

# **APPENDIX I**

## **Safe Use of Hand Tools**

### **Introduction**

A large amount of practical conservation work, particularly that done by volunteers, is carried out with the use of hand tools. This appendix illustrates a range of tools in common usage and the correct techniques for using them safely.

It is essential that all volunteers are shown how to use, carry and store these tools correctly before starting work. This not only encourages safe working practices but also makes the job easier to undertake.

All tool use has some level of risk but observing these techniques should help minimise the risk. Remember other factors such as site conditions, terrain, weather and attitude can influence the ease and safety with which work can be completed. You should also ensure that members of the public are adequately protected, both from tools in use and from the results, like falling branches and holes to trip in. Use signs warning of hazards and make sure you can detect people approaching and briefly stop work, if necessary.

### **Clothing**

When using tools it is best to wear clothes which are tough enough for the work in hand and give protection from harmful hazards such as vegetation and debris. Wear stout footwear, preferably steel toe-capped. Clothes should allow freedom of movement but not so loose that they can be snagged on tools or vegetation.

Take care to protect your head, face and hands from injuries, dust and other harmful substances. Protective gloves, goggles and helmets can help reduce these risks.

### **Handsaws**

- Keep joinery saws sharp and clean, with the teeth set properly.
- Replace bowsaw blades as soon as they begin to stick in the cut.
- Start bowsaw cuts with two long slow pulls, guiding with the thumb on top of the blade and the rest of the hand well clear – then remove the guiding hand and continue steadily using the full length of the blade wherever possible.
- Carry bowsaws with the blades covered – do not carry them on your shoulder.
- Always dry and oil blades before returning to storage.

### **Shovels, spades and forks**

- Check that the handles are smooth and free from splinters and that the blade or tines are not split.
- When digging or shovelling avoid back strain by using your leg muscles as much as possible, e.g. push a shovel handle against your thigh muscle, keeping your back straight.
- Make sure there is at least two handle-lengths' distance between you and anybody else to avoid striking them with tool or materials.
- Never leave a spade, fork or shovel upright – others may trip over it. Always lay it flat with the blade or tines pointing downwards.
- Carry these tools at their point of balance, down by your side and with the blade or tines pointing forward.

### **Small hammers**

- Select the correct style and size of hammer for the job.
- Check that the head is fixed securely at 90 degrees to the handle and that the handle and head are not damaged.
- Keep the head and handle clean to avoid the tool slipping out of your hand or off the work.
- Grasp handle firmly at the end while keeping eyes on the point to be struck.
- Always use the face of the hammer head which has been hardened for the job.
- Do not use hammers for extracting nails – too often the handle breaks or bends. Use a jemmy or nail extractor instead.
- Wear goggles if there is a danger of chips or materials flying off, e.g. when shaping stone.
- Do not store or leave a hammer above head height.

### **Mells and sledge hammers**

- Do not confuse the uses of these: mells are often made of brittle cast-iron and are only used for knocking wooden stakes into the ground; sledge hammers are made from steel and can safely be used to break stone – the size and shape of the head makes them unsuitable for knocking in wooden posts.
- Check that the handles are free from splits and roughness and that the heads are not burred or split.
- Holding the handle firmly at the end with one hand, slide the other hand down the handle until that head strikes the work, all the time keeping your back as straight as possible.
- Make sure that nobody is within at least three handle+arm lengths of where you are working.
- Always wear a helmet when using mells and sledge hammers.
- Wear goggles when using a sledge hammer on 'chippable' material like stone.
- Carry them at the point of balance near the tool head, and down by your side.

### **Crowbars**

- These are heavy tools – keep your back straight and bend your legs when lifting or using.
- Stop work if you become tired – a crowbar or any tool flying from your exhausted fingers can be very dangerous.
- When using a crowbar as a lever, do not jump on the free end or use other tools to hammer on the crowbar. Note: crowbars do bend.
- Carry a crowbar down by your side at the point of balance.

### **Picks and mattocks**

- Check that hafts are smooth.
- Check that the haft fits snugly in the socket without rocking and that it stands slightly proud of the tool head.
- Do not use hafts for packing loose material around straining posts when fencing – it causes dangerous damage to the haft end.
- Make sure other people are well away from you before using.
- Keep the ground around your feet clear of loose material to avoid slipping or tripping.

- When removing the head from the haft, make sure that you tap the bottom of the haft on a firm surface and that you are positioned so that the haft cannot damage you should it come free unexpectedly.
- Carry the tools in separate pieces – heads can otherwise slide down hafts and trap fingers.

### **Axes, billhooks, slashers and sickles**

- Check that handles are smooth and not split or damaged.
- Ensure that axe heads are firmly wedged onto handles and that there is no play or slackness between billhook/slasher handles and the metal blades.
- Check that there is no damage to the back of axe heads and single-edged billhooks.
- Edged tools need to be sharp to be safe: always wear gloves when sharpening and move sharpening stones away from the edge, not into it.
- Never wear gloves when using an edged tool.
- Always cut away from yourself.
- When carrying, wrap tools in sacking to protect edges; carry in boxes where possible.

### **Rakes**

- Use the correct rake for the job – using too heavy a tool can lead to unnecessary tiredness.
- Keep your back as straight as possible and use the muscles in your arms and legs.
- When not in use, either leave rakes leaning up out of the way or lie them flat on the ground with the tines pointing down.