ELECTRICAL – INSPECTING AND TESTING

Please also refer to Electrical Safety Information Sheet for frequently asked questions and operational tips.

Inspection of cords

Where damage is likely to occur to a cord, and it is accessible, you will need to check the cord during your workplace inspection. If there is damage to the cord then the item must be removed from service (tagged out) and either repaired or disposed of. These items must be electrically tested if they are brought back into service.

Electrical testing requirements

Please refer to pages 4-6 (Appendix H) when applying the categories below.

Electrical equipment which is supplied through an electrical socket outlet (i.e. not hard wired) **and** have one or more of the elements below will require electrical testing.

- Is used in an environment which is likely to result in damage to the equipment or a reduction in its expected life span (e.g. exposure to moisture, heat, vibration, mechanical damage, corrosive chemicals or dust).
- Can be damaged by regular flexing (crushing or crimping) of the cables (see definitions section 3.7.17).
- Can be damaged by abuse (rough handling).
- Is second-hand.
- Is hired.
- Is medical electrical equipment, medical electrical systems and non-medical electrical equipment used in the patient environments (including dental clinics).
- Has been modified or repaired.
- Where your building/floor does not have fixed RCD protection (please speak to your local HSW team).

Missing items requiring testing

All reports from external testing companies are to be checked by the Schools/Branches for missing items. These items must be accounted for and tested.

Tagging

Tags must be attached to the electrical equipment or flexible supply cords to make it easier to identify tested equipment and must include:

- Date of the last examination and test.
- Date of the next examination and test.
- Name of person who performed the examination and test.

Failed items

Failed items must be dealt with as soon as reasonably practical that the failure is identified. The item must be either:

- Tagged out using an Out of Service tag (see Appendix D); or
- Decommissioned and disposed of (see Appendix J).

ELECTRICAL – INSPECTING AND TESTING

Electrical testing frequencies

The University for the majority of items is following AS 3760 (2010) *In service safety inspection and testing of electrical equipment* for electrical equipment. Please refer to Table 1 and Table 2 for electrical testing frequencies. Please read the tables below in conjunction with pages 4-6 (Decision trees) to determine what constitutes the minimum required testing.
Note for those items which require testing if the School/Branch Head wishes to test less frequently than what is outlined below, then a risk assessment must be completed (please speak to your local HSW team for assistance).

Table 1. Electrical equipment

Environment or type of equipment	Frequency of testing
Workshops (places of manufacture, assembly, maintenance or fabrication)	6 months.
• Flexing[1] of the cord in normal use. • Exposure to abuse (rough handling). • Hostile[2] environment.	Every 12 months.
None of the environmental conditions below: • Flexing[1] of the cord in normal use. • Exposure to abuse (rough handling). • Hostile[2] environment[1].	None unless they are being repaired, serviced, hired or are second-hand (see below and pages 4-6).
Medical electrical equipment; medical electrical systems and non-medical electrical equipment used in the patient environments (including dental clinics).	Electrical testing (and other testing) will be conducted in accordance with AS 3551 *Technical management programmes for medical devices.* The frequency of testing will be determined at the time of acceptance and is determined by the supplier or manufacturer. Hired medical equipment will be tested before introducing into service and the ongoing frequency is decided by agreement with the hirer and hiree.
Hire[3] Equipment.	Before introduction into service.
Repaired and serviced equipment.	After the repair or service[4] refer to AS 5762 *In-service safety inspection and testing – repaired electrical equipment.*
Second-hand equipment.	Before introduction into service.
Item which has been involved in an incident/accident (exposed to water, damage, chemicals etc)	○ Before the item is returned to service. ○ If the item required regular testing then apply the frequency as stated above.

1. Flexing is this circumstance means crushing/crimping not kinking/coiling/wrapping (see definitions section 3.7.17 for more details).
2. A hostile environment is an environment which is likely to result in damage to the equipment or a reduction in its expected life span (e.g. exposure to moisture, heat, vibration, mechanical damage, corrosive chemicals or dust).
3 The test should be conducted by the person hiring the equipment to the University.
4 This test is required to be conducted by the company or individual who repaired/serviced the equipment.

Continued

ELECTRICAL – INSPECTING AND TESTING

Electrical testing frequencies continued

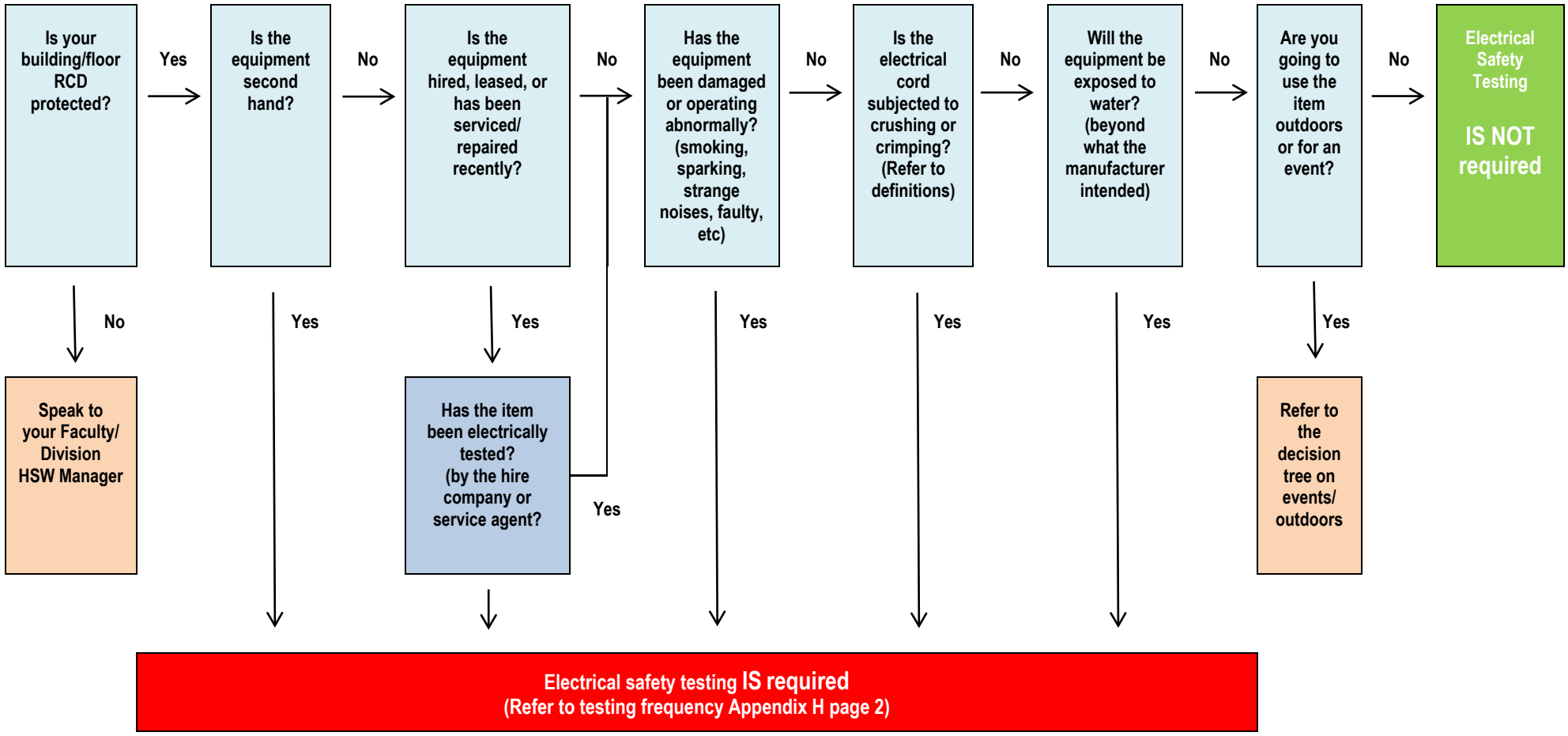
Table 2. Residual Current devices (RCD)

Environment	Type of RCD	Frequency of testing
• Flexing[1] of the cord in normal use. • Exposure to abuse (rough handling). • Hostile[2] environment.	Portable RCDs • Tested by the incorporated self-test function. • Tested by the trip current and trip time test.	Every 3 months. Every 12 months.
	Fixed RCDs *(Campus Services only)* • Tested by the incorporated self-test function. • Tested by the trip current and trip time test.	Every 6 months. Every 12 months.
None of the environmental conditions below: • Flexing[1] of the cord in normal use. • Exposure to abuse (rough handling). • Hostile[2] environment.	Portable RCDs • Tested by the incorporated self-test function. • Tested by the trip current and trip time test.	Every 3 months. Every 2 years.
	Fixed RCDs *(Campus Services only)* • Tested by the incorporated self-test function. • Tested by the trip current and trip time test.	Every 6 months. Every 2 years.

[1] Flexing is this circumstance means crushing/crimping not kinking/coiling/wrapping (see definitions section 3.7.17 for more details)
[2] A hostile environment is an environment which is likely to result in damage to the equipment or a reduction in its expected life span (e.g. exposure to moisture, heat, vibration, mechanical damage, corrosive chemicals or dust).

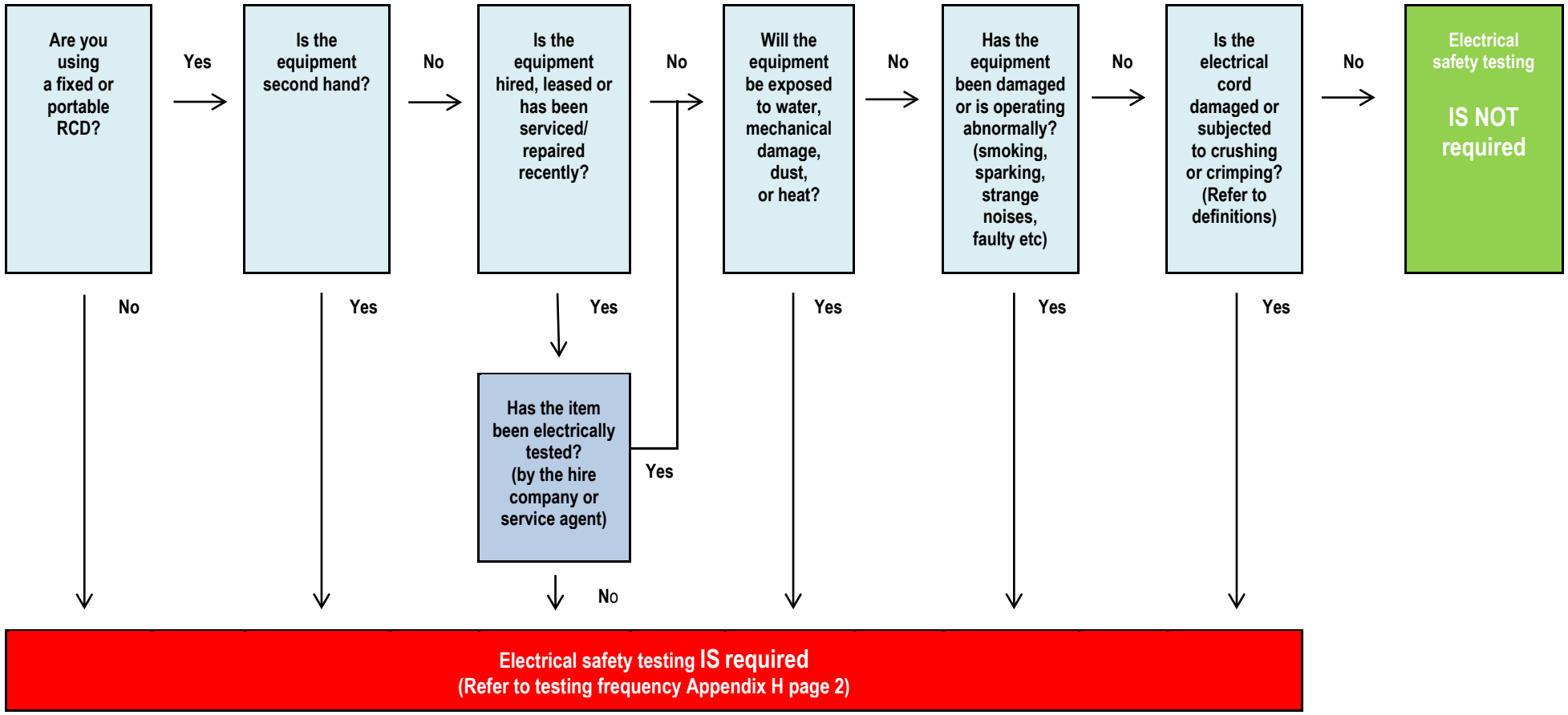
ELECTRICAL – INSPECTING AND TESTING

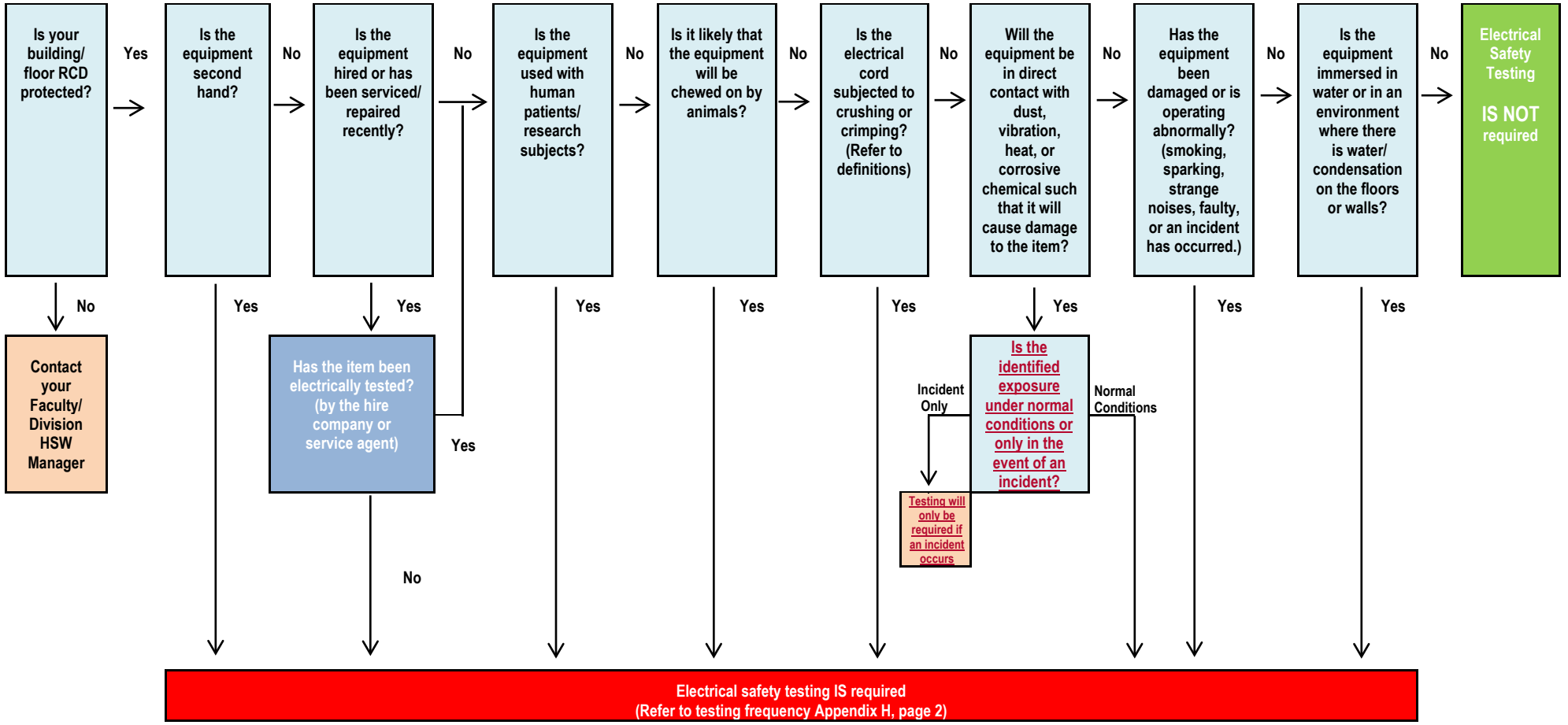
Electrical Safety Testing Decision Tree – Office/Kitchen/Common Spaces



ELECTRICAL – INSPECTING AND TESTING

Electrical Safety Testing Decision Tree – Events/Outdoors



ELECTRICAL – INSPECTING AND TESTING

Electrical Safety Testing Decision Tree – Laboratory/Workshop/Medical/Dental