The National Path Demonstration Site

at Oatridge College

an introductory guide

paths for all

The path to enlightenment

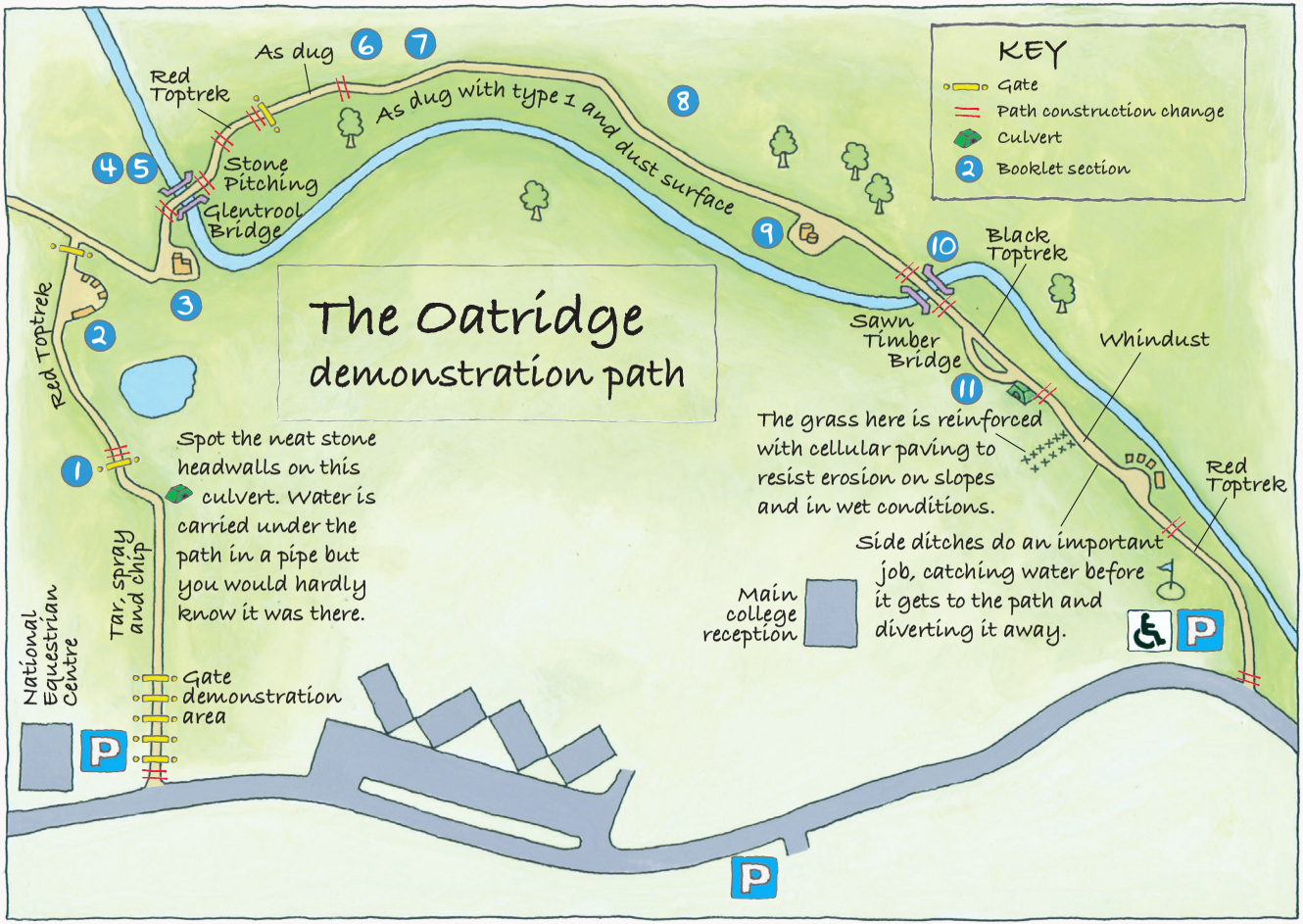
Good paths are essential if people are to enjoy the outdoors. But there's more to designing a good path than you might think. Paths need to open up access for as many people as possible, fit well with the landscape, and not create too many maintenance headaches. There's a lot to learn.

Paths for All is committed to greater public access to and enjoyment of the outdoors, and we've developed a path through the woods behind Oatridge College as a National Path Demonstration Site.

The path here shows a range of approaches to path and bridge building – you can also try out many different types of gates and barriers. At Battleby, Scottish Natural Heritage's conference centre near Perth, there's another demonstration site where you can see some of the materials and construction techniques that can go into building a path so it's accessible to as many different users as possible.

We hope both sites will help you think about what makes a good path and give you some ideas as you develop your own. You'll find lots more information and technical details on the Paths for All website **www.pathsforall.org.uk.**

Use the plan opposite to help you identify the different surfaces along the path and find some un-noticed but vital features.


The Oatridge
demonstration path
KEY
Gate
Path construction change
Culvert
2 Booklet section
As dug
Red Toptrek
As dug with type 1 and dust surface
Stone Pitching
Glentrool Bridge
Red Toptrek
Spot the neat stone headwalls on this culvert. Water is carried under the path in a pipe but you would hardly know it was there.
Tar, spray and chip
National Equestrian Centre
Gate
demonstration area
Black Toptrek
Sawn Timber Bridge
Whindust
The grass here is reinforced with cellular paving to resist erosion on slopes and in wet conditions.
Red Toptrek
Side ditches do an important job, catching water before it gets to the path and diverting it away.
Main college reception
P
P
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Gates, gates, gates

There's probably no such thing as a perfect gate. Gates have to stop livestock escaping, be easy for people to open and close, mark boundaries, allow tractors and machinery to pass through, and perhaps stop unwanted traffic like motorbikes.

Most gate designs are compromises: good at some of these jobs, less good at others. There are many different designs here at Oatridge, so you can see how each has its strengths – and its weaknesses!

You'll find questions and answers on plaques next to each gate to get you thinking: this booklet tells you more. Visit the Paths for All website for further details and technical information.

Chiltern 1.5m self-closing bridle gate

A wide gate takes up only a little more room, but can make a big difference for some users. The extra space can open up the outdoors for many more people: it's good for anyone pushing a buggy, or using a wheelchair or other mobility vehicle.

Steel vehicle barrier

This is a ‘minimalist’ approach to marking a boundary and keeping vehicles out. It can be useful set back from road edges to slow people down and make them think before crossing – though dogs and children might not even notice it! The metal tubes have an urban feel, and you would probably want to think of more sympathetic ways of achieving the same result in a rural setting.

Aston self-closing gate with trombone handle

The two-way catch on the inside of the post is useful, but it can get tangled in horse stirrups. Horse riders like the ‘trombone’ handle, but the 1.2 metre gap between the posts may be a little too narrow for some horses.

So what about about stiles?

A stile can be a huge barrier. People with arthritis or replacement joints can find climbing nearly impossible. For someone who can manage a steep or uneven path, a stile can mean an early end to a good day out.

Marlow one-way gate

One-way gates can be a good stock proof solution, especially when animals are only kept on one side of the gate and the gate opens towards them. These metal gates tend to work better with the self-closing mechanisms that use off-set hinges to close the gate automatically – it's difficult to install them badly. Some people think metal looks out of place in the countryside and prefer to use wood. What do you think?

Woodstock self-closing kissing gates

These gates will only let some users through. The Land Reform (Scotland) Act 2003 gives the right of responsible access to all non-motorised users: there's no hierarchy, but these gates may impose one. The larger gate can be opened further with one of the standard keys supplied by RADAR, the disability network – but how many people have one?

For more information about RADAR, visit **www.radar.org.uk**

Motorbike inhibitors

Keeping motorbikes out of places where they have no right of access is always a tricky challenge. These robust structures can help to make a point and will deter some motorbike riders, but they never solve the problem completely and horses just can't get through.

Henley self-closing gate with stock-proof handle

This handle design is a good solution to making a gate accessible to all – except cows and sheep! It must be properly adjusted and kept lubricated to be stock proof: all handles can become very stiff if they aren't maintained, making it difficult for people with limited arm strength to open the gate.

The stock-proof handle is a simple mechanism, but it needs to be properly maintained to make sure it's easy to operate.

Into the woods

Keep walking past the gates and you'll find an attractive path down to the river and through the woods that will bring you back to the start of the college drive. Numbered plaques along the way are linked to the sections in this booklet.

Like most attractive paths, a lot of work has gone into making this route. On well made paths you should be able to look around and enjoy the view, and not worry about your feet. Here, it's important to look down - the way the path has been built changes along its length. The map on page 3 will help you identify the different surfaces and construction techniques and spot some easily overlooked path features.

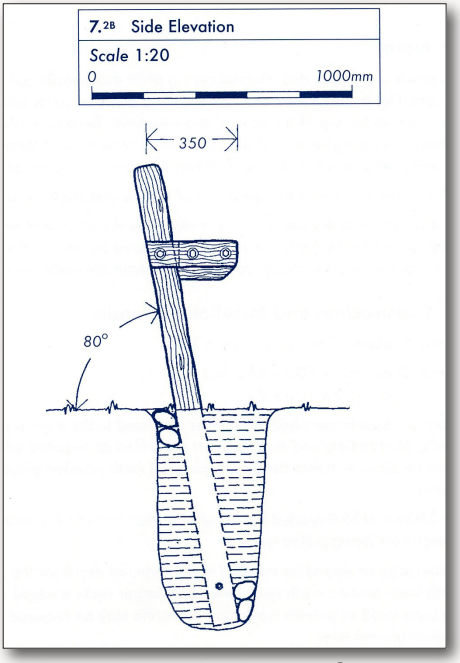
1 York two-in-one field gate

This gate design is a useful combination. It gives easy access for walkers, cyclists and horse riders as well as an opening wide enough for vehicles and animals. Notice how the gate has been installed with a generous, hard-surfaced turning area: this makes it a lot easier for wheelchair users and horse riders who need space to manoeuvre through the gate.

An ingenious hinge and bolt arrangement allows this gate to 'fold' in the middle.

2 Take a rest

Seats and resting places are essential. They create a sense of welcome, and make it possible for many people to use the path: children and families as well as people with restricted mobility will be glad of a chance to rest. Look for places to provide seats or resting places on slopes (on long hills you might need several!) as well as spots with good views.



You don't have to use conventional seats all the time. The 'perch' design here was developed by Paths for All: it's simple and can be better for people who might find an ordinary seat too low. There are detailed drawings in the *Countryside Access Design Guide*. Logs and rocks can make good seats too.

Another approach to resting places is to make something unique to your site or path, like this seat at Corrieshalloch gorge.

3 To ride or not to ride

Horse riders need somewhere to safely re-mount after crossing potential hazards like bridges. Notice how the ground surface around the mounting block is reinforced to cope with the increased wear and tear.

4 Troubled waters

If your path has to cross a river or burn, look for a straight stretch of water. The bridge here had to be on a bend because of other land uses – and it has led to all sorts of interesting challenges!

Bridges can change the flow of a river in ways you wouldn't expect. Here, the burn washed out the bank in a freak storm after the bridge was built. Have a close look at the area of willow and you'll see that we've reinforced the bank to stop the erosion, using a traditional technique called spiling: willow stems planted into the bank have been woven like a basket to hold the bank together. The bank becomes stronger, like a living wall, while allowing the water to flow over in a real spate.

The river is bound to flood here occasionally and would wash away any unbound path surface. So the surfacing just beyond the bridge is made from large stones and rocks packed tightly together: a traditional technique called pitching. It's usually found on upland paths, and it won't get swept downstream in the next flood! We've also made the path lower, creating a channel to drain the flood water quickly back into the river.

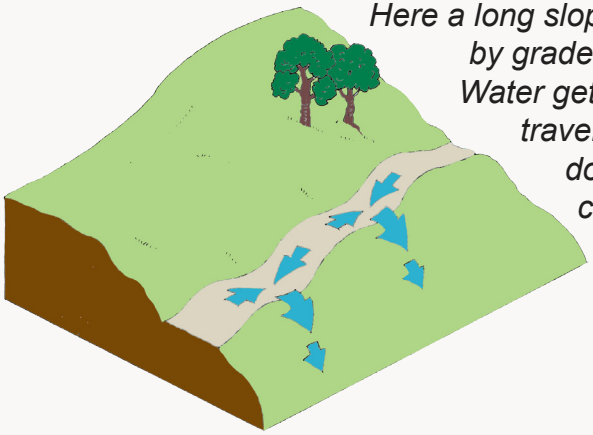
5 Confident crossings

Confident riders might feel quite happy riding across this bridge but for others the handrail could feel too low. The correct height for a handrail can vary for different users and situations: an assessment of the risks and hazards of each case is essential as you develop the bridge design. Paths for All's guide *Path Bridges* will help you.

Handrail uprights need strong fixings to withstand the leverage of any load on the rail. Details of this 'torsional restraint' design are in the Path Bridges guide.

6 Water, water everywhere...

Water damages paths more quickly and brutally than anything else. Working out how to deal with it is the most important part of building paths. You need either to stop water getting onto a path in the first place, or get it off as soon as possible. Often paths have ditches on the uphill side to catch the water before it reaches the path.



Here a long slope has been broken up by grade reversal (see picture). Water getting onto the path only travels a short distance and doesn't pick up speed or cause damage before it is shed from the path.

7 Go with the flow

Notice how the line of the path 'flows' through the landscape. Paths with steep gradients are easily eroded, so minimising gradients means less maintenance – and makes paths easier to use!

This section of path changed a great deal when it was upgraded. In some places the path had to be built up on an embankment of earth up to 1.5m high, in others the bank was reshaped dramatically. But the point is, it looks good. Path construction is an art as well as a technique.

8 Spot the borrow pits

The material used to make this path was taken largely from ‘borrow pits’ – holes dug on site to find suitable stone. The holes were then filled in and landscaped using material unsuitable for the path.

Path materials that are ‘won’ on site like this can blend perfectly with the surroundings. It’s also usually both cheaper and more eco-friendly than bringing in large quantities of stone from elsewhere. Always carefully assess the quality and usefulness of the material (it’s not always good stuff!) before you dig it out. You could end up with a new path that turns to clay in the rain...

Good quality landscaping is crucial to hiding the old pits. Can you see where the borrow pits for this path were?

Path building can be messy, as this view of the site under construction shows! But careful work means there’s little trace after a very short time.

Measure twice, cut once

Getting the materials for a path from the site itself is a good principle. But on this stretch, the on-site material had a clay content that was too high and the surface of the finished path became very muddy after rain. We’ve had to construct a new path here using imported material to make sure that the path is fit for purpose. It’s been an expensive exercise. Always be sure of the suitability of the materials you might use before you use them. The moral of the tale… measure twice, cut once.

9 Think different

Another mounting block, but rather different from the one you saw earlier. There is often a choice about how to build path features, and natural materials like this tree trunk blend in well with the environment. Marking the tops with deep saw cuts helps make wet timber less slippery.

10 Budget replacements

The main beams – the parts that span the river – are the most expensive part of a bridge and must last as long as possible. If you look carefully, you will see there are no bolts through these beams – anywhere. Any holes drilled for bolts would encourage rot and shorten the beams' life. This bridge design makes it easy to replace just the deck, balustrade and handrails when they wear out: much cheaper than building an entirely new bridge.

11 Make it usable...

Have a look at the two path lines that lead out of the wood. The original path sweeps down the slope in a pleasing line, but because of the gradients and cross fall (the slope across the path width) it's not fully accessible. The lower path is accessible and meets Countryside for All Standards. The paths don't look that different, but one is a barrier that will prevent some people from enjoying their outdoors. Careful planning makes all the difference.

People at a Paths for All training event take a close look at the bridge's construction.

...and keep it usable.
You need to check bridges regularly and be prepared to maintain them, especially after floods. Keeping paths and associated structures maintained is just as important as building them well to start with. Think ahead at the planning stage and try to 'design in' features that will minimise the maintenance you need to do and make it as easy as possible: you can get more help with this on the Paths for All website.

Countryside for All Standards

The minimum standards paths will need to meet to ensure they can be used by people with disablilities. Paths that meet these standards can be promoted using the ♿ symbol.
The standards are published by the Fieldfare Trust
www.fieldfare.org.uk

We hope you've enjoyed using the demonstration path, and that it's given you plenty to think about. You'll find a lot more information about path design, construction and maintenance on the Paths for All website: **www.pathsforall.org.uk**. There is a feedback form there too: we would really appreciate your comments!

It is sometimes possible to arrange guided visits to the demonstration sites so that you can really get down to the nitty-gritty of path construction. Contact us if you are part of a group that would be interested.

You might also like to visit the other National Path Demonstration Site at Battleby, the Scottish Natural Heritage conference centre just north of Perth. There you'll find more information about just what goes into making a path – and learn why a path can be like a Mars bar…

We are grateful for the financial contribution from Scottish Natural Heritage and West Lothian Council, and support from Oatridge College. All the gates and access controls at the gate demonstration area have been generously donated by Centrewire Ltd and K Barriers.

paths for all

Scottish Natural Heritage
All of nature for all of Scotland

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