



University of
Nottingham
UK | CHINA | MALAYSIA

Health and Safety

Policy

High Voltage Electricity

SAF-POL-HVE

Document Control

Document Details	
Reference	SAF-POL-HVE
Title	Policy – High Voltage Electricity
Version Number	1
Approval Date	Dec 2023
Issue Date	Dec 2023
Review Date	Dec 2026
Status	APPROVED
Owner	Health and Safety Department
Author	Chris Dickinson

Document Revision History				
Revision	Date	Nature of Revision	Prepared by	Approved by

The Health and Safety Department will maintain the official version of this document. Before referring to any printed copies, please ensure that they are up-to-date.

Contents

	Page Number
1 Introduction	4
2 Scope	4
3 Definitions	5
4 Regulatory background	6
5 Roles and responsibilities	6
6 High voltage electrical permits	12
7 Training, competency, and supervision	13
8 Monitoring and inspection	13
9 Incidents and non-conformities reporting	13
10 Emergency procedures	14

High Voltage Electricity Policy

1. Introduction

University policies establish standards and expectations for health and safety across the organisation and set the minimum standards expected.

Each working unit, which may be a Department, Site, Institute or School and will be referred to as a Business Unit in this policy, can produce its own arrangements, in order to locally implement these standards. Any standard(s) imposed at a local level must meet all requirements set out in this policy. Where there is a discrepancy, the University policy takes precedence.

2. Scope

This policy covers the safe management of high voltage (HV) electrical installations, systems, and equipment within University premises.

Any local arrangements imposed at a local level must meet all requirements set out in this policy. Where there is a discrepancy, the University policy takes precedence.

The High Voltage Electricity Policy does not supersede or negate the requirements of any Health and Safety legislation, rather it provides a consistent system to be followed when dealing with the activities of University staff and contractors working in properties and on land owned or operated by the University. The aims of these policy are:

- To ensure a safe working environment is maintained at all times for staff, contractors, students, visitors, and tenants
- To ensure works on high voltage electrical installations, systems and equipment are carried out and managed appropriately
- To ensure there is a full and accurate record of high voltage electrical work undertaken on University premises.

The University recognises its responsibility for the safe and effective operation of high voltage electrical installations, systems and equipment taking all reasonably practical steps to ensure the safe installation, operations and maintenance of all high voltage electrical services and equipment.

This policy defines how the University will ensure all high voltage electrical installations, systems and equipment under its control will be managed, installed, maintained, and serviced to a consistent standard in compliance with the relevant legislation.

3. Definitions

High Voltage

High Voltage is defined as all voltages above 1000V AC and 1500V DC.

Senior Designated Person

The Senior Designated Person is an individual appointed by the University (Health and Safety Committee) who has overall authority and responsibility for the high voltage electricity system within the premises. This person should not be the Authorising Engineer (HV).

Designated Person

The Designated Person is an individual appointed by the University (The Senior Designated Person) who has overall authority and responsibility for the high voltage electricity system within the remit of their role. This person should not be the Authorising Engineer (HV).

Authorising Engineer (HV)

An Authorising Engineer (HV) is appointed in writing by a Designated Person to take responsibility for the effective management of the relevant safety arrangements (HV). The person appointed should possess the necessary degree of independence from local management to take action within this policy.

Authorised Person (HV)

An Authorised Person (HV) is appointed in writing by the Director of Estates and Facilities or the Head of Infrastructure and Technical Services on the recommendation of the Authorising Engineer (HV) in accordance with the relevant safety arrangements (HV). They are responsible for the implementation and operation of suitable and sufficient management arrangements with regard to work on, or the testing of, defined high voltage electrical equipment.

Duty Authorised Person (HV)

An Authorised Person (HV) who has current responsibility for a system or installation as recorded in the site logbook, whose name is displayed in the mimic diagram and who personally holds or carries the Authorised Person's (HV) key.

Competent Person (HV)

A Competent Person (HV) is approved and appointed in writing by the Authorised Person (HV) 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 Authorised Person (HV).

Accompanying Safety Person (HV)

An Accompanying Safety Person (HV) is a person not involved in the work or test who has received training in 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 safely rescue a person in the event of an accident.

Safe Systems of Work

Documentation that is required under current Health and Safety Legislation. Safe systems of work may include (but not limited to):

- Risk assessments
- Method statements
- Safe operating procedures (SOPs)
- Construction phase plans

By law these must be written documents which must identify all hazards associated with the work and identify measures to eliminate or control the risks arising from the work.

Permit-to-Work

Documents designed to control high voltage electrical work as defined by the University of Nottingham.

4. Regulatory Background

The University has a legal duty to comply with The Electricity at Work Regulations 1989, which requires all users to manage the risk from electricity at work, irrespective of voltage.

- The Electricity Supply Regulations 1988
- BS 6626:2010 Maintenance of Electrical Switchgear and Controlgear for Voltages above 1kV and up to and including 36kV.
- BS 6867:2013 Maintenance of Electrical Switchgear and Controlgear for Voltages above 36kV. Code of Practice

5. Roles and Responsibilities

University Council will

- Receive annual assurance reports from the Health and Safety Department on compliance with this policy.

The University Safety Committee will

- Be the formal oversight and compliance committee for the University and will provide assurance to University Council
- Promote good practice among University staff and students in relation to high voltage electrical safety
- Appoint appropriate Senior Designated Person
- Consider and advise on University management policy and arrangements
- Be notified of any significant incident or enforcement action
- Receive annual report of audits and/or assurance monitoring.

University Executive Board (UEB) will

- Ensure that they are provided with information on non-conformity with this policy
- Seek assurance that emergency plans are in place for electrical installations, systems, and equipment
- Seek assurance that all mandatory requirements for high voltage electrical safety are met
- Seek assurance that all health and safety arrangements for high voltage electrical safety are adequately resourced
- Seek assurance that identified risk control measures are in place and are being acted upon
- Seek assurance that those with responsibilities for high voltage electrical safety are adequately trained and competent
- Seek assurance that there is a process for auditing health and safety performance for high voltage electrical safety
- Seek assurance that competent health and safety advice is available to assist in managing and assessing risks from high voltage installations, systems and equipment
- Be notified of any significant incident or enforcement action.

The Health and Safety Department will

- Provide and keep updated, policies, arrangements and guidance to ensure any statutory requirements are met
- In collaboration with the Authorised Person(s), provide information, support and advice to Business Units on all matters concerning high voltage electrical safety
- Ensure appropriate oversight for compliance with the high voltage electrical safety policy and provide reports to University Safety Committee and UEB
- Have an oversight on high voltage electrical related safety training and ensure adequacy through routine review
- Have oversight in situations where there are non-conformities with high voltage electrical safety requirements
- Report findings of investigations to the University Health and Safety Committee and UEB
- Lead on and coordinate visits by external agencies, including the Health and Safety Executive
- Receive annual assurance reports from the Director of Estates and Facilities on high voltage electrical safety
- Monitor Business Units and contractors to check they are adhering to the University Policy by carrying out audits (see University Health and Safety Monitoring Policy SAF-MAN-MON).

Senior Designated Person will

- Be the University Senior Designated Person for high voltage electrical safety
- Receive recommendations from the Authorising Engineer (HV) on appointing Designated and Authorised Person(s) (HV) and act upon them as necessary
- Seek assurance and ensure that management of high voltage electrical safety meets the requirements of University policy and associated arrangements
- Seek assurance and ensure that high voltage electrical safety arrangements are produced for works on high voltage electrical installation, systems and equipment
- Seek assurance and ensure that high voltage electrical safety arrangements are implemented within the University of Nottingham which meets the requirements of University policy
- Seek assurance and ensure that an Authorised Engineer and Authorised Person(s) are appointed formally as per the requirements as set out in the University arrangements Safety Critical Roles (SAF-MAN2.1)
- Seek assurance and ensure that the Authorised Engineer and Authorised Person(s) have sufficient training, experience, knowledge, time and resources to enable them to meet all the provisions of this policy
- Seek assurance and ensure that an internal health and safety audit programme of the high voltage electrical safety arrangements are in place in accordance with this policy
- Ensure high voltage electrical safety reports are considered by the relevant Health and Safety Committee
- Seek assurance and ensure that following any significant non-conformity, incident or enforcement action that an appropriate investigation is undertaken, and any findings implemented
- Seek assurance and ensure that records are kept robustly as per this Policy
- Lead by example e.g. undertake leadership walk rounds of jobs and installations involving high voltage electricity.

Head of Infrastructure and Technical Services (Designated Person) will

- Be the Designated Person for high voltage electrical safety within the Faculty of Engineering
- Receive recommendations from the Authorising Engineer (HV) on appointing Authorised Person(s) (HV) and act upon them as necessary
- Ensure that management of high voltage electrical safety meets the requirements of University policy and associated arrangements
- Ensure that high voltage electrical safety arrangements are produced for works on high voltage electrical installation, systems and equipment falling under the control of the Estates Office
- Ensure that high voltage electrical safety arrangements are implemented within the University of Nottingham which meets the requirements of University policy
- Ensure that an Authorised Engineer and Authorised Person(s) are appointed formally as per the requirements as set out in the University arrangements Safety Critical Roles (SAF-MAN2.1)
- Ensure that the Authorised Engineer and Authorised Person(s) have sufficient training, experience, knowledge, time and resources to enable them to meet all the provisions of this policy

- Ensure that an internal health and safety audit programme of the high voltage electrical safety arrangements are in place in accordance with this policy
- Ensure high voltage electrical safety reports are considered by the Estates Health and Safety Committee
- Lead by example e.g. undertake leadership walk rounds of jobs and installations involving high voltage electricity
- Ensure that following any significant non-conformity, incident or enforcement action that an appropriate investigation is undertaken, and any findings implemented
- Ensure records are kept robustly as per this Policy.

Authorising Engineer (HV) will

- Ensure that high voltage electrical safety arrangements are implemented, administered and monitored within the University of Nottingham which meets the requirements of University policy
- Assess and recommend in writing suitable Authorised Person(s) (HV)
- Define the exact extent of the installation, systems and equipment for which each Authorised Person (HV) is responsible
- If necessary, recommend the suspension or cancellation of the appointment of an Authorised Person (HV)
- Maintain a register of Authorised Persons
- Issue appointment certificates to each Authorised Person (HV) for a period not exceeding 3 years
- Report to the Designated Person any deficiencies in numbers of suitably trained and experienced Authorised Person(s) (HV)
- Review Authorised Person(s) (HV) operational experience at intervals of not more than 3 years and recommending refresher training as necessary
- Audit the performance and record the operational experience of each Authorised Person (HV) every 12 months
- Undertake comprehensive audits not exceeding 3 years of the implementation of the High Voltage Electricity Policy and associated arrangements
- Notify the Designated Person of any known operational restriction issued by a distribution network operator or equipment manufacturer
- In collaboration with the Health and Safety Department investigate incidents of reported injuries and dangerous occurrences involving high voltage electrical installations, systems or equipment
- Provide information, support, and advice to Business Units on all matters concerning high voltage electrical safety.

The Authorised Person(s) (HV) will

- Implement systems to ensure the management of high voltage electrical installations, systems and equipment meet the requirements as set out in University policy and associated arrangements
- In collaboration with the Health and Safety Department, provide information, support and advice to Business Units on all matters concerning high voltage electrical safety

- Ensure that appropriate information is communicated to University staff, students and contractors in relation to high voltage electrical safety
- Manage performance of contractors competent person providing feedback at contract meetings and to the Director of Estates and Facilities and Authorised Engineer
- Ensure monitoring of the high voltage electrical installations and systems meets the requirements of the policy and legislation and reported upon
- Ensure that anyone undertaking works on University high voltage electrical installations, systems and equipment has sufficient training, experience, knowledge, time and resources to enable them to meet all the provisions of this policy
- Ensure that training records are kept in accordance with University policy
- Attend any mandatory training when requested
- Investigate any non-conformities to the High Voltage Electricity Policy and associated arrangements in collaboration with the Authorising Engineer providing reports to the Estates Health and Safety Committee.

Duty Authorised Person(s) (HV) will

- Be an Authorised Person who has accepted responsibility for a system or installation in the system Log Book
- Be named and displayed on Mimic Diagrams
- Personally hold or carry the Authorised Person's Key (Note – this may be the Principal Contractor's Senior Authorised Person).

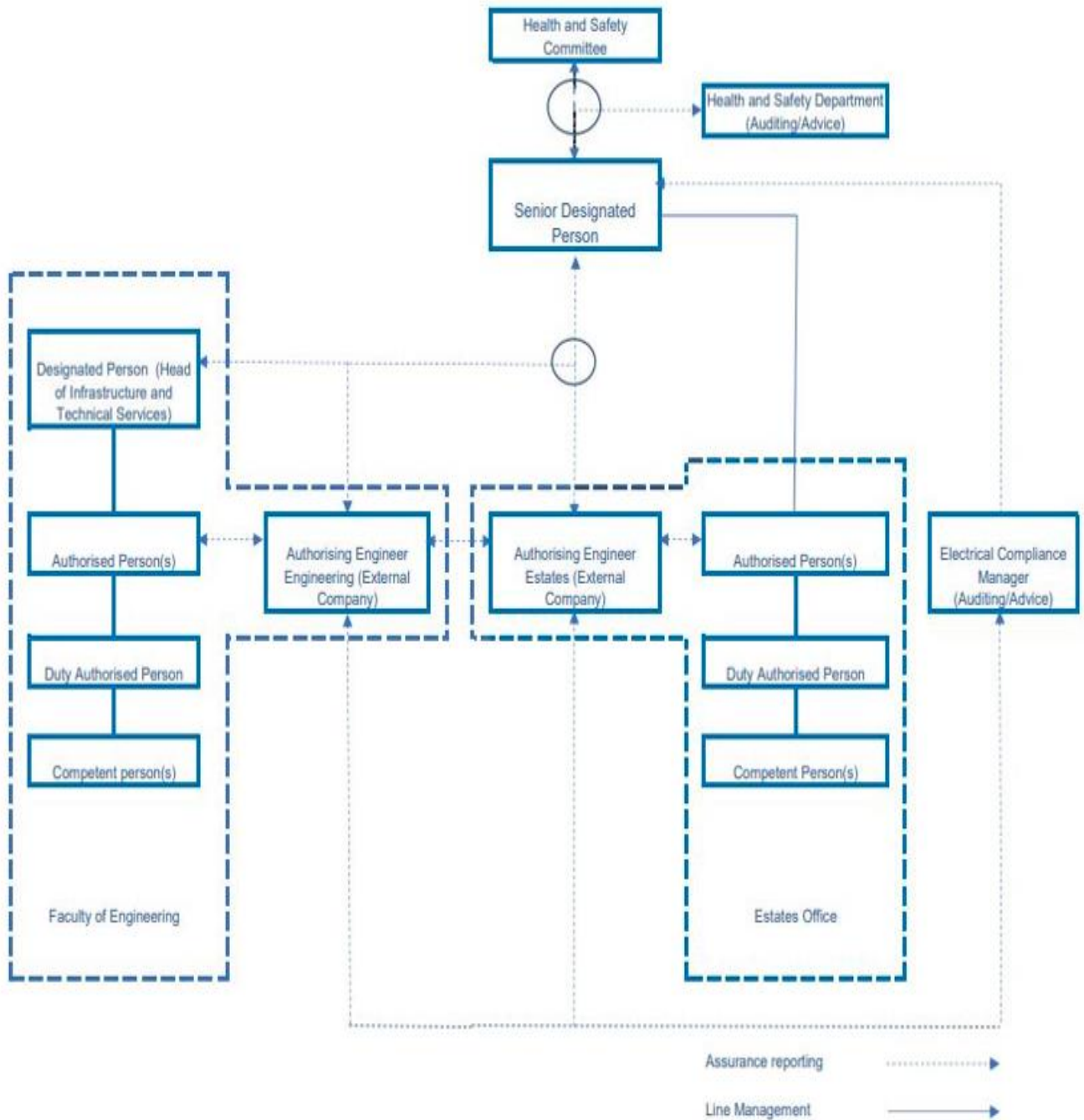
Competent Person(s) (HV) will

- Comply with University policy and arrangements for high voltage electricity
- Follow safe systems of works on high voltage installations, systems or equipment
- Implement any management arrangement for works on high voltage installations, systems or equipment
- Not commence work on high voltage installations, systems or equipment without the correct permit-to-work and suitable and sufficient control measures in place
- Remain at the location of high voltage work or test until works are completed

Electrical Compliance Manager (Estates) will

- Ensure that all duties are met when performing the Authorised Engineer role as detailed in this policy
- Provide advice and support to the Senior Designated Person and Designated Person as required
- Provide oversight and assurance to the Senior Designated Person
- Ensure relevant audits take place for high voltage work, installations, systems or equipment and that these reports are sent to the Senior Designated Person

High Voltage Electrical Management Structure



6. High Voltage Electrical Permits

All works involving high voltage electricity will be subject to permit-to-work.

The following permit-to-work arrangements must be in place for all works involving high voltage electricity.

High Voltage Permits		
Permit	Description	Issuing Officer
High voltage permit-to-work	Permit to manage works on high voltage installations, systems or equipment	Authorised Person
Sanction to test (HV)	Permit to allow tests on high voltage installations, systems or equipment	Authorised Person
Limitation of access (HV)	Permit to allow access for works within high voltage electrical areas but not on high voltage electrical equipment	Authorised Person

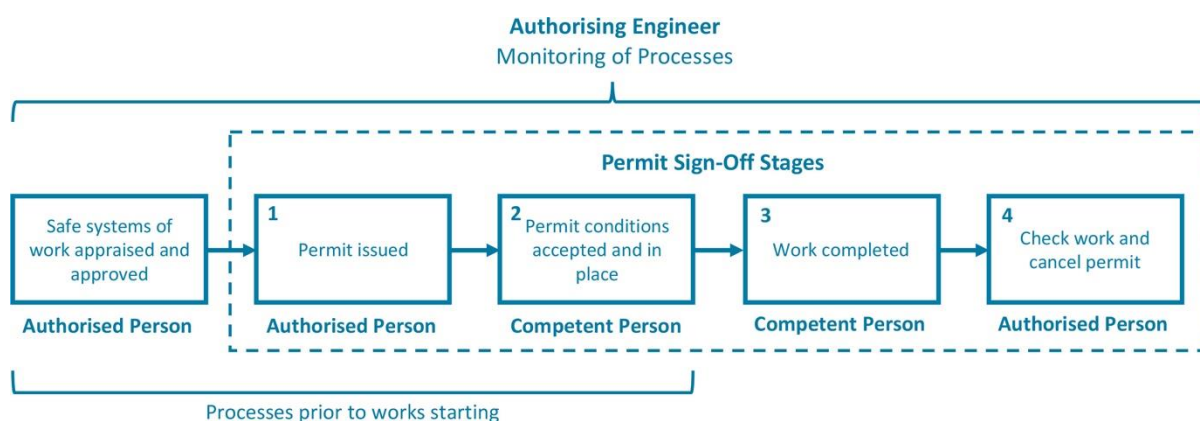
Permit Issuing Process

No high voltage electrical works shall commence until suitable and sufficient safe systems of work have been appraised and approved by the Authorised Person.

The Authorised Person (HV) will issue permits to the relevant in-house maintenance/faculty staff / contractors (Competent Person (HV)) following the permit sign-off stages below.

High voltage electrical works must be monitored to ensure that the work is being carried out in accordance with the requirements of the permit and that any safe systems of work are being followed.

Once the works are complete or on expiry of the permit, the permit must be returned to the Authorised Person for cancellation.



7. Training, Competency and Supervision

The University will ensure that all relevant staff who have responsibilities for high voltage electrical work will receive the appropriate level of training detailed below.

All contractors used for high voltage electrical work must be provided with relevant information on the University's high voltage electrical permit arrangements where it applies to their work.

The Authorising Engineer will issue appointment certificates to each Authorised Person that will not exceed 3 years.

For the issuing of any high voltage permits/certificates training must meet the requirements for, and is formally appointed as, an Authorised Person and has undertaken and successfully completed a course of study for "High Voltage (HV) Operational Safety" prior to appointment and subsequent refresher training at intervals not exceeding 3 years.

8. Monitoring and Inspection

The Authorising Engineer will ensure appropriate monitoring and inspections are in place to manage high voltage electrical work.

The Designated Person (Director of estates and Facilities) will ensure appropriate monitoring and inspections are in place to manage high voltage electrical work.

The University standard is to carry out monitoring and inspection in all areas in accordance with the University Monitoring Policy (SAF-POL-MON).

The Director of Estates and Facilities and Head of Infrastructure and Technical Services will undertake leadership walk rounds as per University Policy.

The Health and Safety Department will audit the system every 3-5 years as per University policy.

9. Incidents and Non-Conformities Reporting

In any emergency the primary concern should always be the immediate safety of those who are affected as a result of an emergency.

When the immediate situation has been dealt with and people are no longer at risk, the incident must be reported locally, and to the Health and Safety Department who will inform the Designated Person. The Authorised Person, in collaboration with the Health and Safety Department will investigate incidents with the aim of identifying lessons learned and preventing similar occurrences in future. Any remedial actions required must be implemented immediately where possible and lessons learnt communicated widely to all who can benefit.

In some cases, the Health and Safety Executive must be notified by the University Health and Safety Department under the Reportable Incidents, Diseases and Dangerous Occurrences (RIDDOR) Regulations.

When a non-conformity is identified this should be investigated by the Authorised Person and Authorising Engineer in collaboration with the Health and Safety Department.

If in doubt advice can be sought from the Health and Safety Department

10. Emergency procedures

In case of emergency involving high voltage electricity, the following procedures must be carried out:

- Get help immediately (contact emergency services and get the electricity supplier to disconnect power)
- Do not attempt to rescue someone in contact with or closer than 18 metres from a high voltage electrical source until power has been disconnected and the system is made safe
- Do not use water-based hoses or extinguishers to fight any fires until the power has been disconnected and made safe