

# Electrical Safety Procedure

## Section 1 - Purpose

(1) This document sets out the University's procedure for ensuring the safe and reliable supply and use of electricity within Charles Sturt University (the University), including all electrical infrastructure and equipment.

(2) The University has a duty to manage the risks to health and safety associated with electrical risks as prescribed under work health and safety legislation. These include the electrical risks associated with the design, construction, installation, protection, maintenance and testing of electrical appliances and electrical installations.

### Scope

(3) This procedure is applicable to all persons who connect to, use or carry out work on the electrical installation at the University.

(4) This procedure is applicable to electrical installations and equipment that operate on:

- a. mains voltage of 240 volt (alternating current); or
- b. 415 volt 3 phase supply; or
- c. other voltages produced from equipment that may cause harm; or
- d. University owned high voltage supply lines; and
- e. solar photovoltaic systems.

## Section 2 - Glossary

(5) For the purpose of this procedure:

- a. Approved person - means a person approved to undertake explicit electrical work as listed below:
  - i. a licensed electrician approved to work on the electrical installation and electrical equipment;
  - ii. an electronics technician approved to work on electrical equipment connected to or capable of being connected to the electrical installation; or
  - iii. a tradesperson holding a restricted electrical licence (air conditioning mechanic, plumber, mechanical fitter, electrical fitter) approved to work on restricted electrical equipment and their connection to the electrical installation according to the specific conditions of their licence; or
  - iv. such other competent person approved to work on electrical equipment by way of demonstration that their knowledge and experience is sufficient for them to do so safely; or
  - v. such other competent person approved to undertake in-service testing of electrical equipment previously judged to comply with the relevant Australian Standards and supplied with a two or three pin plug for connection to a general purpose outlet, and who has successfully completed the appropriate training competencies and ongoing training for their required task.
- b. Electrical equipment - means an electricity consuming device, apparatus, appliance (including the cable), or extension leads and multiple outlet portable power boards that are connected to, or capable of being connected

to the electrical installation. Electrical equipment falls into one of the following categories:

- i. Hand-held portable;
  - ii. Field work/Outdoor/Wet use;
  - iii. Moveable; or
  - iv. Fixed/Stationary.
- c. Electrical installation - means the electricity equipment connected together that can be supplied with electricity from a supply authority or generating source. It can include the main switchboard, distribution boards, and all fixed wiring to isolation switches or general purpose outlets.
- d. Electrical work - means:
- i. any work undertaken on the electrical installation;
  - ii. any work undertaken on electrical equipment; and
  - iii. any work undertaken on the University's electrical supply.
- e. Multiple outlet portable power board - means a device also commonly known as portable power board that is used to provide additional power outlets.
- f. Hostile environment - as detailed in the Work Health and Safety Regulations, means 'an environment in which the normal use of electrical equipment exposes the equipment to operating conditions that are likely to result in damage to the equipment or a reduction in its expected life span, including conditions that involve exposure to moisture, heat, vibration, mechanical damage, corrosive chemicals or dust.'
- g. Organisational unit - means a budget centre, including faculty, school, division, office, centre or enterprise, as the custodian for the space they occupy.
- h. Residual current device (RCD) - RCDs or safety switches are a switching device intended to isolate the circuit when the current imbalance attains the rated operating leakage current value of the device. The purpose of an RCD is to help protect users from electrocution. These devices may be either portable or fixed.

## Section 3 - Policy

(6) This procedure supports the [Work Health and Safety Policy](#)

## Section 4 - Procedure

### Responsibilities

(7) The Division of Facilities Management has governance of the electrical installation in all buildings, including the provision, maintenance, repair, alterations and additions to the electrical installation.

(8) No alterations or additions to the electrical installation including hardwired systems shall proceed without prior approval of the Division of Facilities Management.

(9) Where facilities or workplaces have no nominal person in charge, such as shared teaching spaces and lecture rooms, then the relevant Campus Services Manager, Division of Facilities Management shall be the person in charge for the purpose of this procedure.

(10) The organisational unit is responsible for:

- a. the safety of all electrical equipment under their control or within any space for which they are responsible;
- b. ensuring all electrical work is undertaken by an approved person or the Division of Facilities Management;
- c. ensuring electrical equipment is used and maintained in a safe manner; and

- d. ensuring any electrical equipment that requires inspection, is tested and tagged in accordance with work health and safety legislation, Australian Standard AS3760: In-service Safety Inspection and Testing of Electrical Equipment, and this procedure.

(11) Organisational unit heads/managers are responsible for approving the use of privately owned electrical equipment in non public areas of the University in accordance with this procedure, ensuring such equipment is assessed as safe and electrically tested and tagged if required.

(12) Where facilities are occupied by more than one work unit (shared facilities), all units are equally responsible for ensuring the electrical equipment is used and maintained in a safe manner as per this procedure.

(13) Only approved persons are authorised to electrically inspect, repair, test and tag electrical equipment including extension cord sets and multiple outlet portable power boards.

(14) All users of electrical equipment have a responsibility to:

- a. visually inspect equipment for signs of damage prior to use;
- b. use the correct equipment for the task;
- c. report any electrical defects to a person in authority, and ensure that the item is tagged 'danger - unsafe, do not use', until the item is tested or repaired;
- d. not remove a flexible lead plug from the wall socket, by pulling the lead;
- e. always completely unroll an extension lead before using and never use an extension lead while it is coiled or wound around a drum;
- f. check that portable electrical equipment that has been electrically tested and tagged is still within the approved period; and
- g. ensure that electrical equipment is set up correctly and used safely in accordance with any relevant instructions accompanying the equipment and this procedure.

(15) If a user becomes aware that equipment or associated wiring may be in a dangerous condition, the equipment should be switched off and unplugged, providing it is safe to do so, and the organisational unit management notified immediately. The item must be clearly labelled 'Danger: Do Not Use' and include the person's name, date and contact details.

## **Electrical work**

(16) All electrical work shall comply with the rules and codes of the local supply authority, Standards Australia and work health and safety legislation.

(17) Any electrical work that alters an electrical circuit must be documented on the relevant switchboard legend by the approved person performing the works at the earliest appropriate time.

(18) Where practicable, main switchboards shall be locked, with the Division of Facilities Management controlling access, to prevent unauthorised access.

(19) A fixed or portable residual current device (RCD) shall be used in hostile environments including wet use equipment, if practicable.

(20) Double adaptors are not approved for use within the University and should be removed and replaced with multiple outlet portable power boards with overload protection and individual switches.

## **Interference with electrical safety**

(21) Any person who interferes with electrical installations, electrical equipment or electrical safety systems, such as electrical tags or danger tags, is committing a serious breach of safety and shall be deemed to have committed a breach of discipline or misconduct under the relevant University policy.

(22) All such breaches must be reported immediately to the supervisor, manager, head of the organisational unit, health and safety representative or Manager, Health Safety and Wellbeing.

## **Electrical equipment required to be inspected tested and tagged**

(23) Electrical equipment shall be regularly inspected and tested by a competent person if the electrical equipment:

- a. is supplied with electricity through an electrical socket outlet ('plug in' equipment); and
- b. used in an environment in which its normal use exposes the equipment to operating conditions that are likely to result in damage to the equipment or a reduction in its expected life span. This includes conditions such as exposure to moisture, heat, vibration, mechanical damage, corrosive chemicals or dust.

(24) The organisational unit, by means of a documented safety risk assessment, may determine additional electrical equipment that require electrical inspection, testing and tagging.

(25) The organisational unit shall test electrical equipment as per Australian Standard AS3760, after repair, and shall retest according to the requirements of the work health and safety legislation, risk assessment and AS3760.

(26) New electrical equipment meeting relevant Australian Standards should not require testing and tagging, but requires:

- a. a visual inspection to ensure there is no damage;
- b. to be installed with any provided electrical leads; and
- c. to be marked with in-service date.

(27) Second-hand or pre-used equipment is not considered new equipment and must be inspected, tested and tagged prior to being put into service.

(28) All electrical equipment shall be inspected, tested and tagged prior to return to service after repair for an electrical problem or fault.

(29) Organisational units hiring electrical equipment must ensure it is inspected and tested at the commencement of each hire and tested every three months.

(30) For extended hires the organisational unit must ensure it is inspected and tested at the intervals applicable to the type of workplace where the equipment is being used.

(31) Electrical testing and tagging records must be maintained by the organisational unit and include a description of the item, the date of testing, the test result, the date for re-test and details of the electrical tester.

(32) A current listing of authorised external contractors that can be engaged by organisational units to perform electrical testing and tagging of equipment is maintained by the Division of Facilities Management.

# Section 5 - Guidelines

(33) Nil

## Status and Details

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<b>Unit Head</b>	Steve Mitsch Director, Division of Facilities Management +61 (02) 6051 9863
<b>Author</b>	Ken Simpson Manager, Health Safety and Wellbeing
<b>Enquiries Contact</b>	Ken Simpson Manager, Health Safety and Wellbeing