

# SCHOOL OF ENGINEERING



## Fieldwork Safety Handbook 2022-23

This handbook applies to all students, undergraduate and postgraduate, and staff of the School of Engineering engaged in fieldwork activities.

It should be read in conjunction with the School's Health Safety & Wellbeing handbook.

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## **INTRODUCTION**

The School's commitment to health and safety extends to all fieldwork activities including:

- Organised group fieldwork courses.
- Individual projects carried out by staff and in the field.
- Collaborative working.

This handbook describes how the School gives practical effect to that commitment. Compliance with the requirements and procedures in the handbook is mandatory for all staff and students in the School.

Information is included on the main hazards which might be encountered during fieldwork and the precautions which should be taken; however, the information provided is not exhaustive. Because of the varied nature of fieldwork it is not possible to cover every circumstance. Those planning group fieldwork as well as staff and students (and their supervisors) undertaking individual fieldwork projects must, where necessary, consult other sources of information with a view to ensuring that fieldwork is carried out safely.

It is not expected that the Fieldwork Handbook be read in its entirety. However, staff responsible for organising field trips are expected to have a full understanding of the Policy as detailed in Part I.

Part II contains general and specific hazards that might be encountered when working in the field, together with relevant guidance and advice.

The appropriate use of the guidance in Part I and the information contained in Part II can simplify the task of producing fieldwork risk assessments for undergraduate group field trips, independent research, or collaborative fieldwork involving internal and external organisations.

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**Head of School**

***September 2022***

## **HOW TO READ THIS HANDBOOK**

### **Group Fieldwork: Undergraduate and Taught Postgraduate Group Fieldwork Activity.**

If you are the course coordinator, leader or the participant, read:

- PART I: Sections **1, 2, 3, 4**.
- PART II: All that apply
- Appendices

### **Independent or Individual Fieldwork Projects: Staff, PGR And Honours Students Fieldwork Activity.**

If you are the supervisor, line manager, leader or the participant, read:

- PART I: Sections **1, 2, 3, 5**.
- PART II: All that apply
- Appendices

# **PART I - POLICY & GENERAL ARRANGEMENTS**

## **1. GENERAL**

Fieldwork, as defined by the University & Colleges Employers Association (UCEA), is 'Any work carried out by staff or students for the purposes of teaching, research or other activities while representing the institution off-site'.

The UCEA definition includes activities as diverse as attendance at conferences and recruitment fairs, or undertaking social science interviews, as well as activities more traditionally associated with the term fieldwork such as survey/data collection work carried out by engineers.

In view of the range of activities this handbook is primarily concerned with the practical work carried out by staff or students of the School for the purpose of teaching and/or research in places which are not under School control, but where the School is responsible for the safety of its staff and/or students and others exposed to their activities. This includes activities organised and managed by other School's in which members of the School of Engineering are participants. Voluntary and leisure activities are excluded.

Fieldwork Safety is based upon the same principles that apply to general 'Safety at Work' considerations. Several factors can set the scene for an accident:

- Unsafe attitudes
- Lack of knowledge
- Unsafe equipment
- Distorted thinking
- Ignorance of proper procedures
- Failure to use personal protective equipment

Therefore:

- Take a positive attitude towards preventing accidents
- Know the hazards you face and how to avoid them
- Follow the proper procedures
- Use personal protective equipment
- Ask if you have any questions
- Listen to safety briefings

### **1.1 Persons Under 18 Years of Age**

Any fieldwork which involves participants who are under the age of 18 must comply with the requirements of the Safeguarding Vulnerable Groups Act 2006. Contact the Local Safety Coordinator (LSC) if any participants fall into this category.

### **1.2 Buddy System**

All fieldworkers who are lone working must have an arrangement in place to report their safe return each day. The selection of the buddy is the responsibility of the field worker. The field worker must arrange with the buddy a time and method for check-in each day.

If the fieldworker fails to check in by this time, the buddy should instigate search and rescue within 2 hours, usually by calling the emergency services. The buddy should be given the contact details of the field workers supervisors, and any other contact details which may be useful in organising a local search. If working in a field team, members may check in with each other.

It is the responsibility of the field worker to communicate to the buddy what procedure they should follow if a check in is missed. Once such an arrangement is made, the fieldworker must not break it by, for example, going home for the weekend or deciding to work late.

It is recommended that the Buddy is included in Schools Outlook resource for fieldwork safety [eng-safety@abdn.ac.uk](mailto:eng-safety@abdn.ac.uk).

### 1.3 Cross-School Working

Where fieldwork is undertaken on behalf of, or in partnership with, other Schools it is important that the line management of any technical staff involved is consulted. It is a requirement of the lead researcher to ensure the following points are observed:

- The line manager of the member of staff is consulted in advance of a new project.
- The line manager receives and comments on a preview of the risk assessment.
- The member of staff signs the risk assessment and copy's this to their line manager.
- The member of staff involved in fieldwork must keep their line manager informed as to dates and developments.

Any member of technical staff contacted indirectly should advise their line manager.

### 1.4 Definitions

**Fieldwork Leader:** The person with delegated operational responsibility for all aspects of the fieldwork.

**Fieldwork team:** Two or more individuals who are conducting fieldwork to a common purpose. A fieldwork team may or may not have a designated fieldwork leader present during the work.

**Group fieldwork:** Group fieldwork is mainly under direct supervision such as taught undergraduate or post-graduate courses. However, there may be instances where fieldworkers are under periods of indirect supervision.

**Independent fieldworker:** An individual who is undertaking fieldwork on their own without direct supervision.

**Supervisor:** Supervisors of students or line managers of staff.

**Buddy:** A person selected by a loan working fieldworker who will initiate an emergency procedure if the fieldworker fails to return by a specific time.

## 2. LONE WORKING

The University's [Policy on Loan Working](#) defines a lone worker 'as someone who is working in circumstances where there is not someone else within calling distance who would be able to provide assistance if there were to be an accident'.

Whenever possible, fieldwork should be carried out in groups containing at least two persons. There may however be circumstances when lone working cannot be avoided.

Lone working in the field may only be carried out with the express permission of the lone worker's supervisor. Lone working should be sanctioned only after a thorough assessment of the risks has been carried out taking into account:

- The nature of the work.
- The hostility of the location.
- The experience and capabilities of the worker (particularly as demonstrated during actual fieldwork).

A safe system of work must be devised to safeguard the health and safety of the lone worker, and this should be documented in the risk assessments for the work concerned. Matters to consider include:

- Notification to someone of route, destination, nature of work and expected time of return.
- The action to be taken if the lone worker does not return on schedule.
- Means of communications with the lone worker.
- Restrictions on the types of activities to be undertaken by the lone worker.

It is not wise to rely solely on one method of communication, although methods such as the use of mobile phones are clearly helpful in some circumstances. Unfortunately, fieldwork sites are often in areas where such methods do not work effectively. Always use a reporting system as the basic safety procedure.

In some cases, it may be possible to reduce the risks arising from lone working by arranging for fieldworkers to work in adjacent areas and to share the same accommodation.

The usual precautions taken during field work, for example, carrying extra dry clothing or food, need to be emphasised for lone workers. Such workers may become immobilised in hostile conditions by even minor accidents, such as sprained ankles, and may need to survive until help arrives. Plan for the worst!

**Note:** Someone can be a lone worker even if they are working in a situation where there are other people around them. For example, someone carrying out fieldwork in a public place or would be deemed to be a lone worker unless they were accompanied either by someone from the School or by someone otherwise involved in the work.

### 3. RISK ASSESSMENT

The carrying out of risk assessments is fundamental to the effective management of Health and Safety in the Field. It is important to identify how people might be hurt before taking steps to prevent them being hurt. The School is required by [Health and Safety Law](#) to ensure that risk assessments are carried out.

It is incumbent on every member of staff academic, technical or administrative to ensure that they (and those they supervise or manage) are working in a safe environment and adopting sensible working practices in performing their duties. To this end staff must carry out risk assessments, whether these be informal and unrecorded or by the more formal documented procedures (outlined below), to maintain safe working practices and implement control of hazards.

It is important that staff, whether supervising students or not, do not lose sight of the purpose of the risk assessment. Its purpose is not to produce a completed 'form' which then can be placed on one side and forgotten about. It is to reduce the potential for injury in the laboratory and in the field. The work should be discussed in sufficient detail and sufficient time committed to writing to achieve this purpose.

Risk assessment is the process of:

- Identifying where there is a significant risk (i.e. danger) in an activity and
- Determining how that risk can be reduced to an acceptable level (i.e. working out how the activity can be carried out safely).

A satisfactory risk assessment is one which concentrates on the main hazards (and ignores the trivial ones) and records the significant findings in a way which will help those involved in the work to carry it out safely. We all learn from each other, so communication and dissemination of decisions made while undertaking risk assessment is encouraged. The nature of our activities changes with time so assessments must be able to respond in real time to these challenges.



The University has prepared [Field Trip Guidance](#) together with a Field Trip and Travel Risk Assessment template to be used in assessing the risk for fieldwork. The template may require tailoring to any unique aspects of the fieldwork.

Further information on the School's approach to risk assessment and hazard control can be found in the School's [Health, Safety & Wellbeing Handbook](#).

#### **4. GROUP FIELDWORK: Undergraduate and Taught Postgraduate Group Fieldwork Activity.**

The School organises group field courses annually, usually involving visits to pre-arranged locations. Students will be accompanied by members of staff. There may be times when the group will break up into smaller sub-groups. Small groups of students may work for periods without direct supervision from a member of staff.

##### **4.1 Responsibilities and Command Structures**

###### **4.1.1 Fieldwork Leader**

For each group fieldwork course, the Head of School will appoint a suitably experienced member of staff as Fieldwork Leader. The Fieldwork Leader will be in overall charge of all participating students and staff and will be responsible to the Head of School for all safety aspects of the fieldwork.

The Fieldwork Leader must:

- Appoint a Deputy Leader to act as Fieldwork Leader if the Fieldwork Leader is incapacitated.
- Appoint members of staff to take charge of various aspects of the fieldwork as the Fieldwork Leader deems appropriate.
- Ensure that there are always sufficient staff participating in the fieldwork to maintain suitable staff/student ratios.
- Ensure that all aspects of the fieldwork which could give rise to significant health and safety risks are assessed for risk and steps are taken to reduce the risks to acceptable levels. (Where necessary and if practical, the Fieldwork Leader should ensure that reconnaissance visits are made in advance of the course.)
- Apply for insurance.
- Ensure that staff and students are provided with necessary safety instruction and training to enable them to work safely in the field.
- Add the following documentation to the School's dedicated Outlook calendar resource [eng-safety@abdn.ac.uk](mailto:eng-safety@abdn.ac.uk) prior to departure:
  - A list of staff and students participating in the fieldwork (along with passport details for trips outside the UK).
  - For each participant, details of emergency contacts and details of any medical conditions disclosed.
  - An itinerary and timetable for the fieldwork. Addresses and contact telephone numbers must be provided for any overnight stops. If major changes are made after departure, these must be notified to the School Office.
  - Details of transport to be used (including registration numbers of vehicles if known).
  - A suitable risk assessment or statement of compliance with this handbook.

- Report in writing to the Local Safety Coordinator details of any accidents and safety related problems encountered during the fieldwork so that steps can be taken to prevent similar problems occurring in the future.

**Note:** The Fieldwork Leader has the authority to exclude from all or part of the course any student who, in the opinion of the Fieldwork Leader, is not able to undertake course activities safely or whose behaviour is unacceptable.

#### **4.1.2 Members of Staff**

All members of staff participating in fieldwork courses must:

- Act on the instructions of the Fieldwork Leader and on the instructions of other members of staff in charge of activities.
- Supervise students who have been placed under their direct control to the extent necessary to ensure that fieldwork is carried out safely.

#### **4.1.3 Students**

All students participating in fieldwork must:

- Comply with all arrangements and instructions given by the Fieldwork Leader and other members of staff.
- Stay with their group unless clear arrangements to leave the group are made with the Fieldwork Leader.
- Remain in the course unless clear arrangements to leave the course are made with the Fieldwork Leader.
- Wear adequate clothing, protective footwear and other necessary protective equipment when required.
- Bring to the attention of a member of staff any situation which they believe to be unsafe.
- Act in an appropriate manner and not, either during course time or leisure time, in a manner which other students, staff or local inhabitants might regard as unsociable or offensive.

#### **4.1.4 Command Structure**

The Fieldwork Leader must ensure that there is an unambiguous command structure in the field. Before the course begins the Fieldwork Leader must appoint a deputy who will act as Fieldwork Leader if the Leader should be incapacitated.

Individual members of staff may be designated by the Fieldwork Leader as responsible for aspects of the fieldwork (e.g. equipment, transport).

If the course breaks into smaller groups, someone must be designated as being in charge of each sub-group.

All those participating in the course must be aware of the command structure, understand that they must follow instructions given by those in supervisory positions and recognise their responsibilities to bring any questions and problems to the attention of their supervisors.

If the command passes to other persons on a temporary basis all members of the group must be kept fully informed.

#### 4.1.5 Staff/Student Ratios and Group Sizes

Staff/student ratios and maximum/minimum group sizes will vary according to the experience of participants, activities undertaken and the nature of the sites visited. The following guidelines should be used by Fieldwork Leaders when planning group fieldwork courses:

Undergraduate classes on day/part day excursions:	1 staff member to 10 students ramping down to 1:30, depending on assessment of risks.
Undergraduate classes on extended field courses at recognised field stations:	1 staff member to 15 students provided back-up staff is available at the field station.
Undergraduates carrying out field work for honours projects:	May work alone, following full risk assessment.
M.Sc. students on extended field courses at recognised field stations:	1 staff to 15 students provided back-up staff is available at the field station.
M.Sc. and Ph.D. students carrying out project work:	May work alone, following full risk assessment.

#### 4.2 Planning, Preparation and Training

##### 4.2.1 Planning of Group Fieldwork Courses

The Fieldwork Leader is responsible for planning the fieldwork to reduce the health and safety risks to acceptable levels. Checklists of matters to be considered are included in the Appendices. Where necessary and if practical, reconnaissance visits should be made to locations which will be visited during the course.

##### 4.2.2 Preparation of Students for Group Fieldwork Courses

Before leaving the School each student participating in an organised fieldwork course must complete a 'disclosure of information' form specific to the course and submit it to the Fieldwork Leader. The Fieldwork Leader should check that any pre-existing conditions declared are covered by the University's insurance. The information provided will be used to compile lists of:

- Students with medical conditions which might affect their ability to carry out fieldwork or the treatment they might need in an emergency.
- Students with special dietary requirements.
- People who should be contacted in an emergency.

This list will be held in confidence and will be disclosed to members of staff in the School on a need-to-know basis only.

Each student participating in a group fieldwork course will be given advance information about protective clothing, footwear and any special equipment required. Students must note that the Fieldwork Leader has the authority to exclude from all or part of a course any student arriving at the departure point without essential equipment, footwear and clothing.

The Fieldwork Leader should discuss the risk assessment with participating students (see below). Students can obtain a copy of the course risk assessment on request.

Students will be given advance information about any vaccinations which are required by course participants.

### **4.2.3 Training and Instruction for Participants in Group Fieldwork Courses**

This handbook contains details of many of the risk control measures appropriate to the hazards encountered during fieldwork. All those participating in a group fieldwork course must appreciate the hazards which will be encountered and the precautions which should be taken. Not only is this essential to ensuring their safety during the course, it will also help them to acquire skills which will be necessary if they later carry out individual fieldwork projects.

It will rarely be sufficient for participants to be asked only to sign a declaration that they have read and understood this handbook or the safety content of other course documentation. Fieldwork Leaders must take more positive steps to ensure that course participants appreciate the salient points. This may involve a combination of some or all of the following:

- Briefings before leaving the University for the field locations.
- On residential courses, evening discussions about the next day's locations and/or briefings in the morning before departure.
- Repeat instruction on specific points in the field at or near particular locations.
- Repeat instruction if the conduct of participants indicates that they might not have understood earlier instructions.

### **4.2.4 Before Departure from Aberdeen**

The fieldwork leader must register and upload all documentation onto the School's dedicated Outlook calendar resource [eng-safety@abdn.ac.uk](mailto:eng-safety@abdn.ac.uk). The information provided will be retained in confidence for use in the event of an emergency.

To register the trip on Outlook the fieldwork leader must 'invite' [eng-safety@abdn.ac.uk](mailto:eng-safety@abdn.ac.uk) for the duration of the fieldwork and include in the invite all the relevant documentation for the trip.

### **4.2.5 Before Departure for a Field Location**

Group fieldwork courses must always be supported by a support base, (a person or persons) with knowledge of:

- Work to be performed on that day.
- Itinerary and expected return time.
- Names of members of the party going into the field on that day.

This can be achieved in a variety of ways. For example, members of staff may remain behind and act as the support base or a local inhabitant may be provided with the information. Whoever acts as the local support base, it is vital that they know what action should be taken if the group fails to return when expected. The details of the group's itinerary must provide sufficient detail to enable the route to be followed by a search party.

On return always ensure that the base is told that the group is back. If the group cannot for any reason return at the planned time, make efforts to inform the base or the police of the delay. Failure to do this promptly could result in search parties being sent out unnecessarily.

### **4.2.6 Fieldwork at Recognised Field Centres**

If fieldwork is being undertaken at a recognised centre, which has its own safety rules and procedures, then the staff must assess these rules to identify those which are additional to the usual rules applied by the University of Aberdeen. Staff must then ensure that all appropriate local rules are adhered to fully.

#### 4.2.7 Overseas Travel

Staff and students who are required to travel overseas must ensure that they understand and comply with the requirements of the University's [policy and guidance on overseas travel](#).

Staff and students who are required to travel on University business to countries or regions in which the [Foreign and Commonwealth Office](#) advises against all or all but essential travel must:

- Obtain permission for travel from the Head of School / University Secretary.
- Flights should be arranged through the University-approved travel agency.
- Staff and students should adhere to advice provided by both the Travel Agent and the Airline.
- A travel itinerary should be lodged with the School.

Staff and students, who are concerned about travelling abroad on University business, should address these concerns to the Head of School in the first instance. Staff and students are expected to co-operate fully with any airport and airline security procedures in place in major airports worldwide.

The University's [travel insurance arrangements](#) provides for medical and emergency assistance, together with a number of help-lines. The University's insurance provider (AIG) can arrange:

- A medical referral to the most suitable clinic, hospital or dentist for treatment.
- Direct billing with medical providers, so you do not need to use your own cash or credit card.
- For someone to visit you while you are in hospital or ill abroad.
- An evacuation to the nearest centre of medical excellence or to bring you back home – will a fully equipped medical team if needed.
- Help to locate medication or medical equipment if you can't obtain them locally.

You must always contact AIG if you require medical attention. This is particularly important whilst travelling in the USA, as you might be asked to provide a proof of eligibility to use a medical network – the medical assistance company will arrange this for you.

Information on how to contact AIG is given in the table below. Assistance is available 24 hours a day, every day of the year.

If an incident occurs insured persons must contact the AIG hotline (24-hour service) in the first instance. No arrangements should be made without involving the insurers or their representatives.

Before travelling abroad you must complete an [online insurance application](#) form. After submitting an application you will receive a confirmation email containing the University Policy Number and a link to the [AIG Travel Assistance Website](#). You should ensure that you keep the Policy Number available should you need to call for assistance. You can use this Policy Number to register with the insurers from the AIG Travel Assistance Website by clicking on the pink button labelled *Take Me There*. This takes you to a web page allowing you to register your details.

Ensure that the following details are up to date and that you keep them readily at hand. It is a good idea to add the telephone number to your mobile.

How To Obtain Assistance from AIG:	
Telephone (24/7):	<ul style="list-style-type: none"><li>• +44(0)1273 401950</li></ul>
Before calling have these details ready:	<ul style="list-style-type: none"><li>• Employer name (University of Aberdeen)</li><li>• Policy number (sent to you after completing an insurance application)</li><li>• Your name, location and country of residence</li></ul>

	<ul style="list-style-type: none"> <li>• Your condition, symptoms or query</li> <li>• a telephone number they can contact you on.</li> </ul>
Travel Assist Website	<ul style="list-style-type: none"> <li>• <a href="http://www.aig.co.uk/globecover">www.aig.co.uk/globecover</a></li> </ul>

### 4.3 Transport

Control of transport is an essential part of planning for group fieldwork courses and the University provides some guidance in its [Overseas Travel Policy](#) and its [Driving Policy](#).

- The Fieldwork Leader must approve the use of all road vehicles and boats to be used by course participants (including vehicles belonging to staff and students).
- Staff and students who act as drivers must be individually authorised by the Fieldwork Leader who must ensure that they have necessary driving experience, an appropriate driving licence and have completed an online [Driver Declaration](#) and had it approved by the University. (Note the “hire or reward” restriction on most UK car driving licences applicable when driving vehicles with more than 8 seats. Drivers will need to obtain PCV entitlement or, in the UK only, ensure that the vehicle is covered by a small bus permit). Drivers who passed their car driving test after 1st January 1997 have greater restrictions and are not legally entitled to drive vehicles with more than eight seats on any University business without taking a further driving test and medical examination. Most hire companies do not allow persons under the age of 25 years to drive minibuses.
- It is a requirement of the University that all drivers of Minibuses (more than eight passengers) must have passed a Defensive Driving Course. The University may expand this requirement to include the driving of ANY vehicle on University business.
- The Fieldwork Leader should remind staff and students that it is their responsibility to ensure that they have adequate insurance cover, and to notify their insurance company, before using their own vehicles for fieldwork.
- There must be enough back-up drivers to allow drivers to have adequate rest periods and to cover for circumstances when designated drivers might be incapacitated.
- One driver must be designated as in charge of each vehicle. He/she will be responsible for the condition of the vehicle and for carrying out necessary daily and weekly checks. The Fieldwork Leader must ensure that the driver is competent to carry out these checks. Under UK legislation **every driver is personally responsible for the vehicle they are driving. A vehicle that is in a potentially unsafe condition should never be used.**
- Drivers should make sure that all materials and equipment carried are stowed in a safe and secure fashion. Under no circumstances should the vehicle be overloaded. Projecting goods should be appropriately marked.
- Drivers have an individual responsibility to ensure that they are fit to drive.
- Drivers must ensure that they are "legal" and in a fit state to control their vehicle. No drinking of alcohol and driving is permitted. If required to drive in the morning then the consumption of alcohol must be strictly limited.
- Drivers should not wear wellington boots, heavily studded boots, clogs or high heels. Nor should they drive with bare feet.
- Drivers must not use mobile phones, including hands-free, while driving. Before using the phone drivers must stop in a safe place and turn off the engine. Mobile phones should not be used to listen to music if this involves selecting tracks or making any adjustments while driving.
- Vehicles must not be parked in areas where there is possible danger from falling rocks or trees, or where they may cause an obstruction. Avoid parking where the vehicle may be

at risk of flooding by the tide or other rise in water level. Vehicles should not be driven on to sand or mud or any surface where there is a danger of becoming stuck. When visiting active quarries, drive and park only in specified areas.

- Those carrying out reconnaissance in advance of group courses should consider where vehicles will be able to stop to enable passengers to disembark/embark safely.
- Vehicles must be adequately insured if travelling outside the UK.

#### **4.4 Insurance**

All staff and students travelling overnight or on any flights on University business must complete the University Travel Insurance Application Form that can be found at the link below.

The Fieldwork Leader must ensure that the University's liability insurance covers the activities to be undertaken during the course. The owners or occupiers of some sites to be visited may require "disclaimers" or "indemnities" to be signed before permitting groups to have access. Any such requirements should be referred to the University's insurers before they are signed on behalf of the University.

When fieldwork is performed outside the UK, individual participants must ensure that adequate personal insurance is in place to cover medical and other emergencies. Fieldwork Leaders must inform course participants of any group insurance cover which has been taken out and make them aware of requirements for any additional personal insurance. If additional personal insurances are required, participants must satisfy the Fieldwork Leader that they have taken out necessary additional insurances.

Staff and students who are required to travel on University business must ensure they check travel information provided by the [Foreign and Commonwealth Office](#). This lists:

- Countries, and parts of countries, to which the FCO advises against all travel and
- Countries, and parts of countries, to which the FCO advises against all but essential travel.

The University's travel insurance provides medical and emergency assistance for overseas travellers (see 3.2.7). The University's travel insurance policy will be invalidated if travel proceeds against Foreign Office advice.

#### **4.5 Accidents**

A comprehensive first-aid kit must be taken on every field trip. If the group breaks into smaller groups, a basic kit should be carried by every sub-group working away from the main fieldwork control point. A basic first-aid kit is small enough to be carried with you in a pocket or rucksack. The nature of the location and the type of work being undertaken should be considered when determining the contents of first-aid kits. Consider carrying a GPS unit, especially if poor visibility is a possibility; the combination of mobile phone and GPS will greatly aid recovery of lost and injured fieldworkers.

At least one member of staff on every course must hold an in-date HSE approved first-aid certificate. The School preference is that all staff involved in fieldwork holds the appropriate certificate. The nature of the location and the type of work being undertaken should be considered when determining the contents of first-aid kits and the number of qualified First- Aiders required. If the fieldwork is carried out very close to the University over a short period, for example in a public park in Aberdeen it may not be necessary for the group leader to have a first-aid certificate. Consult the Local Safety Coordinator if in any doubt.

When planning fieldwork, Fieldwork Leaders must consider what might need to be done in event of an accident. If an accident does then occur, there must be a clear plan of action already in place to deal with the situation. Matters to be considered include:



- Provision of emergency equipment.
- Means of summoning assistance.
- Evacuation procedures.
- Contact with the media.

In the UK “999” can be used to contact the mountain rescue and Coastguard services as well as the fire, police and ambulance. In the EU the number for the emergency services is “112” (which also works in the UK). Travellers to other destinations should include emergency telephone numbers in their risk assessment.

Advice on what to do in the event of a serious accident or incident can be found in the Appendix.

#### **4.6 Conduct during Leisure Time**

High standards of behaviour are expected of participants in fieldwork, both during the working day and during leisure periods. All participants are regarded as representatives of the University by local inhabitants and by other people. Any unsociable or offensive behaviour will be interpreted accordingly.

Abuse of alcohol during leisure time on a fieldwork trip is deemed unacceptable behaviour. Fieldwork Leaders have the authority of the Head of School to exclude from all or part of a fieldwork course any individual who, in the opinion of the Fieldwork Leader, is behaving in an unacceptable manner. Unacceptable behaviour may also result in offenders being excluded from future fieldwork courses.

(Alcohol can impair judgement in the field as much as it can when driving. Consumption of alcohol either in the field or before embarking for the field should be avoided).

At residential field courses it is common to work through into the evening, before enjoying group social activities. In such cases the group leader must indicate clearly to students when the work period finishes. After this time the formal safety responsibilities change, and each student becomes more fully responsible for their own safety. However, they will still be regarded as representatives of the University and should act accordingly.

#### **4.7 Further Information**

- [University Liability Insurance](#)
- [University Travel Insurance](#)
- [University Driver Declaration](#)
- [Health and Safety](#)
- [Accident and Near Miss Reporting](#)
- [Driver & vehicle Licensing Agency \(DVLA\)](#)
- [Foreign, Commonwealth & Development Office - GOV.UK \(www.gov.uk\)](#)
- [University Insurers](#)

### **5. INDEPENDENT OR INDIVIDUAL FIELDWORK PROJECTS: Staff, PGR And Honours Students Fieldwork Activity.**

Independent projects may be undertaken by undergraduate students (as part of an honours course), postgraduate students, or by members of staff as part of their research. Staff undertaking solitary work must assume the role of Fieldwork Leader/Supervisor and the associated responsibilities.



## **5.1 Summary of Responsibilities for Independent Fieldwork Projects**

Supervisors will:

- Agree with the fieldworker the locations for fieldwork and the activities to be undertaken, considering the experience and abilities of the fieldworker.
- Ensure that every fieldworker carries out a risk assessment (using the appropriate form) for the work and produces a suitable written summary of the assessment which demonstrates that the fieldworker:
  - Appreciates the dangers which might arise from or during the work.
  - Understands in sufficient detail the precautions which will be necessary to enable the work to be carried out safely.
  - Understands that they (the fieldworker) has responsibilities regarding their own safety, and that of others around them.
- Ensure that the fieldworker has skills, abilities and access to necessary resources to implement the safety precautions which are required.

Fieldworkers must:

- Carry out fieldwork in the manner agreed with their supervisor.
- Undertake a comprehensive risk assessment for their proposed work.
- Carry out fieldwork in a safe manner.

It is strongly recommended that all staff and students carry their University Identity Cards whenever on fieldwork. This helps to identify you to others as having legitimate reasons to be where you are and doing what you are doing and may be useful in the event of an emergency. For overseas work it is prudent for the base to retain passport and visa details and names and addresses of next of kin.

## **5.2 Planning, Preparation and Implementation**

### **5.2.1 Disclosure of Information**

A supervisor can only provide effective supervision of an individual fieldwork project if he/she is made aware of a fieldworker's individual circumstances. Students and staff should inform their supervisor of any medical conditions, disabilities or injuries that might affect safety or performance in the field. They should also tell their supervisor about any medical treatment or prescribed medications which will apply during the fieldwork period and which might affect safety. Each fieldworker should complete the disclosure of information form and submit it to their supervisor before carrying out their risk assessment. The supervisor should check that any pre-existing conditions declared are covered by the University's insurance. Any subsequent changes to the information should be notified to the supervisor.

### **5.2.2 Planning of Independent Fieldwork Projects**

Students must first have their choice of project and the location approved by their supervisor. If the supervisor does not have adequate knowledge of the area in question, he/she should consult colleagues either in Aberdeen or in other institutions. The agreed choice of area should reflect the capabilities, skills and maturity of the student as well as any known medical conditions.

When the project location has been approved, a risk assessment should be carried out for the work to be undertaken. Supervisors are responsible for deciding to what extent necessary precautions should be committed to writing. The purpose of the risk assessment is to ensure that students:

- Appreciate where the dangers lie in the work they are about to undertake, and
- Understand in sufficient detail the precautions which will need to be taken to ensure that the work is carried out safely.

Fieldworker and supervisors should meet and systematically examine the dangers associated with the fieldwork and discuss the precautions which will be required. The checklists forming part of this handbook should be used to prompt the discussion. The supervisor should ensure that the fieldworker is aware of other sources of information which might need to be consulted when carrying out the risk assessment. (For example, guidebooks and publications written by those who have previously visited the area.)

The fieldworker should then be asked to write out a summary of the dangers and the precautions which will be necessary to enable the work to be carried out safely. The supervisor should provide guidance on the level of detail required. The School's fieldwork risk assessment form should be used (see Appendices).

The supervisor should then review the written record of the assessment. The supervisor must sign the written record before the fieldwork can begin. Both supervisor and fieldworker should keep a copy, and a copy must be uploaded to the Schools dedicated Outlook calendar.

The fieldworker must understand that significant alterations in the agreed procedures for the fieldwork must not be introduced (except in exceptional circumstances) without the supervisor's knowledge. When carrying out the risk assessment it should recognise that it may be impossible for the fieldworker, when in the field, to contact their supervisor. The risk assessment should consider foreseeable circumstances which might require changes to the scope of the project.

### **5.2.3 Collaboration with Internal and External Organizations**

Where working involves collaboration between multiple Schools a process must be established to:

- Agree a Lead Supervisor with responsibilities for organising risk assessments and documentation.
- The documentation should be approved by the project supervisor within each School.
- Where the work involves technical staff the approval of the line manager must be received.

Where work involves operating under an external organization's safety procedures then the risk assessment should state this, and a copy of the external organization's safety provision lodged along with the risk assessment.

### **5.2.4 Before Departure from Aberdeen**

Supervisors should ensure that fieldworkers have taken out adequate insurance cover for any fieldwork being performed outside the UK. Cover for rescue, medical treatment and emergency repatriation is particularly important.

Supervisors must obtain from each fieldworker details of a responsible person (e.g. close friend, parent or other relative) whom the School could contact in an emergency. They should also obtain confirmation that any medical information disclosed is up to date. Supervisors should also obtain from each fieldworker an outline of their expected itinerary.

The fieldwork trip must also be registered and documentation uploaded to the School's dedicated Outlook calendar resource [eng-safety@abdn.ac.uk](mailto:eng-safety@abdn.ac.uk). The information provided will be retained in confidence for use in the event of an emergency.

To register the trip on Outlook the fieldwork leader must 'invite' [eng-safety@abdn.ac.uk](mailto:eng-safety@abdn.ac.uk) for the duration of the fieldwork and include in the invite all the relevant documentation for the trip.

### 5.2.5 While Working in the Field

Fieldworkers must carry out fieldwork in accordance with the safe working procedures agreed with their supervisor.

On arrival in their field area fieldworkers must find out who to contact in the case of emergency, and the name and location of the local doctor or clinic. In the case of a fieldworker with a known medical condition working abroad, it is prudent to carry a doctor's note about that condition, translated into the local language.

Before commencing fieldwork an initial reconnaissance should be made of the area, if fieldworkers will be working alone but in adjacent areas, they should consider making this reconnaissance of their respective areas together.

Fieldworkers must remember that while they are in their fieldwork areas, they represent not only the School and the University, but the entire scientific community. Local customs and traditions must be respected. Goodwill engendered locally may prove to be beneficial to the project and is certainly much better than antagonism and animosity.

When working alone in the field, fieldworkers must always carry safety equipment as agreed with their supervisor.

Each day before leaving their field base, each fieldworker must leave a note with a responsible person (hostel warden, farmer etc.) describing precisely where he/she is going on that day (name of locality and approximate grid reference), the route and the expected time of return to base (ETA). Fieldworkers working in pairs from the same place can cover for one another; but it is still advisable to leave a message with a local person in case both are involved in an accident. It must be made clear to the responsible person entrusted with these details that emergency services must be alerted if the fieldworker fails to return within 2 hours of their ETA. Once such an arrangement is made, a fieldworker must not unilaterally break it by, for example, going home for the weekend, changing location or deciding to work late. If a vehicle is used for fieldwork, a dated note indicating the work area and ETA for that day may be left in the vehicle. Students should however carefully consider the extent to which such action may invite attempts to break into or steal their vehicle.

### 5.2.6 Overseas Travel

Staff and students who are required to travel overseas must ensure that they comply with, the University's [policy and guidance on overseas travel](#).

Staff and students who are required to travel on University business to countries or regions in which the [Foreign and Commonwealth Office](#) advises against **all** or **all but essential** travel must:

- Obtain permission for travel from the Head of School / University Secretary.
- Flights should be arranged through the University-approved travel agency.
- Staff and students should adhere to advice provided by both the Travel Agent and the Airline.
- A travel itinerary should be lodged with the School.

Staff and students, who are concerned about travelling abroad on University business, should address these concerns to the Head of School in the first instance. Staff and students are expected to co-operate fully with any airport and airline security procedures in place in major airports worldwide.

The University's insurance provider, AIG, provides medical and emergency assistance, together with several helplines. AIG can arrange:

- A medical referral to the most suitable clinic, hospital or dentist for treatment.
- Direct billing with medical providers, so you don't need to use your own cash or credit card.
- For someone to visit you while you are in hospital or ill abroad.
- An evacuation to the nearest centre of medical excellence or to bring you back home – will a fully equipped medical team if needed.
- To help locate medication or medical equipment if you cannot obtain them locally.

You must always contact AIG if you require medical attention. This is particularly important whilst travelling in the USA, as you might be asked to provide a proof of eligibility to use a medical network – the medical assistance company will arrange this for you.

Information on how to contact AIG is given in the table below. Assistance is available 24 hours a day, every day of the year.

If an incident occurs insured persons must contact the AIG hotline (24-hour service) in the first instance. No arrangements should be made without involving the insurers or their representatives.

Before travelling abroad you must complete an [online insurance application form](#). After submitting an application you will receive a confirmation email containing the University Policy Number and a link to the [AIG Travel Assistance Website](#). You should ensure that you keep the Policy Number available should you need to call for assistance. You can use this Policy Number to register with the insurers from the AIG Travel Assistance Website by clicking on the pink button labelled *Take Me There*. This takes you to a web page allowing you to register your details.

Ensure that the following details are up to date and that you keep them readily at hand. It is a good idea to add the telephone number to your mobile.

How To Obtain Assistance from AIG:	
Telephone (24/7):	<ul style="list-style-type: none"> <li>• +44(0)1273 401950</li> </ul>
Before calling have these details ready:	<ul style="list-style-type: none"> <li>• Employer name (University of Aberdeen)</li> <li>• Policy number (sent to you after completing an insurance application)</li> <li>• Your name, location and country of residence</li> <li>• Your condition, symptoms or query</li> <li>• a telephone number they can contact you on.</li> </ul>
Travel Assist Website	<ul style="list-style-type: none"> <li>• <a href="http://www.aig.co.uk/globecover">www.aig.co.uk/globecover</a></li> </ul>

### 5.3 Transport

Determining arrangements for control of transport is an essential part of planning fieldwork.

- The supervisor must approve the use of all road vehicles and boats to be used by fieldworkers.
- Staff and students who act as drivers must be individually authorised by their supervisor who must ensure that they have necessary driving experience, an appropriate driving licence and have completed an online [Driver Declaration](#) and had it approved by the University. Drivers who passed their car driving test after 1st January 1997 are unlikely to be able to drive vehicles capable of carrying more than eight passengers unless they take a further driving test and undergo a medical examination.

- The supervisor should remind staff and students that it is their responsibility to ensure that they have adequate insurance cover (and that their insurance company is aware that the vehicle will be used for fieldwork) before using their personal vehicles for fieldwork.
- Adequate rest periods must be taken by drivers as appropriate.
- Under UK legislation every driver is personally responsible for the vehicle he/she is driving. A vehicle that is in a potentially unsafe condition should never be used.
- Drivers should make sure that all materials and equipment carried are stowed in a safe and secure fashion for both routine transport and in an emergency. Under no circumstances should the vehicle be overloaded. Goods projecting at front or rear should be appropriately marked.
- Drivers must drive well within the legally permitted levels of "blood-alcohol". Drivers must be "legal" and in a fit state to control their vehicle in the morning that follows a previous evening's social drinking. This is particularly relevant in Scandinavian countries, where permitted blood-alcohol concentrations are much lower than in the UK.
- Drivers must not use mobile phones while driving and would be advised to avoid using hands free phones while driving.
- Drivers should not wear wellington boots, heavily studded boots, clogs or high heels, nor should they drive with bare feet.
- Vehicles must not be parked in areas where there is possible danger from falling rocks or trees, or where they may cause an obstruction. Avoid parking where the vehicle may be at risk of flooding by the tide or other rise in water level. Vehicles should not be driven on to sand or mud or any surface where there is a danger of becoming stuck. When visiting active quarries, drive and park only in specified areas.
- Vehicles must be adequately insured if travelling outside the UK.

#### **5.4 Insurance**

The Supervisor must ensure that the University's liability insurance covers the activities to be undertaken. The owners or occupiers of some sites to be visited may require "disclaimers" or "indemnities" to be signed before permitting access for work purposes. Any such requirements should be referred to the University's insurers before they are signed on behalf of the University.

When fieldwork is performed outside the UK, individuals must ensure that adequate personal insurance is in place to cover medical and other emergencies, and road vehicles must be adequately insured for travel outside the UK.

Staff and students who are required to travel on University business must ensure they [check travel information](#) provided by the Foreign and Commonwealth Office. This lists:

- Countries, and parts of countries, to which the FCO advises against all travel and
- Countries, and parts of countries, to which the FCO advises against all but essential travel.

The University's travel insurance provides medical and emergency assistance for overseas travellers (see 4.2.5). The University's travel insurance policy will be invalidated if travel proceeds against Foreign Office advice.

#### **5.5 Accidents**

A basic first-aid kit should be carried by individuals undertaking fieldwork. (The nature of the location and the type of work being undertaken should be considered when determining the contents of first-aid kits.) A basic first-aid kit is small enough to be carried with you in a pocket or rucksack. Consider carrying a GPS unit, especially if poor visibility is a possibility; the combination of mobile phone and GPS will greatly aid recovery of lost and injured fieldworkers.

When planning fieldwork, the supervisor must consider what might need to be done in event of an accident. If an accident does then occur, there must be a clear plan of action already in place to deal with the situation. Matters to be considered include:

- Provision of emergency equipment.
- Means of summoning assistance.
- Evacuation procedures.
- Contact with the media.

In the UK “999” can be used to contact the mountain rescue and Coastguard services as well as the fire, police and ambulance. In the EU the number for the emergency services is “112” (which also works in the UK). Travellers to other destinations should include emergency telephone numbers in their risk assessment.

Advice on what to do in the event of a serious accident or incident can be found in Appendix A.3.

## **5.6 Further Information**

- [University Liability Insurance](#)
- [University Travel Insurance](#)
- [University Driver Declaration](#)
- [Health and Safety](#)
- [Accident and Near Miss Reporting](#)
- [Driver & vehicle Licensing Agency \(DVLA\)](#)
- [Foreign, Commonwealth & Development Office - GOV.UK \(www.gov.uk\)](#)
- [University Insurers](#)

# **PART II - Hazards & Controls**

## **1. Introduction**

All fieldwork involves some level of risk which can be reduced by awareness of hazards, experience and appropriate safety precautions. Fieldwork Leaders must carefully assess the risks which will vary in accordance with weather and site conditions on the day and the experience, age, fitness and other characteristics of the participants. Fieldwork Leaders should take appropriate safety precautions, and in bad conditions be prepared to cancel part, or all, of the field trip if necessary. If health and safety is properly planned and observed most fieldwork is fairly safe and may be undertaken without too much fear or worry. Some types of work such as coastal studies, working alongside heavy machinery, working at sea or in extreme environments will be comparatively dangerous and require a more thorough assessment of the risks and stringent observance to hazard mitigation.

The planned work needs to be carefully assessed for risks before it starts. Factors such as deep excavations, electrical and gas supplies, biological, chemical or radioactive contamination, vermin infestation or animal attack, unstable ground, flooding, unexploded ordnance, extreme temperatures or high winds are just some of the potential hazards which need to be taken into account and the eventuality planned for (however remote).

Equipment must be in good working order and used for its designated purpose. Protective clothing such as rainwear, steel reinforced boots, hard hats, ear muffers and even sealed body-suits for dealing with bio or chemical hazards must be made available when appropriate.

All fieldworkers on site should be properly trained in the use of tools and machinery, even a generator. Never assume that a fieldworker will know how to operate a tool because it seems simple. Fieldworkers must be made aware of the risks to health and safety and of their responsibility in accident prevention. An adequate number of qualified First Aiders must be on site, and the locations and numbers of the nearest emergency services noted. Mobile phones should be available.

## **2. The Site**

The Fieldwork Leader will be in overall charge of the site(s). On large sites, sub-group leaders should be appointed to take responsibility for local decisions including health and safety. The sites should provide access to shelter (from likely weather conditions: sun, rain, wind, cold & snow) and have appropriate toilet facilities. It is important that any onsite shelters, huts and toilets are kept clean and tidy and all recommended guidelines for each structure are followed. Adequate firefighting appliances must be maintained in places where gas is in use - such as cooking facilities and heaters. It is also useful to have a place to wash hands, both for general hygiene and to allow a First Aider to work in clean conditions.

Additional points to remember are:

- Wear stout footwear.
- Wear appropriate clothing (e.g. long trousers in thorny scrub country).
- Always keep within a reasonable distance of the next fieldworker, and in any case within shouting distance.
- Each sub-group, when in the field, must carry a first-aid kit with them
- Always be aware of the nature of the terrain and exercise appropriate caution.
- Information on the location, including phone number, of the nearest doctor, hospital A&E should be readily available.
- Pay attention to local warnings and danger signs.

### 3. Food

Tiredness in the field, which is often a precursor to accidents, can be directly due to or be exacerbated by lack of food. Energy expenditure in the field can be twice an individual's daily norm. It is important therefore to eat sufficient food.

A substantial breakfast is a very sensible way to start a day in the field. Not only will it help prevent the tiredness which can lead to accidents, the energy reserves it provides can be extremely useful in an emergency.

In remote locations always carry an emergency supply of high energy food and keep the food for an emergency - not for a snack. (Your objective should be, if possible, to return to base with the emergency food supply untouched.)

It is also important to drink regularly and sufficiently to replace lost water. All energetic fieldwork, even in cool climates, leads to extra water loss and this then gives rise to headaches, exposure and general discomfort. Do not drink directly from natural water sources unless you are sure they are clean. Carry sufficient drinks and, especially in cool conditions, consider the use of flasks to carry hot drinks.

### 4. General Hazards and Precautions

This section includes information on the main hazards which might be encountered during fieldwork and the precautions which should be taken. As mentioned in the Introduction, the information provided is not exhaustive. Because of the varied nature of field work it is not possible to cover every circumstance. Those planning group fieldwork as well as staff and students (and their supervisors) undertaking individual fieldwork projects must, where necessary, consult other sources of information with a view to ensuring that fieldwork is carried out safely.

The **hazards posed by wearing wellington boots or waders** must also be fully considered where the depth of water may be or become overwhelming; they can fill with water and could cause the wearer to be overcome by the additional weight and increase the risk of drowning.



#### 4.1 Areas of Low to Moderate Relief

Areas of Low to Moderate Relief	
	<ul style="list-style-type: none"><li>• Before setting out obtain a local weather forecast from a reliable source.</li><li>• Always ensure that a responsible person knows where you are working and when you expect to return. This person should be available to raise the alarm should you be delayed. There should be a written notification of your itinerary and alert procedures in case you become overdue. It is recommended that relevant information be displayed in or on your vehicle (if one is in use) as an additional safety precaution, providing that this is not likely to attract the attention of thieves or vandals. (Northern Constabulary have a form for notifying where you are going in the hills which is available in hotels etc.) Whatever system is used it must be cancelled when the fieldwork is completed.</li><li>• Ensure you have a means of raising the alarm in the event of emergency (whistle, torch, and if possible mobile phone). Know the appropriate distress signals for use in emergency.</li><li>• Always be suitably clad for the terrain and possible extremes of weather in the fieldwork are Carry a reserve of warm clothing (including head gear) and high energy emergency food rations. In remote or exposed areas always carry a survival bag.</li><li>• Minimal clothing may be permissible in stable conditions of warm weather, so long as the hazards of sunburn and heat-stroke are borne in mind. However, both warm and weather-proof clothing should be carried even if not worn.</li><li>• Footwear should be suitable for the terrain. In most cases good, strong walking boots are the best footwear. Well-fitting wellington boots may be preferable for some conditions (e.g. shoreline or stream work). Ankle support and good treaded soles are essential as slips may occur on any muddy or rough ground.</li><li>• Always carry an appropriate detailed map (at least one to each group) and a compass. Know how to walk a compass bearing; always carry a whistle and a torch with spare bulb and batteries. Know the appropriate distress signals for use in emergency.</li></ul>

	<ul style="list-style-type: none"> <li>• Always carry a first-aid kit in a group or have one readily available.</li> <li>• Avoid machinery whether in use or not. Enquire about, watch out for and avoid potentially dangerous animals. Avoid toxic liquids e.g. those used for crop spraying.</li> <li>• Always move carefully over rough, rocky or vegetation-covered ground, avoiding loose boulders, burrows, etc. Take care not to dislodge loose rocks or other objects. If you do, then shout a warning to those who may be below. Under no circumstances must stones or rocks be rolled or thrown down hillsides or over cliffs.</li> <li>• Take particular care in areas of land fill, tips and spoil heaps, where uneven compaction may lead to instability. Look out for, and avoid, weakness resulting from underground combustion and avoid any toxic substances that may be present.</li> <li>• In areas where game shooting takes place, wear high visibility clothing. Find out when and where organised shoots are taking place and plan accordingly. For these areas, liaison with the landowners is essential and permission must be sought where necessary.</li> <li>• Those working among or near dry vegetation, such as gorse or dead bracken, must not smoke or undertake activities that are likely to cause fires. All objects that might subsequently cause fire, such as glass, should be removed from the site.</li> <li>• Protective headgear must be worn where there is a danger of falling objects. This should be an approved type and be in-date. Remember that you will not be protected from a large boulder fall.</li> <li>• For those working in working forestry areas, high visibility clothing should be worn, in addition to the permission of the landowner or his agent being obtained.</li> </ul>
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#### 4.2 Mountains and Uplands

These procedures are to be observed in addition to those given for areas of Low to Moderate Relief.

<b>Mountains and Uplands</b>	
<p>In all cases these regions are to be regarded as hazardous, except for public roads and inhabited parts. Certain parts will more properly be defined as dangerous, notably areas where there is steep or loose rock, or a layer of ice and/or snow. In an area regarded by the Fieldwork Leader or supervisor as dangerous, participants must work at least in threes and groups must never allow one or two persons to split off from the party. A dangerous area requires a high level of appreciation of the risks and dangers involved and the level of care to be exercised. Any small group moving more than a short distance from the main party, or working consistently out of sight, should be regarded as a separate group.</p> <p>For any work on ice fields, glaciers or involving climbing / rope work contact the Local Safety Coordinator for specific advice before commencing the work.</p>	
Responsible person:	<p>Appoint a responsible person and make the necessary notification of your itinerary. In addition, ensure you have a means of raising the alarm in the event of emergency (whistle, torch, and if possible mobile phone). Know the appropriate distress signals for use in emergency.</p>

Weather conditions:	<p>Weather conditions can change quickly; what may start as a pleasant stroll on a fine day along a well-trodden path can turn into a battle against a blizzard. In wintertime the chances of this happening are much greater; the well-trodden easy path of summertime may become a treacherous sheet of ice in winter.</p> <p>Weather conditions on British mountains (especially in winter) can be just as severe, and often more changeable, than those encountered in higher Alpine terrains. Be prepared for the worst conditions that may occur. Turn back if the weather deteriorates or if the route or conditions are too much for anyone in the group. Always obtain a weather forecast from a reliable source before setting off for mountainous or upland areas. Never be deceived by a mild valley breeze. Climb only 300m (1000ft) and, at any time of the year, it can become an icy, piercing gale force wind.</p> <p>Know the signs and symptoms of exposure, and if any member of the party begins to show such signs or symptoms, move immediately to safe conditions and treat the patient appropriately (see 4.11).</p>
Poor visibility:	<p>Poor visibility caused by heavy rain and/or thick cloud can easily lead to the fieldworker being 'benighted'. When visibility is poor you should constantly refer to your compass and make progress cautiously. If you are on a path, follow it carefully and watch out for cairns. Take every opportunity to sight on an identified object. Stop frequently if you have to travel on a compass bearing, each time taking a sighting on an object ahead (an alternative is to send a companion ahead of you twenty metres or so at a time). Sightings should be made whilst stationary. Remember also that it is easy to lose all sense of time on a long walk, so carry a watch and allow plenty of time to finish your expedition in daylight. If there is any indication that visibility may be becoming poor, immediately retreat to a safer area</p>
Electrical storms:	<p>Electrical storms (as opposed to thunder storms) do not occur frequently in the British Isles but it should be borne in mind that electrical potential will be attracted to ridges, summits and other high points, and it is advisable to keep below them during a storm.</p> <p>If you suspect that an electrical storm is imminent, get as far down the mountain and away from exposed ridges as possible. Squat on dry clean rock with head bent down, knees drawn up, feet together and hands on thighs. If you have a rope or insulating clothing, squat on this.</p> <p>Avoid caves and dirt-filled crevices. Don't sit under trees or in small hollows. Choose an area well away from walls and sharp projections.</p> <p>If you are carrying equipment capable of conducting electricity, particularly poles or long pieces of material, place these well away from you.</p>
Equipment and clothing:	<p>Wear boots (not shoes, wellingtons or trainers). Have plenty of warm clothing (including spare dry clothing) and rain-proof outer garments (including over-trousers). Never wear jeans either in winter or in</p>

	<p>summer. When wet, jeans provide little or no protection against the cold.</p> <p>Always carry a map and compass and know how to use them. Consider carrying a GPS unit, especially if poor visibility is a possibility; <u>the combination of mobile phone and GPS will greatly aid recovery of lost and injured fieldworkers</u>. Carry a first-aid kit and an emergency supply of high energy food. (Keep the high energy food for an emergency, not for a snack.)</p> <p>Do not venture onto snow or ice without having ice axe and crampons and experience of using them.</p>
River crossings:	<p>Heavy rain may cause flooding and make streams rise rapidly into dangerous torrents sometimes washing away bridges, parts of footpaths and covering fords. Do not attempt to cross such streams in spate. River crossings are not to be undertaken lightly and if there is any doubt at all either MAKE A DETOUR or WAIT until the spate or flood subsides. A foil thermal blanket should be included in the first-aid kit if a river crossing is anticipated.</p> <p>If the occasion arises in which it is decided that the crossing of a river in normal flow is the safest of several alternatives, then it is best to follow the procedure set out below:</p> <ul style="list-style-type: none"> <li>• Remove trousers to reduce friction or drag. They can be put on dry at the other side.</li> <li>• Wear boots when fording a river. Socks should be taken off and put on dry at the other side.</li> <li>• Undo the waist-strap of rucksack and loosen shoulder straps for quick off-loading. Empty bottles and closed polythene bags should be placed at the top of the pack to provide buoyancy.</li> <li>• If possible obtain a branch or pole to provide a "third leg".</li> <li>• Attach a rope (if available) to a secure anchor point away from the riverbank. Everyone making the crossing should be attached to the rope, thus forming a safe link with the group on the banks of the river.</li> <li>• Alternatively, the party should cross by linking arms, facing alternate directions and moving across close together. Use short shuffling steps and cross on a diagonal path. Do not jump from boulder to boulder.</li> </ul> <p>River, static or slow flowing water are a potential source of water borne disease including Weil's Disease caused by bacteria in the water. Ticks are particularly prevalent in riverbanks and are a cause of Lyme Disease.</p> <p>See section 4.14 for information on prevention, symptoms &amp; treatment of these conditions.</p>
Further Information:	<ul style="list-style-type: none"> <li>• <a href="#">Scottish Mountain Rescue</a></li> <li>• <a href="#">Mountain Rescue England &amp; Wales</a></li> <li>• Emergency dial 999</li> </ul>

### 4.3 Woods and Forests

Woods and Forests	
The main safety hazards in woods and forests are associated with the difficulty of movement and limited visibility. It is easy to become lost so if you do have an accident, it may be difficult for you to be found or for you to find the way out.	
	<ul style="list-style-type: none"> <li>• Appoint a responsible person and make the necessary notification of your itinerary. Ensure you have a means of raising the alarm in the event of emergency (if possible carry a mobile phone – also carry a whistle and torch). Know the appropriate distress signals for use in emergency.</li> <li>• Always bear in mind that work in woods and forests is commonly more tiring than elsewhere and plan your work accordingly.</li> <li>• Always notify the local gamekeeper, forestry officers or other responsible persons of your presence, probable location and work schedule.</li> <li>• Keep your position continually in mind. If you do become lost, back tracking is generally more helpful than carrying on in the hope that things will improve. A map of the district and compass should always be carried. Consider carrying a GPS unit; <u>the combination of mobile phone and GPS will greatly aid recovery of lost and injured fieldworkers.</u></li> <li>• Try to avoid areas where growth is dense and the nature of the ground and any obstructions or holes is obscured, also watch for whiplash of branches.</li> <li>• Rocks and boulders and fallen trees in forests frequently bear a covering of moss and are slippery when wet. Scree slopes in forests should be avoided whenever practicable.</li> <li>• If climbing steep slopes, take great care not to rely too heavily on vegetation for support, it may not be as firmly fixed as you hope.</li> <li>• Do not smoke at times of high fire risk, or as decreed by local forestry regulations. Smoking is not recommended in forested areas. Also take care not to leave anything that might start a fire - glass for example.</li> </ul>
Note:	If possible, avoid passing through dense plantations of young trees; they are very susceptible to damage, and are very impenetrable.
Further Information:	<a href="#">Forestry Commission Scotland</a> <a href="#">Forestry England</a> <a href="#">Forestry Commission</a>

#### 4.4 Bogs, Mires and Swamps

Bogs, Mires and Swamps	
<p>Of the several types of wet unstable ground likely to be encountered, those in which a raft of vegetation overlies water are perhaps the most dangerous. These can usually be distinguished by their swaying movement when walked on. Any continuous carpets of sphagnum or peat mud should also be avoided. Reed-swamps are difficult to traverse on foot and extra care should be taken. Probe ahead with a pole.</p>	
	<ul style="list-style-type: none"><li>• Do not attempt to cross a bog of any type if you are alone.</li><li>• If it is essential to cross a bog, try to keep to the drier upstanding parts, preferably to any tussocks of grassy plants, and avoid un-vegetated areas.</li><li>• If you find yourself sinking, immediately lie flat on your back, and call for assistance; keep calm; if possible free your legs and feet to the horizontal. If you are carrying a survival bag or other inflatable object try to inflate it to give you buoyancy. Even a plastic bag or waterproof garment may be used to trap air and so provide limited support. Still lying flat, move back in the direction of your approach using any tussocks for support.</li><li>• If you become immobilised try to get behind some vegetation for shelter, put on spare clothing and use a survival bag.</li><li>• Extra precautions should be taken during prolonged spells of hot dry weather when fire becomes a potential hazard even in bogs.</li></ul>

#### 4.5 Quarries, Cuttings, Cliffs, Mines and Caves

Quarries, Cuttings, Cliffs, Mines and Caves	
<p>In the accidents league, quarry workers come 3rd (after deep sea fishing and mining). Accidents that are the sequel to a disregard of warning or safety notices count for about 25% of the total.</p>	
Responsibilities of the Fieldwork Leader:	<ul style="list-style-type: none"><li>• If visiting a working quarry, first obtain permission from the quarry manager in advance. Be sure to agree:<ul style="list-style-type: none"><li>• The date of the visit and time of arrival.</li><li>• The number of visitors.</li></ul></li><li>• Report your arrival and departure to the quarry manager.</li><li>• Enquiries must be made through the quarry management about the locations of specific hazards to be avoided.</li><li>• Make a preliminary check on the stability of clay cliffs and sides of clay pits or any other questionable slopes or scree.</li><li>• A safety helmet must be worn when visiting mines, quarries, cliffs, scree slopes or wherever there is a risk from falling objects. Ensure that all members of your party are also wearing, high visibility jackets/vests and, if appropriate, safety goggles and safety boots. Students not wearing a safety helmet must not be allowed to approach the rock face, or into any place designated as a hard hat area (throughout most working quarries).</li><li>• Wear suitable footwear i.e. strong boots. Note wellington boots are suitable only for clay pits and similar environments.</li></ul>

	<ul style="list-style-type: none"> <li>• Safety goggles must be worn when hammering or chiselling rock. Avoid hammering near another person or looking towards another person hammering.</li> <li>• Make sure that all in your party are aware of appropriate emergency procedures.</li> </ul>
Responsibilities of the Fieldworker:	<ul style="list-style-type: none"> <li>• When group working, obey all safety instructions given by the Course/Group Leader or supervisor. Anyone not conforming to the standard required may be dismissed from the group or field course.</li> <li>• Stay with the group, except by arrangement with the Course/Group Leader.</li> <li>• Avoid, where possible, the edges of cliffs, quarries and other steep or sheer faces. <ul style="list-style-type: none"> <li>• Ensure that rocks above are safe before going below.</li> <li>• Never work under an overhang.</li> <li>• Avoid loosening rock on steep slopes.</li> <li>• Do not work above another person.</li> <li>• Do not roll rocks down-slope for amusement.</li> <li>• Do not run down steep slopes.</li> <li>• Beware of landslides on clay slopes.</li> </ul> </li> <li>▪ Keep a sharp lookout for moving vehicles or machinery. Never pick up explosives or detonators. Comply with safety rules, blast warnings and any instructions given by leaders. Beware of sludge lagoons.</li> <li>▪ Beware of traffic when examining road cuttings. Avoid hammering, and never leave debris on the roadway or verges. Railway or motorway cuttings must never be examined, unless special permission has been obtained from the appropriate authorities.</li> <li>▪ Old mine workings are often very inviting to the naturally inquisitive. There are many hidden dangers, even for the most wary. These include getting lost, roof or floor collapse, falls into shafts and mine workings, entrapment in narrow areas, drowning. Do not enter old mine workings <i>or cave systems</i> unless approved as an essential part of the work. Only do so by arrangement, and never alone. Ensure that someone on the surface knows your location and expected time of return. Be sure to report after returning.</li> <li>▪ Do not climb cliffs, rock faces or crags, unless this has been approved by the Fieldwork Leader or supervisor as an essential part of your work and appropriate safety measures and training are in place.</li> <li>▪ Take great care when walking over rocks below high-water mark on rocky shores and have adequate information on tides.</li> </ul>
Note:	<p>The use of rope access techniques is beyond the scope of this document; those intending on using such methods should contact the Local Safety Coordinator about their intentions, and the requirement for equipment certification.</p>



## 4.6 Excavations

Excavations	
<p>With excavations think about what type of soil you are working in, a sand section is a lot less stable than clay sided one, a rubble section has the added danger of falling debris. Always assess the safety of the trench before going in and decide if any shoring is required. Some trenches may need shoring at shallower depths dependent on the local conditions. The situation of a trench may change depending on weather, size of spoil heap, heavy machinery passing by. Spoil heaps should not be allowed to creep ever closer to the edge of your trench, the weight pressing down on can cause a collapse. Debris and stones will also roll off the spoil heap and into the trench - a hard hat only protects your head so wear protective footwear as well. Make sure the spoil heap is secure. Great care should be taken to avoid injury to passers-by, especially when the site is unattended overnight. When visiting sites all local rules must be complied with.</p>	
Depth of Trenches:	<p>Where the sides of an excavation cannot be stepped or battered (sloped) back to a safe angle, their continued stability should not be assumed. All excavations where the depth is greater than 1.2 metres and where the sides cannot be stepped or battered back to a safe angle must have their vertical sections suitably supported (shored) to prevent collapse. <b>Under no circumstances should staff, students or other participants work in un-shored trenches with a depth exceeding 1.2m.</b></p>
Populated areas:	<p>In populated areas and near to roads the location of underground services (e.g. electricity, telephone, water, gas) must be established before the ground is disturbed. Utility companies and local authorities should be consulted for information.</p>
Contaminated sediment:	<p>Where excavations take place in urban and rural situations where rat infestation is possible, processing of excavated sediments should be treated as a hazardous procedure and appropriate actions taken to protect personnel from infection. Similar action should be taken on any site excavation where ground contamination (biological or chemical) is either known or suspected. In such situation's heavy duty gloves and disposable coveralls (sealed bodysuits) should be worn, and arrangements made for safe disposal. Adequate facilities for washing/personal hygiene must be provided.</p>
Equipment and Machinery:	<p>All fieldworkers must be trained in the correct use of the tools and equipment they are expected to use including pickaxe, mattocks (flat-edged pick), shovel, wheelbarrow, turf cutter etc. Fieldworkers should exercise care when approaching a digger in case they should suddenly swing an axe or a shovel. Avoid back injuries when using a shovel, keep the weight low and avoid twisting movements. Tough footwear, preferably steel toe-capped, is necessary to avoid foot injuries from a misdirected shovel, do not wear trainers or other soft shoe. If regularly having to work on knees use knee protectors. If the lifting of heavy objects is anticipated then the manual handling course, run by the University, should be undertaken. Only properly trained persons are permitted to operate a mechanical digger. Appropriate protective clothing should be worn as necessary.</p>



#### 4.7 Hammering Rock/Concrete

Hammering Rock/Concrete	
When collecting rock or concrete samples:	<ul style="list-style-type: none"> <li>• Where possible, observe and record and do not hammer indiscriminately. Keep collecting to an absolute minimum.</li> <li>• Never collect from walls or buildings. Take care not to undermine fences, walls, bridges or other structures.</li> <li>• Wear appropriate clothing including safety goggles when hammering rocks.</li> <li>• Do not hammer flint nodules because of high-velocity splinters.</li> <li>• Do not hammer near other people or work directly above or below other people.</li> <li>• Do not use a hammer on a hammer (hammers are hardened and can splinter).</li> <li>• Avoid hammering at an overhanging cliff or other dangerous location.</li> </ul>

#### 4.8 Farms, Estates and Animals

Farms, Estates and Animals	
Farms and estates pose particular issues relating to health and safety. For many students the potential dangers found on farms will be new to them.	
Animals:	Animals may be aggressive, even a sheep can give a painful kick, let alone the risk posed by a bull weighing several tonnes. Animals may kick, push, gore, bite, spit or crush. On no occasion should you enter an enclosed space with any animal. For group fieldwork you should only enter a field with animals if the Fieldwork Leader indicates it is safe to do so. While walking through a field with animals you should walk quietly, in a coherent group as far from the animals as possible. <u>Avoid getting between a mother and her offspring.</u>
Disease:	Many diseases can be potentially found on farms and estates. These include ticks, tetanus and E-coli. Precautions, such as dressing existing cuts, and ensuring that anti-tetanus vaccinations are up to date should be taken.
Firearms:	Firearms are commonly found on farms and estates. On no occasion should these be handled unless trained and experienced and explicitly authorised by the Fieldwork Leader.
Traps and Snares:	Beware of animal traps or snares (wire nooses anchored to the ground which tighten if pulled on). These should not be encountered on guided tours of farms and estates but on project work it is conceivable that a fieldworker may encounter a trap or snare. If you see a snare or trap, LEAVE IT ALONE. If you should get accidentally snared, do not pull your leg as a snare is well anchored but carefully remove it with your hands by loosening the wire.
Walls, Fences and Gates:	While walking on farms and estates it is not uncommon to cross fences or dry-stone walls (dykes). Both can be dangerous and great care should be taken and whenever possible use gates or styles. Leave gates as you found them. If you must cross a wire fence use

	the strainer (the thicker post in a length of fencing) which gives more support. Care should be taken with barbed wire fences. <u>Do not attempt to touch or cross an electric fence.</u>
Note:	Do not drop any litter or leave any waste that could be harmful to animals.

#### 4.9 Railways, Roads and Motorways

Railways, Roads and Motorways	
<p>You must obtain specific permission before conducting any work on or beside railways and motorways. You must comply with safety regulations laid down by the railway or road authorities. Never use railway tracks as footpaths.</p> <p>You do not need permission to work on or alongside roads other than motorways but for safety purposes you should treat all roads with great care. Wear a high visibility jacket. Display a clear warning signal when you are working near bends, hill crests or in narrow cuttings and employ a lookout if this is feasible. Avoid road tunnels lacking a footpath if possible, but if such work is essential, post a lookout and prominent warning signals or signs at least 100 metres ahead. Be extra careful if there is a strong wind blowing because it can mask the sound of approaching trains or vehicles.</p>	
Further Information:	<ul style="list-style-type: none"> <li>• <a href="#">Network Rail</a></li> <li>• <a href="#">Department for Transport</a></li> <li>• <a href="#">Aberdeen City Council</a></li> <li>• <a href="#">Aberdeenshire Council</a></li> <li>• <a href="#">Highland Council</a></li> <li>• Rail Emergency: <ul style="list-style-type: none"> <li>• Network Rail 0845 11 41 41</li> <li>• British Transport Police 0800 405040</li> </ul> </li> <li>• Other Emergency 999</li> </ul>

#### 4.10 Lakes, Rivers and Other Inland Waterways

Lakes, Rivers and Other Inland Waterways	
<p>Except for very shallow ponds and ditches, all work in water should be regarded as hazardous, because of currents, submerged objects and slippery or muddy bottoms. Lone working in water should be avoided, and lone working using boats is not permitted.</p>	
Clothing:	<p>Clothing should be suitable for the job. It should be remembered that it is nearly always colder on water than ashore, and due allowance made for this. Good waterproof clothing should be worn, including headgear and gloves, as this will usually be necessary to keep out the wind. Footwear should typically be wellington boots or thigh waders. Chest waders should be used only when necessary.</p> <p>When working in boats, nobody should be allowed to go out in a boat unless properly clothed in the opinion of the person in command. For prolonged work, a dry-suit is a desirable safety measure.</p>

Lifejackets:	Lifejacket must comply with BS EN 396 and must always be worn by all people using boats. Ability to swim is not a substitute for a lifejacket. Lifejackets must also be worn by those working in water.
Water borne diseases and contaminants:	Those working in freshwater systems should be aware of the possibility of contracting a range of diseases, including tetanus and Weil's Disease (section A.4.13). They should also be aware of the symptoms of these diseases. Precautions, such as dressing existing cuts, and ensuring that anti-tetanus vaccinations are up to date should be taken. Ticks are also prevalent along riverbanks and can cause Lyme Disease (section A.4.13). The possibility of chemical contamination of the water should also be considered when undertaking fieldwork in freshwater environments.
Currents and similar hazards:	Freshwater fieldworkers should take note of the currents and act accordingly, noting that the stillest waters are often the deepest, and have the softest substrate. Avoid steep banks and steeply shelving substrates. Care should be taken to minimise the risk of falling into holes, or other deep areas when in the water. Do not work on frozen over lakes and rivers.
Further Information:	<a href="#">Scottish Canals</a> <a href="#">Canal &amp; River trust (England &amp; Wales)</a>

#### 4.11 Beaches and Cliffs

Beaches and Cliffs	
Responsibilities of the Fieldwork Leader:	<ul style="list-style-type: none"> <li>▪ Check in advance for potential hazards along the route. A reconnaissance trip is strongly advised, especially to look for areas of quicksand or unstable cliff.</li> <li>▪ Know signs of hypothermia and exhaustion and be familiar with treatment. Remember an open beach on a windy day may be almost as severe an environment as a mountain top might be in spring or summer.</li> <li>▪ Check local tidal conditions, especially time of high tide and tidal range.</li> <li>▪ When working close to cliffs, make sure the instructions laid out above (Quarries, cuttings and cliffs), are adhered to.</li> </ul>
Responsibilities of the Fieldworker:	<ul style="list-style-type: none"> <li>• When group working, follow the instructions of the Fieldwork Leader.</li> <li>• At all times, when working close to cliffs, make sure the instructions laid out above (Quarries, cuttings and cliffs), are adhered to.</li> <li>• When group working, do not leave the main group unless with express permission of the Fieldwork Leader.</li> </ul>
Further Information:	<ul style="list-style-type: none"> <li>• <a href="#">Maritime &amp; Coastguard Agency</a></li> <li>• <a href="#">BBC Tidal Tables</a></li> <li>• Coastguard Emergency Dial 999</li> </ul>

#### 4.12 Estuaries, Mudflats and Salt-Marshes

Estuaries, Mudflats and Salt-Marshes	
<p>Careful preparation is important before undertaking work in these areas. The period available for work is usually limited by the tides and knowledge of the state of the tide and of the time is essential. Because of the time limitation the consequences of becoming lost or sustaining accidents or injury during the work are greater. Unless there is no practicable alternative, fieldwork should not be carried out alone in these environments. Local exceptions may be made where work is confined to the bank.</p>	
	<ul style="list-style-type: none"> <li>• Appoint a responsible person and make the necessary notification of your itinerary. Ensure you have a means of raising the alarm in the event of emergency (if possible carry a mobile phone). Know the appropriate distress signals for use in emergency. Ensure that you advise your responsible person immediately before, and after going, into inter-tidal zones on mud flats.</li> <li>• Always carry a map and a compass in case mist or fog develops suddenly and obscures the shoreline. It is particularly important that the party stays together.</li> <li>• Estuaries, mudflats and salt-marshes are, in general, very exposed and can be very cold; the limitations on working time, due to tides, may also result in work having to be carried out early in the morning or late in the evening. Ensure adequate clothing is worn.</li> <li>• Knowledge of the day's tides is essential, but allowance must also be made for local conditions and changes in the weather, e.g. a change to an onshore wind can bring forward the time of high tide. When the terrain is flat the tide advances quickly and work should be planned to allow ample time for exit <u>before</u> the flood tide starts to advance across the work area</li> <li>• There are often surprisingly deep water channels flowing through these areas, and great care must be taken not to get trapped by the rising tide against these.</li> </ul>
Further Information:	<ul style="list-style-type: none"> <li>• <a href="#">Maritime &amp; Coastguard Agency</a></li> <li>• <a href="#">BBC Tidal Tables</a></li> <li>• Coastguard Emergency Dial 999</li> </ul>

#### 4.13 Working at Sea

Working at Sea
<p>In UK legislation a 'seafarer' means any person, including a master, who is employed or engaged or works in any capacity on board a ship and whose normal place of work is on a ship. This definition is a variation of the Maritime Labour Convention, 2006 (MLC) in the Maritime &amp; Coastguard Agency's, Marine Guidance Note MGN 471 (M).</p> <p>In the UK variation the words "whose normal place of work is on a ship" are added because it ensures that surveyors, pilots and visiting technical consultants are not caught by the definition, and also (to take an extreme case) that a passenger who happens to answer some business e-mails while on holiday on board (i.e. "works on a ship") cannot claim to be a seafarer.</p>

In most cases staff and students will be considered as visiting technical consultant however this would need to be confirmed by the owner/operator or the person in charge of the vessel. It is also dependent on the location (e.g. where in the world or how far from the shore), the duration (e.g. more than just a day trip) of the work activity.

A person defined as a seafarer requires formal training and appropriate medical and dental clearances. The safety of the entire crew depends on everyone following the instructions of the person in charge of the vessel and other designated personnel. This may also be the case for 'visiting technical consultants' (e.g. staff and students).

Irrespective of whether persons are defined as seafarer or 'visitor' adequate training and preparation is necessary with guidance from the owner/operator or person in charge of the vessel.

Preparation	<p>As required by the owner/operator or person in charge of the vessel.</p> <p>If applicable:</p> <ul style="list-style-type: none"> <li>• You must be declared fit to go to sea</li> <li>• Offshore Medical Certificate (to OGUK guidelines) or Seafarer Medical Certificate ENG1 (Maritime and Coastguard Agency).</li> <li>• A dental certificate following an examination prior to going offshore stating good dental health for following six months is required for extended periods offshore.</li> </ul>
Training:	<p>As required by the owner/operator or person in charge of the vessel.</p> <p>If applicable:</p> <ul style="list-style-type: none"> <li>• Personal Survival Techniques (MCA approved), Helicopter Underwater Escape Training (HUET).</li> </ul>
Clothing:	<ul style="list-style-type: none"> <li>• Hypothermia (see 4.14 below) results when core body temperature drops by 2°C to 35°C and below. Survival at sea depends on:             <ul style="list-style-type: none"> <li>• Clothing being worn at the time.</li> <li>• Whether a personal floatation device (PFD/Lifejacket) was worn.</li> <li>• Water temperature.</li> <li>• Age of victim.</li> <li>• Water area (i.e. inland, coastal inshore and offshore).</li> </ul> </li> <li>• To mitigate Hypothermia:             <ul style="list-style-type: none"> <li>• Stay on the boat.</li> <li>• Wear a personal floatation device (PFD).</li> <li>• Wear necessary clothing and keep clothing on.</li> <li>• Getting as much of body out of water as possible.</li> <li>• Remain still and in place UNLESS a floating object, another person (huddle to maintain body heat), or the shore is nearby.</li> <li>• Keeping a positive mental attitude (a will to survive).</li> </ul> </li> </ul>
Fire:	<ul style="list-style-type: none"> <li>• Smoke only in designated areas (if at all).</li> <li>• Know the fire drill.</li> <li>• Know the location of fire alarms, extinguishers and escape routes.</li> <li>• Check and maintain electrical equipment for safety (E.g. PAT test).</li> </ul>

	<ul style="list-style-type: none"> <li>• Keep tidy.</li> </ul>
Working on the vessel:	<ul style="list-style-type: none"> <li>• PPE, including life-jackets, to be worn as required by the person in charge of the vessel.</li> <li>• Fishing and research vessels are working vessels, with an array of heavy equipment packed into a small, moving space.</li> <li>• Observe all signage and instruction given by the person in charge of the vessel.</li> <li>• Larger vessels will have specific muster points and evacuation procedures.</li> </ul>
Further Information:	<ul style="list-style-type: none"> <li>• Working at Sea: <ul style="list-style-type: none"> <li>• <a href="#">Health &amp; Safety</a></li> <li>• <a href="#">Maritime Safety</a></li> <li>• <a href="#">Medical Certification &amp; Advice</a></li> <li>• <a href="#">Training and Certification</a></li> </ul> </li> <li>• <a href="#">Maritime &amp; Coastguard Agency</a></li> <li>• <a href="#">BBC Tidal Tables</a></li> <li>• Coastguard Emergency Dial 999</li> </ul>

#### 4.14 Biological Hazards – General

There are many species of plant and animal that presents a health hazard to humans. An ability to recognise the dangerous/poisonous species indigenous to the fieldwork environment is therefore desirable.

Of potential health hazards, bracken, toxic blue-green algae are most likely to be encountered in the British Isles, but two diseases are becoming more common, Leptospirosis and Lyme disease. Personal hygiene is an important precaution in most situations.

**All fieldworkers should ensure that anti-tetanus injections/boosters or other necessary vaccinations are up to date. Those travelling outside the UK should find out well in advance which vaccinations are recommended and ensure that they are administered. At the same time fieldworkers travelling overseas should find out what other health precautions will be required (e.g. protection against malaria).**

Weil 's disease (Leptospirosis):	
<p>Weil's disease is a potentially life-threatening illness caused by bacteria passed from rats and other rodents via urine. It can also be spread by dogs and farm animals including goats, sheep, cattle and pigs. At risk are those who handle these animals or encounter material or water contaminated by rat urine. The risk from water contact is greatest in static water or slow flowing rivers.</p> <p>The micro-organism may enter the human body through abrasions or cuts in the skin and through the lining of the nose, mouth and eyes. The micro-organism can survive for considerable periods outside the host in the environment.</p>	
Symptoms:	<ul style="list-style-type: none"> <li>• Starts with a flu-like illness and there may be a persistent and severe headache.</li> <li>• May also include vomiting and muscle pains.</li> <li>• Pneumonia and kidney failure may follow.</li> </ul>

Risk activities:	<ul style="list-style-type: none"> <li>• Work connected with rats or rat urine (voles can also be a source of the disease)</li> <li>• Contact with water contaminated by rat urine – mainly static water or slow flowing rivers</li> <li>• Contact with feed stuffs or other material contaminated by rat urine in storage areas</li> <li>• Boat work in ponds, lakes and slow flowing rivers</li> <li>• Fish farming (where rats are often present)</li> </ul>
Prevention:	<ul style="list-style-type: none"> <li>• Avoid rats. Don't touch them with unprotected hands.</li> <li>• Cover all cuts and broken skin with waterproof plasters (before and during work) and wear protective clothing.</li> <li>• Wash your hands after contact with animals, or any contaminated clothing or other materials, and always before eating, drinking or smoking.</li> </ul>
Treatment:	<ul style="list-style-type: none"> <li>• Report any illness to your doctor.</li> <li>• Tell the doctor that you are a fieldworker and tell him about the sorts of environments in which you have been working.</li> <li>• Tell the doctor that you think you might have contracted Leptospirosis.</li> <li>• If caught in the early stages, the disease is usually readily treated with antibiotics. If left untreated, it can be fatal.</li> </ul>
Further Information:	<p><a href="#">National Health Service (NHS)</a></p> <p><a href="#">US Center for Disease Control &amp; Prevention</a></p>

Lyme Disease	
<p>Lyme disease is a tick-borne infection from sheep, deer and other animals which is an increasing problem on areas of heath, rough pasture and in seabird colonies. It is transmitted when a tick bites an infected animal and later bites a human. See a doctor if you think that you have been infected.</p>	
Symptoms:	<p>A red ring may develop around a bite, and there may be associated headache, fever and/or muscle pains, rather like flu. The ring increases in diameter over several weeks as the centre clears. The disease can cause serious illness of the nervous system, joints or heart.</p>
Risk activities:	<p>Any activity in which workers are exposed to tick bites (e.g. agriculture, forestry, land management). Especially at risk are those working in woodland and grassland areas harbouring ticks.</p>
Prevention:	<p>Avoid exposure to ticks by covering exposed skin, especially legs (e.g. by closing trouser bottoms by tucking into socks). Application of insect repellent to skin or clothing may also help. Inspect clothing for ticks. At end of activity undress and inspect body for ticks. Remove any ticks as soon as possible using a tick removal tool. Alternatively using fine tweezers:</p> <ul style="list-style-type: none"> <li>• Grasp the tick firmly as close to the skin as possible.</li> <li>• pull the tick away from the skin in a steady motion.</li> </ul>



	<ul style="list-style-type: none"> <li>• wash the area with soap and water.</li> </ul>
Treatment:	<ul style="list-style-type: none"> <li>• Report any illness to your doctor.</li> <li>• Tell the doctor that you are a fieldworker and tell him about the sorts of environments in which you have been working.</li> <li>• Tell the doctor that you think you might have contracted Lyme Disease.</li> </ul>
Further Information:	<a href="#">National Health Service (NHS)</a> <a href="#">US Center for Disease Control &amp; Prevention</a>

<b>Bracken</b>
Bracken is known to be toxic and carcinogenic to livestock. Avoid cutting, handling or working with bracken. If bracken is handled, wash thoroughly before eating, drinking, smoking or applying cosmetics.

<b>Toxic blue-green algae (Cyanobacteria)</b>	
Toxic blue-green algae is common in many inland waterways. The algae multiply rapidly (especially in summer) to colour the water green, blue-green or brown. Avoid contact with, or ingestion of, water that contains high concentrations of these algae. Severe toxic effects can rapidly occur with inhalation or ingestion of contaminated water.	
Symptoms:	<ul style="list-style-type: none"> <li>• The symptoms due to ingestion are vomiting, diarrhoea, fever and flu-like symptoms.</li> <li>• The symptoms due to other contact are skin irritation and rashes.</li> <li>• Damage to the nervous system, liver and kidneys can occur.</li> </ul>
Risk Activities:	Working in or near inland waterways.
Prevention	<ul style="list-style-type: none"> <li>• Avoid contact through the use of protective clothing and gloves.</li> <li>• Wash thoroughly or use cleansing wipes to remove splashes.</li> </ul>
Treatment:	<ul style="list-style-type: none"> <li>• Seek immediate medical help.</li> </ul>
Further Information:	<a href="#">US Center for Disease Control &amp; Prevention</a>

#### 4.14 Exposure and Hypothermia

<b>Exposure and Hypothermia</b>
<p>For those who disregard precautions, exposure to bad weather can lead to acute physical discomfort, disorientation, growing fear, exhaustion and even collapse. In general, warm, windproof and waterproof clothing should be worn including adequate protection for the head, ankles, wrists and hands. British weather is notoriously unpredictable; the effects of wind (wind chill, buffeting, discomfort and disorientation in wind-driven rain / snow) are potentially hazardous and should not be underestimated, particularly in and around coastal waters and on high mountains or open upland.</p> <p>Apart from falls, drowning etc. the most serious hazard that can occur in field activities is hypothermia. This is caused by the exposure of the body to progressive cooling because of severe weather conditions. It can occur at any time on the hills or seas of the British Isles</p>



and anywhere during the winter months. Unless the symptoms are recognised, and preventative action taken immediately, it can rapidly develop into a life-threatening condition. If the victim is urged to greater effort or left unprotected, the consequences can be serious.

Some field studies may be carried out on water where similar severe exposure can be experienced. The temperature of open waters in and around Britain is rarely high enough to be sure that total immersion will not be accompanied by some degree of shock. Water displaces the insulation layer of air between the body and clothing and may lead to hypothermia. Immersion in water below about 22°C accompanied by physical effort is likely to increase the net heat losses from the body, as can winds or wet clothing. It is important to avoid total immersion (unless diving) and to keep clothing dry and windproof.

Symptoms	<ul style="list-style-type: none"> <li>• A slowing down of pace or effort, which may alternate with sudden outburst of energy</li> <li>• Aggressive response to advice or counsel</li> <li>• Abnormality of vision, stumbling and slurring of speech</li> <li>• Shivering and tiredness.</li> </ul>
Treatment:	<ul style="list-style-type: none"> <li>• Stop and find the best available shelter out of the wind.</li> <li>• Insulate the casualty against further heat loss until help can be obtained. This can be done with additional clothing (even over wet garments), or a large plastic bag (a survival bag) which should be pulled up over the victim and tied at the neck. Insulate the head separately since this is an area of serious heat loss.</li> <li>• If enough people are available, sandwich the casualty between two healthy individuals to conserve heat.</li> <li>• Get help quickly.</li> <li>• It is recommended that if possible a warm sweet drink be given to the victim. Under no circumstances should alcoholic beverages be given.</li> </ul>
Further Information:	<ul style="list-style-type: none"> <li>• <a href="#">National Health Service (NHS)</a></li> <li>• <a href="#">University Occupational Health Service</a></li> <li>• <a href="#">National Travel Health Network &amp; Centre</a></li> </ul>

#### 4.15 Tropical and Hot Climates

Tropical and Hot Climates
<p>In addition to the general hazards outlined above, there are a number of hazards specific to working in hot climates, especially tropical regions, which should be identified and addressed. The risks to health will vary between countries and regions, but include infectious diseases, hazards from wild and domestic animals, and road traffic accidents, as well as risks specific to the fieldwork being undertaken.</p> <p>In many cases the principal hazards are the danger of infectious and parasitic diseases from contaminated water and from insect bites. Further hazards exist from larger animals including attack, infection (e.g. after bites from a rabid animal), and envenomation. The likelihood and consequences of such incidents range from negligible to serious depending on circumstances and the location of the fieldwork. Advice should be taken in the planning stage, any risks should be highlighted in the risk assessment, and mitigating measures documented.</p>

Often, the inaccessibility of medical services results in the potential for serious adverse health consequences in the case of injuries and accidents. It is essential when planning fieldwork in tropical or hot climates to undertake a full risk assessment. If working with collaborators in the destination, their advice should be sought. School colleagues experienced in fieldwork in tropical or hot climates should also be consulted. It is particularly important that the appropriate advice is sought from the University Occupation Health Adviser.

While not unique to tropical environments, it is often overlooked that the most serious cause of injury in tropical work, even in remote and rural areas is from road accidents, due to poor highways, badly maintained vehicles and dangerous driving. This applies also to travel on public transport. While it is generally not possible to avoid road travel, precautions can be taken. These include avoiding road travel at night and only travelling with reputable bus companies. Again, local advice should be sought.

<p>Medical considerations:</p>	<p>Staff should consult the University Occupation Health Adviser at an early stage in the planning process to ensure adequate time is available for immunisations. Appropriate immunisations are available from the Occupational Health Adviser.</p> <p>Advice on infectious diseases must be sought and detailed on the risk assessment in the planning stage. Malaria is a serious hazard in most tropical environments, and advice from the Occupational Health Adviser should be sought on prophylaxis –medicine or measures to prevent illness. If the research is likely to be in an area remote from medical facilities, advice should be sought on carrying curative malaria drugs.</p> <p>Staff and students must ensure that they have adequate medical evacuation insurance. Where possible, details of such insurance should be held by one or more collaborators or local assistants at the field study site.</p>
<p>Heatstroke And Sunstroke:</p>	<p>Heatstroke is not limited to hot climates. It occurs when the temperature of the body rises sharply. This may happen because of excessively high outside temperatures, physical exertion, extensive burns and severe sunburn. Extremely warm and humid temperatures can quickly overwhelm the body’s cooling system. If heatstroke is suspected, get professional help as soon as possible.</p> <p>Sunstroke is a type of heatstroke where the source of heat is the sun. Dehydration and prolonged exposure to the sun contribute to sunstroke but other factors such as medical conditions, medications, physical characteristics or age may also contribute. If left untreated heat exhaustion can lead to heatstroke.</p> <p>Adequate water should always be carried by the individual or group. A rehydration sachet of salt and sugar should be carried along with a means of drinking. Purification tablets should be carried along with a means of drinking, should it become necessary to drink locally found waters.</p>
<p>Symptoms include:</p>	<ul style="list-style-type: none"> <li>• very hot skin that feels ‘flushed’</li> <li>• heavy sweating</li> <li>• dizziness</li> </ul>

	<ul style="list-style-type: none"><li>• extreme tiredness (fatigue)</li><li>• feeling sick (nausea)</li><li>• being sick (vomiting)</li><li>• a rapid heartbeat</li><li>• mental confusion</li><li>• urinating less often and much darker urine than usual</li></ul>
Treatment:	<ul style="list-style-type: none"><li>• Seek medical help.</li><li>• Move the victim somewhere cool and give them fluids to drink (preferably water). You could also cool their skin with water by placing a damp flannel or sheet on them or spraying them gently.</li><li>• It's better to wait for medical supervision before immersing someone fully in water because it could increase their blood pressure significantly (hypertensive response), which could be dangerous for those with cardiovascular disease or those at risk of stroke.</li></ul>
Further Information:	<ul style="list-style-type: none"><li>• <a href="#"><u>National Health Service (NHS)</u></a></li><li>• <a href="#"><u>University Occupational Health Service</u></a></li><li>• <a href="#"><u>National Travel Health Network &amp; Centre</u></a></li></ul>

## APPENDICES – Checklists, Forms and Other Useful Information

### A1. Checklists

General:	<ul style="list-style-type: none"> <li>• Appointment of Fieldwork Leader</li> <li>• Travel arrangements and transport in the field area</li> <li>• Current Foreign Office guidance for overseas locations to be visited</li> <li>• Reconnaissance visits</li> <li>• Permission to access site and work on site</li> <li>• Provision for disabled fieldworkers (if necessary)</li> <li>• Accommodation and catering</li> <li>• Insurance</li> </ul>
People:	<ul style="list-style-type: none"> <li>• Staffing levels, size of group(s) and staff/student ratios</li> <li>• Appointment of Deputy Leader</li> <li>• Leaders of sub-groups</li> <li>• Unambiguous command structure</li> <li>• Staff with specific responsibilities</li> <li>• Need for staff with technical skills</li> <li>• Language skills/interpreters</li> <li>• Qualified first-aiders</li> <li>• Qualified drivers</li> </ul>
Training:	<ul style="list-style-type: none"> <li>• Navigation</li> <li>• First-Aid</li> <li>• Languages</li> <li>• Interpersonal skills</li> <li>• Hygiene/health education</li> <li>• Specific skills (chain saw, use of ropes etc)</li> <li>• Conduct on boats</li> <li>• Use of machinery and vehicles</li> </ul>
Health:	<ul style="list-style-type: none"> <li>• Vaccinations</li> <li>• Other health precautions (e.g. malaria)</li> <li>• First-Aid supplies and equipment</li> <li>• Local medical assistance</li> <li>• Medical conditions of participants which require special provision</li> <li>• Dental health (esp. for working at sea)</li> </ul>
Physical Hazards:	<ul style="list-style-type: none"> <li>• Expected weather conditions</li> <li>• Extreme weather conditions</li> <li>• Upland areas, mountains, cliffs</li> <li>• Glaciers, crevasses, ice falls etc</li> <li>• Rivers, lakes</li> <li>• Bogs, mires, swamps</li> <li>• Quarries, cuttings, cliffs</li> <li>• Caves, Mines</li> <li>• Excavations</li> <li>• Woods, forests</li> <li>• Estuaries, mudflats, saltmarshes</li> <li>• Sea and seashore</li> </ul>

	<ul style="list-style-type: none"> <li>• Roads, motorways</li> <li>• Railways</li> </ul>
Biological hazards:	<ul style="list-style-type: none"> <li>• Poisonous plants</li> <li>• Infectious micro-organisms (Tetanus, Leptospirosis, Lyme Disease, etc)</li> <li>• Venomous, lively or aggressive animals</li> </ul>
Chemical hazards:	<ul style="list-style-type: none"> <li>• Agricultural chemicals and pesticides</li> <li>• Chemicals to be used during fieldwork</li> </ul>
Man-made hazards:	<ul style="list-style-type: none"> <li>• Machinery and vehicles</li> <li>• Power lines and pipelines</li> <li>• Electrical equipment</li> <li>• Insecure buildings</li> <li>• Slurry and silage pits</li> <li>• Attacks on the person or on property</li> <li>• Military activity</li> </ul>
Environmental disturbance:	<ul style="list-style-type: none"> <li>• Pollution arising from fieldwork activities</li> <li>• Disturbance of eco-systems</li> <li>• Waste minimisation and disposal of waste</li> </ul>
Local base:	<ul style="list-style-type: none"> <li>• Arrangements to notify daily itinerary</li> <li>• Arrangements to initiate a search if overdue on return</li> <li>• Medical assistance</li> <li>• Arrangements to obtain local weather forecast</li> </ul>
Communications:	<ul style="list-style-type: none"> <li>• Routine communication</li> <li>• Emergency communication</li> </ul>
Emergency planning:	<ul style="list-style-type: none"> <li>• Foreseeable emergency situations</li> <li>• Equipment for use in an emergency</li> <li>• Means to summon assistance</li> <li>• Evacuation of casualties</li> <li>• Interface with the emergency services</li> <li>• Contact with the School in Aberdeen</li> <li>• Contact with the media</li> </ul>
Essential equipment:	<ul style="list-style-type: none"> <li>• Rucksack</li> <li>• Warm clothing</li> <li>• Warm head gear</li> <li>• Waterproof clothing</li> <li>• Boots or other suitable footwear</li> <li>• Protection from the sun</li> <li>• Watch</li> <li>• Map/compass</li> <li>• Emergency food</li> <li>• Survival bag</li> <li>• Torch and spare bulb/batteries</li> <li>• Whistle</li> <li>• Matches</li> <li>• First-Aid kit.</li> </ul>

	<ul style="list-style-type: none"> <li>• Hard hat.</li> <li>• Mobile Phone.</li> </ul>
Lone working:	<ul style="list-style-type: none"> <li>• Is lone working avoidable?</li> <li>• Is it reasonable for lone working to be undertaken?</li> <li>• Means to notify itinerary and initiate search if overdue.</li> <li>• Hostility of location.</li> <li>• Experience and capabilities of worker.</li> <li>• Means of communication with worker.</li> <li>• Emergency arrangements.</li> <li>• Restrictions on activities.</li> <li>• Other lone workers in adjacent areas.</li> </ul>
Prior to departure from Aberdeen:	<ul style="list-style-type: none"> <li>• Disclose of information from course participants.</li> <li>• Add the dates and documentation to the School's dedicated Outlook calendar resource <a href="mailto:eng-safety@abdn.ac.uk">eng-safety@abdn.ac.uk</a> .</li> </ul>
Before going into the field:	<ul style="list-style-type: none"> <li>• Weather forecast.</li> <li>• Itinerary and return times notified to local base.</li> <li>• Permission to access field locations.</li> <li>• Group briefed on locations to be visited.</li> <li>• Individuals in group correctly equipped.</li> </ul>
Road transport:	<ul style="list-style-type: none"> <li>• Appropriately licensed drivers.</li> <li>• Insurance cover including insurance for private vehicles.</li> <li>• Driver in charge of each vehicle.</li> <li>• Vehicle maintained.</li> <li>• Vehicle correctly loaded.</li> <li>• Sufficient spare parts.</li> <li>• Daily checks (Windscreen, wipers, lights, mirrors, number plates, speedometer, warning lights, brake fluid, exhaust, fan belt, seat belts, hoses, jack/wheel brace, fire extinguisher, first-aid kit, brakes, handbrake, oil leaks, fuel).</li> </ul>

## A2. Methods of Raising the Alarm

Some methods of raising the alarm are:

- Adequate in/out reporting system.
- Mobile and conventional telephones.
- Flares – for marine use and occasionally mountain use (mini-flares).
- Whistle, torch and flags: The international distress signal is six whistle blasts, torch flashes, shouts or waves of a brightly coloured cloth with a gap of one minute between each repetition. Acknowledgement of this signal is three whistle blasts.
- Shouting
- Waving

## A3. What to do in the event of a Serious Accident or Incident

**Don't panic.** Assess the situation without endangering your own life or that of others. Don't move the victim. Identify the conditions which might cause immediate death (breathing stopped, heart stopped) or danger (severe internal bleeding, head, spinal or chest injury, severe shock, unconsciousness). If first aid qualified, give immediate, appropriate and adequate treatment.

Never leave the victim unattended. Withdraw remaining members of the group to a safe location. If first aid is not immediately available call for help by any means at your disposal (including the use of the international distress signal).

**Send for help** (send 2 people if a party of 3 or more). Have the following information when going for help (write it down):

- location of accident (grid reference if possible)
- whether in open or on cliffs, gullies, etc..
- time of accident
- number injured
- name(s) and sex of victim(s)
- whether victims are conscious or unconscious
- whether victim has specific problems (e.g. diabetes)
- first-aid action taken

**Take steps** to warn other persons of any dangers that may remain, until help arrives.

**Where accidents** involve spillage of blood, use disposable gloves when treating wounds.

**Do not discuss** the matter except with authorised personnel (e.g. emergency services). Do not give opinions, even if competent to do so, and limit any discussion to a factual report. Ensure that no public statement is made by you or any member of the party. All statements must be agreed to and released by the University.

**Serious accidents** should be reported to the School by the quickest possible means. Notify the Local safety Coordinator or the Central Safety Team on (01224) 273894/3896 ([healthandsafety@abdn.ac.uk](mailto:healthandsafety@abdn.ac.uk)). If a message has to be left, ensure that it includes a telephone at which you can be reached.

**As soon as practicable** after the incident, submit an [online accident report](#) to the Central Safety Team.

#### **A4. Standard Forms**

Forms can be found on the Schools Safety Pages at [www.abdn.ac.uk/engineering/about/risk-assessments-671.php](http://www.abdn.ac.uk/engineering/about/risk-assessments-671.php)

#### **A5. Fieldwork Safety Outlook Resource**

An example of a submission to Engineering's Outlook safety resource. The responsible person is required to set up an appointment on Outlook and invite [eng-safety@abdn.ac.uk](mailto:eng-safety@abdn.ac.uk). It is recommended also to invite participants and, for lone workers, a buddy.

## A6. Local Information

Address	Fraser Noble Building Kings College Aberdeen, AB24 3UE	
First Aid Room	Room 068	
Automatic External Defibrillator (AED)	Fraser Noble Main Entrance.	
Local Safety Coordinator (LSC)	Mr Grant Cordiner <a href="mailto:g.cordiner@abdn.ac.uk">g.cordiner@abdn.ac.uk</a>	2788
School Fieldwork Safety Outlook Resource	<a href="mailto:eng-safety@abdn.ac.uk">eng-safety@abdn.ac.uk</a>	

## A7. Useful Contacts

School Laser Protection Supervisors	Dr Thanga Thevar (Lead LPS and Laser labs: FN060-066)	3776
	Mr Grant Cordiner (Meston 086, Fluid Mechanics Laboratory)	2788
	Mr John Polanski, National Decommissioning Centre	4415
School Face-Fit Testers	Mr Grant Cordiner <a href="mailto:g.cordiner@abdn.ac.uk">g.cordiner@abdn.ac.uk</a>	2788
	TBC	
Local Workstation Assessors	Mrs Joyce Clark <a href="mailto:joyce.clark@abdn.ac.uk">joyce.clark@abdn.ac.uk</a>	4207



	Mr Grant Cordiner <a href="mailto:g.cordiner@abdn.ac.uk">g.cordiner@abdn.ac.uk</a>	2788
University Radiation Protection Adviser	Dr Stephen McCallum (NHS Grampian) <a href="mailto:s.mccallum@nhs.net">s.mccallum@nhs.net</a>	01224 553109
University Laser Protection Adviser	Nadia Latif, Clinical Scientist, Radiation Protection Services. <a href="mailto:nadia.latif@nhs.scot">nadia.latif@nhs.scot</a>	
Radiation Protection Services	Urgent Enquiries	01224 559049
	General Enquiries: <a href="mailto:gram.radiationproection@nhs.scot">gram.radiationproection@nhs.scot</a>	
Head of Health, Safety and Wellbeing	Mr Garry Fisher <a href="mailto:garry.fisher@abdn.ac.uk">garry.fisher@abdn.ac.uk</a>	2783
Senior Health and Safety Adviser	Dr Allan Petrie <a href="mailto:allan.petrie@abdn.ac.uk">allan.petrie@abdn.ac.uk</a>	3896
Health and Safety Adviser	Mrs Vivienne Amakiri <a href="mailto:vivienne.amakiri@abdn.ac.uk">vivienne.amakiri@abdn.ac.uk</a>	2514
Central Health & Safety	<a href="mailto:healthandsafety@abdn.ac.uk">healthandsafety@abdn.ac.uk</a>	
University Fire Safety Advisor	Mr William Tocher <a href="mailto:william.tocher@abdn.ac.uk">william.tocher@abdn.ac.uk</a>	2515
Clerk to the Old Aberdeen Biological Safety Committee	Dr Jeremy Sternberg, Snr lecturer in School of Biological Sciences <a href="mailto:jsternberg@abdn.ac.uk">jsternberg@abdn.ac.uk</a>	
School rep. to the Old Aberdeen Biological Safety Committee	Prof Davide Dionisi <a href="mailto:davidedionisi@abdn.ac.uk">davidedionisi@abdn.ac.uk</a>	2814
Security	Non-emergency: Emergency:	3327 3939

## A8. School of Engineering Health and Safety Committee

This list is maintained on the Schools website. [School Health & Safety Committee | School of Engineering | The University of Aberdeen \(abdn.ac.uk\)](#)

## A9. Acknowledgements

This document was prepared from the [Guidance on Health and Safety In Fieldwork](#) produced by produced by the [Universities and Colleges Employers Association](#) (UCEA). The School also acknowledges the wealth of information from internal and external organisations dedicated to health, safety and wellbeing in in pursuit of learning.

## A10. Revision Record

Issue	Date	Reason for Review
1	14/4/2021	Major Revision.
1.1	17/11/2021	Included note about wearing wellingtons/minor reformat
1.2	02/09/2022	Updated and refreshed for 2022-23. Added alt text for image(s)