



Department of Electronic & Electrical Engineering

HEALTH AND SAFETY POLICY

Department of Electronic & Electrical Engineering Health and Safety Policy – Specific Arrangements

Contents	Page
1. Department Statement of Intent	4
2. Department Health and Safety Policy – Organisation	6
3. Definitions	16
4. Arrangements	17

	Induction and Training	17
	Control of Visitors	22
	Control of Contractors	24
	First Aid	28
	Workplace Environment and Welfare Facilities	30
	Portable Appliance Testing (PAT)	32
	Risk Assessment	34
	Display Screen Equipment (DSE)	35
	Occupational Health	40
	University Stress Management Policy	40
	Accident, Incident and Near Miss Reporting	42
	Out of Hours Working	44
	Disability (permanent and temporary), New and expectant mothers, Young Workers	46
	Older workers	47
	Manual Handling	48
	Management of Specific EEE Areas/Buildings	50
	Undergraduate Teaching Laboratories and Project Work Space	52
	Workplace Standards	54
	Safe Procurement and Use of Equipment	56
	Construction of Equipment and Apparatus	63
	Modification of Equipment	64
	Control of Substances Hazardous to Health (COSHH)	66
	Management of Local Exhaust Ventilation (LEV) systems	72
	Use of Cryogenics and Liquid Nitrogen	77
	Lifting Operations and Equipment	79
	Pressure Systems	86

	<u>Working at Height</u>	91
	<u>Noise</u>	97
	<u>Workplace Transport</u>	100
	<u>Use of Radiation within EEE (ionising and non-ionising)</u>	108
	<u>Department Radiation Protection Supervisor (Ionising) (DRPS)</u>	108
	<u>Department Radiation Protection Supervisor (non-ionising) (DRPS)</u>	109
	<u>Departmental Laser Safety Officer (DLSO)</u>	109
	<u>Use of Lasers within EEE</u>	109
	<u>Department Biological Safety Officer (DBSO)</u>	111
	<u>Batteries</u>	112
Appendices		
	<u>Appendix 1 H&S Committee Membership</u>	115
	<u>Appendix 2 Competent Persons in EEE</u>	116
	<u>Appendix 3 Fire Safety Guidance</u>	118
	<u>Appendix 4 Electrical equipment guidance</u>	121
	<u>Appendix 5 EEE Fire Marshals</u>	123
	<u>Appendix 6 EEE First Aid trained staff</u>	124
	<u>Appendix 7 Arrangements for Department Safety Inspections</u>	125
	<u>Appendix 8 Fork Lift Truck Operations guidance</u>	126
	<u>Appendix 9 Waste Disposal Routes</u>	128
	<u>Appendix 10 3D Printers</u>	130
	<u>Appendix 11 Use of UAVs, Radio Controlled Vehicles, and semi/autonomous vehicles</u>	131
	<u>Appendix 12 EEE Policy on access to EEE buildings when accompanied by children out of hours.</u>	132
	<u>Appendix 13 Bicycles in University Buildings</u>	135
	<u>Appendix 14 Drugs and Alcohol</u>	135
	<u>Appendix 15 Smoking</u>	135
	<u>Appendix 16 Animals in University Buildings</u>	135

Department of Electronic & Electrical Engineering Health and Safety Policy - Statement of Intent

Under the management of the Head of Department, the Department will follow the University's overarching Health and Safety Policy to:

- Maintain a safe and healthy working environment for staff, students, contractors, visitors and anyone else who may be affected by our undertakings
- Strive for continuous health and safety improvement, ensuring that basic standards are achieved as a minimum and the highest standards are achieved wherever possible
- Embed Health and Safety as a core management function with clear expectations in relation to personal responsibilities of supervisors, staff, students and visitors
- Ensure suitable resource, instruction, training, supervision and safe methods of operation is provided across all aspects of work
- Provide and maintain safe premises, plant and equipment
- Prevent, investigate and learn from accidents, incidents and cases of work-related ill health
- Encourage an open and positive Health and Safety culture

Everyone has a responsibility for Health and Safety – and to support this, all Academic Staff, all Academic Supervisors and Line Managers, the Departmental Technical Manager, and the Departmental Safety Officer will lead and promote a positive health and safety culture in the Department.



Signed:.....

Head of Department, Chee Hing Tan

Policy Implementation date: 18.02.2020.....

Policy Review date: ...18.08.2020.....

DOCUMENT HISTORY AND REVISIONS

Issue	Date	Notes
1	18/10/2017	Re-issue and updating of pre-existing on-line policy
2	23/10/2017	Revised version with elaboration and clarifications of role responsibilities (No substantive changes and hence unpublished)
3	9/4/2018	Review and update of content to reflect changes in staff and certain arrangements. (No substantive changes and hence unpublished)
4	6/12/2018	Review and update of content to reflect changes in staff and certain arrangements. (No substantive changes and hence unpublished)
5	25/1/2019	Addition of out of hours application form and generic risk assessment. Awaiting change of HoD to release.
6	15/2/2019	Updated HoD Introduction and Statement added
6.1	11/3/19	Broken link removed and wording amended in section 8.2
6.2	2/4/19	Review and update of content to reflect changes in staff.
6.3	7/6/19	Undergraduate Teaching Laboratories and Project Workspace arrangements updated to reflect UG/MSc access to EEE labs (section 8.2)
6.4	7/6/19	Update to arrangement to Work at Height to include Clean Room areas.
6.5	13/6/19	Update to qualified first aider list Appendices section 5.7
6.6	13/6/19	Inclusion of Escalation procedure for mandatory H&S training section 7
6.7	21/6/19	H&S Committee Terms of Reference updated to include name change to Department Executive Board and updating the Membership to include the new Radiation Protection Supervisor (non ionising)
7	18/2/20	New release - Updated Policy

Next Review due: 18/8/2020 – responsibility for this assigned to Head of Department

Department of Electronic & Electrical Engineering Health and Safety Policy – Organisation

1. Purpose and Scope

In accordance with [University Health & Safety Policy and Arrangements](#), this local policy reflects the responsibilities and arrangements found within the Department of Electronic & Electrical Engineering. The scope of this policy covers all activities in all locations occupied by the staff and students of the department including postgraduate students who shall be deemed as employees of the Department for the purpose of Health and Safety law.

2. Health and Safety Responsibilities

The Department's stakeholders within the University include those listed below, with responsibilities for each role outlined in the [University Health & Safety Policy and Arrangements](#):

- The President and Vice Chancellor
- University Council
- University Executive Board
- University Senate
- Vice President and Head of Faculty for Engineering
- Faculty Executive Health & Safety Committee
- Faculty DSO Forum
- University Health & Safety Department
- Estates and Facilities Management.

The following section sets out responsibilities for various roles, individuals and groups within the Department, in relation to discharging Health & Safety arrangements on a day-to-day basis. Failure to adhere to the obligations set out in this Policy may result in disciplinary action.

2.1 Head of Department (HoD)

The Head of Department (HoD) has ultimate responsibility for, and for the local adoption of, the University Health and Safety Policy within the Department. The responsibilities of the HoD role as set out in the University Health and Safety policy and arrangements include taking the lead in driving the Health and Safety management system and to demonstrate visible commitment. In addition, the HoD is responsible for:

- Setting the local health and safety policy based on institutional requirements in addition to assessment of the risks inherent in the work of the department;

- Informing staff of their own responsibilities, the local arrangements designed to identify, assess, control and monitor risks, and the process of Health and Safety planning in the department;
- Appointing a Departmental Safety Officer (DSO) and other specialist Safety Officers to cover specific hazards (e.g. chemicals, radiation, lasers, biosafety, etc.) where required by the work undertaken;
- Allocating the necessary resources, both in terms of time and financial resources, to staff appointed to carry out a Health and Safety role, particularly with regard to the DSO;
- Developing a clear and effective Health and Safety structure within the Department, and, for example, chairing the Departmental Health and Safety Committee;
- Providing the necessary information, instruction, training and personal protective equipment (PPE) to enable staff to perform their job in a safe manner;
- Making Health and Safety training a core element of departmental teaching at all levels;
- Ensuring that staff provide appropriate supervision of students, based on suitable and sufficient risk assessment;
- Ensuring that any matter brought to their attention by the DSO or Trade Union Safety Representatives is given prompt and appropriate attention;
- Taking personal action to suspend or stop any activity that is dangerous or not carried out within Departmental Health and Safety policy;
- Actively monitoring Health and Safety performance by receiving regular updates on departmental Health and Safety related occupational ill-health issues/accidents/incidents and Health and Safety inspections/ investigations;
- Ensuring appropriate inspections take place for all laboratories and workshops under their management.

Whilst the Head of Department will remain accountable for leading the above elements of the Departmental Health and Safety arrangements, specific activities can be delegated to competent persons.

2.2 Department Safety Officer (DSO)

The primary role of the Department Safety Officer (DSO) is to support the Head of Department on local health and safety matters, to act on their behalf when required to do so, and to be a liaison between Department staff and the University Health and Safety Team. The responsibilities of the role are set out in the University H&S policy and arrangements as follows:

- Undertake Health and Safety training to an appropriate level of competence;

- Be fully familiar with the University's Health and Safety Policy and assist the Head of Department to develop, implement and periodically review a local policy and procedures;
- Provide Health and Safety related advice to the Head of Department and other members of staff;
- Undertake regular Health and Safety inspections (with Trades Union Safety Representatives, as necessary) and report findings;
- Ensure that occupational ill-health issues/accidents/incidents and near misses are reported and investigated (with direct involvement as necessary) in accordance with the University's Accident and Incident Investigation Policy and Procedures, and to communicate findings of investigations and ensure that recommended action is carried out;
- Ensure the necessary provision of Health and Safety training (including induction) to staff within the Department either by direct involvement or by monitoring provision;
- Deliver General departmental Health and Safety induction/refresher training to staff and students;
- Disseminate Health and Safety information and reports to appropriate staff and students;
- Monitor that adequate precautions are taken in relation to any special hazard in or about to be introduced into the Department, with advice from the University Health and Safety Department where appropriate;
- Monitor that all plant, equipment and processes within their area are maintained in a safe condition and in compliance with appropriate statutory requirements;
- Maintain adequate Health and Safety records where appropriate;
- Monitor housekeeping within the Department to ensure that a high standard is maintained;
- Monitor that adequate, suitable protective clothing and equipment is available and used as required;
- Ensure that systems are in place to provide and maintain adequate first aid facilities;
- Monitor that safe working practices based on risk assessment are adopted by staff and postgraduate students);
- Organise occupational health surveillance for staff and PGR students;
- Organise Department Health & Safety Committee meetings;
- Act with the delegated authority of the Head of Department on Health and Safety matters of urgency.

2.3 Supervisory Staff

All supervisory staff (including Academic supervisors, Administrative Managers, Principal Investigators, Departmental Technical Managers, Team Leaders, Supervisors, Departmental Administration Managers, etc.) shall:

- Be fully familiar with the University and local Health and Safety Policy and understand and apply it within all areas of their responsibility;
- Prepare documented risk assessments and safe working procedures, implement/enforce any control measures identified, and keep signed records to demonstrate they have been communicated;
- Ensure staff/students for whom they are responsible are provided with (and understand), all the necessary information regarding their health, safety and wellbeing and are trained to enable them to carry out suitable and sufficient risk assessments, where required;
- Ensure that suitable and sufficient instruction and training is provided and that staff/students are adequately supervised at all times in order to carry out their duties safely and in-line with University policy, risk assessments and safe working procedures;
- Lead by example through adoption of safe working practices including the use of personal protective equipment (PPE);
- Ensure that their staff operate in accordance with the University and local Health and Safety Policy, as relevant to their work;
- Ensure that they and their staff are trained in the principles, operations and emergency procedures necessary for Health and Safety;
- Ensure the competence and training of their appointees to allotted tasks;
- Ensure that safe working practices within a safe working environment are used by all staff;
- Comply with any additional, specific health and safety arrangements detailed within this local Health and Safety Policy.

Whilst Academic supervisors can delegate tasks, for example to a Post Doctoral Research Associate (PDRA), they will remain responsible for the safety aspects of their respective research areas and so they must satisfy themselves that safety arrangements are planned and being adhered to at all times.

2.4 All Staff and Postgraduate Research Students

In accordance with the Health & Safety at Work etc. Act 1974, everyone has a responsibility to take reasonable care of their own safety and that of others who may be affected by their acts (what they do), or their omissions (what they fail to do). As such, all Department staff shall:

- Make themselves familiar with all relevant Health and Safety information provided;
- Comply with the Departmental Health and Safety arrangements set out in this document;
- Undertake all Health and Safety training as directed (see arrangements);
- Work in accordance with all instruction (verbal or written) and training provided;
- Adhere to all policies, risk assessments and safe working procedures;
- Keep equipment in good working order, in a safe condition, and report any defects to their supervisor/manager;
- Make full use of all safety equipment or devices and pre use checks, and wear all PPE without exception when required to do so;
- Report all accidents, incidents, and dangerous occurrences via the [University portal](#);
- Report any hazard, defective equipment or observed unsafe practice to their supervisor/line manager;
- Be encouraged to report to their line manager/supervisor, any pre-existing or diagnosed health condition (including pregnancy) which could be affected by their work (all due diligence will be observed with regard to confidentiality, the Data Protection Act and the Equality Act);
- Not remove any chemical, poison, radioactive source, or any hazardous materials from the building without the express permission from the Head of Department;
- Not intentionally or recklessly interfere/tamper with, adapt or misuse anything provided by the University for reasons of health, safety or welfare;
- Respond quickly to any requests made by the HoD and/or DSO;
- Cooperate with the University on all Health and Safety matters and comply with any additional, specific Department Health and Safety Arrangements detailed within this local Policy.

2.5 All Students

The University has a duty of care under Section 3 of the Health & Safety at Work etc. Act 1974 towards any person not in its employment, the scope of which includes students. All students shall, therefore, at all times whilst they are on University premises or taking part in University activities, follow the Health and Safety Policy and comply with any health and safety instructions given to them. In addition, they:

- Shall not, without the consent of the member of staff in charge of the areas or activity, introduce any equipment for use on University premises, alter any fixed installations, alter or remove health and safety notices or equipment, or otherwise take any action which may create hazards for persons using the premises or employees of the University;
- Shall at all times, whilst in residence in University property, comply with all fire, safety and security procedures as laid down in the contract of residence;

- Shall not, intentionally or recklessly, interfere with or misuse anything provided by the University in the interests of health, safety or welfare;
- Shall conform to all instructions, written and oral, given to ensure personal safety and the safety of others;
- Shall use protective, specialist clothing or suitable PPE as required and shall use all safety equipment available;
- Shall maintain all equipment in good condition, reporting any defects to their supervisor;
- Shall report all occupational ill-health issues/accidents/incidents/near misses, whether or not injury is sustained, to their supervisor or the member of staff in charge of the activity or facility.

3. Department Health & Safety Committee

3.1 Terms of Reference (ToR)

The Health & Safety Committee is where the department proactively addresses current and future Health and Safety issues. The committee will convene a minimum of three times a year. The EEE Terms of Reference of the Committee are:

- To report directly to the Departmental Executive Board (DEB) via the DSO.
- To develop, consider and recommend Health and Safety related policies and procedures to the DEB, after consultation with and including feedback from interested parties.
- To ensure that any agreed changes are actioned in a reasonable timescale, and that such changes are communicated clearly to all staff and students.
- To champion Health and Safety matters, helping the HoD to create a culture where awareness, reporting and improving health and safety issues/practice is embedded in all activities and managed proactively.
- To update and continually develop/improve the Departmental H&S Policy on an annual, as well as responsive, basis to ensure that it covers the types of activity performed in the department, and reflects any changes in legislation/regulation at a higher level.
- To monitor and report on H&S processes, actions and activities within the department (including training compliance, incidents and near misses).
- To promote the Departmental H&S Policy and share good practice amongst academic, technical and administrative team meetings, the Staff Student Forum, and departmental staff meetings and away days.
- To identify H&S issues of a more serious nature, or which require significant operational or strategic change, to be escalated to the DEB or direct to the HoD.
- To record and follow up, by way of formal minutes, any actions arising from discussion at either Departmental Executive Board or the Health and Safety Committee, relating to H&S issues, and to ensure that regular meetings of both groups are routinely scheduled and held;
- To ensure that documented inspections are undertaken with the correct frequency;
- To monitor the quality of a sample of Risk Assessments via a separate sub-committee;

- To act upon Health & Safety concerns raised by staff, students, visitors etc;
- To report to Faculty Executive Board (FEB) on the effectiveness of the local Health and Safety management system and raise issues via the Head of Department (HoD);
- To plan for the implementation of any changes as directed by the University Executive Board (UEB), the Faculty Executive Board (FEB) and or the University Health and Safety Committee.

3.2 Agenda

The Health & Safety Committee agenda shall be focussed and should include the following topic areas:

- Matters arising and resolution of action points from previous Committee meeting;
- H&S performance monitoring (findings from internal department safety inspections, University Health & Safety audits, etc.);
- Reported incidents and outcome of resulting investigations;
- Safety or occupational health concerns raised through consultation with employees and students;
- Staff H&S training compliance and any issues arising out of SRDS;
- Changes to departmental arrangements (e.g. new activities) that may impact on Health & Safety;
- Health & Safety arrangements due for review (ie. risk assessments, safe working procedures, etc.);
- Scheduled inspection, testing and maintenance, including external contractors working on-site;
- Off-campus activities including planned fieldwork;
- Legislative changes and/or Health & Safety Executive updates and/or University Policy updates;
- Sampling of the quality of risk assessments;
- Any other department H&S business.

3.3 Membership of Health & Safety Committee

(See [Appendix 1](#))

3.4 Responsibilities of those attending the Health and Safety Committee

Members of the Health and Safety Committee are expected to play an active role in the progressive development of the departments' Health and Safety management system as outlined in the terms of reference provided above. Members are chosen because they have skills, knowledge or interests relating to an aspect of health and safety, because they provide an expert 'competent' knowledge of a specific hazard (such as radiation, DSE assessment) or because they are asked to represent the views of a particular group of staff (for example staff working off site and away from the main St George's campus).

In all instances, members are expected to:

- Focus on the development of departmental Health and Safety policy arrangements and to monitor their delivery;
- Report on proposed changes to legislation and or policy in so far as it affects departmental business and contribute to the development of implementation plans where specific changes are proposed;
- Report of progress against the current H&S policy in the area of responsibility, escalating any concerns about non-compliance and reporting on the outcomes of workplace inspections;
- Act as a champion of strong, positive health and safety with staff and students in the department, contributing to information flow to and from the committee and ensuring that staff in their area of control are aware of their health and safety responsibilities;
- Take part in regular sampling of risk assessments on behalf of the committee.

4. Department Health & Safety Inspection Programme (see [Appendix 7](#))

All laboratory, workshop and technical areas shall be regularly, formally inspected by the HoD and DSO or nominated representatives to ensure compliance with local policy. As a type 1 Department, this will involve a minimum of 3 inspections per year of high risk areas and the DSO will set out a programme of inspections which identifies areas to be inspected along with frequency. Inspections will normally be led by the Head of Department or a senior nominated manager. Reporting of any resulting actions, and/or any instances of non-compliance will be raised at the following Departmental Health and Safety Committee meeting. Specialist safety officers (for example, lasers) may also be called upon to assist with inspection.

In addition, the Head of Department will conduct a Health and Safety Tour at least 10 times a

year to reflect the nature and extent of hazards in the department and staff in control of labs/workshops must carry out regular health and safety inspections.

5. Departmental Health and Safety Arrangements

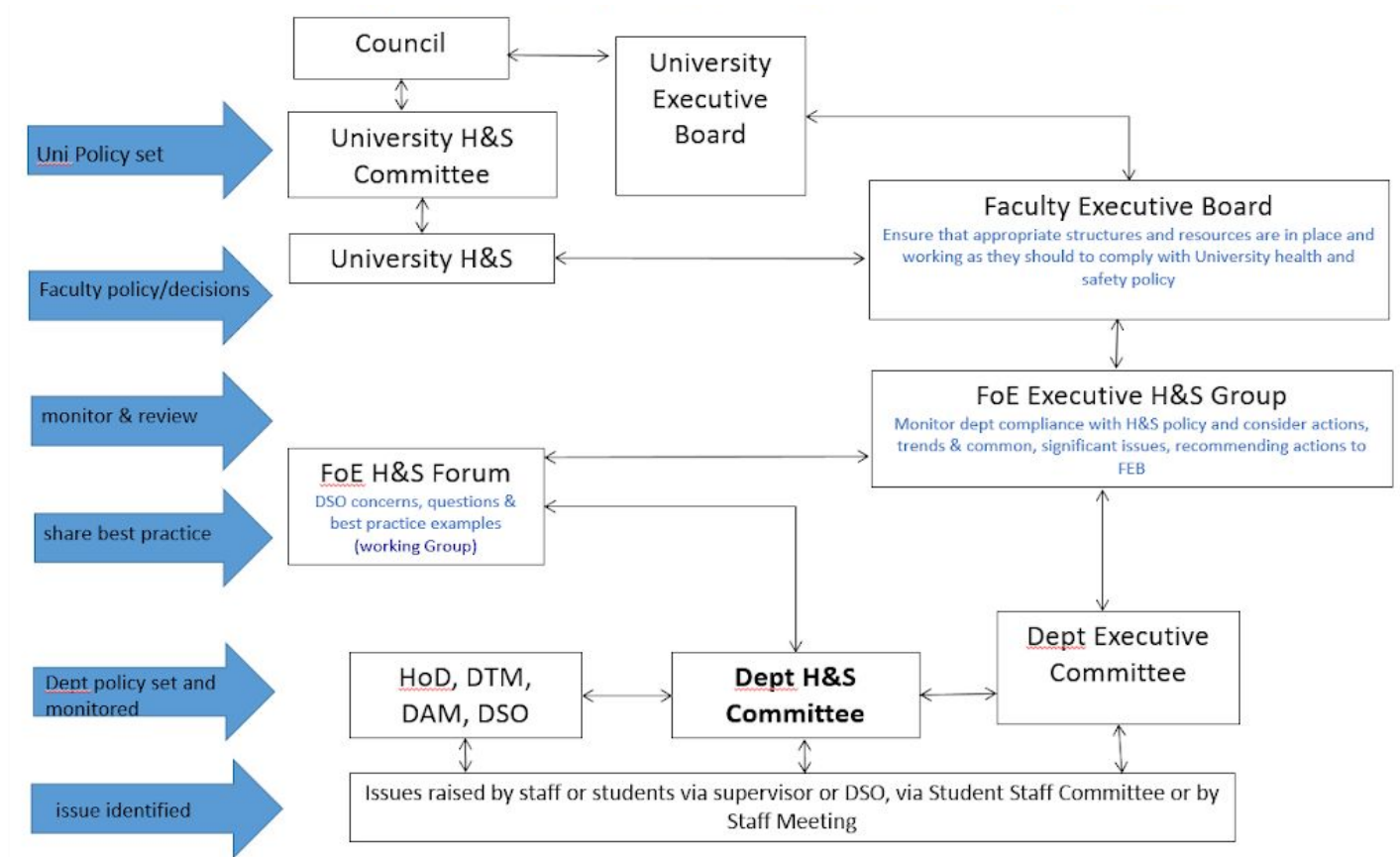
All staff, students and visitors must comply with the Health and Safety policy arrangements which set out the management system as well as roles and responsibilities that will allow the department to manage each of the department's significant hazards. Failure to follow the Departmental procedures (in relation to induction, training, risk assessment, safe systems of work, record keeping and monitoring etc) or failure to maintain the safety standards outlined in this policy document could result in sanctions deemed appropriate by the Head of Department or members of the Safety Team. The principles underpinning each set of H&S policy arrangements include:

- The Head of Department (HoD) takes overall responsibility for ensuring departmental compliance with the policy arrangements, with support from the Departmental Safety Officer (DSO)
- All staff, students and visitors must comply with the guidelines set out in this policy and in University policy documents.
- Academic Supervisors and line managers must ensure that all work that presents hazards to staff, students and visitors is properly planned and organised with suitable and sufficient risk assessments, safe systems of work, control measures and instruction and training of staff and students.
- Competent persons are appointed by the Head of Department to understand the legislative environment and to act as a source of expert knowledge in the department.
- Departments will work with other responsible persons in the University to ensure that statutory obligation including statutory inspections and health surveillance are fulfilled in line with University policy.
- Records must be maintained to demonstrate that the duty of care towards staff, students and visitors is fulfilled.

6. Department List of Competent Persons

See [Appendix 2](#)

7. Department Health and Safety Management Structure and Organisation



Definitions used in Health and Safety Arrangements

Competent Person - A Competent Person is someone who has sufficient technical and practical knowledge of the equipment or hazard to be able to detect any defects and assess how significant they are. In some cases, the competent person should be external to the department, for example for undertaking statutory inspections.

COSHH Assessment - used to identify the hazards in relation to hazardous substances, and to ensure that a valid decision is made about the control measures which should be taken to prevent or control exposure to hazardous substances

Departmental Technical Manager (DTM) – A person with overall responsibility for day-to-day technical management and problem resolution as well as for long-term strategic resource planning for the department and who works with the HoD and DSO to ensure a safe working environment for staff, students, and visitors.

Duty of Care – The University has a legal requirement to ensure that work activities that could result in harm to the employee are assessed and controlled. This duty of care cannot be delegated away, and is only met when the person (usually an academic supervisor or line manager) delegating a task is in a position to confirm that the task has been carried out. This requires a strong system of monitoring, supervision and feedback.

Key Document Folder - A collection of documents relating to the certification, commissioning, operation, and maintenance of work equipment and/or details of procedures taking place and/or training and induction records and/or any other relevant information to protect the health and safety of staff, students and visitors. In EEE, this may be the Lab Safety folder

Operator - Someone who is trained and competent to use a piece of equipment. All operators are listed in the specific arrangements section and are only competent to use the equipment annotated against their name.

PPE - Personal Protective Equipment that will protect the user against health or safety risks at work. It can include items such as safety helmets, gloves, eye protection, high-visibility clothing, safety footwear and safety harnesses.

Risk Assessment (RA) - used to identify the hazards, estimate the risk and take actions to eliminate or control the likelihood or impact of any potential harm arising from the hazard

Safe System of Work (SSoW) - A safe system of work is a formal procedure which results from systematic examination of a task in order to identify all the hazards. It defines safe methods to ensure that hazards are eliminated or risks minimised. Also known as Standard Operating Procedure (SOP) or Schemes of Work.

Supervisor - Anyone with immediate supervisory responsibility. This includes academic supervision as well as formal line management supervision.

Arrangements for Induction and Training

Introduction

In accordance with the Health and Safety at Work Act (1974) and the Management of Health and Safety at Work Regulations 1999, the University has a duty of care to manage risks to safety and health, to assess reasonably foreseeable risks, and to implement risk controls. The provision of induction and training ensures that staff are aware of the hazards in their workplace and can act appropriately to reduce or eliminate the potential for harm as a result of those hazards. Although the law applies directly to employees, all students agree as part of their registration procedure that they will abide by the same standards whilst at the University. This policy is therefore intended to cover the safety induction training for all new staff, all students and all visitors to the Department.

1. Overview/General duty

1.1 All staff and students must undertake induction and training in line within this policy to understand their responsibilities and the risks relating to their work.

1.2 Failure to complete the required training, complete relevant inductions, follow the Departmental procedures or maintain the safety standards outlined in this policy document could result in sanctions deemed appropriate by the Head of Department or members of the Safety Team.

2. Roles and Responsibilities

2.1 It is the responsibility of the Head of Department to:

- ensure that inductions are available to all staff, students and visitors
- allow sufficient time and resource for staff and students to attend all relevant training
- monitor compliance with mandatory training and agree any further actions required.

2.2 The HoD has delegated the responsibility for general departmental Health and Safety induction training to Dianne Webster, DSO.

2.3 Line Managers and Academic Supervisors are responsible for:

- ensuring that new staff and students attend a general department Health and Safety Induction and any specific inductions to local work areas and also complete the mandatory training courses set out below
- ensuring that they meet with the new starter in their first week to ensure that requirements for any additional health and safety training specific to the work to be carried out is identified, planned and completed (in conjunction with the DSO as appropriate)
- ensuring that high risk work activities and/or areas are only undertaken/accessed by trained, authorised and competent persons (with appropriate risk assessments, COSHH

assessments and safe systems of work in place) and identifying induction or re-induction requirements

- reporting unauthorised access/issues or concerns to the DSO and DTM
- considering new Health and Safety implications when introducing new equipment, technology or changes to working practices/systems
- identifying and arranging new training and/or instruction when people change jobs/roles or take on extra responsibilities with Health and Safety implications.

2.4 Staff and students are responsible for:

- attending training and induction as directed
- following any instructions (written or verbal) along with any health and safety training provided.

2.5 Area representatives and/or Lab Managers are responsible for delivering local inductions to their area of responsibility, managing access to high risk/restricted areas and identifying and providing training requirements to address specific hazards.

2.6 Departmental Safety Officers can assist in the arrangement of training when required. This includes signposting to University or Faculty provision of shared training and facilitating or providing priority training as agreed with the HoD.

3. Induction and Training Requirements

Staff and Research Postgraduates

3.1 All new staff and new research postgraduates must complete [mandatory online H&S induction training](#) (search for induction) which is accessible once the individual has a Ucard (available from CiCS).

3.2 Line managers/academic supervisors must ensure that all new staff and research postgraduates complete the mandatory online courses as follows:

- [Fire Awareness](#) (must be taken every 12 months)
- [Out of Hours and Lone Working](#)
- [General Risk Assessment Techniques](#)
- [Manual Handling – the basics](#)
- [Display Screen Equipment \(DSE\)](#)
- [COSHH Awareness](#)
- H&S Induction (see above)
- Supplementary local induction (see 3.3)

Failure to comply with the mandatory training requirements will be subject to Policy 1-19 – Escalation Procedure for Non-Compliance with Mandatory Health and Safety Training which can be found under the Policies tab here

<https://sites.google.com/a/sheffield.ac.uk/eee-handbook/>

3.3 In addition, line managers and academic supervisors must ensure that new staff and new research postgraduates also undertake:

- A departmental H&S induction by the DSO or nominated deputy, ideally on their first day, or within their first week and prior to commencing work in any [high risk] work areas. The formal departmental induction should cover, as a minimum, the [University induction checklist](#) which covers basic health and safety information that all employees need to know. The induction must be documented and the new member of staff should sign to say that they have completed the induction.
- Specific inductions for all work areas can be arranged by contacting those named in the [Arrangements for the Management of Specific EEE Areas/Buildings](#). The induction must be documented and recorded and the inductee must sign to say that they have completed the induction. This specific induction should address all local hazards (such as working at height, working with machinery, working with substances hazardous to health etc.) and management of health and safety (including safe systems of work/standard operating procedures, requirements for risk assessment etc., emergency procedures and access requirements).

3.4 Line managers and academic supervisors must make the DSO aware of any casual staff, paid visitors and agency staff working in the Department to arrange access to the mandatory on-line training.

Students

3.5 The DSO (or nominated person) will deliver a timetabled Health and Safety Induction lecture to all new Undergraduate and Taught Postgraduate students during “Intro week”. A register of attendance will be taken with records retained.

3.6 In addition, students will be given specific inductions to any areas they will be working in. These inductions will be documented and recorded. (see 3.3 above)

3.7 Undergraduate students will be supervised at all times in high risk areas (unless working in the iForge where local arrangements apply) and are only allowed to work out of hours in exceptional circumstances and only if a relevant risk assessment has been completed and they are supervised accordingly.

Visitors

3.8 All visitors are required to have a clearly identifiable Host (who is not the HoD) and who takes responsibility for identifying training and induction requirements.

3.9 All visitors will be given specific inductions in any area(s) they will be working in, covering relevant information about any hazards they may encounter. The induction should be recorded and the visitor should sign to say that they have completed the induction and this record will be retained by the visitor's host (with a copy also provided to the DSO).

3.10 As a minimum, short term visitors (less than 3 months duration) will be informed of the Fire & Emergency Procedures and relevant welfare arrangements by their Host. This should be documented and signed by visitor and host with a copy held by the host. A copy should be sent to the DSO.

3.11 Visitors in attendance for more than 3 months will undertake the standard online mandatory training as set out in 3.2 above.

Cleaners

3.12 The DSO will work with the University Facility Manager to ensure that arrangements for local induction of cleaners to laboratories/workshop areas that they work in are available. This induction should be provided by the nominated lab contact and should include (but is not limited to) any areas that they should not enter; any potential hazards; any personal protective equipment requirements (for example safety footwear or laboratory coats); what to do if there is a spillage or leak; any warning signs to be observed; which bins to empty and which surfaces they can clean.

Contractors

3.13 As per the separate Control of Contractors policy arrangements, the department must ensure that any contractor entering high risk areas receives a local induction, which must be recorded, signed and retained by a named person in the work area.

Competent Persons

3.14 Where the HoD appoints a competent person to assist with the implementation of the department's policy arrangements, then the HoD should ensure that the competent person completes any relevant training required to enable them to complete this role.

3.15 The HoD and the DTM will be responsible for identifying relevant training and instruction required for the role of Departmental Safety Officer to reflect their responsibilities.

3.16 Risk assessments should identify any further instruction and training needs associated with specific locations, tasks or equipment (including legal requirements for specific job training such as operating fork lift trucks).

4. Managing Risk Assessments and Safe Systems of Work

4.1 Line Managers and Academic Supervisors are responsible for ensuring that documented risk assessments and safe working procedures are developed and shared with staff (either through induction or training) for all hazardous areas of work and these should be read and signed before any work is undertaken.

4.2 Line Managers and Academic Supervisors are responsible for providing staff (either through induction or training) with clear instructions for Emergency Response action (for example in relation to machinery shutdown, chemical spills etc.).

4.3 Access to high risk areas and departmental keys will not be issued until inductions are complete.

4.4 Equipment must not be used by any persons until training specific to the equipment has been completed and signed off by the Line Manager or Academic Supervisor.

4.5 Each laboratory will have a named contact who is responsible for ensuring that only trained, competent persons are working in that area, and ensuring that staff, students, and visitors are instructed to act within the published minimum laboratory standards.

5. Managing key documents

5.1 A Lab Safety folder must be maintained in work areas, documenting equipment and/or procedures taking place. This must include a list of current trained, authorised users.

6. Monitoring and Review

6.1 The DSO is responsible for monitoring compliance with requirements for inductions and training through the department's regular inspection programme and for reporting details of non-compliance to the HoD and/or the H&S Committee to agree further action.

7. Further Reading

- [University Health and Safety Induction Checklist and Induction training](#)
- [HSE Guidance on induction and training](#)

Arrangements for the Control of Visitors

Introduction

When does this arrangement apply?

Under the Health and Safety at Work Act, the University has general duties and responsibilities on all people at work, including staff, students and visitors who could be affected by work activities, e.g. guests, casual workers, contractors. This policy applies to all different types of visitors that are encouraged in order to build relationships, to enhance research and teaching and to promote the Faculty as an excellent place to work and study and so, for this purpose, visitors are defined as those individuals spending more than a day in the University premises that are not registered as applicants, students, staff or contractors.

1. Overview/General duty of departments

1.1 All visits to the department must be properly planned and organised.

2. Roles and Responsibilities

2.1 The Head of Department (HoD) has overall responsibility for all activities in the department and for the implementation of this Policy. Specifically, the HoD will be satisfied that robust systems are implemented for the effective management of visitors.

2.2 The HoD will manage visitors to the department as follows:

- All visitors are required to have a clearly identifiable Host (who is not the HoD) and who takes responsibility for supervision of the visitor and their conduct
- All potential visitors should make a formal request, which will need to be signed off by an academic supervisor, the DSO and a nominated signatory (usually HoD, DTM or Departmental Administration Manager)
- All visitors will need to discuss the proposed visit with the DSO and all Health and Safety issues, arrangements and inductions identified prior to signed approval being obtained from the Academic Host and DSO
- All visitors will be given specific inductions in any area(s) they will be working covering relevant information about any hazards they may encounter. The induction should be recorded and the visitor should sign to say that they have completed the induction and this record should be retained by the visitor's host (with a copy lodged with the DSO). As a minimum, short term visitors will be informed of the Fire & Emergency Procedures and relevant welfare arrangements.
- Visitors in attendance for more than 3 months will undertake the standard online fire training as part of the DSO induction process.

- With the exception of visiting PGR students, visiting academic staff and former PDRA staff, visitors should not be allowed, under any circumstances, to work unsupervised in any laboratory or research area. PGR students cannot be considered suitable supervisors. Supervision should be appropriate to the activity being undertaken and in line with existing risk assessments, etc.
- With the exception of visiting PGR students, visiting academic staff and former PDRA staff, visitors are not allowed to work out of hours in any area of the Department. In exceptional circumstances, out of hours access will be allowed if the visitor has appropriate supervision, has completed the Out of Hours training, and there is a suitable and sufficient risk assessment in place.
- A register of all visitors, including office / lab location and contact details in case of an incident will be maintained by Kim Brechin.
- A register of all visitors training and induction records will be maintained by Dianne Webster

3. Managing key documents

3.1 The department will keep a central register of visitors so that they can be contacted in the event of an emergency.

4. Monitoring and Review

4.1 Compliance with the arrangements for visitors will be monitored through the department's regular inspection programme, the results of which will be reported to the Departmental Health and Safety Committee.

Arrangements for the Control of Contractors

Introduction

When does this arrangement apply?

In accordance with Section 3 of the Health and Safety at Work Act 1974 and the Management of Health and Safety at Work Regulations 1999, the University has a duty of care to ensure the safety of people who are not employees. This includes (but is not limited to) contractors and we must do this by planning, managing and monitoring their work and ensuring that risks are controlled. This policy applies to all contractors working across Departmental locations.

Definitions

Contractor - For the purpose of this arrangement, a contractor is defined as a person or firm not belonging to the Department that undertakes a contract to provide materials or labour to perform a service or do a job.

Point of Contact (POC) - Nominated competent person selected by the DTM.

Overview/General duty of departments

1.1 All staff involved in managing contractors to any extent must ensure compliance with the [University Control of Contractors Policy](#).

1.2 All work involving contractors must be properly planned and organised.

1.3 The DTM is responsible for ensuring that Department appointed Contractors carry out the work safely and in accordance with this arrangement.

1.4 The DTM is responsible for informing Estates and Facilities Management (EFM) of work which involves breaking into the fabric of the building (including removal of anything attached). This type of work can only be directed through EFM.

2. Roles and Responsibilities

Head of Department

2.1 It is the responsibility of the Head of Department to:

- be satisfied that Contractors appointed by the department (and their subcontractors) have the necessary insurance, competencies and safety arrangements by means of pre-vetting
- ensure that all Contractors (and their subcontractors) are informed of any locally known hazards (for example the presence of asbestos) and that they are provided with copies of relevant University policies, procedures and documentation

- ensure Contractors (and their subcontractors) are visibly identifiable, and monitored whilst on the premises.

Departmental Technical Manager (DTM)

2.2 The Departmental Technical Manager is responsible for issuing any relevant Permit to Work if satisfied with safety arrangements.

2.3 Departmental staff planning work that requires the use of external contractors must inform the Departmental Technical Manager so that an appropriate assessment can be made before proceeding. [Annex A Process for Appointing External Contractor into your Department](#) details the process that must be followed.

2.4 The department Point of Contact for a specific piece of work involving contractors will ensure that the Process for appointing External Contractors into the Department conforms to the Checklist provided in [Annex E Contractors Health and Safety Guide](#).

2.5 For Contractors appointed by the Department:

- The DTM is responsible for ensuring that no contractor work breaks into the fabric of the building.
- The DTM is responsible for ensuring that reasonable checks are made when the department selects its own contractors (who are not on EFM's Approved Contractor List) and ensuring that the contractor meets all the criteria stated in [Annex D External Contractors Checklist](#). All evidence is to be kept by the DTM or DSO for future reference.
- The DTM, or a person nominated by the DTM, and acting as the Point of Contact, must ensure that contractors provide risk assessments and method statements (RAMS) which must be reviewed and deemed suitable and sufficient prior to the work commencing.
- The Point of Contact is responsible for ensuring that contractors:
 - are inducted before any work can commence, in laboratories and workshops about hazards that may affect them and what to do in an emergency
 - are made aware of the requirements of the Control of Contractors Policy and any specific rules associated with local hazards
 - ensure the Works Sign In/Out sheet is signed (template is available at [Annex C departmental works sign in sheet](#)), and that this is retained as a record of the induction
 - are made aware of their duty to inform the Point of Contact of any faulty defective equipment which has to be removed from service and to provide written completion of work.

- The Point of Contact is responsible for monitoring/checking and where necessary enforcing and reporting on departmental selected contractors. Any actions are to be reported to the DTM for follow up and action.

2.6 For Contractors appointed by EFM and EFM Maintenance Staff to work in Departmental Workshops or Laboratories, the DTM or a person nominated by the DTM (Point of Contact) is responsible for:

- acting as the key departmental link with EFM and EFM selected contractors (including EFM staff) who are carrying out maintenance, repair and installation of equipment in departmental workshops and laboratories. [Annex B Process for EFM appointed External Contractor or EFM Maintenance Staff in Departmental Space details the process to follow](#)
- ensuring EFM appointed contractors are made aware of their duty to inform the POC of any faulty defective equipment which has to be removed from service
- ensure EFM appointed contractors are made aware of the requirement to provide written completion of work
- monitoring, checking and where necessary enforcing and reporting on departmental selected contractors.

2.7 EFM take responsibility for selection, training and risk assessments for EFM selected contractors (including EFM staff) who are carrying out maintenance, repair and installation of equipment in shared areas e.g. corridors, office space and non-departmental areas.

2.8 All staff should report any concerns in relation to contractor work to the DTM and/or DSO for follow up and action.

2.9 The DSO is responsible for recording instances of EFM contractor non compliance e.g. not providing suitable and sufficient risk assessments and method statements, refusing to take part in a local training and induction, displaying unsafe behaviours or practices. Such instances are to be reported to the EFM Helpdesk (if EFM appointed) and the Departmental Health Safety Committee. If this can not be resolved at Department level, this must be raised to the Faculty Health and Safety Executive Group.

3. Training and Induction Requirements

3.1 All contractors must be inducted into the work area before any work can commence in line with section 2 above.

3.2 The Departmental Safety Officer can arrange, facilitate or provide training when required to ensure that staff know their responsibilities under this policy.

4. Managing Risk Assessments and Safe Systems of Work

4.1 All work involving contractors must have a suitable and sufficient risk assessment in place in line with section 2 above before any work can commence.

4.2 Contractors are responsible for providing their own equipment and PPE, ensuring that it is safe and maintained in accordance with manufacturer's guidelines.

4.3 All staff have the authority (and will be encouraged) to challenge and report any contractor on site who is deemed to be putting themselves or others at risk.

5. Managing key documents

5.1 The DSO is responsible for ensuring that records are maintained to demonstrate that reasonable checks are made in relation to the selection, induction and management of contractors in line with section 2 above.

6. Monitoring and Review

6.1 The DSO is responsible for monitoring compliance with these requirements for control of contractors through the department's regular inspection programme and subsequently reporting details of non-compliance to the HoD and/or the Departmental Health and Safety Committee to agree further action.

7. Further Reading

- [University Control of Contractors Policy and Procedures](#)
- [HSE Brief Guide to Control of Contractors](#)

Arrangements for First Aid

Introduction

When do these arrangements apply

The Health and Safety (First Aid) at Work Regulations 1981 require employers to provide adequate and appropriate equipment, facilities and personnel to enable first aid to be given to all employees at work if they are injured or become ill. The extent of the arrangements shall be commensurate to the hazards that prevail within the Department.

Definitions

- First Aid Needs Risk Assessment - A risk assessment needed to determine the level of first aid cover that is required taking into account factors such as the number of occupants in an area, workplace and task hazards and building layout.
- Qualified first aiders - All staff who agree to be first aiders will be trained according to a syllabus minimum of Level 3 Award in First Aid at Work.

1. Overview/General duty of departments

1.1 Dianne Webster, DSO, is responsible for documenting the First Aid Needs Risk Assessment ([see template](#)) and reviewing it on an annual basis or before if there is a significant change in order to determine the extent of first aid arrangements required.

2. Roles and Responsibilities

2.1 It is the responsibility of the Head of Department to:

- ensure the provision of sufficient first aid equipment and supplies
- ensure the provision of sufficient numbers of qualified First Aiders in recognition of the activities and complexity of the workplace
- allow sufficient time for First Aiders to attend training.

2.2 Contact details for Department First Aiders at 16/8/19, (see [Appendix 6](#))

2.3 Department First Aiders are responsible for:

- responding promptly to calls for assistance
- carrying out their duties according to the training received
- putting their own safety first when dealing with a situation
- not attempting anything beyond their own personal capacity or training
- summoning emergency assistance if required (via the University control room)
- preparing a post-incident first aid report.

2.4 Dianne Webster, DSO, is responsible for checking and ensuring first aid training remains current, and updating contact numbers in the departmental arrangements.

2.5 Academic Supervisors and Line managers should inform staff, students and visitors who the First Aiders are, where they are located and how to contact them in an emergency.

2.6 Staff should not move anything provided for the purpose of first aid, or remove any items from a first aid box without authority.

3. Training and Induction Requirements

3.1 First aid arrangements should be covered in general departmental inductions and also in local laboratory inductions.

3.2 First Aiders must complete a 3 day First Aid at Work (FAW) certificate – no other first aid awards will be recognised.

4. Managing Risk Assessments and Safe Systems of Work

4.1 Lindsay Nash, Jon Wall and Stephen Dorward are responsible for checking and replenishing the First Aid Boxes on a monthly basis and ensuring a list of contents with sign off is kept within each box. They are also responsible for ensuring that the list of first aiders displayed is the current version.

4.2 All supervisors organising off-site activities or other large events on campus must complete an activity-based Risk Assessment which takes into account the requirements for first aid.

Willenhall (Off-site)

Staff and PGR students working at Willenhall are first aid qualified. Lone working is not permitted and at least one member of the visiting party must be fully first aid trained. A standard first aid kit and eyewash bottles are maintained on site.

Automatic Defibrillators are located at:

Nanoscience Reception, North Campus.
Mappin Building (Spring 2020)

The following named persons are responsible for checking Automatic Defibrillators and reporting back to central Health and Safety via their google form on a monthly basis:

Jon Wall/Stephen Dorward	Nanoscience Reception
Dianne Webster	Mappin Building

Location of all University Defibrillators can be found here:

<https://ssid.sheffield.ac.uk/hs/>

Workplace Environment and Welfare Facilities

When does this apply

In accordance with the *Workplace (Health, Safety and Welfare) Regulations*, the University has a duty of care to ensure that the working environment is safe, clean, tidy, hygienic, and comfortable. Where required, this shall be achieved in a collaborative manner with Estates & Facilities Management and other Heads of Department who share the same work environment.

Roles and Responsibilities

Specifically within the context of the Regulation stated above -

The HoD shall:

- ensure buildings and workspaces (including common areas) are fit for purpose, are in a good state of repair, and satisfy the requirements of the *Building Regulations*, including (but not limited to) construct, doors, windows, etc.;
- give due consideration to access/egress and facilities for people with disabilities (except where health and safety legislation takes precedence over disability legislation);
- ensure a reasonable workplace temperature (minimum of 16°C) except where significant physical exertion is required or where hot processes take place (in which case the minimum temperature should be 13°C) – there is no legal upper temperature limit but control measures should be implemented to mitigate against the effects of higher temperature extremes;
- ensure the provision of suitable and sufficient lighting (including emergency lighting);
- ensure that enclosed work environments are ventilated by a sufficient source of fresh air, including the provision of extraction systems to remove contaminants from the air;
- ensure noise levels are controlled so as not to cause harm;
- ensure the provision of safe furniture, workstations, fixtures and fittings including sufficient safe storage;
- ensure housekeeping is kept to a satisfactory standard with regard to cleanliness, hygiene and tidiness;
- ensure the provision and upkeep of sufficient welfare facilities including adequately resourced toilets (with sanitary conveniences), and food/drink preparation areas with a supply of clean fresh drinking water;
- where required, the provision of specialist welfare facilities (i.e. scrub down areas, showers, etc.), and areas for individuals to change in/out of work clothes including accommodation of regular/work clothes when not being worn;
- the provision of rest facilities away from workstations and areas, with specific provision made for pregnant women and/or nursing mothers;
- ensure safe access/egress and traffic routes for pedestrians.

The Department Safety Officer shall:

- monitor workplace environment and welfare facilities to ensure the upkeep of the above arrangements, and report any deficiencies to the Head of Department.

All Department Staff shall:

- report any issues or concerns with regard to the workplace environment or welfare facilities to the DSO;
- not abuse welfare facilities, and only use them in a manner for which they are intended.

Arrangements for Portable Appliance Testing (PAT)

Introduction

When do these arrangements apply

The Electricity at Work Regulations, 1989 set out essential safety principles for working with electricity and the principal requirement is that all systems and equipment be constructed and maintained, so far as is reasonably practicable, to prevent danger. Regular inspection and testing of systems and equipment is an essential provision of the Regulations.

Overview/General duty of departments

The [University Inspection & Testing of Electrical Equipment Policy & Procedures](#) will be followed at all times.

All electrical equipment in their Department is tested by the University central service provided by EFM on an annual basis. Reports are sent to the Department Safety Officer, DTM and Ian Wraith who will ensure any necessary actions are complete.

All equipment fitted with a BS1363 (13A) plug must be PAT tested.

All other single phase and three phase portable electrical equipment should be visually inspected and electrically tested.

New equipment will be tested in-house departmentally by trained persons to avoid any potential delay before EFM see items.

1. Roles and Responsibilities

1.1 University policy states that the Director of Estates and Facilities Management & IT shall provide and maintain a University electrical testing service to ensure compliance with statutory health and safety legislation.

2.2 The Head of Department shall be responsible for ensuring that:

- Department testing of all new equipment is arranged via the Electronic Workshop (contact Ian Wraith tel. 25864 i.wraith@sheffield.ac.uk)
- All electrical equipment in the Department is tested. This may be carried out annually by the University central PAT service provided by EFM or in the department by a suitably trained competent person and records updated on the University Asset Database;
- Any item of electrical equipment, departmentally purchased or personal items brought into the Department must be PAT tested OR visually inspected (by a competent person) prior to use
- Items should not be used where the next test date has elapsed;

- Faulty equipment should not be used. Faulty equipment should be reported to the Electronic Workshop, labelled and withdrawn from service;
- Items of personal electrical equipment that have not been subject to the University's inspection and testing regime must not be used;
- New equipment is PAT tested (or visually inspected) in-house by trained persons to avoid any potential delay before EFM annual inspections.

Items to undergo full PAT should include:

- In-house built equipment (example: laboratory equipment for research)
- Modified equipment (example: e-stop added to original laboratory equipment)
- Imported items (outside of EU not CE marked).

Items to undergo visual inspection should include:

- Items provided by University Approved Suppliers that arrive between EFM annual tests
(Example: Computers, Monitors, laptop/mobile phone chargers etc).
- Globally recognised Original Equipment Manufacturers (example: Apple, Dell, Microsoft etc)
- New in-house built equipment (example: laboratory equipment for research).

If it is not clear as to which category items fall (PAT test or visual inspection) then a full PAT test shall be undertaken.

Training and Induction Requirements

All staff that undertake City & Guilds Level 3 Award in the In-Service Inspection and Testing of Electrical Equipment (PAT 600/3597/3) on behalf of the department will be deemed as suitably trained.

EEE competent staff are:

Ian Wraith	Paul Haines	Jon Wall
Neville Gillott	Stephen Dorward	Steve Marsden
Tom Templeman	Callum Hawley	

PAT reports will be provided annually by the Central Service team. Any actions or recommendations will be managed by the departmental point of contact. This may include removing items from service or requesting items are repaired ready for testing again.

EEE Point of Contact for University Central Service: **Ian Wraith**

Arrangements for Risk Assessment

Introduction

When do these arrangements apply

The Management of Health and Safety at Work Regulations 1999 require employers to assess the risk to the health and safety of their employees (and anyone else who may be affected by their activities) and make arrangements for putting into practice any necessary preventative and protective measures.

Overview/General duty of departments

Risk assessment of work activities within the department will be carried out by the person directing the work or those in control of the area. This is usually an Academic/Lab Supervisor in charge of that space. Where the risk assessment is performed by another individual, it will be reviewed and signed off as approved by the responsible person and records will be accessible to all those who may be affected by the work.

The University STAR system (<https://ra.group.shef.ac.uk>) should be used to complete risk assessments. All staff and students should apply for an account.

Monitoring and Review

Monitoring of risk assessments will fall to the DSO and the EEE Risk Assessment Sampling Group.

The EEE Risk Assessment Sampling Group will meet monthly and look at a sample of submitted assessments. The group will report back to the H&S Committee.

The Safety Inspection programme will look at a sample of assessments during the tours in each area.

The DSO will perform random spot checks of assessments in the department.

The DSO can offer guidance on compiling risk assessments.

Arrangements for Display Screen Equipment (DSE)

When do these arrangements apply?

Online Display Screen Equipment Training is mandatory for all Staff and PGR members and should be completed within 1 week of commencing work in the department.

Long stay visitors (3 months +) must also complete the online training.

Short term and other visitors will be dealt with on an individual basis where they cannot access the H&S online training.

Overview/General duty of departments

The [University policy](#) should be followed at all times.

Roles and Responsibilities

Head of Department

The Head of Department will be responsible for ensuring that a DSE assessment is completed for each user. In addition each Head of Department should ensure:-

- Managers/ Supervisors are aware of their responsibility in ensuring that DSE assessments are undertaken for all staff in their control
- Individual(s) are allocated the role of DSE Assessor and ensure they attend training
- That consideration is given to remote sites ensuring a DSE Assessor can provide support.
- There is support for DSE assessor(s) in carrying out their duties
- Staff have breaks or changes in activity whilst working with DSE
- Staff are made aware of the risks associated with DSE, through adequate and suitable health and safety training
- Where appropriate that formal management referrals are instigated via the DSE referral form where it has been identified that individuals require specialist support
- Appropriate recommendations made by the DSE Assessor and/or Occupational Health specialists are implemented
- A list of DSE Assessors is maintained
- Effective monitoring of DSE Assessments

The DSO will:

- Ensure that all new staff will be made aware of the DSE Policy at induction
- Staff and students (see below) will be advised at induction to undertake the online training programme in relation to the use of DSE equipment. They will be asked to undertake this training within 1 week of starting their role;
- Ensure staff are made aware that this training is mandatory and report non-compliant users to the Head of Department. This will be reported to the HoD directly after 3 requests have been made without compliance.

- check training records regularly and make requests as needed.

Line Managers of DSE Users

- Ensure new and existing users access the online DSE awareness training and complete the DSE assessment within one week of becoming a DSE User.
- Provide DSE equipment/reasonable adjustments following recommendations made by the DSE Assessor/Occupational Health.
- Refer DSE Users to Occupational Health

DSE Assessors as part of their role will:-

- Carry out face to face DSE assessments where necessary
- Where necessary, follow up assessments to resolve problems
- Ensure the provision of any equipment recommendations
- If following the workstation assessment issues/problems have been identified, the DSE Assessor will advise the member of staff and their Line Manager on changes and/or adaptations which could be made to the workstation.
- If after these changes and/or adaptations have been made the member of staff is still experiencing issues/problems with their workstation, then the DSE Assessor will discuss any issues with their Line Manager and a referral to the University's appointed Occupational Health Specialist will need to be made – for full procedure guidance, and template referrals please refer to the following webpage
<https://www.sheffield.ac.uk/hr/wellbeing/workstation-assessment>
- Ensure that the assessment shall be repeated or reviewed if major changes are made to equipment or furniture;if workstations are relocated;if the nature of the work changes;if the health of the user changes or if there is any reason to believe the assessment is invalid.

Staff who are designated as users will:-

- Complete the online DSE awareness training and assessment within one week of becoming a DSE User and work in accordance with agreed procedures and instructions
- Discuss any untoward outcomes of the assessment with the DSE Assessor
- Make any changes indicated by the assessment or when recommended by a DSE Assessor
- Notify the DSE Assessor of any significant changes associated with the DSE and refresh the DSE online training
- Report any health problems related to DSE work to their line manager/supervisor or DSE Assessor

University Occupational Health Service will where necessary:-

Where a management or self-referral has been made to the University Occupational Health Service, they will where necessary:

Make recommendations for individuals and managers to discuss implementation of

reasonable adjustments, including specialist equipment referrals.

Provide support and advice on ill-health issues related to work with DSE

Responsibilities of staff

As outlined in the University DSE Policy linked above, all staff will:

- Undertake this training within 1 week of starting their role
- Bring to the attention of the DSE assessors any problems with their workstations and resulting health issues. The DSE assessor should respond to these within 1 week.
- Ensure The Department of Health & Safety training system is updated to establish when actions have been dealt with;
- Ensure follow up actions after face to face meetings are complete. Timescale is dependant on the action agreed with user;
- Ensure the user is given adequate information on the DSE procedures if problems persist after face to face meetings and follow up action. DSE procedures should be followed.

The Display Screen Equipment (DSE) Regulations, 1992, apply to a display screen ‘user’ that is members of staff who:

- Normally use DSE for continuous or near continuous spells of an hour or more at a time;
- Use DSE in this way more or less daily;
- have to transfer information quickly to or from the DSE; and also need to apply high levels of attention and concentration; or is highly dependent on DSE or has little choice about using it; or needs special training or skills to use the DSE.

Where this criterion applies employers are required to assess VDU equipment and workstations to reduce any health risks; to plan VDU work so that there are breaks of activity; and to provide information and training for users. In addition, users are entitled to eyesight tests and spectacles should they prove necessary specifically for DSE use. Specific procedures relating to the safe use of DSE are:

- Within one month of joining the Department all new staff will be made aware of the DSE policy in this document and, if necessary, will undertake the online training programme at: [display-screen-equipment](#)
- Staff experiencing a problem using DSE equipment must inform the DSE Assessor or DSO and/or line manager as soon as possible to enable action to be taken.
- After completion of the online DSE training package, users requiring free eyesight tests must contact their DSE Assessor, DSO or line manager, who will notify the

University Health and Safety Department so that an approval for a free eyesight test may be issued.

All Department Staff / DSE Users shall:

- comply with any recommendations made by the DSE Assessor;
- be encouraged to report any health problems (either pre-existing or diagnosed) related to their use of DSE to their line manager and DSE Assessor;
- inform the DSE Assessor of any change of circumstances relating to your DSE assessment.

Postgraduate Students

1. Postgraduate students have a particular risk of health problems related to computer use due to the long hours they spend working, they risk ignoring early symptoms in order to meet deadlines, and the possibility that they will work for long periods on a laptop computer.
2. Postgraduate students who have an employment contract with the University will be covered under this policy in the same way as other employees.
3. Postgraduate students who are not employees are not specifically covered by the Health and Safety (Display Screen Equipment) Regulations 1992 (amended 2002); they are not entitled to free eyesight testing and the University is not obliged to provide training and information.
4. Where the University provides a computer workstation for use by a postgraduate student, there is a duty of care to ensure this is suitable for the task involved.
5. It is good practice to encourage postgraduate students to visit the online training site <https://hs.sheffield.ac.uk/> to carry out self-assessment and to seek support from their supervisor departmental DSE Assessor or IT staff if they feel equipment is sub-standard.

UNDERGRADUATE STUDENTS

The DSE regulations do not require workstation assessments for undergraduate students, however, where the University provides facilities for use by students (e.g. in computer labs, the library etc), these should be of an adequate standard i.e. with suitably adjustable chairs, space to work etc.

Laptop Computers

Laptops must comply with the Regulations where they are in prolonged use (e.g. for periods of an hour or more, and on most days).

As the regulations state that the mouse, keyboard and screen must be separate, specific modifications will be required to laptops in prolonged use.

There are several options:-

- a) Place the laptop on a specially made platform or a pile of books etc, and use a separate keyboard and mouse
- b) Use the laptop with a separate monitor
- c) Use the laptop with a docking station
- d) Connect the laptop to a desktop computer using a KVM (keyboard, video, mouse) switch

All laptop accessories should be as light as possible. It is recommended that a rucksack type carrier is considered if a laptop is frequently carried.

The Display Screen Assessors are:

Steve Marsden
Fahmi Mohammad
Dianne Webster

Further reading

[University Display Screen Policy and Procedures](#)

Occupational Health

The University [Occupational Health](#) provision for staff is managed by Human Resources, and delivered through Health Assured Limited.

[Guidance](#) for referral by members of the Department are available at:

Further reading

[Stress Management Policy](#)

[HSE Guidance - Stress](#)

University Stress Management Policy

The University of Sheffield recognises the health and wellbeing of staff as a key priority. The University is committed to building a supportive and fully inclusive work environment where everyone can flourish and succeed.

We take a proactive, preventative approach to health and wellbeing through our Juice programme which provides managers and staff with access to a range of activities and interventions to help them improve and maintain wellbeing.

Staff may at times experience levels of stress. This policy supports staff and managers who find themselves affected by stress and provides appropriate advice, guidance and support should it become an issue at work.

By promoting physical and mental wellbeing and through the appropriate management of the impacts of excessive stress, the University aims to increase levels of staff engagement, reduce levels of sickness, staff turnover and accidents, and achieve greater organisational success through the efforts of better motivated and healthier staff.

Scope:

All University of Sheffield staff.

Please note: Students can find further guidance on addressing concerns regarding stress management through the [University Counselling Service](#).

Key Principles:

1. This policy is designed to promote the wellbeing of staff through proactive and supportive management of excessive work related stress.
2. The University is committed to addressing work related factors which might contribute to excessive stress or undue pressure at work.
3. The University encourages staff to take responsibility for their own health and wellbeing and to make healthy changes to their lifestyle.

4. The University promotes a culture where stressors are acknowledged, where stress is not regarded as a matter of individual weakness, and where staff can talk about feeling under excessive pressure without fear of recrimination.
5. The University expects all members of staff to treat each other with dignity, courtesy and respect.
6. It is the responsibility of staff to inform the University of known disabilities, including mental health issues, in order for the University to support and for staff to be able to work with the University on appropriate solutions.

Accident, Incident and Near Miss Reporting

When do these arrangements apply

All incidents, including accidents, near misses or dangerous occurrences taking place within the Department, or incidents to staff/students whilst undertaking University activities elsewhere, must be reported as soon as possible after they occur via the University's online portal Accident Incident and near miss Reporting (AIR) on your MUSE account (<https://www.sheffield.ac.uk/hs/accident>).

In accordance with the *Reporting of Injuries, Diseases and Dangerous Occurrence Regulations* (RIDDOR), some incidents may also require reporting to the enforcement authority (the Health and Safety Executive). This will be undertaken by the University Head of Health and Safety.

Where the injury resulting absence from work or an inability to carry out normal duties, the equipment linked to the injury should not be disturbed pending investigation;

- the person sustaining the injury or any eye witness should be asked to summarise the events leading up to the accident and they should be recorded in writing if possible.
- the DSO must be informed as soon as possible to enable them to investigate the cause of the incident and so that arrangements can be made to have the scene photograph if necessary
- any absence due to a work related incident should be reported directly to the University Health and Safety Department

Roles and Responsibilities

The Head of Department shall:

- that following an incident, ensure a review of relevant risk assessments and safe working procedures is undertaken, and the implementation of any additional control measures to prevent reoccurrence.

The Department Safety Officer shall:

- conduct local accident investigations and report findings to the Head of Department and the University Health & Safety Department.
- following an incident, secure the area and acquire any evidence to support the investigation (i.e. notes, photographs, etc.), and any eye witness testimony;
- report any absence due to a work-related incident directly to the University Health and Safety Department;

The EEE Health and Safety committee will monitor and review any serious incidents ensuring suitable and sufficient counter measures.

The prevention of accidents in the university is everyone's responsibility and each member of staff should ensure that they are familiar with any special emergency instructions relevant to the areas in which they work for the proper handling of emergency situations.

Out of Hours Working

All staff, graduate students and visitors must sign-in (where log books are available) at the Porters Lodge of the relevant building when working in the Department outside of the hours 8.00 a.m. to 6.00 p.m., Monday to Friday.

Undergraduates are not normally permitted to work out-of-hours.

No practical or experimental work where there is a risk of an accident should be undertaken out of hours. Normally, work out-of-hours should be restricted to library work, computing, writing reports and making non-risk observations.

Anyone working out-of-hours must:

- Submit an [Out of Hours Working Permission Form](#), approved and signed by their Supervisor and returned to the Departmental Safety Officer, before permission can then be granted.
- Have completed all training required by EEE and this is up to date:
 1. Fire Awareness
 2. Out of Hours and Lone Working
 3. Display Screen Equipment (DSE)
 4. General Risk Assessment Techniques
 5. Safe Manual Handling
 6. CoSHH Awareness
 7. H&S Induction (online for new staff/students from September 2019)
- Have read and understand the potential hazards and their control measures in the Out of Hours risk assessment.

Other important points to note:

- Out of hours access is not granted automatically, and permission **must** be sought using the [Out of Hours Working Permission Form](#).
- Completed forms are to be returned to the DSO (paper copy or scanned by email).
- The application can take up to 7 working days to be approved and actioned.

Please note that generic risk assessments are for offices and workrooms, not labs/experimental work, are available on the EEE Health & Safety [web page](#)

Lone working

Lone working within EEE is not encouraged, but may be permissible under very specific circumstances after a detailed risk assessment has been performed.

Supervisors have a duty to assess the risks faced by lone workers.

The [Lone Worker Guidance & Checklist](#) should help you assess the risks presented.

Disability (permanent and temporary), New and expectant mothers, Young Workers

People with certain physical disabilities or health issues may be at greater risk from particular activities than would otherwise be the case.

Staff and students with physical disabilities, or health issues which they feel could in some way put them at increased risk in the workplace, are encouraged to discuss the situation with their Manager/Supervisor and the DSO.

Supervisors/Managers may wish to seek advice where appropriate.

Issues of a sensitive nature will be treated with the utmost confidentiality.

Certain work activities and environments may adversely affect the health, safety and/or welfare of new and expectant mothers and/or their child (new or as yet unborn).

New and expectant mothers who feel that their or their child's health, safety and/or welfare may be put at risk by their work activities and/or environment are encouraged to discuss the situation with their Manager/Supervisor in the first instance, who should arrange with the DSO for a pregnancy risk assessment to be completed and reviewed at regular periods throughout the pregnancy, as well as on their return to work.

Further information from the DSO may be sought if they feel that issues have not been considered correctly or to their satisfaction.

Females who are pregnant **must not** handle suspected carcinogens: the risk of teratogenic effects is greatest in the early stage of pregnancy.

Females who work with known or suspected carcinogens and who are contemplating pregnancy, should seek advice from their Manager/Supervisor.

Young Workers (under 18 years of age)

Introducing young people to the world of work can help them understand the work environment, choose future careers or prepare for employment. An appreciation of workplace risk and how to deal with it can be one of the biggest benefits offered by a work placement.

Young people may need closer supervision depending on their level of experience, competency and maturity, and the nature of the work. For instance, a school placement scheme work experience person will need constant supervision.

Further reading

[Young People and Work Experience](#)

[New and Expectant Mothers who work](#)

Older workers

Today's workforce is likely to contain a higher proportion of older workers because of factors such as increased life expectancy, removal of the default retirement age and raising of the State Pension Age, which means that many people will need, and want to continue working.

Employers have the same responsibilities for the health and safety of older employees as they have for all their employees.

Older workers bring a broad range of skills and experience to the workplace and often have better judgement and job knowledge, so looking after their health and safety makes good business sense.

Line Managers/Supervisors should:

- Review your risk assessment if anything significant changes, not just when an employee reaches a certain age
- Not assume that certain jobs are physically too demanding for older workers, many jobs are supported by technology, which can absorb the physical strain.
- Think about the activities older workers do, as part of your overall risk assessment and consider whether any changes are needed. This might include:
 - allow older workers more time to absorb health and safety information or training, for example by introducing self-paced training.
 - introduce opportunities for older workers to choose to move to other types of work.
 - design tasks that contain an element of manual handling in such a way that they eliminate or minimise the risk.
- Think about how older workers could play a part in helping to improve how you manage health and safety risks. This might include having older workers working alongside colleagues in a structured programme, to capture knowledge and learn from their experience.
- Avoid assumptions by consulting and involving older workers when considering relevant control measures to put in place. Extra thought may be needed for some hazards. Consultation with your employees helps you to manage health and safety in a practical way.

Further reading

[Young People and Work Experience](#)

[Health & Safety for Older Workers](#)

[New and Expectant Mothers who work](#)

Arrangements for Manual Handling

Introduction

When do these arrangements apply

The Manual Handling Operations Regulations 1992 apply to manual handling operations which may cause injury at work such as lifting and lowering of loads pushing, pulling, carrying or otherwise moving loads, whether by hand or other bodily force.

There are three principal duties:

- Hazardous manual operations should be avoided where reasonably practicable;
- Operations which cannot be avoided must be subject to ergonomic assessment as to how they should be undertaken;
- The risk of injury should be reduced as far as is reasonably practical for example the use of mechanical handling aids and training improper handling techniques.

The department will have a manual handling assessor and appoint new candidates as required.

Overview/General duty of departments

All staff in the department should receive appropriate manual handling training basic training and safe manual handling techniques for lifting loads under 5Kg only which is supplied by the Health and Safety department via online training. Refresher training takes place every three years. Records will be accessible to the DSO via health and safety training system.

In addition, the DSO is able to deliver Manual Handling Awareness training to staff/students for loads greater than 5kg.

Manual handling online training is available via the health and safety training system which can be found at <https://hs.shef.ac.uk>

The Manual Handling assessor and EEE point of contact is **Stephen Dorward**.

The majority of tasks involve some level of manual handling, e.g. a couple of reams of photocopier/printer paper weigh around 5Kg.

If there is some risk of injury from manual handling, then a task assessment must be made. It should be noted that assessments should only be done by those individuals who have received the appropriate manual handling assessment training.

- Steps must be taken to reduce the risk to the lowest reasonably practicable level.
- Avoid the need for manual handling as far as reasonably practicable.
- Protective measures should be observed at all times, e.g. the wearing of gloves, eye protection or protective footwear.
- Make full and proper use of equipment provided to aid manual handling.

- Always practice good handling techniques.
- Seek assistance, it may be helpful to draw on the knowledge and expertise of others.

Stephen Dorward is a trained Manual Handling Assessor and can advise on manual handling related tasks that are not covered in the normal risk assessment procedure.

The University [Manual Handling Risk Assessment](#) will help you assess the work.

The majority of manual handling in the department is undertaken by the Mechanical Workshop and EEE technical staff who have all attended relevant training.
For moving larger pieces of equipment/furniture etc., EFM Logistics can be booked to assist.

Specialist moving is out-sourced to an external provider such as Lift and Shift.

A complete list of available department lifting aids can be obtained from Karl Rotchell (tel. 25437)

Arrangements for the Management of Specific EEE Areas/Buildings

1. Roles and Responsibilities

For the purposes of managing Health and Safety, the Departmental estate is divided into seven local areas listed in the table below. Each area has a coherent set of activities and forms more or less contiguous space within one building or area. Each local area has a designated local area manager who has specific responsibilities on the development, delivery and monitoring of H&S practice within their local area.

These individuals are selected by the Head of Department for their intimate working knowledge of operations in their local area.

Area manager	Local area manager	Tel	e-mail
Nanoscience clean rooms	Lee Shunburne	25143	lee.shunburne@sheffield.ac.uk
Nanoscience remainder	Lee Shunburne	25143	lee.shunburne@sheffield.ac.uk
EMD Labs	Andy Race	25835	a.m.race@sheffield.ac.uk
Electronics Workshop, F102 Project Lab	Ian Wraith	25864	i.wraith@sheffield.ac.uk
Mechanical Workshop	Karl Rotchell	25857	k.a.rotchell@sheffield.ac.uk
Portobello	Steve Marsden	25861	s.marsden@sheffield.ac.uk

1.1 The Head of Department (HoD) has allocated responsibility for the implementation of this Policy to the area managers and their specific responsibilities are:

- To monitor the conduct of all area users in relation to H&S practice.
- To ensure that inductions have taken place and have been recorded by users, and research groups, operating within their area of responsibility.
- To intervene as appropriate, including immediate stopping of activities which are deemed not to follow acceptable practice.
- To report any breach of Departmental Health and Safety policy to the relevant supervisor, DSO and Head of Department.
- To make resource requests (both personnel and equipment) to the Head of Department to ensure that standards of H&S practice are maintained.
- To have oversight and act as a reviewer for any Standard Operating Procedures (SOP) or Method Statements (MS) within the local area, that are not directly related to research work being undertaken (for which the relevant PI/Academic Supervisor would be responsible).

Area managers have further specific responsibility in relation to COSHH as detailed in the separate EEE COSHH policy and listed in the Technical Specialisation roles section.

Training and Induction Requirements

Any requirement to work within the above areas must be covered sufficiently in the local laboratory or workshop induction including training on the Safe Operating procedures, risk assessments, emergency procedures etc

Managing Risk Assessments and Safe Systems of Work

Supervisors are responsible for ensuring that there is a suitable and sufficient risk assessment and documented safe working procedures in place for any work taking place in the above areas.

Monitoring and Review

Compliance with the arrangements will be monitored through the department's regular inspection programme, the results of which will be reported to the Departmental Health and Safety Committee. In addition, the Department Health and Safety Committee shall review a sample of risk assessments annually and implement any significant findings.

Undergraduate and MSc Teaching Laboratories and Project Work Space

3rd and 4th year students as well as MSc students will need to enter the labs/workspaces of the department to undertake their projects.

Universities have a legal duty to provide '*such supervision as is necessary*' to ensure the health and safety of students. This duty is delegated to the supervisor for 3rd, 4th and MSc student projects.

- Supervisors should appoint a 'suitably qualified person' to deputise for them during times of their absence or unavailability. Students must not carry out experimental work without this supervision. A 'suitably qualified person' may include another member of staff (academic, technical or postdoctoral) or a PhD student providing these persons have knowledge of the work involved and the associated risks.
- Supervision does not always mean constant attendance; it does mean that the supervisor is satisfied that the absence of direct supervision does not constitute a hazard. In general, where non-direct supervision is deemed sufficient, someone must be within reasonable shouting distance to assist during an emergency.
- Supervisors can collaborate in terms of ensuring that someone is available at all times in an area (which may be a suite of labs or single large, shared space), and this should be documented (e.g. a rota in a Google document). A vital stage in defining the level of supervision necessary is to carry out a risk assessment for the project work.
- Access to controlled areas is available in principle to all students, with the requisite risk assessments in place. However, this needs to be looked at on a case-by-case basis, with arrangements put in place to ensure that students contact whoever is supervising them at least when they arrive and depart. The standard for student access will be 8am-6pm, and not 'out of hours'. Ucards and iButtons will be programmed accordingly.
- [Generic risk assessments](#) have been written to cover the following activities: Soldering and Circuit Construction, Office based activities, and an assessment of general risks in the lab. Copies are available at and have been circulated to all students and supervisors, who should discuss, read and sign off together. If this satisfactorily covers all the intended work, then no further risk assessments are necessary.
- Some of the projects covered by the generic risk assessments may be carried out in areas/labs that house higher risks. In these cases, the project students should work to the pre-existing general risk assessments for that area, alongside a documented induction covering those higher risks and stating the conditions where the student can work in the area within the limits of the generic assessments.
- Any project activities not covered by the generic risk assessments, e.g. use of lasers, hazardous substances etc., must be risk assessed separately and signed off by the supervisor before work commences. Masters students should undertake the necessary online training. For UG students, the required training will be provided by

the Department. Schemes of Work that cover all the safety aspects need to be explained to the students.

First and second year undergraduates receive laboratory-based teaching in the Diamond building under the auspices of the Multidisciplinary Engineering Education team.

Further Reading:

[The Diamond Health & Safety Policy](#)

Arrangements for Workplace Standards

Introduction

When do these arrangements apply?

In accordance with the Workplace (Health, Safety and Welfare) Regulations, the University has a duty of care to ensure that the working environment is safe, clean, tidy, hygienic, and comfortable. Within this context, the Head of Department will take reasonable steps to ensure a comfortable workplace temperature, suitable and sufficient lighting and sufficient ventilation, and implement control measures to mitigate against any adverse effects. In addition, the department will implement a minimum standard of health and safety requirements for implementation across all laboratories and workshops.

1. Roles and Responsibilities

1.1 All laboratories and workshops should have a nominated person who is responsible for ensuring that the following minimum standards are implemented:

1. Notice on the door identifying the person (along with a contact number) who has overall control of the area
2. Access to the area has controls to prevent unauthorised access
3. There is a documented induction (recording participation and content) for new staff, students and visitors (if carrying out work) and contractors which is signed off by the trainee and trainer
4. There is a documented general risk assessment for the lab/workshop which is signed off by the person in control of the lab
5. Housekeeping is kept to a satisfactory standard with regard to cleanliness and tidiness, including suitable and sufficient safe means of storage (with all chemicals, samples and equipment appropriately segregated and stored)
6. Training records are available for use of pieces of equipment (e.g. centrifuges, mixers, lathes etc.) where required by the Provision and Use of Work Equipment Regulations (PUWER) assessment, which include content and sign off by trainee and trainer
7. Safe working procedures are documented and displayed for use of equipment and processes
8. Risk assessments are readily available
9. COSHH assessments and Safety Data Sheets are readily available
10. Sufficient Personal Protective Equipment (PPE) is provided and used in line with Risk Assessments

11. Manuals and Declarations of Conformity, maintenance, inspection records, daily operator checks are available where required by the PUWER assessment
12. Rigs and complex experimental equipment have a display showing owner, contact details and if in use or not
13. Signage (on the entrance) to indicate presence of specific high risk hazards.

1.2 Staff should report any issues or concerns with regard to the workplace environment or welfare facilities to the nominated person responsible for the work area, the DSO or the HoD.

Arrangements for the Safe Procurement, Commissioning and Use of Equipment

Introduction

When do these arrangements apply?

In Accordance with the Provision and Use of Work Equipment Regulations 1998 (PUWER), and the Machinery Directive (2006), the University has a duty of care to ensure all work equipment and machinery is safe for use, and to take appropriate action to assess the safety of machinery before purchase, during installation and commissioning, during use, during maintenance, and upon disposal. This policy covers control and safe use of all categories of equipment (not just powered items), and applies to all equipment purchased for research, teaching, contract work or any other work purposes within the University, or for off-site use on University business. The policy also applies to equipment that is second hand, hired, donated or loaned to the University, and items built or modified by the University.

Additional regulations apply with regard to lifting equipment, pressure systems, noise and vibration, electrical equipment, and access equipment (ie. use of ladders/stepladders), arrangements for which are detailed separately within this policy.

Definitions

- Work Equipment - tools, machinery, instruments and rigs required to carry out University activities.
- Requisition - Request for budget approval and processing of an order for an external supplier.

1. Overview/General Duty of Departments

1.1 All procurement of new equipment should be properly planned and organised and all staff, students, and visitors must comply with the guidelines set out in this policy and in the [University Provision and Use of Work Equipment Regulations \(PUWER\) policy](#) (search PUWER).

1.2 It is the Duty of Academic Supervisors, Line Managers, Research Student Supervisors and PDRAs to identify any relevant new equipment procurement within their Group/Laboratory and inform their DTM and DSO.

2. Roles and Responsibilities

Head of Department

2.1 The Head of Department has overall responsibility for compliance with the PUWER regulations and for ensuring that suitable and sufficient measures are put in place to ensure that the safety of all work equipment is assessed prior to purchase and throughout its lifecycle, by:

- clearly identifying an 'Equipment Owner' to be responsible for complying with the University PUWER policy, for each piece of equipment in the department (except unpowered hand tools). The Equipment Owner will depend on the situation, but may be the Academic Supervisor, DTM, Workshop Supervisor, Laboratory Manager, PDRA, etc and will be responsible for ensuring the safe provisions and operation of the equipment
- Ensuring that the Academic Supervisor is held responsible for ensuring the safety of users, through training, safe systems of work and suitable monitoring arrangements
- clearly label the owner of each piece of equipment in the equipment file and where practicable, on the equipment itself
- be satisfied that statutory inspection by EFM (or an appointed contractor) has taken place (because responsibility for statutory inspection also lies with the Director of Estates and Facilities Management).

Academic Supervisor/Line Manager of equipment users

2.2 It is the responsibility of Academic Supervisors and Line Managers to:

- ensure that there is a suitable and sufficient risk assessment in place for working with equipment and that documented safe working procedures are developed and shared with relevant staff including details of emergency shut down and isolation procedures
- ensure that only trained and competent staff/students are permitted to operate work equipment
- ensure that suitable PPE is provided in accordance with the risk assessments and safe systems of work
- monitor the use of the equipment and ensure that users are using it responsibly and within its safe operating limits
- ensure that users maintain all related documentation and usage records as required by local arrangements
- ensure that before new/second hand equipment is procured against their budget, it is assessed for safety prior to purchase in accordance with the University's pre-purchase checklist and that a PUWER assessment is documented (the PUWER assessment asks

questions such as does it have a manual, declaration of conformity, what are the noise levels etc) and confirms with requirements as set out in section 4 below.

- Donated equipment must be assessed in the same way before ownership is transferred to the University
- ensure that any other relevant H&S documentation, e.g. Safe System of Work (SSoW), risk assessment, COSHH assessment, is completed by a competent person and the commissioning report is signed off **before first use** of the equipment ensure that new equipment is added to the relevant register
- monitor compliance as part of inspections and report back to the H&S Committee.

Equipment Owner

2.3 Where appointed, it is the responsibility of the 'Equipment Owner' (who may also be the academic supervisor with responsibilities set out above) of each piece of equipment to:

- ensure that before new/second hand equipment is procured against their budget, it is assessed for safety prior to purchase in accordance with the University's pre-purchase checklist and that a PUWER assessment is documented (the PUWER assessment asks questions such as does it have a manual, declaration of conformity, what are the noise levels etc) and confirms with requirements as set out in section 4 below. Donated equipment must be assessed in the same way before ownership is transferred to the University
- ensure that any other relevant Health and Safety documentation, e.g. Safe System of Work (SSoW), risk assessment, COSHH assessment, is completed by a competent person and the commissioning report is signed off before first use of the equipment
- notify the Departmental Technical Manager and relevant Professional Services, e.g. EFM, H&S, Finance, about the intention to procure new equipment and to provide the relevant information as required in University policies, e.g. PUWER, in a timely manner
- maintain a key document file (as detailed in [Appendix 3 of the Safe Procurement of Equipment Guidance](#)) for all work equipment
- ensure that only trained and competent staff/students are permitted to operate work equipment and, where practical, keep training records and a list of current users displayed on or near the equipment in a clearly labelled location and in the Key Documents Folder
- attach, where possible, instructions for use and an Emergency shutdown procedure to the equipment
- ensure that suitable PPE is provided in accordance with the risk assessments and safe systems of work for the equipment
- ensure that guards and emergency stops are fit-for-purpose, properly located, are of sufficient build to provide protection, be maintained in good condition, not be easily bypassed/disabled/removed whilst the machinery/equipment is in operation

- monitor the use of the equipment and ensure that users are using it responsibly and within its safe operating limits
- ensure that new equipment is added to the relevant register
- ensure that equipment is inspected, serviced and maintained according to the manufacturer's instructions and any statutory requirements, and provide records of maintenance and repair to update the Equipment File
- ensure that defective equipment has warning signs displayed and the equipment isolated to prevent use until repair or disposal
- ensure compliance with legislation when disposing of work equipment by means of sale or donation to a third party (except to a dealer or for scrap).

2.4 The DTM and DSO will monitor and verify compliance by the Equipment Owners.

Users

2.5 It is the responsibility of the equipment user to:

- **not** use equipment until they are inducted, trained, and authorised to do so
- complete and/or sign a suitable and sufficient risk assessment and a safe working procedure for the equipment and follow the standard operating procedure/safe system of work for the task at hand as well as implement any control measures stated in the risk assessment for the task
- operate the equipment in a safe and controlled manner in accordance with the risk assessment, controls, safe systems of work and any other related safety documentation for the activity, and to identify when new or revised risk assessments are required
- ensure pre-use checks (including visual inspections) are carried out and recorded as necessary
- use PPE as directed and outlined in the risk assessment and safe system of work
- maintain all related documentation and usage records as required by the Equipment Owner of Academic Supervisor/Line Manager
- ensure all new and existing work equipment is in good condition, suitable for the purpose intended, for the conditions and environment in which it is to be used, and consideration given to power requirements, floor loading, and production of noise, vibration, dust, fumes or vapours
- be familiar with emergency stop and/or isolation methods and never remove or bypass guards or any other device fitted/provided for safety reasons
- ensure that any defective equipment is not used and reported to the Equipment Owner/technical staff and removed from use immediately with a request that it is quarantined

- report any unexpected behaviour of the system to their line manager or supervisor or Equipment Owner **immediately**. This should then initiate an immediate investigation and the apparatus must be taken out of service until the problem can be remedied
- maintain a safe working environment in accordance with published laboratory standards.

Budget Holders, Approvers and Requisitioners

2.6 Budget Holders and Approvers must ensure that end users are aware of their responsibilities before they are asked to order new equipment.

2.7 Those tasked with requisitioning must complete either a Safe Procurement Checklist ([Appendix 2 of the Safe Procurement of Equipment Guidance](#)), or a reviewed PUWER assessment and risk assessment, before submitting a requisition for approval on SAP or before obtaining equipment from any other source. The DSO, DTM and technical staff can provide advice to Requisitioners in carrying out their duties.

3. Training and Induction Requirements

3.1 Any requirement to work with powered equipment must be covered sufficiently in the local laboratory/workshop/office induction where the equipment is used.

3.2 Supervisors and/or Line Managers are responsible for ensuring that equipment is operated by trained authorised and competent persons only.

3.3 Departmental Safety Officers can arrange, facilitate or provide training when required and advise on control measures.

3.4 Departmental Safety Officers and the Departmental Technical Managers can/will provide Requisitioners with guidance concerning work equipment-related legislation including PUWER and the Machinery Directive.

4. Managing Risk Assessments and Safe Systems of Work

4.1 Academic Supervisors, Line Managers and Equipment Owners must ensure that before new/second hand equipment is procured against their budget, it is assessed for safety prior to purchase in accordance with the University's pre-purchase checklist and that a PUWER assessment is documented (the PUWER assessment asks questions such as: does it have a manual, declaration of conformity, what are the noise levels etc) and conforms with requirements:

- that new work equipment for use at work conforms with the essential requirements of European Community law (for new machinery this means the Machinery Directive)
- that it is CE marked
- that it comes with a Declaration of Conformity
- that it is provided with instructions in English
- that it is free from obvious defects – and that it remains so during its working life

- that adequate information is provided concerning the intended use of the equipment; and about using the equipment (normally this will be a copy of the original equipment's instructions in English)
- that new concepts (in the scope of the Machinery Directive) have been designed and constructed to meet the common minimum European requirements for safety.

4.2 For large or high risk equipment which require controlled access, an associated log book or record must be kept, and preferably attached to/kept near to the equipment, in which users must make entries whenever the apparatus is used and for how long it is used. It should also have entries of routine maintenance and testing. For research apparatus it should include any modifications made to the apparatus.

4.3 Departmental Technical Managers (DTMs) must ensure that, where work equipment poses a significant risk during delivery, installation, commissioning, use, maintenance or disposal, a Departmental Project Manager is assigned and project management techniques are employed to control the equipment procurement process to deliver a safe facility.

4.4 Any person hiring in work equipment on a short-term basis either internally (from within the University) or externally (from hire companies) should ensure that the arrangements for the equipment to be regularly serviced and examined are clear. The person arranging hire should consult with the DTM, follow the arrangements set out in the checklist for leasing equipment ([see template checklist for leasing equipment](#)) and ensure that an up-to-date certificate of examination is provided (if required) and that this will remain valid for the duration of the hire term. The person arranging hire should always check that they are happy with any conditions laid out in the hire agreement prior to signing.

4.5 In order to ensure the safe procurement of substances to ensure compliance with the Dangerous Substances and Explosive Atmosphere (DSEAR) and the Control of Substances Hazardous to Health (COSHH) regulations, departments must ensure that all substances are risk assessed prior to purchase to ensure:

- the substance selected presents the least risk of creating a fire, explosion or corrosive atmosphere, and minimises the risk to health
- that appropriate control methods are in place for the delivery, unpacking, storage, transport, use and disposal of any substances to which the DSEAR and COSHH regulations apply
- that all staff and students that may come into contact with substances are trained in safe handling and use, and are aware of the risks and control methods, and where necessary have sufficient supervision.

4.6 Departments must ensure that areas of buildings with specific ATEX zone classifications have appropriate protocols in place to prevent or control hazardous atmospheres.

4.7 Once substances relevant to COSHH and DSEAR are delivered, the Faculty DSEAR and COSHH policies apply and the arrangements in departments should be followed as appropriate.

5. Managing key documents

5.1 A Lab Safety Folder must be stored nearby or attached to equipment. It must contain all relevant official documentation, including:

- commissioning reports, annual inspections and testing documentation
- a list of current authorised users of the equipment

5.2 The safe operating limits of the equipment (where applicable) must be clearly displayed on the equipment.

6. Monitoring and Review

6.1 Compliance with the arrangements for procurement of equipment will be monitored through the department's regular inspection programme, the results of which will be reported to the Departmental Health and Safety Committee. In addition, the Department Health and Safety Committee shall review a sample of task based risk assessments annually and implement any significant findings.

7. Further Reading

- [University PUWER Policy](#) (search PUWER under documents)
- [Faculty Guidance Document on Safe Procurement](#)
- [HSE Guidance on buying new machinery](#)

Construction of Equipment and Apparatus

All equipment or apparatus constructed in the Department must be tested before use to ensure that it complies fully with all the relevant safety legislation. This applies to equipment or apparatus constructed as part of undergraduate or research projects and applies equally to electronic circuits, electrical machines, mechanical devices, etc. All equipment that is built in the department should have a risk assessment in place for the construction work being undertaken.

It is important to seek advice at an early stage, preferably before the start of construction and this can be obtained from:

Type of work	Contact name	Tel. Ext.
Electronic systems	Ian Wraith	25864
Electrical and energy storage systems, high voltage apparatus	Andy Race	25835
Electrical machines & rotating apparatus	Andy Race	25178 25835
Mechanical systems and materials, woodworking	Karl Rotchell	25437
Lasers and optics	Rick Smith	25179
X-ray radiation	Mark Hopkinson	25385
Non ionising radiation	Alan Tennant	25438
Hydraulic & pneumatic supplies/services	Karl Rotchell	25437
Gases	Paul Haines	25866

Arrangements for the Modification of Equipment - for housing an experiment

Introduction

When do these arrangements apply?

The University Provision and Use of Work Equipment (PUWER) Policy, which places duties on all staff and students who procure, modify, operate or have control over work equipment, requires that equipment provided for use at work is suitable for the intended use; safe for use and maintained in a safe condition. It is University and Faculty policy that all equipment used in the workplace should comply with Provision and Use of Work Equipment Regulations 1998 (PUWER) regulations, CE standards, Departmental arrangements for procurement of new equipment, and (wherever possible), the manufacturer's intended use.

This policy does not apply to:

- activities in departments that relate to building equipment from scratch, using individual components
- activities where the purpose of the research, or the learning outcome is the modification.

Depending on the intended purpose of building or modifying equipment, consideration should also be given to the requirements of the Supply of Machinery (Safety) Regulations 2008.

1. Modifying New Equipment

1.1 The starting assumption is that all staff should purchase suitably designed and CE marked equipment so far as is reasonably practicable.

1.2 If a member of staff believes there is an exceptional case to modify equipment, then they shall be required to provide evidence to the Head of Department that there is:

- a significant teaching or research need to carry out the modification in the first place; and
- suitable and sufficient risk assessments in place; and
- clear documentation of the rationale for why and what modifications have been made; and
- a clear statement from the DSO to indicate how HSE and the University underwriters are likely to view the modification, with a recommendation to escalate to the Health & Safety Department for further advice if required;

1.3 Only in exceptional cases should cost-saving be accepted as justification for modifying equipment instead of purchasing suitably designed and CE marked equipment.

1.4 The Head of Department will formally consider and approve any exception cases on behalf of (or in conjunction with) the Departmental Health & Safety Committee and inform the Deputy FDO (SIT) of the case for modification.

1.5 Quarterly reports will be provided to FEB to monitor the extent and frequency that departments are using modified equipment.

2. Review of Existing Modified Equipment

2.1 The Head of Department will ensure systems are in place to identify existing equipment which has been modified from the original manufacturers condition and record this in the Faculty log (see log here).

2.2 The Departmental Safety Officer will then review each record and document any items that require further discussion to determine whether it should be taken out of service, or whether further discussions would be required with either the central Health & Safety department, the H&S Executive (HSE) or the University insurance underwriters.

2.3 For any pieces of modified equipment that will continue to be used, a retrospective exceptional case to use modified equipment will need to be developed to evidence to the Head of Department that there is:

- a significant teaching or research need to carry out the modification in the first place; and
- suitable and sufficient risk assessments in place; and
- clear documentation of the rationale for why and what modifications have been made
- a clear statement from the DSO to indicate how HSE and the University underwriters are likely to view the modification, with a recommendation to escalate to the Health & Safety Department for further advice if required.

2.4 Only in exceptional cases should cost-saving be accepted as justification for modifying equipment instead of purchasing suitably designed and CE marked equipment.

2.5 Heads of Department will formally consider and approve any exception cases on behalf of (or in conjunction with) the Departmental Health & Safety Committee and to inform the Deputy FDO (SIT) of the case for modification.

3. Further Reading

- [University PUWER Policy](#) (search PUWER under documents)

Arrangements for the Control of Substances Hazardous to Health (COSHH)

Introduction

When does this arrangement apply?

In accordance with the Control of Substances Hazardous to Health (COSHH) regulations (2002) the University has a duty to protect the safety and health of any person who uses, or could potentially be exposed to hazardous substances such as chemicals, liquids, solids, dust, powders, fumes, mists, vapours, gases, biological agents, nanotechnology and microorganisms that cause disease. This policy covers all activities related to the procurement, storage, transport and use of Hazardous Substances and is relevant to all staff, students and visitors who may come into contact with Hazardous Substances. In certain cases, other specific pieces of legislation may apply (ie. radiation, lead, etc.), the arrangements for which are covered separately.

Definitions

- Hazardous substances (HS) include any substance, whether solid, liquid or gas, that may cause harm to your health either in the immediate future or in the longer-term
- HS User - The primary/end user of the HS.
- SDS - Safety Data Sheet (previously known as an MSDS – Material Safety Data Sheet).

1. Overview/General duty of departments

1.1 All staff and students have a responsibility to adhere to this local policy as well as the University policy and any specific measures (as determined by a COSHH Risk Assessment) which are put in place to reduce or remove exposure to hazardous substances.

1.2 All work involving substances hazardous to health should be properly planned and organised.

1.3 It is the duty of Line Managers, Research Student Supervisors and PDRAs to identify any relevant work using hazardous substances within their Group/Laboratory and inform their HoD and DSO.

2. Roles and Responsibilities

Head of Department

2.1 The Head of Department (HoD) has overall responsibility for all activity under COSHH within the department and for the implementation of this Policy. Specifically, the HoD will:

- understand COSHH regulations
- be satisfied that robust systems are implemented for the effective management of all hazardous substances

- ensure that a COSHH register/inventory exists detailing all hazardous substances in use within the Department, and that a current safety data sheet is held for all HS
- be satisfied that statutory inspection of Local Exhaust Ventilations (LEVs) by EFM (or an appointed contractor) has taken place (because responsibility for statutory inspection also lies with the Director of Estates and Facilities Management).

Academic Supervisors/Line Managers

2.2 It is the responsibility of academic supervisors and line managers of HS users to:

- agree with the need to use HS as detailed in the risk assessment
- ensure the provision of instruction, training and supervision for Department staff and students using hazardous substances
- ensure all HS are assessed and that the Risk Assessment and COSHH assessment is suitable and sufficient in terms of covering the hazards and risks involved, using the SDS to inform as required, and ensuring a copy of the material safety data sheet and a safe system of work is held locally and readily accessible (either hardcopy or electronically)
- ensure that the RA and COSHH assessment is signed off by them before work using the HS takes place, and reviewed as necessary and communicated to all concerned
- ensure that suitable supervision of HS users is provided where required
- ensure that users in their areas are competent and receive the training necessary to use HS safely, and that this is sufficiently documented
- ensure that necessary control measures are in place before work using the HS takes place including the safe delivery, transportation and storage of HS prior to use
- implement and enforce control measures detailed within the risk assessments (including the use of PPE) and adhere to the procedures detailed within safe working procedures
- oversee relevant pre-use checks on equipment (such as LEV) used to minimise exposure to HS
- for applicable substances, ensure workplace exposure limits are not exceeded
- have local contingencies for spillage etc. in place and inform the DSO of any accidents or incidents involving hazardous substances immediately.

Users of Hazardous Substances (HS)

2.3 It is the responsibility of the HS User to:

- ensure that risk assessment, controls and safe systems of work (including pre use checks) are in place and understood for the work to be undertaken, which may involve their production in conjunction with the Supervisor before undertaking any work with HS
- work according to any stipulations set out in that risk assessment

- attend relevant training
- perform relevant pre-use checks on equipment (such as LEV) used to minimise exposure to HS
- use PPE and safety equipment as directed in the risk assessment
- report any unexpected behaviour of any task, equipment or PPE to their line manager or supervisor immediately for further action if required
- inform their supervisor/line manager of pregnancy, and/or any pre-existing/diagnosed health conditions that could be affected by their use of, or exposure to hazardous substances
- be aware of the actions to take in the event of themselves or another person being adversely affected by a hazardous substance
- attend any occupational health surveillance as required.

Department Safety Officer

2.4 It is the responsibility of the Department Safety Officer to:

- monitor risk assessments, COSHH assessments and safe working procedures to ensure COSHH hazards and control measures have been accounted for
- monitor compliance with mandatory safety training for those who are required to use hazardous substances
- organise occupational health surveillance and liaise with the University Occupational Health Advisor (or approved external service provider) on work related illness caused by hazardous substances
- maintain documents and records relating to LEV inspection and maintenance.

3. Training and Induction

3.1 Any requirement to work with HS must be covered sufficiently in the local laboratory or workshop induction where HS is used.

3.2 All staff and research postgraduates must complete the on-line COSHH awareness training module.

3.3 In addition, all staff who use HS or who supervise others to use HS must undertake COSHH assessment training.

3.4 Departmental Safety Officers can arrange, facilitate or provide training when required as prioritised in conjunction with the HoD.

4. Managing Risk Assessments and Safe Systems of Work

Use of Hazardous Substances (HS)

4.1 All HS users must complete the COSHH Risk Assessments using the departments COSHH Assessment form which can be found [here](#)

4.2 After review and authorisation by the Supervisor, the COSHH Risk Assessment should be available at the point of use alongside the relevant SDS. A COSHH Risk Assessment is only active once authorised by the Supervisor and should be reviewed on a regular basis, or when a substantive change to the procedure (new chemical, process, etc) occurs. COSHH Risk Assessments should consider the following:

- risks associated with any HS
- alternatives to that HS which may be less hazardous
- intermediate products which may be formed during the procedure
- engineering controls which may be present or need to be present
- suitable PPE
- disposal considerations.

4.3 A central Departmental log of all active COSHH Risk Assessments shall be kept by the Departmental Safety Officer. Local (lab or group of labs) logs of active COSHH Risk Assessments may also be kept.

4.4 All laboratories containing HS should display appropriate signage, with highly dangerous HS indicated on door signage to provide warning of the hazard.

4.5 All laboratories containing HS should have clear access control arrangements in place to ensure that only trained, authorised and competent users enter the vicinity of HS.

Procurement of Hazardous Substances (HS)

4.6 No HS should be brought into a Department without an active COSHH Risk Assessment being in place beforehand. This includes HS from collaborators or samples from suppliers.

4.7 An active COSHH Risk Assessment should be referenced with any order placed, either by attachment of the Risk Assessment to the order or a reference number being added to the appropriate field in SAP.

4.8 For HS not available from standard suppliers on SAP, the Purchasing Card held by either the Departmental Safety Officer or Departmental Technical Manager may be used for payment. No other purchasing route will be used for HS.

Receipt and Storage of Hazardous Substances (HS)

4.9 Deliveries of HS should only go to a nominated location that has suitable facilities in place to receive them.

4.10 HS should be stored in their final intended working locations according to the precautions set out in the Risk Assessment and SDS.

4.11 Inventories shall be produced of HS held in a local (lab or group of labs) area and kept up to date.

4.12 To assist in reporting, central Departmental inventories will also be produced and managed by the DSO/DTM. This is particularly important for poisons and chemical weapons precursors as Departments are required to submit an annual return of stocks held.

Disposal of Hazardous Substances (HS)

4.13 HS should only be disposed of in accordance with precautions and via the routes specified in the SDS and RA.

4.14 If storage of HS waste is required (i.e. in order to build up to a minimum level prior to professional collection and disposal) then an inventory of this waste should be held in the local area.

Managing Engineering Control Equipment

4.15 Departmental Safety Officers and Technical Managers shall ensure that suitable testing of engineering control equipment in accordance with operating manuals (for example for LEVs) is performed at the required intervals, and that these tests are recorded and those records easily available (see separate policy arrangements for LEV management).

Poisons and Chemical Weapons

4.16 Poisons (as defined in the Poisons Act 1972) have their own specific storage, transport and notification requirements. Some chemicals can be used as chemical weapons or as precursors in the production of chemical weapons and again have their own notification requirements. See the further guidance document for details.

5. Managing key documents

5.1 The department will keep a central record of:

- COSHH Risk Assessments
- HS
- Poisons that fall into either Part 2, Regulated Poisons or Part 4, Reportable Poisons - of Poisons Act 2 1972, Schedule 1A

6. Monitoring and Review

6.1 Compliance with the arrangements for HS will be monitored through the department's regular inspection programme, the results of which will be reported to the Departmental Health and Safety Committee. In addition, the Department Health and Safety Committee shall review a sample of COSHH risk assessments annually and implement any significant findings.

7. Further Reading

- [Additional Faculty COSHH Guidance](#)
- [University COSHH Policy](#)
- [EEE-COSHH-POLICY-v5.1](#)
- [EEE CoSHH Risk Assessment Form](#)

Arrangements for the Management of Local Exhaust Ventilation (LEV) systems

Introduction

When do these arrangements apply?

In accordance with the Health and Safety at Work Act 1974 and the Control of Substances Hazardous to Health Regulations 2002 (COSHH,) the University has a duty to control risks to employees' health arising from potential exposure to dust, fumes, mists, vapours and gases. This policy covers the installation, commissioning, statutory examination test and decommissioning of all Local Exhaust Ventilation (LEV) systems (fixed and non-fixed assets) and complements the existing [LEV University Standard](#).

Definitions

- Local Exhaust Ventilation (LEV) - Engineering control system designed to protect the operator by minimising exposure to airborne contaminants such as dust, mist, fume, vapour and gas. The main elements of an LEV are:
 - A hood of some kind, where the contaminants enter the system
 - Ducting, which safely transports the contaminants to a filter/cleaner/exhaust point
 - Air cleaner/filter/scrubber
 - Air mover, a fan to power the system
 - Discharge: a safe point of air exhaust.
- Fume Cupboards - a type of LEV which is a ventilated enclosure where chemicals that have or produce dust, mist, fumes, vapours and gases can be handled or kept.
- Fixed Systems LEVs - form part of the building's permanent structures and fittings within the fabric of the building.
- Non-Fixed System LEVs do not form part of the fabric of the building, for example:
 - portable extraction systems
 - systems which form part of a larger machine (e.g. fume extraction in a laser cutter)
 - systems which may be even permanently connected to the building structure, but whose parts *do not travel* through the fabric of the building
- LEV book - a book to be positioned next to each LEV, to hold the relevant documentation generated during the LEV's lifecycle.

1. Overview/General duty

1.1 All staff and students using LEVs must follow the arrangements in this policy.

1.2 It is the responsibility of line managers, academic supervisors and PDRAs to identify any relevant LEV system within their Group/Laboratory and inform their DSO.

2. Roles and Responsibilities

2.1 The Heads of Department (HoD) has overall responsibility for the implementation of this Policy, by:

- ensuring that all LEV systems have associated risk assessments, written schemes of examination and inspection records
- ensuring that all departmental staff operating or maintaining such equipment are competent
- appoint one or more Competent Persons (CP) in their department, based on the [list of competencies](#) (this may be one person per site or one person per LEV) to assist EFM and the end user in a number of activities which prepares the system for use, maintains it fit for purpose across its life cycle, and dispose of after use
- be satisfied that statutory inspection by EFM (or an appointed contractor) has taken place (because responsibility for statutory inspection also lies with the Director of Estates and Facilities Management)

2.2 The current list of competent persons are as follows:

Jon Milner Nanoscience and all EEE locations LEV Lead

2.3 It is the responsibility of the competent person to:

- ensure that Risk Assessment and Methods Statement (RAMS) and Safe Systems of Work (or Operating Procedures (SOPs)) are provided by suppliers to the department prior to installation
- refer to the departmental arrangements for procurement for any new or second hand LEV systems
- ensure that suppliers perform suitable handover to the department, including a written scheme of maintenance and operation, detailing all the operational aspects and maintenance requirement for the system, and specifically, the frequency for replacing critical parts (e.g. filters) as part of the Planned Preventative Maintenance (PPM) regime.
- oversee the supplier carry out the commissioning of the LEV system and create the commissioning report

- verify the list of LEVs and tags present in the department, to make sure the data in the asset database is consistent with the real situation
- ensure that LEVs not within the required specification are taken out of use (e.g. sash closed, and appropriate signage put in place) until repairs have taken place
- act as a key contact point for EFM to ensure that statutory examinations are taking place as required and that the department receives, records and progresses examination reports
- act as a point of contact with EFM to chase up any required remedial works
- check that users who operate, install, maintain, repair, inspect or test LEV systems have the necessary skills and knowledge to carry out their job safely
- ensure that where LEVs have changed usage, they are recommissioned and tested at the appropriate specification
- regularly monitor LEV system performance by providing an overview of airflow monitoring undertaken in pre use checks
- organise training sessions for users including lab induction and refresher training
- organise decontamination as appropriate if an LEV is removed
- organize statutory inspections for Mobile LEVs or LEVs which are part of machines.

2.4 Academic Supervisors/Line Managers are responsible for:

- understanding the scope and content of the relevant Regulations and University policies where this is relevant to work in their specific area
- ensuring that suitable and sufficient risk assessments and safe systems of work have been documented and that these are signed and shared with all relevant staff and students
- ensuring only trained authorised and competent persons work with LEVs
- communicating the requirement for all staff under their control to complete online "managing and maintaining LEVs" training programme
- consult with the department's Competent Person before buying any new LEV
- enforcing all control measures (including the use of PPE) identified by risk assessments for staff/students for whom they are responsible.

2.5 It is the responsibility of the LEV user to:

- only use LEVs where they are trained, authorised and competent to do so
- create or comply with the risk assessment, controls and safe systems of work for all activities requiring an LEV, and identify when new or revised risk assessments are required
- perform and record daily visual inspections and control the airflow before use, as directed by the operation manuals
- in collaboration with the Departmental Competent Person and EFM Competent Person, define the specification for any new LEVs to be procured
- undertake relevant induction and training and take the online "managing and Maintaining LEVs" training before using any LEV

- know and work within the safe operating limits of the LEV
- report any fault or concerns following the pre-use checks to the nominated person for that LEV immediately who will arrange for any necessary remedial actions which must be completed before the LEV is used
- contribute to any required disinfection at the end of the LEV's lifecycle in line with the operations manual.

2.6 The DSO is responsible for recording and escalating instances of non compliance to the EFM Helpdesk and the Departmental Health Safety Committee. If this can not be resolved at Department level this must be raised to the Faculty H&S Executive Group.

2.7 The Estates and Facilities Management Competent Person (EFM CP) will be expected to:

- arrange for the installations to happen, in collaboration with the LEV supplier and contact with the local Departmental Competent Person
- routinely organize statutory inspections for fixed LEVs
- declare LEV units as unusable once they are no longer fit for purpose
- physically dismantle / dispose of fixed LEVs at the end of their useful life.

3. Training and Induction Requirements

3.1 Any requirement to work with LEVs must be covered sufficiently in the local laboratory or workshop induction including training on the Safe Operating procedures of the LEVs.

3.2 Any user, academic supervisor or technical staff that are required to work with LEVs must first take the online "managing and maintaining LEVs" training programme.

3.3 Supervisors and/or Line Managers are responsible for ensuring that LEVs are operated by trained authorised and competent persons only.

3.4 Departmental Safety Officers can arrange, facilitate or provide additional training when required.

4. Managing Risk Assessments and Safe Systems of Work

4.1 Supervisors are responsible for ensuring that there is a suitable and sufficient risk assessment and documented safe working procedures in place for any work involving LEVs.

4.2 Anyone managing, planning, controlling or using any LEV must first complete or sign a suitable and sufficient risk assessment and a safe working procedure and must follow the standard operating procedure or safe system of work for the task at hand and implement any control measures stated in the risk assessment for the task.

4.3 Instructions for use must be attached to each LEV.

5. Managing key documents

5.1 An LEV book must be stored nearby or attached to the LEV. It must contain all relevant official documentation for the LEV including:

- Test certificate, commissioning report
- Safe Operating Procedures (SOPs)
- User manual, Maintenance manual
- Airflow check sheet
- Log entries for contaminants, change of purpose, decontamination
- decontamination certificates
- record of repairs

6. Monitoring and Review

6.1 Compliance with the arrangements for LEVs will be monitored through the department's regular inspection programme, the results of which will be reported to the Departmental Health and Safety Committee. In addition, the Department Health and Safety Committee shall review a sample of LEV related risk assessments annually and implement any significant findings.

7. Further Reading

- HSE [LEV systems introduction](#)
- HSE [LEV manual](#)
- The [University LEV Standard](#)

Arrangements for the use of Cryogenics and Liquid Nitrogen

The hazards associated with low temperature liquefied or solidified gases mainly arise from their physical properties. They are:

- Asphyxiation - Rapidly evaporating gases can reduce the oxygen concentration of air by displacement so that it reaches dangerous levels (see table below). Areas with oxygen concentrations below 18% must never be entered. It is recommended that oxygen alarms are set to alarm at 19%.
- Cold burns, frostbite and hypothermia from contact with liquefied/solid materials, cold surfaces or gases.
- Over pressurisation if the large volume expansion caused by the liquid becoming a gas is confined or trapped.
- Fire from oxygen enriched atmospheres generated by the condensation of oxygen onto surfaces.
- Materials becoming brittle from the effects of extreme cold and could result in catastrophic failure.
- Manual handling risks from delivering/transporting of cryogenic materials and their containers around site may create manual handling hazards.

Organisation

For the purpose of accessing liquid nitrogen supplies, the Department is divided into 2 areas, where **Richard Frith** is tasked with controlling access to the fill points. Liquid Nitrogen vessels and fill points are located at:

- Nanoscience
- Portobello Centre

Summary of duties and responsibilities of the Lead on Cryogenics

- Maintain an up to date register of authorised users
- Undertake periodic checks of all equipment and keep a record of those checks
- Ensure that new vessels are added to the Department inventory and if required, are subject to inspection by BOC.
- Ensure that and advisory notes/defects found are acted upon.
- Provide advice to colleagues on students on decanting of liquid nitrogen, and where necessary, assist the authorised user.
- Take out of commission, with a view to disposal, any equipment which is not deemed fit for purpose (either as a result of periodic inspections or ad-hoc inspection)
- To maintain a reasonable working knowledge of HSE guidelines and legislation.
- Attend the Departmental Health and Safety Committee
- Prepare a report for each Departmental Health and Safety Committee meeting
- Take the lead on addressing issues raised by H&S Audits or Departmental inspections
- Identify any budget requirements in connection with the use of Liquid nitrogen
- Attend relevant training courses as requested by the Head of Department

- Bring to the attention of the Departmental Safety Officer and the Head of Department any concerns over actions or culture in relation to use of cryogenics.

Equipment for Cryogenic Storage and Transport

- All holding vessels must be examined annually by BOC (arranged via EFM)
- Vessels are stored in locked compounds and the fill points *individually* locked when not in using valve lock and suited padlock and/or chain. This lock must render the equipment unusable when locked.
- An induction will be given for accessing the loading bay and the fill point; precautions to be taken; awareness of the risk and COSHH assessment will be given by Richard Frith and signed off by all parties.
- A numbered key will be issued by Richard Frith on production of a valid Liquid Nitrogen training certificate.
- Keys must not be loaned to anyone. Periodic checks will be made by Richard Frith /DSO/DTM.
- Only the DSO is permitted to obtain copies of these keys.
- All users of liquid nitrogen must have a valid and up to date awareness training from BOC.
- Once training has been completed, prospective users must contact Richard Frith for an induction. A numbered key will also be issued.
- A generic Risk Assessment is in place along with a COSHH Assessment in place.

EEE utilise Liquid Nitrogen in various ways. Access to Liquid Nitrogen supplies is only allowed to individuals who have received training from the DSO or Designated Proxy, and all Liquid Nitrogen access points are locked off with keys that are tightly controlled and only available to trained users.

We don't use Dry Ice at this point in time.

Arrangements for Lifting Operations and Equipment

Introduction

When does this arrangement apply?

In accordance with The Lifting Operations & Lifting Equipment Regulations (LOLER) and the Provision and Use of Work Equipment Regulations (PUWER), the University has a duty of care to ensure the safety of anyone whose work involves the lifting and lowering of loads. Whether those loads are goods or equipment, the University must ensure that the equipment and any accessories (e.g. slings, hooks etc) are in safe working condition and do not pose a risk of failure. This Policy covers the use of all lifting equipment and lifting activities related to the lifting and lowering of loads but not the use of a forklift truck (please see separate workplace transport policy).

Definitions

- ‘Lifting equipment’ - includes any equipment used at work for lifting or lowering loads, including attachments used for anchoring, fixing or supporting it. The definition also includes lifting accessories such as chains, harnesses, slings, hooks or eye bolts etc.
- ‘Thorough Examination’ - a thorough examination is a systematic and detailed examination of the lifting equipment by a competent person to detect any defects that are, or might become, dangerous.

1. Overview/General duty

1.1 All staff, students and visitors lifting or lowering loads must follow the arrangements within this policy and all work involving lifting or lowering loads should be properly planned and organised.

1.2 It is the Duty of Line Managers, Research Student Supervisors and PDRAs to identify any relevant lifting equipment within their Group / Laboratory and inform their HOD and DSO.

1.3 The University of Sheffield has a policy and systems in place to manage statutory requirements covering lifting equipment. Currently, lifting equipment is inspected by the University insurers (Allianz). Records are managed by Estates Facilities Management (EFM) and given to a departmental representative, Karl Rotchell (Mechanical Workshop Supervisor). Records are also available to representatives via the Allianz website.

2. Roles and Responsibilities

Head of Department

2.1 Overall responsibility for lifting equipment lies with the Head of Department, but responsibility for statutory inspection in particular also lies with the Director of Estates and Facilities Management and in this case, The Head of Department has to be satisfied that statutory inspection by EFM (or an appointed contractor) has taken place.

Competent Person

2.2 The Head of Department will nominate one or more Competent Persons to provide oversight of the lifting arrangements (which may be one person per department; or one person per site).

2.3 Current Competent Persons are as follows:

Karl Rotchell	All EEE areas	Lifting Equipment Lead
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2.4 It is the responsibility of the Competent Person to:

- ensure that pre-planning and risk assessment is in place for all activities involving lifting equipment (including attachments/ lifting accessories) and lifting operations
- ensure that all lifting equipment and accessories are individually identifiable and tagged (for example, with safe working loads or to indicate accessories)
- ensure that lifting equipment and accessories are suitably stored and secured when not in use and only made available to authorised operators
- ensure that all lifting equipment is thoroughly examined by a competent person, when the equipment is put into service for the first time (unless it is new and a declaration of conformity is provided or when Allianz specifically agree that the item in question does not need to be examined) or following any significant change which may affect the safe operation of the lifting equipment. This could include its involvement in an accident or dangerous occurrence, after a significant change in conditions of use and/or long periods out of use or after exceptional circumstances liable to affect the safety of the lifting equipment.
- act as a department point of contact to Estates Facilities Management in order to manage and ensure statutory examination and inspection of all lifting equipment by University insurers (Allianz)
 - notify our insurers (Allianz) of all lifting equipment
 - receive Allianz examination reports
 - record and progress examination reports and the actions contained therein
 - ensure that examination reports (provided by Allianz) are reported to the Departmental Health and Safety Committee
 - ensure that lifting equipment and accessories are 'fit for purpose', remains safe and is positioned or installed to prevent the risk of injury

- ensure that lifting equipment is positioned or installed to prevent the risk of injury
- ensure that users know and do not exceed the maximum safe working load (SWL), and ensure the SWL is clearly marked on the equipment;
- ensure that defective lifting equipment is removed from service and is not returned to use until defects have been rectified
- ensure that no lifting equipment is purchased without prior consultation with, and approval from, the Departmental Competent Person and Departmental Technical Manager and that equipment is only purchased through approved suppliers
- ensure a procedure is defined which allows new equipment to be introduced between mandatory inspections, whilst ensuring that such equipment has been provisionally inspected and tagged and recorded on the register
- ensure that all new lifting equipment is supplied with a test certificate and user manual before use, and that these are stored in a suitable location.
- ensure that training and information is provided to the department on the risks from lifting and slinging and the measures in place to reduce these risks
- where practical, keep training records and a list of current users displayed on or near the equipment in a clearly labelled location and in the Key Documents Folder
- ensure that suitable PPE is provided in accordance with the risk assessments and safe systems of work

Organisation

For the purpose of accessing equipment for lifting equipment, the Department is divided into 4 areas, where Karl Rotchell, Workshop Supervisor, is tasked with controlling access to lifting equipment. The lifting equipment is located at:

- Nanoscience building
- George Porter building
- EEE Mechanical Workshop
- Kroto building, room LG50

Equipment for Lifting Operations

- For the purposes of this document, the term lifting equipment is taken to include sack barrows, pedestrian fork trucks, winch stackers, hydraulic lifting tables etc.
- All lifting equipment must be statutorily tested annually by Allianz (arranged via EFM)
- All lifting equipment must be registered on the Department register of lifting equipment.
- All lifting equipment must be inspected annually and accessories e.g. eye bolts, slings every 6 months on a scheduled basis and individually tagged.
- All pieces of lifting equipment will be *individually* locked when not in using a suited padlock and chain. This lock need not necessarily be wall-mounted (the expectation is

that the vast majority will not) but it must render the equipment unusable when locked.

- There will be only 3 keys for each lock (Karl Rotchell, DTM and DSO) Spare to be kept in the Departmental safe). In the event that Karl Rotchell is not available, the DTM or DSO become the nominated cover during period of absence, e.g. annual leave, illness.
- Only the DSO is permitted to obtain copies of these keys.
- For an activity that spans more than one day, the user should make the necessary arrangements to ensure that the equipment is locked and secured at the end of each working day and over weekends.
- All users of lifting equipment must have a valid and up to date training
- Before permitting access to lifting equipment, Karl Rotchell (or nominees) must be satisfied that there is an appropriate Risk Assessment in place.

2.5 Lee Shunburne, DTM will monitor and verify compliance by the Departmental Competent Person.

Academic Supervisors and Line Managers

2.6 Academic Supervisors/Line Managers are responsible for:

- understanding the scope and content of the LOLER Regulations where this is relevant to work in their specific area
- ensuring that all lifting operations in their area of responsibility are planned by a competent person and that risk assessments and safe systems of work are shared with staff
- ensuring only trained authorised and competent persons operate lifting equipment and accessories and that relevant staff complete any required training
- ensuring that suitable and sufficient risk assessments and safe systems of work have been documented and that these are signed and shared with all relevant staff and students
- enforcing all control measures (including the use of PPE and restriction zones) identified by risk assessments for staff/students for whom they are responsible.

Operators/Users

2.7 It is the responsibility of the operator to:

- comply with the risk assessment, controls, manufacturer's instruction for the sole purpose intended and safe systems of work for the activity (including attachments/ lifting accessories) and identify when new or revised risk assessments are required
- attend relevant training
- operate lifting equipment and undertake lifting operations in a safe manner
- ensure pre-use checks are carried out and recorded as necessary
- ensure that any defective equipment is not used and reported to the Competent Person with a request that it is quarantined

- create or contribute to the development of specific lifting plans for any complex processes e.g. irregular shaped items
- ensure lifting accessories for securing loads are compatible with the load, and during lifting, steps should be taken to prevent the load or part of the load becoming unstable.
- report any unexpected behaviour or defective equipment to their line manager or supervisor **immediately**. This should then initiate an immediate investigation and the equipment or accessory must be taken out of service until the problem can be remedied.
- Users must ensure that every lifting operation involving lifting equipment is properly planned by a competent person, appropriately supervised and carried out in a safe manner by a competent person.
- All lifting equipment in the Department is annually inspected by an external assessor to establish and record its condition.

Departmental Safety Officer

2.8 The Department Safety Officer shall:

- understand the scope and content of the LOLER Regulations
- monitor control measures identified by risk assessment to ensure they are implemented and adhered to;
- arrange/provide training when required and monitor staff training in line with the legal requirements for the vehicles in use
- collate statutory inspection records received, and distribute to those who are responsible for the lifting gear concerned.

2.9 Any person hiring in lifting equipment or accessories on a short-term basis either internally (from within the University) or externally (from hire companies) should ensure that the arrangements for the equipment to be regularly serviced and examined are clear. The person arranging hire should consult with the DTM, follow the arrangements set out in the checklist for leasing equipment ([see template checklist for leasing equipment](#)) and ensure that an up-to-date certificate of examination is provided and that this will remain valid for the duration of the hire term. The person arranging hire should always check that they are happy with any conditions laid out in the hire agreement prior to signing.

3. Training and Induction Requirements

3.1 Any requirement to work with lifting and slinging equipment must be covered sufficiently in the local laboratory/workshop/office induction where lifting equipment is used.

3.2 The Departmental Competent Person should ensure that suitable training records are available for each piece of lifting equipment. Examples could include external training for

lifting and slinging (overhead cranes) and also in house training on the specific use of certain equipment.

3.3 Supervisors and or line managers are responsible for ensuring only trained, authorised and competent staff/students work with lifting equipment.

3.4 Departmental Safety Officers can arrange, facilitate or provide training when required and advise on control measures.

4. Managing Risk Assessments and Safe Systems of Work

4.1 Supervisors are responsible for ensuring that there is a suitable and sufficient risk assessment in place for working with lifting equipment. Where an unusual or complex task is being considered, a specific risk assessment is required.

4.2 Supervisors are responsible for ensuring that documented safe working procedures are developed and shared with staff who need to work with lifting equipment.

4.3 Anyone managing, planning, controlling or using any lifting equipment must first complete or sign a suitable and sufficient risk assessment and a safe working procedure.

4.4 Anyone using any lifting equipment should ensure that they follow the standard operating procedures or safe system of work for the task at hand and implement any control measures stated in the risk assessment for the task.

4.5 Where lifting equipment is used, there should be a simple lifting plan which covers none complex moves and then a more detailed lifting plan for complex moves.

4.6 All users of lifting equipment will use pre-checks which should be recorded and available when requested as part of a safe working procedure or inspection.

4.7 Before buying any lifting equipment, the Departmental Competent Person should be consulted, and all new equipment should be checked and tagged prior to use.

4.8 Supervisors are responsible for providing PPE if risks cannot be adequately reduced by other means.

4.9 Instructions for safe use must be attached to each piece of lifting equipment.

4.10 Lifting risk assessments should be reviewed after:

- an incident with the equipment or process in question
- changes in environment i.e. new location
- complaints from staff, students or visitors are received
- change to process or new equipment being introduced (including bespoke equipment).

5. Managing key documents

5.1 Records related to the safe system of work and risk assessment for the task at hand must be kept in the work area.

5.2 The Departmental Competent Person should keep records including manuals, log books, training, commissioning reports, Declarations etc which should be readily available for checking or consultation as required. Ideally these will be kept in a key document folder and stored nearby or attached to the lifting equipment.

6. Monitoring and Review

6.1 Compliance with the arrangements for lifting equipment will be monitored through the department's regular inspection programme, the results of which will be reported to the Departmental Health and Safety Committee. In addition, the Department Health and Safety Committee shall review a sample of lifting related risk assessments annually and implement any significant findings.

7 Further Reading

- [Simple Guide to the Lifting Operations & Lifting Equipment Regulations](#)

Arrangements for Pressure Systems

Introduction

When do these arrangements apply?

In accordance with the Pressure Equipment Regulations 1999 and the Pressure Systems Safety Regulations (PSSR) 2000, the University has a duty of care to ensure the safety of anyone whose work involves pressure systems, and to prevent serious injury from the hazard of stored energy (pressure) as a result of the failure of a pressure system or one of its component parts. This Policy covers control and safe use of pressure systems within the Department including boilers, autoclaves, pressurised process plant and piping, compressed gas systems and research apparatus. Hydraulic systems, while using high pressures, do not store energy in the system and so are not covered by PSSR.

Definitions

- Pressure Systems – are detailed in PSSR regulations, and broadly speaking, involves:
 - pipework containing a relevant fluid that operates above 0.5 bar pressure (approx. 7psi) with protective devices (e.g. a safety valve and /or gas regulator) to which a gas cylinder, cylinders, bulk storage tank or cryogenic vessel is connected; and/or
 - a pressure storage vessel, including cryogenic storage vessels, with associated pipework and protective devices that has a pressure x volume equal to 250 bar litres or more.
- Fluid - includes gases and liquids which are capable of exerting a vapour pressure. They do not include hydraulic oils. Under PSSR, a relevant fluid is
 - steam at any pressure;
 - any fluid or mixture of fluids which is at a pressure >0.5 bar above atmospheric;
 - a gas dissolved under pressure in a solvent (e.g. acetylene).

1. Overview/General duty

1.2 All staff and students using pressure systems must follow the arrangements within this policy and all work involving pressure systems should be properly planned and organised.

2. Roles and Responsibilities

2.1 Overall responsibility for the safe operation of pressure systems lies with the Head of department (HoD), who will:

- ensure one or more Departmental lead person/s is appointed for managing pressure systems

- ensure that the lead person maintains a current departmental register of pressure systems for which the Department has overall control
- ensure that all pressure systems, vessels, accessories and safety devices are in safe working condition
- ensure written schemes of examination are obtained and examinations are undertaken in accordance with the written scheme and that maintenance/servicing and repair are undertaken by a competent person
- be satisfied that statutory inspection by EFM (or an appointed contractor) has taken place (as responsibility for statutory inspection also lies with the Director of Estates and Facilities Management).

2.2 One or more Departmental lead competent person/s will be appointed for managing pressure systems as deemed appropriate (which may be one person per department; or one person per site or one per pressure system).

2.3 The current competent person is as follows:

Paul Haines	Nanoscience and EEE areas	Pressure Systems Lead
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2.4 It is the responsibility of the Competent Person to:

- maintain a departmental register of pressure systems, distinguishing between pressure systems which are fixed, portable and those which are part of a research experiment
- ensure written schemes of examination are available
- ensure that all new purchases of pressure systems have all the relevant documentation readily available in line with the [University Pressure Systems Policy Document](#)
- undertake documented periodic checks to ensure safe day-to-day operation and maintenance of pressure systems, vessels, and safety devices
- manage and ensure statutory examination and inspection of pressure systems in accordance with the written scheme and maintenance/servicing and repair are undertaken by a competent person:
 - notify EFM of all fixed pressure systems and ensure examinations are undertaken
 - ensure examinations are undertaken by the Department for portable pressure systems (in most cases this will be undertaken by EFM preferred competent persons, but must be arranged by the Department)
 - receive examination reports
 - record and progress examination reports and the actions contained therein
 - ensure that examination reports are reported to the Departmental Health and Safety Committee

- ensure that training and information is provided to the department on the risks from control systems and the measures in place to reduce these risks
- where practical, keep training records and a list of current users displayed on or near the equipment in a clearly labelled location and in the Key Documents Folder
- ensure that suitable PPE is provided in accordance with the risk assessments and safe systems of work
- monitor the use of the apparatus and ensure that users are using it responsibly and within its safe operating limits.

2.5 The Departmental Technical Manager, will monitor and verify compliance by the competent person(s).

2.6 It is the responsibility of the academic supervisor or line manager to:

- Understand the scope and content of the Pressure Equipment Regulations 1999 and the Pressure Systems Safety Regulations (PSSR) 2000
- identify any relevant pressure systems within their Group / Laboratory and inform their HOD and DSO
- ensure that pressure systems under their control are operated by trained, authorised and competent persons only
- ensure that suitable and sufficient risk assessments and safe systems of work have been documented and that these are signed and shared with all relevant staff and students.

2.7 It is the responsibility of the operator/user to:

- not work with compressed or liquefied gases without due authority
- attend relevant training
- comply with the risk assessment, controls, safe systems of work, and all information and instruction for the activity and identify when new or revised risk assessments are required
- operate the pressure system in a safe and controlled manner
- ensure pre-use checks are carried out and recorded as necessary
- know and work within the safe operating limits of the apparatus (commonly pressure and temperature).
- report any unexpected behaviour of the system or defects to their line manager or supervisor or competent person **immediately**. This should then initiate an immediate investigation and the apparatus must be taken out of service until the problem can be remedied.

2.8 It is the responsibility of the Department Safety Officer to:

- understand the scope and content of the Pressure Equipment Regulations 1999 and the Pressure Systems Safety Regulations (PSSR) 2000

- monitor control measures identified by risk assessment to ensure they are implemented and adhered to
- arrange/provide training when required
- keep records of all statutory inspections undertaken by EFM (or their appointed contractor).

3. Training and Induction Requirements

3.1 Any requirement to work with pressure systems must be covered sufficiently in the local laboratory/workshop/office induction where pressure systems are used.

3.2 Academic Supervisors and/or Line Managers are responsible for ensuring that pressure systems are operated by trained authorised and competent persons only.

3.3 Departmental Safety Officers can arrange, facilitate or provide training when required and advise on control measures.

4. Managing Risk Assessments and Safe Systems of Work

4.1 Supervisors are responsible for ensuring that there is a suitable and sufficient risk assessment and documented safe working procedures in place and shared with staff who need to work with pressure systems. They should also ensure the provision of instruction, training and supervision for Department staff and students using compressed and liquefied gases.

4.2 Anyone managing, planning, controlling or using any pressure systems must first complete or sign a suitable and sufficient risk assessment and a safe working procedure.

4.3 Anyone using any pressure systems should ensure that they follow the standard operating procedures or safe system of work for the task at hand and implement any control measures stated in the risk assessment for the task.

4.4 Supervisors are responsible for providing PPE if risks cannot be adequately reduced by other means.

4.5 For large or high energy pressure systems which require controlled access (see [University Pressure Systems Policy Document](#)), then a log book must be kept attached to, or near to the equipment, in which users must make entries whenever the apparatus is used and for how long it is used. It should also have entries of routine maintenance and testing. For research apparatus it should include any modifications made to the apparatus.

4.6 Instructions for use and an Emergency shutdown procedure must be attached to each pressure system, and it should clearly take the user through the steps to make safe the

apparatus as quickly as possible.

5. Managing key documents

5.1 A Key Document folder must be stored nearby or attached to the pressure system. It must contain all relevant official documentation for the pressure system including:

- commissioning reports, annual inspections and testing documentation
- a list of current authorised users of the pressure system
- Department and/or building Insurance Certificate.

5.2 The safe operating limits of the apparatus (commonly pressure and temperature) must be clearly displayed on the equipment.

6. Monitoring and Review

6.1 Compliance with the arrangements for pressure systems will be monitored through the department's regular inspection programme, the results of which will be reported to the Departmental Health and Safety Committee. In addition, the Department Health and Safety Committee shall review a sample of pressure systems risk assessments annually and implement any significant findings.

7. Further Reading

- [HSE Pressure Systems Safety Regulations 2000 \(PSSR\)](#)
- [University Pressure Systems Policy Document](#)

Arrangements for Working at Heights

Introduction

When do these arrangements apply?

In accordance with The Work at Height Regulations 2005, and the Provision and Use of Work Equipment Regulations (PUWER) 1998, the University has a duty of care to ensure the safety of persons who work at height and those who may be affected by those working at height. This policy covers the use of any equipment that enables people to work at height, where there is the potential to suffer personal injury, for example ladders, flat roofs, raised platforms and stepladders. The scope for working at height also includes work at ground level whereby an individual could fall in/down to a level below, or objects falling onto an individual at ground level. A separate policy exists for Control of Contractors which is applicable for work at height activities undertaken by external contractors.

Definitions

‘Working at Height’: Working in any place where if there were no precautions in place, a person could fall a distance liable to cause personal injury.

1. Overview/General duty

1.1 All staff, students and visitors working at height for work purposes must follow the arrangements within this policy as well as the [University Working at Height Policy](#) and all work at height should be properly planned and organised.

1.2 It is the responsibility of Line Managers, Research Student Supervisors and PDRAs to identify any relevant Work at Height requirements within their Group / Laboratory and inform their HOD and DSO.

2. Roles and Responsibilities

Head of Department

2.1 The Head of Department (HoD) will:

- nominate one or more Departmental lead ‘Competent Person(s)’ to support the implementation of the work at height regulations, as deemed appropriate for the department (which may be one person per department; or one person per site)
- support the Competent Person to implement measures required to comply with this policy

- ensure that all staff within the Department discharge their responsibilities in accordance with this policy
- ensure the selection and provision of access equipment that is fit-for-purpose and ensure that work/access equipment is routinely maintained and checked
- ensure the upkeep of all testing, inspection and maintenance logs
- ensure that hazards associated with working at height are risk assessed and control measures implemented, leading to the development of a documented safe working procedure
- be satisfied that all work at height (by staff, students or external contractors) does not present unacceptable levels of risk through the adoption of risk assessments.

Competent Person

2.2 The current Competent Person is

Jon Wall	All EEE areas	Ladder and Work at Height Lead
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2.3 It is the responsibility of the Competent Person to:

- maintain a register of Work at Height Equipment ([see Work at Height Register Template](#)) including but not limited to ladders, stepladders, kick-stools, tower scaffolds, scissor lifts, harnesses and lanyards
- ensure that each item of equipment is individually identifiable and tagged
- secure ladders and only make these available to authorised users
- manage a record of when equipment is signed out to authorised users for use
- ensure the safe condition and checking of ladders
- ensure that each item of equipment is subject to 6 monthly formal maintenance inspections, or more regularly if an incident has occurred that may have caused the equipment to become unsafe or if the environmental conditions could cause damage; or if any concerns about the safety of the equipment are raised
- maintain a record of the findings from each periodic inspection or re-inspection, along with any actions taken to show rectification or disposal of unsafe equipment
- maintain a record of work at height training to show which individuals are trained and authorised to use work at height equipment
- Where practical, keep training records and a list of current users displayed on or near the equipment in a clearly labelled location and in the Key Documents Folder.

Academic Supervisors/Line Managers

2.4 Academic Supervisors/Line Managers are responsible for:

- understanding the scope and content of the Work at Height Regulations where this is relevant to work in their specific area

- ensuring that all equipment used for working at height in their area of control remains safe
- ensuring only trained authorised and competent persons work at height and that relevant staff complete online training for safe use of ladders and stepladders
- ensuring that risk assessments and safe systems of work (including emergency response) have been documented and shared with all relevant staff and students for any work at height
- consulting with the department's Competent Person before buying any work at height equipment and check and tag new equipment prior to use
- enforcing all control measures (including the use of PPE) identified by risk assessments for staff/students for whom they are responsible

Department Safety Officer

2.5 The Department Safety Officer shall:

- understand the scope and content of the Work at Height Regulations
- monitor control measures identified by risk assessment to ensure they are implemented and adhered to;
- arrange/provide training when required and monitor online staff training to ensure safe use of ladders and stepladder training has been completed for those staff within scope.

2.6 The Departmental Technical Manager will monitor and verify compliance by the Competent Person.

Staff and Students

2.7 It is the responsibility of the user of work at height equipment to:

- only use working at height equipment if trained, competent and authorised to do so
- complete online training for safe use of ladders and stepladders before using any working at height equipment
- read and sign the relevant risk assessment and comply with controls and safe systems of work for the activity, identifying when new or revised risk assessments are required
- ensure that the ladder/step ladder has a ladder tag displayed before use. If not, the user should take the ladder/step ladder out of use and report it to the Departmental Competent Person
- adhere to all control measures identified by risk assessments, and procedures detailed within risk assessments and safe working procedures
- use pre-checks ([see appendix 2 of the University Work at Height Policy](#)) which will need to be recorded for motorised equipment or when requested as part of a safe working procedure
- report any defects, faults, incident or unexpected behaviour to their supervisor, line manager, Departmental Competent Person or DSO **immediately** and take the equipment

out of service and mark the equipment “Do Not Use”. This should then initiate an immediate investigation and the apparatus must be taken out of service until the problem can be remedied.

3. Training and Induction Requirements

3.1 Any requirement to work at height must be covered sufficiently in the local laboratory/workshop/office induction where work at height equipment is used.

3.2 Anyone managing, planning, controlling or using any work at height equipment (excluding kick-stools) must first complete the online training Safe use of ladders and stepladders ([Safe use of ladders and step ladders](#)) to demonstrate competence.

3.3 Departmental Safety Officers can arrange, facilitate or provide training when required and advise on control measures.

4. Managing Risk Assessments and Safe Systems of Work

4.1 Wherever possible, work at height should be avoided and eliminated.

4.2 There must be NO lone working when work at height equipment is in use. This statement must be included in any risk assessment(s).

4.3 Before buying any work at height equipment, the Competent Person(s) should be consulted, and all new equipment should be checked and tagged prior to use.

4.4 The Control of Contractors policy and arrangements should be followed for contractors undertaking work at height within a departmental space, and a valid Permit to Work must exist.

For the purpose of accessing equipment for working at height, the Department is divided into 4 areas, where **Jon Wall** is tasked with controlling access to ladders. The local ladder stations are located at:

- Nanoscience (Level 1)
- Nanoscience Emergency Shower room
- George Porter (EMD Store Room) (until May 2020)
- EEE Mechanical Workshop
- Willenhall (checked by the DSO on Inspection visits)

Equipment for working at height

- For the purposes of this document, the term ladder is taken to include step-ladders, extending ladders and portable platforms.
- All ladders/platforms must conform to EN 131.
- All ladders must be registered on the Department register of ladders.

- All ladders must be inspected at least every 6 months on a scheduled basis and individually tagged.
- All ladders will be individually locked when not in use using a commercially sourced ladder locking mechanism. This ladder lock need not necessarily be wall-mounted, (the expectation is that the vast majority will not) but it must render the ladder unusable when locked. A simple chain through the rungs of the ladder is not sufficient unless this is to chain it to a fixed wall-mounted or floor-mounted bracket.
- There will be only 3 keys for each ladder lock (with the exception of the Clean Room area – see below) (Jon Wall, DTM and DSO) Spare to be kept in the Departmental safe)). In the event that Jon Wall is not available, the DTM or DSO become the nominated cover during periods of absence, e.g. annual leave, illness.
- Only the DSO is permitted to obtain copies of these keys.
- For an activity that spans more than one day, the user should make the necessary arrangements to ensure that the ladder is locked and secured at the end of each working day and over weekends.
- All users of ladders must have a valid and up to date training.
- Before permitting access to ladders, the Jon Wall (or nominees) must be satisfied that there is an appropriate Risk Assessment in place. In the majority of uses, it is likely that the Departmental standard usage Risk Assessment will be sufficient. In such cases, users must sign a local register that they have read and understood this standard usage.

Nanoscience Clean Room ladders

To facilitate work in the clean rooms and to ensure that cleanliness of the equipment is maintained as well as removing the need to transport ladders through the building, a step ladder and a leaning ladder are secured by means of a second suited padlock and located in the Emergency Shower room. Access to these pieces of equipment is for Technical staff only. Technical staff have been issued and signed for the keys.

Use of these items must follow the standard use of ladder policy as outlined above.

5. Managing key documents

5.1 Records related to the safe system of work and risk assessment for the task at hand must be kept in the work area.

5.2 The Competent Person should keep the maintenance records, inspection, pre-use check lists and lists of authorised users readily available for checking or consultation as required.

6. Monitoring and Review

6.1 Compliance with the arrangements for work at height will be monitored through the department's regular inspection programme, the results of which will be reported to the Departmental Health and Safety Committee. In addition, the Department Health and Safety Committee shall review a sample of work at height risk assessments annually and implement any significant findings.

7. Further Reading

- [University Work at Height Policy](#)
- [Safe use of ladders & step ladders](#) – A brief guide [HSE]
- [The Work at Height Regulations 2005](#)

Workplace Noise Arrangements

Introduction

When do these arrangements apply?

In accordance with the Control of Noise at Work Regulations 2005 and the Management of Health and Safety at Work Regulations 1999, the University has a duty of care to protect staff and students from excessive noise which could lead to noise induced hearing loss (NIHL) and/or permanent hearing damage. This policy covers control of activities that can potentially expose staff to workplace noise above the threshold that requires action to be taken by employers.

Definitions

- Workplace Noise Risk Assessment - The process or method to measure and/or identify the amount of noise that staff, students and visitors are exposed to in the workplace. The objective of a noise risk assessment is to eliminate, reduce or control exposure to workplace noise.
- Lower Exposure Action Value – 80dB(A) (personal exposure averaged over a day) or 135dB(C) Peak sound pressure
- Upper Exposure Action Value – 85dB(A) (personal exposure averaged over a day) or 137 dB(C) Peak Sound.
- Hearing protection - Hearing protection can be used as an additional measure once noise has been reduced as far as is reasonably practicable by other means; or as an interim measure pending noise reduction. It must not be used as the sole method of protection if personal noise exposures exceed the upper action value (85dB). Hearing protection provided must be suitable for the levels and type of noise individuals are exposed to. Hearing protection should be made available on request if noise exceeds the lower action value (80dB).

1. Overview/General duty

1.1 All staff and students working in a noisy environment must follow the arrangements within this policy and as far as reasonably practicable ensure that arrangements are in place to eliminate the risks associated with occupational noise.

1.2 It is the duty of Line Managers, Research Student Supervisors and PDRAs to identify any relevant noisy activities or noisy environments within their Group/Laboratory and inform their HoD and DSO.

1.3 As far as reasonably practicable the department will ensure that arrangements are in place to eliminate the risks associated with occupational noise, and this principle must underpin all noise risk assessments in the department.

2. Roles and Responsibilities

Head of Department

2.1 The Head of Department (HoD) will:

- nominate a competent person or persons within the Department to support the implementation of the Control of Noise Regulations 2005 and ensure they have the necessary skills and competence
- support the nominated, Competent Person(s) in implementing measures to comply with the Noise Regulations
- ensure all Staff within the Department discharge their responsibilities in accordance with this Policy
- be satisfied that noise does not exceed permitted thresholds through the adoption of risk assessments.

Competent Person

2.2 The current competent persons nominated by the HoD **are** as follows

Stephen Atkin/Dianne Webster **All EEE areas**

2.3 It is the responsibility of the Competent Persons to:

- understand the scope and content of the 2005 Noise Regulations
- provide information to the department on the risks from noise and the measures that can be put in place to reduce these risks and how they can escalate any concerns regarding workplace noise
- understand when the Faculty's sound level meter should be used to carry out sound level measurement, and operate this meter in accordance with training and the operator's manual.

2.4 Lee Shunburne, DTM, will monitor and verify the competence of the nominated competent person(s).

Academic Supervisors and Line Managers

2.5 Academic Supervisors and line managers are responsible for:

- understanding the scope and content of the 2005 Noise Regulations where this is relevant to work in their specific area

- ensuring noise factors are taken into account when hiring, purchasing or manufacturing new equipment in relation to the Control of Noise at Work Regulations 2005 prior to use
- identifying the areas/activities under their control where noise levels are likely to cause harm and ensuring noise risk assessments and safe systems of work have been undertaken, documented and shared with all relevant staff and students
- ensuring employees are suitably trained in all aspects of operating equipment, including noise control
- implementing and enforcing noise control measures, with support from the nominated person or Departmental Safety Officer as required
- providing PPE (such as hearing protection where necessary) if risks cannot be adequately reduced by other means
- determining whether hearing protection zones and demarcation is required through the use of appropriate signage
- identifying staff who could be exposed to harmful effects of noise and ensure they attend health surveillance
- monitoring the use of noisy equipment (e.g. through inspections and H&S walk-arounds) and carrying out sound level measurement where appropriate to ensure that safe operating limits are enforced.

Staff and Students

2.6 It is the responsibility of staff, students and visitors with the potential to be exposed to excessive occupational noise to:

- complete or sign a suitable and sufficient risk assessment and a safe working procedure and comply with the controls, safe systems of work and instruction for activities that involve exposure to occupational noises, identifying when new or revised risk assessments are required
- attend relevant training as required
- use all equipment and noise control measures in accordance with instruction and risk assessments including hearing protection where required
- maintain hearing protection and any other noise control equipment
- carry out sound level measurement where appropriate
- report any concerns regarding noise levels to their Manager/Supervisor without delay
- report any defects or difficulties with hearing protection and any other noise control equipment to the Competent Person
- inform their supervisor/line manager of any pre-existing or subsequently diagnosed health condition that may be affected by exposure to noise through their work
- co-operate with any programme of health surveillance which is identified as necessary following risk assessment
- attend health surveillance appointments when required to do so

- contact the department nominated competent person or the DSO if they require help with a noise risk assessment.

Departmental Safety Officer (DSO)

2.7 It is the responsibility of the DSO to:

- understand the scope and content of the 2005 Noise Regulations
- identify whether formal noise risk assessment is required within the Department
- ensure noise factors are taken into consideration when purchasing new equipment
- monitor control measures identified by risk assessment to ensure they are implemented and adhered to;
- support academic supervisors/line managers to undertake noise monitoring through the use of suitable monitoring equipment
- arrange/provide training when required and advise on noise control measures
- identify staff and students requiring health surveillance and coordinate with Occupational Health (via HR) and liaise with Occupational Health on issues arising out of exposure to noise or vibration.

2.8 As the responsibility for leading the University arrangements for health surveillance also lies with the Director of Human Resources, in this case, The Head of Department has to be satisfied that health surveillance has taken place and that managers have been informed if there are restrictions on an individual's ability to work in a noisy area due to health risks.

2.9 Lee Shunburne, DTM, will ensure that any feedback from health surveillance is provided to the appropriate manager and that any restrictions on an individual's ability to work in a noisy area due to health risks are identified and managed appropriately.

3. Training and Induction Requirements

3.1 Any requirement to work in an area where there is potential exposure to loud noise must be covered sufficiently in the local laboratory/workshop/office induction.

3.2 Departmental Safety Officers can arrange, facilitate or provide training when required and advise on noise control measures.

4. Managing Risk Assessments and Safe Systems of Work

4.1 All staff and students shall, when procuring equipment or designing processes, check in the design/procurement stage what the expected noise levels are likely to be. Where noise levels are likely to be 80 dB or above they must take steps to reduce levels as low as is reasonably practicable. (This could mean buying a slightly more expensive piece of equipment or additional cost in design to reduce noise levels). Staff and students shall document noise risk assessments where noise levels are at 80 dB or above.

4.2 For existing equipment and processes, all staff and students are responsible for documenting risk assessments where noise levels are likely to interfere with normal conversation i.e. make it difficult to communicate verbally because of the noise.

4.3 Noise risk assessments should be reviewed after:

- any incident with the equipment or process in question
- when the process changes or new equipment is introduced (including bespoke equipment)
- changes in environment i.e. new location
- complaints from staff, students or visitors are received.

4.4 The Faculty will provide a sound level meter which is managed and maintained by Mr Mark Wagner in the Faculty of Engineering Central Services Team. This person will ensure the equipment is calibrated and available when required.

4.5 The sound level meter will meet at least Class 2 of BS EN 61672-1:200318 (the current instrumentation standard for sound level meters). Calibration should be performed as per recommended by the manufacturer and following guidance under the Control of Noise at Work Regulations 2005.

5. Managing key documents

5.1 The safe operating limits and control measures must be clearly displayed for any equipment or process emitting excessive noise.

6. Monitoring and Review

6.1 Compliance with the arrangements for control of noise will be monitored through the department's regular inspection programme, the results of which will be reported to the Departmental Health and Safety Committee. In addition, the Department Health and Safety Committee shall review a sample of risk assessments related to noise exposure annually and implement any significant findings.

7. Further Reading

- [Noise at Work Regulations 2005](#)
- [HSE hearing protection guidance](#)
- [Faculty guidance](#)
- [Noise Risk Assessment](#)

Arrangements for Workplace Transport

Introduction

When do these arrangements apply?

In accordance with the Health and Safety at Work Act 1974, the University has a duty of care to take steps, as far as is reasonably practicable, to ensure the health, safety and welfare of those who need to drive any vehicle or piece of mobile equipment used in any work setting. This policy covers the use of any powered vehicle for work on University premises or for purposes connected with their employment at the University including Fork Lift Trucks (FLT), Mobile Elevated Work Platform (MEWPs), tractors, telehandlers etc, and including any vehicle that is hired in, either internally (from within the University) or externally (from hire companies).

The [University Work-related driving policy and procedures](#) (February 2019) should be referred to for any use of motor vehicles on public roads (including cars, vans and minibuses). Vehicles moving on public roads are not considered as 'workplace transport', except where public roads are used as temporary workplaces, for example during roadside deliveries, road works or breakdown assistance, where Health and Safety law and the following arrangements apply.

Definitions

- 'Workplace transport' means any vehicle or piece of mobile equipment used in any work setting. It covers a wide range of vehicles, from cars, vans, lorries and lift trucks, to less common vehicles and plant such as forklift trucks and telehandlers.

1. Overview/General duty

1.1 All staff, students and visitors using a vehicle for work purposes on TUoS premises, or for purposes connected with their employment at TUoS, must follow the arrangements within this policy and all driving of powered vehicles should be properly planned and organised.

1.2 It is the Duty of Line Managers, Research Student Supervisors and PDRAs to identify any relevant powered vehicles within their Group / Laboratory and inform their HOD and DSO.

2. Roles and Responsibilities

Head of Department

2.1 The Head of Department (HoD) will:

- nominate one or more Departmental ‘vehicle supervisors’ to support the implementation of the relevant regulations, as deemed appropriate for the department (which may be one person per department; or one person per site; or one person per vehicle)
- support the ‘vehicle supervisors’ to implement measures required to comply with this policy
- ensure that all staff within the Department discharge their responsibilities in accordance with this policy
- ensure the selection and provision of vehicles that are fit-for-purpose
- be satisfied that all work based transport (by staff, students or external contractors) does not present unacceptable levels of risk through the adoption of risk assessments.

Vehicle Supervisor

2.2 The current list of ‘vehicle supervisors’ is as follows

Paul Haines	Nanosciences	Fork Lift Truck (FLT)
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2.3 It is the responsibility of each ‘vehicle supervisor’ to:

- ensure that training and information is provided to the department on the risks from vehicles and the measures in place to reduce these risks
- ensure that a risk assessment is in place for all activities performed by that vehicle
- ensure that the key is only issued to trained, competent and authorised operators
- ensure that the key is returned to the locked key box in the supervisors office when the vehicle is not in use
- ensure that the key is securely held such that it would not be possible for an untrained person to start up the equipment
- manage a record of when the key is signed out
- ensure that the vehicle has received up to date maintenance and inspections as required in the user manual, and arrange for any remedial actions required following identification of any concerns
- ensure that the vehicle receives a formal inspection by an external Competent Person before being allowed back into operation following an accident or significant change to the vehicle
- where practical, keep training records and a list of current users displayed on or near the vehicle in a clearly labelled location and in the Key Documents Folder
- ensure that suitable PPE is provided in accordance with the risk assessments and safe systems of work.
- Routine statutory lifting equipment inspections by Allianz to be carried out and records kept.

- Operators to be authorised in writing by the HoD for the specific type of Lift Truck used and type of work for which the operator is viewed competent.
- Authorisations to be for a specified period.
- Although not a legal requirement, in the interests of best practice, all operators must hold a full UK driving (category B) car licence to operate University owned Lift Trucks.

2.4 The DTM will monitor and verify compliance by the vehicle supervisor.

Academic Supervisors/Line Managers

2.5 Academic Supervisors/Line Managers are responsible for:

- understanding the scope and content of the PUWER Regulations where this is relevant to work in their specific area
- ensuring that all equipment used for workplace transport in their area of control remains safe
- ensuring that only trained authorised and competent persons operate powered vehicles and that relevant staff complete any required training
- ensuring that suitable and sufficient risk assessments and safe systems of work have been documented, in collaboration with others if necessary (this may include the DSO, driver, spotters, etc as needed) and that these are signed and shared with all relevant staff and students
- providing PPE if risks cannot be adequately reduced by other means
- enforcing all control measures (including the use of PPE and restriction zones) identified by risk assessments for staff/students for whom they are responsible.

Department Safety Officer

2.6 The Department Safety Officer shall:

- understand the scope and content of the PUWER Regulations
- monitor control measures identified by risk assessment to ensure they are implemented and adhered to;
- arrange/provide training when required and monitor staff training in line with the legal requirements for the vehicles in use.

Operator/Driver

2.7 It is the responsibility of the operator/driver to:

- comply with the risk assessment, controls and safe systems of work for the activity, implement any control measures stated in the risk assessment for the task, and identify when new or revised risk assessments are required

- ensure that they are fit to carry out the driving task required and that they do not operate equipment when unfit through illness, accident, medication, alcohol use or other circumstances
- complete the [health declaration template](#) on an annual basis and submit this to the DSO
- ensure that the key is not left in the vehicle when they leave the driving position and that the vehicle is always left in a safe location and condition when unattended
- ensure that the FLT key is returned to the locked key box in the supervisors office when the vehicle is not in use
- ensure that any required pre-use checks are completed and recorded as necessary
- report any fault or concerns following the pre-use checks to the nominated person for that vehicle **immediately** who will arrange for any necessary remedial actions which must be completed before the vehicle is used.

Authorised FLT drivers in EEE are: Paul Haines; David Morris & Jon Milner

2.8 Any person hiring in vehicles on a short-term basis should ensure that the arrangements for the equipment to be regularly serviced and examined are clear. The person arranging hire should consult with the DTM, follow the lease agreement checklist ([see template checklist for leasing equipment](#)) and ensure that an up-to-date certificate of examination is provided and that this will remain valid for the duration of the hire term. The person arranging hire should always check that they are happy with any conditions laid out in the hire agreement prior to signing.

3. Training and Induction requirements

3.1 The operator/driver of the powered vehicle must have received up to date induction and training and passed the assessment required for the operation of the specific type of vehicle. The only exception to this is where the driver is undertaking formal training under competent supervision to learn to operate the vehicle. It is the operator's responsibility to ensure they are trained and inducted to the specific vehicle before use.

3.2 Where required by law, the operator/driver must possess a current valid driving licence for the class of vehicle in use. The only exception to this is where the driver is under formal training under competent supervision to learn to operate the vehicle.

3.3 Competence assessment and/or refresher training should take place at 3 year intervals, as specified in the risk assessment. In the event of an accident or when there is an indication of the driver not working to required standards, the vehicle supervisor, or the line manager of the operator/driver will consider whether it is necessary to introduce earlier refresher training.

3.4 The DSO should maintain a record of operator training and which vehicles each individual is trained and authorised to operate. (See [Workplace Transport Training record](#) template).

3.5 Departmental Safety Officers can arrange or facilitate training when required.

4. Managing risk assessments and Safe Systems of Work

4.1 There should be written authorisation from the Head of Department for the use of the fork lift truck.

4.2 The risk assessment should consider all risks and potential controls relevant to the activity including, for example, the site of work, ground conditions, weight limits, height restrictions, obstacles, weather, the suitability and safety of the vehicle itself, the nature of the load being carried and the skill level of the driver.

4.3 Where routine tasks are being carried out, a plan of the transit route should be produced and wherever possible people should be excluded from the area and obstacles removed or protected.

4.4 Barriers should be used to exclude from the area of operation any persons not directly involved in the task at hand. Anyone who is required to be present within the area of operation, e.g. spotters or banksman, must be fully conversant with the task at hand, must have considered the risk assessment and must wear high visibility waistcoat or jacket, a hard hat and safety shoes (see [Appendix 2](#) for vehicle management trained staff).

4.5 Any unusual or complex task must have a documented plan of the route to be travelled included within the Safe System of Work.

4.6 Where lifting equipment is used, there should be a simple lifting plan which covers none complex moves and then a more detailed lifting plan for complex moves.

4.7 If more than one vehicle is operating within the same area it is essential that a one-way traffic route is enforced by the operator and spotters or banksman or where not possible, clear signage of priorities must be used and understood by all persons involved.

5. Arrangements for managing key documents

5.1 Records, including current certificate of inspection (where required), pre-use checklist, Safe System of Work (SSoW) or Standard Operating Procedure (SOP), operator's manual and risk assessment for the task at hand must be kept with the vehicle, ideally in a key document folder.

5.2 The vehicle supervisor should keep the certificate of insurance or other evidence of suitable insurance cover, the maintenance records, list of approved drivers and usage records. These records should be readily available for checking or consultation by the drivers, DSO etc as required.

6. Monitoring and Review

6.1 Compliance with the arrangements for workplace transport will be monitored through the department's regular inspection programme, the results of which will be reported to the

Departmental Health and Safety Committee. In addition, the Department Health and Safety Committee shall review a sample of risk assessments related to workplace transport annually and implement any significant findings.

7. Further Reading

- [L117 Rider-operated lift trucks](#) – Operator training and safe use ACOP (3rd edition) 2013
- [HSG136 A guide to workplace transport safety](#) (3rd edition) 2014
www.hse.gov.uk/workplacetransport

Use of Radiation within EEE (ionising and non-ionising)

Extra Low Frequency, Radio Frequency & Microwave Radiation (Electric & Magnetic fields)

Anyone contemplating schemes of work involving a radiation flux in the region of 1 mW/cm² or an electric field 1kV/m or a magnetic flux 0.02 mTesla or more should inform the Departmental Radiation Protection Supervisor (DRPS, see below).

The Department has an RF power meter, see Ian Wraith (Electronics Workshop).

Ionising Radiation

The use of radioactive materials, X-ray equipment and any other source of ionising radiation is regulated by the Radioactive Substances Act 1993, the Ionising Radiation Regulations 1985 and associated Codes of Practice and Guidance Notes. The Departmental Radiation Protection Supervisor (DRPS) must be informed of any proposed work involving ionising radiation.

All sources of such radiation must be registered by Safety Services and will be subject to regular inspection. The DRPS maintains a list of persons certified to use X-ray equipment who have demonstrated the necessary level of competence in the use of this equipment safely. New staff and students can be added to this list on application to the DRPS. It is an expectation that such persons will carry out the [ionising radiation training](#) (either online, or in person) at the earliest possible opportunity and failure to do so, without good reason, may result in persons being prohibited to use such systems.

Department Radiation Protection Supervisor (Ionising) (DRPS)

Current role holder: Prof Mark Hopkinson

The Radiation Protection Officer will advise on all aspects of radiation protection in the University, with particular reference to the statutory requirements relating to the Ionising Radiation Regulations 2017, together with approved codes of practice and guidance. The Radiation Protection Officer will advise on all aspects of radioactive waste management in the University, with particular reference to the statutory requirements of the Environmental Permitting Regulations 2016. The Radiation Protection Officer will coordinate arrangements for the safe ordering, storage, handling, use, transportation and disposal of radioactive substances.

All work with ionising radiation requires a work certificate to be issued by the University Radiation Protection Officer. Any new or proposed installations should be discussed with the DRPS, who will advise and apply for the permit. Existing installations will be subject to annual inspection and the permit renewed following a satisfactory visit. Any variation of the permit

(including moves of equipment) must be discussed immediately with the DRPS.
The DRPS maintains a list of equipment, permits and registered users in the department.

The Radiation Protection Officer is responsible to the Head of Department.

Department Radiation Protection Supervisor (non-ionising) (DRPS)

Current role holder: Prof Alan Tennant

The DRPS shall provide advice on all aspects of the use of non-ionising radiation, with particular reference to the statutory requirements of the [Artificial Optical Regulations 2010 and Control of Electromagnetic Fields at Work Regulations 2016](#), together with appropriate British Standards and other relevant guidance where statutory provisions have still to be enacted.

The Radiation Protection Officer is responsible to the Head of Department.

Departmental Laser Safety Officer (DLSO)

Current role holder: Dr Rick Smith

The Laser Safety Officer provides expert knowledge on the use of Lasers within the Department. The responsibilities of the LSO are:

- Provide advice to users planning laser installations in matters of Health and Safety.
- Maintain an up-to-date register of lasers in the Department.
- Maintain an up-to-date register of trained users in the Department.
- Assess laser installations for compliance with good practice and appropriate legislation.
- Provide laser technical advice to the DSO and HoD to assist them in approving or otherwise Risk Assessments. Standard Operating Procedures or capital works.
- To keep up to date with legislation connected with the use of lasers and advise the HoD on any policy changes that might ensue.
- To liaise with central University laser safety staff on issues and inspections.

The Laser Safety Officer is responsible to the Head of Department.

Use of Lasers within EEE

The University has a responsibility under the Health and Safety at Work Act 1974, to ensure that all work with radiation is carried out safely. In the Department of Electronic & Electrical Engineering, the sources of potentially hazardous radiation at the present time are in the main LASERS. There are also some commercial X-ray diffraction sets and high power microwave sources.

Radiation safety of laser products is covered by BS EN 60825-1:1994 which is a 'European norm' based on the International Electrotechnical Commission IEC 60825-1. Guidance Notes for

Universities incorporating these requirements are available [Local Laser Safety Rules](#)

When considering the purchase of a new laser system, a scheme of work and relevant risk assessments must be sent to the DLSO for review prior to any order being placed.

- All lasers and laser systems, except low-power Class 1 lasers, must be registered with Safety Services.
- All people intending to work with Class 3R lasers and above must register with Safety Services via the Departmental Laser Safety Officer (DLSO see below).
- With the exception of Class 1 lasers the DLSO should receive copies of all relevant schemes of work involving lasers.

Link to [Laser Risk Assessment Pro Forma](#)

Department Biological Safety Officer (DBSO)

Current role holder: Mr Luke Marsden

The Departmental Biological Safety Officer will provide professional safety advice as needed to staff and students across the University in respect of biological and genetic modification work.

The Biological Safety Officer will:

- Act as an Advisor to members of the department in all matters relating to biological safety including genetic modification experiments and the containment of potential hazards, and to provide liaison between the department and the Health and Safety Department.
- Liaise with the University Biological Safety Officer, to ensure that sufficient documentation of processes and associated risk assessments are in place and to provide HSE with such information as is required by applicable regulations should it be requested.
- Assist in the audits of Biological work undertaken in the department by the University Health and Safety Officer.
- Assist in the investigation of all accidents or incidents in laboratories in which genetic modification is taking place and take what action is necessary. Each accident/incident and the action taken must be recorded, together with the names of the personnel involved.
- Liaise with the DSO and Human Resources with regard to statutory health surveillance.

The Departmental Biological Safety Officer is responsible to the Head of Department.

Arrangements for the use of Batteries

We use a large variety of batteries in EEE ranging in size from button cells up to the Willenhall 2Mw system. These are made of a range of materials, some of which may constitute a hazard if handled, stored, or charged incorrectly.

Some of the hazards presented by batteries include:

- Chemical burns
- Electrocutation
- Burns from hot surfaces
- Explosion
- Fire

The HSE booklet is available here [Using Electric Storage Batteries Safely](#)

This guidance must be read before starting any work with batteries. All work with batteries should still be risk assessed and, depending on the type of battery and any gases and/or by-products it may produce as a result of charging or discharging, you may need to perform COSHH risk assessments and volumetric calculations for the area being used to ensure adequate ventilation.

Lithium based and rechargeable batteries

Lithium Ion Polymer, or simply Lithium Polymer (LiPo) batteries offer excellent performance for applications which require both extremely high discharge/burst currents coupled with very high power densities e.g. drones.

In order to achieve such performance LiPo batteries utilise a potentially volatile construction which require special care for them to be used safely.

The use of LiPo batteries must be authorised by the supervisor in charge of the work before any batteries or associated equipment (chargers, etc...) are purchased and a specific safe working procedure and risk assessment must be in place.

Use is restricted to applications which require their specific properties of extremely high discharge/burst current and high power densities.

The vast majority of applications in EEE do not require these properties consideration must be given to more stable battery chemistries such as Lithium Ion (Li-ion), Sealed Lead Acid (SLA), Nickel Cadmium (NiCd) or Nickel Metal Hydride (NiHM).

Safety considerations

Electrical

Whilst LiPo batteries are generally low voltage devices, they are capable of sustaining huge discharge currents in excess of 100A. Extreme care should be taken when handling battery connectors and any faulty/damaged wiring must be reported and to technical staff in the Electronic Workshop, the item labeled “Do Not Use”, removed from use and assistance sought to ensure the fault is rectified immediately.

LiPo batteries can be damaged by:-

over-charging
over-discharging
mechanical damage (e.g. being dropped, punctured etc).

Any such damage to packs/cells may lead to an extremely volatile Lithium fire.

Visual Inspection

All cells must be regularly inspected for signs of swelling, puncture, physical damage etc

All connectors must be of the correct rating and the manufacturers connectors must not be removed/modified.

Additional connectors must be compatible with those fitted.

Connectors

Many batteries are supplied with power connectors. When selecting a connector for a particular battery it is important to ensure that it meets the required specifications for the application (e.g. current rating, wire gauge, etc...)

Manufacturer fitted connectors must not be removed. If a different connector is required, the cell must be purchased with the correct connector fitted or purchase an approved appropriate interface connector.

All components must be CE marked and purchased from a reputable supplier.

Usage

A LiPo battery should always be fully charged before use, this ensures that all cells of the pack are balanced appropriately before any high discharge currents are required.

A LiPo powered device must be monitored at all times and never left unattended. If a battery is observed to swell or smoke, it must be disconnected immediately, if it is safe to do so. If fire is observed do not approach the battery. Evacuate the area and raise the alarm.

Storage

A LiPo battery should never be stored for long periods of time below 50% capacity.

If a battery is to be reused within the next week it may be recharged fully and stored in this state, otherwise it should be charged using the storage mode of the charger.

Once appropriately charged, the battery must be stored in a fire-resistant cabinet/container. If there is any risk of the battery terminals shorting in storage these must be appropriately insulated before storage.

Batteries should not be stored without use for a period of more than 3 months.

Appendix 1 H&S Committee Membership

Head of Department (HoD)	Prof. Chee Hing Tan
Departmental Safety Officer (DSO)	Dianne Webster
Departmental Technical Manager (DTM)	Lee Shunburne
Departmental Administration Manager (DAM)	Luke Marsden
Representative for Electronic Workshop	Ian Wraith
Representative for EMD	Andy Race
Representative for Nanoscience	Lee Shunburne
Representative for Comms	Steve Marsden
Representative for the Mechanical Workshop	Karl Rotchell
Willenhall Representative	Dan Gladwin/Matt Smith
Department Laser Safety Officer (DLSO)	Rick Smith
Department Radiation Protection Supervisor DRPS (Ionising)	Mark Hopkinson
Radiation Protection Supervisor DPRS (non ionising)	Alan Tennant
Biological Safety Officer DBSO	Luke Marsden
Ladders & Work at Height Lead	Jon Wall
LEV Lead	Jon Milner
Cryogenics and Liquid Nitrogen Lead	Richard Frith
FLT Lead	Paul Haines
PPE Lead	Stephen Dorward
Representative from Health & Safety	Andrew Johnstone
Representative for Students	Nathan S Raj
Administrative Support	Ian Parmenter

Appendix 2 Competent persons in EEE

These roles provide a focus for the following activities:

Battery Safety	Matthew Smith
Breathing Apparatus	Paul Haines
Biological Safety Officer	Luke Marsden
COSHH Administrators	Lee Shunburne Dianne Webster Luke Marsden
COSHH Inventory maintenance	Jon Milner - Nano and Kroto, Andy Race - EMD Steve Marsden - Portobello Karl Rotchell - Mechanical Workshop
Defibrillator monthly checks	Dianne Webster - Mappin Jon Wall/Stephen Dorward - Nanoscience
Disability Liaison Officer	Neil Powell Luke Marsden
DSE Assessors	Steve Marsden Fahmi Mohammad Dianne Webster
Electricity at work	Andy Race
Fire Safety	Dianne Webster
First Aid Box, signage/list maintenance	Lindsay Nash
Fork Lift Truck (FLT)	Paul Haines
Gases & Pressure systems	Paul Haines
Goods-in Safety	Lindsay Nash
Health Surveillance Monitoring	Dianne Webster
Radiation Protection (Ionising) Supervisor	Mark Hopkinson
Radiation Protection (Non-Ionising) Supervisor	Alan Tennant
Laser Safety Officer	Rick Smith
Ladders and Work at Height (WAH)	Jon Wall

Lifting equipment (LOLER)	Karl Rotchell
Liquid Nitrogen & Cryogenics	Richard Frith
Local Exhaust Ventilation (LEV)	Jon Milner
Manual Handling Assessor	Stephen Dorward
Noise and Vibration at Work	Dianne Webster Stephen Atkin
Personal Protective Equipment (PPE)	Stephen Dorward
Provision and Use of Work Equipment Regulations (PUWER)	Lee Shunburne Dianne Webster
Respiratory Protective Equipment (RPE) and Face Fit testing	Jon Wall Stephen Dorward
STAR Risk Assessment Coordinator	Dianne Webster
Webmaster	Mark Jenkins
Willenhall	Dan Gladwin/Matthew Smith
Workplace Health, Safety and Welfare	Luke Marsden Lee Shunburne Dianne Webster

Staff trained in Vehicle Management ('Banksmen')

Richard Frith
Paul Haines
Sam Marples
Jon Milner
David Morris
Andy Race
Lee Shunburne
Jon Wall
Dianne Webster

Appendix 3 Fire Safety Guidance

In accordance with the *Regulatory Reform (Fire Safety) Order*, the University has a duty of care to ensure the safety of individuals from fire. In addition to staff and students, this may include visitors, contractors, the general public and the community at large.

Fire can result in catastrophic loss of life, injury, damage/loss to property or inventory, and disruption to academic activities. An increased risk exists within the Department due to the nature of work taking place and the flammable substances stored on site.

University fire safety arrangements are the joint responsibility of the Fire Safety Team and Estates & Facilities Management in-conjunction with the Head of Department.

Where areas of the Department are shared with another faculty/department, a collaborative approach shall be taken between the respective Heads to mitigate against the risk of fire. Ultimately, it is the collective responsibility of everybody to prevent fires from occurring.

Specifically within the context of the legislation stated above -

The Head of Department will be responsible for ensuring that fire safety is effectively managed. In particular each Head of Department must ensure that:

- The University's Fire Safety Policy and Procedures are effectively implemented within the areas for which they are responsible.
- All new starters receive a basic fire safety induction within one week of joining the University.
- All staff undertake fire training annually.
- Fire safety is considered when undertaking risk assessments of the department's work activities and when conducting routine safety inspections.
- Issues identified for departmental action in the fire risk assessment are resolved within the allotted timescale.
- A departmental Disability Liaison Officer is appointed and a Personal Emergency Evacuation Plan (PEEP) is formulated for any of their staff or students that either requires help to leave the building in the event of fire or may have difficulty hearing the fire alarm. The Disability Liaison Officer will also liaise with the EFM Facilities Manager for their area.
- Put in place a Generic Emergency Evacuation Plan (GEEP) to ensure that, in the event of an evacuation, assistance can be provided for any visitors to the department who need help to leave the building.
- An assessment is made of the department's high fire risk activities so that staff requiring additional training in the use of fire fighting equipment can be identified.
- Sufficient fire marshals, door guards and a building representative are appointed to ensure that any evacuation of the building can be effectively managed.
- The Fire Safety Team are informed of any significant change in the number of staff and students in the department.

The DSO shall:

- support the HoD to carry out fire safety related duties;
- monitor risk assessments to ensure they take account of fire hazards;
- report any fire safety concerns to the HoD and University Fire Safety Team;
- ensure that sufficient Fire Marshals are in place and designate sweep areas and door assignment
- deliver induction talks to all new staff and students including fire safety procedures

Managers/Supervisors/Academics shall:

- ensure that all staff under their control complete the University's mandatory fire safety training within their first week of starting at the University, and that refresher training is undertaken annually;
- ensure that all staff/students under their control are provided with the necessary information and instruction with regard to evacuation routes, exit doors and assembly points for the building they are in;
- identify and arrange completion of a PEEP for those members of staff or students who have visual, auditory, cognitive or mobility impairment (including those with temporary circumstances, for example, someone with a broken leg using crutches) and communicate the findings to relevant staff.

Fire Marshals: (see Appendix 5 for current EEE Fire Marshals)

- There will be a minimum two nominated fire marshals for each level in all relevant buildings who will undertake online training and refresher training as required.
- Members of the Fire Marshal team will be assigned to stand by the fire doors once their area is clear to prevent people entering the building before the fire alarm has been cancelled.

All Department Staff shall:

- complete fire safety training within their first week of employment, and refresher training annually. This is a mandatory requirement in EEE and failure to comply may result in exclusion and/or disciplinary action;
- take all reasonable care to prevent the risk or spread of fire;
- make evacuation a priority;
- keep all fire exit routes and final exit doors unobstructed (both front and rear), and not prop/wedge fire doors open;
- not move or tamper with anything provided for fire safety (i.e. smoke/heat detectors, fire extinguishers, etc.);
- not smoke inside any University building;
- familiarise themselves with evacuation procedures, and comply with all University fire safety arrangements
- Dial 4444 or raise the alarm using the red call points in the event of a fire.

Arrangements for Fire Marshals

The HoD will ensure that there is a sufficient number of trained fire marshals to ensure adequate cover in all EEE occupied buildings during fire evacuations.

The DSO will nominate staff to complete the training and will assign areas to be swept and doors to be guarded.

Fire Marshal training is available at <http://hs.shef.ac.uk> and is valid for 3 years.

All staff, PGRs, long stay visitors and MSc students will undertake Fire Awareness training annually.

Overview/General duty of departments

Current fire marshals can be found in [Appendix 5](#)

Fire Marshals will follow the appropriate [guidance document](#).

Evacuation

On hearing the fire alarm (which is a loud continuous alarm), immediately leave the building by the nearest safe exit (which may be an Emergency Exit).

Congregate at the assembly point identified for your building:-

Portobello, Mechanical Workshop and Mappin Buildings, the assembly point is in **St. George's Church Yard**.

Centre for Nanoscience and Technology, George Porter and Kroto buildings, the assembly point is at the side of the **Gatehouse/Porters Lodge** in the car park.

Further reading

[University Fire Safety Policy and Procedures](#)

Appendix 4 Electrical Equipment Safety Guidance

By law, all electrical equipment must be tested regularly. The test includes assessment of cables, fuses, connectors, etc., earth continuity and insulation resistance.

The law states that electrical equipment must be maintained if it can cause danger.

Electrical testing should ensure earth continuity and if possible lead polarity and insulation resistance.

Visual inspection should ensure that the appropriately rated plug, cable and enclosure are correctly fitted, that they are undamaged and they conform to UK specification. Equipment that passes inspection or testing should be appropriately labelled. PAT test labels should show the date that the next test is due.

Details of all electrical equipment and the result of their test and inspection must be recorded in the Assets database.

Before using electrical equipment it is the responsibility of the user to check that the item has been PAT tested, has a test label and the next test due date fixed which has not elapsed. The user must also perform a visual inspection. Look for abrasions, splits, cuts, wear or trapping to the cable insulation, signs of scorching to the plug and damage to the equipment enclosure. If in doubt do not use it and have it assessed by the Electronics Workshop.

Before any new electrical equipment can be used it must be either PAT tested or visually inspected and electrically tested by Electronic Workshop staff. All equipment brought into the Department, including personal equipment (e.g. brought from home), borrowed or hired equipment and equipment returning from calibration or repair must be treated as new equipment.

All electrical equipment or apparatus constructed/altered/repared in the Department, which is to have some form of connection to mains electricity (or similar source of power), must also be either PAT tested or visually inspected and electrically tested (however temporary it may be) by Electronic Workshop Staff.

All equipment brought into the Department, including personal equipment (e.g. brought from home), borrowed or hired equipment and equipment returning from calibration or repair should be treated as new equipment.

Equipment found not to be tested or whose test date is overdue **must not** be used. Contact your nearest technician, who will arrange testing.

A regular cycle of testing takes place in the department conducted by EFM staff, however this is only done during a block of a few weeks each year so equipment must not be left untested or out-of-test-date on the assumption that it will be done automatically. Contact The Electronic Workshop.

Any electrical equipment that is found to be faulty must be clearly labelled as “Faulty: Do Not Use” to prevent further use and reported to the Electronics Workshop.

Adaptors and Electrical Plugs

University safety policy states that to use equipment with non-British mains plugs within the University is not permitted.

If you have such an item please contact Ian Wraith or staff in the Electronic Workshop who will convert it as required.

Any equipment found using non-British mains plugs will be confiscated.

Appendix 5 EEE Fire Marshals correct as of 11/2/20:

Name	Location	Door Guard
Steve Marsden	Portobello	Y
Matt Hobbs	Portobello	Y
Ian Parmenter	Portobello/Mappin	
Fahmi Mohammad	George Porter/Mappin	Y
Jason Ede	George Porter/Mappin	
Sam Marples	George Porter/Mappin	
Dianne Webster	George Porter/Mappin	Y
Ian Wraith	George Porter/Mappin	Y
Amanda Burnett	Mappin	Y
Melanie Tennant	Mappin	Y
Natalie Hothersall	Mappin	Y
Ruaridh Watson	Mappin	Y
Luke Marsden	Mappin	Y
Lee Shunburne	Mappin	Y
Gavin Williams	Mappin	
Stephen Atkin	Nanoscience	
Stephen Dorward	Nanoscience	
Paul Haines	Nanoscience	
Jon Wall	Nanoscience	
David Morris	Nanoscience	
Stephen Atkin	Nanoscience	
Yuefei Cai	Nanoscience	
Pallavi Patil	Nanoscience	
Jon Milner	Nanoscience	
Tao Wang (EMD)	Level 4 Nanoscience	
Kevin Jackson	Modular Village	
Im Sik Han	Modular Village/Ground floor Nanoscience	
Matt Smith	Kroto/Mappin	Y
Eddie Gray	Mechanical Workshop	Y
Karl Rotchell	Mechanical Workshop	Y

Appendix 6 EEE First Aid trained Staff correct as of 11/2/20:

Contact details for all first aiders are posted inside/adjacent to First Aid boxes in EEE

Name	Location
Dan Gladwin	Mappin
David Stone	Mappin
Ruaridh Watson	Mappin
Rui Zhao	Mappin
Kris Groom	Mappin/Nanoscience
Rob Richards	Mappin/Nanoscience
Sam Marples	George Porter/Mappin
Tom Templeman	George Porter/Mappin
Matt Smith	George Porter/Mappin
Jon Milner	Nanoscience
Jon Wall	Nanoscience
Stephen Dorward	Nanoscience
Brett Harrision	Nanoscience
Paul Haines	Nanoscience
Rob Airey	Nanoscience
Stephen Atkin	Nanoscience
Yuefei Cai	Nanoscience
Nasser Babazadeh	Nanoscience
Ofogh Tizno	Nanoscience
Jia Bai	Nanoscience
Salam Khamas	Portobello
Tim Good	Portobello
Eddie Gray	Mechanical Workshop
David Miller	Mechanical Workshop
David Snowden	Mechanical Workshop

Appendix 7 Arrangements for Department programme of Safety Inspections

Safety Inspections

Safety Inspections will be performed by subsections of geographical areas within the department (e.g.: Level 1 Nanoscience), and will be performed on at least an annual basis, with inspections of higher risk areas being undertaken on a more regular basis e.g. 3 times per year.

The DSO will contact the Technical Lead responsible for the area to be inspected, as well as any academic supervisors with responsibility for the space, equipment or work undertaken in that area, with at least 4 weeks notice.

Safety Inspections are diarised at least 6 months in advance by the DSO and is a rolling programme of inspection.

The date of the inspection is set with the expectation that all required staff will be in attendance, or will have a proxy in attendance, for the duration of the whole inspection.

Staff are expected to actively participate in the inspection. Failure to attend will be reported to the HoD.

Reports generated off the back of the inspection will be sent to the named Laboratory Supervisors, with actions to be taken clearly outlined and timescales for completion clearly stated. Failure to complete the actions within the timeframe will be reported to the HoD.

Safety Inspection Team

This team, drawn from a pool of staff, is under the direction of the DSO. Their responsibilities are:

- To undertake periodic areas inspections in line with the published schedule.
- To undertake unannounced areas inspections as required by the DSO and/or HoD.

Safety inspections will be undertaken, where possible, with the supervisor(s) responsible for an area in attendance, or with a pre-arranged suitable proxy.

Local Area Inspections - Laboratories and Workshops

A monthly H&S checklist has been implemented in all laboratories and workshops in the department.

The named Laboratory Supervisor must ensure that the lab checks are carried out by a nominated person EACH MONTH and they report any issues to the Laboratory Supervisor for immediate rectification.

The forms must be kept on display in the lab for at least one year and be available for inspection at any time by the Departmental Safety Officer (DSO). The DSO will inspect the forms periodically and will carry out regular inspections of the laboratory.

Appendix 8 General requirements relating to the management of Lift Truck operations

Paul Haines is the responsible person appointed by the EEE HoD to coordinate Lift Truck operations within the department.

David Morris, Jon Milner and Paul Haines are the EEE designated trained drivers of the FLT

Departmental lead must:

- Ensure that expert Lift Truck maintenance/servicing and pre use check routines are established and records kept.
- Ensure that routine statutory lifting equipment inspections by Allianz to be carried out and records kept.
- Ensure that Department specific risk assessment for Lift Truck operations are completed.
- Ensure that Operators are authorised in writing by the HoD for the specific type of Lift Truck used and type of work for which the operator is viewed competent - Authorisations are for a specific period of time

Although not a legal requirement, in the interests of best practice, all operators must hold a full UK driving (category B) car licence to operate University owned Lift Trucks.

Although there is no specific legal requirement to provide refresher training after set intervals, lift-truck operators need to be re-assessed from time to time to ensure that they continue to operate lift trucks safely. This assessment should form part of a department's normal monitoring procedures and be formally time-tabled to ensure that it is done at a suggested interval of not greater than 3 years.

In addition to routine monitoring, formal re-assessment is likely to be needed where operators:

- Have not used Lift Trucks for some time.
- Are occasional / infrequent users.
- Appear to have developed unsafe working practices.
- Have had an accident or a near miss.
- Have experienced a change to their working practices or environment.
- Have experienced a change in personal circumstances which could affect their ability to operate the vehicle safely

The FLT owned by EEE must not be used on a public highway.

General guidance relating to safe Lift Truck use

Seat belts must be worn at all times.

Drive at a speed appropriate to the circumstances of use and work environment.

Only move with a raised load at a creep speed or whilst stacking.

Normal travel is with the forks 100 - 150mm above the ground.

Travel in a direction in which the operator/driver has a clear view or using a trained banksman. This means counterbalanced trucks should travel backwards if the load obstructs vision, but when going uphill on a slope with a bulky load travelling forwards but with help from a banks-man. Never go across sloping ground only up or down.

When travelling on a slope when loaded, travel with the load uphill.

When travelling on a slope when unloaded travel with the forks downhill.

Always leave the truck parked with forks on the ground, handbrake on and ignition key removed.

Never park on a slope.

Never carrying passengers under any circumstances.

Never lift people on the truck forks etc. under any circumstances.

Pedestrians & other vehicles are to be prohibited from entering the Lift Truck operating area by the use of barriers, marking of routes and/or warning devices. Suitably experienced observers/banksman with sufficient knowledge of lift truck operations to recognise unsafe conditions must be used during lift truck operation.

High visibility clothing to be worn by all staff involved in Lift Truck operations.

Head protection to be worn by all staff involved in Lift Truck operations where there is a risk of head injury from falling objects.

Lift Truck to be fitted with audible warning devices e.g. horn, reversing sounder.

Lift Truck to be fitted with a flashing warning beacon.

Lift Truck must be parked with keys removed from ignition to prevent unauthorised use.

Adequate levels of ambient lighting to be maintained during operation.

Roadways and aisles etc. to have sufficient width and overhead clearance for loaded Lift Trucks.

Significant structural features such as loading bay edges or other changes of level to be identified, marked and where appropriate protected e.g. with barriers.

Overhead structures such as ceilings, lighting fittings, ductwork etc. can be struck by a raised load if the operator is inattentive. Lift Trucks can have their lift height mechanically limited to avoid this risk.

Appendix 9 Waste Disposal Routes

Although not directly an issue of safety in many cases, waste must be disposed of in a correct manner. There are several waste streams and you must put your waste into the correct stream.

Black sack – cleaner removed waste, all non biological or non contaminated waste; for example paper, paper towels, non hazardous chemical containers.

General rule of thumb: if the item looks as though it has come from a laboratory it should not go in the general waste bins.

Hazardous waste

If you have excess hazardous substances that need to be disposed of, or you have waste containing or contaminated with, HS that requires disposal you should contact Jon Milner/Local Technical Support Staff with a full description of what you have, how much you have and where it is. Jon Milner/Local Technical Support Staff will arrange for a hazardous waste collection to be made, through the University Health and Safety Office.

Sharps Waste

Some work will require the use of a blade, needle or other similar implement that may be considered as a stabbing/cutting risk if it is placed in a normal waste bag. All sharps should be placed in a specially designed sharps bin. These usually have a lid with cut outs to allow safe removal of blades and hypodermic tips from a holder without the need to re-sheath.

Yellow/orange bin – any sharps other than those contaminated with medicines.

Solvent waste

As a consequence of the implications of the Control of Pollution Act, 1974, certain arrangements concerning the collection of used solvents have to be formalised. It is not permitted to pour solvents down drains. Solvents may be mixed in correctly labelled Winchester's in accordance with the categorisation set out below. This categorisation is common throughout the University.

- Category X- All halogenated solvents or mixtures containing halogenated solvents.
- Category Y- All non-halogenated solvents which are non-acidified.
- Category Z- Oils (non PCB containing material)

Waste Electronic and Electrical Equipment (WEEE) Waste

WEEE waste covers a wide range of household and professional electrical and electronic products.

WEEE waste cannot be disposed of along with normal waste. The current WEEE legislation requires the University to separate out WEEE waste. The University has an institutional level system for disposing of computers, PC peripherals and historic WEE waste. All other WEEE must be disposed of by the Department.

For all WEEE waste, please contact Ian Wraith in the Electronics Workshop (Ext. 25864) for advice, collection and to arrange disposal through the Electronic Workshop in line with University policy (see link below).

[WEEE waste guidance](#)

Biological Waste

Currently we produce very small quantities of Biological waste through the work of Prof Matcher's group. Any waste is currently entering the waste disposal route for Biological waste through the Kroto Research Institute. Waste is placed in a sealable yellow Limb Bin for disposal by incineration.

Appendix 10 3-Dimensional Printing (EEE Contact Matt Davies)

3-D printers are becoming increasingly prevalent in the department as they are a versatile tool that brings enormous benefits in many aspects of the work we undertake. Some consideration needs to be given to where and how 3-D printers are used in the department since they come in a variety of types and sizes, and use many different substrates.

CoSHH assessments must be in place for the materials to be used.

If no Safety Data Sheet is available for the proposed material, the material must not be used and an alternative material sourced.

Generally, a 3-D printer uses high voltage, heat and moving parts as a minimum, and larger systems may also introduce hydraulic and pneumatic systems working at high pressure. The process of printing usually involves sintering, extruding or curing the substrate.

The printing process may well result in the release of vapours and gases of a hazardous nature as the substrate being used is heated. Before buying/siting a 3-D printer a risk assessment should be performed. This should consider the type of work that will be done and the substrates that may be used.

- Will LEV be required?
- Should the printer be enclosed in some way (if not manufactured in this way already) to protect users from moving parts, heat, vapour and gas emissions?
- How will it be interlocked?
- Does your system use UV?
- How will you prevent exposure of staff/students?

Appendix 11 Use of UAVs, Radio Controlled Vehicles, and semi/autonomous vehicles

It is a requirement that the DSO must be informed of any plans to use UAV's (drones), Radio Controlled Vehicles or semi/autonomous vehicles before any work is carried out.

Detailed descriptions of the planned work must be provided.

The use of UAVs in the UK is governed by the Civil Aviation Authority (CAA) and whilst it is still evolving drone pilots are increasingly being viewed as General Aviation Pilots.

Information on rules for flying drones for recreation are available [here](#). Whilst these are good rules to work to, the department has to consider the safety of staff, students and members of the public as well as reputational risk should an incident occur. To this end, permission for drone flights of any type must be made in writing to the HOD at least two weeks before the planned flight. This request must include:

- Detailed information on the drone- dimensions, power output, weight, control systems, camera systems etc...
- The location of the flight- where will you take off from, what is the surrounding area like (i.e.: built up and busy, open fields, etc...) and who owns the ground.
- The nature of the flight (i.e.: test flight of newly designed drone, or drone flight to test experimental equipment being carried, etc...)
- Planned duration of the flight.

At this point we are still developing the rules but currently:

- Only trained drone pilots are allowed to fly drones for work purposes.

Appendix 12 Department Policy on access to EEE buildings when accompanied by children.

Normal working hours

In line with University guidelines, this is deemed to cover weekdays 8am-6pm excluding any designated days on which the University has been deemed to be closed, e.g. public holidays.

The University has guidance on the presence of children and young persons (who are defined as being under 18 years old) in University buildings during normal working hours. A copy of this document is available here [The Safety of Children and Young Persons on University Premises](#)

The Department policy follows this guidance in full and this document should be consulted if you are planning to access any Departmental buildings when accompanied by children during normal working hours.

Out of hours

This is deemed to cover all other times which are not designated as normal working hours e.g. after 6pm until 8am and on weekends and official periods of closure.

It is recognised that all categories of staff may be required to call into the Department during out of hours periods to collect documents or items, undertake very minor tasks such as signing papers, approving costings, submitting assessment grades etc, and that this will on occasions coincide with times at which they are accompanied by children. In order to allow staff to gain access with children out of hours for brief periods, the Department has put in place the following policy in consultation with University Health and Safety:

- The visit should not exceed 1 hour in total duration and only be for the purposes of entering an office like room.
- Staff should not enter a room which could reasonably be regarded as a laboratory.
- Staff should not leave children unaccompanied at any point, even for the briefest of periods.
- All staff entering the building out of hours with children must have a valid authorisation from the DSO or their proxy.

In buildings with signing in facilities, staff should include the number of children with them using a means that is unambiguous in terms of determining the number of individuals entering the building e.g. A N Other +2.

For the avoidance of doubt, the Department does not permit staff to spend extended periods working in the Department out of hours when accompanied by children, however pressing the need.

A copy of this section of the policy has been lodged with the Porters Lodges for the Portobello Centre and North Campus. If you have any queries regarding this policy or any difficulties arising from it, please contact Dianne Webster, DSO in the first instance.

Children on University Premises

The Policy above is in addition to the University's Policy on children being present on University premises which are outlined below.

Many staff and students combine parenting and work or educational responsibilities and this means that there are occasions when they may wish to bring their children on to University premises. On these occasions, it must be borne in mind that the University is an institute of adult learning and the buildings and grounds of its premises are not designed with children in mind.

Valid Reasons for Children or Young Persons to be on University Premises

- When attending University operated crèche, playschool, nursery school or sporting facilities.
- When on visits organised by the University, schools, departments or other recognised bodies, where significant risks associated with planned activities and foreseeable incidents must be assessed.
- When on school organised "work experience" periods with specific departments, where significant risks associated with planned activities and foreseeable incidents have been assessed and safe working procedures produced if appropriate. In each of these situations satisfactory arrangements must be in place to ensure adequate induction and supervision of the children and activities undertaken by the relevant University (department or section), OR event organiser. In all other situations, the presence of children on University premises is discouraged and should only occur exceptionally, and then only in low risk work areas and where their presence does not disrupt the normal operation of the University.

Examples would include: -

1. Brief social visits by parents with newborn babies or young children.
2. Accompanying parents to specific ceremonies or events, whether public or private, not involving hazardous activities, areas or equipment.
3. Accompanying parents (University employee) to work on a brief visit, e.g. when visiting for short periods to pick up work or carry out a short term low risk activity.

Accompanying parents (University employee) to work for short periods due to childcare difficulties or similar into a low risk environment until alternative arrangements can be made, but only at the discretion and direction of the Head of Department.

University premises are not designed to accommodate children, and the precautions in place to control risks for the normal population are unlikely to be appropriate for children, due to their physical size, inquisitiveness, immaturity or inexperience.

Children should not be brought into the workplace for extended or frequent periods or as an alternative to making proper arrangements for their care - this could include after-school activities, arrangements with other parents /childminders or flexible working arrangements.

In the event that children are brought into work premises, then: -

1. The parent must consult with the Head of Department about the acceptability of children being present, even for short periods.
2. The parent will be responsible at all times for the supervision of their child(ren) during the period the child(ren) are on the work premises and will never leave them unattended; and will be responsible for exercising sufficient supervision to prevent any hazardous situation from arising.
3. Children must not be allowed to disrupt the normal operation of the work area or the work of other employees.
4. Children must only be allowed into low-risk areas and must never be allowed to enter any area where hazardous activities are being undertaken, hazardous equipment or hazardous substances are being used or if their presence could cause harm to the child(ren).
 - Children must not be allowed to touch any work-related equipment, article or substance or item of waste deposited in a bin or other waste receptacle.
 - The Head of Department, Health & Safety, Security and the Building Facility Manager can instruct the parent to remove the child(ren) immediately from the work area.
 - Children under 16 years of age must not be allowed to ride on the Arts Tower Paternoster and must be accompanied whilst using any other University lifts.
 - In the University's Libraries children under 16 years of age must be accompanied by a parent or responsible adult.

Appendix 13 Bicycles in University Buildings

Bicycles are not permitted within any University buildings. Cycle users should make use of the proper cycle parking facilities available at strategic locations throughout the campus.

Small 'folding' bicycles, when folded, may be brought into buildings provided that they are stored so that they do not cause an obstruction to other building users.

Appendix 14 Drugs and Alcohol

[Human Resources guidance](#)

Appendix 15 Smoking

The University does not permit smoking in any University building, this includes the use of electronic cigarettes.

[Smoke Free Policy](#)

Appendix 16 Animals in University Buildings

Animals (other than nationally recognised support dogs) must not be brought into University buildings, nor should they be exercised on University property in such a manner as to cause a nuisance to others