

# WHS OP038 Electrical Safety Procedure

## Section 1 - Overview

- (1) The University has a legal obligation under the [NSW Work Health and Safety \(WHS\) Act 2011](#) as a 'person conducting a business or undertaking' (PCBU), and the University's [Work Health and Safety \(WHS\) Rule](#), to provide a Primary Duty of Care to University Representatives, Students and visitors to ensure that so far as reasonably practicable, the health and safety of these individuals is managed and maintained while at the workplace.
- (2) The University also must meet the specific legislative requirements of Part 4.7 of the [NSW Work Health & Safety Regulation 2017](#) to manage the general electrical safety in workplaces and energised electrical work.
- (3) This document follows the '[Managing Electrical Risks in the Workplace Code of Practice](#)' and provides a framework and guidance for identifying and assessing hazards and risks and managing controls associated with electrical work, equipment and installations associated with University activities.

## Section 2 - Scope

- (4) This procedure relates to all electrical work as defined under clause 146 of the [Work Health and Safety Regulation 2017](#), equipment and installations where workers perform tasks for the University within the control of the University, and includes contractors at University workplaces.
- (5) The University sets the minimum mandatory requirements in regards to electrical safety being:
  - a. All electrical installations, work, equipment and materials shall be fit for purpose;
  - b. No live electrical work rule - The University has a rule that requires 'NO LIVE ELECTRICAL WORK'. This rule applies to high voltage and low voltage electrical equipment or conductors. No live electrical work is to be carried out by University workers;
  - c. All electrical switchboards, including local distribution boards, are secured from unauthorized access;
  - d. Access to potentially live electrical equipment shall only be made by appropriately qualified persons and be controlled by the use of a key or tool to minimise the risk of inadvertent or accidental contact;
  - e. Accurate up to date electrical drawings (single line diagrams) shall be maintained electronically;
  - f. Electrical work shall only be carried out by licensed electricians;
  - g. Where applicable, all work shall be undertaken with zero energy present;
  - h. A compliance certificate is required for all electrical installations or alterations and a copy is to be given to Estate and Built Environment (EBE) and relevant authority;
  - i. Residual Current Device (RCD) protection will be provided at the distribution boards for all lighting and power circuits;
  - j. All electrical work is authorised by the Estate and Built Environment;
  - k. Electrical faults are reported to FMS via the Campus Assist Helpdesk (or Campus Assist Online).
  - l. Plug-in electrical equipment is regularly visually inspected by the equipment users;
  - m. Plug-in equipment that is likely to be damaged during normal use, or from its environment, or is moved regularly is identified and subject to electrical testing and tagging (ETT);

- n. Plug-in equipment that fails a visual inspection or ETT is immediately disconnected from the electricity supply and removed from service;
- o. Faulty items are to be removed from the work area or if this is not appropriate they are clearly tagged “out of service”;
- p. Repaired equipment is re-tested and tagged prior to re-introduction to service;
- q. The use of double adapters and piggyback plugs are prohibited;
- r. The use of power boards and extension cords is actively minimised;
- s. Medical electrical equipment that is intended to be connected to patients, research participants or students, must be maintained in accordance with AS/NZS 3551:2012 – Management Programs for Medical Equipment; and
- t. Any manufacture or modification of electrical equipment is carried out by a competent person and subject to a design risk assessment and ETT prior to commissioning.

## Section 3 - Procedures

### Electrical Work

(6) There are several exemptions to electrical work that are identified at clause 146 of the [Work Health and Safety Regulation 2017](#) and include some work on electrical equipment that is operated by electricity at extra-low voltage.

(7) Electrical work must only be conducted and/or supervised by licensed and competent electricians. All electrical work must be supervised by a licensed electrician with an Electrical Supervisor's Qualification (a qualified Electrical Supervisor can supervise themselves).

(8) University Workers are only permitted to conduct electrical work on low and high voltage electrical installations if they are a licensed or registered electrical worker. This does not include extra low voltage work.

(9) All electrical workers' licences must be sighted, reviewed and recorded when the electrical worker presents for work at each University workplace.

### Personal Protective Equipment (PPE)

(10) Electrical workers are to wear clothing and safety equipment that provides appropriate safety protection to the head, body, arms, legs and feet. The level of personal protective clothing and PPE on each University site is also mandated by the site's specific procedures.

### Low Voltage Electrical Isolation

(11) All potential sources of electricity are to be identified and isolated if the work undertaken places the person at higher risk than normally associated with the job. Always test equipment to check it is de-energised before performing any work on it using the safety principle of 'TEST FOR 'DEAD' BEFORE YOU TOUCH'.

(12) Drawings are to be available of electrical circuits at all University workplaces. An electrician must verify that isolation has been achieved. Work may only proceed on de-energised equipment after the following has occurred:

- a. a risk assessment has been completed; and
- b. any part of an installation to be worked on has been isolated and the isolation has been verified.

(13) Working de-energised on low voltage electrical equipment or circuits requires the electrical equipment or circuits to be effectively isolated from all relevant sources of electricity supply.

(14) This may be done using opening switches, removing fuses or links, opening circuit breakers or removing circuit connections.

(15) The standard steps in low voltage isolation are:

- a. Consultation - consulting with the person with management or control of the workplace (e.g. in relation to the timing of the work) and notifying any other affected persons as appropriate;
- b. Isolation - identifying the circuit(s) requiring isolation; disconnecting active conductors from the relevant source(s), noting there may be multiple sources and stand-by systems/generators/photovoltaic systems as well as auxiliary supplies from other boards; and if a removable or rack out circuit breaker or combined fuse switch is used it should, if reasonably practicable, be racked out or removed then locked open and danger tagged.
- c. Securing - the isolation locking the isolating switch(es) where practicable or removing and tying back relevant conductors to protect the person(s) carrying out the electrical work;
- d. Tagging - tagging the switching points where possible to provide general information to people at the workplace;
- e. Testing - testing to confirm the relevant circuits have been de-energised and any other relevant conductors in the work area; and
- f. Re-testing as necessary - for example, if the person carrying out the work temporarily leaves the immediate area, checks and tests must be carried out on their return to ensure that the electrical equipment being worked on is still isolated to safeguard against inadvertent reconnection by another person; or for example, if a wire changes its status when cut, which can occur because it is lifted from earth.

## Securing the Isolation

(16) To secure the isolation and electrical equipment requires the disconnection and/or physical lock and tag applied to prevent unintended or inadvertent energisation.

(17) A fundamental principle is that the point of isolation should be under the control of the person who is carrying out the work on the isolated conductors.

(18) Tagging systems should also be used at the point(s) of isolation where possible for general information.

(19) Locking off - Isolation points should be fitted with control mechanisms that prevent the electrical equipment from being inadvertently re-energised. The control mechanism should require a deliberate action to engage or disengage the device. It should be able to withstand conditions that could lead to the isolation failing, for example, vibration.

(20) Tagging systems - Danger tags - Isolation involves using suitable warning or safety signs as well as locks or other controls to secure the isolation. Out of service tags - Out of service or caution tags are used to identify electrical equipment that is not safe to use or fit for purpose.

(21) The '[Managing electrical risks in the workplace - model code of practice](#)' provides detailed guidelines for securing isolation.

## Fault Finding and Testing

(22) It may be necessary to change an isolation point to allow for testing or fault finding on energised parts, for example testing that may be required before returning electrical equipment to service and commissioning new electrical equipment.

(23) Any testing or fault finding on energised parts must be carried out in accordance with requirements for energised electrical work, as discussed in Section 7 of the '[Managing electrical risks in the workplace - model code of practice](#)'.

(24) If electricity supply is restored to part of the circuit then safe procedures for restoring electricity supply must be followed.

## **Restoring Power**

(25) All reasonable steps must be taken to ensure that restoring electricity supply following isolation does not pose risks to health and safety at the workplace. For example:

- a. appropriately terminating all conductors;
- b. carrying out appropriate testing on any new, altered or repaired electrical equipment, for example, tests for insulation resistance, earth continuity, polarity, correct connection and function testing;
- c. removing safeguards, including temporary bonds and short-circuiting devices;
- d. notifying all workers working on the electrical equipment and other affected workers at the workplace that electricity is to be restored;
- e. taking precautions as appropriate to ensure that other electrical equipment is not inadvertently energised;
- f. following procedures for removing any locks (or other control mechanisms), tags, notices and safety signs; and
- g. carrying out a visual inspection to ensure that all tools, surplus material and waste has been removed from the workplace.

(26) When electricity is restored tests must be carried out to confirm that polarity is correct, actives are switched and, where applicable, phase sequences are correct before electrical equipment is used. For further information refer to AS/NZS 3017:2007 Electrical installations – Verification guidelines.

## **Leaving Unfinished Work**

(27) If work is left unfinished, the workplace must be left in a safe state including, for example, by:

- a. terminating any exposed conductors;
- b. physically securing any exposed conductors or surrounding metal work;
- c. tagging, taping off the electrical equipment and the workplace area;
- d. informing affected persons at the workplace the work is not complete and advising of potential hazards;
- e. taking any necessary precautions to ensure that electrical equipment cannot become inadvertently re-energised;
- f. ensuring that the status of switchboards and electrical equipment are clearly and correctly labelled; and
- g. handing over adequate information to workers taking up the unfinished work to allow them to continue the work safely.

## **High Voltage Electrical Work**

(28) High voltage (HV) mains and apparatus are only to be worked on by authorised HV personnel who hold the relevant qualifications and systems of work.

(29) High voltage high voltage electrical installation should prepare an Installation Safety Management Plan for their workplace. The plan should address the risks associated with the operation and maintenance of the high voltage installation.

## **Energised Electrical Work**

(30) All persons are prohibited from carrying out any kind of electrical work on any electrical circuit or apparatus that remains in an electrically-energised condition.

(31) The Operation Manager and/or Site Manager are responsible for ensuring all electrical personnel are aware of and apply the 'NO LIVE ELECTRICAL WORK' rule.

(32) Energised electrical work is only to be performed by a contracted appropriately licensed and registered person in accordance with Regulation 158 of the WHS Regulations 2017 (NSW).

(33) Where work involves working near live parts, all exposed conductors and other live parts in the immediate work area must be confirmed as de-energised or if not practicable, protected from inadvertent contact as a minimum using insulating barricades.

Note: This procedure does not apply to work on extra low voltage (ELV) equipment or conductors.

(34) To verify equipment is in a safe condition and is 'Fit for Duty', whenever an electrical circuit is newly-installed, broken or reconnected, the integrity of the completed work must be tested by a licensed electrician before being energised.

### **Safety Observers (competent assistants)**

(35) A competent Safety Observer is required when there is a risk of contact with live electrical parts or where the electrician performing the task deems an observer as an appropriate control.

### **Low Voltage Rescue Kit**

(36) A Low Voltage Rescue (LVR) Kit is to be present when there is a possibility of contact with live parts (e.g. fault-finding, testing and commissioning where there are unprotected live parts) or as required by a risk assessment. The kit's contents are to be checked before each use against the standard requirement.

### **Electrical Installations**

(37) Installations include infrastructure that supplies electricity to a building, including the main switchboards, distribution boards, metering, fixed wiring, socket outlets, and fixed electrical equipment.

(38) Electrical Certificates of Compliance must be completed immediately on the completion of any new work to an electrical installation. Electrical Certificates of Compliance are not required for repairs. A copy of the certificate is to be retained in the site's electrical file.

### **Temporary Electrical Installations for Experimental Research and Testing**

(39) For the purposes of Research and Testing undertaken on the University sites, a full risk assessment with consultation with Estate and Built Environment and WHS Team must occur for any temporary electrical installation.

### **Switchboards and Control Panels**

(40) Access to electrical switchboards and control panels is restricted to Estate and Built Environment qualified workers and approved electrical contractors.

(41) Most circuits are protected by circuit breakers to prevent overloading. Reports of tripped circuit breakers and requests to reset tripped circuits or RCDs must be made to Estate and Built Environment (Ph: 6773 2065) during work hours or Safety and Security (Ph: 6773 2099) after hours.

(42) Tripped circuit breakers, RCDs and other electrical devices must not be re-energised until the reason for their operation has been identified and the fault has been rectified. Steps outlined in this procedure under 'Restoring Power' are to be followed.

(43) Only a qualified electrical worker from Estate and Built Environment is permitted to restore power and reset tripped circuits. No other person is to be instructed to reset tripped circuits.

## **Safe Access to Switchboards/Rooms**

(44) All areas in front of switchboards and/or rooms must be kept clear to allow for isolation access in the case of an emergency. All switch rooms housing switchboards must have all emergency egress paths kept clear at all times.

## **Temporary Switchboards (construction and demolition work)**

(45) All temporary switchboards are to comply with the requirements of AS3012: Electrical installations - Construction and demolition sites.

## **Overhead Lines and Underground Services**

(46) Overhead lines on University sites will be suitably flagged on or near the lines.

(47) No work should be carried out under or near overhead power lines (particularly with heavy machinery, elevated working platforms (EWPs), truck-mounted working platforms, cranes or similar) unless the 'No Go Zone' requirement limits have been established for the particular situation and overhead line.

(48) Where any work is to be conducted adjacent to overhead power lines, the asset owner (electrical entity) is to be contacted to confirm safe working distances, and any other controls required. This information is to be included in the Safe Working Methods Statement for the activity being completed.

(49) Any excavation work or work that will affect underground services must be approved through Estate and Built Environment prior to commencement.

(50) No pegs or metal poles are to be used for securing 'temporary structures' such as marquees unless approved by Estate and Built Environment.

## **Redundant Electrical Cables and Equipment**

(51) The existence of redundant or unused cabling and wiring presents a potential hazard due to unexpected live conductors. Conductors may be 'live' because of inadequate isolations or induced voltages.

(52) All redundant cables shall be removed where possible. If not possible both ends of the cable shall be capped, labelled and the site's electrical line diagram (schematic) updated to reflect the redundant cable.

Note: While many redundant legacy cables exist on University sites that may not have been identified or recorded, the University will endeavour to identify these cables, remove or cap both ends, label and document on the site's electrical line diagram.

## **Electrical Drawings**

(53) Electrical drawings are to be available for inspection at all University sites. Before use, electrical drawings should be checked to establish if a drawing reflects the 'AS INSTALLED' condition of the equipment. Where possible, the drawing should also be reviewed to check it matches the current installation.

(54) Electrical drawings marked in any other way than 'AS INSTALLED' must not be taken as an accurate record when servicing constructed and commissioned equipment. Electrical drawings are to be reviewed and updated after initial installations or after any subsequent alteration to an electrical installation. All accessible and stored copies of the drawings are to be replaced with the current version.

(55) All electrical drawings are to be readily available, to everyone concerned with working, testing, commissioning or fault finding on switchboards and electrical equipment.

## **Thermographic Inspections**

(56) Thermographic inspections are required to assess the performance of all switchgear on site. Thermographic surveyors should be accompanied at all times by an Electrician who is familiar with the University workplace and who can provide access to electrical panels. These requirements exist regardless of whether the surveyor is also a licensed Electrician or not.

(57) The inspection or survey should take place when equipment is operating at a normal or higher than normal capacity and the results are to be recorded and any identified issues are to be actioned before returning to service.

## **Identification and Labelling**

(58) All electrical equipment and its sources are to be identified and labelled in accordance with Australian Standards (AS3000, AS3007, AS3012, AS3760).

(59) Electrical switchboards will be clearly labelled with a unique identification and appropriate warning labels to distinguish the following:

- a. Switchboard identification – each switchboard needs a unique identification label.
- b. Sources of supply – each source of supply to a switchboard needs to be labelled.
- c. Multiple sources – if a switchboard is supplied from multiple sources of supply a ‘WARNING - MULTIPLE SOURCES’ label must be applied, and those sources listed.

## **Residual Current Devices (RCD)**

### **Protection Against Direct Current**

(60) Serious injuries and fatalities can be prevented by the use of RCDs, commonly referred to as “safety switches”. RCDs are typically provided at the electrical distribution board for lighting and power circuits. In some situations, RCDs are installed at the socket outlet.

(61) The auditing of electrical distribution boards, the installation of new RCD protection, and the inspection and testing of existing RCDs is an ongoing maintenance process. This process is carried out by a qualified FMS electrician or an appointed electrical contractor in accordance with AS/NZS 3760:2010.

(62) All new installations or upgrades to switchboards and/or electrical control panels must be protected to IP2X compliance (finger safe) or higher, pending the location and areas, to minimise hazards from accidental contact with live electrical equipment, conductors within the switchboard and/or the cubicle door when it is open.

## **Legacy Switchboards**

(63) The minimum requirements for legacy switchboards are that all areas that can be accessed without the use of a tool are to be protected to IP2X. This includes the areas where operators or electricians carry out the operation or reset equipment.

## **Emergency stop buttons**

(64) Emergency stop buttons that isolate the electrical supply should be incorporated into the design of all new laboratories and workshops and used on fixed electrical equipment such as lathes and drill presses. The emergency stop buttons must be easily accessible and clearly labelled.

## Plug-In Electrical Equipment

(65) Supervisors must ensure that plug-in electrical equipment is regularly visually inspected for obvious faults or defects, with the inspection to be incorporated as part of workplace safety inspections. These inspections should include checking for damage, discolouration from heat, damage to cords, and condition of operating controls and buttons.

(66) These inspections should occur at least annually.

## Testing and Tagging of Electrical Equipment

(67) The University provides competent workers to complete electrical testing and tagging through the Estate and Built Environment.

(68) It is the responsibility of the local supervisor to identify equipment for testing. Priority is given to equipment that fits one or more of the general or environmental risk factors listed below:

- a. General risk factors:
  - i. Handheld – moved during use;
  - ii. Portable – frequently moved from one location to another;
  - iii. Supply cord is subject to abuse; and
  - iv. Supply cord is subject to frequent flexing.
- b. Environmental risk factors incorporate exposure to:
  - i. Moisture – used in a wet area, outdoor use or storage;
  - ii. Dust – used in a dusty environment;
  - iii. Heat – positioned adjacent to a heat source;
  - iv. Corrosive environment;
  - v. Vibration; and
  - vi. Mechanical damage.

(69) Portable electrical appliances and tools are to be inspected and records kept in accordance with AS/NZS 3760 – Electrical Safety Standard.

(70) All portable electrical appliances including hired and personal equipment, flexible extension cords, portable RCDs and power boards are to be inspected, tested and tagged by a competent person.

(71) All portable electrical appliances, flexible extension cords, portable RCDs and electric portable outlet devices (power boards) without a valid inspection tag must be immediately removed from service.

(72) Electrical equipment that fails a test will be immediately removed from use by either:

- a. Cutting the plug off and disposing of the item in an appropriate waste stream; or
- b. Applying an Out-of-Service tag to the piece of equipment, pending further inspection, repair and testing.

## Frequency of Testing

(73) ETT services will be provided annually. A small number of areas including some engineering workshops or laboratories will be provided with ETT services once every six months.

## New Equipment

(74) Where new equipment is introduced to the workplace, the supplier is responsible for providing a safe product and therefore electrical testing and tagging is generally not required. The equipment should be visually inspected prior to first use.

## Repaired Equipment

(75) Equipment that has been repaired or serviced must be tested and tagged by the repairer prior to being reintroduced to service.

## Personal Electrical Equipment

(76) Only personal electrical equipment that is genuinely used for University business will be tested, following the approval of the supervisor. Common personal items including mobile phone chargers will not be tested. These items must be regularly visually inspected by the owner and removed from the University if there is any sign of damage or fault.

(77) Personal electrical equipment used in student accommodation will not be subject to ETT processes. However, students may be asked by a senior resident or other University Representative to dispose of or remove faulty or damaged equipment.

(78) Electrical equipment requiring testing that is not able to be tested with a Portable Appliance Tester (e.g. three phase equipment) must be tested and tagged by a licensed electrician in accordance with AS/NZS 3760:2010.

## Record Keeping

(79) Records will be captured during the testing process by the ETT worker or contractors engaged to complete the testing. The records will be maintained by:

- a. Tag applied to the equipment following the testing; and
- b. University database of all equipment tested (maintained by each faculty and/or FMS).

(80) Records will be stored in the University's corporate record keeping system, in accordance with [Records Management Rule](#).

## Electrical Leads, Power Boards and Double Adaptors

(81) Power boards used at the University must comply with AS/NZS 3105 Approval and Test Specification for Electrical Portable Outlet Devices. Power boards are considered a temporary measure and may only be used in office environments if they are fitted with overload protection and connected to a General Purpose Outlet (GPO).

(82) Extension leads must be compliant with AS/NZS 3199 Approval and Test Specification for Cord Extension Sets. When in use, extension leads must be:

- a. Selected so that the shortest practical lead is used for the task;
- b. Fully extended;
- c. Connected to the nearest socket outlet and removed from the socket outlet immediately when not in use;
- d. Protected from mechanical damage; and
- e. NOT placed where they could be a trip hazard (e.g. across aisles, corridors or other trafficable areas).

(83) The use of double adaptors and 'piggyback' adaptors are prohibited for use on all University workplaces.

(84) Only portable RCD power boards may be used on plant outside of office environments where it is not connected to a safety switch.

## **Welding Sets**

(85) All welding sets are to be inspected and tested before being put into service. These are to be regularly inspected and tested while in service and consistent with the requirements of AS/NZS 3760.

## **Medical Electrical Equipment**

(86) AS/NZS 3760:2010 specifically excludes medical devices and electrical devices in patient care areas. Medical electrical equipment intended to be connected to patients, research participants or students must be designed and certified to meet the requirements of AS/NZS 3200 and maintained in accordance with AS/NZS 3551:2012.

(87) The inspection, testing and maintenance of medical electrical equipment are the responsibility of the faculty, school or research institute that owns the equipment.

## **Electrical Incidents**

### **Reporting Electrical Incidents**

(88) All electrical incidents are to be reported immediately to the relevant supervisor, Estate and Built Environment and to WHS. An incident report is to be completed in SkyTrust with all electrical incidents being appropriately investigated.

### **Medical Attention and Response**

(89) It is important that any person who has suffered an electric shock, no matter how minor, seeks medical attention as soon as possible after the event. Contact with electricity can have serious health effects that may be delayed.

(90) A qualified electrical worker from Estate and Built Environment is to inspect the electrical installation and/or the socket outlet and equipment involved in the incident. Equipment involved in an electrical incident will be removed from service pending further inspection and testing.

## **Roles and Responsibilities**

(91) Roles and responsibilities shall be allocated according to the following table:

| <b>Role</b>                               | <b>Responsibility</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Facilities Management Service Directorate | Safe design, construction, installation, monitoring and maintenance of the University's electricity infrastructure;<br>Security of electrical switchboards;<br>Installation of testing of fixed RCD protection;<br>Provision of Electrical Testing and Tagging (ETT) services in conjunction with Science and Engineering;<br>Authorisation of all electrical work; and<br>Provision of qualified electrical workers and competent people.                                                                                                                                  |
| Site Electrical Supervisor (or delegate)  | Ensure compliance with the electrical procedure;<br>Communicate and ensure electrical personnel are aware of and apply the 'NO LIVE ELECTRICAL WORK' rule;<br>Sight and record electrical workers' licences and qualifications before they work on any University site;<br>Ensure all equipment is maintained and complies with the required standards (including testing standards);<br>Ensure all damaged equipment is reported and sent for repair to persons qualified to carry out the repairs; and<br>Carry out risk assessments and put in the appropriate controls. |

| Role                                                                    | Responsibility                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contractor to University                                                | <p>Ensure compliance with the electrical procedure;</p> <p>Communicate and ensure electrical personnel are aware of and apply the 'NO LIVE ELECTRICAL WORK' rule;</p> <p>Sight and record electrical workers' licences and qualifications before they work on any University site;</p> <p>Ensure all contractors performing high voltage work have a Safe System of Work and all Relevant HV Procedures and Permits;</p> <p>Ensure all equipment is maintained and complies with the required standards (including resting standards);</p> <p>Ensure all damaged equipment is reported and sent for repair to persons qualified to carry out the repairs; and</p> <p>Carry out risk assessments and put in the appropriate controls.</p>                                                                                                                                                                                   |
| Electricians (Facilities Management Service Directorate, or contractor) | <p>Be licensed and fully qualified;</p> <p>Test newly installed, broken or reconnected electrical circuits before being energised;</p> <p>Verify isolation has been achieved;</p> <p>Carry out risk assessments and put in the appropriate controls; and</p> <p>Report all electrical shocks to Site Managers or Supervisors.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Safety Observer                                                         | <p>Accompany University electricians on fault finding and testing jobs;</p> <p>Hold current First Aid and CPR qualifications; and</p> <p>Be trained in the use of the Low Voltage rescue kit.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Deans, Directors and Heads of Schools                                   | <p>Ensure compliance with the electrical procedure within their area of control.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Supervisors                                                             | <p>University supervisors are required to ensure that:</p> <p>Electrical faults are reported to CIS</p> <p>Staff, students and visitors do not attempt to access electrical switchboards</p> <p>Plug-in electrical equipment is regularly visually inspected for obvious faults;</p> <p>Plug-in equipment that is likely to be damaged during normal use is identified and made available for testing;</p> <p>ETT staff are provided with appropriate induction and supervision whilst working in their area of control;</p> <p>Faulty electrical equipment is immediately removed from services;</p> <p>Their area of control has sufficient socket outlets to minimise the use of power boards and extension leads; and</p> <p>Any manufacture or modification of electrical equipment for University use is carried out by a competent person and subject to design risk assessment and ETT prior to commissioning.</p> |
| Employees and Other Workers                                             | <p>Ensure compliance with the electrical procedure;</p> <p>Report any faults to their Supervisor and remove any faulty or damaged equipment;</p> <p>Carry out safety inspections and assist with risk assessments;</p> <p>Use equipment for the specific task, correctly; and</p> <p>Report all electrical incidents to Supervisors.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Authority and Compliance

(92) The Procedure Administrator makes these procedures.

(93) University Representatives and Students must observe these Procedures in relation to University matters.

(94) These Procedures operate as and from the Effective Date.

(95) Previous Procedures relating to electrical safety are replaced and have no further operation from the Effective Date of this new Procedure.

## Section 4 - Definitions

(96) 'Electrical work' is defined in State and Territory legislation and generally means work on or near any of the following:

- a. connecting electricity supply wiring to electrical equipment or disconnecting electricity supply wiring from electrical equipment
- b. installing, removing, adding, testing, replacing, repairing, altering or maintaining electrical equipment or an electrical installation.
- c. extra low voltage (ELV) ELV is defined in AS/NZS 3000 Wiring Rules as "Not exceeding 50 V (AC) or 120 V ripple-free (DC)".
- d. a low voltage means voltage that exceeds extra-low voltage and does not exceed 1000 volts alternating current (1000 V a.c.) or 1500 volts direct current (1500 V d.c.).
- e. a high voltage means voltage that exceeds low voltage.

(97) Worker, as defined by the [Work Health and Safety Act 2011](#), is a person that carries out work in any capacity for a person conducting a business or undertaking, including work as:

- a. An employee;
- b. A contractor or subcontractor;
- c. An employee of a contractor or subcontractor;
- d. An employee of a labour-hire company who has been assigned to work in the person's business or undertaking;
- e. An outworker;
- f. An apprentice or trainee;
- g. A student gaining work experience;
- h. A volunteer; or
- i. Person of a prescribed class.

## Status and Details

|                           |                                                                                                                            |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <b>Status</b>             | Current                                                                                                                    |
| <b>Effective Date</b>     | 10th June 2019                                                                                                             |
| <b>Review Date</b>        | 10th June 2022                                                                                                             |
| <b>Approval Authority</b> | Director People & Culture                                                                                                  |
| <b>Approval Date</b>      | 7th June 2019                                                                                                              |
| <b>Expiry Date</b>        | Not applicable                                                                                                             |
| <b>Unit Head</b>          | Anthea White<br>Director People and Culture                                                                                |
| <b>Enquiries Contact</b>  | Diana Chambers<br>Senior Manager, Health Safety and Wellbeing<br>0267735294<br><hr/> People and Culture<br>+61 2 6773 3705 |

## Glossary Terms and Definitions

**"Student"** - Is an admitted student or an enrolled student, at the relevant time: 1. an admitted student is a student who has been admitted to a UNE course of study and who is entitled to enrol in a unit of study or who has completed all of the units in the UNE course of study; 2. an enrolled student is a student who is enrolled in a unit of study at UNE.

**"Effective Date"** - means the Rule/Policy takes effect on the day on which it is published, or such later day as may be specified in the policy document.

**"University Representative"** - means a University staff member, contractor, agent, affiliate, residential staff member, UNE Council member, Council committee member, employee of a controlled entity, director of a controlled entity and any other person engaged by the University to undertake some activity for or on behalf of the University. It includes corporations, affiliated organisations and other bodies falling into one or more of these categories.