equipment on site must be recorded in accordance with AS3760 and AS3012 and maintained onsite in site register or logbook to be available at all times.

Logbooks may be those commercially available in line with the standards or **Electrical Equipment Register** (FORM-GRP-ALLD-ALLS-OHS-128-2)

The minimum qualification permissible by Spotless to perform Testing and Tagging of portable electrical equipment is the Test and Tag Course, available through TAFE or an equivalent, where a person has been assessed as competent and deemed qualified to perform the task. This qualification allows for Testing and Tagging of portable electrical appliances only, but not maintenance or repairs.

Maintenance or repairs to portable electrical equipment will only be completed by licensed Electrical Workers.

9 ELECTRICAL WORKER RECORDS

9.1 ELECTRICAL EMPLOYEES

An employee file will be maintained for each Electrical Employee. The file will contain documentation of their nominated **Electrical Supervisor** (FORM-CORP-OHS-GEN-128-1).

- Personal contact details
- Copies of current certificates of competencies (licences)
- Copies of relevant technical or other certificates
- Copy of current drivers licence
- insurance details if vehicle is supplied via “car allowance”
- recruitment process
- Details and documented evidence of any relevant courses (internal and external) completed
- Associated training records, including induction declarations and assessments
- Copies of any relevant completed audit reports using **Electrical Safety Management Plan Audit Report** (AUDIT-GRP-ALLD-ALLS-OHS-10-1).
- Copies of any significant defects, listed on the distributor’s inspection report, which can be attributed to the person
- Record of issued documentation, test equipment, PPE, and electrical tool list
- Details of any disciplinary action

The above details will also be retained for any casual or contract technical staff.

9.2 ELECTRICAL CONTRACTORS/SUBCONTRACTORS

Details will be maintained on all Electrical Contractors. The file will contain:

- A contractor pre approval qualification
- Sub-contractor personal contact details as per the Spotless Services Agreement
- Copies of certificates of competencies (licences)
- Copies of certificates of currency for relevant insurances
- Copies of relevant technical or other certificates
- Copy of current drivers licence if applicable
- Copies of monthly contractor OH&S Safety Performance Summaries
- Details of any relevant courses completed and all associated training records, including induction declarations and assessments
- Copies of Spotless contract performance assessments
- Copies of all relevant completed audit sheets
- Copies of any significant defects, listed on the distributor’s inspection report, which can be attributed to the Contractor
- Record of issued documentation, test equipment, PPE and electrical tool list (if issued by Spotless, if self-issued by sub-contractor this information must be available from the subcontractor on request)
- Details of any Spotless raised disciplinary action or corrective action reports

10 ELECTRICAL EMPLOYEE TRAINING AND ASSESSMENT

10.1 ESMP TRAINING

- ESMP training is provided annually to all Electrical Workers directly employed by Spotless.
- ESMP training is required for Spotless Supervisors and Managers who have Electrical Workers or Electrical Contractors reporting to them.
- Electrical Contractors are required to attend ESMP training prior to commencement and/or are required to demonstrate compliance with the ESMP. .

ESMP training can only be delivered by a licensed open class Electrical Fitter Mechanic approved by the respective state's or territory's electrical nominee or electrical endorsee or by completing the equivalent online training provided through safety@spotless.

For Classroom training, a participants list should be retained and participants should be encouraged to provide feedback on the quality of the training and trainer. (Participants list can be sent to LearningSpot for updating of the electronic records of training completion)

10.2 TRAINING ASSESSMENTS

Electrical Employee training requirements will be assessed annually. The minimum training required will be annual refresher of the ESMP.

Internal and external training will be made available to Electrical Employees to improve technical competencies and as required by any legislative changes.

10.3 COMPETENCY AUDITS

Audits on new employees must be conducted once a month for the first three months. Existing employees should be audited at least annually with records being maintained for seven years. More frequent audits will be conducted if the performance of a particular Electrical Worker is considered unsatisfactory.

When non-conformances are identified they will be immediately discussed, documented with the relevant person and appropriately actioned.

Persons with their own electrical contractors licence but working under the control of the Spotless contractor's licence will be included in the audit program.

Action plans are to be developed where deficiencies are identified through the audit process. **Action Plan** (FORM-GRP-ALLD-ALLS-OHS-01).

11 DEFINITIONS

Term	Definition
Approval	Agreement is reached whether verbal or written and must be documented.
Competent	Having acquired through training, and qualifications, experience or a combination of these, the knowledge and skills to correctly perform the task required. (AS/NZS 4836, Section 1.6.3)
Direct Control of Apprentices	Direct control means knowledge of the person, where they are and what activity they are doing.
Direct supervision of Apprentices	Direct supervision means at all times on a direct and constant basis, Direct means being within visual contact and/or earshot (audible range) and Constant basis refers to the those tasks being performed by the apprentice for the first time and until skill is demonstrated for the complexity of the task and the work environment.)
Electrical Supervisor	An agreed and nominated licensed Electrical Worker. This person assists in ensuring that the legislative electrical compliance obligations are being met by Spotless.
Electrical Worker	A person engaged in the installation, maintenance, repair, alteration, testing or fault finding on electrical equipment, including the supervision of such work. (AS/NZS 4836, Section 1.6.9)
Electrically Safe	<ul style="list-style-type: none"> • For a person or property, that the person or property is free from electrical risk; • For electrical equipment or an electrical installation, that all persons and property are free from electrical risk from the equipment or installation; • For the way electrical equipment, an electrical installation or the works of an electricity entity are operated or used, that all persons and property are free from electrical risk from the operation or use of the equipment, installation or works; • For the way electrical work is performed, that all persons are free from electrical risk from the performance of the work; • For the way a business or undertaking is conducted, that all persons are free from electrical risk from the conduct of the business or undertaking; and • For the way electrical equipment or an electrical installation is installed or repaired, that all persons are free from electrical risk from the installing or repairing of the equipment or installation
Energised	Connected to a source of electrical supply or subject to hazardous induced or capacitive voltages. (AS/NZS 4836, Section 1.6.11)
Exposed Conductors	Electrical conductors and parts, the approach to which is not prevented by a barrier or rigid material in good order or by insulation that is adequate for the voltage concerned and that is in sound condition. (AS/NZS 4836, Section 1.6.13)

Term	Definition
Fault Finding	<p>The process of making measurements or carrying out tests on equipment to locate faults. It may also include the process of connecting testing instruments or devices to various parts of the equipment to determine how the equipment is operating. (AS/NZS 4836, Section 1.6.14)</p> <p><i>Examples:</i> 1) Tracing a fault on a refrigeration control circuit 2) Tracing a fault on a motor or an appliance</p>
High Voltage	Voltage that exceeds 1000 volts AC or 1500 volts DC. (AS 4836).
Incident	An actual or an apparently imminent occurrence of an event that endangers or threatens to endanger the safety or health of any person, or destroys or damages or threatens to destroy or damage any property, or any other event or alarm that results in a response by the reporting authority.
Live Work	<p>Electrical work performed in circumstances in which some or all of the electrical equipment the subject of the Electrical Work is energised. This includes testing; however, a safety observer is not required for testing, unless a risk assessment finds that one is required. (Qld elect Reg Sect 12 (J))</p> <p>Live work includes: Testing, tightening live or energised terminals, tracing cables through a live switchboard, vacuuming a switchboard, component removal or replacement or drilling a hole into a live or energised switchboard.</p> <p>The following are examples of Live Work (Qld Gov Dept IR, Electrical Safety):</p> <ul style="list-style-type: none"> • Testing components of a television set that's switched on to carry out a repair • Testing to ensure correct connections (including polarity) • Tightening the terminals of live circuit breakers • Pulling cables into or through a switchboard where there is exposure to live terminals and or energised conductors.
On or Near	<p>Proximity to exposed energised conductors where there is possibility of either of the following coming within 500 mm (or other approved distance, exclusions zones) of the energised exposed conductors, whether deliberate, accidental or inadvertent:</p> <ul style="list-style-type: none"> • A person's body. • Any object, which a person may be carrying or touching during the course of the work that is not designed for use on energised conductors operating at that voltage. (AS/NZS 4836, Section 1.6.23)
Personal Protective Equipment (PPE)	Safety clothing and equipment for specified circumstances or areas, where the nature of the work involved or the conditions under which people are working, requires its wearing or use for their personal protection to minimise risk.

Term	Definition
Safe System of Work	For Live Work on a low voltage electrical installation, includes, but is not limited to a system of work that complies with the provisions of AS/NZS 4836 (Safe Working on Low Voltage Electrical Installations) about ensuring the safety of persons while performing Live Work.
Safety Observer	<p>In relation to observing for the performance of Electrical Work means a person, specifically assigned the responsibility of observing and warning against unsafe approach to equipment, exposed energised conductors and other potential hazards; (AS/NZS 4836, Section 1.5.22)</p> <ul style="list-style-type: none"> • Who is competent to help, and is suitably trained in the work, and has an understanding of the Electrical Work being performed. • Whose competency to help, training and understanding of the Electrical Work performed has been assessed by an approved trainer within the last twelve months. • Who is competent to rescue the person performing the Electrical Work and to provide resuscitation. • Whose competence for rescue and resuscitation has been assessed in the last twelve months. • Having an approved low-voltage rescue kit, that includes gloves and rescue crook that is in current test date range, at all times throughout the observation. • Who must not be employed to perform any other task or be distracted during the observation. <p><i>Example 1: Installation Category 4: Relates to the primary supply voltage on a main switchboard supplied by a transformer.</i></p> <p><i>An Electrical Worker performing testing or fault finding in this category must have a Safety Observer who will be a duly qualified and licensed Electrician.</i></p> <p><i>Example 2: All other installation categories</i></p> <p><i>An Electrical Worker performing testing or fault finding in all other situations where the cable size is greater than 16mm² and the immediate protection device is rated above 80 amps must have a Safety Observer who is a duly qualified and licensed Electrical Worker.</i></p> <p><i>Example 3: Emergency</i></p> <p><i>An Electrical Worker performing Electrical Work in an emergency situation must without exception, have a Safety Observer who is a duly qualified and licensed Electrical Worker, when:</i></p> <ul style="list-style-type: none"> • A 'state of Emergency' exists as declared by State or Federal

Term	Definition
	<p>Government e.g. severe storms or cyclones.</p> <ul style="list-style-type: none"> • A hospital, aged care facility or like facility, where it is imperative that the electrical supply either to the installation or electrical equipment must be urgently restored (within 1-2 hours), the Supply authority supply of electricity is cut – Brown Outs or Black Outs and/or Emergency Back-up generation plant has failed. • A domestic or commercial installation during a power outage where there is the possibility of a temporary emergency generator being connected and there exists a possibility of back-feeding.
Testing	<p>The use of logical methodology or test instruments, or test equipment by a competent person. (AS/NZS 4836, Section 1.5.25)</p> <p><i>Examples:</i> 1) <i>Installation testing</i> 2) <i>Testing for presence of voltage at main switch.</i></p>

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