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## **Policy for Safe Working with Electricity**

### **Policy Statement**

The use of electricity in health care premises is a common and potentially hazardous process, which makes it essential that all electrical systems are managed without giving rise to danger. Inadequate control and or improper use of electricity are a danger to life and property. The Cardiff and Vale University Health Board (hereinafter referred to as the UHB), and its officers are responsible for electrical services as duty holders, and accountable for ensuring control. They are also responsible for ensuring the safe management, design, installation, operation and maintenance of the UHB's electrical systems.

This policy seeks to establish the conditions whereby the use of both electrical power generally, and in particular equipment connected to the electrical installation will be adequately controlled in all work related activities, to ensure so far as is reasonably practicable the health and safety of those affected. This Policy is the UHB's response to meet the requirements of providing a safe system of work for all electrical services within its properties.

### **Policy Commitment**

To achieve the requirements of the Policy statement, the UHB will implement a range of procedures, protocols and safe systems of work for the safe working with electricity. For the benefit of patients, visitors and staff the main objective is to ensure that a safe electrical system is operated throughout the UHB buildings. The following highlights the key commitments of this Policy:

- The system will only be worked upon by electrically competent staff.
- The necessary safeguards will be in force at all times, to ensure that only electrically competent persons are allowed to work on and have access to the UHB's electrical systems.
- The electrical system will be operated within its capacity so that overloading does not occur and overheating of cables is avoided.
- A systematic regular maintenance programme will be conducted on all key electrical systems.
- Procedures and protocols for the electrical systems compliment this policy.

### **Supporting Procedures and Written Control Documents**

The following documents should be read in conjunction with this Policy:

#### **Legislation**

- Health and Safety at Work etc. Act 1974
- Electricity Act 1989
- The Electricity at Work Regulations 1989

- Electricity Safety, Quality and Continuity Regulations 2002
- Provision and Use of Work Equipment Regulations 1998
- The Electrical Equipment (Safety) Regulations 1994
- The Plugs and Sockets etc (Safety) Regulations 1994
- Workplace (Health, Safety and Welfare) Regulations 1992

### Welsh Health Estates Guidance

- HTM 06-01: Electrical services supply and distribution Part A: Design consideration
- HTM 06-01: Electrical services supply and distribution Part B: Operational management
- HTM 06-02: Electrical safety guidance for low voltage systems
- HTM 06-02: Electrical safety handbook
- HTM 06-03: Authorised Person's Logbook
- HTM 06-03: Electrical safety guidance for high voltage systems

### Scope

This policy applies to all of our staff and all buildings/locations including those with honorary contracts

### Equality and Health Impact Assessment

An Equality and Health Impact Assessment (EHIA) has been completed and this found there to be no impact

<b>Policy Approved by</b>	Health and Safety Committee
<b>Group with authority to approve procedures written to explain how this policy will be implemented</b>	Operational Health and Safety Committee
<b>Accountable Executive or Clinical Board Director</b>	Director of Capital Estates and Facilities

### Disclaimer

If the review date of this document has passed please ensure that the version you are using is the most up to date either by contacting the document author or the [Governance Directorate](#).

### Summary of reviews/amendments

Version Number	Date Review Approved	Date Published	Summary of Amendments
1	1 <sup>st</sup> December 2016	TBA	<i>Revised Document updated in line with Service Board and Legislative changes</i>
2	January 2017	4 <sup>th</sup> September 2019	Revised document

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## **1.0 INTRODUCTION**

The use of electricity in health care premises is a common and potentially hazardous process, which makes it essential that all electrical systems are managed without giving rise to danger. Inadequate control and or improper use of electricity are a danger to life and property. The Cardiff and Vale University Health Board (hereinafter referred to as the UHB), and its officers are responsible for electrical services as duty holders, and accountable for ensuring control. They are also responsible for ensuring the safe management, design, installation, operation and maintenance of the UHB's electrical systems.

This policy seeks to establish the conditions whereby the use of both electrical power generally, and in particular equipment connected to the electrical installation will be adequately controlled in all work related activities, to ensure so far as is reasonably practicable the health and safety of those affected.

This Policy is the UHB's response to meet the requirements of providing a safe system of work for all electrical services within its properties.

## **2.0 POLICY STATEMENTS**

### **2.1 MAIN SAFETY OBJECTIVES**

For the benefit of patients, visitors and staff the main objective is to ensure that a safe electrical system is operated throughout the UHB buildings. The system will only be worked upon by electrically competent staff.

The necessary safeguards will be in force at all times, to ensure that only electrically competent persons are allowed to work on and have access to the UHB's electrical systems.

The electrical system will be operated within its capacity so that overloading does not occur and overheating of cables is avoided.

A systematic regular maintenance programme will be conducted on the following systems:-

- Low Voltage Systems
- High Voltage Systems
- Standby Generators
- Fire Alarms
- Emergency Lighting
- Portable Appliance Testing (PAT)
- Emergency Backup (UPS)
- Passenger & Platform Lifts
- Lightning Protection Systems
- Any other appropriate system covered by this policy.

Procedures and protocols for each of the above electrical systems underpin this policy.

## **2.2 MONITORING OF PERFORMANCE**

The Head of Estates & Facilities will have the responsibility to ensure that the electrical systems and equipment installed within the UHB's premises are safe to use. Any equipment found on inspection to be unfit shall be removed from operational service until it has been repaired by a competent person. Any system found to be unsafe shall be switched off and isolated from service until the fault is found and rectified.

The Head of Discretionary Capital & Compliance will have responsibility to ensure asset are regularly updated and all statutory inspections are carried out. Detailed records of inspections shall be maintained with remedial actions taken when any defects found pose a Health & Safety risk.

## **3.0 LEGAL REQUIREMENTS**

### **Employers General Duties**

It shall be the duty of the employer to comply with the provisions of "The Electricity at Work Regulations 1989" insofar as they relate to matters which are within their control.

### **Employees General Duties**

It shall be the duty of every employee while at work -

- (a) To co-operate with his employer so far as it is necessary to enable any duty placed on that employer by the provisions of the Electricity at Work Regulations 1989 to be complied with; and
- (b) To comply with the provisions of the Electricity at Work Regulations 1989 insofar as they relate to matters which are within their control.

### **Employers Specific Duties**

It is the responsibility of the owners and occupiers of premises; Chief Executives and General Managers to ensure that their premises comply with all statutes.

Employers have a general duty, under the Health and Safety at Work etc. Act 1974 (HSW Act 1974), as far as is reasonably practicable, to ensure the health, safety and welfare of their employees, residents and visitors to their premises. These duties are legally enforceable, and the Health and Safety Executive have successfully prosecuted occupiers of premises under this statute. It is incumbent upon both owners and occupiers of premises to ensure that there is a management regimen for the proper purchase, design, installation and operational management of plant, equipment and systems.

## **Employees Specific Duties**

Every employee who has to work with electricity must:

- (a) Make full and proper use of all protective equipment supplied by UHB and satisfy themselves that services are isolated before they work on the system.
- (b) Report any defect in the electrical system or plant owned or used by the Health Board to their line manager.
- (c) When a permit to work system is required or in force, the employee must ensure that he/she adheres to the UHB's safety procedure.
- (d) When required by his/her employer, be present during working hours for a medical examination.

## **4.0 ROLES AND RESPONSIBILITIES**

### **4.1 UHB RESPONSIBILITY**

The UHB recognises its responsibility to implement in full the safe management of electricity in UHB premises. The UHB has a responsibility to ensure that only electrically competent persons are allowed to work on or near any electrical systems or apparatus and that regular network tests are performed, results recorded with risk assessments being performed on the findings and then action taken to remedy any defects in a priority and safe order.

The UHB has a duty to ensure that the electrically competent persons allowed to work on their systems/networks are properly trained via an ongoing training regime to ensure staff are fully conversant with the electrical regulations in force at all times.

### **4.2 DELEGATED RESPONSIBILITY**

The Chief Executive as the Duty Holder for the premises has the overall authority and responsibility for Health and Safety and as such, to ensure compliance with the requirements under the Health and Safety at Work etc. Act 1974, the Workplace (Health, Safety and Welfare) Regulations 1992 and in particular, the Electricity at Work Regulations (1989) and any associated standards and guidelines. This responsibility may be assigned or delegated by agreement to other senior executives within the organisation, however ultimate accountability remains with the Duty Holder.

The Duty Holder shall appoint in writing, a person or persons to take executive responsibility for the management and control for the safe use of the electrical

systems and equipment installed within the UHB's premises. This person shall be known as the Designated Person

The Designated Person is an individual appointed by the healthcare organisation (a board member or a person with responsibilities to the board) who has overall authority and responsibility for the implementation of safe systems of work outlined in this policy and any other associated procedures & protocols.

He/she has a duty under the Health and Safety at Work etc. Act 1974 to prepare and issue a statement on Health and Safety at Work, including the organisational arrangements associated with this policy.

The Designated Person shall:

- Ensure that appropriate systems are in place to implement the requirements of this Policy and its procedures for all premises under their control.
- Periodically review the effectiveness of the policy and procedures in association with the Head of Estates & Facilities and Head of Discretionary Capital and Compliance where they impact on his/her areas of responsibility.
- Approve and authorise any changes to the policy and procedure guidance as advised by the Heads above.
- Appoint an Authorising Engineer, who will advise the UHB on all safety aspects associated with high and low voltage installations, and also the appointment of suitable Authorised Persons.

The Head of Estates & Facilities has operational responsibility to ensure observance of the statutory requirements imposed upon the UHB by “The Electricity at Work Regulations 1989”, and shall ensure that there are sufficient competent in-house or contract staff available at all times to work safely on the electrical system should a failure or hazard occur. He shall ensure that sufficient safety testing equipment and protective clothing are kept and maintained in a safe place.

The Head of Estates and Facilities shall ensure that his technical staff are fully conversant with any variations or updates on the Safety Regulations, and act upon any Health and Safety directives, Hazard Notifications issued appertaining to the UHB’s electrical services.

The Head of Estates and Facilities shall operate a “Permit-to-Work” procedure for both high voltage and low voltage systems.

The Head of Estates and Facilities shall ensure that adequate training is regularly provided to competent staff to ensure that they are at all times trained to work in a safe manner on any part of the system.

The Head of Discretionary Capital & Compliance has responsibility to ensure observance of the statutory requirements imposed upon the UHB by “The Electricity at Work Regulations 1989”, with regard to statutory compliance inspections. He shall ensure that regular safety inspections are carried out and records kept and update accordingly.

[An organisational flow chart for electricity is illustrated in Diagram 1 on page 14]

### **4.3 CONTRACTORS**

Contractors and Sub-contractors must fully comply with this Policy, the UHB's Control of Contractors Policy and any other related policy/procedure, either through compliance with their own approved Policy or through full integration into the UHB's policy. The control of work undertaken by subcontractors and its supervision will be the same as for UHB staff.

### **4.4 PROCUREMENT, DESIGN AND INSTALLATION OF ELECTRICAL SYSTEMS AND EQUIPMENT.**

The design and installation of systems and equipment will be to standards not less than those contained in the current edition of the UHB's Electrical Specification, which will be updated as required to reflect compliance with British and European Standards, Codes of Practice and IEE Wiring Regulations (current edition).

The electrical design specification for new works and for alterations to existing installations will be carried out by suitably qualified and experienced persons. Major/complex electrical work involving the production of design specifications will be developed and validated by an appropriate Chartered Electrical Engineer in conjunction with the UHB Manager responsible for the work.

Complete records of design and acceptance tests, installed drawings and tests results, will be maintained and made available, as required to those responsible for the operation and maintenance of all electrical systems, plant and equipment.

Electrical equipment, fittings, materials, and components specified, procured and installed by the UHB will comply with appropriate British and/or European standards.

### **5.0 RESOURCES**

The resources for the management, maintenance, testing, training, operation, monitoring and auditing of performance for electrical systems are already in place. These are an integral part of the Estate Maintenance revenue allocation however further investment may be required on a phased basis to fully conform to any future changes in

the legislative requirements for electrical installations and the implementation of this policy.

## **6.0 TRAINING REQUIREMENTS**

The UHB will ensure through its managerial arrangements, that all employees and contractors who work with or on electrical services, receive adequate training and are competent to discharge their duties. Before any individual is put to work or placed in an environment which has the risk of electrical hazards the level of training, experience and competence will be formally assured so as to obviate, so far as is reasonably practical, the risk of danger.

Training needs shall conform to the requirements as defined in The Electricity at Work Regulations 1989 and HTMs 06-01/02/03, to standards imposed by the Institute of Electrical Engineers current Edition and by the use of appropriate safety testing apparatus. Competent staff will be trained to use and operate a "Permit-to-Work" system when working on high/low voltage systems, switch gear and transformers or when working on "live" installations or plant. Training will be provided as part of any specific skill requirements, and shall be designed to enable employees to deal competently with all aspects of electrical maintenance and installation.

## **7.0 FURTHER INFORMATION**

### ***Legislation***

- Health and Safety at Work etc. Act 1974
- Electricity Act 1989
- The Electricity at Work Regulations 1989
- Electricity Safety, Quality and Continuity Regulations 2002
- Provision and Use of Work Equipment Regulations 1998
- The Electrical Equipment (Safety) Regulations 1994
- The Plugs and Sockets etc (Safety) Regulations 1994
- Workplace (Health, Safety and Welfare) Regulations 1992

### ***Welsh Health Estates Guidance***

- HTM 06-01: Electrical services supply and distribution Part A: Design consideration
- HTM 06-01: Electrical services supply and distribution Part B: Operational management
- HTM 06-02: Electrical safety guidance for low voltage systems
- HTM 06-02: Electrical safety handbook
- HTM 06-03: Authorised Person's Logbook
- HTM 06-03: Electrical safety guidance for high voltage systems

## **8.0 EQUALITY**

We have undertaken an Equality Impact Assessment and received feedback on this policy and the way it operates. We wanted to know of any possible or actual impact that this policy may have on any groups in respect of gender, race, disability, sexual orientation, Welsh language, religion or belief, transgender, age or other protected characteristics. The assessment found that there was no impact to the equality groups mentioned. Where appropriate will make plans for the necessary actions required to minimise any stated impact to ensure that we meet our responsibilities under the equalities legislation.

## **9.0 AUDIT**

The Policy is largely technical in nature with particular relevance for Estate Maintenance, Major/Discretionary Capital and Compliance & Performance Management. Adherence to the requirements of this procedure will be monitored via a number of different methods e.g. a testing regime carried out on a regular basis upon electrical switch gear, protection and earthing facilities, review of incident statistics, audits of databases etc. Records will be maintained by Estate Maintenance and management audits conducted via Compliance & Performance Management.

Technical Audits will also be undertaken by the Authorising Engineers, Authorised Persons and Competent Persons as part of their duties.

## **10.0 DISTRIBUTION**

This Policy will be posted on the UHB Intranet. The Capital Planning, Estates and Facilities Department is responsible for ensuring that all relevant staff have access to this document, particularly Authorising Engineers, Authorised Persons and Competent Persons.

## **11.0 REVIEW**

This procedure will be reviewed every 3 years, or more frequently if required, to ensure continued compliance with electrical regulations, health technical memoranda – HTM's, relevant codes of practice and best practice as appropriate.

Diagram 1

**ELECTRICITY - Organisational Relationships**

