UNIVERSITY of ULSTER

GUIDANCE NOTES FOR STUDENTS ON PLACEMENTS

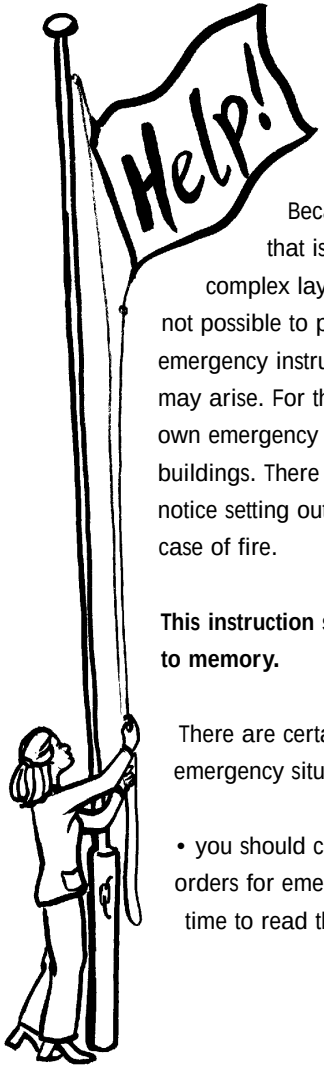
please read this guidance and complete the checklist on the back cover within a week of commencing your placement. Your supervisor will ask to see this checklist during his / her visit.

HEALTH & SAFETY

GUIDANCE NOTES FOR STUDENTS ON PLACEMENTS

CONTENTS

1. Action to be taken in an emergency 2
2. First Aid 4
3. General Safety 7
4. Fire 10
5. Electrical Hazards 14
6. Legal Framework 15



1. ACTION TO BE TAKEN IN AN EMERGENCY

Because of the wide variety of work that is carried out and the possible complex layout of the various buildings, it is not possible to produce a set of valid and detailed emergency instructions to cover every situation that may arise. For this reason, each employer has its own emergency instructions relation to particular buildings. There should be in every building a notice setting out the procedure to be adopted in case of fire.

This instruction should be studied and committed to memory.

There are certain points that apply to all emergency situations:

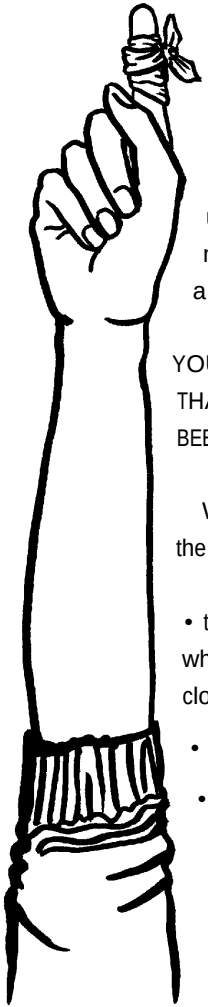
- you should commit to memory the standing orders for emergency action. You will have no time to read them in an emergency
- **remember:** you are expected to act in the spirit of the instructions. There is no substitute for common sense
- the most important consideration at all times in human safety
- **remember:** if you become a casualty someone must rescue you, possibly at personal risk to themselves
- you should act quietly and methodically. You should not rush or attempt to pass others when leaving the scene of an emergency
- the senior person present should assume control of the situation, ensuring the safe evacuation from the premises of all persons present and be prepared to warn the Emergency Services, etc, of known specific hazards.

If you have to telephone for assistance in an emergency, the following information must always be given:

- who you are
- where you are; ie the location and telephone extension from which you are telephoning
- the nature of the emergency and what services are required
- the exact location where assistance is required.
- You should ensure that the message has been correctly received by asking for it to be repeated back to you.

It is essential that the location is clearly defined. Local terminology should not be used because–for instance, ‘the research site’ means very little to the Emergency Services.

It is important always to give the correct name for the building and the street where it is located. If the post code is known that should also be provided.



2. FIRST AID: IF IN DOUBT, ASK

The following is advice on basic first aid for untrained people to use in an emergency. It is not a substitute for effective training. First aid is a skill requiring training and practice.

YOU SHOULD NOT ATTEMPT TO GIVE MORE THAN THIS BASIC FIRST AID IF YOU HAVE NOT BEEN TRAINED.

When giving first aid it is vital that you assess the situation and that you:

- take care not to become a casualty yourself while administering first aid (use protective clothing and equipment where necessary);
- send for help where necessary. *Don't delay;*
- follow the advice given below.

What to do in an Emergency

Check whether the casualty is conscious. If the casualty is unconscious or semi-conscious:

- check the mouth for any obstruction;
- open the *airway* by tilting the head back and lifting the chin using the tips of two fingers.
- If the casualty has stopped breathing and you are competent to give artificial ventilation, do so.

Otherwise send for help without delay.

Unconsciousness

In most workplaces expert help should be available fairly quickly, but if you have an unconscious casualty it is vital that his or her airway is kept clear. If you cannot keep the airway open as described above, you may need to turn the casualty into the recovery position. *The priority is an open airway.*

Wounds and bleeding

Use disposal gloves where available. Open wounds should be covered – after washing your hands if possible. Apply a dressing from the first–aid box over the wound and press firmly on top of it with your hands or fingers. The pad should be tied firmly in place. If bleeding continues another dressing should be applied on top. *Do not remove the original dressing.* Seek appropriate help.

Minor Injuries

Minor injuries of the sort which the injured person would treat themselves at home, can be treated from the contents of the first–aid box. The casualty should wash his or her hands and apply a dressing to protect the wound and prevent infection.
In the workplace special metallic and/or coloured or waterproof dressings may be supplied according to the circumstances.
Wounds should be kept dry and clean.

Suspected broken bones

If a broken bone is suspected *obtain expect help. Do not move casualties* unless they are in a position which exposes them to immediate danger.

Burns

Burns can be serious – if in doubt seek medical help. Cool the part of the body affected with cold water until the pain is relieved. Thorough cooling may take 10 minutes or more, but this must not delay taking the casualty to hospital. Certain chemicals may irritate or damage the skin – some seriously. Treat in the same way as for other burns. It is important that irrigation continues, even on the way to the hospital if necessary. Remove any contaminated clothing which is not stuck to the skin. Make sure that you *avoid contaminating yourself* with the chemical.

Eye injuries

All eye injuries are potentially serious. The casualty will be experiencing intense pain in the affected eye, with spasm of the eye lids. Before attempting to treat, *wash your hands.*
If there is something in the eye, irrigate the eye with clean, cool water or sterile fluid from a sealed container, to remove loose material. *Do not attempt to remove anything that is embedded.*

If chemicals are involved, flush the open eye with water or sterile fluid for at lease 10–15 minutes. Apply an eye pad and send the casualty to hospital.

Special hazards

Electrical and gassing accidents can occur in the workplace. You must assess the danger to yourself and not attempt assistance until you are sure it is safe to do so. If the casualty has stopped breathing and you are competent to give artificial ventilation and cardiac resuscitation, do so. Otherwise send for help without delay.

Illness

Many everyday ailments can arise at work. Giving medicines is not within the scope of first aid at work. Application of common sense and reassurance to the casualty is the most valuable help that you can give. If in any doubt about the seriousness of the condition, expert help should be sought. If the casualty has his or her own pain relief tablets they may take these as appropriate. People assisting should not offer medication of their own or belonging to others.

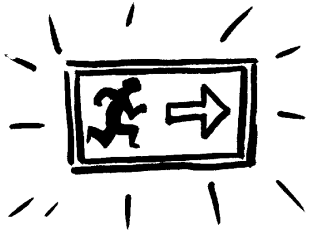
Record keeping

It is good practice that any injuries or cases of illness which have been treated are recorded in a book. Include the following information in your entry:

- date, time and place of incident or treatment;
- name and job of injured or ill person;
- details of the injury/illness and the treatment given;
- what happened to the person immediately afterwards (eg went home, went back to work, went to hospital)
- name and signature of the person providing treatment.

This sort of information can help identify accident trends and possible areas for improvement in the control of health and safety risks.

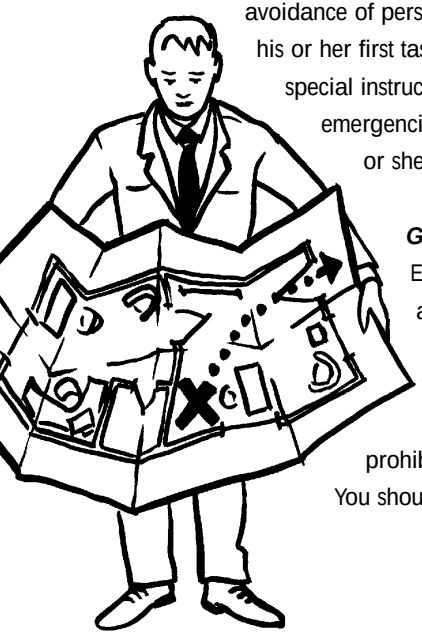
If in doubt, ask.



3. GENERAL SAFETY

Introduction

The prevention of accidents in laboratories, stores, workshops and all other places of work is a duty of every individual using or entering them. Ensuring the safety of others is as important as the avoidance of personal injury. Everyone should make it his or her first task to become familiar with any special instructions issued for dealing with emergencies peculiar to the place in which he or she is working.



General safety rules

Eating, drinking, smoking and the application of make–up in laboratories or when handling or working with chemicals is prohibited. Smoking may also be prohibited in many other areas as well. You should familiarise yourself with:

- the layout of the building
- the location of the fire–fighting appliances and how they work
- ways to get out of the building in an emergency, which may be different to the way you came in,
- the siting of telephones, and
- first aid arrangements

Remember: it may be too late to find out very much when an emergency actually happens.

Precautions in offices, libraries, etc

A recent nation–wide survey has revealed that offices are the scene of a substantial number of serious accidents every year. Most of these are avoidable. There is an increasing use of machinery in offices, eg paper–guillotines, duplicators etc, which should be operated only according to the makers' instructions. Only maintenance personnel should remove the enclosing panels of machines.

Leads should not be allowed to trail in a manner likely to cause persons to trip over them or to pull over the item. You should not leave appliances in precarious positions nor use waste–paper baskets as ashtrays.

Care must be taken to avoid spillage of water in rooms in which there are electric power points set in the floors. It is possible in some circumstances for a person standing on such a wet floor to receive a severe, possibly fatal, electric shock.

When carrying files, you should not carry so many that your vision is obscured. Filing cabinet drawers should always be closed as soon as you have found what you want. The corner of a metal drawer can inflict a very painful injury. Open only one drawer at a time because more than one drawer open may cause a filing cabinet to tip forward.

You must never stand on revolving stools or chairs and should avoid using any chair or stool where steps are provided. A fall on to the end of a desk or an open drawer can cause a very serious injury.

You should not leave stacks of boxes, kit bags or files on the floor near doorways for people to fall over. Polished floors, particularly if waxed or wet, offer a hazard. You should never run on the polished floors of corridors or common rooms.

Work outside normal hours

Many companies have their own rules with regard to work outside normal hours, eg 0800 to 1800 hrs, Mondays to Fridays. Saturday, Sundays, Bank Holidays and other official holidays are usually regarded as outside normal hours.

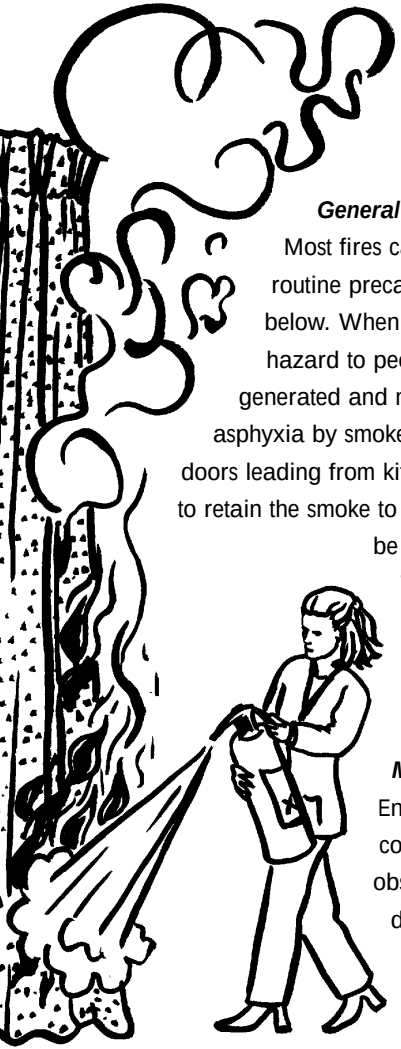
Extreme care should be exercised when working outside these times and then only with the explicit authority of the management of that organisation. It should be forbidden to perform operations deemed hazardous by the employer, or his/her nominee, unless some other person is within calling distance, and only after prior permission has been given by the Head of the Section or his/her nominee for the particular work involved.

Noise

Noise can cause damage to hearing, reduce efficiency or merely annoy. Damage to hearing can result from a sudden violent sound producing an effect as dramatic as the rupture of an ear drum. Continuous exposure to lower noise levels can, however, produce deafness.

In the latter case the impairment to hearing may pass unrecognised for a long period of time due to the insidiousness of the effect.

If you have any queries on safety matters: consult your supervisor or safety representative.



4. FIRE

General information

Most fires can be prevented by applying routine precautions, some of which are set out below. When a fire occurs, the principal hazard to people is the smoke that is generated and most deaths at fires are due to asphyxia by smoke. Double doors in corridors and doors leading from kitchens, for example, are designed to retain the smoke to allow the remaining corridors to be used for evacuating the building. The walls of corridors have a specified fire resistance so that the fire can be contained in a small section of the building.

Means of Escape

Ensure that rooms, passages, corridors and stairways are not obstructed and that corridor fire doors are kept closed. If a room contains an emergency exit, make sure that it is unobstructed so that it is immediately available for use in an emergency.

Fire extinguishers

Do not attempt to use an extinguisher unless you have received appropriate instruction and training and if it is safe to do so.

Discretion is essential in deciding the lengths to which first-aid fire-fighting is pursued. Portable fire-fighting equipment is not designed to cope with extensive fires and it is important that first-aid fire-fighting should cease and the location should be evacuated as soon as the effects of fire threaten the means of escape, the building structure, or otherwise indicate that it is out of control.

Although further action might reduce material losses no such saving can compare in importance with human safety.

Before attempting to fight a fire: always ensure the alarm has been raised *and you are able to leave the area if the fire escalates out of control.*

Ensure you know: the correct fire extinguisher to use and have received instruction in its use. For example, in a laboratory situation use the wrong choice of extinguisher can turn a minor incident into a major disaster.

Use carbon dioxide extinguishers with care: they can reduce the oxygen content of the atmosphere in a confined space to a dangerously low level.

There are many kinds of fire-fighting equipment in the workplace: it is the duty of everyone to know where they are located, and for what types of fire each one is intended. Whenever fire-fighting equipment has been used an immediate report should be made to the supervisor so that the equipment may be recharged or replaced.

Use of fire extinguishers

- **Carbon Dioxide (usually black in colour)** extinguishers are the type most generally used for electrical fires or in laboratories, and have several advantages in dealing with small fires. No mess is made and there is little danger of apparatus nearby being knocked over or damaged. They can be used where live electrical circuits are involved.

  However, they have little cooling effect and until the extinguished material has cooled below the ignition temperature care must be taken to ensure that the fire does not re-ignite.

- **Water (usually red)** extinguishers discharging water under pressure from a carbon dioxide cartridge are recommended for use on fires involving paper, wood, etc. They must not be used on fires where there are live electrical circuits. They may be used for solvents miscible with water. It should be noted that the strong jet of water can itself cause damage.

- **AFFF (Aqueous Film Forming Foam – usually cream)** multi–purpose extinguishers are suitable for most types of fires (materials, etc) and are ideal for dealing with the majority of fires involving flammable liquids. The aqueous film prevents re-ignition of the fire with limited cooling properties.

  Foam extinguishers may be used on immiscible liquids that are lighter than water, eg petrol and most oils. They must not be used there live electrical circuits are involved.

- **Hose reels** are usually sited in corridors or in large rooms, for use where extinguishers discharging water may be inadequate for the risk involved. They are intended to be used on fires involving wood structures, paper, fabrics etc. The hoses are usually of 22mm diameter and from 25–40 metres in length. Where a control valve is fitted, it is important to ensure that it is fully open before the hose is run out. Hoses fitted with automatic valves operate when between 1 to 3 metres of hose has been run off the wheel.

Fire/smoke–stop doors

Fire/smoke–stop doors may be installed throughout buildings so as to prevent smoke and hot toxic gases circulating along routes to safety. These doors must not be wedged or propped open. They must be kept closed at all times after access and egress has been effected.

Fire instructions

These appear in the Emergency Procedures for the organisation and possibly in the internal telephone directory. They should be displayed on notices in all buildings.

Fire detection systems

Fire detectors give an early warning of a fire particularly if the fire starts in an unoccupied area. There are generally two types of detector used.

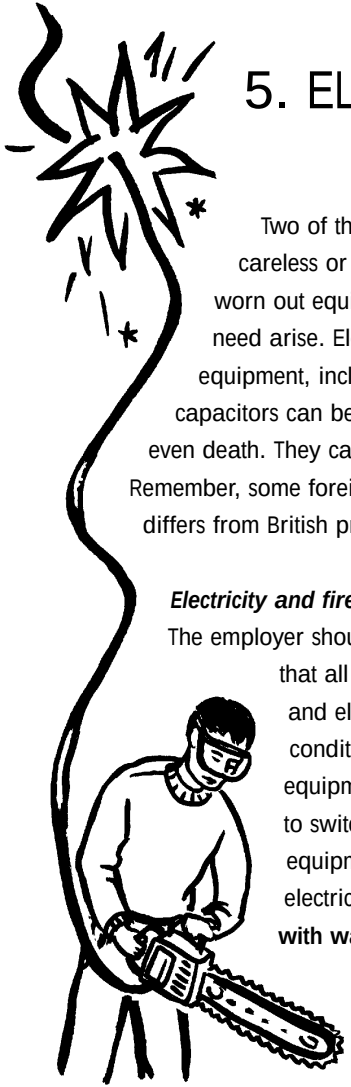
- Heat detectors contain either a bimetallic or thermistor device and operate when a rapid increase in temperature occurs.

They are fitted in some kitchens, laboratories and corridors. Other heat detectors operate when a fixed temperature can be anticipated in normal operation, eg oven rooms and kitchens.

- Smoke detectors contain an ion–chamber and detect the products of combustion. They are the most sensitive of the automatic detectors. Because of their high sensitivity, larger areas can be protected by a single detector and these systems are found in most buildings.

  All fire detectors are necessarily sensitive devices and can be easily activated to give a false alarm. Smoke detectors for instance can be activated by dust, steam or exhaust from petrol or diesel engines.

  Misuse of fire-fighting equipment, eg hose-reels, fire-extinguishers and fire-alarms, may render it inoperable when required in an emergency and could even result in loss of life. Moreover it is a criminal offence that may result in the imposition of severe penalties by the Courts and disciplinary action by the employer.



5. ELECTRICAL HAZARDS

Two of the worst electrical hazards are careless or unskilled workmanship and faulty or worn out equipment. Neither of these hazards need arise. Electric and electronic supplies and equipment, including batteries and electrolytic capacitors can be responsible for personal injury and even death. They can also cause fires and explosions. Remember, some foreign colour coding of electrical leads differs from British practice. **If in doubt, ask.**

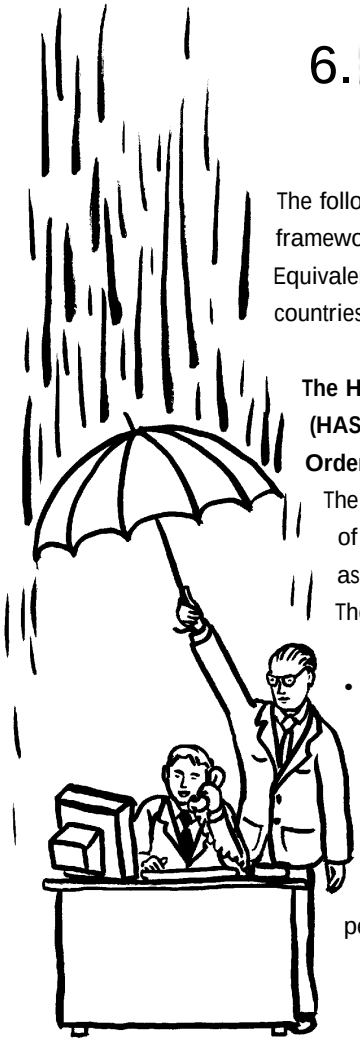
Electricity and fire

The employer should have a system in place to ensure that all socket outlets, switches, flexible leads and electrical appliances are in good condition. In case of fire involving electrical equipment, the first action to take must be to switch off the power supply to that equipment. You should extinguish an electrical fire with *carbon dioxide*, **never with water or foam.**

Use of electric points and equipment

Lead length should be adequate for the particular job for which the equipment is currently being used. In no circumstances should you interfere with the wiring or connections of any electric point or appliance. All necessary adjustments or modifications to wiring will be carried out by a duly authorised, competent person.

6. LEGAL FRAMEWORK



The following information applies to the legal framework within the United Kingdom. Equivalent requirements exist in many other countries.

The Health and Safety at Work Act 1974 (HASWA)/Health and Safety at Work Order (N.I.) 1978

The Act/Order is based upon the concept of a general duty of care for most people associated with work activities.

The specific aims are to:

- secure the health, safety and welfare of persons at work
- protect persons other than persons at work against risks to health or safety arising out of or in connection with, the activities of persons at work
- control the keeping and use of explosive or highly flammable or otherwise dangerous substances, and generally prevent the unlawful acquisition, possession and use of such substances
- control the emission into the atmosphere of noxious or offensive substances.

Main provisions of HASWA

There have been a number of Regulations, etc, since HASWA but fundamentally they only amplify the basic concepts contained within HASWA. Those provisions applicable to people place various duties upon employers, employees and others. In brief, these are:

General duties of employers

Employers are required, as far as reasonably practicable, to:

- ensure the health and safety and welfare of employees
- provide safe plant and systems of work

- ensure safe use, handling, storage and transport of articles and substances
- provide information, instruction training and supervision
- maintain a safe place of work and safe means of access and egress.

General duties of employers to employees

The effect is to make criminally enforceable the common law duty to take reasonable care for the safety of employees. This includes the requirement, as far as reasonably practicable, to ensure:

- employees know the risks
- employees know the precautions
- the precautions are available
- employees know the precautions available.

General duties of employers to persons other than employees

Employers have a general duty to protect anyone affected by the undertaking, eg the general public. Regulations:

- require information to be given to persons affected, eg living near the plant
- prescribe situations regarding emission of fumes smoke, etc
- place duties on persons in control of premises in relation to harmful emissions into the atmosphere.

Duties towards the customer

Duties of those who design, manufacture, import or supply and install articles or substances are to:

- ensure that they are safe and without risk to health
- carry out tests, examination and research (or have it done on their behalf)

- provide adequate information regarding proper use, maintenance etc
- install or erect plant and equipment safely.

The duties can be relieved by a written undertaking from the supplier that he/she will take the steps to ensure that the article or substance will be safe in use or while being cleaned, maintained, etc.

Duties of employees

No levy on employees is permitted for the provision of statutory protective equipment. Employees must:

- take reasonable care for themselves and others
- co–operate with the employer and use safety appliances
- not recklessly and wilfully interfere with safety appliances.

Written safety policies

Companies must prepare and revise, when necessary, a written statement of their general policy towards health and safety at work setting out:

- the organisation – ie who is responsible
- the arrangements – ie what is to be done

Safety representatives and committees

Trade Unions may, in accordance with Regulation, appoint safety representatives and ask for a safety committee.

There is a duty on an employer to enter into consultation with representatives, whose functions and rights are prescribed by Regulations.

Disclosure of information

Inspectors may tell safety representatives what they ask the firm to do.

Powers of inspectors

Inspectors have wide powers of:

- entry
- inspection
- interview of persons
- collection of information
- photographing and recording
- taking samples
- seizing dangerous substances or plant
- taking written statements.

Enforcement

- **Improvement Notice**
  This requires an organisation to take remedial action within a specified period. Failure to comply incurs up to a £20,000 fine (or unlimited fine on indictment)

- **Prohibition Notice**
  Activities giving rise to imminent danger must cease on the date stated – which may be immediate. Failure to comply incurs a £20,000 fine or, on indictment, an unlimited fine and up to two years' imprisonment.

- **Codes of practice**
  These are admissible as evidence in determining practicable, reasonably practicable and by practical means.

- **Other offences**
  These can incur a £20,000 fine on summary conviction or, on indictment, and unlimited fine and up to two years' imprisonment

- **Appeals**
  Employers may appeal to an Industrial Tribunal within 21 days against Improvement and Prohibition Notices. Improvement Notices are suspended until the appeal is heard, but not Prohibition Notices.

Prosecution is the ultimate deterrent. Prosecutions can be taken out against corporate bodies or individuals but in all cases the onus of proof lies with the accused, ie an organisation or individual is deemed to be guilty and must prove they exercised all due diligence or took all reasonable precautions to prevent the incident happening.

YOUR PLACEMENT SAFETY NOTES

HEALTH AND SAFETY STUDENT INDUCTION CHECKLIST

Name of Employing Organisation: _____

Name of Student: _____

Your Health and Safety are paramount during this placement.

The completed checklist and statement MUST be returned to your Placement Tutor within two weeks of commencing your placement.

If for any reason you feel unable to sign this declaration you should contact your placement tutor immediately.

The following items are commonly included in induction into organisations. It may be useful for you to check off the items when they occur. Inform the person in charge of your placement within the organisation if any obviously relevant items are not covered within one week of the start of the placement.

HEALTH AND SAFETY ISSUES	
Emergency procedures	
Health and Safety policy received or location known	
Location of First Aid Box	
First Aid arrangements	
Fire procedures and location of fire extinguishers	
Accident reporting procedures	
Manual handling procedures	
Display screen equipment regulations/procedures	
Protective clothing arrangements	
Instruction on equipment you will be required to use	
Any relevant risk assessments have been drawn to your attention	
Equality, Harassment And Bullying Training given/policies explained	

I confirm that I have no current concerns relating to any health and safety issues associated with this placement. In the event of concerns arising during or in connection with the placement I will inform the Placement Tutor

I have been advised of the organisation's Equality, Harassment and Bullying procedures.

Student Signature: _____

Date:_____