



ELECTRICAL SAFETY POLICY

Category	Health and Safety
Type	Policy and Procedure
Approved by	The Shed Committee
Date Policy Took Effect	26 July 2021
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Review Date	August 2022

The Auckland Central Community Shed (the **Shed**) is committed to providing a safe workplace for its Members and visitors.

The purpose of this policy is to provide a safe workplace by ensuring all **Shed owned electrical appliances** are inspected and tested in accordance with **AS/NZS 3760:2010** and Worksafe NZ guidelines.

The inspection and testing of electrical appliances is a recognised practical step for the management of electrical hazards.

The Shed requires all electrical appliances to be regularly inspected and tested including immediately after construction, repair or modification or where there is reason to suspect the equipment is faulty or damaged but cannot be confirmed by visual inspection.

Procedures for implementing this Policy are found on the following pages.

Approved by Chairman (on behalf of The Committee)

PROCEDURES

1. Coverage

All **electrical appliances** in use in workshops, kitchen and offices owned or administered by The Shed except for fixed wiring installations e.g. light fittings, air conditioning units, etc.

2. Responsibility

Primary responsibility for ensuring the safety testing of **Shed owned** electrical appliances, in accordance with **AS/NZS 3760:2010** is with the Shed Committee. The responsibility for providing the means for testing lies with the Shed Co-ordinator and responsibility for carrying out the testing lies with the **competent testers**.

As well as safety, there are important legal responsibilities for all the Shed Members in relation to electrical safety. Legal risks are mitigated by compliance with this policy. Whilst all **competent testers** shall perform electrical safety testing, in addition all Members should visually check electrical appliances on an ongoing basis. This responsibility shall be made clear during their induction.

3. Testing

Every electrical appliance in The Shed must be inspected and tested:

- prior to commissioning, immediately after construction, repair or modification **or**
- where there is reason to suspect the equipment is faulty or damaged but cannot be confirmed by visual inspection, **and**
- at regular intervals during its service life to check that no degradation has occurred to its electrical safety since manufacture.

Equipment that has a current electrical safety certificate need not be tested. All other appliances are to be tested at prescribed intervals.

a. Conducting Tests

Competent testers include those with registration and current practising licenses as Electrical Service Technicians, Electricians, as well as other Members trained to conduct testing (refer to section **f. Training**).

b. Non-compliant equipment

Electrical appliances which fail to comply with the standard when tested shall be withdrawn from service immediately, labelled with a warning against further use and arrangements made for repair (see Appendix 3 [Shed Member Safety Guidelines para 1](#)) or for disposal or destruction.

c. Frequency

In accordance with the **AS/NZS 3760:2010** The Shed requires testing and inspection of electrical appliances to be conducted at the frequency specified in **Table 2, AS/NZS 3760: 2010**. This table is to be interpreted in accordance with **Appendix 1. Table 2** is reproduced in **Appendix 2**.

An annual review of usage of appliances may be conducted to establish the testing cycle for electrical appliances in use in the following year. In order to meet these requirements the Shed Committee should initially prioritise the electrical equipment to be tested based on the frequency of use and level of risk, as follows:

- The first priority should be to test and inspect all electrical appliances in regular use in workshops on a 6 monthly basis.
- Secondly, electrical appliances, which are used occasionally and are low risk may be prioritised to be tested in the next 1-2 years.
- For rarely used appliances in non-hostile environments, testing should be carried out at least 5 yearly.

d. Documentation/Records

The minimum requirement is for the following information to be recorded on the label attached to the appliance:

- The date of testing
- Person performing the test

To assist with managing regular testing of equipment the Shed the dates of inspection, the tester's initials and agreed testing intervals shall be recorded on the Shed's Asset Register.

There is a colour coding system that shall be used to enable a quick, visual reference for all Members as follows:

- **Test 6 monthly – green (even years) or blue (odd years)**
- **Test annually – yellow (even years) or black (odd years)**

e. Test Equipment

Tests shall be done using a P.A.T. (portable appliance tester) or appropriate testing equipment in accordance with the **AS/NZS 3760**. The P.A.T. should be routinely calibrated i.e. annually. Further details regarding specific testing requirements and practical guidelines refer to **Appendix 2**.

f. Training

Competent testers shall be trained to the following standards:

- the operation of this policy and its procedures
- AS/NZS 3760:2010

The Shed Committee shall ensure electrical testing and inspection training is organised for those Members involved in electrical appliance testing. This will also include a basic electrical safety awareness and familiarisation session.

APPENDIX 1: **Definition of terms**

AS/NZS 3760:2010 - Standard New Zealand's standard for In-service safety inspection and testing of electrical equipment.

Electrical appliances - "Appliance" shall mean 'Low Voltage' electrical equipment and high-current Extra Low Voltage (ELV) electrical equipment powered from mains 230AC volts connected by flex-wire cord, as defined by the Electrical Regulations 2003, their subsidiary Regulations and Standards. Typical examples include:

- Hand-held equipment, kitchen appliances, computer equipment, heaters;
- Cord sets, cord extension sets and outlet devices (also known as **electrical portable outlet devices (EPODs)** or power boards;
- Flexible cords connected to **fixed equipment in hostile environments**;
- Portable power supplies and battery chargers.

"Shall" means mandatory.

"May" means optional.

"Environment" refers to the situation and conditions within the immediate area (generally at least 1.8m) of which an appliance (including its power cord) is located. This applies to the 'environment' external to, and within an appliance.

"Hostile environment" includes an environment in which heat, shock, vibration (movement, flexing), moisture (ice, fluids, condensation), pressure (inc. crushing forces), or abnormal levels of dust is present.

Competent Tester - a Member of The Shed who has undertaken training with an existing Member who has an electrical testing certificate of competence issued by an independent authority in the past 5 years.

Induction - a process undertaken by each Member of the Shed upon joining or upon renewal of their Membership

Shed owned - Where The Shed Committee has allowed its Members to use their own appliances, these appliances are included in the inspection and testing arrangements. However, if they are found to fail in any way they must be removed from the premises and repaired at the owner's expense.

APPENDIX 2:

Interpretation of TABLE 4 of AS/NZS 3760 (“Indicative Testing and Inspection intervals for electrical equipment”)

For the purposes of The Shed electrical appliance testing regime, equipment shall be put into the following two categories:

Category 1: Six monthly frequency of testing

Category 1 shall include:

- a) any appliance which is used in a severe ‘hostile’ environment or is exposed to multiple ‘hostile’ environment factors or is open to abuse
- b) any appliance which is subjected to a high frequency of use
- c) portable appliances (i.e. under 18kgs, such as electric drills and saws), cord extension sets, and electric portable outlet devices (EPODs) which are operated in different environments.

(Note: Portable appliances, including extension cords and EPODS, which are not used in different environments are normally tested under other categories).

Category 2: One year frequency of testing

Electrical appliances used in the office and kitchen are generally included in this category.

Extra attention should be given to insulation, electrical leakage, corrosion, and earth-bonding, in appliances containing heat or moisture. These appliances have self-made internal environments which can be defined as ‘hostile’ and should therefore be tested annually, at least, or more frequently (Cat-1) if subjected to more severe or multiple ‘hostile’ environmental factors.

See Table 4 in AS/NZS 3760 for any clarification or review of Shed testing regimen.

APPENDIX 3: **Shed Member Safety Guidelines for Electricity**

The following information shall be included in Member Inductions.

1. Faults and repairs

- a. All electrical repair work shall be carried out by qualified persons who have current registration and practising licenses as Electrical Service Technicians or Electricians.
- b. All electrical appliances that fail electrical safety tests shall be taken out of service or rendered inoperable until the appliance is checked and/or repaired by qualified persons as above.
- c. Faulty equipment shall be immediately reported to the Duty Manager.
- d. Faulty equipment shall be switched off and removed from service, or if unable to be moved, left with a clear warning notice if it is likely to be a hazard to other Members.
- e. Faults in fixed wiring shall be reported directly to the Coordinator (in person or via email, text or phone call).

2. Safe working practices

- a. Do not interfere with or alter the fixed electrical supply to any part of the Shed premises.
- b. Always visually inspect equipment before use. Do not use electrical equipment that has frayed or exposed leads or faulty or damaged plugs.
- c. Protect electrical leads from mechanical, chemical, or heat damage.
- d. When an item of equipment is situated at a distance from a power-point, the electrical lead should not run along the floor or be hooked around other machines. If necessary, place hooks along the wall to raise the lead above the floor.

- e. Do not use extension cords as a substitute for fixed wiring. Additional power outlets should be arranged where necessary.
- f. When power boxes are used that enable a number of appliances to be run from one power outlet, care must be taken to ensure that the circuit is not overloaded. Where possible, use power boxes with circuit breakers attached. However, it is better to once again request more permanent power outlets.
- g. Keep clothes, paper and other flammable materials well clear of heaters and other equipment producing heat as a function of their operation.
- h. Keep all objects and dust away from air vents required by equipment for cooling to reduce the risk of fire.
- i. Liquid spills should be immediately removed as these can cause electrical short circuits that may lead to metal cases becoming 'live' or to fire.
- j. Construction, alterations or repairs of non-Shed electrical equipment, e.g. items brought in for repair by the public, should be tested prior to use by qualified persons who have current registration and practising licenses as Electrical Service Technicians or Electricians. *This must be made clear to the owner prior to starting any work.*
- k. Do not open covers on any equipment that leaves potentially 'live' circuits exposed.
- l. In wet or damp conditions a residual current device should be used. Protective rubber gloves and boots should be worn.
- m. Display warning notices in places where specific dangers are present - high voltage, high power transmitters, lasers, unearthed equipment, etc.
- n. Turn off all electrical apparatus that is not in use.
- o. Any electrical equipment left operating and unattended should have the control switch clearly marked and instructions for switching off in the case of emergency posted in a prominent position
- p. Do not use three-phase outlets for single-phase equipment.

APPENDIX 4: ELECTRICAL INSPECTION AND TESTING CHECKLIST

1	Physical Inspection
a.	External damage or defects
b.	damage to accessories, connectors, plugs or outlet sockets eg chords are anchored
c.	inner conductors of flexible leads are not visible
d.	unprotected conductors or insulation tape are not in evidence
e.	security and alignment of any control knobs
f.	covers and guards etc are properly secured in place
g.	mechanical safety devices are in good working order and that ventilation inlets and exhausts are not obstructed
h.	controls and alarms are in good working order
i.	Plug / equipment rating align

2	Testing
(a)	Class I equipment - Earthing continuity Includes Cord sets, cord extension sets, EPODs (<i>Electrical Portable Outlet Device</i>) and PRCDs (<i>Portable Residual Current Devices</i>) <i>An earth test to ensure that there is less than 1Ω (ohm) resistance between exposed metal parts and earth</i>

(b)	All Classes of equipment - Testing of insulation
(i)	Leakage current test
(ii)	Insulation resistance test

See Tables in **AS/NZS 3760** for resistance limits

- **Test 6 monthly – green (even years) or blue (odd years)**
- **Test annually – yellow (even years) or black (odd years)**

FOR DISPLAY ON THE TOOL ROOM & OFFICE NOTICE BOARD
APPROVED SHED ELECTRICAL WORKERS

The following Members have been assessed and approved by the Committee as Members who are **competent PAT testers** of Shed electrical equipment:

Name:	Approved Date:
Willem Pretorius	5 May 2021
Brian Furness	5 May 2021
Ken Buckley	5 May 2021
Nicola Powell	5 May 2021
Emile Woodruffe	5 May 2021
James Flocchini	5 May 2021

The following Member(s) have been approved by the Committee as Members who are able to carry out basic electrical repair work:

Name:	Approved Date:
Willem Pretorius	5 May 2021

Related Policies, Procedures and Forms

Health and Safety at Work Act 2015

Health and Safety Policy Statement

Electrical Testing Guidelines

Contact for Further Information

If you have any queries regarding the content of this policy or need further clarification, contact the Coordinator aucklandcentralshed@gmail.com