



**Cumbria**  
Wildlife Trust

## Code of Practice No.13 Safety in Fieldwork

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This Code of Practice covers visiting sites for surveying purposes by individuals or small groups of surveyors, and should be read in conjunction with the following CoPs:

CP12 Practical Conservation

CP15 Working Alone in Safety

All individuals undertaking fieldwork for the Trust must take responsibility for carrying out the required safety procedures.

The responsibility for safety is defined in the Trust's Health & Safety Policy. Workers carrying out fieldwork must first undertake a risk assessment using the methods described in CP01 Risk Assessment. They must be trained in the basic techniques and practices appropriate to the work and appreciate the potential hazards and dangers that might arise. All employees and volunteers engaged by the Trust must take responsibility for carrying out safety procedures.

A group engaging in fieldwork should adhere to instructions from a leader who should be the person with responsibility for the survey and/or field work.

### 1. PREPARATION FOR FIELDWORK

#### a) Risk assessments

Before undertaking fieldwork, a worker should first undertake a Risk Assessment in accordance with CP01 Risk Assessment. The risk assessment can cover a period of survey or a number of sites, for instance a Water Vole survey of a particular district. However, a local assessment on the day of the survey must be undertaken to take account of changeable factors such as the weather and water levels, plus site-specific details such as access, animals in fields etc. Surveyors must be trained in the basic techniques and practices appropriate to the work and appreciate the potential hazards and dangers that might arise.

The risk assessment will consider the task, the site location and environment, the weather and other special circumstances and will describe how the task can be done safely. It will also specify what Personal Protective Equipment is necessary and will highlight other regulations, hazards and risks that are relevant.

The very nature of fieldwork means that it is often likely to be carried out by a lone worker, and the risk assessment should cover the special precautions required to ensure this is undertaken as safely as possible. When working alone, appropriate precautions must be taken in accordance with CP15 Working Alone in Safety. Lone working may significantly increase the level of risk experienced by staff and volunteers.

It is very important to get permissions for the survey work from landowners even if the land is public access land or crossed by public rights of way. The landowner should be asked if there are any particular hazards on the site. The Occupiers' Liability Act 1957 sets out the duty of care landowners have for people they invite or permit to use their land, whether expressly or by implication. Landowners must take reasonable care that staff/volunteers will be reasonably safe doing whatever it is they have invited or permitted the Trust to do on their land.

## **b) Reporting procedures**

No lone worker should go into the field without implementing the Trust 'Buddy System', details of which are included in the Staff Handbook and CP15 Working Alone in Safety.

As an absolute minimum for all fieldwork, staff and volunteers should record their planned whereabouts before leaving, and detail their planned routes and estimated return time with their 'buddy' or designated person. The designated 'buddy' must fully understand the lone working system and be equipped with all the information they need to implement the lone working guidelines. A mobile telephone should be taken on site and numbers left with the designated person. When working alone in the fells, or working in remote locations where mobile phone signals are poor, the Spot GPS should be taken and your buddy informed. This person is then responsible for starting emergency procedures if the lone worker does not report in or return by the planned time. If there is any doubt, please consult the Trust's Health and Safety Officer or the relevant line manager.

It is very important that the buddy system is adhered to, to ensure the personal safety of people working for the Trust, and to prevent false alarms.

Your 'buddy' should be provided with the following details:

- The date of your lone working
- The start time and end time of when you are 'lone working', including the time of your final call to say you are safe and off site
- Whether you will make a lunch time call
- Your mobile phone details and the network coverage for the site if known
- If you are using the Spot GPS
- Details of the place you are visiting, who you are meeting, where you will park your car and, if you are visiting a large site, details of where you intend to go and when
- Vehicle make/model/colour and registration

## **c) Clothing and equipment**

Staff and volunteers must ensure in advance that they have the appropriate clothing, footwear and equipment for the type of weather and terrain likely to be encountered. If unusual or severe weather conditions are forecast this should be taken into account in the risk assessment process. A mobile phone with adequate battery charge should be carried (see above). The possibility of being out of range of mobile reception should also be taken into consideration in the risk assessment process.

Staff and volunteers working in the field should carry a First Aid Kit and be trained in the appropriate use of its contents. Appropriate food and drink is advised as is extra food for emergencies. They should also carry a hat, watch (preferably waterproof), sun block cream and insect repellent and must carry a torch and spare batteries if there is any possibility that the trip is likely to extend into the hours of darkness.

Working in upland, inter-tidal or remote sites requires specialist clothing and equipment. See section 3d).

A map and compass should be carried if the fieldwork is at a remote location. Field workers must be able to use this equipment correctly, and be able to navigate in poor weather conditions. A GPS unit may be useful on these occasions, however do not rely on these alone. Ensure that they are fully charged before leaving home or Trust premises, or take spare batteries (that are fully charged before leaving home).

In general the following points should also be considered:

- Clothing and footwear should be suitable for the work, time of year and terrain liable to be encountered
- Appropriate clothing, and equipment such as survival bags should be carried if the field work is to be undertaken in areas where weather conditions could be hazardous i.e. high ground, moorland and open water
- If an all-day fieldwork session is planned, sufficient food and drink should be carried. Emergency rations should be taken if necessary
- A whistle should be carried
- A mobile phone should always be carried. Ensure that the phone is fully charged before you set off and that you have sufficient credit if it is a 'Pay as you Go' phone. If possible, the extent of network coverage should be ascertained
- If the Spot GPS is required make sure that this is fully charged before leaving
- A field trip should not normally extend into the hours of darkness. If there is a possibility of this occurring, then a torch with spare batteries should be carried
- Always consult a tide table before visiting coastal sites
- A life-jacket may be required for work on inter-tidal sites
- Carry a first aid kit.

All of the above should be considered in the risk assessment process before proceeding with a field visit.

## **2. SPECIFIC SITUATIONS AND ENVIRONMENTS**

### **a) Exhaustion, exposure and hypothermia**

Anyone working outdoors is at risk from hypothermia. Hypothermia occurs when the body temperature falls below 35<sup>0</sup> Centigrade (normal body temperature is 36.9<sup>0</sup> Centigrade). This leads to weakness, poor judgement, loss of will to survive and, if prolonged, can prove fatal. Hypothermia can be exacerbated through exhaustion, immersion in cold water, or by injury and the resulting immobilisation. It is important to be sensitive to the signs of hypothermia in colleagues or yourself. In extreme cold or wet conditions any two of the following points are known visible symptoms of hypothermia and need attention:

- Complaints of feeling cold, tired, or listless
- Unreasonable behaviour or irritability
- Sudden uncontrollable shivering
- Stumbling or falling
- Slurring of speech and difficulty with vision
- Physical resistance to help
- Collapse or unconsciousness.

Where possible the victim should be removed from the environment that is causing the exposure as soon as possible. Seek medical attention immediately. If the victim cannot be moved, try to maintain their body heat by wrapping in blankets or clothes and preferably a survival bag.

Staff should not undertake surveys when conditions are inclement and local weather conditions and forecasts should be carefully considered before setting off. The weather, terrain, exposure levels should be monitored continuously and if conditions are deteriorating, survey should be suspended until they improve to acceptable levels. If in any doubt, err on the side of caution. Exposed and remote sites should not be surveyed alone.

## **b) Heat exhaustion**

This includes sunstroke, but it does not need to be a sunny day to suffer heat exhaustion. It can be induced by hard physical work and dehydration, so ensure that you have plenty of drinking water available.

Anyone suffering from heat exhaustion should be moved into the shade to sip water and then urgent medical attention should be sought.

## **c) Weil's Disease (Leptospirosis) Background**

This is an acute bacterial infection transmitted by wild and domestic animals. Human infection results from direct contact with the tissues, urine or faeces of an infected animal or indirectly through contaminated water.

There are two varieties of Leptospirosis, which are the main concerns:

- 1. Cattle Associated Leptospirosis (CAL)** which can be contracted by working in close contact with cattle. Symptoms associated with this in humans are: flu-like illness, severe headache and meningitis.
- 2. Weil's Disease or Leptospiral Jaundice** Most commonly associated with rodents, particularly rats. The symptoms associated with this form are: jaundice, meningitis, conjunctivitis and renal failure. The disease, which is notifiable, requires hospital treatment, and one in nineteen people die following infection from kidney or liver failure. Statistically however, the disease is rare.

### **Prevention**

Wear boots and gloves and, as necessary, waders and waterproof gloves when in contact with stagnant water or contaminated soil. Alert work parties and volunteers to potential dangers (also necessary for insurance purposes). Cover all cuts and abrasions of the skin with a good quality watertight dressing and do not touch with wet hands or get water in the eyes, nose or mouth. Do not bite your nails. Observe high standards of personal hygiene at all times. After working with dirty water, or contact with cattle or rodents or anything contaminated by them, wash hands and forearms preferably with an anti-bacterial agent and particularly before eating, drinking or smoking. Equipment used should also be rinsed and dried as soon as possible.

### **Symptoms**

These start 3-19 days after exposure to contaminated water. Similar to flu, they include a temperature, headaches, fever and muscle pains. Other symptoms may include conjunctivitis and/or jaundice.

### **Diagnosis and Treatment**

If you believe you are developing Weil's disease you should contact your doctor and ask for an 'Elisa' blood test. Early diagnosis and treatment are vital for recovery.

#### **d) Lyme Disease**

Lyme disease is an infection caused by a bacterium and is transmitted by the bite of an infected tick. Not all ticks are infected and the risk of infection is further reduced if ticks are removed within 24 hours. This tick is found on vegetation and animals in grassland, marshland and woodland habitats. Ticks are most active and feeding between April and October, though can be encountered at any time of year.

##### **Prevention**

Wear appropriate clothing to cover the legs e.g. high boots, Wellington boots, gaiters or long trousers tucked into socks. Light coloured clothing can also be useful as ticks can more easily be seen. Arm coverings should include a cuff to help exclude ticks and insect repellents will help. Ticks should be removed immediately - wash hands first with soap or a disposable cleansing wipe. After a walk or activity rub your clothes down and inspect your skin for ticks when bathing or showering. If you should find any ticks, remove them promptly. Remove using a pair of tweezers that won't squash the tick (such as fine-tipped tweezers) or a tick removal tool (available from pet shops or vets). Gently grip the tick as close to the skin as possible and pull steadily away from the skin without crushing the tick. Wash your skin with water and soap afterwards, then apply an antiseptic cream to the skin around the bite

##### **Diagnosis and Treatment**

- Check for rashes/red patches (can be 2.5 – 5cm across and may be ring-shaped) or an unhealed bite
- Flu-like symptoms
- Meningitis-like symptoms (i.e. stiff neck, difficulty in concentrating, fatigue)

If you have any of the above following a tick bite, see a doctor immediately. Lyme disease is treatable with antibiotics at any stage. However, the earlier it is diagnosed the easier it is to treat. If you have any concerns contact your GP.

#### **e) Tetanus**

Tetanus is a toxin produced by a bacterial infection of an anaerobic wound e.g. a thorn splinter under the skin, an animal bite or a puncture wound from a nail. Gloves must be worn when carrying out any work where there is a likelihood of cuts. All outside workers/volunteers should be protected against this by inoculation, and it is their responsibility to ensure that this is done. You should contact your GP to find out when your next booster is due.

#### **f) Canine Toxocariasis**

This disease is transmitted through contact with dog faeces. Whilst it is not a serious threat to adults, it is most acute in children and can cause blindness. As other diseases can also be transmitted by dog waste, precautions need to be taken when working on sites that are regularly used by dog owners. Where the nature of the task makes contact with dog dirt likely, hand-washing facilities should be provided.

### **3. SPECIFIC HAZARDOUS AREAS**

#### **a) Mountains, Moorlands and Uplands**

Conducting fieldwork in the uplands will always involve a greater risk than most other habitats and this should be reflected when planning the work, both in terms of Personal Protective Equipment, and adequate risk assessment.

- Properly fitting walking boots are essential. They should be broad soled with a good heel and with suitable ankle support, to reduce the risk of twisted ankles. The sole should be made of a recognised mountaineering type that allows good grip
- Extra layers of clothing will insulate against the cold. Jeans are not suitable, as they do not hold warmth when wet. Corduroy, woollen or specialist synthetic trousers are preferable. Wind and waterproof jackets and over-trousers should be worn if necessary and should always be carried whenever working on upland sites
- Warm headgear and gloves should be carried to limit heat loss through the head and hands
- A rucksack should be carried containing spare clothing, food and drink, emergency rations in the form of high-energy food (e.g. energy bars), a First Aid Kit, an appropriate scale map, compass, whistle, survival bag and a torch
- Staff must learn the international distress code. This is **six** long flashes, whistles, shouts or waves in succession, repeated at one-minute intervals
- Do not work in remote upland areas if you do not know how to effectively use a map and compass
- Check the local weather forecast before setting out. Adverse weather conditions should be taken into account in the Risk Assessment process
- Lone working should not be undertaken on moorland sites where managed burning is underway.

#### **b) Steep Slopes, Cliffs and Craggs (including Limestone Pavement)**

Steep ground, cliffs and crags can be very interesting in terms of wildlife, vegetation and geological exposures. However these areas are inherently dangerous and extreme care must be taken while conducting surveys on such terrain. If risks cannot be adequately mitigated against, field work should not take place and professional help should be sought.

- Do not undertake work on cliff faces as specialist training is required (e.g. climbing, abseiling, rope techniques)
- Wear suitable head protection when working on or below cliffs and crags. Do not work below them if there is any risk of falling debris
- Be aware of any cliff edge and ensure that safe working conditions can be employed if close to the cliff edge
- Do not work alone if there is ANY risk of falls
- Do not lean over or stand close to cliff edges
- Beware of undercutting of the cliff edge
- Keep equipment secured to person to free up hands
- Work slowly and carefully, checking footing at all times.

The surface of limestone pavement is potentially very dangerous with trip hazards, slippery surfaces (especially when wet), unstable stones, deep holes (grikes) and potential falls from height. Lone working is not recommended while surveying on limestone pavement.

- Wear appropriate footwear with gripping soles and walk slowly and carefully.
- Take great care where a thin layer of vegetation may be covering the gaps between stones.

- Take great care walking on limestone pavement while wet, as the surface can become very slippery.

### c) Bogs, Mires and Swamps

Bogs, mires and swamps are ecologically interesting, however they present hazards which may not be obvious. The wettest parts of these systems can support a thin layer of vegetation over deep water and are potentially very hazardous. Old peat cuttings and drainage ditches can also be well hidden. Walking across such habitats can be challenging and very tiring.

- Unless you know them well, do not work alone on wetlands where these conditions are likely to occur.
- Always walk slowly and carefully on such mires and do not walk on any areas that you are unsure of.
- Walking on such habitats can be extremely tiring, be aware of this especially when working with people new to the site. This can especially be the case in warm weather, where the combination of difficult walking, high humidity and full exposure to the sun can lead to dehydration and heat exhaustion.
- Carry a stick or pole to probe the ground ahead.
- If you find yourself sinking
  - Try to reach firm ground as soon as possible, but without struggling as this may make you sink quicker.
  - If wearing a rucksack, take it off.
  - Stay calm and do not panic, shout for help.
  - Try to get your legs free and lie in a horizontal plane.
  - Try to get some support by lying flat on your back or front and trying to grab hold of some tussocks of vegetation for support.
- There may also be the risk of hypothermia for anyone falling in, depending on the time of year and/ or the prevailing weather conditions. Do not continue working if you fall in and, if possible, take spare clothing and a survival bag.
- Biting insects can be a major annoyance and distraction during the summer. Wear appropriate clothing and use suitable insect repellents.

### d) The Seashore and Intertidal Areas

Most types of seashore work is hazardous. Cumbria's coastline with its estuaries, mud and sand flats can be particularly hazardous. These shores have rapid upward tidal fill and other potential risks such as deep creeks and quicksand. Rocky shores have uneven surfaces, slippery weed-covered rocks, and fissures. Exposed headlands liable to violent wave action are also dangerous. For these reasons, lone working should not be undertaken in inter-tidal areas. Surveying intertidal mud and sand flats should not be undertaken without specialist knowledge and local guidance.

- Check local tide times and make any adjustments for GMT or British Summer Time.
- Mud and sand flats have rapid tidal fill and a high risk of being cut off from the shore. Life-jackets should be worn where there is a risk of being cut off by the tide.
- Consult maps, charts, and utilise local knowledge to avoid quicksand etc. (if unsure **do not** proceed).
- If you become trapped in quicksand:
  - Call for help immediately.
  - Do not attempt to lift the feet, but try to shuffle out. If necessary spread your body weight by lying

down.

- Use a length of rope to help pull another person out of the quicksand.
- Bear in mind that a person may suffer shock and/or exposure as a result. If so, abandon work and return immediately to seek help.
- Stop working on the intertidal area before the tide starts to come in. Never begin to walk out onto mudflats when the tide is incoming.
- Take care around rubbish on the strand line (e.g. Chemical drums, canisters, needles etc.). Do not touch, and report to the appropriate authorities as necessary.
- If you see another person in distress call for assistance from the Coastguard, do not take risks yourself.
- Wear sufficient protective clothing and suitable footwear. In summer, wear suitable sun block and be aware of sun glare off the water.
- If in any doubt about your safety consult with local authorities (e.g. Coastguard) and do not work alone.

#### e) **Water**

Water poses a hazard because of the danger of drowning as well as its potential to make people cold and create slippery working conditions. Falling unexpectedly, fully clothed into cold water, and trying to swim or co-ordinate with rescuers, is extremely difficult. Even strong swimmers experience difficulty. Water may also pose a pollution risk. Except for shallow ponds and ditches, work in fresh or marine waters should be regarded as hazardous. Further hazards include currents, winds, steep sided banks and weirs. Rivers, estuaries and inter-tidal areas are also liable to sudden changes in flow rates. This section also contains information that can be applied to estuaries.

#### **The major causes of drowning are:**

- Lack of awareness of the risks, irresponsible behaviour, disregard or misjudgement of hazards
- Stepping into holes, and sudden changes of depth when wading
- Inadequate supervision, especially of the young
- Inability to swim or lack of experience of swimming in open waters
- Not wearing life jackets or other life-saving equipment
- Absence of rescuers or rescue equipment
- Rescuers who lack skills in life saving or artificial respiration.

#### **General Precautions**

- Working in rivers, lakes, estuaries and inter-tidal areas should never be undertaken alone.
- When working by or in rivers, estuaries or inter-tidal areas always take note of the current. The stillest waters are often deepest and have the softest substrate. When climbing into or out of water choose a shelving area. If a steep bank has to be used, take extreme care. Wading in water is hazardous because of the current and uncertain nature of the substrate. When chest waders are used, two people must be present. Always expect potholes or underwater obstacles. Never step on to ice.
- Working in and around water at night should be avoided.



- Wear lifejackets when working on, in, or above water. These must comply with BS 3595 (1981).
- Only work in these places if you are a good swimmer.
- Work out a rescue systems in advance. Have ropes, poles, and lifebelts readily to hand to avoid others having to enter water.
- Someone in the group should have water safety training and knowledge of emergency first aid.
- Never work alone and ensure there is always someone on the banks/shore to act in the event of an emergency.
- Deep water over 1m, and any swiftly moving water must not be worked in.
- An approved safety harness, belt, or lifeline, must be worn if working near to a weir.
- Never step onto ice even if the water body appears shallow.
- When working over water where falling in would present a hazard, a person must wear an approved lifejacket and safety harness or belt. The harness or belt must be anchored to the support on which the person is working in such a way that if they fall the anchor line and support will bear their weight. Ideally a boat should be standing by in these circumstances and manned by a suitably trained staff member. To conform to the Working at Heights Regulations, a separate risk assessment must be made of this activity.

Wading in water is hazardous because of the possible current and the uncertain nature of what is underfoot. Wear suitable footwear, such as Wellington boots or thigh length waders (never bare feet), to protect against sharp objects. Where regular water based fieldwork will be undertaken, Wellingtons and waders with Steel toe/steel mid-sole protection should be worn to protect against harm from submerged hazards. If chest waders are used, do not go above 1 metre deep and at least two people must be present in case of difficulty. Always carry a safety rope and use a buoyancy aid.

Whenever possible, avoid working in deep, fast-flowing water or near to weirs. If work must be done in such areas or the waterway is narrow, an approved safety harness and lifeline must be worn. An additional safeguard of a hanging chain or rope, approximately five centimetres above water level, is strongly recommended. Take extra care on crumbling and slippery waterside banks. Avoid working in soaking rain and winter conditions.

### **Working over water**

When working over water a person must wear an approved type of lifejacket and safety harness or belt where falling in could occur. The harness or belt must be anchored to the support on which the person is working, in such a way that if they fall, the anchor line and support will bear their weight. Ideally, a boat should be standing by at all times.

### **Use of Small Boats and Inflatable Crafts**

All Trust staff using boats should have satisfied the Trust that they are proficient and competent boat-handlers and have had boat-handling training. Volunteers should not work in boats or inflatable craft in the absence of a competent staff member. Furthermore, those staff or volunteers using boats in open sea and estuaries must receive formal training in the type of craft they will be using.

Always make sure that activities are within the competence of the boat user and within the capabilities of the craft. As a rule, small boats used by the Trust are not equipped or suitable for the open sea or estuaries.

If using boats owned by others for survey work, the Trust must be satisfied as to the seaworthiness of the craft, that its use is appropriate to the conditions likely to be encountered and that the skipper and crew are appropriately

qualified.

Regular boat users must be able to swim. Do not use boats in darkness.

### **Clothing, Equipment and Safety**

Boats must carry a standby means of propulsion such as oars and paddles. A small extra outboard motor is useful even on smaller powered craft. The spare engine should be clamped ready in position but tilted back for ease of use in an emergency.

#### **The following equipment should be carried:**

- First Aid Box
- Life Jacket
- A knife and whistle
- A compass when used on the coast. A map/chart.
- A mobile phone
- A small boat hook and rope
- An anchor with a suitable length of rope when used on the coast
- A bucket or baler
- Seasickness tablets may be a good idea, but should not form part of the first aid kit.

### **Water Bourne Infection and Illness**

Fieldwork involving water and sediments poses a number of risks including: Tetanus, allergic reaction to blue/green algae, Weil's disease and insect bites. Health and Safety Guidance Note 11 Occupational Health and Hygiene covers the precautions to prevent illnesses commonly associated with water-based work.

### **f) Agricultural Land**

Agricultural land generally poses limited hazards beyond those found in other habitats. However the application of chemicals, movement of livestock and use of machinery can create hazardous situations. It is not possible to anticipate all the hazards which may be encountered and therefore staff and volunteers must adopt a common sense approach and be vigilant at all times.

#### **Physical Hazards**

Some fairly standard features of the farm scene may present a hazard such as the presence of livestock, machinery, barbed wire, electrical fences, stacks of hay or straw, unfenced slurry or silage pits, ponds, grain silos and high voltage electricity supply cables.

#### **Chemical Hazards**

A wide range of chemicals are used in agricultural practices, a number of which are toxic to humans. The greatest risks are through poisons, whether used legally or illegally, and spraying operations. Residual amounts of pesticides or other chemicals may be present for some time after spraying has been completed.

## **Livestock and working animals**

Livestock can be a significant potential hazard, especially horses, cattle with young or when bulls are on their own in a field. Whilst carrying out survey work it is better to avoid encounters with cattle if possible. An advance phone call to the landowner, ahead of the survey, can glean information about the livestock likely to be present at particular times. Working dogs can also be a hazard.

## **g) Forests and Woodlands**

Special problems exist in wooded areas, principally because of the restricted visibility and difficulty of movement. It is probably easier to become lost in woodlands or forest than in other terrestrial localities. When walking through a wooded area, keep position and direction constantly in mind. If you become lost it is better to back track than to go on in the hope of finding a landmark.

### **General Precautions**

- Avoid areas of dense growth, or where the nature of the ground is obscured. If walking in a line or in a group, beware of the whiplash from branches. Objects on the ground such as rocks or fallen trees are frequently covered with moss and can be very slippery when wet. If climbing or descending steep slopes, support from vegetation should be used with caution since it may not be firmly fixed. Be mindful of potential eye injuries, from low or broken branches, when navigating through dense, young conifer plantations and woods.
- Do not climb trees.  
Do not climb forest observation towers without prior permission and only when accompanied. Be aware of fire hazards, especially during dry conditions.
- Modern forestry operations are often hazardous and complex, and workers may be unaware of your presence. In particular keep away from:
  - felling operations;
  - heavy machinery and vehicles;
  - aerial ropeways for forest management.
- Tree Roosts  
Many tree roosts are in trees that would be classified by an arboriculturalist as hazardous because bats tend to use old trees, which have developed hollow limbs, rot holes in the trunk or loose bark. If you wish to examine such trees using a ladder, follow the ladder code (outlined on page 27 in the Bat Workers Manual published by the JNCC) and place the ladder against sound trunk wood, never against a branch. Tie the ladder to the tree by means of a rope or strop.

When checking or erecting bat and bird boxes observe the following precautions:

- wear a safety helmet
- do not carry loose tools in the hand – put the tools you require in a haversack with a shoulder strap
- wrapping a piece of cloth or rubber tube around the top rung will help prevent the ladder slipping on the narrower tree trunks
- make sure you have an assistant firmly holding the ladder at the base
- ensure the assistant at the base of the ladder wears a safety helmet too

- do not climb trees without the help of a ladder – tree climbing requires special training

## **h) Underground**

Caves and underground areas must not be entered unless by competent, trained and experienced practitioners. Survey or monitoring work in caves and mines requires particular attention to safety because the potential for a serious accident is probably greater than in buildings. Inexperienced workers must seek advice and practical guidance from an experienced caver, who should have the appropriate equipment and be familiar with good caving practice. Guides and safety information for working underground are available from mining and caving organisations. Further detailed information for Bat Workers is contained in the Bat Workers Manual published by the JNCC in 2004. Also see English Nature's Health and Safety Information Notices 11/97 *Visiting Working Mines* and 12/97 *Visiting Disused Mines*.

The following 'General Precautions' are from Bat Workers Manual (<http://www.aditnow.co.uk/documents/Personal-Album-385/Bat-Worker-Manual-Complete.pdf>):

- Never go alone
- Don't spilt up underground
- Use the 'Buddy' system
- Take spare lights
- Wear appropriate clothing
- Take appropriate equipment and know how to use it
- Vertical shafts should be attempted only with adequate safety equipment and never without proper training on the surface beforehand.
- Obtain a survey map of the site before the visit

## **i) Industrial and post-industrial sites (including mines, quarries, building sites and landfill sites)**

Do not enter without the owner's permission and always consult them on any potential hazards prior to your visit. Some particular hazards are:

- Industrial residues and contaminated sites/wastes. Adopt safety procedures recommended by operators or, if none are available, do not work on contaminated sites.
- Methane gas. Due to the potential explosion risk, adopt safety procedures recommended by operators or, if none are available, do not work on contaminated sites.
- Working quarries. Do not enter blast zones in operating hours, and under no circumstances visit without operator's permission. Adopt safety procedures recommended by operators (e.g. wearing safety helmets, high visibility jackets).
- Pay particular attention to the movement of vehicles on the site, and the activities being carried out – avoid working in areas where vehicles are present or likely to be present.
- Mineshafts and cave entrances

These are widespread across old mining areas and limestone country.

- Be aware and watch out for potential holes. Do not enter unless appropriate assessments and training have been undertaken.
- Check maps before visiting the site to see potential hazards (NB they are not all recorded).
- Do not work alone