



University of Glasgow | School of Physics & Astronomy

SAFETY REGULATIONS AND EMERGENCY PLAN

2020 Edition

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PREFACE

The Health and Safety at Work Act 1974 (<http://www.hse.gov.uk/legislation/hswa.htm>) places responsibility on both employer and employee for health and safety. Two of the more important sections of the Act are given below:

Section 2 (1)

It shall be the duty of every employer to ensure, so far as is reasonably practicable, the health, safety and welfare at work of all his employees.

Section 7

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

a) To take reasonable care for the health and safety of himself and other persons who may be affected by his acts or omissions at work; and

b) as regards any duty or requirement imposed on his employer, or any other person, by or under the statutory provisions, to co-operate with them so far as is necessary to enable that duty or requirement to be performed or complied with.

It must be emphasized that anyone who contravenes the above act is liable to be prosecuted in the event of an accident resulting from the contravention.

SAFETY POLICY OF THE SCHOOL OF PHYSICS AND ASTRONOMY

The School of Physics and Astronomy recognizes that its work can sometimes be hazardous. It is the philosophy and belief of this School that the maintenance of good health and safety standards will improve overall performance and cost effectiveness. Also, successful management of health and safety can only be effectively achieved through the concerted effort and active participation of every staff member. Its success relies entirely on the contribution each person makes towards health and safety.

The Head of School is responsible for putting into place effective arrangements for ensuring the health and safety at work of all staff and students so far as such matters are within his/her control. It is my intention that the health and safety of staff and students will not be compromised for the sake of expediency.

Each level within the School is accountable to its respective senior and at the same time responsible for its subordinates. Supervisors should lead, motivate and encourage their staff to report on hazards and to discuss openly all matters relating to safety.

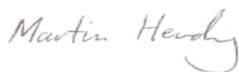
Safety Policy is made and safety performance is monitored by the Head of School under the guidance and advice of the Safety Committee, comprising staff representatives from the various sections.

The School recognizes that safety requirements which are required by law set only a minimum standard. Safety standards are dynamic in nature, and the School underlines the significance of its commitment by constantly reviewing its own safety standards. As far as conditions and resources permit, the School is committed to continual and progressive improvement in safety standards.

All staff in the School are required to observe health and safety rules and standards, and senior staff are to set a good example. Deliberate deviation from the established rules and practices may result in disciplinary action.

This Policy Statement will be reviewed at least annually by the Safety Committee.

Finally, it is required that all persons working in the School should read these Safety Regulations and the accompanying Emergency Plan and ensure that their actions are in accord with the rules and guidelines laid down.



February 2020

Professor Martin Hendry

Head of School of Physics and Astronomy

SAFETY REGULATIONS

REGULATIONS FOR THE CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH

It is the policy of this School that all members of staff, students, and all other persons using the School must comply with the above regulations - failure to do so is a criminal offence.

Anyone intending to introduce a chemical substance into the School should obtain as much information as possible concerning the hazards associated with the substance. Hazards resulting from the combination of the substance with others already in use should also be considered. If the hazards are considerable, the availability of a safer alternative substance should be investigated. Chemicals should not be ordered in quantities which greatly

exceed the amount required for the task in hand, as the hazard increases with the quantity stored. It should also be remembered that the disposal of chemicals is very expensive and will be charged to the appropriate Research Group or Laboratory budget.

Research Group Leaders are responsible for ensuring that formal risk assessments of the hazards of chemical substances are produced. The completed assessment forms should be signed by the Group Leader. Newly discovered hazards associated with a substance already in use should be brought to the Research Group Leader's attention immediately.

All staff, students and technicians must read and sign the Risk Assessment for the chemical they are using and abide by the techniques prescribed in the assessment.

Information on the hazards of specific chemicals can be obtained from the supplier, the Safety Co-ordinator, or the University Safety Officer. Disposal of chemicals can be arranged with the Chemical Safety Advisor or the Safety Co-ordinator.

Note: The legal requirements for risk assessment to be carried out now extends beyond COSHH and requires that all work is risk assessed.

COSHH REGULATIONS

New Approach to Good Practice and Exposure Limits in Control of Substances hazardous to Health (COSHH) is a starting point for guidance

https://www.gla.ac.uk/media/media_188463_en.pdf

The procedures detailed in COSHH 2002 and 2010

https://www.gla.ac.uk/media/media_173317_en.pdf

and

https://www.gla.ac.uk/media/media_175444_en.pdf

have been implemented in the School and staff appointed within each group to ensure that the risk assessment and safety procedures for all chemicals used have been identified.

Further links and forms can be found at

<https://www.gla.ac.uk/services/seps/az/chemicalsafety/>

SAFETY ORGANIZATION

The Head of School is responsible to the University Court for health and safety in the School.

However, responsibility for formulating safety policy and advising on safety matters has been delegated to the Safety Committee, which meets frequently throughout the year.

SAFETY OFFICER (MR G TOBASNICK)

The Safety Co-ordinator is available to advise on safe working practice, and to obtain expert advice where required. In the absence of the Head of School and Chairman of the Safety Committee, he has the authority to halt any activity which he deems to be unacceptably hazardous.

The following items should be reported to the Safety Co-ordinator as soon as possible:

- a) Any injury - no matter how trivial.
- b) Any dangerous occurrence - even if it does not result in injury to anyone.

c) Any existing or potential hazard - so that it can be dealt with before it causes an accident.

LASER SUPERVISOR (DR G GIBSON)

The Laser Supervisor is available to advise on all matters of safety relating to lasers.

Staff must exercise the strictest control and take all necessary precautions when using lasers. The necessary precautions are summarized in the University Safety Handbook, although staff who are responsible for lasers should also be familiar with AURPO Guidance No. 7, "on the safe use of lasers in education and research", which can be downloaded at

https://www.gla.ac.uk/media/media_418032_en.pdf

The siting and use of lasers in the School should be discussed with the Laser Supervisor, and all new laser equipment should be registered with him or her.

Research laboratory areas in which lasers are operating usually have illuminated warning signs outside them, and it is important that these are switched on when the lasers are in operation and are switched off when the lasers are inoperative.

In general, a laser should not be left operating in an unoccupied room unless an interlock system, which shuts off the laser in the event of an unauthorized entry, is installed.

Appropriate protective eyewear must be provided for each member of a laser group and must always be readily available.

For laser radiation in the visible and near infra-red regions, the tissue at risk is generally recognised to be the retina of the eye. Your attention is therefore directed to the recommendations laid down in AURPO Guidance No. 7, "on the safe use of lasers in education and research" for maximum exposure of the cornea of the eye to laser radiation.

<https://aurpo.org.uk/publications/guidance/>

In view of the exceptionally low maximum values for exposure, the following basic methods of protection must be considered:

- a) Complete containment of the laser installation.
- b) Screening of the operator.
- c) Direct protection of the eyes.
- d) Assessment of the installation for safety before the start of operations.
- e) The designation, instruction and medical control of staff for laser work.

Full recommendations for the safe operation of laser systems will be found in the Laser Rules on laser safety obtainable from the Laser Supervisor.

RADIATION PROTECTION OFFICER (MS C NEILAN)

The Radiation Protection Supervisor is available to advise on all matters relating to ionizing radiation.

All work with ionizing radiation must be carried out in accordance with the procedures laid down in the "Local Rules for the use of Radioactive Materials and X-Rays" (see <https://www.gla.ac.uk/myglasgow/radiationprotection/hazardinformationsheets/informationsheets/> IR99 Local Rules) . This document should be read in conjunction with Note No. 8 in the booklet "Health Physics Notes" issued by the University Radiation Protection Service. Copies of these documents may be obtained from the Radiation Protection Supervisor.

A full description of the legal requirements and the procedures to be employed is given in the documents mentioned, but some important points are noted below.

- 1) In all cases, radiation workers must not expose themselves or others to ionizing radiation to a greater extent than is reasonably necessary for the purpose of their work, and the recognized dose limits for each class of worker must not be exceeded.
- 2) Radioactive sources can only be ordered through the Radiation Protection Supervisor, and all users must co-operate in maintaining security of the sources. In particular, the record system which contains details of the location of each source must be kept up to date and all transfers of sources must be notified to the Radiation Protection Supervisor. Movement or transport of radioactive sources outwith the main laboratory is subject to stringent transport regulations, and the Radiation Protection Supervisor should be contacted before any arrangements are made for transporting sources.
- 3) The use of ionizing radiation in undergraduate teaching is governed by the recommendations contained in the International Commission for Radiological Protection, Publication No 36 (1983) "Protection against Ionizing Radiation in the Teaching of Science" (<http://www.icrp.org/publication.asp?id=ICRP%20Publication%2036>). The University Radiation Protection Service has a pamphlet which summarises the recommendations. The annual dose limit for an undergraduate is 1/10 of that for a member of the public and each experiment or demonstration must not result in a radiation dose exceeding 1/10 of the undergraduate dose limit. Laboratory Class Heads should ensure that in any experiment involving ionizing radiation, the safety procedures are properly transmitted from the demonstrator to the student. This is particularly important where there may be a change of demonstrator.
- 4) All uses of X-ray equipment must be discussed beforehand with the Radiation Protection Supervisor.

Further information see: <https://www.gla.ac.uk/services/radiationprotection/>

INCIDENT REPORTING

All work-related accidents involving personal injury or damage to property must be reported to SEPS and the school Safety Officer; this includes 'near-miss' incidents. Incident reporting via the web form (<https://www.gla.ac.uk/myglasgow/seps/reportanincident/#d.en.411120>) will alert both SEPS and the Safety Officer simultaneously; if reporting using the paper form (downloadable forms available from the SEPS link, and also from the school web pages <https://www.gla.ac.uk/schools/physics/studentstaff/safety/>), please ensure a scanned copy is sent to the Safety Officer as soon as possible.

RISK ASSESSMENTS

All laboratories in the School (research and teaching) must complete a Risk Assessment Form for each activity undertaken and submit these electronically to the safety officer for central storage. A copy of the standard form is appended to this handbook, and is available in from the SEPS website <https://www.gla.ac.uk/myglasgow/seps/forms/>

Moreover, a summary of the risk assessment per laboratory must be completed using the template form and displayed prominently close to the main entrance for each appropriate lab (this is to ensure that the emergency services can rapidly assess the hazards in each room). A copy of the form is appended to this handbook, and a downloadable version can be found at <https://www.gla.ac.uk/schools/physics/studentstaff/safety/>. The electronic version must be sent to Safety Officer as a central record.

FIRE PREVENTION

- Smoking, including electronic cigarettes, is forbidden inside the building.
- Do not store combustible or flammable materials on or near heaters.
- Do not leave electrical heaters switched on in unoccupied rooms.
- Switch off all electrical equipment when not in use.
- Close all windows at the end of the working day.
- Close all doors - including corridor fire doors.
- Restrict the use of flammable liquids to the absolute minimum and ensure that they are stored safely. Know the location of fire extinguishers and learn how to use them. Do not wait until a fire occurs before reading the instructions.

FIRE ALARM TESTING

The fire alarm will normally be tested on Monday mornings between 08.50 and 09.00.

WORKING OUTWITH NORMAL HOURS

It is important that you comply with the following instructions when working outwith normal hours:

- 1) Your arrival and departure at the out-of-hours door will be recorded by CCTV; you must comply with any additional instructions to record your presence in the building.
- 2) Plan what you are doing to reduce the risk of fire to a minimum.
- 3) Acquaint yourself with the whereabouts of the nearest exit, fire extinguisher, and light switches for corridors and stairs leading to the nearest exit.

Potentially dangerous operations must never be undertaken outwith normal hours unless a second responsible person is present. Such operations should be restricted to normal hours when medical and other services are readily available.

When assessing the hazards of an operation, you should bear in mind that a mistake could cost your life, so be very careful when making an assessment.

The greatest care must be taken to avoid starting a fire. The risk can be minimized by adopting the following safe working practice:

- a) Ensure that all equipment is in good working order - especially heating devices.
- b) Assess the consequences of equipment malfunction, and consider what action is necessary to
- c) cope with such an occurrence.
- d) Ensure that fire-fighting equipment is close at hand, and that you know how to use it.
- e) If flammable substances must be used, restrict the quantity to the minimum necessary for the job.

Research students who intend to work late must inform a senior member of the group and give details of the work they intend to do.

It is strongly advised that inexperienced personnel should be accompanied by experienced personnel when working late. If there is a serious injury in the Kelvin Building, dial 4444 and ask for an ambulance. If no First Aider is available in Kelvin Building contact Main Gatehouse Ext 4282 and First Aid trained Security Staff will attend. If the incident occurs at Acre Road Observatory, call Garscube security on 2222.

SAFETY & TRAVEL

WORKING AWAY FROM THE UNIVERSITY

When staff are working away from the University, RGLs are responsible for ensuring a safe working environment. In general, work will be carried out in another institution that the RGL is familiar with and has similar levels of safety to the University of Glasgow.

If staff are planning to undertake fieldwork or are going to a new institution, then they should undertake a risk assessment and discuss with their RGL.

TRAVEL INSURANCE

Staff and students are covered by University travel insurance.

An online insurance form should be submitted at least five days in advance. The form can be found at: <https://www.gla.ac.uk/myglasgow/insuranceandrisk/>

Details of coverage can be found at:

<https://www.gla.ac.uk/myglasgow/insuranceandrisk/#d.en.88033>

RESEARCH FURTH OF GLASGOW

If postgraduate students are going to work away from the University then “research furth of Glasgow” should be submitted. If postgraduate students are going to work for at another institution for extended periods on a regular basis then the institute can be setup as an approved institution. This is done by application to the College. For further details contact the School Graduate Convener (Dr C Englert). Details can be found at:

<https://www.gla.ac.uk/services/postgraduateresearch/mobilityandcollaborationopportunities/research-furthofglasgow/>

DUTY OF CARE

(from: <https://www.gla.ac.uk/myglasgow/insuranceandrisk/>)

It is the responsibility of the line manager (or other identified member of staff) to ensure that the employee is as well prepared for the trip as possible. This can include many factors such as:

- Ensuring that the employee is fully briefed on the area he/she will be visiting
- Ensuring that an adequate risk assessment has been carried out by the employee and that action has been clearly identified which will help to reduce, as far as possible, any perceived risks
- Ensuring that travel insurance has been organised well in advance of the trip
- Ensuring that the employee is keeping up-to-date with the latest information on their destination by accessing the Foreign and Commonwealth Office (FCO) website – <https://www.gov.uk/foreign-travel-advice>

- Wear personal protective equipment (PPE) where necessary. (glasses, protective clothing, safety shoes, etc).
- Do not wear contact lenses when working with chemicals as chemicals may be trapped between the lens and the eye.
- Do not pour your waste solvents or other chemicals down the drains. Ask the Superintendent or the stores Administrator to arrange for disposal.
- Do not eat, drink, smoke or apply make-up in areas where chemicals are used or stored, this is forbidden by law.
- Do not inhale unknown chemicals or gases - they may be toxic.
- Do not store mercury in unsealed vessels. Mercury spillages should be reported immediately to the Superintendent.
- If gas cylinders, liquid nitrogen or liquid helium containers, flammable solvents or dangerous chemicals are to be conveyed by lift, they must not be accompanied by passengers except in the case of a well-ventilated lift such as the goods lift. Such items should be placed in the lift, which can then be called from the appropriate floor by an assistant.
- Gas cylinders should be supported by a stand or fixed securely when in use. They should be transported on proper cylinder trolleys only, and should have the gauge head removed before being transported.
- Highly flammable solvents must not be kept in rooms or laboratories in containers greater than 500ml, unless special permission has been given by the research supervisor. Up to 50 litres may be kept in a properly designed cabinet.
- Vessels containing chemicals must be labelled clearly and correctly - this includes waste chemicals.
- Broken glass, razor blades, etc. must not be disposed of in wastepaper bins. They should be sealed in a suitable, labelled container and put in bins in the courtyard, unless they are contaminated in any way, in which case they should be given to the Superintendent for disposal.
- To avoid cuts, and poisoning by contamination, broken glassware should be swept up not picked up.
- Machine tools must not be used unless permission has been obtained from the Workshop Supervisor or his deputy.
- Appropriate safety guards must be in place before machines are used.
- All persons with long hair must wear safety caps or hair net before using machines.
- Welding equipment, gas burners, etc., must not be used in the vicinity of flammable liquids or materials.
- Personal Electrical Equipment - Anyone who brings personal items of mains-operated equipment (Electric heaters, kettles, radios etc.), into the School, must ensure that they comply with the safety standards of the University, and that they are maintained to these standards. Owners of such items may have them tested by applying to the Superintendent.
- All mains electrical supplies up to and including the outlets are the responsibility of the Estates and Buildings Department. No work may be carried out by School personnel on electrical supplies.
- All mains electrical equipment must be correctly wired
- (brown = live, blue = neutral, yellow/green = earth), and have the correct fuse fitted.
- All equipment - except double insulated - must be earthed.
- Wiring should be checked for safety at least once per year, using a Portable Appliance Tester where appropriate.
- Power points must not be overloaded.
- Mains extension leads must not be connected together either to increase length of extension or to increase the number of sockets. An extension lead of the correct length or with the correct number of sockets must be obtained.
- Electrical heaters must not be left switched on in unoccupied rooms.
- Do not run cables across the floor unless they are protected by a suitable cover.
- Laboratory equipment must not be run overnight unless a risk assessment has been carried out by a competent member of staff. A risk assessment form should be attached to the room door and a copy sent to the Superintendent.
- Water supplies to equipment must be provided via metal piping or reinforced nylon tubing which must be connected to the water supply by proper clips - not wired.

USE OF DISPLAY SCREEN EQUIPMENT

Health and Safety (Display Screen Equipment) Regulations 1992 as amended by the Health and Safety (Miscellaneous Amendments) Regulations 2002 lay down requirements for the use of "display screen equipment" by "users".

<http://www.hse.gov.uk/pubns/priced/l26.pdf>

In the context of the School of Physics & Astronomy "display screen equipment" can be equated with PCs, Macs, Workstations and VDUs.

However, the term "user" is less easily defined. It refers to employees whose work requires them to make use of display screen equipment for some significant but unspecified fraction of the working day.

The safety problems of using display screen equipment relate mainly to fatigue and strain associated with prolonged use. For the most part symptoms are only temporary.

EQUIPMENT

The chair must be safe and adjustable to meet the needs of the user.

The screen must be positioned suitably for the user and must be free of excessive glare and reflections - if necessary, by the addition of a hood or a filter to the screen and blinds to the windows. The image size and quality should be comfortable for the user.

The keyboard should be independent from the screen and be easy to use.

The desk should be of suitable dimensions to allow comfortable use - perhaps in conjunction with footstools, arm rests, screen stands and document stands.

ENVIRONMENT

The lighting provision in the environment should ensure that reflections from the screen surface do not make the image difficult and tiring to view. It is important that there is no excessive difference in light levels between the screen image and the background level from behind the screen e.g. from a window. Furthermore, it is best to avoid a large contrast between the illumination of any paper document being read and the light output from the screen image.

The noise level, temperature and humidity of the workplace should be satisfactory.

JOB DESIGN

The user's work schedule must include breaks from display screen use.

The software must be appropriate to the task and suited to the needs of the user. Training in its use should be provided.

The user should receive information about the health and safety aspects of display screen equipment use.

Fuller details and advice on the safety aspects of the use of display screen equipment can be found in the booklet Display Screen Equipment (DSE) available from the University Safety Office or at web page

<https://www.gla.ac.uk/myglasgow/seps/az/computers/>

Note: Staff who wish to have an eye test should contact the Superintendent.

EMERGENCY PLAN

FIRE, POLICE, AMBULANCE

DIAL 4444 if on Gilmorehill Campus (i.e. Kelvin Building)

DIAL 2222 if on Garscube Campus (i.e. Acre Road Observatory)

These numbers must not be used for other than the specified emergencies. Less serious incidents at the Observatory can be communicated to Garscube Security on 5799.

ACCIDENT OR ILLNESS

In the event of a serious accident or sudden illness you should

dial 4444 (Kelvin Building) or 2222 (Acre Road Observatory) and ask for an ambulance

- then summon a first-aider.

A list of first-aiders is given below.

If the accident involves chemicals, full written details should be sent with the patient.

In the event of a less serious accident or illness you should summon a first-aider. If the first-aider decides that hospital treatment is required then contact Main Gatehouse to call ambulance.

If no first-aider is available contact Main Gatehouse Ext 4282 and First Aid trained Security Staff will attend.

FIRST AIDERS

Mr S Craig	KB Room 203	Ext 5901
Mr D Doak	KB Room 140	Ext 6412
Ms F McEwan*	KB Room 346	Ext 0921
Ms L Murray	KB Room 317	Ext 4717
Mr P MacMillan	KB Janitor	Ext 4465
Mr C Hunter	Acre Road Observatory	8556

*Thursday and Friday only

BURST PIPES, ELECTRICAL FAULTS ETC.

For emergencies such as burst pipes, electrical faults etc. which occur during normal working hours, contact one of the following:

Superintendent Ext 2841

Handyperson Ext 6400

Janitor Ext 4465

Estates & Buildings Helpdesk Ext 6547

For emergencies occurring outwith normal working hours contact:

Main Gatehouse Ext 4282

FIRE

ON DISCOVERING A FIRE:

- **Raise the alarm by operating the nearest Fire Alarm Call Point.**

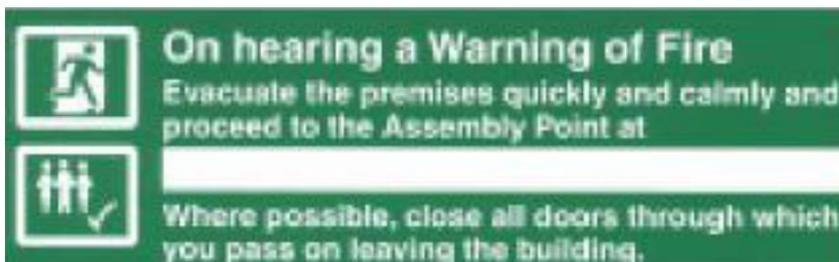


An electronic sounder will then sound continuously.

- **Evacuate the building**



- **Proceed to the designated assembly point**



ON HEARING A WARNING OF FIRE

- Evacuate the building quickly and calmly
- Proceed to the designated assembly point

In all circumstances:

- **Do not delay your departure by collecting personal belongings**
- **Where possible close room doors behind you**

REFUGE AREAS

Areas suitable for disabled people to wait temporarily on upper floors for assisted evacuation have been identified within accessible buildings. These areas, typically stair landings, are marked by suitable signage. In the event of fire alarm activation or other circumstance that prevents exit by lift, those with a disability that prevents them leaving the building unaided should proceed to the closest Refuge Area. Two-way communications systems are installed in some Refuge Areas to allow users to communicate directly with Central Services staff. A rolling programme to provide further two-way communication links is ongoing on a prioritised basis.

Anyone who requires assisted evacuation is advised to carry a charged mobile phone and to ensure that the emergency number below is programmed into the phone memory.

Kelvin Building: 4444

Acre Road Observatory: 2222

Fire Wardens and other staff provide a further route for emergency communications.

- **Do not use lifts**

Do not re-enter the building until a Fire & Rescue Officer has stated that it is safe to do so.

Do not fight a fire if:

- It is dangerous to do so
- You are on your own
- There is a possibility of your escape route being cut off by fire or smoke
- The fire continues to grow
- The fire involves hazardous materials

If in doubt get out

In addition you should familiarize yourself with:

- The escape route from the premises:
- The position and operation of Fire Alarm Call Points
- The correct method of calling the Fire Brigade (dial 4444 and ask for the Fire Service) The evacuation procedure for the premises
- The location of assembly points:
 - Assembly Point 1: Chemistry Roadway;
 - Assembly Point 2: Gardens at rear of Bower Building
 - Assembly Point 3: Outside entrance to Old Building
- The position and operation of Fire Fighting Equipment
- The position of Fire Resisting Doors and the need to keep such doors closed when not in normal use
- Any specialised shut down procedures, together with security measures appropriate to the risk
- The position and content of Fire Action Notices
- The position and content of Safety Signs

Note that between 17.00 and 08.00 and at weekends it is possible to open the Old Building Door from the inside by pressing the silver push button switch located at the right-hand side of the door or pressing Break Glass

Escape Route for occupants of Level 6 is by the West Door then down main staircase or by East Door then down rear staircase at Goods Lift to Assembly Point 2.

Escape Route for occupants of the Penthouse is by main staircase at the north end of the corridor, or by the door at the south end of the corridor and down the Stair E leading to courtyard.

WORKING WITH CHEMICALS

Contact the Chemical Safety Advisor for advice on working with hazardous chemicals; disposal of chemicals is handled by Veolia: <uk.techscotland@veolia.com>, and research groups are responsible for paying disposal costs.

CHEMICAL EMERGENCIES

The following notes apply to most, but not all, dangerous chemicals. If in doubt consult

<https://www.gla.ac.uk/myglasgow/seps/az/chemicalsafety/chemicalsafety/chemicalemergencies/how-tocopewithachemicalemergency>

or a First Aider.

CONTACT WITH SKIN

Wash off contaminant with a gentle, but copious stream of cold water for at least twenty minutes. Remove contaminated clothing while flooding the injury (use gloves).

Obtain medical help for all but very minor burns.

Hydrofluoric acid burns must always be considered very serious - even if there are no immediate symptoms - and medical aid must be obtained as soon as possible.

CONTACT WITH EYES

Wash with a very gentle stream of cold water for at least ten minutes. It may be necessary to enlist the aid of a colleague to hold the eyelids open to ensure that the water enters the eye. Be careful that contaminated water does not splash the uninjured eye. Always take eye casualties to hospital.

INGESTION OF CHEMICALS

If chemicals are swallowed and lips and mouth are burned give sips of water or milk to drink, but do not induce vomiting. Call an ambulance.

Full resource on Chemical Emergencies is available at

<https://www.gla.ac.uk/myglasgow/seps/az/chemicalsafety/chemicalsafety/#d.en.35209>

Guidance on use of Cryogenic Substances please refer to

<https://www.gla.ac.uk/myglasgow/seps/az/cryogenicsubstances/>

Specific risk advice for nanotechnology please refer to “Working Safely with Nanomaterials in Research & Development”:

<http://www.safenano.org/media/108929/UKNSG%20Guidance%20-%20Working%20Safely%20with%20Nano-materials%20-%202nd%20Edition.pdf>

OPTICAL RADIATION

Lasers and UV sources are types of non-ionising radiation which come under the new Artificial Optical Radiation Directive (AORD). Other sources of optical radiation such as white light sources, strobe sources, blue light sources and welding equipment also come under the AORD directive.

A guide to the Artificial Optical Radiation Directive is available at

https://www.gla.ac.uk/media/media_164337_en.pdf

ELECTRIC SHOCK

In the event of an electric shock, switch off the equipment and if possible, unplug at the mains before trying to pull the victim clear.

If the victim is breathing, send for a first-aider immediately.

If the victim is not breathing call an ambulance and then attempt resuscitation.

RADIATION INCIDENTS/EMERGENCIES

All radiation incidents and emergencies must be reported at the earliest opportunity to the Radiation Protection Supervisor and the University Radiation Protection Service.

Where a radiation incident, possibly involving radioactive contamination occurs, treatment of any injury takes precedence over concerns regarding the risk from radiation. To call an ambulance, dial 4444. In the case of a contaminated casualty, the person accompanying the patient to hospital should, where possible, take with him a suitable contamination monitor and be able to give details of the circumstances of the accident.

In the event of fire in a laboratory where radioactive sources are stored or in use, a senior member of staff should inform the Fire Brigade of the significance of the radiation hazard warning signs. Teaching laboratories are "supervised" radiation areas where the risk from external radiation or radioactive contamination is very small and are safe for the Fire Brigade to enter in the event of a fire, without special precautions. The main radioactive material store is a "controlled" radiation area and should only be entered by firemen wearing chemical suits and breathing apparatus.

NOTE: Loss of any radioactive material from the School is a very serious matter and must be reported immediately to the Radiation Protection Supervisor (ext 4466) and/or University Radiation Protection Service (ext 4471)

WORKING AT HEIGHT

Work at height means work in any place where, if there were no precautions in place, a person could fall a distance liable to cause personal injury. For example you are working at height if you:

- are working on a ladder or a flat roof;
- could fall through a fragile surface;
- could fall into an opening in a floor or a hole in the ground.

Take a sensible approach when considering precautions for work at height. There may be some low-risk situations where common sense tells you no particular precautions are necessary and the law recognises this.

There is a common misconception that ladders and stepladders are banned, but this is not the case. There are many situations where a ladder is the most suitable equipment for working at height.

Before working at height you must work through these simple steps:

- avoid work at height where it is reasonably practicable to do so;
- where work at height cannot be avoided, prevent falls using either an existing place of work that is already safe or the right type of equipment;
- minimise the distance and consequences of a fall, by using the right type of equipment where the risk cannot be eliminated.

You should:

- do as much work as possible from the ground;
- ensure workers can get safely to and from where they work at height;
- ensure equipment is suitable, stable and strong enough for the job, maintained and checked regularly;
- make sure you don't overload or overreach when working at height;
- take precautions when working on or near fragile surfaces;
- provide protection from falling objects;
- consider your emergency evacuation and rescue procedures.

For further information on working at height please visit

www.hse.gov.uk/pubns/indg401.pdf

KELVIN BUILDING FIRE WARDENS

Area Fire Officer Mr Colin Craig. Ext 5901 or 07748155509

Deputy Fire Officer Ms Agnes Garrett. Ext 6400

New Building

Fire Wardens	Area Covered	
Dr Nicolas Labrosse	All	Level 6*
Dr David Hamilton	Research Wing	Level 5
Ms Fiona Speirits	Penthouse	Level 5
Mr Tony Clarkson	Research Wing	Level 4 *
Mr Matt Trainer	Teaching Wing	Level 4
Ms Lucy Murray	Research Wing	Level 3 *
Ms Sophie Combs	Teaching Wing	Level 3
Mr Andrew Fraser	Computer Cluster	Level 3
Mr Stephen Craig	Research Wing	Level 2 *
Ms Claire Neilan	Teaching Wing	Level 2
Mr Billy Smith	MCMP upper rooms	Level 2 *
Mr Colin How	MCMP lower rooms	Level 1
Mr Alan Bowman	Stores	Level 1

*Exit via Crane Hall

Old Building

Fire Wardens	Area Covered	
Mr Mike Perreur-Lloyd	East Perimeter	Level 4
Ms Jill Borland	West Perimeter	Level 4#
Mr Steven O'Shea	West Perimeter	Level 3#
Mr Calum Gray	East Perimeter	Level 3#
Dr Bryan Barr	East Perimeter	Level 2#
Dr Morag Casey	West Perimeter	Level 2#
Ms Agnes Garrett	Computer Lab	2#
Mr John Marshall	West Perimeter	Level 1#
Dr Graham Gibson	East Perimeter	Level 1

Exit via Old Building (South Entrance)

Additional short-notice cover provided as necessary by Mr Tom Queen & Mr Paul Agnew.

Main Entrance	Area Fire Officer Mr Colin Craig/ Fire Warden Alan Bowman
#South Entrance	Mr John Marshall
*Crane Hall Exit	Fire Warden Mr Billy Smith

Acre Road Observatory

Fire Wardens	Area Covered	
Mr Colin Hunter	All areas	Levels 1 and basement

PHYSICS AND ASTRONOMY FIRST AIDERS

Mr S Craig	KB Room 203	Ext 5901
Mr D Doak	KB Room 140	Ext 6412
Ms F McEwan*	KB Room 346	Ext 0921
Ms L Murray	KB Room 317	Ext 4717
Mr P MacMillan	KB Janitor	Ext 4465
Mr C Hunter	Acre Road Observatory	8556

*Thursday and Friday only

LOCATION OF FIRST AID BOXES

KB Level 1 : Room 148

KB Level 2 : Janitor's Desk and Rooms 203, 206 and 216

KB Level 3 : Room 319, 346 and 350

KB Level 5: Room 515b

KB Teaching Wing: Levels 2, 3 & 4 - each undergraduate laboratory (in addition to those specified above)

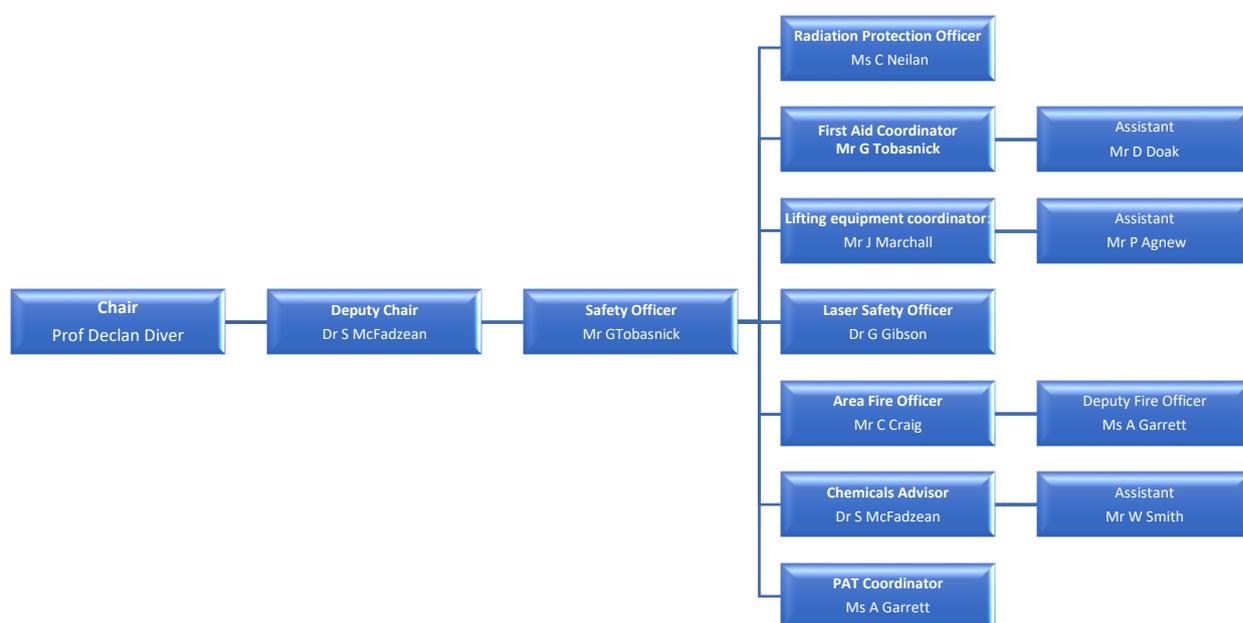
Acre Road Observatory: Janitor's Room and main dome.

SCHOOL OF PHYSICS & ASTRONOMY HEALTH AND SAFETY PLAN

The following items form the basis for an on-going School Health and Safety Plan. The main objectives of this plan are to provide a regular review of local safety procedures and regulations in line with the Safety Policy of the School Policy Statement (this document). To this end, the Safety Committee will undertake to:

- review the School Safety document (annually)
- review and update all COSHH risk assessments (every 5 years)
- prepare of non-COSHH risk assessments
- ensure portable appliance testing (every 2 years)
- conduct safety inspections of all offices, labs, lecture theatres and public areas.

ORGANIZATIONAL CHART: SAFETY COMMITTEE



The duties of each member of the safety support committee are outlined below:

CHAIR OF SAFETY COMMITTEE.

- Chair all Safety Committee meetings.
- Appoint sub-committee to carry out annual building health and safety inspections.
- Together with the Safety Co-ordinator, provide advice to members of the School on matters of health and safety and advise the Head of School on the formulation and revision of the local Health and Safety Policy Statement and risk assessment and control procedures.

SAFETY CO-ORDINATOR.

- Together with the Chairman of the Safety Committee, provide advice to members of the School on matters of health and safety and advise the Head of School on the formulation and revision of the local Health and Safety Policy Statement and risk assessment and control procedures.

- To monitor, on behalf of the Head of School, the duties and tasks carried out by the Safety Support personnel.
- To liaise with University Safety and Environmental Protection Services and other central advisors on health and safety matters.
- To be a member of the Safety Committee.
- To produce written systems of work for any significant risks which may be encountered in the work of the School, ensuring that these are brought to the attention of those who enter that area and that local management effect adherence to them.
- To co-ordinate and maintain records of annual health and safety inspections

AREA FIRE OFFICER.

- To liaise with University Fire Officer and other University safety personnel regarding fire protection requirements, and to maintain the School Fire Log Book.
- To carry out regular inspections of escape routes and testing alarm system.
- To arrange and monitor fire drills.
- To ensure all new members of staff are given instruction on Fire Emergency Procedures.
- To be a member of and report to the Safety Committee.

RADIATION PROTECTION OFFICER

- to ensure the safe use of radioactive sources (isotopes) and ionizing radiation within the School of Physics & Astronomy
- reports to the Head of School and Safety Committee.
- Duties include the updating and dissemination of information relating to ionizing radiation relating to the School, in alignment with University Radiation Protection Policy
- responsible, in conjunction with University Radiation Protection Service, for the safe storage of isotopes and for recording their use and location.

LASER SAFETY OFFICER

- to minimise the risk that laser-related accidents occur in the Schools of Physics & Astronomy and Chemistry.
- all users of lasers in both Schools are trained in the awareness of the risks posed by lasers;
- all laser equipment used in both Schools conforms to the recommendations given in PD IEC TR 60825-14:2004 "Safety of Laser Products" as far as is reasonably practicable.

To achieve these aims, the laser-safety officer

- arranges for all new users of lasers in both Schools to watch the laser-safety video owned by the University (now on DVD). The laser-safety video should be made available to new users of lasers in the School within 1 week of a new user reporting to the laser-safety officer. The new user then completes the University's laser user registration form available at web page below
- <https://www.gla.ac.uk/services/radiationprotection/non-ionisingradiations/>

Records of all laser users are held by the University Radiation Protection Service.

- requires all other laser users in the School to watch the laser-safety video at least once every 5 years. The laser-safety officer takes records of attendance at laser-safety video showings. If laser users have not attended a showing of the laser-safety video for more than 5 years the laser-safety officer reports to the Head of School that the user in question has not completed the required laser-safety training.
- inspects new laser facilities for class III or IV lasers in the School and advises on their laser safety. This should happen within 1 week of the new laser facility being reported to the Laser Safety Officer. The member of staff responsible for the new class-III or class-IV facility needs to complete a risk assessment for the use of non-ionising radiation form available from <http://www.gla.ac.uk/services/radiationprotection/non-ionisingradiations/> prior to switching on the new lasers.

- performs, together with the University Laser Safety Officer, an annual inspection of all class-III or IV laser facilities in both Schools.
- reminds the research group leaders annually of their laser-safety related responsibilities.

CHEMICAL SAFETY ADVISOR.

- To advise the Safety Co-ordinator on the safe handling and use of hazardous chemicals.
- To organize safe disposal of waste chemicals.

FIRST AID CO-ORDINATOR.

- To ensure first aid staff training is current.
- To order and maintain levels of first aid materials and equipment.

PORTABLE APPLIANCE TESTING (PAT) CO-ORDINATOR.

- To liaise with research groups and other sections within the School in the testing of all portable appliances.
- To set testing schedules and procedures and maintain records.

HEAVY LIFTING SUPERVISOR.

- To organize a task force to undertake and be responsible for all heavy loads which have to be slung, moved or lifted.
- To ensure test certificates for all lifting gear is current.
- To liaise with the University appointed insurance company's test engineer on annual safety checks.
- To advise staff and students on safe working practices regarding heavy lifting.

SAFETY COMMITTEE MEMBERS AND CONTACT DETAILS

Committee Member	Contact details
Mr. C. Craig (Area Fire Officer)	Ext 5901 07748155509
Prof D.A. Diver (Convenor)	Ext 5686
Ms. A. Garrett (Deputy Area Fire Officer, PAT Coordinator)	Ext 6400
Dr G. Gibson (Laser Safety Officer)	Ext 6403
Mr. C. Hunter (Observatory)	Ext 8556
Dr S. McFadzean (Deputy Convenor, Chemical Safety Advisor)	Ext 6397
Ms. R. McLauchlan (Minutes Secretary)	Ext 4152
Mr J. Marshall	Ext 6409
Ms C. Neilan (Radiation Protection Officer)	Ext 2807
Prof V. O'Shea	Ext 5882
Mr G. Tobasnick	Ext 2841

USEFUL TELEPHONE NUMBERS

For Police, Ambulance or Fire Brigade:

calling **999** from a University desk phone will put you through to security, who will call the emergency services.

Security:

Gilmorehill: **ext 4444** (0141 330 4444)

Garscube: **ext 2222** (0141 330 2222)

University Radiation Protection Officer and Mr J Gray University Laser Safety Officer Ext 4471

Radiation Emergency Mob:07906311646

University Safety Officer Mr D McLean: Contact Security in first instance.

SEPS INCIDENT REPORT FORM



University of Glasgow

Safety & Environmental Protection Service
University of Glasgow
Isabella Elder Building
Glasgow G12 8QQ Tel No. 0141 330 5532
Email: safety@glasgow.ac.uk

For SEPS use only

Serial No.	
Date	
Investigated	

Incident Report Form (Please send a copy of this report to SEPS and to your supervisor or follow local reporting procedures, if these are specified by your unit). Please report within 5 days of the incident.

- If more than one person was injured as a result of an accident, please complete a separate form for each person.
- Do not delay reporting. If important, any missing information can be provided later by email or phone.

A Was someone injured yes no If yes, were they absent from work more than 3 days yes no
 (if no please go to Section C) (employee only) more than 7 days yes no

B The injured person

First Name	University employee? yes <input type="checkbox"/> no <input type="checkbox"/>
Surname	If 'No', tick appropriate box
Home Address	Student <input type="checkbox"/>
Post Code	Employee of outside contractor <input type="checkbox"/>
Home Tel No.	Member of general public <input type="checkbox"/>
Email	Other (please specify) <input type="checkbox"/>
Mobile	

College/School/Research Institute/Service	Phone Number	Staff/Student No.	Age	Sex M <input type="checkbox"/>	F <input type="checkbox"/>
Nature of injury or condition	Part of body affected	Trade, occupation or job title (if student, class/course)			
Was first aid given yes <input type="checkbox"/> no <input type="checkbox"/>	By whom _____				
Was immediate hospital treatment required yes <input type="checkbox"/> no <input type="checkbox"/>					

C Details of incident

Exact location (building, room number etc.)	Date
Name and telephone number of supervisor and witness(es)	Time

D Indicate what led to the incident (tick one box)

- | | | | |
|---|---|---|---|
| Injured by an animal <input type="checkbox"/> | Fall from a height* <input type="checkbox"/> | Handling glass or sharps <input type="checkbox"/> | Injured during sporting activity <input type="checkbox"/> |
| Contact with electricity <input type="checkbox"/> | *Distance through which person fell ___ m | Portable power or hand tools <input type="checkbox"/> | Struck against stationary object <input type="checkbox"/> |
| Exposure to an explosion <input type="checkbox"/> | Exposure to fire <input type="checkbox"/> | Contact with moving machinery or material being machined <input type="checkbox"/> | Struck by moving, flying or falling object <input type="checkbox"/> |
| Slip, trip or fall on same level <input type="checkbox"/> | Injured whilst handling, lifting or carrying <input type="checkbox"/> | Exposure to harmful substance or pathogen <input type="checkbox"/> | Struck by moving vehicle <input type="checkbox"/> |
| Fall on stairs <input type="checkbox"/> | Occupational disease <input type="checkbox"/> | Hot/Cold contact <input type="checkbox"/> | Other (Outline) <input type="checkbox"/> |

Circumstances of incident (continue on a separate sheet if required)

Report completed by (signature) _____ Print name _____ Date _____

RISK ASSESSMENT SUMMARY - Room xxx – GROUP xxx

The Responsible Person for this laboratory is: *Insert Full Name here*

 : *GU extension/mobile*

Description of laboratory use:

HAZARD	LIKELIHOOD OF RISK	CONTROL MEASURES
Electrical Shock <ul style="list-style-type: none"> ▪ Electrical equipment 	Low / Medium / High	
Fire <ul style="list-style-type: none"> ▪ Electrical failure ▪ Solvent fire 	Low / Medium / High Low / Medium / High	
Hazardous Chemicals <ul style="list-style-type: none"> ▪ Solvents ▪ Reagents ▪ Catalysts ▪ By-products 	Low / Medium / High Low / Medium / High Low / Medium / High Low / Medium / High	
Gas Cylinders	Low / Medium / High	
Lifting Equipment	Low / Medium / High	
Laser Radiation	Low / Medium / High	
Nuclear Radiation	Low / Medium / High	

Brief summary of activity undertaken in this laboratory

Signatures:

Research Group Leader: _____

Responsible person: _____

Date: _____

SEPS Risk Assessment form



General Risk Assessment

Management Unit		Location (Site / Building / Room)	
Assessment Date		Review Date	
Assessor's Name		Job Title	
Description of Task			

Description of the hazard (or hazardous event)	Who might be harmed?	How might people be harmed?	What risk controls are currently in place?	Current risk rating*			Identify any additional controls that may be needed	Timescale for additional controls and responsible person	Residual risk rating*		
				L	C	R			L	C	R

*Likelihood x Consequence = Risk

Risk Rating Calculator

Likelihood that hazardous event will occur		Consequence of hazardous event	
1	Very unlikely	1	Insignificant (no injury)
2	Unlikely	2	Minor (minor injury requiring first aid only)
3	Fairly likely	3	Moderate (Up to three days absence)
4	Likely	4	Major (More than seven days absence)
5	Very likely	5	Catastrophic (Permanent injury or death)

Action Level Table

Risk Rating	Risk Level	Actions to be taken	
20 – 25	Very High Risk	STOP! and the plan.	Stop the activity and take immediate action to reduce the risk, a detailed plan should be developed implemented before work commences or continues. Senior management should monitor
15 – 16	High Risk	Urgent Action!	Take immediate action and stop the activity if necessary, maintain existing controls rigorously. The continued effectiveness of control measures should be monitored periodically.
8 – 12	Moderate Risk	Action the risk scale.	Moderate risks may be tolerated for short periods only while further control measures to reduce are being planned and implemented. Improvements should be made within the specified time-
3 – 6	Low Risk	Monitor	Look to improve at the next review or if there is a significant change. Monitor the situation periodically to determine if new control measures are required.
1 – 2	Very Low Risk	No Action viewed	No further action is usually required, but ensure that existing controls are maintained and re-regularly.

Some example hazards that may apply to the activity (not exhaustive)

Working at height	Noise	Lighting (including strobe lighting)	Fire and explosion
Falling objects	Vibration	Compressed air	Hazardous chemicals
Slippery, uneven or worn floors	Hand tools	Magnetic fields	Biological risks / disease
Obstructions and projections	Repetitive hand / arm movement	Pressure systems	Animals
Confined spaces	Machine operation	Needles and sharps	Compressed Air
Mechanical Lifting	Manual Handling	Lasers	Hydraulic systems
Poor housekeeping	Vehicle movements	Ionising and non-ionising radiation	Other (please specify on assessment)