

**THE STATE HOSPITALS BOARD FOR SCOTLAND**

**ELECTRICAL SAFETY POLICY**

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The date for review detailed on the front of all State Hospital policies/ procedures/ guidance does not mean that the document becomes invalid from this date. The review date is advisory and the organisation reserves the right to review a policy/ procedure/ guidance at any time due to organisational/legal changes.

Staff are advised to always check that they are using the correct version of any policy/ procedure/ guidance rather than referring to locally held copies.

The most up to date version of all State Hospital policies/ procedures/ guidance can be found on the intranet:

<http://intranet.tsh.scot.nhs.uk/Policies/Policy%20Docs/Forms/Category%20View.aspx>

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## 1. General

The Health and Safety at Work etc. Act 1974, The Management of Health and Safety at Work Regulations 1999 and The Electricity at Work Regulations 1989 place a duty on The State Hospital (hereinafter referred to as the "Hospital" ) to publish, issue and implement an Electrical Safety Policy which outlines the organisation and procedures required to achieve the objectives set out in those legislative documents.

The Hospital regards Health and Safety as matters of prime importance which are to be given an equal priority with other business and operating objectives and will ensure so far as is reasonably practicable that the electrical safety of employees at work, volunteers, patients and other persons is not adversely affected by any of the Hospital's operational activities.

The Hospital recognises that the lowest acceptable standards of electrical safety are contained in legislation and it is the aim of the Hospital as an organisation committed to quality performance to improve upon these standards.

The Hospital is committed to the safe operation of all electrical systems, for which it has a responsibility, by implementing the requirements of Scottish Health Technical Memorandum 06-02 – Electrical safety guidance for Low Voltage Systems and Scottish Health Technical Memorandum 06-03 – Electrical Safety guidance for High Voltage Systems.

The Hospital's review procedures for health and safety matters, identification of hazards and eliminations of risk shall also take account of the electrical systems, with the safety guidance, to ensure compliance with statutory legislation.

The Hospital proposes to continue to promote and develop a pro-active electrical safety regime by providing information, training and instruction for all employees together with safe workplace procedures and rigorous maintenance routines for all electrical equipment.

The effectiveness of the electrical safety policy and procedures depends to a large extent on the full co-operation and active participation of all employees, volunteers to implement safe work practices and to report on any perceived risk of danger arising from the use of the electrical systems and equipment.

The Hospital regards electrical safety at work as also being a responsibility of every employee / volunteers in order to safeguard themselves, their colleagues and other persons within the sphere of the Hospitals interests.

This electrical safety policy will apply wherever any Hospital employees, volunteers or contractors are working on any electrical equipment that is within the responsibility of the Hospital, wherever it is located.

## 2. Organisation

### 2.1 HV / LV Designated Person

Each healthcare organisation should appoint a person as Designated Person. The roles in relation to this Scottish Health Technical Memorandum are described below:

- appoint in writing an Authorising Engineer (HV / LV) for all systems and installations for which management has responsibility;

- audit the Authorising Engineer (HV / LV) annually to ensure the Authorising Engineer (HV / LV)'s duties have been carried out in accordance with this Scottish Health Technical Memorandum;
- agree any local variations from this guidance.

## **2.2 Authorising Engineer**

An Authorising Engineer (HV / LV) is appointed in writing by the Designated Person to take responsibility for the effective management of this safety guidance (HV / LV).

The person appointed should possess the necessary degree of independence from local management to take action within this guidance.

## **2.3 Authorised Person**

An Authorised Person (HV / LV) is appointed in writing by the management on the recommendation of the Authorising Engineer (HV / LV) in accordance with this safety guidance (HV / LV) and is responsible for the implementation and operation of this guidance with regard to work on, or the testing of, defined electrical equipment.

## **2.4 Competent Person**

A Competent Person (HV / LV) is approved comprising a core trade electrical person appointed in writing by the Duty Authorised Person (HV / 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 safety document from the Duty Authorised Person (HV / LV).

## **2.5 Accompanying Safety Person (HV / LV)**

An Accompanying Safety Person is a person not involved in the work or test who has received emergency first-aid for electric shock and who has adequate knowledge, experience and the ability to avoid danger, keep watch, prevent interruption, apply first-aid and summon help. The person should be familiar with the system or installation being worked on or tested and is to have been instructed on the action to be taken to rescue a person safely in the event of an accident.

# **3. Duties and Responsibilities**

## **3.1 Authorising Engineer (HV / LV)**

The 'Authorising Engineer (HV / LV)' will be responsible for implementing, administering and monitoring the application of this guidance. The Authorising Engineer (HV / LV)'s roles include the following:

- assess and recommend in writing sufficient Authorised Persons (HV / LV) to provide the necessary cover for all systems and installations for which management has responsibility;
- define the exact extent of the systems and installations for which each Authorised Person (HV / LV) is responsible;
- if necessary, recommend the suspension or cancellation of the appointment of an Authorised Person (HV / LV) and withdraw the certificate;
- maintain a register of all Authorised Persons (HV / LV);

- ensure that candidates for appointment as Authorised Persons (HV / LV)
  - satisfy the qualification requirements;
  - satisfy the training and familiarisation requirements;
  - can demonstrate adequate knowledge of each system, installation and type of equipment for which authorisation is sought;
  - have satisfied the Authorising Engineer (HV / LV) as to their competence and ability.

### 3.2 Authorised Persons

The Authorised Person (HV / LV) should be solely responsible for:

- the practical implementation and operation of this guidance; and
- the systems and installations for which management is in control of danger and for which the Authorised Person (HV / LV) has been appointed.

The Authorised Persons (HV / LV) instructions and decisions on electrical matters may be considered final and should be complied with. In the case of a dispute, the Authorised Person (HV / LV) is to stop the work or test and refer the matter to the Authorising Engineer (HV / LV) for adjudication.

More than one Authorised Person (HV / LV) may be appointed for a system or installation but, at any one time, only one Authorised Person (HV / LV) should be on duty. Each transfer of responsibility between Authorised Persons (HV / LV) should be recorded in the HV / LV logbook. The name of the Duty Authorised Person (HV / LV) on duty should be readily available and should be displayed behind the glass of the mimic diagram or near the working key cabinet in a position that can only be altered by an Authorised Person (HV / LV) using an Authorised Person (HV / LV) key.

Where there is more than one Authorised Person (HV / LV) appointed for a system or installation, the Authorising Engineer (HV / LV) should be advised of any authorised person (HV / LV) who is nominated as being in overall charge with responsibility for control of records etc.

The duties of Authorised Persons (HV / LV) may be summarised as follows:

- control the work on high voltage systems, prepare inspection, maintenance and safety programmes, and progress the work;
- ensure that all records concerning high voltage systems are kept up to date;
- record all high voltage switching operations;
- ensure that test equipment is maintained in good condition;
- cooperate with the Authorising Engineer (HV / LV) in matters of policy concerning high voltage systems;
- report in writing any dangerous and/or unusual occurrences to the Authorising Engineer (HV / LV);
- appoint in writing Competent Persons (HV / LV), and maintain a register of all appointments;
- define the duties of appointed Competent Persons (HV / LV) on the 'certificate of appointment';
- ensure that the necessary safety posters are displayed in substations at all times;
- issue and cancel safety documents;
- routinely inspect and test substation earthing;
- routinely inspect and test transformers and switchgear;
- routinely inspect and test high voltage protection systems including batteries.

The Authorised Person (HV / LV) should inform the Authorising Engineer (HV / LV) of:

- any defects found in electrical equipment;
- any dangerous occurrence;
- any dangerous practices observed in the course of his duties.

### **3.3 Competent Persons**

Competent Persons (HV / LV) should comply with this safety guidance (HV / LV) when carrying out work, whether instructions are issued orally or in writing.

Competent Persons (HV / LV) should use safe methods of work, safe means of access and the personal protective equipment and clothing provided for their safety.

Competent Persons, when recipients of a safety document, should:

- be fully conversant with the nature and the extent of the work to be done;
- read the contents and confirm to the person issuing the safety document that they are fully understood;
- during the course of the work, adhere to, and instruct others under their charge to adhere to, any conditions, instructions or limits specified on the safety document;
- keep the safety document and (where appropriate) keys in safe custody, and correctly implement any management procedure to achieve this;
- when in charge of work, provide immediate or personal supervision as required;
- warn all persons as quickly as possible to withdraw from, and not to work on, the equipment concerned until further notice if, during the course of work, a hazard which could result in danger arises or is suspected. The situation should be reported immediately by the Competent Person (HV / LV) to an Authorised Person (HV / LV).

Competent Persons (HV / LV) should not start or restart work under a safety document issued to another Competent Person (HV / LV).

Having accepted a safety document, the Competent Person (HV / LV) may only undertake or supervise the work or test specified until the task is complete and the Competent Person (HV / LV) has signed part 3 of the permit or sanction-for-test, which is retained in the pad. Neither the Competent Person nor any person under the direct control of the Competent Person (HV / LV) is to attempt to undertake any other duties.

Unless it is unavoidable, the Competent Person (HV / LV) is not to leave the location of the work or test until the task is completed. If the Competent Person (HV / LV) has to leave the location of the work or test temporarily, the task should be suspended and adequate safety precautions taken to prevent danger. The work or test is not to be resumed until the Competent Person (HV / LV) has returned to the location of the work or test.

Competent Persons (HV / LV) clearing a safety document should do so only after all persons working under the safety document have been withdrawn from, and warned not to work on, the equipment concerned. Where appropriate, they should ensure that all tools, gear and loose material have been removed, guards and access doors replaced and the workplace left tidy.

### **3.4 Role and duties of the Accompanying Safety Person (HV / LV)**

The Accompanying Safety Person (HV / LV) is a person, not directly involved in the work or test, who should have adequate knowledge, experience and the ability to avoid danger. They are required to keep watch, prevent unauthorised interruption of the work or test, be able to apply first-aid and summon help.

The Accompanying Safety Person (HV / LV) should have received training in emergency first-aid in accordance with this guidance.

The Authorised Person (HV / LV) or the Competent Person, as appropriate, who will be responsible for the work or test to be attended is to ensure that the Accompanying Safety Person understands their intended role and fully understands how to disconnect the equipment being worked on or tested from all sources of supply and how to switch off any test equipment or disconnect it from its source of supply.

The Accompanying Safety Person (HV / LV) should be in attendance when the Duty Authorised Person (HV / LV) considers it necessary, and in the following circumstances:

- while equipment is being proved or confirmed dead;
- while equipment is being earthed, other than by means of a switch or circuit breaker;
- where equipment cannot be confirmed dead until the Competent Person (HV / LV) has made conductors accessible;
- while the Authorised Person (HV / LV) is spiking a cable;
- while testing is being undertaken at high voltage;
- while a high voltage potential indicator is in use;
- while voltage and phasing tests are being undertaken at high voltage;
- while any person is opening or working in a high voltage enclosure.

## **4. Procedures**

All work on the electrical systems and equipment is to be carried out under the safety rules and safety procedures that are formalised as written instructions, as appropriate.

When programmed work is to be carried out on a complex electrical systems, the prepared safety programme shall be countersigned by another Authorised Person for the system, prior to the work being carried out.

Safety programmed and safety documentation are to be retained on file for a period of three years after completion of the work referred to in the documents.

Persons undertaking work on the systems must be capable of carrying out the duties assigned to them in a safe manner, without risk to others and with respect to these duties, they must have;

- (a) adequate knowledge of the technicalities of electricity,
- (b) sufficient experience of similar work on electrical systems,
- (c) detailed knowledge of the equipment to be worked on,
- (d) an understanding of the hazards which can arise during the work and the precautions which need to be taken,
- (e) the ability to recognise at all times whether it is safe for work to continue.

Each of these requirements is equally important and should be carefully weighed when persons are to be appointed to carry out duties under the safety procedures.

## **5. Training**

SHTM 06-02 & SHTM 06-03 suggests that, in order to become eligible for appointment as Authorised Person (HV / LV) candidates should have successfully completed an approved initial training course for Authorised Persons. The course profile is described in SHTM 06-03 Appendix 8. There are also periods of on-site training and familiarisation that are described in paragraph 10 of SHTM 06-03 Appendix 8.

Records of all training activities are to be held in the operational procedures manual for each particular system. This will include the records of each individual who has received the necessary training appropriate to the duties to be undertaken.

Examination of each persons training record is to be included in the procedures review process and where necessary, periodic retraining is to be arranged to cover the technical aspects, electrical safety and first-aid matters, as appropriate for each individuals' duties.

## **6. Incident Reporting**

Any incident which involves the electrical system and which compromises safety must be reported, in the first instance to the Estates Department, who will inform the Authorised Person for the system and who in turn will determine what action is to be taken to prevent risk or danger arising from the reported equipment.

All reported incidents are to be investigated by the Designated Person and a written record of the incident and action taken is to be filed in the system logbook and the operational procedures manual.

The reporting of injuries or dangerous occurrences under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulation 1995 (RIDDOR) will be acted upon, as required, by the Designated Person.

## **7. Review**

This Electrical Safety Policy is to be reviewed every three years, with regard to procedures and the competence of staff for their assigned duties, by the Designated Person and the Authorising Engineer.

An agreed minute of the Authorising Engineers review meeting is to be retained in the Operational Procedures Manual and copies passed to all Authorised Persons.

## **8. Format**

The State Hospitals Board recognises the need to ensure all stakeholders are supported to understand information about how services are delivered. Based on what is proportionate and reasonable, we can provide information / documents in alternative formats and are happy to discuss with you the most practical and cost effective format suitable for your needs. Some of the services we are able to access include interpretation, translation, large print, Braille, tape recorded material, sign language, use of plain English / images.

If you require information in another format, please contact the Person Centred Improvement Lead on 01555 842072.



<b>Key Stakeholders</b>	<b>Consulted (Y/N)</b>
Patients	N/A
Staff	N/A
TSH Board	N/A
Carers	N/A
Volunteers	N/A