

## Electrical Safety Procedures

### 1. LEGISLATION/ENTERPRISE AGREEMENT/POLICY SUPPORTED

- [Occupational Safety and Health Act 1984 \(WA\)](#)
- [Occupational Safety and Health Regulations 1996 \(WA\) Electricity Act 1945 \(WA\)](#)
- [Electricity \(Licensing\) Regulations 1991 \(WA\) Health and Safety Policy](#)

### 2. PROCEDURAL DETAILS

This procedure outlines the minimum compulsory standards for all University staff, students and visitors to ensure electrical safety is maintained.

#### 2.1. Working on electrical installations

- 2.1.1. Only authorised persons are permitted to work on Curtin University electrical installations.
- 2.1.2. Authorised persons working on or near High Voltage installations or equipment will comply with the requirements of the University High Voltage Safety Management Plan.

#### 2.2. Inspections, testing and tagging

- 2.2.1. All staff will undertake a visual inspection of electrical appliances prior to use (see Schedule 1).
- 2.2.2. Staff will check to ensure that appropriate electrical equipment is tested and tagged in accordance with Schedule 2. Any non-compliance shall be reported to their line manager.
- 2.2.3. Line managers will ensure arrangements are made to test and tag relevant electrical equipment in accordance with Schedule 2.

#### 2.3. Safe use of electrical equipment

- 2.3.1. Heads of Schools/Areas will ensure sufficient numbers of socket outlets will be available to ensure safe operation of electrical equipment. Specifically, they will:
  - (a) ensure access for any switches accessed frequently; and
  - (b) ensure that power and extension cords are positioned such that they do not create a hazard;
- 2.3.2. Staff, students and visitors will use no more than one power board and one extension cord for each socket outlet.
- 2.3.3. When a power board is used in a hostile environment and electrical equipment is frequently plugged in and out, users of the power board will ensure it is individually switched or fitted with safety shutters.
- 2.3.4. No person will use any the following adaptors in a power board, extension cord or University socket outlet:

Double



Piggyback



- 2.3.5. Travel adaptors may be used whilst on Curtin University business overseas, however these must be purchased from recognised Australian suppliers/stores and be marked with the Regulatory Compliance Mark (a triangle with a circled tick inside it) and Australian Safety Approval number (see example below). Also refer to the [travel adaptor warning](#) issued by EnergySafety WA.



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- 2.3.6. All users of hand-held or portable appliances will use RCD protection when using the appliance.
- 2.3.7. All users of cabled appliances will use appropriate cable management techniques when using the appliance.
- 2.3.8. Staff, students and visitors will not use portable electrical heaters in air-conditioned spaces. Where a portable electric heaters is used, the user will ensure it is of a type approved for use (in writing) by Properties.
- 2.3.9. Cooking appliances will only be used in a kitchen or kitchenette.
- 2.3.10. Staff, students and visitors will tag any faulty or non-functioning devices or equipment as 'Out Of Service' and report it to their supervisor, manager or Curtin contact, to arrange repairs.
- 2.3.11. Staff, students and visitors will maintain clear access to electrical switchboards or cupboards.

#### **2.4. Electrical incidents**

- 2.4.1. Staff, students and visitors will report any electrical incident as per the [Incident and Hazard Reporting and Investigation Procedure](#).
- 2.4.2. Any person receiving an electrical shock will submit themselves, for medical assessment, to a qualified medical practitioner.

### **3. RESPONSIBILITIES**

Managers and supervisors are responsible for ensuring implementation and compliance with this procedure in their areas of responsibility.

### **4. SCOPE OF PROCEDURES**

These procedures apply to all University staff, students and visitors.

### **5. DEFINITIONS**

(Note: Commonly defined terms are located in the [Curtin Common Definitions](#). Any defined terms below are specific to this document)

#### **Authorised Person**

Only a person, authorised by the Manager, Electrical Infrastructure, to undertake Electrical Work and who has a current and appropriate electrical worker's licence from the Electrical Licensing Board of Western Australia and/or is duly Authorised under the Electrical (Licensing) Regulations 1991 can undertake works as defined by the legislation.

Where an Electrical Worker is not employed directly by the University, they will be associated with an Electrical Contractor in order to perform electrical work on University premises. An electrical worker is a person who carries out electrical work and/or is mandated to do so in accordance with: Electricity (Licensing) Regulations 1991.

Work on electrical machines or instruments, on an electrical installation or on electrical appliances or equipment to which electricity is supplied or intended to be supplied at a nominal pressure exceeding 50 volts alternating current or 120 volts ripple free direct current whether or not the thing on which the work is performed is part of, or is connected to or to be connected to, any distribution works or private generating plant and, where work is performed on any appliance, whether or not electricity is supplied or may be supplied thereto through an electric plug socket or socket outlet.

### **Clear Access**

Unimpeded access to designated area, with a minimum clearance of 900mm. from opened doors.

### **Cooking Appliance**

An appliance used for the cooking of food examples include but are not limited to Toasters and Convection Microwaves.

### **Cord Set (Extension Cord)**

An assembly of a plug intended for connection to a mains socket outlet, a sheathed flexible cord and a cord extension socket, or appliance connector.

### **Electrical Appliance**

Means a device in which electrical energy is consumed or substantially changed in character by conversion into heat, sound, motion, light or otherwise may be classified as:

- **Fixed/stationary** – an appliance which is in normal use, fastened to a support, or is otherwise secured in a specific position, or is of such size or function as to be difficult or unlikely to be moved from one place to another, e.g. large workshop machinery (lathe, band saw, etc.) oven, refrigerator;
- **Movable** – an appliance that can be moved readily from one place to another by unplugging from a socket outlet, but that is not moved during operation e.g. cathode ray oscilloscope, electronic balance, personal computer, printer, etc.;
- **Hand-held** – portable equipment that is intended to be held in the hand during normal use e.g. electric drill, angle grinder (excludes battery operated equipment); and
- **Portable** – equipment that is connected to an electrical supply and intended to be moved when in use e.g. portable vacuum cleaner, electric high pressure water cleaner.

### **Electrical Installation**

Electrical equipment installed for the purposes of conveyance, control, measurement or use of electricity, where electricity is or is to be supplied for consumption.

### **Hostile Environment**

A workplace where electrical equipment or flexible supply cord may, in its normal use be subject to conditions that are likely to result in damage e.g. Laboratories, Workshops, Kitchens, these are by way of example and not intended to be a definitive list.

### **Kitchen**

An area where food is prepared and cooked examples of appliances found in such areas include but are not limited to any of the following; Toasters, Convection Microwaves, Cooktops and Ovens.

### **Kitchenette**

An area where food may be cooked or reheated, that is fitted with suitable extraction to outside. Cooking equipment generally found in these areas would be limited to a Convection Microwave, basic portable cooking equipment such sandwich makers and rice cookers. Ovens and cooktops are not permissible in these areas.

### **Non-Hostile Environment**

A dry, clean workplace where the electrical equipment or flexible supply cord, in its normal use, is not subject to conditions that are likely to result in damage. Areas may include but are not limited to the following; general office space, tea prep areas, non-laboratory teaching areas. These are by way of example and not intended to be a definitive list.

### **Power Boards - Electrical Portable Outlet Device (EPODs)**

A device, other than a cord set, having a single means of connection to a low voltage supply and one or more outlet facilities. It may incorporate a reeling or coiling arrangement.

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

An electrical safety device specially designed to switch electricity off when electricity 'leaking' to earth reaches a pre-determined level that may be harmful to a person.

### **Socket Outlet**

A device for fixing or suspension at a point, and having contacts intended for making a detachable connection with the contacts of a plug

### **Tea Preparation Area**

An area where food is **re-heated** examples of appliances found in such areas include but are not limited to any of the following Kettle, Coffee Machine, Toasted Sandwich Maker, **Conventional Microwave** (**Not Convection Microwave**).

## 6. SCHEDULES

[Schedule 1: Visual Inspection Checklist – Electrical Equipment](#)

[Schedule 2: Inspection of Electrical Appliances in the Workplace](#)

## 7. RELATED DOCUMENTS/LINKS/FORMS

[Incident and Hazard Reporting and Investigation Procedure](#)

[Online incident/hazard reporting system](#) Standards Australia, AS/NZS 3000 (Wiring Rules)

Standards Australia, AS/NZS 3760 (In-service safety inspection and testing of electrical equipment)

[WorkSafe WA](#)

[Department of Commerce, WorkSafe Division \(2001\) “Guide to testing and tagging portable electrical equipment and residual current devices at workplaces”](#)

Energy Safety [Adaptor Warning](#)

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<b>Policy Manager</b>	Chief Operating Officer
<b>Approval Authority</b>	Chief Operating Officer
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## REVISION HISTORY

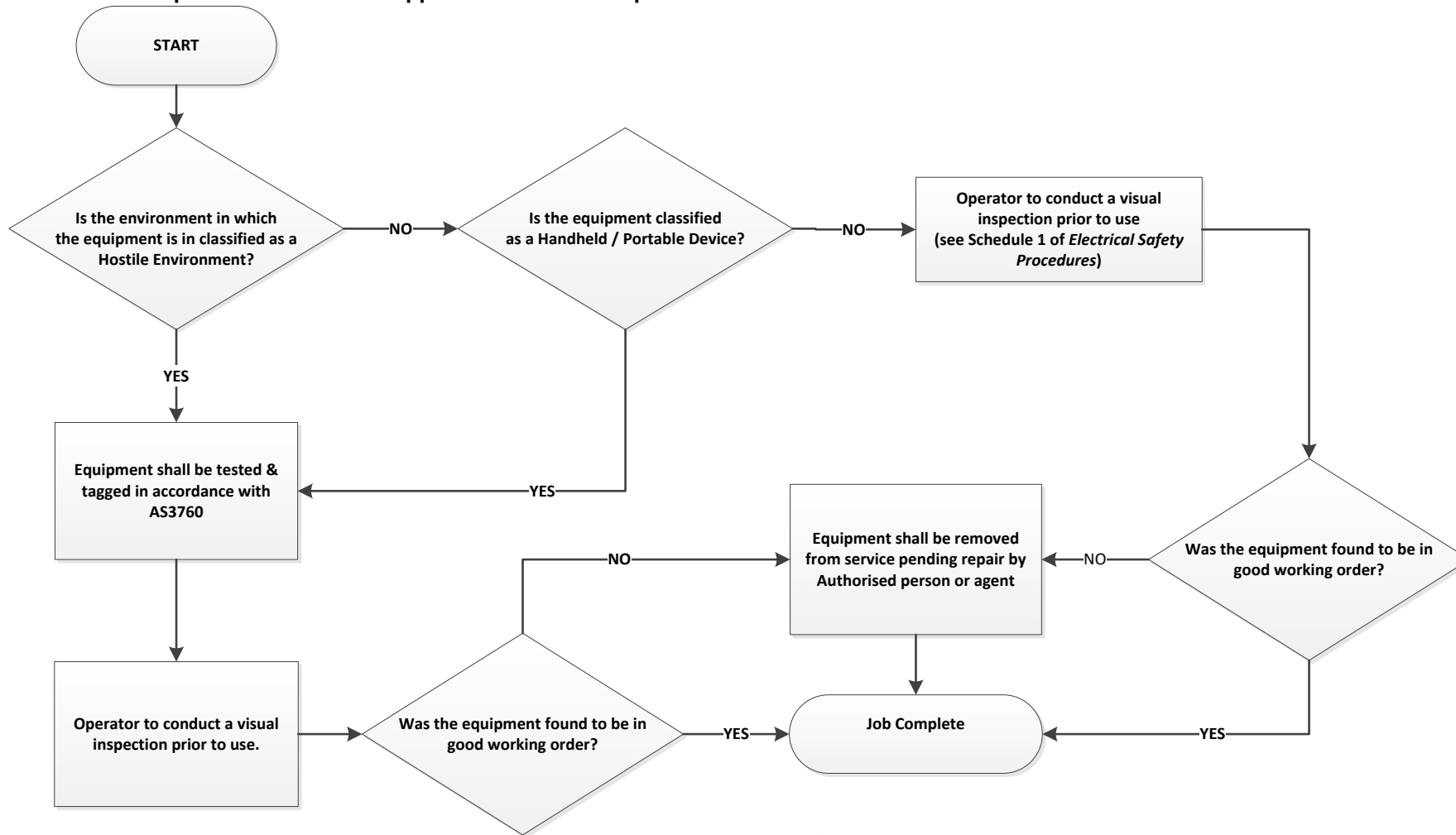
Version	Approved/ Amended/ Rescinded	Date	Committee / Board / Executive Manager	Approval / Resolution Number	Key Changes and Notes
New	Approved	10/06/2013	Vice President, Corporate Services	EM1315	Unconditional
	Administratively Updated	06/10/2015	Director, Legal and Compliance Service	EC 76/15	Executive Manager Title Changes
	Amended	20/06/2016	Chief Operating Officer	EM1620	Unconditional
	Amended	17/10/2018	Chief Operating Officer	EM1822	Unconditional

## Schedule 1 – Visual Inspection Checklist – Electrical Equipment

### Visually and physically:

- (a) check for obvious damage, defects, or modifications to the equipment and its accessories;
- (b) for flexible cords, check:
  - (i) that flexible cords are effectively anchored to equipment, plugs, connectors and cord extension sockets;
  - (ii) that the external surface of flexible cords are free of cuts, abrasions, twists or other damage such that the inner core is visible; and
  - (iii) that there is no use of insulation tape, which should not be used;
- (c) for extension cords and power boards (EPOD, Electrical Portable Outlet Device), check that the warning indicating the maximum load to be connected to the device is intact and legible;
  - (i) check that any operating controls are in good working order (i.e., that they are secure, aligned and appropriately identified);
  - (ii) check that covers, guards, and the like are secured and working in the manner intended by the manufacturer or supplier;
  - (iii) check that ventilation inlets and exhausts are unobstructed;
  - (iv) check pins of insulated pin plugs for damage to the insulation of the pins; and
  - (v) if fitted, the shroud on cord extension sockets should be inspected for damage;
- (d) check that the current rating of the plug is equal to or greater than with the current rating of the equipment; and
- (e) check that workspace-appropriate cable management techniques are in place and used with the appliance.

## Schedule 2 - Inspection of Electrical Appliances in the Workplace



### Hostile Environment:

A workplace where electrical equipment or flexible supply cord may, in its normal use be subject to conditions that are likely to result in damage eg Laboratories, Workshops, Kitchens, these are by way of example and not intended to be a definitive list."

### Handheld/ Portable Device:

- Handheld device that is intended to be held in the hand during normal use e.g. electric drill, angle grinder (excludes battery operated equipment).
- Portable device that is connected to an electrical supply and intended to be moved when in use e.g. portable vacuum cleaners, electric high pressure water cleaner.