THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

OH&S Occupational Health & Safety Unit

Electrical Safety Management Plan
(ESMP)

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Electrical Safety Management Plan (ESMP)

1. INTRODUCTION

1.1 Purpose

The purpose of the Electrical Safety Management Plan (ESMP) is to address the University's legal obligations under the Electrical Safety Act 2002, specifically as it relates to the carrying out of **electrical work** on University of Queensland owned or leased property. The ESMP is a working document designed to effectively manage and minimise electricity related health risks to personnel working on or visiting University of Queensland sites. The ESMP is to be read in conjunction with University of Queensland faculty and division procedures developed to comply with the ESMP.

1.2 Background

The University of Queensland, as an employer, has a legal obligation under section 28 of the Queensland Workplace Health and Safety Act (1995), to ensure the workplace health and safety of each of its workers at work. The University also has an obligation to ensure the workplace health and safety of others is not affected by the way they conduct their business.

In addition, the Electrical Safety Act 2002 specifically addresses "preventing persons from being killed or injured by electricity and preventing of property from being destroyed or damaged by electricity". The University of Queensland utilises a diverse range of properties and facilities which are either University owned or leased. **Electrical work** is carried out on these premises by a wide variety of individuals including Property and Facilities Division staff or contractors as well as staff or contractors to other divisions and faculties. The University of Queensland has decided that electrical safety issues must be addressed and that systems including policies and procedures, are to be established and maintained to ensure that electrical hazards are effectively managed.

2. OBJECTIVES OF THE ESMP

2.1 Electrical Safety Policy

Safety is of paramount importance to the University of Queensland. The University is committed to providing an environment for the safe use of electricity and safe work practices. To achieve this, management and each employee has a responsibility to eliminate hazards and perform all **electrical work** in a safe manner. The University will provide systems including policy, procedures and training to manage electrical risks. Every safety incident or accident will be reported and investigated in accordance with University policies and procedures.

2.2 Electrical Safety Goals

In relation to electrical safety, the goals of the University of Queensland are that at any University controlled site:

- No persons are killed or injured by electricity; and
- No property is destroyed or damaged by electricity.

2.3 Objectives

To achieve these goals requires a comprehensive system to manage the potential for death, injury or damage. The University of Queensland's Electrical Safety Management Plan, (ESMP), is the primary structure of that system. The objectives of the ESMP are to:

- Provide the Senate with a high degree of confidence that the University has the capability to identify and manage electrical safety risk in compliance with the Electrical Safety Act 2002;
- Provide Faculty and Divisional Managers with a comprehensive framework for identifying and managing electrical risk within their areas of responsibility;
- Detail the University of Queensland's approach towards identifying and managing electrical hazards at its sites for maintenance personnel, students, contractors, construction workers and other visitors;
- Provide a system that is complementary to and integrated with existing University of Queensland workplace health and safety policies and safety management plans and procedures;
- Clearly define the obligations of all stakeholders for electrical safety under the Electrical Safety Act 2002;
- Provide a basis from which Faculties and Divisions are able to develop complying systems for identifying and managing electrical risk within their areas of responsibility;
- Ensure a rigorous and ongoing monitoring of electrical safety performance.

3. SCOPE AND LIMITATIONS

This document has been developed specifically for the University of Queensland and applies only to University of Queensland owned and leased property. It has been developed to manage and minimize electrical-related health risks to personnel working on or visiting University of Queensland sites.

The ESMP must be read in conjunction with University of Queensland and faculty and division policies and procedures that provide for the safety of personnel working on or visiting University of Queensland sites.

All persons who work at or visit University sites for whatever purpose are subject to the requirements of the ESMP.

4. LEGAL REQUIREMENTS

4.1 Legislation

The control of electrical related health risks in Queensland is detailed in several pieces of legislation. Compliance with these is achieved by translating their requirements into an integrated hierarchy of policies, procedures, standards and safe work practices which allow for meaningful application of the intent of the legislation at appropriate levels within the University of Queensland.

Any electrical related tasks associated with University of Queensland owned or leased property shall be performed in accordance with all current and relevant State and Commonwealth Acts, Regulations, Advisory Standards, Codes of Practice and Australian Standards, including, but not limited to, the following:

- Queensland Electrical Safety Act 2002;
- Queensland Electrical Safety Regulation 2002;
- Queensland Workplace Health and Safety Act (1995);
- Queensland Workplace Health and Safety Regulation (1997);
- Queensland Environmental Protection Act 1994;
- Queensland Environmental Protection Regulation 1998;
- Codes of Practice – (Under ESA 2002)
  - Working Near Exposed live Parts;
  - Works (Protective earthing underground cable systems and maintenance of supporting structures for powerlines);
  - Electrical Work
  - Electrical Equipment (Rural Industry)

4.2 Requirements for Electrical Workers

Staff of the University of Queensland who manage **electrical workers** must ensure that:

- **All electrical workers** are registered with the University's **Electrical Safety Officer,** detailing:
  - Name;
  - Licence category;
  - Faculty;
  - Contact details.
- A schedule is maintained of all electrical worker registrations and licences to be renewed in the year. The schedule will include, as a minimum:
  - Primary trade;
  - Licence category;
  - Licence number;
  - Renewal date.
- A bring-up system is in place to ensure due dates for renewal of all **electrical worker'** licences are flagged and brought to the attention of the line **manager**;
- **All persons carrying out electrical work** are provided with adequate training and supervision (Refer also Sections 6.3.2, 6.3.3 & 6.5.1);
- Subject to exemptions, only licenced **electrical workers** carry out work on **electrical equipment** that is used for or operated at voltages greater than **extra low voltage;**
- No worker is allocated work for which they are not both licensed and competent.

4.3 Contractor's Licence

- The University will maintain its contractor's licence with each faculty or division engaging in contract work nominating a **Qualified Technical Person** as an endorsee to the licence. **The Electrical Safety Officer** will act as the principal contact for the licence to external organisations and report directly to the Associate Director OH&S.

5. ORGANISATIONAL RESPONSIBILITIES

5.1 Electrical Supervision Structure

* QTP = Qualified Technical Person

Any Faculty which carries out electrical work other than fixed wiring (which may be undertaken only by P & F or their assigned agents) should ensure that all such work is supervised by a **Qualified Technical Person** registered with the University's **Electrical Safety Officer**. *In the event that an electrical worker is supervised/managed by a person who does not have an electrical licence the appropriateness of any action or work required to be undertaken by this electrical worker will be determined by the Electrical Safety Officer.*

5.2 Electrical Safety Fundamentals

- To ensure the safety of electrical systems at the University all **electrical work** on fixed wiring shall be undertaken solely by Property & Facilities Division or their assigned agents;
- All electrical work is to be tested by competent personnel to ensure that it is electrically safe;
- **Electrical work** within departments shall be carried out in accordance with the regulatory and reporting frame work set out in this management plan;
- Faculties & Divisions shall ensure all **Portable Electrical Equipment** carries a current "Test Tag" in accordance with the University Guideline published on the Occupational Health & Safety intranet site;
- **Electrical equipment** shall only be used for its designed purpose;
- Double adaptors and piggyback plugs are not to be used on any UQ site;
- Electrical Incidents and unsafe situations shall be reported to the **Electrical Safety Officer**, using the established incident and hazard reporting processes.

5.2.1 Plug Boards

- Multiple plug boards are not to be "daisy chained";
- All outlets on plug boards are to be individually switched and incorporate a 10 amp overload circuit breaker;
- Plug boards are not to be used for high current devices such as, room AC units, fridges and freezers, welders, room heaters and air compressors;
- Plug boards are not to be located where they may be exposed to water or create trip hazards.

5.2.2 Extension Leads

- All extension leads must be tested and tagged;
- All extension leads must be used for short-term applications only;
- All extension leads must be the appropriate length and current rating for the application;
- Any cord extension set or flexible cable at the workplace must be located where it is not likely to suffer damage or cause a hazard;
- All extension leads must be maintained in good order and inspected for damage before each use for nicks or cuts and exposed single insulation;
- If any extension lead is not fit for its intended use, or it does not have a current test tag, then it shall not be used and shall be withdrawn from service until restored to functionality.

5.3 Responsibilities

Responsibilities for electrical safety on UQ sites include but are not limited to the following (Refer also detailed position descriptions):

Person/Party	Responsibility
University of Queensland Senate	• Approve ESMP.
Vice Chancellor	• Primary executive responsibility for Occupational Health and Safety.
Associate Director OH&S	• Ensure University wide compliance with ESMP; • Training and awareness.
Electrical Safety Officer	• Informing themselves and the University on the requirements of the Electrical Safety and Workplace Health and Safety Acts and Regulations; • Monitoring the performance of the ESMP through: - ensuring that regular electrical audits are conducted of electrical workers, electrical work, Faculties and Divisions; - responding to events which indicate a need to take action in relation to aspects of the ESMP; • Administering the University's electrical contractor's licence; • Maintaining a register of all UQ electrical workers; • Assist in the training of staff and contractors - Induction and ongoing; • Investigation of electrical incidents; • Providing advisory services in relation to the requirements of the Electrical Safety Act and other related Standards; • Reporting of Serious Electrical Incidents to the Queensland Electrical Safety Office; • Advising on Electrical Safety certification of electrical equipment where required by Faculties and Divisions; • Acting as the primary point of contact for electrical safety issues for the University of Queensland; • Assisting Faculties and Divisions to develop systems to comply with the requirements of the ESMP; • Assisting Faculties and Divisions to develop risk assessments.

Person/Party	Responsibility
Faculty and Divisional Managers	• Establishing and maintaining systems to facilitate compliance with the ESMP; • Ensure all staff and contractors working for them and their sections are aware of and comply with the ESMP; • Workers are licensed and competent to carry out their allocated duties; • Each employee has the correct tools, equipment and material to complete the work in a safe and efficient manner; • Risks are assessed, control measures identified and on-site risk assessments completed and control measures implemented when necessary; • Work is completed in accordance with instructions; • Work complies with the appropriate standards, has been properly tested and the site is safe.
Qualified Technical Persons	• Implementing systems to facilitate compliance with the ESMP; • Technical supervision of electrical workers; • Maintaining a register of all Faculty/Division electrical workers and their licences; • Training of staff and contractors - Induction and ongoing; • Investigation and reporting of electrical incidents; • Providing advisory services in relation to the requirements of the Electrical Safety Act and relevant standards; • Reporting of Electrical Incidents to the Electrical Safety Officer OH&S; • Certification of electrical installations and equipment; • Acting as the primary point of contact for electrical safety issues for the Faculty/Division; • Assisting Faculty/Division to develop systems to comply with the requirements of the ESMP; • Assisting Faculty/Division to develop risk assessments; • Provision of Electrical Safety Certificates to the Electrical safety Officer.
Senior Electrical Engineer (P&F)	Provision of technical consultancy to the Electrical Safety Officer.
Electrical Workers (University and Contract)	• Compliance with the ESMP and Faculty/Division procedures; • To bring to the attention of their Supervisor any potential electrical hazard; • Work only under the control of a supervisor.
Other University staff, students and visitors	• The safe use of electricity; • The safety of those under their supervision and care; • Compliance with the ESMP.

5.4 Obligations

In addition to the responsibilities listed above, any Division or Faculty of the University where electrical work is undertaken shall comply with the following:

5.4.1 Awareness

Ensuring that all persons, including students and visitors affected by the requirements of the ESMP are made aware of the relevant requirements.

5.4.2 Electrical Accident Reporting and Investigation

Every electrical incident that results in either a person being injured or that has the potential to cause injury will be immediately reported to Electrical Safety Officer of the Occupational Health & Safety Unit. The incident will be investigated and a report completed. Procedural improvements identified during the accident investigation will be implemented. Refer to the Occupational Health & Safety intranet site for forms and guidelines.

5.4.3 Notices issued under the Electrical Safety Act 2002

All Notices will be actioned in the following manner:

- The Associate Director OH&S is to be notified in writing as soon as practicable;
- The Electrical Safety Officer OH&S is to be notified verbally on issuance of the Notice;
- The Notice will be rectified within 2 days;
- The defect will be discussed with the person who carried out the work;
- For serious defects, the person may be subject to additional training and disciplinary action which is to be recorded on their personnel file;
- Serious defects will be discussed at a full safety meeting;
- Consideration will be given to changing procedures;

Notices include:

- Improvement Notices;
- Electrical Safety Protection Notices;
- Unsafe Equipment Notices.

5.4.4 Obligations under the Electrical Safety Act 2002

Part 2 of the Electrical Safety Act 2002 specifies obligations for persons, organisations and entities under the Act.

All persons involved with electrical work are to make themselves aware of their obligations under the Act, a person may owe obligation in more than one capacity.

All workers are to be made aware of their obligations by their Faculty or Divisional Manager through training such as inductions.

5.4.5 Introduced/Manufactured electrical Equipment

Any Faculty or Division where staff, contractors, students or visitors, modify, design, construct or assemble electrical equipment on a University site or bring such equipment on to a University site, will provide to their Qualified Electrical Person or the Electrical Safety Officer OH&S, a Certificate of Electrical Safety signed by an electrically qualified person, confirming that the equipment has been tested and is electrically safe.

No Faculty or Division shall permit staff, contractors, students or visitors to connect any introduced/manufactured electrical equipment at a University site without a Certificate of Electrical Safety.

5.4.6 Sale/Disposal of University Equipment

The sale or disposal of University owned equipment, whether by internal or external means, will be permitted only if;

- It is ensured that the equipment is tested and tagged prior to sale; and
- All documentation for the safe installation, use and maintenance is provided

University staff or students who design construct or assemble any equipment that is subsequently offered for sale or disposal for use by others shall meet all obligations above and:

- Certificate of Electrical Safety is supplied for non commercially produced equipment.

5.4.7 Scrapping/Dumping of Electrical Equipment

University staff or students who dump or scrap electrical equipment shall ensure that any electrical supply cord is cut off to prevent unauthorised use and that the item is disposed of in a manner to discourage retrieval.

5.5 Electrical Safety Essentials

The University has identified the five imperatives for electrical worker safety. These are summarised as the Electrical Safety Essentials, used in training and displayed in the workplace these are:

• **SAFETY**	- Consider self, others and the public in all undertakings ; - Ensure all equipment is suitable to the task and certified in test where required
• **ASSESSMENT**	- All tasks require some degree of Risk Assessment and planning
• **COMPETENCE**	- Only perform tasks for which you are licensed and competent; - Work to all applicable standards
• **LOCK OUT, TAG OUT**	- Identify and isolate all sources of harmful energy prior to commencing work
• **TEST BEFORE TOUCH**	- All **electrical workers** will adopt a "test before touch" approach and treat all conductors live until proven otherwise
• **TESTING**	- All **electrical work** must be tested by a licensed and competent person prior to energisation; - In high risk areas certification by an approved auditor may be required

6. MANAGING ELECTRICAL WORK

6.1 Safety Principles

All **electrical work** will be completed in accordance with AS 3000 and any other relevant standards. **Electrical work** on any University owned or controlled site will only be carried out by persons who have been assessed as competent and approved by UQ to carry out **electrical work**.

Electrical work is defined in the Electrical Safety Act;2002 section 18. It covers a large range of activities and includes electrical wiring and testing by students, electrical engineers and academic staff. It is therefore necessary for all staff students, visitors, electrical engineers and academic staff to comply with all safety principles, standards and UQ policies that relate to performing **electrical work**.

It is essential that all electrical work is completed in a safe manner and that electrical equipment has been tested and inspected to ensure the equipment is electrically safe prior to connection and release for use. Only persons who have been assessed as competent to carry out electrical testing and approved by the Electrical Safety Officer will be permitted to carry out this activity.

6.2 Risk Assessment

Risk assessments will be conducted for the range of electrical work carried out on University sites and controls identified. Management of risk will be incorporated into work procedures and job documents where appropriate. Risk assessments will be reviewed every five years, when an incident or significant near miss occurs or when a change to activities occurs. Risk assessment training will be provided to all staff including electrical workers.

6.3 Electrical Work

6.3.1 Electrical installation work

Electrical installation work on any University owned or controlled site will only be carried out by Property and Facilities Division or their authorised contractors. Electrical installation work can only be carried out by a person who holds a current electrical mechanics licence acceptable in Queensland.

All electrical equipment and construction wiring for the performance of **construction work** is to be in accordance with the requirements of AS/NZS 3012 (Electrical installations—Construction and demolition sites).

All electrical equipment and wiring for use in an explosive atmosphere must meet the standards of AS/NZS 60079, 61241 and 2381 series as applicable.

All forms for application for initial connection or metering changes submitted to an electricity entity must be signed by a **qualified technical person** listed on the **electrical contractors licence.**

All **high voltage** electrical work or electrical work in a hazardous area must be inspected by

an accredited auditor prior to connection to supply.

6.3.2 Work on electrical equipment

Work on **electrical equipment** may be carried out by persons who hold a current electrical mechanics, fitter or relevant restricted licence. **A** person may only carry out electrical work as is indicated on their licence. A person will be considered to have committed a major safety breach if they carry out electrical work that is not permitted by their licence and may be subject to disciplinary action.

If a person with a restricted electrical work licence is requested by their Manager/Supervisor or any other person to carry out electrical work which their licence does not permit, they are to contact the Electrical Safety Officer. The Electrical Safety Officer will determine whether this person is licenced and competent to complete the electrical work.

6.3.3.Electrical work by students, electrical engineers and academic staff

The Electrical Safety Act 2002 provides exemptions so that under certain circumstances a *competent* person may perform electrical work without holding an electrical worker licence.

Whenever electrical work, under these exemptions, is being carried out by a person who does not hold an electrical work licence, all other sections of the electrical legislation and UQ policies must be complied with. A written risk assessment is necessary whenever live testing is being carried out.

Faculties and Divisions must ensure adequate training and supervision, including risk assessment training, is provided for electrical work undertaken by students, electrical engineers and academic staff.

6.3.4 Electrical Switchboards

All electrical switchboards will be kept locked.

Switchboards shall be marked externally with their identification number, any cupboard containing a switchboard shall be marked to indicate this purpose, such that access may be kept clear.

All circuits are to be clearly identified at the board, and any termination point to facilitate isolation.

6.3.5 Control of Job Requirements

University electrical workers and casual/sub-contract electrical workers will complete all work in accordance with project documents/ work orders. In the event that additional work beyond the job documents is required to be carried out or the initial agreed work activity is altered, the worker in control at the site will:

- Record all changes on the work order/project documents;
- Obtain the appropriate signature, authorising the changes, on the work order or other suitable document;
- Review risk assessments and implement further controls if required;
- Update relevant documents, e.g. as-built drawings, work order documents.

6.3.6 Record of Testing and Work Activities

The following information on electrical testing will be recorded on the job documents:

- The name of the person who carried out the test;
- The signature of the person who carried out the test;
- The licence number of the person who carried out the test;
- Test readings;
- Serial number/s and test due date/s of testing equipment.
- Records must be kept for five years or the life of the equipment or installation, whichever is the lesser.

6.3.7 Working Live

The intent of the Electrical Safety Act 2002 is that live electrical work is not carried out unless it is absolutely necessary and that there is no reasonable alternative. Testing of energised electrical equipment is classified as live work and live testing must comply with the UQ policy on working live. This applies equally to the testing of electrical installation work, testing of electrical equipment and any testing conducted by students, electrical engineers and academic staff.

Live work may present significant potential for death or injury to electrical workers. As such live work (with the exception of testing and fault finding) will **NOT** be performed unless absolutely necessary **AND** only when approved by the electrical worker, person in control and the workers manager. The Electrical Safety Officer and any Qualified Technical Person may veto this approval.

Live work may only be authorised due to the following circumstance: (At least one of these conditions exist):

- It is necessary in the interests of safety, whether or not electrical safety, for the work to be performed while the electrical equipment the subject of the electrical work is energised;
- A supply of electricity is necessary to performing the electrical work; (this is testing and fault finding)
- There is no reasonable alternative to performing the electrical work by live work.

The form "Application for Live Work", must be completed in full before any live work, with the exception of testing and fault finding, commences. The completion of this form requires that an accredited safety observer be present when the live work is in progress.

Live work, including testing and fault finding, may only be carried out when the following conditions have been complied with in full:

- Only electrical workers or persons with the appropriate training and competency have been assigned to the work;
- A written risk assessment has been completed;
- Identified control measures have been implemented;
- Testing instruments are in-test and suitable for the work;
- Appropriate PPE is being used;
- The isolation point for the live equipment has been identified and can be reached without climbing over obstacles;
- The work site is clear of obstructions.

If a risk assessment identifies a hazard due to high fault currents during testing a safety observer must be present as a safety control measure.

Failure to observe live work requirements in full shall be deemed a major safety breach and any individual involved may be subjected to disciplinary action.

Thermo scanning of switchboards will be considered live work when it is necessary to open or remove the escutcheon plate and live conductors are exposed.

All live testing will require the completion of a written risk assessment.

6.4 Tools and Equipment

In this Section the term "electrical worker" also includes students, electrical engineers and academic staff.

6.4.1 Test Instruments

All equipment used to perform electrical tests will be tested in accordance with the manufacturers instructions and relevant standards. Records of tests will be kept for 5 years.

On each occasion before a test instrument is used it is the responsibility of the electrical worker to examine the instrument to ensure it is in-test and is in good order. This examination is to be in accordance with UQ procedures. If any item of equipment is not fit for its intended use, or is not in-test, it shall not be used and shall be withdrawn from service until restored to functionality.

6.4.2 Personal Protective Equipment

Electrical work may require the use of PPE relevant to the work being carried out. PPE will be identified by the risk assessment. UQ Faculties and Divisions will supply PPE and maintain a system for regular testing of the equipment. PPE will be tested in accordance with the manufacturers instructions and relevant standards. Records of tests will be kept for 5 years.

On each occasion before PPE is used it is the responsibility of the electrical worker to examine the item to ensure it is good order. This examination is to be in accordance with UQ procedures. If any item of equipment is not fit for its intended use, it shall not be used and shall be withdrawn from service until restored to functionality.

6.4.3 Safety Equipment

All electrical workers at the worksite will use safety and operating equipment relevant to the work being carried out. UQ Faculties and Divisions will provide safety equipment and maintain a system for regular testing of the equipment. Safety equipment will be tested in accordance with the manufacturers instructions and relevant standards. Records of tests will be kept for 5 years.

On each occasion before safety equipment is used it is the responsibility of the electrical worker to examine the equipment to ensure the item is in-test and is in good order. This examination is to be in accordance with UQ procedures. If any item of equipment is not fit for its intended use, or is not in-test, it shall not be used and shall be withdrawn from service until restored to functionality.

6.5 Supervision

6.5.1 Electrical Worker Supervision

Each electrical worker shall report to a supervisor /manager. In the event that an electrical worker is supervised or managed by a person who does not have the appropriate qualifications or competency in the electrical work, any query about the competence of the worker to perform a given task must be referred to the Electrical Safety Officer.

6.5.2 Apprentices

The University may use apprentices on job sites. *A* licenced electrical worker will be nominated to be responsible for the activities of an electrical apprentice at site.

6.6 Safety and Training Meetings

Safety meetings will be held on a regular basis with all persons who hold an electrical worker licence. Training will be an important part of these meetings. Management and supervisors will ensure that all electrical workers sign a record of attendance.

6.7 Electrical Safety and Competency Audits

Electrical safety and competency audits will be conducted on all electrical workers on a regular basis. The audits will identify situations where electrical work or testing is not being carried out in accordance with standards and competencies. Results will also be used to identify individual and group training needs. Where electrical work is continually not being completed in accordance with requirements or a serious breach of procedures occurs the results may be used for disciplinary reasons.

Audits may also be conducted on students, electrical engineers and academic staff so as to ensure that electrical work is carried out in a safe manner and in accordance with electrical legislation.

The auditor will be a person who is electrically qualified, competent to carry out audits and is familiar with the electrical work being carried out by the particular person. The auditor is to be aware of the responsibilities of electrical workers in accordance with the legislation.

6.8 Employment

6.8.1 Electrical Workers' Records

The personnel file maintained on each full-time and casual electrical worker will include as a minimum:

- Copies of relevant technical competency certification and renewal dates;
- Copies of audit sheets (Held for a minimum of 2 years);
- Details of any significant defects attributed to that person;
- Details of any disciplinary action as a result of an electrical safety breach;
- Competency assessments;
- Copy of where appropriate, general induction card.

(Refer also Sections 6.4.2 and 6.4.3, which include record keeping requirements for PPE and electrical safety equipment)

6.8.2 Induction

Every electrical worker, including casual and labour hire workers, will participate in an induction program. Induction will occur before a new electrical worker commences work. The induction will include, as a minimum, an understanding of:

- The ESMP (Uncontrolled copy issued);
- The range of work activities expected to be carried out;
- Job description;
- Work clothing requirements;
- Requirements for PPE;
- Work procedures;
- AS 3000;
- Occupational Health and Safety induction (Card issued);
- Site emergency procedures;
- Instruction on competencies and standards;
- Competency assessments.

Induction will include a technical and competency assessment. The extent of the assessment will depend upon the activities being undertaken. Records of assessment will be held in the employee's personnel file.

Before any new electrical worker is permitted to work alone, they may be accompanied by an experienced electrical worker who will assess their competency over a number of jobs to determine whether they are capable and competent to carry out work. The number of jobs will be determined by the Qualified Technical Person or Electrical Safety Officer and will cover the various types of activities the worker is expected to complete. A written assessment will be completed and maintained in the employee's file.

New employees are subject to a three-month probationary period during which their performance is assessed and a decision made on their suitability.

6.8.3 Sub-Contractors

University staff who source sub-contractors or labour-hire employees must ensure that the supplying organisations provide documentary evidence that the employees supplied are appropriately licenced and competent. Information shall include as a minimum:

- Queensland Electrical Contractor licence;
- Registration under relevant Act or Regulation;
- Work Cover details;
- Public and professional liability insurances

This information will be held for a minimum of 5 years as will records of work activities.

6.9 Contractor Management

6.9.1 Electrical contractor registration

All electrical contractors employed by UQ to carry out electrical work on UQ premises will be required to satisfy registration criteria including P&F contractor induction and evidence of an electrical safety management plan. The registration process is designed to assure UQ that electrical contractors are complying with their obligations under the Electrical Safety Act 2002 and associated legislation.

Audits will be conducted on electrical contractors and it is necessary for the contractor to satisfy and maintain an efficiency level. Audits will assess safety, staff competency and legislative compliance. A contractor who does not satisfy assessment criteria will not be permitted to carry out electrical work for UQ.

The auditor will be a person who has auditing experience, 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 workers in accordance with the legislation.

6.9.2 Induction

Any external contractor contracted by the University to perform works at a site must, prior to commencing work, undergo Property and Facilities induction as well as relevant faculty, division and site inductions. Individuals must be aware of their legal obligations in relation to health and safety specified in the Queensland Workplace Health and Safety Act (1995), Queensland Electrical Safety Act 2002, Queensland Environmental Protection Act 1994 and associated Regulations.

Project personnel shall be made aware of the requirements of the ESMP, and UQ electrical installation standards prior to tendering to ensure they allow for such requirements when quoting. The Electrical Safety Officer, OH&S Division shall be advised immediately of any incidents of non-compliance with the ESMP.

Organisations contracting for electrical work to the University of Queensland will be required to ensure that electrical workers assigned to University jobs have undergone the appropriate University induction/s and are qualified, licensed and competent.

6.10 Documents and Records

6.10.1 Control of Documents

This ESMP will be reviewed, at five yearly intervals. The Associate Director OH&S will approve changes to documents.

Any change to procedures, amendments to manuals or new documents will be explained and issued to electrical workers at the earliest practicable opportunity.

All electrical workers will have access to the latest approved version of controlled documents relative to their work.

A record of all documents, PPE and equipment issued to each person will be maintained. This requirement includes casual and labour hire electrical workers.

6.10.2 Record retention

The following records will be retained for five years:

- Electrical workers' personnel records;
- Electrical test results;
- Tests on testing instruments;
- Tests on safety equipment.

6.11 Maintenance

Property and Facilities Division are responsible for all preventive and corrective maintenance on fixed installations required for statutory compliance and any activities to ensure that installations and equipment under their control are electrically safe. This includes ensuring that vegetation is kept clear of overhead powerlines. All UQ facilities will be given a visual electrical safety inspection at least every two years. (Refer also to the Property and Facilities Division Maintenance Policy).

7. Identification and reporting of electrical hazards

This section describes the process for managing electrical safety hazards at the University of Queensland. The aim is to define the reporting line for such issues and to ensure timely management of the problem.

7.1 Notification of electrical hazards

Staff can assist the management of electrical safety by reporting any issues or problems they may identify. Generally, electrical safety issues will be identified through the Workplace Health and Safety Audits conducted by the **Electrical Safety Officer** and during routine maintenance and inspections by Property and Facilities Division or their contractors.

Any electrical issue that is otherwise identified may be reported in the following manner:

7.1.1 Immediate hazards e.g. exposed live wires, fallen powerlines

7 am to 4 pm Mon to Fri	After Hours
• Contact Property and facilities Works Control: - (07) 5460 1048, Gatton site - (07) 3365 2222, St Lucia and other sites • Alert other people in the vicinity	• Phone Security St Lucia, (07) 3365 3333, all sites giving: - Details of location, type and scale of the hazard, and - The name and location of the caller. • Alert other people in the vicinity

7.1.2 Potential hazards

7 am to 4 pm Mon to Fri	After Hours
1. The first section of Identified Hazards Report Form is to be filled out by the person identifying the hazard and the form submitted to the head of department or section. 2. A copy of Identified Hazards Report Form and work order should be submitted to Property & Facilities if their action is required.	• Phone Security St Lucia, (07) 3365 3333, all sites giving: - Details of location, type and scale of the hazard, and - The name and location of the caller.

7.2 Hazard Investigation

In the event of an actual electrical incident or the identification of a major electrical safety risk the issue will be fully investigated by the Electrical Safety Officer who will report to the Associate Director OH&S.

7.3 Remediation of hazards

The majority of electrical hazards at UQ can be rectified by the Property & Facilities Division. Depending on the extent of the problem and the associated risk, a service contractor or other external organisation may be engaged to effect remedial action. Alternatively, if it is a safety issue involving building occupants, the problem may be managed at the source for example, through a change in work practices.

If the issue is identified as requiring major refurbishment or asset replacement work, the final resolution will be prioritised and placed on a project list for future remedial action.

8. Accidents and Incidents

8.1 Accident and incident reporting

If the matter is urgent, telephone Security St Lucia, (07) 3365 3333.

Accidents, incidents and injuries should be reported on a workplace injury, illness & incident report form (IIIR). In the case of fatalities, serious bodily injury, work-caused illness or a dangerous event, after completing any emergency action required, details of the accident must be provided without delay to the Associate Director of Occupational Health & Safety (tel ext. 52365). Provide a contact phone number and address of the person injured or involved.

The Associate Director of Occupational Health & Safety or UQ Electrical Safety Officer must—

(a) Give written notice of a serious electrical incident to the Electrical Safety Office in the approved form; and

(b) Ensure the written notice is received by the Queensland Government Electrical Safety Office within 24 hours after they first become aware of the happening of the incident or event.

(c) However, if the incident or event that happens is a serious electrical incident in which a person has been killed, the Associate Director of Occupational Health & Safety/UQ Electrical Safety Officer must also advise the Electrical Safety Office of the incident, immediately they become aware of the happening of the incident, by phone, fax or another suitable form of immediate and effective communication.

9. Safe Work Practices

University of Queensland Faculties and Divisions must establish and maintain effective systems for implementing the requirements of the ESMP to ensure that students, workers and visitors remain safe from electrical hazards. Where necessary, policies, procedures, standards and safe work practices shall be developed, maintained and audited on a regular basis.

10. Electrical Worker Training

The University of Queensland is committed to the continued maintenance and improvement of electrical workers' skills to ensure safety in an environment of changing technology. To this end the competency requirements of a role must be identified and current competency of any worker in that role assessed, where a disparity exists training must be provided.

10.1 Electrical Worker Competencies

Faculties and Divisions must ensure that electrical worker competencies are reviewed on a regular basis to determine training needs. Internal and external training will be provided as required.

10.2 Rescue and Resuscitation Training

Faculties and Divisions must ensure that workers who are required to perform, or help in performing, electrical work shall receive rescue and resuscitation training as a minimum annually, while Safety Observers shall receive resuscitation training as a minimum six monthly.

11. Glossary

Term	Meaning
"Construction work" **"Manufacturing work"** **"Service work"** **"Office work"** **"Amusement work"** **"Rural Industry work"**	Have the meanings as given in the Electrical Safety Regulations, Schedule 9
Electrical engineer	Has the meaning as given in the Electrical Safety Act, Schedule 2
Electrical equipment	Has the meaning as given in the Electrical Safety Act, Schedule 2
Electrical installation	Has the meaning as given in the Electrical Safety Act, Schedule 2
Electrical installation work	Has the meaning as given in the Electrical Safety Act, Schedule 2
Electrical Safety Officer	The University officer within the OH&S Division assigned to manage and administer the ESMP. (Refer to Section 5.3 Responsibilities).
Electrical work	Has the meaning as given in the Electrical Safety Act, Schedule 2
Electrical worker	A person who performs electrical work.
Fixed wiring (Wiring, fixed)	Has the meaning as given in AS3000 s1.4
Hard wire	See 'Fixed wiring'
Person in control	Has the meaning as given in the Electrical Safety Act, Schedule 2
Qualified Business Person	Has the meaning as given in the Electrical Safety Regulations, Schedule 9
Qualified Technical Person	Has the meaning as given in the Electrical Safety Regulations, Schedule 9
Serious electrical incident	Has the meaning as given in the Electrical Safety Act, Schedule 2
Supervise	Supervise electrical work, means supervise the way the electrical work is performed.
Voltage - Extra low voltage	Has the meaning as given in the Electrical Safety Act, Schedule 2
Voltage - Low voltage	Has the meaning as given in the Electrical Safety Act, Schedule 2
Voltage - High voltage	Has the meaning as given in the Electrical Safety Act, Schedule 2