

Appendix 5.5 – Risks associated with particular sites

This appendix covers a range of Earth science sites that could potentially be visited. The ideas listed are a selection of risks that could be encountered and steps that can be taken in such environments. There could be other risks associated with each of these sites. **These lists should not be used as a definitive guide.** They are intended to provoke thought into risk assessment for different types of site. The only truly effective risk assessment that can be done takes place on site with an experienced individual undertaking the assessment. For those trips to mountains, rough country, mines and caves, it is essential that there are field leaders present who are experienced in this type of environment.

1 Coastal exposures

NB: The actions in this table do not necessarily appear parallel to the corresponding risk.

Risks	Actions
<ul style="list-style-type: none">◆ Tides◆ Access to and from shore◆ Unpredictable weather◆ Sea walls (not fenced)◆ Exposure to cold◆ Slippery rocks◆ Quicksands and soft ground◆ Mudflows and landslipping◆ Falling rocks and other debris from cliffs◆ Deep pools, and fissures in the ground◆ Marine life, living or otherwise, causing painful stings◆ Heat exhaustion and exposure to the sun◆ Strong on-shore winds◆ Sources of pollution such as sewage	<ul style="list-style-type: none">◆ Check tide-tables◆ Check weather forecast◆ Have the telephone number of the coastguard, doctor, hospital◆ Be aware of tidal systems, e.g. Spring and neap tides, weather systems

2 Mountains and rough country

NB: The actions in this table do not necessarily appear parallel to the corresponding risk.

Risks	Actions
<ul style="list-style-type: none">◆ Deteriorating weather such as fog or snow (white-out)◆ Steep edges◆ Boggy ground◆ River/stream crossings, stiles and fences◆ Trackway condition◆ Falling rocks◆ Scree avalanche◆ Hypo/hyper-thermia◆ Getting lost◆ Fissures in the ground◆ Weak/dangerous cliffs	<ul style="list-style-type: none">◆ Members should let a responsible person know where they intend to go and what time they plan to be back. When they arrive back, they should let them know they have returned safely◆ Check the weather forecast◆ Take the telephone number of Mountain Rescue◆ Carry a whistle and map and compass and ensure some one in the group knows how to use it◆ Mobile phones are useful if they are available◆ GPS may be useful if available but they are no substitute for a good map◆ Take warm and brightly coloured waterproof clothing, together with a towel, a change of socks and a space blanket◆ A bar of chocolate can boost energy if caught out◆ Take a full kit of mountaineering gear if necessary (ropes, walking stick, crampons)◆ Keep together and the leader may have to slow the pace accordingly◆ Have an experienced member of the group bringing up the rear, who knows exactly where the group is heading

3 Mines and caves



Remember – *Entering mines and caves alone is foolhardy and should never be attempted*

NB: The actions in this table do not necessarily appear parallel to the corresponding risk.

Risks	Actions
<ul style="list-style-type: none"> ◆ Roof fall ◆ Excavations ◆ Wall-bursts ◆ Hidden shafts ◆ Hidden walls ◆ Dangerous gases – carbon dioxide, carbon monoxide ◆ Getting lost ◆ Getting trapped ◆ Spoil heap slumping ◆ Old buildings, machinery and equipment ◆ Toxic minerals ◆ Changing weather conditions – heavy rainfall can cause rapid flooding ◆ Contaminated water ◆ Open shafts ◆ Derelict machinery, plant and buildings 	<ul style="list-style-type: none"> ◆ Members should never enter a mine or cave unless adequate training has taken place, they are properly equipped and have trained and experienced leaders with them ◆ Obtain the Code of Practice produced by the National Association of Mining History Organisations (contact The Peak District Mining Museum on 01629 583 384) in conjunction with the National Caving Association ◆ There are many disused mines from which the waste material has been dumped on tips or hillsides. Most of these tips are old and quite stable, but prolonged rainfall can sometimes affect slope stability. Be very careful when digging holes in such places as this may affect slope stability and you might break into an old shaft or pit. Keep well clear of old buildings, plant and machinery. ◆ Many minerals are toxic, particularly those associated with metaliferous mining where, for instance, arsenic from the old flues of lead mines was often a by-product. If collecting from old mineral tips always ensure that your hands are thoroughly washed before eating. Members should not eat, drink or smoke in the field if they have been in contact with potentially toxic materials. Do not give any suspect mineral specimens to children. ◆ Ensure there is an individual who is responsible for numbers of people and will be aware of where people are at all times ◆ Have suitable equipment – lights on helmets, plans, gloves, breathing apparatus where appropriate ◆ Notify Mine Rescue of the visit ◆ Check the weather forecast

4 Active quarries and pits

The manager or site owner will point out most hazards. Follow the advice/instructions given by the site manager.

NB: The actions in this table do not necessarily appear parallel to the corresponding risk.

Risks	Actions
<ul style="list-style-type: none"> ◆ Conveyors ◆ Excavations or rakes ◆ Vertical faces ◆ Drainage sumps with water or mud of unknown depth ◆ Polluted water ◆ Hypo/hypa-thermia ◆ Unstable stock piles ◆ Blasting ◆ Moving machinery and equipment ◆ Slippery ground (particularly after rain) 	<ul style="list-style-type: none"> ◆ Do not approach the vertical face of any working or go beyond the boulder or guard rail protection ◆ Keep away from all working machinery and the active working face ◆ Find out where and when explosives are being used ◆ Do not clamber up boulder or scree slopes ◆ Do not approach any sludge pit, lagoon or sump hole – their depth is often deceptive ◆ Do not walk on areas covered with ice, it may be concealing a pit or lagoon ◆ Do not go into water or mud of unknown depth. Never be tempted to swim in a flooded pit however warm the weather may be. Sometimes, the water is very deep and extremely cold, and entering it can cause seizure or cramp. In addition, many flooded pits have an additional hazard produced by a bloom of blue-green algae which can produce toxins which may cause rashes following skin contact and serious illnesses if accidentally swallowed ◆ Avoid exposure, both from heat and cold. Do not remove essential protective equipment or clothing ◆ Stand well clear of any conveyors, crushing and screening equipment. Vehicles must be given priority of movement. Cables and equipment and any other machinery must be avoided and not touched ◆ No field party should be present in a quarry when a dropball/hydraulic breaker is in use ◆ Active quarries and pits may have moved over time – be aware of old workings and shafts

5 Disused or abandoned quarries or open pits

Many of the risks associated with active quarries are also associated with disused ones (see also tables 4 and 6). Make sure a thorough risk assessment is undertaken.

NB: The actions in this table do not necessarily appear parallel to the corresponding risk.

Risks	Actions
<ul style="list-style-type: none"> ◆ May be used for other dangerous purposes such as shooting ◆ Can be overgrown and may disguise hazards. ◆ Occasionally, hazardous waste may have been illegally dumped and there will be no warning of this ◆ Hidden drainage channels ◆ Flooded pits – drowning, pollution, exposure 	<ul style="list-style-type: none"> ◆ Never attempt to enter disused pits and quarries without permission. ◆ If you have obtained permission to visit, follow the same principles for a visit to any working quarry.

6 Landfill sites

Many worked out quarries and pits are used as landfill sites and these present their own particular hazards. Again refer to 4 and 5 as many of the risks in active and disused quarries may be found in landfill sites. The manager will advise you of these and instruct you to keep well clear of all tipping areas.

NB: The actions in this table do not necessarily appear parallel to the corresponding risk.

Risks	Actions
<ul style="list-style-type: none"> ◆ Toxic waste ◆ Tipping areas ◆ Landfill leachate ◆ Landfill gases ◆ Contaminated ground 	<ul style="list-style-type: none"> ◆ Never walk across the material after it has just been tipped ◆ Landfill sites can also be potentially dangerous because of the number of vehicles and pieces of mobile plant that may be operating in the area ◆ Landfill leachate is the by-product of water entering the waste mass of a landfill site. It is often corrosive and skin contact must be avoided ◆ Wear appropriate Personal Protective Equipment – gloves, boots etc ◆ Consider other risks include Weil's disease and tetanus – see chapter 5 sub section 5.5.4.

Appendix 5.6 – Recommended contents of a first-aid kit

This is a recommended list of contents to be included in a first aid kit to be taken on Earth science fieldwork visits. It includes the full contents specified in the Health & Safety Executive Guidelines plus additional items considered necessary for geological field excursions and quarry visits.

Contents	Quantity
<i>First Aid Guidance Leaflet</i>	1
<i>Assorted adhesive dressings</i>	20
<i>Eye pads with bandage</i>	2
<i>Triangular bandages</i>	4
<i>Safety pins</i>	6
<i>Medium first aid dressings</i>	6
<i>Large first aid dressings</i>	2
<i>Moist cleaning wipes</i>	6
<i>Crepe bandage - 7.5cm</i>	2
<i>Low adherence dressings 10 x 10 cm</i>	4
<i>Instant ice packs</i>	2
<i>Ventaid personal air way</i>	1
<i>Vinyl gloves – disposable</i>	4
<i>Pair 15 cm scissors</i>	1
<i>20ml sterile eyewash</i>	4

It is advisable to have disposable surgical gloves available for first aiders to wear when treating patients to protect them from small, unknown risks associated with infectious diseases such as hepatitis and HIV.

Most of these items can be purchased from reputable high street chemists, scientific suppliers or BTCV Enterprises (see appendix 5.7).

Appendix 5.7 – Health and safety resources and equipment suppliers

Resource details	Supplier
<p><i>A full range of personal protection</i></p> <p><i>20 branches nationwide.</i></p> <p><i>Equipment including first aid kits.</i></p>	<p>Arco Limited Head Office PO Box 21 Waverley Street Hull HU1 2SJ ☎ 01482 222522 f: 01482 218536 ✉ sales@arco.co.uk</p>
<p><i>Personal protection equipment, first aid kits plus a wide range of tools suitable for site clearance and conservation work.</i></p>	<p>BTCV Enterprises Conservation Centre Balby Road Doncaster South Yorkshire DN4 ORH. ☎ 01302 859522 f: 01302 310167</p>
<p><i>General geological supplies including maps, books, hammers, hand lenses and other field equipment</i></p>	<p>Geo Supplies Ltd. 16 Station Road Chapeltown Sheffield S35 2XH. ☎ 0114 245 5746</p>
<p><i>General geological supplies including collections and sets of rocks, minerals and fossils, hammers, hand lenses and other field equipment.</i></p>	<p>Northern Geological Supplies 66 Gas Street Bolton Lancs BL1 4TG ☎ 01204 388754 f: 01204 389863</p>
<p><i>Lapidary and geological supplies and books</i></p>	<p>Manchester Minerals Georges Road, Heaton Norris Stockport Cheshire SK4 1DJ ☎ 0161 477 0435 f: 0161 480 5095</p>
<p><i>Insurance – Public Liability (only available to local groups and affiliated societies)</i></p>	<p>The Geologists Association Burlington House Piccadilly London W1V 9AG ☎ (020) 7434 9298 f: (020) 7287 0280 ✉ Geol.Assoc@btinternet.com</p>
<p><i>Insurance – Public Liability and Personal Accident, Tools and Equipment (only available to affiliated groups)</i></p>	<p>BTCV Head Office 36 St. Marys Street Wallingford Oxfordshire OX10 OEU. ☎ 01491 839766 f: 01491 839646</p>

Appendix 5.8 – A typical indemnity form

THE BEDROCK STONE COMPANY
QUARRY LANE
LUTON
BEDFORDSHIRE

FORM OF INDEMNITY

To: THE BEDROCK STONE COMPANY

Visit to: BEDROCK QUARRY

Site: QUARRY LANE, LUTON,
BEDFORDSHIRE

On: SATURDAY

Date: 22 MAY 1999

I/We hereby agree that permission to visit the above site has been given to me/us on condition that:

- 1) I/we accept full responsibility for any damage done to your property by me/us or by any member of my/our party.
- 2) You shall not be liable for any injury, loss or damage sustained by me/us during the visit, howsoever caused.
- 3) I/we shall indemnify you against again claims by third parties (including members of my/our party) in respect of injury, loss or damage sustained by them during the visit and caused by negligence of me/us or by any member of my/our party.
- 4) Provided in the case of (1), (2) and (3) that such injury, loss or damage is not due to the negligence of yourselves or of your employees.

Signed: _____

Dated: _____

Ivor Lotterock,
Wealden Geological Society
20 Hayes Way
Beckenham
Kent BR3 6RL

Appendix 5.9 – A typical visitor’s declaration

To: THE BEDROCK STONE COMPANY
 QUARRY LANE
 LUTON
 BEDFORDSHIRE

From: Name of Visitor - Ivor Lotterock
 Organisation Represented – Borsetshire RIGS Group

Date Of Visit: SATURDAY, 22 MAY 1999

In consideration of you permitting me/us to enter your site at Bedrock Quarry, Quarry Lane, Luton, Bedfordshire, I/we hereby agree that I/we will be responsible for, and will release and indemnify you and your servants, and agents from any and all liability for:-

- (a) Personal injury (fatal or otherwise).
- (b) Loss of/or damage to property.
- (c) Any other loss, damage, costs or expenses however caused or incurred which, but for the exercise of such permission, would not have arisen.

Provided that nothing in this form is intended to exclude liability which, under the terms of the Unfair Contract Terms Act 1978, as amended by the Occupiers Liability Act 1984, cannot legally be excluded.

This permission is given subject to the following conditions.

- 1) Visitors must be aged 18 years or over.
- 2) They must carry appropriate insurance cover.
- 3) They must obey any instructions given by Bedrock Stone Company staff.
- 4) They must wear adequate protective clothing.
- 5) Parties are limited to 20 persons.
- 6) There must be adequate supervision of such persons.
- 7) The Bedrock Stone Company retains the right to prohibit further visits.

Each Member of the Party to Sign

1 _____	11 _____
2 _____	12 _____
3 _____	13 _____
4 _____	14 _____
5 _____	15 _____
6 _____	16 _____
7 _____	17 _____
8 _____	18 _____
9 _____	19 _____
10 _____	20 _____

PLEASE RETURN COMPLETED FORM PROMPTLY FOR OUR RECORDS

Appendix 5.10 – Hertfordshire RIGS Group: advice on access to mineral/landfill sites

Case study: The Redbournbury Chalk Pit, St Albans, Herts

The Redbournbury Chalk Pit was opened as a chalk pit in 1943 for the production of agricultural lime and later closed in 1966. Since the end of the 1970s, the pit has been owned by SARP UK (formerly Leigh Environmental) and a large part of the quarry floor has been used as a liquid waste treatment plant. The chalk faces of the pit have remained untouched and it represents one of the best localities in Britain for stratigraphical interpretation of the Chalk Top Rock. It also contains a variety of other important geological features which, over the years, have been protected by being within the confines of the treatment plant. The site is potentially of considerable value as an educational and research site.

Planning permission for the site as a waste treatment plant was granted after a Public Inquiry in 1977. Consent was given on the condition that:

- 1 geologists would be given access to the chalk exposures
- 2 that the chalk exposures shall not be obscured or modified without the prior written consent of the local planning authority in consultation with English Nature
- 3 there shall be an area of the hard ground reserved for scientific study which underlies the floor of the main terrace. This was to be agreed by the local planning authority in consultation with English Nature.

However, despite these assurances of access to geologists there remained the problem of insurance. Unrestricted access to quarries is not possible as they are potentially dangerous places. They are all governed by and have to strictly comply with the Mines & Quarries Act 1954 and/or the Health and Safety at Work Act 1974. If a site is operational access would have to be under the supervision of the Quarry Manager.

At non operational sites, the enactment of the Occupier's Liability Act 1984 permits quarry operators/landowners to transfer liability and they would require an indemnity to be signed, which has the effect of making safety the absolute responsibility of the individual rather than the operator/landowner. The Hertfordshire RIGS Group, with the advice of the St Albans District Council Legal Department, came up with a suitably worded document which was acceptable to SARP UK (see sample indemnity form over).

David Curry
Hertfordshire RIGS Group

Sample indemnity form for access to an operational/non operational quarry/mine/pit

Request for permission to visit Redbournbury Chalk Pit to undertake research or geological field study

To: David Curry, Keeper of Natural Sciences, Museum of St.Albans, Hatfield Road, St.Albans AL1 3RR

Name:.....
Establishment name:.....
Address:.....
.....
Number in party:
Date(s) of proposed visit(s).....

In consideration of the Hertfordshire RIGS Group and SARP UK (formerly Leigh Environmental) permitting me/my party to enter the Redbournbury Pit for geological field studies/research, I, being authorised to sign on behalf of the party hereby undertake not to hold the Hertfordshire RIGS Group or SARP UK in any way responsible for death, personal injury and loss or damage to property of any person arising directly or indirectly out of and in connection with the said permission to enter the quarry and I/we hereby undertake to and agree to indemnify the Hertfordshire RIGS Group and SARP UK against all losses, charges, damages, expenses or other consequences which the Hertford RIGS Group and SARP UK shall or may sustain or be put to by reason of any of the above happenings or consequent in any way directly or indirectly upon the said permission to enter the site.

I hereby confirm that I/members of my party will be insured against all such liabilities.

Signed for and on behalf of;.....
Witness:.....
Signature:.....
Date.....

Appendix 5.18 – Sample letter from Devon

Sample letter to potential RIGS owners, provided by the Devon RIGS Group

Devon RIGS Group		Your address
		Date
Recipient's address		
Dear.....		
RE: COUNTY GEOLOGICAL SITES		
1. The results of recent survey work.		
<p>A number of Regionally Important Geological Sites (RIGS) have been identified in the South Hams area during the last few years by the Devon RIGS Group. These are some of the best places in the District to observe and study its geology, but which do not already have national recognition of being Sites of Special Scientific Interest (SSSI). Appropriate RIGS are being notified as County Geological Sites (similar to County Wildlife Sites with which you may already be familiar).</p> <p>We wish to inform you that part of your property is a valuable example of an exposure of Devon's geological assets, and as such we consider it to be a County Geological Site. The site in question is important because it contains [insert LAYMAN'S EXPLANATION OF GEOLOGICAL INTEREST ON SITE ". A map showing the boundary of the site is attached to this letter.</p> <p>In some cases, sites were visited by one of our field survey volunteers, in which case they would have sought permission to look at part of your land at that time and you may recall their visit. In other cases the sites were viewed from public right of way or no visit was made, although in all cases we have attempted to ascertain ownership and speak to the owner.</p>		
2. What does a County Geological Site Mean for you ?		
<p>We hope you can spare a few moments to allow us to explain why we have been doing this work. The enclosed leaflet "County Geological Sites explained ", describes the purpose of the County Geological Sites system. As the leaflet makes clear, the recognition of County Geological Site on your land should not give cause for concern, as the title should be of positive value to the owners of most of these sites. In particular we must emphasise;</p> <p>This is not a statutory designation and does not confer any legal restriction on the use of your land or restrict normal agricultural operations;</p> <p>It does not serve to permit or promote public access in any way, which will remain in your control;</p> <p>It is designed to make you as a landowner, and key authorities who influence land use, aware of the geological value of a site in advance of any future decisions on its use;</p> <p>It can prove very useful in attracting environmental grants and other assistance and advice on conservation management.</p>		
3. What will happen to the information ?		
<p>It is important that all those who influence and regulate landuse in Devon are aware of the important geological sites it contains, and to this end we are making the County Council, The Environment Agency and local authorities aware of the locations of the County Geological Sites, so that they can take them into account when carrying out their functions.</p>		
4. What else can Devon RIGS Group offer ?		
<p>We recognise that the successful conservation of geological sites depends on co-operation, agreement and provision of clear and accurate information. With this in mind, we are developing our work on County Geological Sites in order to try and help you as a landowner.</p> <p>We can provide you with simple advice, on request, about why your land is special for geology, what type of land management it needs to retain or enhance its geological conservation value. The small size and resources of our voluntary group prevents us from providing a full service, but we are able and very keen to provide basic guidance on any aspect of this subject, should you feel advice would be useful to you.</p> <p>South Hams District Council also have funds available for management of sites (through European grant aid) which may be available to yourself.</p> <p>If you would like to discuss this subject in any way, please do not hesitate to contact us or the Council.</p> <p>Yours sincerely,</p> <p>Name, Title</p> <p>PS. If we have made a mistake and sent you details of a site which does not, in fact, belong to you, please accept our apologies. If this is the case we would be grateful if you could return this letter to let us know our error.</p>		

Appendix 5.19 – Sample letter from Peterborough

Extracts from a letter produced by Peterborough RIGS Group for landowners of potential RIGS.

Designation of a RIGS does not necessarily mean...

- ◆ ...restriction of development or extraction rights
- ◆ ...the imposition of costly conditions to developers, extractors and owners
- ◆ ...the delay of commercial operations

The aims and action plans of RIGS groups do rely on consultation, cooperation and partnership to achieve...

- ◆ ...the invitation to preserve important discoveries
- ◆ ...the opportunity for scientific and educational visits
- ◆ ...the possible preservation of geological features, where practical

Appendix 5.20 – Planning a geological excursion or field trip

Getting permission

Visits to most Earth science sites require the permission of the landowner and/or user. The organiser or leader of the visiting group will need to write asking for permission to visit well in advance. The purpose of the visit should be explained along with the day and time the group would like to come and the numbers likely to be attending. More details on getting permission can be found in chapter 5, section 5.7.

Preparation for visiting a site

If possible, and with the agreement of the owner/user of the site, the leader should make a prior visit to ascertain where cars should be parked, if toilet facilities will be available and exactly what specific safety precautions will need to be observed during the visit. This will provide an opportunity to meet the manager, or deputy, who will be responsible for your visit on the day in question. Prior knowledge of the site will considerably assist in organising the visit and should ensure that members of the visiting group at least assemble in the right place at the proper time.

Ideally, if the manager or deputy can spare the time, a brief inspection of the areas to be visited should be made and the route to and from any geological exposures or collecting areas established.

If, in addition to examining the geological exposures, the party wishes to collect specimens of minerals, rocks or fossils, permission to do so must be obtained beforehand. Most quarry operators will have no objection to this, particularly if the material is destined to go to the crusher or is already on the waste tips. Only collect specimens for personal needs and in no circumstances should quantities of material be removed from the site for commercial gain. Removal of material without permission is theft, and the consequences of doing so not only leaves the individual open to prosecution, but brings discredit on mineral and fossil collectors as a whole and can result in future access being denied.

If a field trip for young people is being planned useful advice can be obtained from Rockwatch, the club for young geologists. Rockwatch welcomes offers from experienced individuals to lead organised trips for its members and has an information pack available for this purpose.

Contact Rockwatch on ☎ (01636) 670000 or ✉ rockwatch@rsnc.cix.co.uk



*Wildlife Watch produces a publication called *The Essential Guide to being a Wildlife Watch Leader*. It offers excellent health and safety advice for people who may be involved in running an event for young people. It is free to registered Watch leaders and £10 to outside agencies*

Contact The Wildlife Trusts' UK national office for more information on ☎ (01636) 677711

Responsibilities when organising a fieldtrip

The leader of a field party carries many responsibilities. They will be held responsible for any problems that may arise. In appointing a leader, the organisers of the trip must consider the individual's leadership experience and competency. Many leaders may be extremely knowledgeable about a particular geological exposure or mining area but are unable to communicate this information in an understandable form to the other members of the group. Others may possess good communication skills but lack the ability to control a group on site.

- ◆ The ideal size for a geological party is between 12 and 15. However, it depends on the particular activity. It is not advisable to run meetings with large numbers and the leader should always know

the size of the group and individual names beforehand. If numbers are large, the organisers should appoint more leaders. It is useful to have two leaders, one who may be the expert and another who will be responsible for organising the group.

- ◆ Before setting out, the leader should inform the members of the group how long they will be in the field, whether or not to take their packed lunch and drinks with them, what other equipment they will require, how much walking will be involved and how strenuous this will be. Advice on waterproof clothing and appropriate footwear should also be given.
- ◆ It would be useful to provide a handout that gives members of the group background to the verbal briefing that would be given on the site. The briefing should be no more than a four or five minute talk and the handout should provide any other information.
- ◆ It may prove useful to display some of the specimens of minerals or fossils previously found on the site to help members to know what to look for. Explain that if they find a rare fossil or specimen, it should be reported and, wherever possible, it should be deposited, with the site owner's consent, with a local or national museum.
- ◆ Keep a constant watch on the group. It is good practice to make regular number counts, particularly when leaving one part of a site for another. If the visit is to a quarry or pit, try to keep in a group.
- ◆ Agree with the site owner or operator the time the group will be leaving the quarry and make sure everyone is back in the car park with 15 minutes to spare.
- ◆ Ensure all group members know what to do in an emergency. Whistles are an effective means of getting across a warning message. Have a designated meeting place if there is an emergency. Some site operators will require people to sign out before they leave. Ensure participants advise the leader if they need to leave the site.
- ◆ Ensure it is known where the nearest hospital or doctor is and how to contact them.
- ◆ Sometimes the site owner or operator will give permission for the cars to be taken down to the quarry floor. If permission is given, ensure cars are only parked in the specified area and not driven about on the quarry floor. Members should check with their insurers to ascertain if their car insurance will cover damage to their vehicle while in a quarry.

Children

While most quarry operators welcome properly planned and organised visits with schoolchildren and often run open days when such events take place, children are not normally allowed into quarries at other times. However, if the manager of the quarry is prepared to allow educational visits or events for younger geologists the group should be properly supervised by responsible adults.

The leader must ensure the young person is accompanied at all times during the visit by a parent, or guardian, who must satisfy the leader they will exercise the necessary control. As a guide, a ratio of one adult to six children is sensible, or even lower numbers if the site is particularly dangerous. See chapter 8 for further safety information relating to children and geological fieldwork.

ESTA also may be able to help with information of safety for fieldwork visits (see Who's who, chapter 2). The Department for Education and Employment may also be able to provide information on health and safety requirements for minors. Contact ☎ (020) 7925 5000.

The responsibilities of participants in a field excursion

It is really up to the leader to define what level of responsibility they require from a group. It should be remembered, however, that it is often the leader who is blamed or sued if something goes wrong. It is also up to the leader to decide if someone is prevented from taking part because, for example, they don't have appropriate footwear. Any conditions or advice should be stressed well before the visit.

A member of any Earth science field trip, excursion or conservation work group would be advised to check that the group is covered for public liability and personal accident insurance, if the member does not have it themselves. If there anything is unclear clarification should be requested.



There is some onus on the visitor or group member to be responsible for their actions under the Health and Safety at Work Act (see chapter 5, sub section 5.2.1)

Indemnity for leaders

It is recommended that the appropriate Field Leaders Indemnity Form is completed for each visit and signed by all members of the visiting group. This provides an opportunity to remind the members of the party, immediately before they enter the site, that they must all behave in a responsible manner and ensure that none of their actions endangers either themselves or any other person.

Sample indemnity form 1

FIELD LEADER'S INDEMNITY FOR GROUPS HOLDING BOTH PUBLIC LIABILITY AND PERSONAL ACCIDENT INSURANCE

We the undersigned, understand and agree that we undertake this visit to

_____ on _____ with _____ acting as field leader/s entirely at our own risk and that no liability shall devolve on the field leader/s, nor shall any claim for liability be considered by the leader/s.

We understand that in visiting the above location/s some risk may be involved and that we are there entirely on our own volition. Insurance is carried by the _____ with _____ in respect of Public Liability and Personal Accident and details of the cover are available for inspection.

We acknowledge that the leader/s position is purely voluntary and that they have been nominated and accepted by us.

It is understood that the leader/s will take all measures reasonably possible to prevent accidents and to ensure the safety of all members of the party. Similarly, we agree to behave in a responsible manner and ensure that none of our actions endanger either ourselves or others. Any instructions given by the leader/s or representatives of the site management, during the visit will be immediately complied with.

We will inform the leader if we are under 18 years of age, or if we have any fitness or health problem, and will abide by the leader/s decision whether or not to include us in the party.

Sample indemnity form 2

FIELD LEADERS INDEMNITY FOR GROUPS HOLDING PUBLIC LIABILITY INSURANCE ONLY

We, the undersigned, understand and agree that we undertake this visit to

_____ on _____ with _____ acting as field leader/s entirely at our own risk and that no liability shall devolve on the field leader/s, nor shall any claim for liability be considered by the leader/s.

We understand that in visiting the above location/s some risk may be involved and that we are there entirely on our own volition. Insurance is carried by the _____ with _____ in respect of Public Liability only and details of the cover are available for inspection. It is recommended that members should take out their own Personal Accident Insurance to cover such visits.

We acknowledge that the leader/s position is purely voluntary and that they have been nominated and accepted by us. It is understood that the leader/s will take all measures reasonably possible to prevent accidents and to ensure the safety of all members of the party. Similarly, we agree to behave in a responsible manner and ensure that none of our actions endanger either ourselves or others. Any instructions given by the leader/s, or representatives of the site management, during the visit will be immediately complied with.

We will inform the leader if we are under 18 years of age, or if we have any fitness or health problem, and will abide by the leader/s decision whether or not to include us in the party.



***Please Note:** The completion of the Field Leaders Indemnity Form does not absolve the leader from their primary responsibility of ensuring, to the best of their ability, that the members of the party are not put at risk and do not sustain personal injury or loss (see sub section 5.7.2)*

Individuals under 18

It should be remembered that, in law, a person must be 18 years of age before their signature on such an indemnity form is valid. Individuals under the age of 18 must, by law, be accompanied by a parent or guardian who takes responsibility for their actions. Contact the Department for Education and Employment on ☎ 020 7925 5000.

Members with health problems

It is important that, should any member of the group disclose a fitness or health problem to the leader, this information is kept confidential. It will be up to the leader to decide whether or not to include the individual in the party and, if they do so, it may be necessary to revise the programme to take that member's health problem into account.

Austin Lockwood

South London RIGS Group, The Russell Society and Ravensbourne Geological Society