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Code: HS4
Issue number: 1

Electrical Safety Policy

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Authors details	Estates Maintenance Manager

Type of document	Policy
Target audience	All CWP staff
Document purpose	In order that all employees and others including contractors are aware of both the Trust and their own responsibilities under the Health and Safety at Work etc. Act 1974 (HASAWA). In respect of electrical services and equipment which falls under the Electricity at Work Regulations 1989 (EAWR). The EAWR requires organisations to have arrangements in place to safeguard those who may be affected by electrical services and equipment. The Trust has therefore in addition adopted the Department of Health, Health Technical Memorandum (HTM) 06-02 and 06-03 Electrical Safety Guidance. All persons working on the electrical systems and with electrical equipment must be suitably qualified and competent.

Approving meeting	Infrastructure Sub-Committee Health & Safety Sub-Committee	15-Oct-20
Implementation date	15-Oct-20	

CWP documents to be read in conjunction with	
HR6	Mandatory Employee Learning (MEL) Policy

Document change history	
What is different?	New document, full review of the document undertaken
Appendices / electronic forms	N/A
What is the impact of change?	N/A

Training requirements	No - Training requirements for this policy are in accordance with the CWP Training Needs Analysis (TNA) with Education CWP.
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Document consultation	
Clinical Services	Via discussion board
Corporate services	Via discussion board
External agencies	N/A

Financial resource implications	None
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External references	
1.	Health and Safety at Work etc. Act 1974
2.	Electricity at Work Regulations 1989

3. Management of Health and Safety at work
4. Electricity Safety, Quality and Continuity Regulations
5. Portable Appliances in Offices and other Low risk environments
6. BS 7671 IET Requirements for Electrical Installations (Current Edition)
7. The IET Code of Practice for 'in-service Inspection & Testing of Electrical Equipment
8. IET Guidance Note 7 – Special Locations
9. Health Technical Memorandum (HTM) 00 Policies & Principles of Healthcare Engineering
10. HTM 06-02 Electrical Safety Guidance for Low Voltage systems
11. HTM 06-03 for High Voltage systems
12. HTM06-01 Electrical Services supply and Distribution Part A (Design Considerations)
13. HTM06-01 Electrical Services supply and Distribution Part B (Operational Management)
14. HTM 06-02 Electrical Services, Electrical Safety Handbook
15. HSG 85 Safe working practices
16. HSG 107 Maintaining transportable and portable electrical equipment
17. HSG 23 Keeping Electrical switch gear safe
18. HTM 08-02 Lifts
19. HTM 08-03 Bedhead services

Equality Impact Assessment (EIA) - Initial assessment	Yes/No	Comments
Does this document affect one group less or more favourably than another on the basis of:		
- Race	No	
- Ethnic origins (including gypsies and travellers)	No	
- Nationality	No	
- Gender	No	
- Culture	No	
- Religion or belief	No	
- Sexual orientation including lesbian, gay and bisexual people	No	
- Age	No	
- Disability - learning disabilities, physical disability, sensory impairment and mental health problems	No	
Is there any evidence that some groups are affected differently?	No	
If you have identified potential discrimination, are there any exceptions valid, legal and/or justifiable? N/A		
Is the impact of the document likely to be negative?	No	
- If so can the impact be avoided?	N/A	
- What alternatives are there to achieving the document without the impact?	N/A	
- Can we reduce the impact by taking different action?	N/A	
Where an adverse or negative impact on equality group(s) has been identified during the initial screening process a full EIA assessment should be conducted.		
If you have identified a potential discriminatory impact of this procedural document, please refer it to the human resource department together with any suggestions as to the action required to avoid / reduce this impact. For advice in respect of answering the above questions, please contact the human resource department.		
Was a full impact assessment required?	No	
What is the level of impact?	Low	

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1. Introduction

Cheshire and Wirral Partnership NHS Foundation Trust (the Trust) is committed to ensuring the health, safety and welfare of all employees and others who could be affected by its activities so far as is reasonably practicable.

This policy has been produced in order that all employees and others including contractors are aware of both the Trust's and their own responsibilities under the HAWAWA in respect of electrical services and equipment which falls under the EAWR.

The Electricity at Work Regulations requires organisations to have arrangements in place to safeguard those who may be affected by electrical services and equipment. The Trust has therefore in addition adopted the Department of Health, Health Technical Memorandum (HTM) 06-02 and 06-03 Electrical Safety Guidance in addition.

All persons working on the electrical systems and with electrical equipment must be suitably qualified and competent.

To this end the Trust has committed to operating and maintaining its electrical systems, plant and equipment to a suitable level in order to minimise risks, accidents and injury from these activities and systems.

In addition the EAWR also has strict requirements on "Live Working" which is supported by the Department of Health in the form of HTM 06-02. Live working on mains electrical services within the Trust will not be carried out until all other safer options have been explored, and the written consent of the Authorising Engineer (A/E) has been obtained by Trust appointed Authorised Person (A/P).

All persons working on the Trust's electrical systems must be competent to carry out the duties required. The A/Ps will carry out assessments and monitoring audits as necessary to ensure the standard is met and maintained.

2. Legal Requirements

Health and Safety at Work etc. Act 1974

The HASAWA imposes duties on employers, the self-employed and on employees; all of the preceding persons and organisations have a duty of care under that act. The EAWR was made under the HASAWA; this duty of care whilst at work also applies to the use of electrical supplies, services and equipment in the course of normal work activities. The EAWR require particular precautions to be taken against the risk of death or personal injury from electricity in work activities.

Management of Health and Safety at Work regulations 2006

The Management of Health and Safety at Work Regulations 2006 requires that principles of prevention are applied to work activities. The Trust has adopted the Department of Health (DoH) Electrical Safety Guidance HTM 06-02 for its Low voltage electrical system and HTM 06-03 for its High Voltage electrical system.

- Electricity at Work Regulations 1989
- Electricity Supply, Quality and Continuity Regulations
- Provision and Use of Work Equipment Regulations
- Construction Design & Management (CDM) Regulations

In addition the Institution of Engineering and Technology (IET) wiring Regulations BS 7671 (current edition) are applied to all new electrical installations, alterations and additions to existing electrical services together with any specific NHS, DoH or industry guidance applicable to the specific installation. Such as HTM 06-01, Building Regulations, CISBE guide. Planned Inspection and Test of the existing electrical Installations as part of the Planned Preventative Maintenance system is employed in order to maximise the availability of services to clinical and non-clinical staff (such as electrical installation condition reports (EICR) and portable appliance testing (PAT)).

Risk assessment protocols may be used in order to prioritise work identified by the Planned Preventative Maintenance systems, however dissimilar risks should not be compared against each other. E.g. risk of patient dying whilst undergoing major surgery against risk of fire and possible loss of life caused by an overloaded electrical system or circuit. Property, infrastructure and services risks should be funded separately from clinical risks.

3. Scope

This policy applies across all areas of the Trust, the services that it provides and to all staff contracted to work in the Trust's properties whether owned, rented, leased or otherwise provided for the purpose of Trust related activities (Trust property).

Separate additional requirements for electrical safety are made for those working in an electrical capacity on the electrical infrastructure, plant and equipment belonging to the Trust or otherwise for the use of employees of the Trust. Some of which are found in the following publications:

- BS 7671 IET Requirements for Electrical Installations (Current Edition)
- The IET Code of Practice for 'in-service Inspection & Testing of Electrical Equipment
- IET Guidance Note 7 – Special Locations
- Health Technical Memorandum (HTM) 00 Policies & Principles of Healthcare Engineering
- HTM 06-02 - Electrical Safety Guidance for Low Voltage systems
- HTM 06-03 - for High Voltage systems
- HTM06-01 - Electrical Services supply and Distribution Part A (Design Considerations) and Part B (Operational Management)
- HTM06-01 - Electrical Services supply and Distribution Part B HTM 06-02 Electrical Services, Electrical Safety Handbook
- HSG 85 - Safe working practices
- HSG 107 - Maintaining transportable and portable electrical equipment
- HSG 230 - Keeping Electrical switch gear safe
- HTM 08-02 - Lifts
- HTM 08-03 - Bedhead services

This includes but is not limited to:

- Estates
- Installation contractors

- Specialist Maintenance Contractors
- Consultants (Building Engineering Services)
- Inspection and Test Contractors

It is not practical to apply this policy to personal electrical equipment brought into the Trust by staff, visitors & volunteers; therefore it is not permitted to bring any personal electrical equipment or appliance that requires connecting to the electrical supply into the Trust premises. Long term residents / patients may request consent for certain equipment which shall be subject to 'In service inspection and testing' prior to connection to the Trust's electrical supply.

As the Trust operates out of leased or rented buildings including NHS-PS buildings, and carries out work on behalf of the landlord on occasions, the relevant landlords electrical safety policy needs to be read in conjunction with this policy.

4. Objectives

This policy is intended to enhance the safety of all employees, service users / patients and visitors with respect to electrical systems and equipment by making all Employees aware of their responsibilities and duties under the Electricity at Work Regulations.

Electrical safety is not solely the responsibility of the Estates Team. "Nearly a quarter of all reportable electrical safety incidents/accidents involve portable equipment. The vast majority of these incidents/accidents result in electric shock" (Source HSG 107 Introduction).

With the vigilance of frontline clinical and non-clinical staff and the appropriate Planned Maintenance by the Estates Team it should be possible to reduce the risk and mitigate "reportable electrical incidents/accidents" due to portable equipment, thus improving the electrical safety of staff, volunteers, visitors and patients.

Work on the Trust's electrical infrastructure, systems and equipment may only be performed by personnel appointed and approved as a 'Competent Person' (defined in HTM 06-02) by the Trust's Authorised Person Team.

The Estates Team have been charged with ensuring that appropriate levels of Planned Maintenance and "Inspection and Test" reports (EICR) of the electrical system, plant and equipment is performed in order to reduce the risks of failure or injury from electricity during the course of the Trust's normal activities, this also includes planned Portable Appliance Testing. This is to be achieved with a minimum of disruption to the core business of the Trust.

The Trust must provide sufficient resources to enable the electrical systems, plant equipment and portable appliances to be maintained at the appropriate levels to ensure safety.

It is important to note, that often electrical installations within a healthcare building can be complex. BS 7671 has a specific section within Section 7 'Special Locations' (710 Medical Locations). This is also reflected within HTM 06-01. All personnel who specify electrical work on the Trust's electrical systems must make themselves aware of these regulations.

All works carried out on the Electrical system must be certificated with the appropriate certificate as defined within BS 7671. This also includes emergency lighting.

5. Responsibilities

5.1 The Chief Executive (Duty Holder)

Overall responsibility for ensuring that the Trust meets its statutory obligations and that effective arrangements for the management of health and safety are put in place. This is a requirement under the Health & Safety at Work Act and unless this has been formally delegated and accepted by another person the duty holder is taken to be the most senior manager or owner i.e. the Chief Executive.

5.2. Designated Person

A requirement of the NHS Guidance HTM 06-02 / HTM 06-03:

“The designated person is an individual appointed by a healthcare organisation (a board member or a person with responsibilities to the board) who has overall authority and responsibility for the low voltage electricity system within the premises and who has a duty under the Health and Safety at Work Act, Subsidiary Regulations and HTM's

5.3. Authorising Engineer (LV / HV) (Independent Electrical Engineer (C.Eng. / I.Eng.)

This is a requirement of the NHS Guidance HTM 06-02, HTM 06-03.

“An Authorising Engineer (LV / HV) is appointed in writing by the Designated Person to take responsibility for the effective management of the safety guidance (LV / HV). The person appointed should possess the necessary degree of independence from local management to take action within this guidance” (HTM 06-02 / 06-03).

5.4. Coordinating Authorised Person (LV & HV)

This is an additional management appointment to suit the needs of the Trust in order to facilitate communications and liaison between design consultants, Project teams, Authorising Engineer, other A/Ps. This role also coordinates with the Authorising Engineer's Audits and investigations. CAP should be an Engineering (Electrical) Estates Officer.

5.5. Authorised Person (LV)

This is a requirement of the NHS Guidance HTM 06-02 / HTM.

06-03: “An Authorised Person (LV / HV) is appointed in writing by the management on the recommendation of the Authorising Engineer (LV / HV) in accordance with this safety guidance (HTM 06-02 / HTM 06-03) and is responsible for the implementation, management and operation of this guidance with regard to work on, or the testing of, defined electrical equipment / Installation. A/Ps could be Electrically Qualified Estate Officers, Maintenance Supervisors, and with certain restrictions Maintenance Technicians.

5.6. Competent Person (LV)

This is a requirement of the NHS Guidance HTM 06-02.

“A Competent Person (LV) is approved and appointed in writing by an Authorised Person (LV) for defined work, possessing the necessary technical knowledge, skill and experience relevant to the nature of the work to be undertaken, who is able to prevent danger or, where appropriate, injury, and who is able to accept a permit-to-work from an Authorised Person (LV).” A register of both directly employed and contractor C/Ps is held within Estate Services Dept.

5.7 Employee

All employees are responsible for their own safety and the safety of others due to their actions or inactions with respect to Health and Safety. The Trust will not support the following types of request which may breach Health and Safety:

- Connection of electrical appliances to the Trust's electrical system unless they have been purchased and registered on the Trust's appliance register. The Authorised Person Team shall provide guidance regarding portable appliances
- Connection or removal of components or parts from equipment that is live.
- Installation, removal or replacement of any electrical accessory whilst that circuit is live;
- Any work on electrical services not made dead and isolated.

To "make dead" requires that the item is isolated from all sources of electrical energy, "proved or confirmed dead" with an approved GS38 voltage indicator that itself shall be tested before and after each use, and the fitting of a safety lockout including personal padlock and sign, all of which can only be performed by a Competent Person (electrical).

Any person carrying out any electrical work (LV) on the Trust's estate must be appropriately qualified / trained and been signed up as a competent person by the Trusts A/P team.

Access to electrical switch rooms and substations shall be maintained free of obstruction at all times.

Electrical switch rooms, sub stations, electrical cupboards MUST not be used as a general store cupboard and clear access to electrical switch gear must be maintained at all times.

The Trust requires that all staff carry out the following simple basic inspection of portable electrical equipment (source HSG 107 User checks (visual)) each time that the equipment is taken into use and as felt necessary during use.

Check for:

- Damage (apart from light scuffing) to the cable sheath;
- Damage to the plug, for example the casing is cracked or the pins are bent;
- Inadequate joints, including taped joints in the cable;
- The outer sheath of the cable not being effectively secured where it enters the plug or the equipment. Obvious evidence would be if the coloured insulation of the internal cable cores were showing;
- The equipment has been subjected to conditions for which it is not suitable, e.g. it is wet or excessively contaminated;
- Damage to the external casing of the equipment, or there are loose parts or screws;
- Evidence of overheating (burn marks or discolouration);
- Physical damage i.e. cracks to light switches, sockets or any other item of the fixed electrical installation visible to employees.
- These checks also apply to extension leads and their associated plugs and sockets.

Any faults should be reported by local management / staff and the equipment taken out of use immediately. The local management / staff shall take effective steps to ensure that the equipment is not used again until it has been repaired by a Competent Person. (E.g. the defective equipment should be labelled as "Faulty" by the department manager and repaired by the Estates Maintenance Team).

In the event that during the above inspection a Portable Appliance Test label (PAT) is observed to be out of date this should be reported immediately by the appropriate management system.

All new equipment purchased for the use within the Trust premises, has at least 1 year manufacturer guarantee, after this period the equipment MUST be PAT tested.

Any extension leads purchased / used must be fully un-wound, have a rating of at least 13amps, minimum cable size of 1.5 mm². Any extension lead rated smaller than 13amps could be at risk of being overloaded. Extension leads should be at the required length as to a long lead could cause a trip hazard.

Any pre used hand equipment including extension leads MUST be checked and PAT tested by Estate Services before it is plugged in and used.

Any mobile phone type charger (either patient owned or trust supplied) must be checked by ward staff for signs of damage, overheating or misuse and must be CE marked with 250 mm maximum length of USB type lead only and the transformer must be of a suitable type and designed for charging the equipment concerned

5.8 Contractors/Service Providers

All contractors working on the Trust's electrical system must be signed up as Competent Persons by the Trusts A/P team'.

This policy should be read in conjunction with the [Trust's Health and Safety Arrangements and Responsibilities Policy \(GR2\)](#) and Contractor Site rules.

Only the Trusts A/P can issue HTM 06-02 & HTM 06-03 safety documents such as Permit to Work, Cert. of Authorised Live Working etc.

All electrical equipment MUST be in a good condition and have a valid PAT sticker/ticket, protected by an RCD, and permission obtained from the A/P or and Project Manager before the equipment is plugged into the Trust's electrical system.

All electrical contractors should either be a member of NICEIC (National Inspection Council for Electrical Installation Contracting) or and the ECA (Electrical Contractors Association) or a similar approved by Estates Department competent person trade body.

5.9 Tenant's Responsibility

It is the tenant's responsibility to ensure all of their electrical equipment is in good electrical and mechanical condition and have a valid PAT certificate and sticker/ ticket.

The Tenant must NOT carry out any works on the Trust's electrical system without prior written authority from the Trust's Estate Team and Electrical A/P.

6. Medical Devices

Supplies for medical imaging equipment (x-ray, MRI) must be approved by the Trusts A/P prior to connections being made.

Medical devices should be regularly inspected, tested, & maintained. Refer to Cheshire and Wirral Partnership NHS Foundation Trust's Medical Devices Policy.

7. Training Requirements

Work on the Trust's electrical infrastructure, systems and equipment may only be performed by personnel appointed as a Competent Person by the Trust's Authorised Person (A/P) Team and trained in compliance with HTM 06-02.

The A/Ps need to be trained by an external approved training provider, accessed by the Authorising Engineer, and obtains certificates as per the requirements of the HTM 06-02 & 06-03.

Directly employed C/Ps need to attend a C/P course and be assessed by the A/P as per the requirements of HTM 06-02. This is to be reviewed every 3 years.

Contractor C/Ps, their training record and they are assessed by the A/P, this is reviewed at the A/Ps discretion, but with a max period of 3 years.

All Persons working on the electrical system MUST have a valid 'First Aid' certificate or equivalent in accordance with the trust First Aid Arrangements as per the HTM 06-02 & 03 requirements. These are renewable every 3 years.

8. Monitoring Compliance

Element to be monitored	Lead	Frequency	Reporting arrangements
A/E Appointment	D/P	Annually	D/P
A/E Audits	A/E	Annually	D/P
A/P Appointment	A/E	3 yearly	D/P
A/P Audits	A/P	Annually	A/E / D/P
A/P Training	A/E	3 yearly	A/E
C/P Training	A/P	3 yearly	A/P
C/P Appointment	A/P	3 yearly	A/P
Emergency First Aid	A/E & A/P	3 yearly	A/E & A/P

9. Arrangement Review

This arrangement will be reviewed within three years of the ratification date.

This arrangement must be reviewed by the Estates Management Team in conjunction with those deemed necessary and must be ratified and approved by the Trust's Health and Safety Committee.