

## install wayfinding signage

**Effective and responsible management of our path networks will require the installation of some wayfinding signage to direct path users. This guide illustrates how to install waymarkers, fingerposts and orientation panels safely and securely**

### Need to know

Installing any signage will involve obtaining permission from the landowner, transporting materials and equipment to site, selecting the correct tools for the task and wearing appropriate work clothing and / or personal protective equipment (P.P.E.). Important matters to consider include:

- Know precisely where and how the sign is to be installed. For example, know what height it is to be set at, which orientation it should take and is the method of installation to use concrete or well rammed soil and stone
- If working near property or in built up areas, check there are no utilities within the working area for example, electricity cables or water pipes. Obtain location plans from the utility provider and / or look for tell tale signs like access covers or exposed cables / pipes. Where utilities are suspected, and the sign position cannot be substantially moved, consider hiring a Cable Avoidance Tool (CAT) to accurately locate any electric cables. Follow advice in the Health and Safety Executive (HSE) Guidance HSG47 'Avoiding danger from underground services' and Energy Network Association's 'Watch Out, Cables About!' safety information publications
- Ensure you have the required components to erect the sign for example, clamps / base plates and the correct tools to secure / tighten them

### Planning and preparation

Before starting any practical work, and especially if you have a frequently changing workforce and / or new person(s) joining the group, it is important to instruct them on the correct and safe use of the tools likely to be used; including specialist equipment like a CAT, if required. This should include: the tools name and purpose, how to check it is safe to use, how to use it safely and how it is safely carried to / from the work-site. See Paths for All 'How to use hand tools safely' and 'How to maintain hand tools' for further advice.

Ask people to take personal responsibility for the safe use, transportation, storage and cleaning of the tool(s) and equipment they've used during the period of their work. If you plan to involve young or very inexperienced people in doing the work, make sure they are more closely supervised and supported.



*Only use a tool for the purpose it was designed for. If you don't have the correct tool then don't undertake the task*



*Installing signage correctly and safely helps to protect the installer(s) and those around them; including members of the public using the path*

### Types of wayfinding signage

**Fingerpost:** a sign with one or more blades pointing to a destination or destinations. Usually positioned at the start of a path and at junctions with other paths. Posts are typically made from round aluminium or steel tubing, square hardwood timber or square recycled plastic. Directional fingers are often vinyl wrapped aluminium, machine routed lettering / numbers and symbols or plastic inserts.

**Waymarker:** markers along the route at points where the direction of the path may be unclear or where confirmation of the route is required. They are usually very basic, providing simple information on direction only.

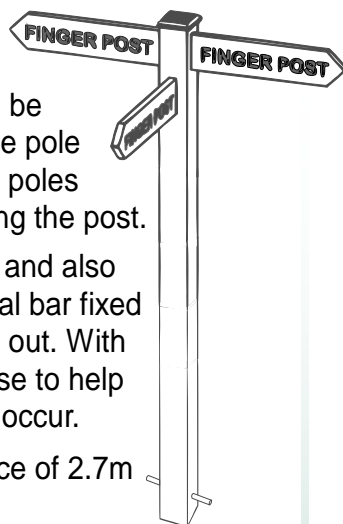
**Orientation panel:** typically a larger sign at a main access point which promotes the site and informs users of the paths within the area; often by means of an annotated map.

## Installation

**Fingerpost:** metal poles are often set in concrete but can be secured in well compacted soil / stones (typically 1/3 of the pole should be set into the ground). Fit a baseplate, to prevent poles being lifted out or rotated, and a top cap to stop water filling the post.

Timber or recycled plastic posts are set to a similar depth and also using concrete or well compacted soil / stones. A horizontal bar fixed through the post base will prevent it being rotated or lifted out. With both metal and timber posts, slightly mound soil at the base to help stop water collecting and potentially causing rust or rot to occur.

To accommodate horse riders, a minimum height clearance of 2.7m is required for signs that extend over the path area.



## Working safely

- 👤 Prepare a risk assessment: work out what might go wrong then check to make sure you have taken measures to stop it happening
- 👤 Ideally, always work alongside another person. This is especially important when working in isolated locations or where there may be increased personal risk
- 👤 Make sure that someone knows exactly where you will be and how long you expect the work to take
- 👤 Take a first aid kit and keep it somewhere accessible, just in case
- 👤 Take a fully charged mobile phone for safety. This can also be used to photograph any issues that may arise and to record the completed installation
- 👤 Put up warning signs prior to commencement of work. If other people come along the path then stop working and secure the sign, for example to avoid it toppling over, until they are safely past

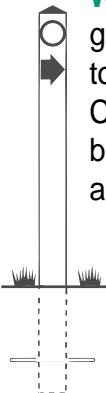
## Dressing safely

- 👤 Wear outer clothing that will withstand the rigours of your work. It should protect you from the weather, including strong sunshine, and from being scratched or pricked by vegetation
- 👤 Wear stout footwear and consider getting steel toe capped shoes / boots or wellingtons. If there is an added risk of standing on broken glass or syringes then invest in footwear with a steel mid-sole to protect against punctures
- 👤 Wear other P.P.E. where required, for instance: dust masks (for cement), gloves, eye protection and hard hats

## Want to know more?

To find out more about installing wayfinding signage, contact: [pathsforall.org.uk](http://pathsforall.org.uk)

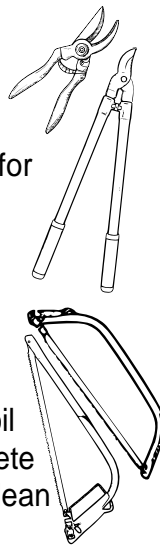
**Waymarker:** Waymarkers are generally set at a height of 1.0m above ground and can be secured using concrete or well compacted soil / stones to a minimum depth of 0.4m. Typically made from recycled plastic or FSC Certified hardwood timber, they should be installed with a fitted horizontal bar below ground. Where metal poles have been used, they should have a baseplate and top cap fitted.



**Orientation panel:** Orientation panels should be installed at a height appropriate for use by wheelchair users; as measured to lowest point of signage panel. For further information see Paths for All 'Signage Guidance for Outdoor Access'.

**Tools of the trade:** bowsaw, loppers, pruning saw and secateurs to remove vegetation • wheel barrow / rucksack for moving tools / equipment • step ladder or work platform if replacing previously installed finger type signs • adjustable spanner / ratchet and sockets to tighten fixing bolts • pinch bar, post hole digger, spade, tape measure and spirit level to dig the hole and securely install the post.

**Materials:** posts can be installed using firmly compacted soil and stone or, in easily accessed locations, pre-mixed concrete e.g. 'postcrete'. The use of concrete will require access to clean water.



## maintain surfaces

The condition of a path surface can make a considerable difference as to how people use the path or whether they can use it at all. This guide will help you to identify issues early, rectify problems that occur and help to stop them reoccurring.

### Need to know

Popular paths will show signs of wear and tear and the surface will typically require regular maintenance. The key to preventing your path from becoming unusable is to inspect it frequently and know what tell-tale signs to look for.

**Scouring:** water running down a path will wash away any loose material. Look for early signs such as eroded runnels or patches of silt; which is where the water has slowed down and the silt drops out of its suspension. In more severe cases, potholes may form along your path.

**Settlement:** lumps and bumps in the surface can appear if the base layers have not been properly compacted or possibly where the path has been subjected to frost heave or subject to encroaching roots. These irregularities can cause access problems for path users, or may lead to damage through uneven wear.

### Tools for the job

**Spade** - the sharp edge is useful for cutting turf

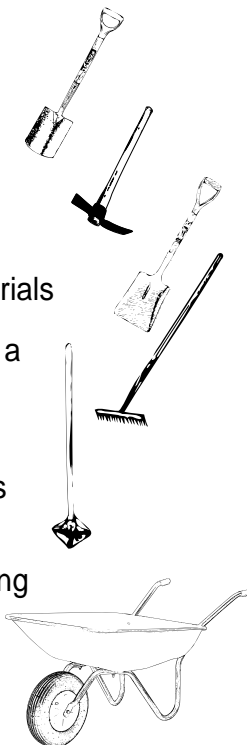
**Mattock** - useful for loosening up surfaces or digging borrow pits for new material

**Shovel** - for shifting aggregates or loose on-site materials

**Rake** - for spreading aggregate; for example levelling a path base or surface

**Punner / tamper** – for compacting (tamping) down surfacing materials over small areas or securing posts into the ground

**Wheelbarrow and buckets** – for transporting surfacing materials along the path to the area being surfaced - a plastic sheet or tarpaulin could be useful for avoiding waste or creating unnecessary mess



### What and when?

**Aggregates** - use aggregates of a similar specification to the existing surface. If in doubt, take a sample to your local supplier. Before you obtain any new materials, check to see if there was any left on-site from the original construction. Material haulage can be a substantial element of supply costs so plan your repairs carefully to make efficient use of a lorry load and possibly store surplus on the site for future repairs.

**Anti-slip treads (bridges and boardwalks)** - try not to use 'chicken wire' as a non-slip solution on existing wooden boardwalks or bridge decks. A number of other solutions are available and include anti-slip paints or prefabricated resin bound strips that can be screwed to sound timber decking boards. Check all wooden components for signs of rot.

**On-site materials** - if there are suitable materials available on-site, you can possibly dig a 'borrow pit'. Open the pit by carefully removing surface vegetation and storing it for re-vegetating the 'borrow pit' after use.

## Getting the job done

If the path base is exposed, and the surface is uneven, then it is probably time to do some repairs. If the damage is limited to small patches you can probably just top-up the worn areas and compact the new aggregate. Where the damage extends across the path or some of the path base has been washed away, you'll need to plan things more carefully.



*Remember that a worn surface is probably a symptom of an underlying problem. Look for, and rectify, the cause at the same time - it will save you time and money in the long run.*

Before resurfacing a section of path, check that the base is level and properly compacted. Any loose stone will rise to the surface and cause problems at a later date. It will also be uncomfortable to walk, ride or wheel on.

Before filling holes or ruts, scrape round the eroded areas with a spade to remove loose stones. Spread the aggregate as a layer slightly thicker than the existing surface and then compact thoroughly to form a level surface. Using a roller or vibrating plate will give a better finish, and allow you could re-compact the rest of the path surface while you have machinery on site - this is one way to extend the life of unbound aggregate paths.










*In extreme cases you might see a geotextile sheet or underlying soil exposed beneath the path base. This is a sign that both the surface and sub-base material has been subject to substantial erosion and will need to be fully replaced - after you have rectified the reason for this erosion.*

It may be that you maintain a boardwalk which has chicken wire stapled to the surface; as a means to provide an anti-slip surface. When chicken wire begins to rust and tear it can create a trip hazard. A temporary fix is to use extra fence staples (small) to pin the loose strands to the board but it is far safer, and considerably more durable, to fix prefabricated non-slip strips; which are screwed to wooden boards. Make sure the boards are not showing signs of rot otherwise they should be replaced with recycled plastic or new anti-slip decking boards. This assumes the boardwalk sub-structure remains sound otherwise it should be repaired / replaced.

## Getting the job done (contd.)

Make sure the decking boards are not showing signs of rot otherwise they should be replaced with recycled plastic or new anti-slip boards. *(This assumes the boardwalk sub-structure remains sound otherwise it should be repaired / replaced).*

## Working safely

-  Prepare a risk assessment: work out what might go wrong then check to make sure you have taken measures to stop it happening
-  Take a first aid kit and put it somewhere accessible, just in case
-  Put up warning signs during work and, when people come along the path, stop working until they are safely past
-  If you have to leave the site unfinished, place a cordon or cones around any hazards
-  Make sure that all tools are properly maintained and that everyone knows what each tool should be used for, and how to use it
-  When using swinging tools, ensure that no-one comes within two tool lengths of the operator. If you're using a swinging tool, only wear gloves if they are snug fitting and have safety grips
-  If you are using machinery, check what level of training or qualification is required

## Want to know more?

Find out more detail about path maintenance in the **Lowland Path Construction Guide**: visit: [pathsforall.org.uk](https://pathsforall.org.uk)

# paths **How to...** for all

## maintain hand tools

It's easy to forget about your tools; when you've finished with them after the days activities. Some simple and regular maintenance will help keep them working safely and effectively for many years. This guide will help you care for the tools that your group needs to undertake its important work.

### Need to know

Effective tool maintenance doesn't need to be time consuming. Some important things to consider include:

- Mark tools when you first get them for easy identification. Particularly important when sharing / mixing tools
- Clean and dry tools after use and before storage
- Check condition of tools on a regular basis. Set aside broken tools for repair or replacement
- Store tools safely and in an orderly and easily accessed manner

As well as helping your tools to last longer, regular maintenance will ensure that people can continue to use them safely and effectively.

### Tools for the job

**Spade / shovel** - clean off any mud or grit and dry before storage

**Mattock / pick axe** - clean and dry then separate the handle from the head before transportation and storage

**Scythe / grass hook** - clean, dry, sharpen and then carefully cover blade before storage

**Loppers** - remove any vegetation caught in the blades and clean / dry handles. Lightly lubricate any pivot points

**Pinch bar** - clean off any mud / grit and dry before storage

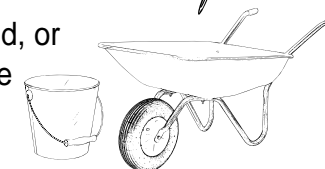
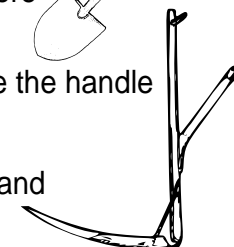
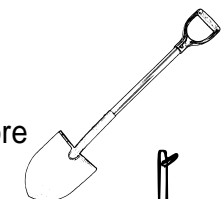
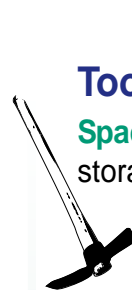
**Wheelbarrow and buckets** - wash out any mud, or other debris, and dry before storage. Check tyre pressure and pump up if necessary

### What and when?

**Marking tools** - mark new tools so you can readily identify them as belonging to your group. Bright paint markings can also help you find any tools that get laid down in long vegetation - this is particularly useful for smaller tools like loppers and bow saws.

**Cleaning tools** - clean tools as soon as you've finished using them. It's easier to get mud off before it dries - using a stiff hand brush is usually sufficient to remove most of the mud / grit and before giving a quick wipe down with an old rag or similar. Once dry, place them into a secure and safe storage facility.

**Checking tools** - ideally, no broken tools should be put away in storage but it's still good practice to check the tools before heading out to work. Allow a little extra time to deal with any simple repairs or last minute sharpening to be undertaken before the planned task. You may find a written maintenance schedule and rota is useful for your group.



## Getting the job done

Ask people to take responsibility for cleaning the tools they've used - so that it doesn't fall to one person at the end of the day. Where there are young people in the work party; make sure they are supervised if cleaning sharp tools.



*A handful of wet grass can make an effective scourer for cleaning mud off smooth surfaces such as spades and shovels.*

When using tools, learn to recognise when they are not working as effectively as they should. For example, if a bow saw or pruning saw seems particularly difficult to use then blade may have become blunt and needs to be replaced.



*If a bow saw keeps sticking, but the blade is still sharp, try wiping the blade with a wax candle to help it move through wood more smoothly.*

Ask members of the group to report any tools which may be in need of maintenance - perhaps set aside a separate area on the ground where faulty tools can be collected and keep them separate from the other tools. With powered machinery, it is useful to use a tie / tag label system to record issues with the equipment and help avoid the next user taking broken and / or dangerous machinery onto site.










*Don't use engine oil to wipe down tools. If any protection is required then use a teflon based, moisture displacing lubricant or vegetable oil after drying.*

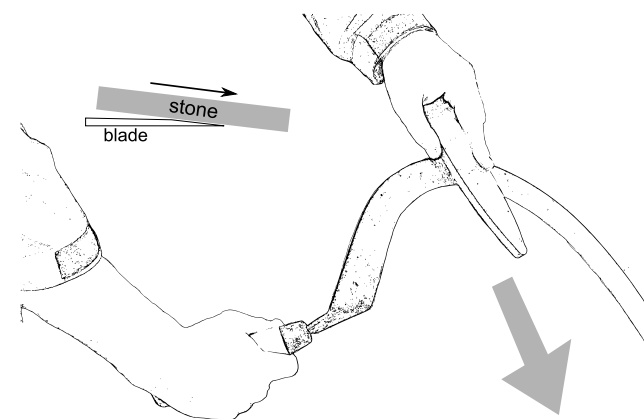
Check condition of the tools as you clean them and make a list of any that need additional maintenance or replacement. Keep these tools separate so that they are not used until they have been repaired or replaced.

Keep the cutting edge of bladed tools, such as scythes and axes, sharp with the correct type of sharpening stone. Make sure that people using these tools know which sharpening stone to use how to safely use it (see diagram).

Apply a thin coat of boiled linseed oil to wooden handles, approximately once a month, to stop them from drying out and potentially cracking or splitting. It will also help to stop metal heads becoming loose on swinging tools, for example axes and hammers.

## Working safely

-  Prepare a risk assessment: work out what might go wrong then check to make sure you have taken measures to stop it happening
-  Take a first aid kit and put it somewhere accessible, just in case
-  Put up warning signs during work and, when people come along the path, stop working until they are safely past
-  Take great care when cleaning or replacing blades and make sure you have a good grip on the tool before you start. Wear gloves
-  If you are separating a mattock head from its handle, don't lean over it as you do it - you may get a nasty bump in the face if the handle bounces upwards
-  Make sure that everyone knows what each tool should be used for, how to use it and how to correctly maintain it
-  If using powered machinery, check what sort of maintenance is required and make sure it is both followed and recorded. If it has a manufacturers warranty, you may need to have a record of what maintenance has been undertaken



## Want to know more?

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## approach vandalism on paths

**If your path has been vandalised, or is subject to anti-social behaviour, you will firstly need to repair the damage before addressing any ongoing issues. This guide will help you to find ways of dealing with vandalism and anti-social behaviour effectively.**

### Need to know

Vandalism and anti-social behaviour can be a real blight for any path network; preventing people from enjoying their time on the path, from feeling safe, or potentially creating a danger for other path users, for example, damage to bridges or safety fencing.

Repeated problems may indicate a wider problem in your area. Contact your local authority Outdoor Access Team and / or possibly enlist the help of your local Community Safety Partnership and local Community Police Officers.

Look for opportunities to engage with the community; to help repair damage. Their involvement may act as a good deterrent to future difficulties.

Changing the layout of a path, and its associated features, can sometimes help to reduce the temptation for people to vandalise or engage in anti-social behaviour. For example, it may be that a bench seat is being used during anti-social activity. Rather than getting rid of a valuable seat, consider whether it could be moved to a more visible location.

### Tools for the job

**Gloves** - sturdy work gloves are essential to prevent injury from sharp objects or contamination from soil, plant sap, waste fluids or materials such as paint stripper or strong cleaning agents.

**Litter pickers** - your local authority may be able to provide long handled 'mechanical' litter pickers. This will make it safer, less strenuous and more pleasant to collect smaller waste materials.

**Stiff brush and shovel** - useful for collecting and lifting items like broken glass from the path area and then removing it to a suitable receptacle.

**Bin bags** - take a stock of sturdy bags but don't use them for broken glass or other sharp objects. Items like syringe needles should only be collected by suitably trained persons and stored within a proper 'sharps' container. Contact your local authority for safe disposal advice.

**Cardboard or plastic 'sharps' box** - seek training in the safe collection and disposal of 'sharps'. Collect any broken glass or other sharp objects and dispose of the box safely. Make sure you close and secure the lid.

### What and when?

The very nature of vandalism and anti-social behaviour means that you will mostly work reactively to situations as they arise. Contact your local authority to explore ways of dealing with the problem in partnership with others and hopefully avoid on-going issue.

**Respond quickly to problems** - lack of repair, or not clearing up quickly after incidents such as fly-tipping or graffiti, leads to a sense of neglect which can easily spiral into further problems. Even if you don't have funds for immediate replacement, it's better to remove the damaged items as soon as you can safely do so.

**Work in partnership** - when organising a community clean up or repair work session, consider using it as an opportunity to work with your local newspaper to highlight how people are tackling the issue (rather than as a means of simply complaining about the problem and criticising those involved).

**Prioritise removing graffiti** - try to tackle any graffiti early to stop further build up and especially where the graffiti is offensive in nature.

## Getting the job done

**Picking litter** - If possible, organise a work party to clear litter from the whole path or network rather than just the worst individual sections. This will have the most positive impact and helps to present the path as being cared for and worth looking after.

Before the planned event, work hard on promotion to get as many people involved as possible. Advertise locally for volunteers and involve local schools, clubs and community groups. Look for a venue to start and finish the event where you can provide refreshments and toilet facilities for volunteers.

The charity, Keep Scotland Beautiful, organises a national spring clean event each year in Scotland and you may find it useful to 'tag' your work on to this event as a way of helping with promotion. Visit their site for more information and to download the online clean up kit and information leaflets.

Sweep broken glass with a stiff brush and use a shovel to place it in a suitable container. Do not put broken glass into plastic bin bags.



If you find hypodermic needles, such as from drug-use, take extreme care to avoid handling them. Contact your local authority rapid response hotline and the items should be collected within 24 hours







**Removing graffiti** - Contact your local authority as they may be able to provide your group with materials to remove graffiti. Always use a product that is designed to remove graffiti from the affected surface and follow the manufacturers instructions.



Wear protective gloves and goggles / face mask to prevent cleaning fluid coming into contact with skin or eyes

Where appropriate to do so, consider using an 'anti graffiti' paint, which can make it easier to wash off future paint attacks. Follow the cleaning instructions carefully - large areas of graffiti may be best tackled with a hot water pressure washer.

## Working safely

-  Undertake a risk assessment: work out what might go wrong then check to make sure you have taken measures to stop it happening
-  Before starting a clean-up, inspect the area for dangerous items such as needles or glass and mark off any suspect areas for specialist attention. Take additional care if you have to clear these items, using anti-puncture gloves and mechanical litter pickers
-  Ensure that each work party has a contact number to report any area of particular concern
-  Remember to make time for breaks and ensure hand washing facilities are available and used
-  Take a first aid kit and put it somewhere accessible, just in case
-  Dog faeces is an obvious health hazard, especially when picking litter. Advise people of this issue and provide protective gloves for the task along with additional hand cleaning wipes

There's no sure-fire way of preventing vandalism or anti-social behaviour. Local solutions are typically more effective and last longer so get in touch with your local community safety partnership to see what might work for you.

## Want to know more?

Find out more detail about path maintenance in the **Lowland Path Construction Guide**: visit: [pathsforall.org.uk](http://pathsforall.org.uk)



# paths for all How to...

## control vegetation

Keeping paths clear of encroaching vegetation is one of the most common maintenance tasks. This guide is designed to help you work safely when cutting verges, clearing branches and removing fallen leaves.

### Need to know

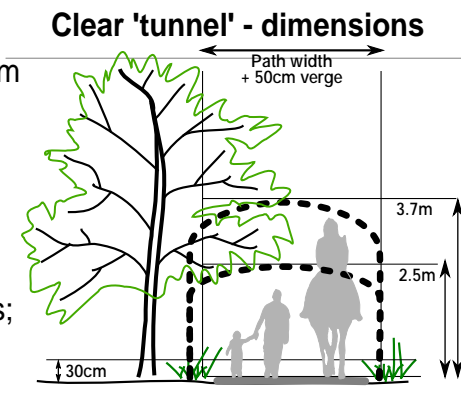
Aim to keep a clear path 'tunnel' at all times so that the path is free from any obstructions such as hanging branches and long grass. Try to keep sight lines open so that people can see others approaching. Take a look at the diagram below for recommended clear 'tunnel' dimensions.

Avoid letting vegetation along path verges grow more than 30cm tall otherwise plants will encroach onto the path surface and also restrict people from stepping off the path to allow others to pass. Dog owners will also find it easier to pick up poo if vegetation is kept short.

You should aim to cut path verges a minimum of three times per year.

Take extra care not to disturb nesting birds during breeding period (March - Sept).

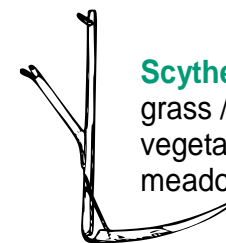
Fallen leaves can create a slip hazard and may lead to problems on most path surfaces; if they are not cleared and allowed to rot down. Try to clear leaves in dry weather.



### Tools for the job



**Sickle / grass hook** - for cutting small areas of long grass / light vegetation



**Scythe** - for cutting tall grass / other light vegetation / wildflower meadows / bracken



**Pruning saw** - for cutting branches. Some can be used with an extension pole for working overhead



**Rake** - for collecting cut material or other vegetation, for example fallen leaves



**Loppers** - for cutting thinner branches and shrubs

**Bow saw** - for cutting larger branches / stems / small trees

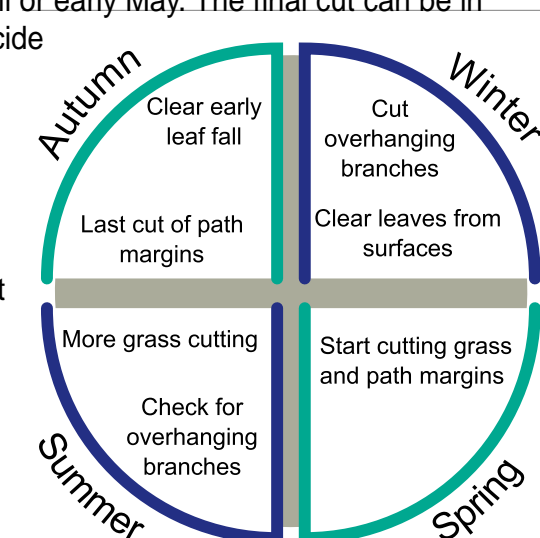


### What and when?

Dependent on weather conditions, you'll probably need to organise the first cut of path verges in April or early May. The final cut can be in October and you will need to decide how many cuts are required in-between. Grass paths will need more frequent cutting.

Winter is the best time to tackle overhanging branches and shrubs but check throughout the summer for any broken or drooping branches.

Leaf clearing is best done in late autumn and throughout the winter, as required.



## Getting the job done

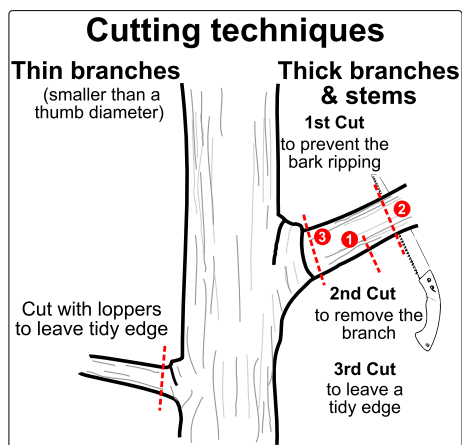
Make sure you have realistic expectations about what can be achieved and try to complete distinct sections of path. Find jobs that are appropriate for volunteers and within their individual abilities. Make the task enjoyable and their involvement appreciated - otherwise they may not offer to help in the future.

Choose the right tools for the task and ensure that everyone knows how to use them properly. Give a brief overview of the tools being used, what they are used for and how to use them safely **before** you start work.



*When using cutting tools, sharpen them regularly - a blunt cutting tool requires much more effort to use than a sharp one*

When cutting back trees and shrubs, take enough off so that regrowth takes two or three years before it needs attention again. Try to cut tree stems and branches back to a main stem but make sure the tree won't be unbalanced by heavy trimming (see diagram).














*Remember the value of stopping for a cup of tea and biscuit*

## Manual or machine?

Cutting vegetation by hand can be a rewarding and sociable task but can also be very tiring and physically strenuous. Taking regular breaks, and varying work tasks, can help to maintain motivation. Remember, a trained operator with a petrol strimmer can cut over 100m of path verge in an hour.

A petrol or cordless 'leaf blower' can quickly and easily get leaves off the path; although it may only deal with the problem temporarily. Raking is much slower and harder work but you can create large leaf piles that are less likely to blow straight back on to the path. Try to only use a stiff brush for short sections of path, or where no alternative is available, otherwise it can be physically quite arduous work and may damage unbound path surfaces.

## Working safely

-  Prepare a risk assessment: work out what might go wrong then check to make sure you have taken measures to stop it happening
-  Take a first aid kit and put it somewhere accessible, just in case
-  Put up warning signs during work and, when people come along the path, stop working until they are safely past
-  Make sure that all tools are properly maintained and that everyone knows what each tool should be used for, and how to use it
-  Only use tools for their intended purpose
-  Dog poo is an obvious health hazard, especially when using a strimmer. Always wear removable overalls, gloves and a full face polycarbonate visor to EN 166:2001 B when using strimmers
-  Do not allow anyone to operate machinery without training and recommended safety gear, such as ear defenders and face masks
-  When using cutting or swinging tools, ensure that no-one comes within at least 2 tool lengths of the operator. If you're using a swinging tool, only wear gloves if they have safety grips
-  Take **great care** if cutting Giant Hogweed as the sap can severely burn your skin
-  Do take care when using hand saws above shoulder height and wear helmets and safety glasses when clearing overhead branches
-  Rest and refresh - stop working before you get too tired and possibly make mistakes

## Want to know more?

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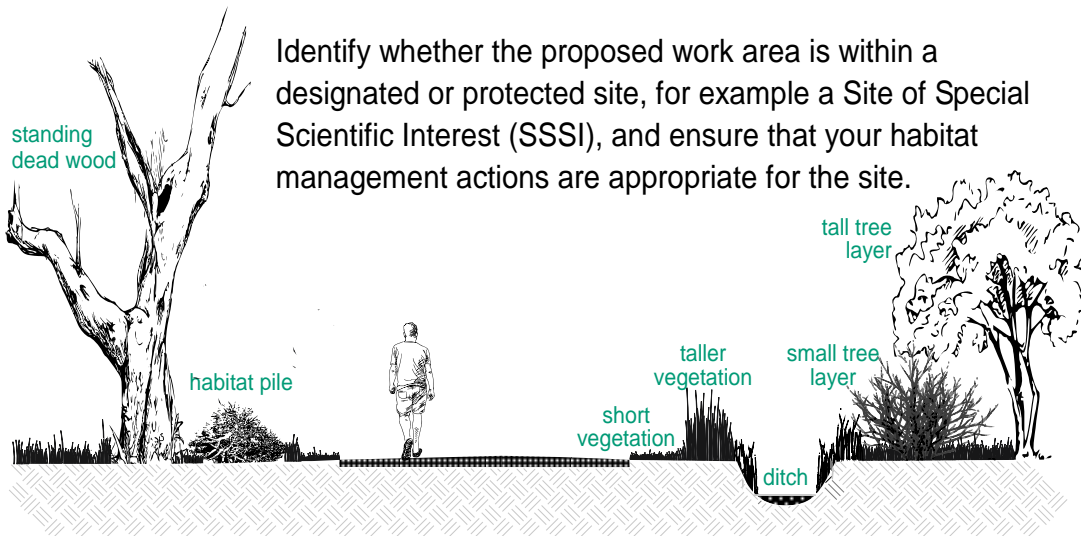
## manage paths for wildlife

**The management of our paths for wildlife is something we can all do and need not be complicated. This guide illustrates some of the simple changes you can make to improve habitats along your paths**

### Need to know

Look out for plants that are referred to as 'invasive species'. Cutting some invasive species can cause them to spread further or, as with sap from the Giant Hogweed, can result in serious burns to exposed skin. Learn to specifically identify Japanese knotweed, Himalayan balsam and Giant hogweed. Know what to do, and who to inform, if these species are found along your path route.

Identify whether the proposed work area is within a designated or protected site, for example a Site of Special Scientific Interest (SSSI), and ensure that your habitat management actions are appropriate for the site.



### Getting the job done

**Short vegetation:** Where possible, cut a narrow strip of shorter vegetation on either side of your path. This helps to maintain the full usable width of the surfaced path and will also allow you to leave taller vegetation (grasses / wildflowers) outside this strip. Schedule a cut every 4 weeks; this allows just enough time for some of the plants to flower; providing nectar for insects. Try cutting either side of the path at different stages: cutting opposite verges at 2 week intervals will help to maintain a wider variety of nectar rich plants along the full path length and for longer.

**Taller vegetation:** To further improve the variety of nectar rich flowers, and where space allows, maintain a strip of taller vegetation alongside your regularly maintained, short vegetation strip. This area will require far less maintenance and can usually be cut once a year; around September or October; allowing time for the plants to flower and release their seeds back into the ground, to grow the following year. Wildflowers thrive in soil where the nutrient level is low. It is recommended that the cut vegetation is left on the ground for a couple of days, allowing the seed to be released, before being lifted off the site.

**Standing dead wood and habitat piles:** Dead and decaying wood provides many environmental benefits. It provides food, shelter and, as the material decays, releases vital nutrients back into the soil which, in turn, helps other flora to flourish.

Areas of dead wood should be retained where possible; either through stacking of cut branches to create habitat piles beside paths or by retaining standing deadwood which does not pose a risk to path users.

Dead wood provides an excellent habitat for insects which, in turn, provide a valuable source of food for birds and small mammals. As it rots it enables some animals and birds to hollow it out creating nests and areas in which to take refuge. Many species of fungi will also only grow on dead wood and may also be eaten by other animals.

## Getting the job done (contd.)

**Small tree layer:** Where space allows, develop or maintain a strip of smaller tree species. Choose native species that are local to your area and which may also bear fruits; providing a valuable food source for birds and small mammals. Even a narrow strip of smaller tree species can provide cover to protect animals against predators, nesting for birds and nectar for insects which provide food for the birds and smaller mammals.



Native trees like the Oak have been recorded to support over 280 associated insect species. Introduced trees, for example Sycamore, supports only around 15 associated insect species

**Tall tree layer:** Taller trees will provide many of the benefits of small tree layer but will also contain areas of older and dead wood. A canopy of taller trees can provide shaded, cooler areas during warm weather; useful for both path users and wildlife to rest and cool down. A variation in light levels will also encourage a diverse range of plant species to develop beneath the main tree canopy. Species with different light requirements can then flourish within the same habitat.

**Managing water:** Areas of open water and boggy wetland areas are very important to our wildlife, particularly amphibians. Drainage features associated with path networks can increase the availability of wetland habitat, contribute towards a reduction in flooding and reduce the negative consequences associated with surface water runoff such as path / soil erosion and deposition of sediment into waterways.



Did you know that over the last 50 years nearly 70% of ponds have disappeared across the UK?

**Drainage ditches:** Drainage ditches often provide a valuable wetland habitat and it's not unusual to see them contain frog spawn or aquatic plant species. Drainage maintenance should be carried out during autumn or winter; to avoid disturbing invertebrate eggs. Excavated material should be left close to the ditch for a few days; allowing any minibeasts to escape back into the ditch.

**Ponds:** As part of an integrated and sustainable drainage system, it may be possible to create a single holding pond or a series of smaller ponds. These can provide a valuable habitat for amphibians, invertebrates and wetland vegetation whilst also slowing down the flow of water as it travels downstream. Care should be taken to ensure that their location isn't going to pose a significant risk to path users, particularly children. Pond embankments should be shallow sided; assisting smaller animals to get out more easily should they happen to fall in.



Ponds do not need to permanently hold water and areas of occasional open mud can be beneficial to some species

## Working safely



Prepare a risk assessment: work out what might go wrong then check to make sure you have taken measures to stop it happening



Check the area for exposed utility cables, broken bottles, syringe needles and dog faeces before any verge cutting or mowing work takes place



Learn to recognise signs of key tree diseases such as Ash Dieback (Chalara), Dutch Elm Disease or Acute Oak Decline and how to manage and / or report it



Do not plant trees above or below public utilities such as electric, gas or water. Undertake a utility search before planting any trees



Put up warning signs prior to commencement of any work and, when people come along the path, stop working until they are safely past



Do not leave large dead standing timber in situations that may pose a threat to path users or to infrastructure (such as buildings, roads and powerlines)

## Want to know more?

To find out more about managing your paths for wildlife, contact: [pathsforall.org.uk](http://pathsforall.org.uk)

## look after path features

**For people to have a positive experience of your path, you will need to look after more than just the path surface. This guide will help you to inspect and repair features such as signs and gates. It will also help you to check that bridges and boardwalks remain safe to use.**

### Need to know

Directional signs and waymarkers remain the principle ways of helping people to navigate without the need for a map. Over time, fingerposts and waymarkers will deteriorate, and may break. A regular inspection regime will help to anticipate future problems and keep your path network accessible and welcoming.

Frequent inspection and maintenance of gates, especially latches and hinges, will ensure that people can continue to gain access along your path. More complex structures, for example bridges, can be looked after though a combination of volunteers and expert help.

### Tools for the job



**Screwdriver** - not only for tightening screws, you can use a screwdriver for probing timber; to test for rot. Carrying a few screws may allow you to carry out an instant repair

**Mobile phone** - probably the easiest way of recording the condition of structures. Remember to take a note of photo numbers or maybe even use a gps app on the phone



**Paint and brushes** – to touch up signposts and lettering. Check on the original sign specification to get the correct colours



**Soapy water and cloth** – good for removing algae from signs



**Penknife** – useful for removing worn (or vandalised) way marker disks from signs, if they have been glued into position, or cut rope

**Grease or light oil** – wipe a thin film onto gate brackets to help prevent rust and keep mechanism working smoothly



### What and when?

Structures should be inspected at least once a year. It is also worthwhile undertaking an inspection after a major storm to make sure that there hasn't been any significant damage.

An annual inspection should involve checking that the structure remains 'fit for purpose' - in other words does it still do what it was designed for and remains safe to use.

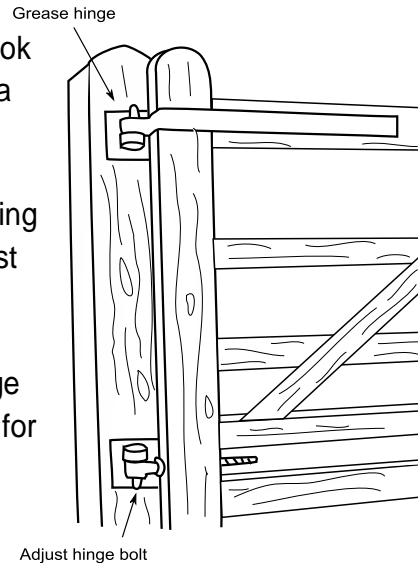
Make sure directional signs still point in the right direction and are legible. Check that waymarkers are clearly visible and in the right place. Simple inspections of bridges can be done annually by competent individuals but structural surveys need to be done by qualified persons.

Structures like gates also need frequent maintenance to make sure they operate properly.

## Getting the job done

There are no 'specialist' skills required to look after most path features however here are a few pointers that should help:

**Gates** - gates often 'sag' after a while, making them more difficult to open and close. Adjust the hinges to make sure the latch is in the right position. Often, one of the hinges will have a bolt which can be adjusted to change the angle of the gate - use a large spanner for this. Apply grease or oil to the hinges and latch mechanism if they are stiff.



**Directional signs** - loose directional fingers on the post may need bolts or screws tightened, renewed or added to; depending on the design of the post.

Repaint the lettering and symbols if faded or replace any stick-on plates that are worn, faded or damaged. Sometimes metal or plastic signs just need a wash if they've become obscured by algae - multi-surface cleanser in a hand spray bottle and a soft brush or cloth works very well.

**Waymarkers** - plastic roundels might be attached using 'security' screws or glued into position. Use a knife and flat bladed screwdriver to lever off broken or damaged roundels and scrape out any old glue before fixing a new one.









*For screwed-in roundels, use stainless steel or exterior coated screws or apply a thin film of grease to the screw and smear the screw head with a little grease once in place; to lengthen its life.*

**Interpretation panels** - wash off any dirt or algae with a multi-surface cleanser or cleansing wipes



*Acrylic panels need to be maintained with care - they can easily crack if you try to replace or overtighten the fixing screws or bolts.*

## Working safely

-  Prepare a risk assessment: work out what might go wrong, then check to make sure that you've thought about how to stop it happening
-  Take a first aid kit and put it somewhere accessible, just in case
-  Put up warning signs during work and, when people come along the path, stop working until they are safely past
-  Make sure that all tools are properly maintained and that everyone knows what each tool should be used for, and how to use it
-  Only use tools for their intended purpose
-  If you are working alone, make sure that someone knows where you are going and what time you expect to return. You should carry a mobile phone for emergency use, and you might find it helpful to 'call in' at regular intervals

## Want to know more?

Find out more detail about path feature maintenance in the **Lowland Path Construction Guide** and **Path Bridges**: visit: [pathsforall.org.uk](http://pathsforall.org.uk)

## use hand tools safely

**The maintenance of our paths will require the use of hand tools. This guide illustrates some of the more common maintenance tools including how to use, carry and store them safely.**

### Need to know

Using hand tools safely includes assessing the work to be undertaken, selecting the correct tool for the task and wearing appropriate clothing and / or personal protective equipment (P.P.E.). Important things to consider include:

- If digging into the ground - check there are no utilities, for example electricity cables or water pipes, within the working area
- Only use tools for their intended purpose
- Regularly check the condition of the tool and never use if broken
- Stop using tools if you become overly fatigued or otherwise unable to operate or control the tool properly

Using tools safely will help to protect the user and those around them; including members of the public that may be passing along the path. It will also make the task easier and help to protect the user from physical strain or discomfort through improper use.

### Tools talk

Before starting any practical work, and especially if you have a frequently changing workforce and / or new person(s) joining the group, it is important to undertake a tools talk to cover the correct and safe use of hand tools likely to be used that day. This tool talk should include: the tools name and purpose, how to check it is safe to use, how to use it safely and how it is safely carried to / from the work-site. In some instances, it may also be necessary to advise how tools should be stored when not in use.

Ask people to take personal responsibility for the safe use, transportation, storage and cleaning of the tool(s) they've used during the period of their work. If you have young people in the work party, make sure they are more closely supervised and supported.



*Only use tools for the purpose it was designed for. If you don't have the correct tool then don't undertake the task.*

Ask other members of the group to report any tools which may need repaired - perhaps set aside a separate area on the ground where faulty tools can be collected.

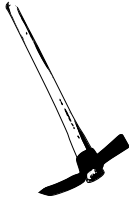


*We all have responsibility to ensure that tools are being used, carried and stored safely and correctly. Help others to stay safe.*

**Carrying tools:** if tools are to be carried by hand, hold them at your side and at the point of balance; ensuring you do not swing your arms when walking. NEVER carry longer and / or heavier tools on your shoulder or behind your neck as you risk serious injury if you lose your balance. Keep a safe distance from others and carry only one tool in each hand.

**Storing tools:** On-site, tools should be stored flat on the ground, remain clearly visible and laid out in an orderly manner. No tool should be propped up against a fence, wall, vehicle or tree as there is potential for them to fall over and cause injury. Similarly, don't hook tools onto tree branches, as people may walk into them, or stick them upright into the ground.

## Tools talk (contd.)



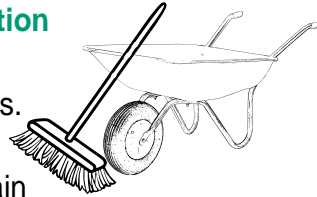
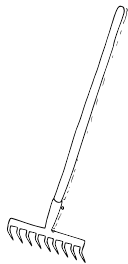
**Use of swinging tools:** includes tools such as axes, mells, hammers, pickaxes / mattocks, slashers and billhooks. Maintain safe working distance from others (min 3m), keep a good grip on handle and do not wear gloves when using swinging tools. For cutting tools; ensure blade is sharp, free from rust or cracks and has no chipping to the cutting edge.



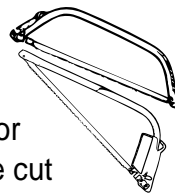
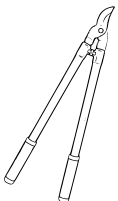
**Use of digging tools:** includes spades, shovels, forks, shuvholers and pinch bars. Position your feet to maintain good balance; ensuring they do not get in the way of the tool when being used and maintain a straight back when lifting materials. For spades and forks, use the ball of your foot to press down on the tool; using any other part of your foot may cause discomfort or injury. For hole digging tools, such as shuvholers and pinch bars, maintain a straight back, use your legs to lower and raise the tool into the hole and keep your head clear when lifting the tool upwards.

### Use of material gathering and transportation

**tools:** includes rakes, brushes and wheelbarrows. Never overload wheelbarrows. Only carry what is physically comfortable for the individual user and consider the terrain over which the material is being moved. Avoid overuse of rakes and brushes as this may cause physical discomfort. Rakes should be laid flat on the ground and with the tines pointing down.



**Use of cutting tools:** includes bowsaws, loppers, pruning saws and secateurs. Use correct tool for the task to be undertaken and avoid having to use excessive force or a twisting motion when cutting; for example, loppers are ideal for branches of up to a thumbs' width. Anything thicker should be cut with a saw. Wear gloves when using cutting tools; this will help protect your hand from sharp blades and allow cut vegetation to be pulled away after being cut. When using hand saws, keep gloved free hand at least 15cm away from the cutting blade and operate saw with smooth and long strokes.



## Working safely

- 👤 Prepare a risk assessment: work out what might go wrong then check to make sure you have taken measures to stop it happening
- 👤 Make sure that everyone knows what each tool should be used for, and how to use it. This allows people to change work task throughout the day
- 👤 Take a first aid kit and put it somewhere accessible, just in case
- 👤 When not in use, place tools flat on the ground and in a position that will not create a trip hazard
- 👤 Put up warning signs prior to commencement of work and, when people come along the path, stop working until they are safely past
- 👤 Take great care when cleaning or replacing blades. Make sure you have a good grip on the tool before you start and wear gloves for added safety
- 👤 If you are separating a mattock head from its handle, don't lean over it as you do it - you may get a nasty bump in the face if the handle bounces upwards

## Dressing safely

- 👤 Wear outer clothing that will withstand the rigours of your work. It should protect you from the weather, strong sunshine and from being scratched or pricked by vegetation.
- 👤 Wear stout footwear and consider getting steel toe capped shoes / boots or wellingtons. If there is a risk of standing on upturned nails or broken glass then invest in footwear with a steel mid-sole to protect against punctures.
- 👤 Wear other P.P.E. where required, for instance: dust masks, gloves, eye protection, hard hats and ear defenders.

## Want to know more?

To find out more about using tools safely, contact: [pathsforall.org.uk](http://pathsforall.org.uk)



# paths for all

# How to...

## keep water off paths

**With Scotland's high levels of rainfall, keeping your path drainage in good condition is essential. This guide will help you to inspect and maintain a range of familiar path drainage features.**

### Need to know

To be most effective, a drainage system should be able to intercept water flowing above or below the ground. It should also be able to receive water that has been shed off a path surface and then divert it onto open ground, into another drainage feature or toward a nearby watercourse.

Make sure that water doesn't sit on the bottom of the ditch and that it runs freely (gradients or between 1:15 and 1:40 are most effective). Culverts and drains should not be more than half full, during periods of heaviest flow, and should be kept free from debris. Look for evidence of water getting onto the path surface and causing surface scouring to take place. Check for soft spots on the path; they may indicate where water is seeping beneath the surface.

When inspecting drainage features, check that all stonework to culvert headwalls, cross drains and waterbars is secure and that any drainage pipes are in good condition and free from damage or blockage. Where there are drains along a path, look for signs of marshy ground or standing water; which could indicate blockage in the drain. Check any silt traps and pipe outlets to make sure that they are functioning correctly and are not full or blocked.

### Tools for the job

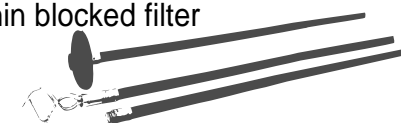
**Ditching spade or trenching shovel** - for general digging including digging out ditches and then removing the spoil



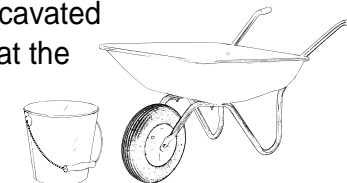
**Mattock** - for digging into hard ground, excavating ditches or cutting through roots



**Drainage rods** - for clearing pipes within blocked filter drains and larger piped culverts



**Wheelbarrow and buckets** - useful to move excavated spoil to a suitable location rather than leaving it at the side of a ditch or other path drainage feature



### What and when?

**Inspect path drainage features** - at least once every year and ideally during a spell of wet weather; where any possible drainage issues can be more easily spotted. In addition, always try to inspect drainage features after very heavy rain or floods to check that there has been no significant damage.

**Maintain drainage features in the early spring** - any dead vegetation needs to be removed before the new growing season otherwise it will rot down and create problems in the future.

**Repair your drainage system as soon as defects occur** - This will help to minimise damage to the path in the long-term. Be prepared to bring in expert help, if required - replacing a small culvert or re-profiling a ditch if fairly straightforward but rebuilding a cross drain or water bar requires a higher degree of skill and experience.

## Getting the job done

### Ditches

Remove any obstructions which restrict water flow along the ditch.

### Drains

Empty catch pits and clear leaf litter, vegetation and debris from the surface of the drain.



*If simple surface vegetation clearance doesn't help, you may need replacement stone and / or drainage pipe to get the drain working effectively again*

### Culverts

Clear out silt, debris and vegetation blocking pipes or ditches on the inlet and outlet. Secure any loose headwall stones where there is movement or gaps. If the headwall has been cemented in place it will be more difficult and involved to undertake repairs.

### Cut-off drains

Clear debris and leaf litter from grating / channel. Clear out silt from the drain channel and debris from the outlet end, as necessary.



*Carrying out repair work, rather than routine maintenance, requires additional skills, and you may need to use a contractor*

*The following features are more common on rural and upland paths:*








### Cross drains

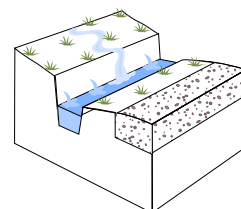
Clear out silt, debris and vegetation blocking the main channel and inlet / outlet ditches. Firm up any loose channel liner stone, where there is obvious movement or gaps.

### Waterbars

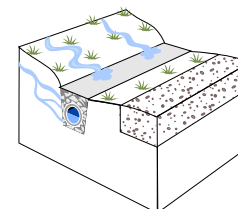
Clear out silt or debris blocking the bar channel, silt trap (if installed) and outlet ditch. Firm up any loose stones where there is movement or gaps.

## Working safely

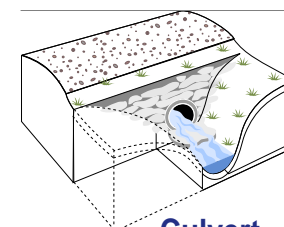
-  Undertake a risk assessment - work out what might go wrong, then check to make sure that you've thought about how to stop it happening
-  Take a first aid kit and put it somewhere accessible, just in case
-  Put up warning signs during work and, when people come along the path, stop working until they are safely past
-  Make sure that all tools are properly maintained and that everyone knows what each tool should be used for, and how to use it
-  Only use tools for their intended purpose
-  When using swinging tools, ensure that no-one comes within 3m of the operator and do not wear gloves when using swinging tools
-  Rest and refresh - stop working before you get too tired and make mistakes



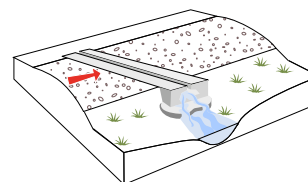
Ditch



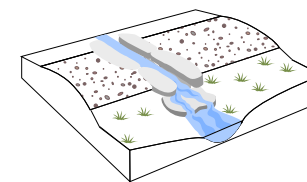
Drain



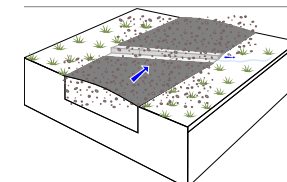
Culvert



Cut-off drain



Cross drain



Waterbar

## Want to know more?

Find out more detail about path maintenance in the **Lowland Path Construction Guide**: visit: [pathsforall.org.uk](http://pathsforall.org.uk)