

## **ELECTRICAL SERVICES/ EQUIPMENT MANAGEMENT POLICY**

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Applies to:	Organisation wide

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## DOCUMENT CONTROL

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## CONTRIBUTION LIST Key individuals involved in developing the document

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## **1. INTRODUCTION**

- 1.1 This policy sets out the commitment of Somerset Partnership to provide a safe and secure environment for patients, visitors and staff. It applies to all persons who have access to, use of, or are responsible for the maintenance of Somerset Partnership premises or equipment.
- 1.2 It is important that electrical services and equipment function safely and correctly, have adequate protection and do not exceed their design limits. The assurance of safe and reliable operation can only be achieved through a regime of regular inspection and testing of such systems and equipment and the implementation of appropriate maintenance works. Medical devices are not included (please refer to the Trust's Medical Devices Policy).
- 1.3 Somerset Partnership has a responsibility to ensure all electrical low voltage (LV) networks and systems are safe. All relevant safe working practices are followed and adequate precautions are taken to reduce as far as is reasonably practicable the risk of personal injury or death from electrical shock to all patients, employees, contractors and members of the general public.
- 1.4 The policy also provides guidance and references to assist staff in implementing the requirements set out within this policy.
- 1.5 This document sets out the electrical safety policy and procedures in operation within Somerset Partnership. The procedures should be regarded as a guide to minimise to an acceptable level the risks associated with electrical systems and equipment.

## **2. PURPOSE AND RATIONALE**

- 2.1 The aim of this Policy is to introduce a structured Procedure and Reporting Schedule Management and Control of Electrical Services and electrical equipment within the Trust premises.
- 2.2 As required by the HSE and Institute of Electrical Engineers (IEE) Regulations the Trust will ensure all works carried out will be in line with this guidance.
- 2.3 For the purpose of this Policy the Estate comprises of all buildings currently owned or occupied by the Trust.

## **3. DUTIES AND RESPONSIBILITIES**

### **Chief Executive/Chief Operating Officer**

- 3.1 The Chief Executive, as the Duty Holder, holds the overall responsibility for Somerset Partnership Health and Safety and implementation of this

policy. This responsibility is delegated to the Director of Governance and Corporate Development.

### **Director of Governance and Corporate Development**

- 3.2 The Director of Governance and Corporate Development is the Lead Director for electrical safety and will give assurance to the Trust Board regarding compliance with statutory legislation and ensure that all identified risks are included in the Risk Register.

### **Estates Manager – Designated Person**

- 3.3 The Estates Manager shall be nominated in writing by the Director of Governance and Corporate Development and shall possess adequate professional knowledge, with appropriate training, to devise and manage the necessary procedures to ensure that electrical safety within the Trust is well managed.

### **Estate Officer**

- 3.4 The person is required to liaise closely with other professionals in various disciplines. In addition, the person will possess a thorough knowledge of electrical safety. He/she will be responsible for:
- all training needs, including communications, permits to work and emergency procedures
  - all test equipment and protective clothing
  - recording and monitoring of all activities

### **Authorised Person – Electrical**

- 3.5 Authorised Persons for Electrical Services are to be Estates Personnel or an individual of a similar status who possesses adequate knowledge, sufficient experience and has received the necessary training within this field. Authorized Persons should be appointed in writing to control and manage LV Electrical Services, including standby generators. This will involve the implementation, maintaining, testing and inspecting of all LV electrical services. They are to liaise with all necessary parties and provide any information to enable the Policy to be fully implemented.

### **Competent Person**

- 3.6 A Competent Person is an individual who, in the opinion of the Authorized Person, has sufficient technical knowledge and relevant experience to prevent danger to themselves and others, whilst carrying out work on defined LV electrical services, equipment or standby generators and associated systems. All Competent Persons are to be provided with

adequate training so they can become familiar with the electrical systems and equipment upon which they are required to work.

### **Facilities Employee Responsibilities**

- 3.7 In accordance with the Health and Safety at Work Act 1974 and the Trust's Health and Safety policy, any employee is required to:
- co-operate with managers in order to meet statutory requirements
  - work in a safe manner, making full and proper use of any control measures provided
  - report faults/hazards and/or defects and any failure of control measures to managers immediately
  - wear all relevant PPE and use all safety equipment as supplied by Somerset Partnership NHS Foundation Trust
  - report all incidents

### **Managers and Heads of Departments**

3.8 Managers and Heads of Departments shall allow access at all reasonable times to properties and equipment in order that all competent personnel can discharge their duties under this policy.

3.9 Co-operation of Managers is required as follows:

- the reporting of circuits or equipment in need of repair
- making available electrical systems or equipment to carry out repairs
- allowing access to systems for the purpose of routine testing and inspection
- ensure any electrical equipment delivered to and for use in Somerset Partnership has been electrically tested and approved
- allow access to portable electrical equipment for testing and inspection

### **Contractors**

3.10 All contractors employed by the Somerset Partnership shall comply with this policy and the Trust's Control of Contractors Policy.

### **All Employees**

- 3.11 All employees must be familiar with and comply with the guidelines in Appendix C relating to user checks.

## **4. DEFINITIONS**

### **Electric Generator**

- 4.1 A device that provides electrical power in the event of a mains failure.

### **Uninterruptable Power Supply (UPS) or Battery Backup**

- 4.2 An electrical apparatus that provides emergency power to a load when the input power source, typically the utility mains, fails.

### **Switchgear**

- 4.3 As used in association with the electric power system, refers to the combination of electrical disconnects, fuses and/or circuit breakers used to isolate electrical equipment.

### **Portable Appliance**

- 4.4 An appliance which is normally fitted with a 13 amp 3 pin plug top that is intended to be moved whilst in operation or an appliance which can easily be moved from place to place, for example vacuum cleaner, toaster, food mixer and so on.

### **Fixed Wiring**

- 4.5 The installed wiring in a building, running from and including, a consumer unit/final distribution board, out to a 13A socket, light fitting or other low current outlet.

### **Medical Electronic Equipment – Patient Related Equipment**

- 4.6 Equipment connected to a patient is maintained by the Medical Electronics Team (please refer to the Trust's Medical Devices Policy).

## **5. SAFETY ARRANGEMENTS**

### **Risk Assessment**

- 5.1 There is a requirement under the Management of Health and Safety at Work Regulations 1999 to carry out adequate and sufficient risk assessments to identify any risk of danger from low voltage electricity. The risks for staff working on electrical systems and equipment can be substantially reduced through the safe working practices set out in this policy.

- 5.2 Risk assessments are to be undertaken by a technically qualified Estates Officer/Healthcare Professional or designated competent professional company or consultant. All risk assessments are to be recorded in writing, logged on the Facilities Risk Register and must identify the potential for danger or personal injury and or any other foreseeable risk.
- 5.3 Facilities Management will instigate regular reviews of all risk assessments every 12 months or as deemed necessary. All findings and results are to be formally reported to the Facilities Manager for necessary action.
- 5.4 Significant risks will be placed on the Trust's Risk Register. This will enable the Trust to prioritise any actions needed to either remove or reduce the risk from electrical systems to an acceptable level.
- 5.5 The risk assessments shall identify:
- the danger of electric shock, or personal injury to staff, visitors and patients
  - damage to Somerset Partnership property, due to an electrical fire, arcing or explosion
  - provision of suitable and adequate safety protection, tools and equipment, earthing and precautions
  - the condition, suitability, strength of installation of existing systems for specific tasks
  - security of isolation of electrical systems and equipment
  - any specialist or necessary precautions due to the siting of a system or equipment (explosive atmosphere)
  - adverse weather or environmental conditions where appropriate
  - maintenance frequency or requirements
  - all documentation and recording arrangements
  - any remaining foreseeable risks

### **Control Measures**

- 5.6 The control measures for the prevention of injury or death from electrical services will be dependent on the potential risk to staff, patients, visitors and others. Where the risk is high or unacceptable, control measures will be implemented to ensure a safe environment is maintained.

5.7 Control measures will include clearly defined and recorded management protocols/arrangements detailing:

- areas of responsibility
- lines of communication

5.8 These protocols will be recorded within the procedures adopted as part of this policy.

- the impact and suitability of modifications to services/equipment is fully assessed against its operational environment. (New builds/Capital Projects)
- the periodic inspection, testing, maintenance, operation of electrical services/equipment will take account of, but not be limited to, HTM's/BS/MHRA/Manufacturers suggested instructions. All such operations shall be recorded
- the development and maintenance of suitable and sufficient service/equipment information. Record drawings, charts, project manuals etc
- ensuring that electrical services/equipment is suitably signed (danger, hazard, warning)
- securing and restricting access to electrical services/equipment to Authorized and Competent personnel
- operating safe written systems of work which shall include an assessment of impact to the Business/Service and include the use of Permit to Work Systems in accordance with HTM
- ensuring that only suitably trained competent staff are permitted to work on/operate specified electrical services/equipment
- ensuring that refresher training/competency assessment is undertaken at suitable intervals
- ensuring that all maintenance staff receive basic First Aid training
- tools and equipment used by maintenance staff/contractors are certified safe to use

### **Provision of Information – Responsibilities**

5.9 The Senior Operation Manager or his deputy shall be responsible for the provision of appropriate advice and guidance to the Trust's users in respect of:

- the disruption of the electrical service
- dangers from electrical shock
- any other risks posed by/to the electrical services which may affect normal building/business activities

5.10 The advice/information shall include but not be limited to:

- the nature and type of risks to health where applicable
- control measures employed
- use of PPE and/or specialist safety equipment

5.11 Local managers shall be responsible for advising staff/service users of any danger that may exist when maintenance work, operation, testing or other activity associated with electrical services/equipment is being undertaken in areas under their control.

## **6. TRAINING REQUIREMENTS**

6.1 The Trust will work towards all staff being appropriately trained in line with the organization's Staff Mandatory Training Matrix (training needs analysis). All training documentation referred to in this Policy must be held by the Service Level Providers and reassurance given to the Trust that their training is up to date.

## **7. MONITORING COMPLIANCE AND EFFECTIVENESS**

Estate Management shall monitor the effectiveness of this Electrical Safety Policy. Monitoring will be achieved via risk monitoring group and estates team meetings.

### **Process for Monitoring Compliance**

7.1 Responsibilities for conducting the monitoring:

- Service Level Agreement contractors will monitor the staff under their control, including sub-contractors

7.2 Methodology to be used for monitoring:

- Annual Report to Estates and Facilities Governance
- Audits by SLA contractors
- Reporting/reviewing DATIX forms

7.3 Frequency of monitoring:

- As required by the SLA provider or their staff

- Audit of permits raised - annually

7.4 Process for reviewing results and ensuring improvements – annually with recommendations provided quarterly to Estates and Facilities Governance Group and risk issues. Any issues of concern will be referred to the Health, Safety, Security and Estates Management Group.

7.5 Recommendations will be presented to the Estates and Facilities Governance Group for consideration identifying any issues.

## **8. REFERENCES, ACKNOWLEDGEMENTS AND ASSOCIATED DOCUMENTS**

### **8.1 References**

HSE Guidance on Electricity at Work 1989

BS + EN Guidance (BS7671)

Institute of Electrical Engineers Regulations

Health Technical Memorandum Guidance

### **8.2 Cross reference to other procedural documents**

See information in:

- Health & Safety Policy
- Medical Devices Policy
- Fire Safety Policy
- Medical Gas Policy

All current policies and procedures are accessible to all staff on the Trust intranet (on the home page, click on 'Policies and Procedures').

## **9. APPENDICES**

9.1 For the avoidance of any doubt the appendices in this policy are to constitute part of the body of this policy and shall be treated as such.

Appendix A      **PORTABLE APPLIANCE TESTING**

Appendix B      **USER CHECKS**

## PORTABLE APPLIANCE TESTING

### 1. RECOMMENDED TEST FREQUENCY

- 1.1 All Class 1 portable appliances will be subject to a test prior to being put into service and following repair.
- 1.2 The general frequency of testing may be lesser or greater than those listed in the table below (based upon risk assessment).

**Table 7: Recommended Test Frequency**

Recommended Test Frequency		
Area	Equipment	Frequency
Main Kitchens	Somerset Partnership owned food trolleys	6 monthly
	Hand held equipment Class 1 or 2	6 monthly
	All other equipment	12 monthly
Workshops (Estates)	Hand held tools and equipment	6 monthly
	RCD's where used by electricians, in the field, to be tested	6 monthly
	All other equipment	12 monthly
Stores	All equipment issued (as User Checks in Appendix D Table 8)	Check on issue
	All equipment	6 monthly
Clinical Areas	Kitchen hand held equipment (Class 1 or 2)	6 monthly
	All other equipment	12 monthly
Medical Electronic Equipment	Hand held/portable Class 1 equipment	12 monthly
	Class 1 plug op chargers and power supplies	12 monthly
	Hand held/portable Class 2 equipment	24 monthly
	Class 2 plug top chargers and power supplies and battery operated equipment	No tests required (as User Checks in Appendix D Table 8)
	RCD's where used by technicians in the field to be tested	6 monthly
Laboratory Equipment	Hand held Class 1 equipment	12 monthly
	Hand held Class 2 equipment	24 monthly
	Hard wired/fixed equipment	48 monthly

<b>Recommended Test Frequency</b>		
<b>Area</b>	<b>Equipment</b>	<b>Frequency</b>
Information Technology (IT) Office Equipment	Including printers, scanners, photocopiers, faxes, monitors, base units, modems, speakers, PSU's and servers. Class 1 and 2	60 months – full test
	Class 2 plug top chargers and power supplies	No test required (as User Checks in Appendix D Table 8)

## ELECTRICAL EQUIPMENT

### 1. USER CHECKS

1.1 As prescribed by the Institute of Electrical Engineers Code of Practice for In-Service Inspection and Testing of Electrical Equipment 3rd Edition:

- the user check is a vital safety precaution
- many faults can be determined by a visual inspection
- the user is the person most familiar with the equipment and may be in the best position to know if it is in a safe condition and working properly
- no record need be made of the user check unless some aspect of the equipment is unsatisfactory

1.2 The user check is limited to an external visual inspection without any dismantling of the equipment, such as removal of covers or plug tops.

1.3 The user check should proceed as follows:

- consider whether the user is aware of any fault in the equipment and whether it works properly
- disconnect the equipment, if appropriate, by switching off and unplugging the item of equipment
- inspect the equipment, the cable and the plug
- the inspection should include the checks listed in Table 8

1.4 Take action if any faults or damage are apparent. Faulty equipment should be:

- switched off and unplugged from the supply
- labelled to identify that it is not to be used
- reported to Estates, IT or Medical Electronics, dependent upon the type of equipment
- removed from service immediately

1.5 If equipment is found to be damaged or faulty an assessment should be made by a competent person as to the suitability of the equipment for the use or location.

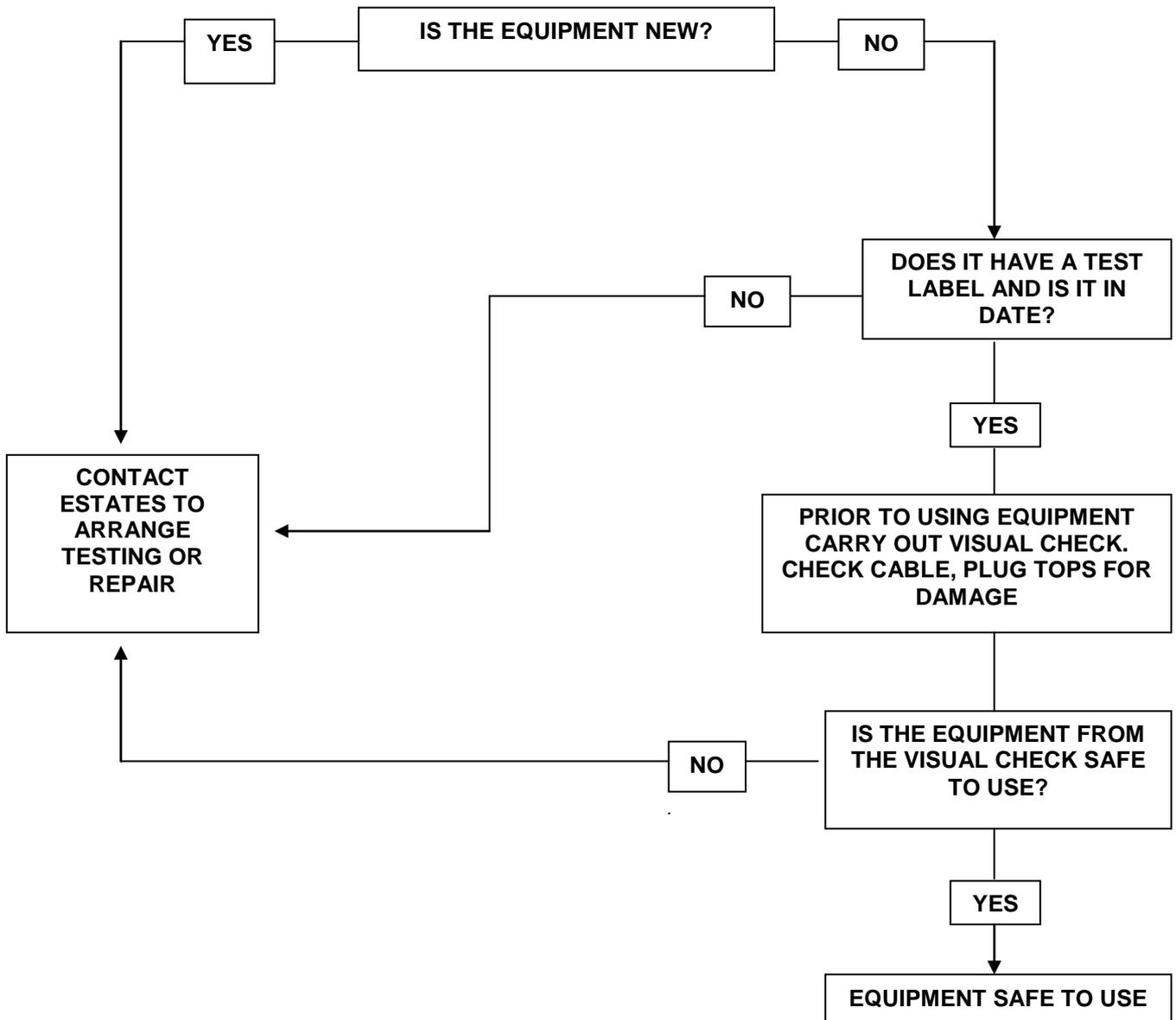
- 1.6 Frequent inspections and tests will not prevent damage occurring if the equipment is unsuitable for the particular application, replacement by suitable equipment is required.

**Table 8: Visual Inspection Checks**

<b>Topic</b>	<b>Advice</b>
Plugs	Not loose in socket-outlet and can be removed from socket-outlet without difficulty
	Free from cracks or damage
	Free from any signs of overheating
	Flexible cable secure in its anchorage (all plug tops rewirable and moulded on)
	No movement should be apparent
	Pins not bent
	Pins preferably sleeved, particularly where young children may touch the plug
	No cardboard label on the bottom
Flex or Cable	Plug does not rattle
	Good condition
	Free from cuts, fraying or damage
	Not in a location where it could be damaged
	Not too long, too short or in any other way unsatisfactory
	No joints or connections that may render it unsuitable for use, such as taped joints
	Only one flex connected in to one plug
	Not too tightly bent at any place
	Not found under a carpet
	Not a trip hazard
	An extension lead should be inspected throughout its length This will mean uncoiling coiled type extension leads
Socket-Outlet or Flex Outlet	Free from cracks or other damage
	No sign of overheating
	Shutter mechanism of socket outlet is functioning
	Not loose (properly secured)
	Switch, if fitted, operates correctly
Adaptor or Extension Lead Fitted with an RCD	Inspect device and verify it has a rated residual operating current not exceeding 30mA
	Check device by plugging it in, switching it on and then pushing the test button
	The RCD should operate and disconnect the supply from the socket-outlet

<b>Topic</b>	<b>Advice</b>
Appliance or Item of Equipment	Free from cracks, chemical or corrosion damage to the case or damage that could result in access to live parts
	Equipment is operated with protective covers in place and doors closed
	Able to be used safely Switches on and off correctly
	Works properly
	Sufficient space to permit cooling Not positioned so close to walls and partitions that there is inadequate spacing for ventilation and cooling
	No sign of overheating
	Not likely to overheat No books or files on top of a computer or towels over a convector heat
	100w lamps should not be fitted in 60w luminaires
	Cups and plants are not placed where their contents could spill into equipment
	Environment
No indiscriminate use of extension leads or multi-way adaptors	
Equipment not normally left on over night	
Suitability	Equipment suitable for the work it is intended to carry out

## PORTABLE APPLIANCE TESTING (PAT) GUIDANCE



### REMEMBER:

- Do not use equipment unless it has been tested
- Check that test label is fitted and is in date/current
- Carry out visual check on plug top and cable for damage
- Turn off power to equipment before removing plug tops or socket
- All staff have a responsibility for their own safety and the safety of others

**IF IN DOUBT: DO NOT USE EQUIPMENT – REPORT TO ESTATES**