THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

CREATE CHANGE

Electrical Safety Management Plan (ESMP)

The University of Queensland
Electrical Safety Management Plan

This document replaces the Electrical Safety Management Plan of June 2006 developed by OHS Division's Electrical Safety Officers Daniel Martin and Darrell Moody			
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1. Introduction

This plan has been produced following an exhaustive review of the Queensland Electrical Safety Act 2002 and Regulations 2013. The bulk of this legislation applies only to a limited number of organisational units and staff within the university. The plan is intended as a guide to help with the implementation of the Act and Regulations. In the event of any contradiction of the plan with legislation, current legislation takes precedence. In this document, any reference to the plan is in affect a reference to current legislation.

Notwithstanding the above, to ensure the brevity of this document, portions of the regulation that only apply to UQ in exceptional circumstances have been omitted from discussion e.g. Section 57A *Power of regulator to direct defective electrical work to be rectified*.

Other sections of the regulations have been omitted from the plan as their explanation is trivial and the general knowledge of the law should form part of the mores of the UQ community e.g. Regulation 31 *Misrepresentations about electrical equipment or work.*

Specific information in relation to very specific items i.e. licensing applications and cancelations requirements have also been omitted.

2. Objectives of the Electrical Safety Management Plan

Provide the University of Queensland Senior Management Group with an assurance that the University manages the electrical infrastructure, electrical appliances, and associated electrical work in accordance with the Electrical Safety Act 2002.

3. Principals of Risk Management

No person must carry out, or be directed to carry out, any Electrical Work for which they are not:

- qualified, licensed and competent to perform; or
- which may subject them or others to the potential for harm; or
- which may cause infrastructure or property damage.

All Electrical work must be risk assessed prior to the start of the work as per UQs PPL 2.30.01b Occupational Health and Safety Risk Management – Procedure

4. 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 of Queensland's *Qualified Business Person.* The QBP is the OHS Director, who is required to keep a list of electrical workers with the following information as detailed below.

- Holder's name.
- Number of the licence.

- The class of the licence.
- Type of electrical work stated on the licence.
- Conditions or restrictions included in the licence.
- Date the licence expires.
- Jurisdiction in which the external licence was issued.

A list of electrical workers is kept by the Human Resource Division of UQ on the Aurion Database. (https://myaurion.hr.uq.edu.au).

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

- The list of electrical workers is kept up to date.
- Electrical workers are provided with adequate training, supervision, tools and equipment appropriate to the nature of the task assigned them.
- Trained safety observers are made available as required.
- Electrical workers and safety observers have current competency in cardiopulmonary resuscitation and low volt rescue. It is good practice to renew these competencies every six months.
- Electrical workers are not allocated work for which they are not trained, licensed and assessed as competent to perform.

5. Requirements for Electrical Work[1]

A safe work method statement (SWMS) or a documented risk assessment must be completed for electrical work. The specific items below must be addressed in the SWMS or risk assessment.

5.1 Determine whether Equipment is Energised

Before electrical work is performed on electrical equipment it must be tested to ensure it is not energised. For high voltage equipment, conductors must also be earthed. All exposed parts must be treated as live until tested.

5.2 Isolate Equipment (Lock Out Tag Out)

Equipment isolation points must be physically locked out and a tag or notice must be affixed to the lock or isolation point describing why and by whom the isolation was implemented as per UQ PPL 2.20.08 Lockout-Tagout guideline.

5.3 Energised (Live) Electrical Work

Working on energised (live) electrical equipment is prohibited except under the following conditions:

- The electrical equipment worked on provides a vital health and safety function.
- The electrical equipment must be energised (live) in order for the work to be carried out properly.
- In order to test.

[1] Electrical Safety Regulation 2013 (Qld) Reg. 14, 15, 16, 17, 18, 19, 20, 21, and 22

- There is no reasonably practicable alternative.

The following work practices must be in place if energised (live) electrical work is performed:

- A risk assessment in relation to the live work must be completed.
- The area where the electrical work is to be performed must be kept clear of obstructions to allow for access and egress.
- The isolation point must be clearly marked and access and egress to this point must be established and maintained.
- The isolation point must be capable of being operated quickly.
- The person authorising the work must consult with the person in control of the workplace (reference regulation). At the University of Queensland this refers to contractors. Any contractors undertaking live work must hold an UQ approved SWMS which explicitly details that live work will be performed as part of the work

- It is imperative that **no contact occurs between person and live parts** while working on electrical equipment. This is normally achieved by using mats, gloves and other personal protective equipment.
- Controls must be in place to ensure that there is no **unauthorised access to equipment being worked on** while it is live or energised.
- A safety observer is required for live work.

5.4 Work Methods

Work must be performed in accordance with the SWMS. Tools must be appropriate for the work, have been tested and maintained in good working order.

6. Electrical Work by Students, Electrical Engineers and Academic Staff

The Electrical Safety Act 2002 s55 (3) (g) provides an exemption so that a university student can perform electrical work as part of training under the supervision of teaching staff without holding an electrical worker license. All requirements of an electrical worker will apply to the student and teaching staff.

Organisational units wishing to make use of this exemption must obtain the explicit written permission of the Director OHS.

7. Duty Owed to a Person in Training[2]

Any person in the first six months of a training program or apprenticeship at the University of Queensland must not be in the vicinity of exposed live high voltage parts. In the case of exposed live low voltage parts the person must not be at risk of contacting the live exposed parts.

[2] *Electrical Safety Regulation 2013* (Qld) Reg. 279

A person in training must work under a level of supervision suitable to their competence, qualifications and the task to be undertaken.

8. Duties Assigned to Positions at University of Queensland

Responsibilities for electrical safety and the implementation of the Electrical Safety Management Plan (ESMP) on University of Queensland campuses and sites has been outlined in table 1 below.

Role	Responsibility
Vice Chancellor's Risk and Compliance Committee.	Approve the ESMP.
Director OHS	Ensure University wide application of the ESMP. Investigate electrical incidents and report to the regulator as required. The Director OHS is the endorsee on the University of Queensland's electrical contractors licence as the "Qualified Business Person."
Director P&F	Responsible for the design, installation and maintenance of the electrical infrastructure on all University of Queensland campuses and sites.
Organisational Unit Managers	Establish and maintain procedures to ensure compliance with the ESMP. Ensure all staff and contractors working for them and their sections are aware of and comply with the requirements of the ESMP
Senior Electrical Engineer	Provide technical consultancy to the Director OHS and the Director P&F. Establish construction, installation and equipment standards. Establish inspection and maintenance regimes for all electrical assets and infrastructure owned or operated by the University.
Work Health and Safety Managers and Coordinators	Ensure all electrical incidents are notified to the OHS Division. Perform incident investigation in the local area and assist the OHS Division with incident investigation where required. Audit electrical work and implement corrective measures as required.
University of Queensland Electrical Workers	University of Queensland staff who are regarded as electrical workers must comply with the ESMP and any additional local area requirements. Electrical workers must report any electrical hazards to their supervisor. Electrical worker must always work within the bounds of their license and competency. If an organisational unit of the University of Queensland has assessed that an electrical contractor's licence is required for the electrical work performed in their unit, the most senior electrical worker is required to act as the "Qualified Technical Person" and his or her name will be endorsed on the University of Queensland's electrical contractor's licence.
Staff, Students and Visitors	Staff who are not electrical workers, students and visitors including contractors must ensure they do not expose themselves to electrical hazards.

Table 1

9. University of Queensland Electrical Safety Duties[3]

Part 2 of the Electrical Safety Act 2002 places a range of duties on various stake holders. This has been abridged and sections omitted to make the information relevant for UQ.

9.1 Primary duty of care.

The University of Queensland has a duty of care to ensure its undertaking is conducted in a way that is electrically safe.

9.2 Designing electrical equipment or installations.

UQ does design electrical equipment from time to time as part of research projects and hence it has a duty to ensure the equipment is designed to be electrically safe.
If this design is transferred on to another entity information about its use and installation, i.e. a user manual, must be provided.

9.3 Manufacturing electrical equipment

UQ does manufacture electrical equipment from time to time as part of research projects and hence has a duty to ensure the equipment is manufactured to be electrically safe. The manufacturing process must be electrically safe.
Electrical equipment must be tested and inspected to be electrically safe and a certificate of electrical safety must be held on record.

It is possible that UQ may be considered a "responsible supplier" if the electrical equipment is considered "In-scope electrical equipment" i.e. designed as suitable, for household, personal or similar use. Currently UQ is not regarded as a registered responsible supplier and hence no in-scope electrical equipment manufactured at UQ may be offered for sale.

9.4 Importing electrical equipment

UQ often imports electrical equipment hence has a duty to ensure the equipment is designed to be electrically safe and tested and examined to ensure it is electrically safe.

It is possible that UQ may be considered a "responsible supplier" if the electrical equipment is considered In-scope electrical equipment i.e. designed or marketed as suitable, for household, personal or similar use. Currently UQ is not regarded as a registered responsible supplier and hence no in-scope electrical equipment imported by UQ may be offered for sale.

In-scope electrical equipment that is marked with the Regulatory Compliance Mark (RCM) in compliance with the standard may be offered for sale.

[3] *Electrical Safety Act 2002* (Qld) ss 30,31, 32, 33, 34, 36, and 37

9.5 Supplying or donating electrical equipment

UQ may be considered a supplier if old equipment is donated to other organisations or if UQ supplies equipment as part of a joint venture. In these events UQ must provide written instruction on how the electrical equipment must be use to ensure its electrical safety i.e. a user manual.
In relation to in-scope electrical equipment and where receiving organisation does not deal, repair or recondition second hand items of in-scope electrical equipment, additional information must be provided to the purchaser e.g. has the equipment been tested by a licensed electrical worker and details of the test.

In general commercially produced equipment should only be sold through licenced clearance houses and be shipped with a current test and tag in place, or clearly labelled as "NOT ELECTRICALLY TESTED.

9.6 Installing electrical equipment or electrical installation.

When new electrical equipment or an electrical installation is installed at UQ sites, it must be tested and examined to ensure the equipment or the installation is electrically safe before commissioning. This work is performed by the Property and Facilities Division typically using competent contractors. A certificate similar to appendix A is produced by the installer.

9.7 Repairing electrical equipment or electrical installation.

Similar to 10.6 above, the repaired equipment or installation is subject to a test and is visually examined to ensure it is electrically safe before being allowed to return to operation. A certificate similar to appendix A is produced by the repairer.

Notwithstanding the details listed in the Electrical Safety Act above, no organisational unit shall permit staff, contractors, students or visitors to plug in or in any other manner, install, any electrical equipment altered or manufactured by UQ without a Certificate of Electrical Safety (Refer Appendix A, Certificate of Electrical Safety) or a RCM mark.

10. Electrical Substations and Switchboards

UQ has forty 11 KV substations. These substations can only be entered by authorised staff and contractors. Any work in these stations can only be completed once a risk assessment or SWMS has been reviewed and training requirements have been met.

In order to comply with the electrical safety regulations, two permit systems have been established in relation to the electrical substations at UQ. An access permit and an entry permit.

The access permit is required to perform work on electrical equipment in the substations and the entry permit is required to again entry into the sub-stations. An entry permit is required regardless to the requirement to perform work in the substation.

At all times the restrictions related to the performance of live Electrical work must be observed.

Access to switchboards shall be restricted to licenced electrical workers.

11. Hazardous Areas

Electrical equipment located in a hazardous area as defined in the UQ safety notice of July 2016 must be inspected and tested by an accredited auditor when first connected and after an additional installation of electrical equipment.

Option 1
Hazardous area dossier must be made available to the accredited auditors and authorised electrical workers. The document must be held on site so that any services, changes or deletion can be reordered. A copy of the original document is available from the P&F archive.

Option 2
Hazardous area dossier must be made available to the accredited auditors and authorises electrical workers. The document must be held on an accessible computer system so that any services, changes or deletion can be reordered. A copy of the original document is available from the P&F archive.

12. Medical Areas

Many medical installations would fall in to the hazardous area classification, however as electrical appliances in these areas are directly connected to patients, additional controls are required in these locations.

Details of these additional controls are set out in AS3003.2011 Electrical installations - Patient treatment areas of hospitals and medical and dental practices therapy.

13. Overhead and Underground Services

11kV overhead un-insulated lines are in situ at Gatton, Pinjarra Hills and Long Pocket. Exclusion zones have been regulated as 3m for a person or plant. The distance is 600mm for vehicles passing by or underneath the line.

A permit to work (Appendix C Permit to Work Around Live Overhead Cables) has been develop by the P&F Division to ensure all the required control measures have been implemented before work is performed on or near these lines.

The bulk of electrical distribution at the University of Queensland is via unground cables and as a result a permit to work has been developed by the P&F Division to control excavation and to ensure the required controls have been implemented before the ground is broken (Appendix B Permit to Excavate around Electrical Cables).

14. University of Queensland Electrical Contractors Licence

A contractor's licence is a licence issued by the Electrical Safety Office and is held by a company for the business of doing electrical work.

A contractor's licence is not required if all the electrical work performed by the company is only for the company. In the case of the University, all installation work completed by UQ Electrical Workers is only performed on UQ owned infrastructure. This is also true for the bulk of the electrical equipment work with the exception of electrical appliances.

Some schools, who employ electrical workers, may manufacture or alter electrical appliances for their work. It may occur, and it has in the past, that this equipment is provided for collaborative partners who would not be considered to be part of the University. In these cases, there is a requirement for the University to hold an electrical contractors licence.

The University of Queensland holds a contractor's licence for this purpose described above. The licence is held by the Director of OHS who acts as the qualified business person on the licence. Any organisational unit who needs to perform electrical work for another entity must notify the Director OHS and they must have, in their employ, a licenced electrical worker who is willing to take on the role of qualified technical person.

15. Electrical Incident Reporting and Investigation

All incidents including all electrical incidents must be reported to the OHS Division as soon as practically possible.

Incidents include injuries such as electric shock, near miss events and damage to equipment. The reporting mechanism is the on-line incident portal available via the OHS Division web site.

All emergencies must be reported on 336 53333.

The OHS Division will notify the regulator of all notifiable events. The university community does not require the specific reporting details and for brevity these have been omitted from this document but are available in the Electrical Safety Act 2002.

The incident investigation will be completed by the local WHSC and by the OHS Division depending on the circumstances of the incident.

16. Notice issued by the Regulator

Any notices issued against the University or its employees must be brought to the attention of the OHS division by telephone call as soon as possible.

The OHS Division will coordinate the response between UQ and the regulator.

GLOSSARY

Accredited Auditor – Is an auditor appointed under regulation 235 of the Electrical Safety Regulations. Details of an accredited auditor are listed in the approved form, Form 14. Form 14 is a Form created under Section 208 of the Electrical Safety Act 2002.

Electrical work - What Electrical work is?

- Connecting electrical equipment excluding using a plug and socket outlet.
- Any work on electrical equipment.

Electrical work - What Electrical work is not?

- Connecting electrical equipment using plug and socket outlet.
- Work on electrical equipment when not exposed to an electrical hazard e.g. painting electrical equipment covers.
- Very simple and safe work e.g. replacing a fuse or light bulb.
- Where special arrangements have been developed for workplaces manufacturing electrical equipment. A list of what is referred to as prescribed workplaces are listed in Schedules 7 of the Electrical Safety Regulations.
- Running conduits provided they are earthed and wiring is not energized and work is under the direction of a licensed electrician.
- Locating, mounting or fixing in place electrical equipment.
- Mounting electrical equipment but not connecting it to electricity.
- Exclusions to allow for trainees and assistants.
- Other exclusion not regarded as relevant to UQ.

Electrical equipment - Electrical equipment means any apparatus, appliance, cable, conductor, fitting, insulator, material, meter or wire that is used for controlling, generating, supplying, transforming or transmitting electricity at a voltage greater than 50 volts alternating current or 120 volts ripple free direct current (extra-low voltage). For equipment operated in a hazardous area there is no exclusion for extra-low voltage.
Electrical equipment use in a vehicle is excluded from the provisions of the Electrical Safety Act and hence it excluded from the scope of this document.

Hazardous Area – an area in which an explosive atmosphere is present, or may be expected to be present, in quantities such as to require special precautions for the construction, installation and use of potential ignition sources as per AS/NZS 60079.10.1

In-scope electrical equipment Defined in Sections 48B of the Electrical Safety Act 2002 as Electrical equipment designed suitable, for household, personal or similar use. For a detailed list see AS/NZS 4417.2.2012 Annex B

Qualified Business Person (QBP) - for a licensed electrical contractor, is an individual who satisfies the regulator that he or she is a fit and proper person and is competent to perform the business aspects of an electrical contractor. At UQ the QBP

is the Director OHS. The Director will be an endorsee on UQ's electrical contractor's license.

Qualified Technical Person (QTP) - for a licensed electrical contractor, is an individual who satisfies the regulator that he or she is a fit and proper person and has held for at least a year an electrical work license. At UQ the QTP is a nominated electrical worker for an Organization Unit which may require the use of an electrical contractor's license. The electrical worker name be an endorsee on UQ's electrical contractor's license.

RCM Mark - The Regulatory Compliance Mark or RCM is a symbol utilised to show regulatory compliance under the defining standard (AS/NZS 4417.1:2012 Regulatory compliance mark for electrical and electronic equipment – Use of the mark).

Regulation - *Electrical Safety Regulation 2013*

Safety Observers - Safety Observer (electrical) is a person who is competent to:

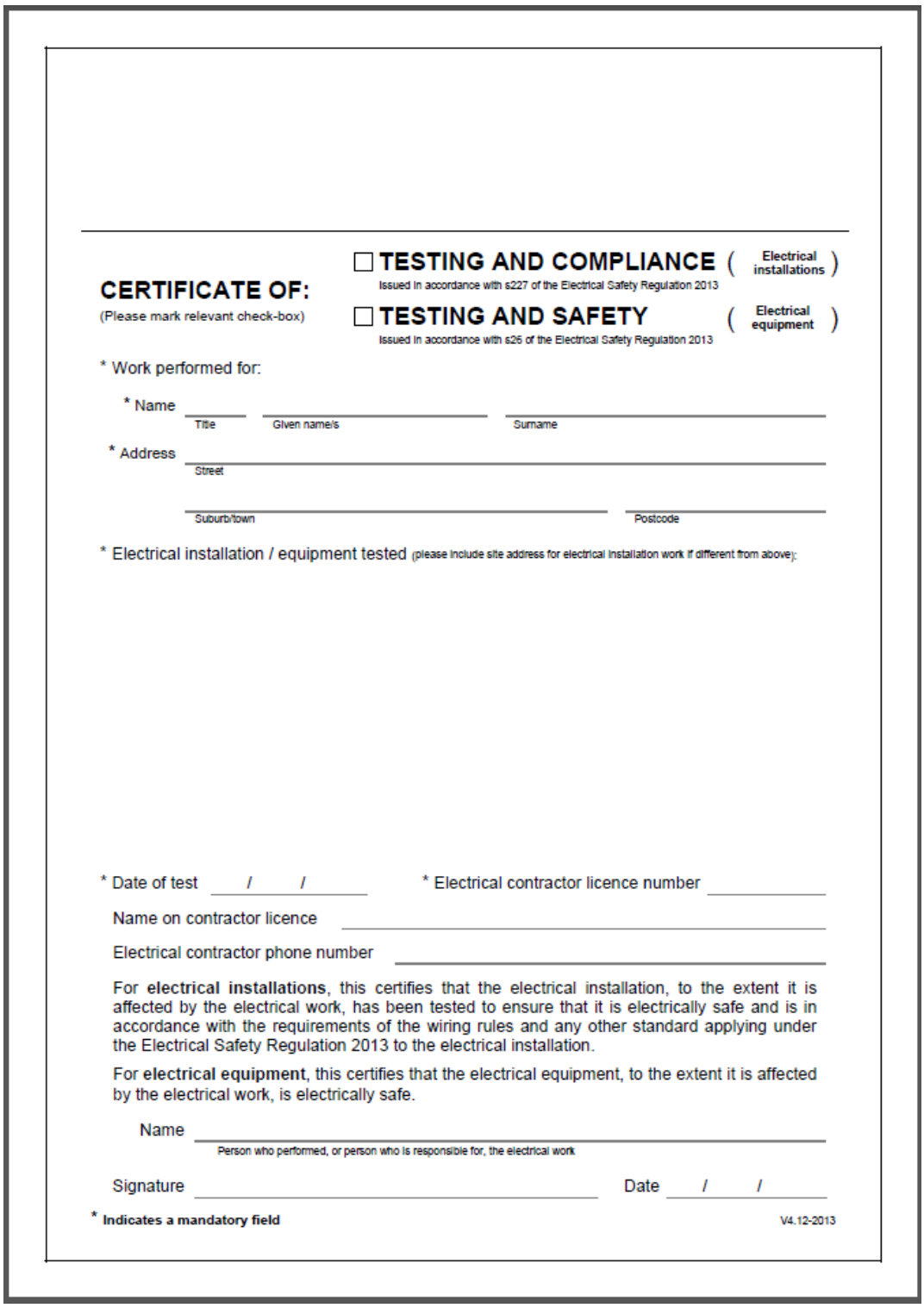
- Help with the electrical work
- Rescue the person performing the work
- Provide resuscitation (rescue/resuscitation competence confirmed in the previous twelve months).

The requirement regarding "competent to help" would not necessarily require an electrical work licence, for example the observer could be an electrical engineer.

A Safety Observer (electrical) must be used when performing live electrical work unless the work involves testing electrical work or fault finding, where a documented risk assessment has indicated very low risk.
Where the work has been assessed as high-risk, a Safety Observer (electrical) shall be used as one of the control measures. Examples of high-risk work include:

- Fault finding at a switchboard that has a high prospective fault current level
- Installing and replacing components at a switchboard
- Where the worker is near the exclusion zone for exposed live parts
- Performing complex fault finding

Appendix A Electrical Safety Certificate



CERTIFICATE OF:
(Please mark relevant check-box)

☐ **TESTING AND COMPLIANCE** (Electrical installations)
Issued in accordance with s227 of the Electrical Safety Regulation 2013

☐ **TESTING AND SAFETY** (Electrical equipment)
Issued in accordance with s26 of the Electrical Safety Regulation 2013

* Work performed for:

* Name _____ (Title) _____ (Given name/s) _____ (Surname)

* Address _____ (Street)

_____ (Suburb/town) _____ (Postcode)

* Electrical installation / equipment tested (please include site address for electrical installation work if different from above):

* Date of test / / * Electrical contractor licence number _____

Name on contractor licence _____

Electrical contractor phone number _____

For **electrical installations**, this certifies that the electrical installation, to the extent it is affected by the electrical work, has been tested to ensure that it is electrically safe and is in accordance with the requirements of the wiring rules and any other standard applying under the Electrical Safety Regulation 2013 to the electrical installation.

For **electrical equipment**, this certifies that the electrical equipment, to the extent it is affected by the electrical work, is electrically safe.

Name _____
Person who performed, or person who is responsible for, the electrical work

Signature _____ Date / /

* **Indicates a mandatory field**

V4.12-2013

Appendix B Permit to Excavate Around Electrical Cables

PERMIT·TO·CARRY·OUT·WORK·AROUND·UNDERGROUND·ELECTRICAL·CABLES¶

Building·or·maintenance·work·including·driving·of·pegs,·erection·of·street·signs·and·poles,·installation·of·new·underground·services·or·any·penetration·exceeding·300mm·in·areas·around·electrical·cables·is·prohibited,·unless·a·permit·to·work·has·been·approved:¶

¶

1.→Start·date·and·time·and·planned·completion·date·and·time.¤	¤
2.→Name·of·the·person·that·the·permit·is·issued·to:·¤	¤
3.→Contact·Telephone·Number:·¤	¤
4.→Section·/·Company:¤	¤
5.→Location·of·Work¤	¤
6.→Provide·details·of·the·work.¶ ¶ ¶ ¶ ¤	
7.→Provide·details·of·searches·for·services.·Refer·to·onsite·service·locations,·carry·out·onsite·non-invasive·testing·or·excavate·with·vacuum·extraction.·Service·locations·can·be·obtained·from·the·P&F·CAD·Coordinator·on·336·52222¶ ¶ ¶ ¶ ¤	
8.→Provide·details·of·action·taken·to·confirm·information·on·site·service·locations.¶ ¶ ¶ ¤	
Has·the·location·of·the·penetration·been·approved·by·the·UQ·project·manager·or·project·officer?¤	¤
Has·a·safe·work·method·statement·been·produced·for·the·work?¤	¤
Has·the·following·been·considered·when·working·with·live·electrical·conductors?¶ Insulated·gloves,·digging·with·insulated·hand·tools,·mats,·safety·observer,·¤	¤
Have·emergency·procedures·been·considered?·Any·damage·to·the·cable·must·result·in·the·cessation·of·work·and·the·project·manager·or·supervisor·must·be·notified.·¤	¤

¶

¶

☐ ··Permission·granted·to·penetrate·the·ground·near·underground·electrical·cables·UQ·project·manager,·UQ·project·supervisor,·UQ·maintenance·Manager,·UQ·Health·and·Safety·Coordinator.¶

¶

¶

Signature:→ → → → → → Date:→ → → → → ¶

¶

¶

¶

¶

Name:·_____¶

¶

Appendix C Permit to Work Around Live Overhead Cables

PERMIT TO WORK AROUND LIVE OVERHEAD CABLES

Building/maintenance work in areas around live overhead lines is prohibited, unless a permit to work has been issued to the personnel involved. This permit to work is issued to the nominated recipient for the specific occasion stipulated below:

- Works Order/ Project : ----------
- Work Permit No.: ----------
- This Permit is issued to : ----------
- This Permit is valid from : am/pm on ___/___/___ to am/pm on ___/___/___
- Section/Company : ----------
- Contact Telephone Number : ----------
- Location of Works : ----------
- Description of Works : ----------
- Duration of Works : ----------

Before approval is granted to proceed with work, confirm the following:				
The work does not encroach on identified exclusion zones.				
The site where the intended works are to be performed has been examined jointly with UQ Property & Facilities Division.				
All works are to be performed in accordance with Queensland legislation and the requirements outlined in the University of Queensland Electrical Safety Management Plan.				
A documented risk assessment or safe work method statement has been completed with controls identified, which will be implemented to protect people and property. This must indicate the exclusion zone.				
If any conditions are encountered where the safety of any persons may be at risk, work is to cease immediately and UQ Property and Facilities Division notified.				
Only competent and where applicable, licensed workers will be assigned to the job				
Signed:		Applicant	Date: / /	
Approved:		Senior Electrical Engineer	Date: / /	

Appendix D High Voltage Test Permit

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

Property and Facilities Division

Form
04/13

HIGH VOLTAGE TEST PERMIT **PF379**

Test Permit No.:

1. Switching Sheet No.:	**2. Nominated Issue:**	Time: Date: / /
3. Issue To:	**4. Nominated Surrender:**	Time: Date: / /

5. Work Area Location:

6. Access to the following High Voltage Lines and Apparatus

7. Test Details

8. Description of Isolation Points with DNOB's attached

9. Location of Operator Earths with DNOB's attached

10. Other Precautions

☐ Taping/Roping Off ☐ Work Area Sign ☐ Live HV Lines & Apparatus Above or Beyond Board
☐ Live & Dead Board ☐ Additional Barriers in Place ☐ Other (please specify)
☐ Not Applicable

11. Nearby Live HV / LV at the Work Area

☐ HV Not Applicable
☐ LV Not Applicable

12. Issue of Test Permit

Approval by Name of Switching Co-ordinator (please print)

Switching Operator	Name (please print)	Signature	Time	Date
				/ /

13. Recipient of Test Permit

I acknowledge that I only have access to the lines and apparatus listed in section 6 of this HV Test Permit and shall have no difficulty in keeping clear of lines and apparatus not covered by this Permit and shall not alter Isolation Points. Earths and Other Precautions can be altered as per Qld Electrical Entity Procedure for Safe Access to HV Electrical Apparatus.

Recipient Name (please print)	Signature	Time	Date
			/ /

14. Work Group Signatures

Sign On				Sign Off		
I acknowledge that I only have access to the lines and apparatus listed in section 6 of this HV Test Permit while Earthed and shall have no difficulty in keeping clear of lines and apparatus not covered by this Permit and shall not alter Isolation Points. I acknowledge that only Authorised Individuals of the Work Group shall vary Earths or Other Precautions as directed by the Recipient.				I acknowledge that I no longer have access to the lines and apparatus listed in section 6 of this HV Test Permit and shall regard the lines and apparatus as being live.		
Name (please print)	Signature	Time	Date	Signature	Time	Date
			/ /			/ /
			/ /			/ /
			/ /			/ /
			/ /			/ /
			/ /			/ /
			/ /			/ /
			/ /			/ /
			/ /			/ /
			/ /			/ /
			/ /			/ /

15. Transfer of HV Test Permit

This Test Permit with all conditions is hereby transferred

	Name (please print)	Signature	Time	Date
Outgoing Recipient				/ /
Incoming Recipient				/ /

16. Working Earth Schedule

	Location of each set of Working Earths	On		Off	
		Time	Date	Time	Date
a			/ /		/ /
b			/ /		/ /
c			/ /		/ /
d			/ /		/ /
e			/ /		/ /

17. Operator Earth Schedule (for temporary removal of Operator Earths)

	Location of each set of Operator Earths	Off		On	
		Time	Date	Time	Date
a			/ /		/ /
b			/ /		/ /
c			/ /		/ /
d			/ /		/ /
e			/ /		/ /

18. Abnormalities

Supplementary Page(s) are on issue for this Test Permit **Yes** ☐ / **No** ☐ (tick ✓ one box only)

19. Surrender of HV Test Permit

All require pre-energisation checks/tests have been successfully completed.	**Yes** ☐	**No** ☐	If "NO", record the checks/test not successfully completed under this Permit in Section 19 Abnormalities.

All Working Earths placed have been removed and Operator Earths replaced except as specified in Section 18 Abnormalities and I acknowledge that I no longer have access to the lines and apparatus listed in section 6 of this HV Test Permit and shall regard the lines and apparatus as being live.

Surrendered by Recipient Name (please print)	Signature	Time	Date
			/ /

Appendix E High Voltage Access Permit

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

Property and Facilities Division

Form
04/13

Access Permit No.:

1. Switching Sheet No.:	**2. Nominated Issue:**	Time:
		Date: / /
3. Issue To:	**4. Nominated Surrender:**	Time:
		Date: / /

5. Work Area Location:

6. Access to the following High Voltage Lines and Apparatus

7. Work Details

8. Description of Isolation Points with DNOB is attached

9. Location of Operator Earths with DNOB is attached

10. Other Precautions

☐ Taping/Roping Off ☐ Work Area Sign ☐ Live HV Lines & Apparatus Above or Beyond Board

☐ Live & Dead Board ☐ Additional Barriers in Place ☐ Other (please specify)

☐ Not Applicable

11. Nearby Live HV / LV at the Work Area

☐ HV Not Applicable

☐ LV Not Applicable

12. Issue of Access Permit

Approval by

Name of Switching Co-ordinator (please print)

Switching Operator	Name (please print)	Signature	Time	Date
				/ /

13. Recipient of Access Permit

I acknowledge that I only have access to the lines and apparatus listed in section of this HV Access Permit and shall have no difficulty in keeping clear of lines and apparatus not covered by this Permit and shall not alter Isolation Points. Earths and Other Precautions can be altered as per Qld Electrical Entity Procedure for Safe Access to HV Electrical Apparatus. Any Testing performed under this HV Access Permit shall not involve Lethal Current.

Recipient Name (please print)	Signature	Time	Date
			/ /

14. Work Group Signatures

Sign On				Sign Off		
I acknowledge that I only have access to the lines and apparatus listed in section 6 of this HV Access Permit while Earthed and shall have no difficulty in keeping clear of lines and apparatus not covered by this Permit and shall not alter Isolation Points. I acknowledge that only Authorised Individuals of the Work Group shall vary Earths or Other Precautions as directed by the Recipient.				I acknowledge that I no longer have access to the lines and apparatus listed in section 6 of this HV Access Permit and shall regard the lines and apparatus as being live.		
Name (please print)	Signature	Time	Date	Signature	Time	Date
			/ /			/ /
			/ /			/ /
			/ /			/ /
			/ /			/ /
			/ /			/ /
			/ /			/ /

15. Transfer of HV Access Permit

This Access Permit with all conditions is hereby transferred

	Name (please print)	Signature	Time	Date
Outgoing Recipient				/ /
Incoming Recipient				/ /

16. Suspend/ Reinstate HV Access Permit

This Access Permit with all conditions is hereby Suspended / Reinstated

	Name (please print)	Signature	Time	Date
Suspended by Recipient				/ /
Reinstated by Recipient				/ /

17. Working Earth Schedule

	Location of each set of Working Earths	On		Off	
		Time	Date	Time	Date
a			/ /		/ /
b			/ /		/ /
c			/ /		/ /
d			/ /		/ /
e			/ /		/ /

18. Operator Earth Schedule (for temporary removal of Operator Earths)

	Location of each set of Operator Earths	Off		On	
		Time	Date	Time	Date
a			/ /		/ /
b			/ /		/ /
c			/ /		/ /
d			/ /		/ /
e			/ /		/ /

19. Abnormalities

Supplementary Page(s) are on issue for this Access Permit **Yes** ☐ / **No** ☐ (tick ✓ one box only)

20. Surrender of HV Access Permit

All require pre-energisation checks/tests have been successfully completed.	**Yes** ☐	**No** ☐	If "NO", record the checks/test not successfully completed under this Permit in Section 19 Abnormalities.

All Working Earths placed have been removed and Operator Earths replaced except as specified in Section 19 Abnormalities and I acknowledge that I no longer have access to the lines and apparatus listed in section 6 of this HV Access Permit and shall regard the lines and apparatus as being live.

Surrendered by Recipient Name (please print)	Signature	Time	Date
			/ /

Appendix F Entry Permit Electrical Maintenance High Voltage

THE UNIVERSITY OF QUEENSLAND
AUSTRALIA

Property and Facilities Division
Form
02/18

This entry permit is to allow job specific entry to the University's high voltage substations to undertake or supervise maintenance work on equipment other than high voltage equipment or lines.

The substations are accessed by a secure key not on the University's master key system. This Entry Permit ceases when the work is complete and the key recipient (if applicable) shall return any keys to PF Assist.

The substations are generally divided high voltage (HV) equipment rooms and low voltage (LV) switch rooms, however some combined HV/LV rooms exist. The electrical equipment is enclosed in metal clad switchboards. **Do not touch any high voltage equipment while it is energised. Do not touch any electrical switches except light switches or power points unless covered by an access permit.**

The maintenance works covered by the entry permit are in the substation. Although all electrical equipment is enclosed, care should be taken to observe the following points:

- Keep any part of your body or equipment at least 1000mm (1 metre) away from any exposed HV terminations inside chain wire fence OR 300mm (.3 metre) away from any low voltage terminations;
- Do not leave the switch rooms open or unattended;
- Do not carry long conductive material into the HW switch room, i.e. metal conduits;
- Any ladders or scaffolds used to be non-conductive and suitable for electrical use;
- It is recommended that non-polyester long trousers and long sleeve shirts be worn when working in HV switch rooms;
- No eating/drinking allowed in substations;
- Work method statements to be completed for all types of work and to be submitted to the Project Manager or Project Officer for approval prior to the start of work.

Procedures

- Before entering a switch room
  - Let someone know you are going into a switch room and when you are likely to return
  - If you are unsure about any aspect of the job, STOP and seek further advice
- As you enter
  - Check emergency exit doors are accessible and operable
- While inside
  - Avoid bumping electrical panels as some of the electrical equipment is sensitive to vibration
  - If you spill liquid, clean it up immediately
  - If you hear any hissing sounds, get out
  - If you smell any burning smells, get out
- As you leave
  - Clean up
  - Lock up
- In case of emergencies, contact Security on 3365 3333 or PFAssist on 3365 2222.

Questionnaire:

1. How far do you have to stay away from live terminations? — High Voltage: _____ Low Voltage: _____
2. What is the first thing you do if you smell something strange in a switch room? — _____
3. What switches are you allowed to touch in a switch room? — _____
4. How do you raise an emergency on site? — _____
5. How long is the induction valid for? — _____

1. Requestor Details:					
Name:		Position			
Organisation:		Section:			
Contact No.:		Date:	/ /		
Description of Work:					
Reason for Substation Entry:					
Period Entry Required:	Start:	Finish:			
UQ Project Manager:					
2. Site Details:					
UQ Work Order No.:					
Campus *(cross out)*:	☐ St Lucia ☐ Gatton ☐ PACE ☐ Oral Health ☐ Long Pocket				
Building Name:		Bldg. No.:		Key No.:	
Substation Number:					
3. Supervision Status:					
Supervised access required *(i.e. inspections or investigations)*. If yes, go to Section 5.				☐ Y or ☐ N	
Unaccompanied access required by contractor? If yes, Section 4 must be completed				☐ Y or ☐ N	
4. Documentation Required for Unsupervised Access:					
• Has the Safety Plan or Safe Work Method Statement been accepted?				☐ Y or ☐ N	
• High Voltage Awareness training?				☐ Y or ☐ N	

5. Persons Involved in Works:
I have read and understand the above description and warnings. This substation entry permit is issued to authorise only those persons as listed on this form.

Name	Company	Mobile Number	Signature

6. Authorised By:
The contractor has considered and controlled the activities and has completed Safe Work Method Statements and Risk Assessments and they have been accepted by UQ. *(Authorised persons are HSC, SEE, EPO5, EPO6, Maintenance Managers (all Campuses))*.

Name:		Position:	
Section:		Contact No.:	
Signature:		Date:	/ /
		Security Advised:	☐ Y ☐ N ☐ N/A