



Grindleford Geological Trail



Trail Summary

Transport



Circular walk of roughly 4½ km along moderately easy tracks through streamside woodland and heather moorland, including some ascents. Option to add a 2½ km round trip through the National Trust’s Longshaw Estate via a tea room and shop in a former hunting lodge.

Distance



Allow



Difficulty



“Discover a medieval packhorse route, an inclined railway, and a quarry that supplied stone for building local dams.”

This circular walk starts at Grindleford Railway Station and takes you to a historic quarry, through ancient woodland and a medieval packhorse route, and past the notorious Topley railway tunnel. You’ll see abandoned millstones and evidence of Bole Hill quarry’s important role in supplying stone for building Derwent and Howden dams. There’s an inclined railway, a former mill, a martyrs’ chapel and a prehistoric hillfort. You’ll see how local stone undergirds the land and its wild-life and is crafted into walls and houses for local people.

This guide is intended to compliment rather than supplant appropriate navigational equipment and due care should be taken when undertaking the self guided trails. We recommend you carry and know how to use the correct Ordnance Survey map. Please wear sturdy footwear, take appropriate weather protection, food and drink and please remember to follow the Countryside Code.

Start and finish:

Grindleford Railway Station: Upper Padley. Derbyshire. OS White Peak Area, OL24 SK251 788.

Access:

Train to Grindleford station on Sheffield to Manchester line. Bus stops at The Maynard, near to the station. For current information on public transport phone Traveline on 0871 200 22 33.

Parking: Car park at Grindleford station. Roadside parking on B6521 running above Padley Gorge. National Trust car park at Longshaw Lodge.



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Geology and Landscape

The landscape we now see has its origins some 320 million years ago, when this part of Britain was close to the equator. Geologists call this period of time the Carboniferous and the rocks you see are Millstone Grit sandstone. These rocks were laid down as sediment in a major delta, around the size of today's River Nile.

Along the way you'll be able to turn 'rock detective' and track the evidence that helps us to interpret how these rocks were laid down all those millions of years ago.



Geology in daily life

The fine-grained layers within the gritstone series of rocks prevent this Dark Peak area from drying out completely. This means the local moorlands hold plenty of water – hence the dams at Howden and Derwent. After heavy rain the water runs clear and dark, coloured brown by moorland peat.

Durable gritstone provided our ancestors with an ideal construction material and source of crushing stones for the paper pulp industry or millstones for grinding grains. Look out for Padley Mill (point 4), which was once water-powered.



Geology and wildlife

Acidic gritstone provides the perfect soils for heather moorlands and oak and birch woodlands. You'll see both landscapes on this walk, which includes the nationally important Site of Special Scientific Interest (SSSI), Padley Gorge nature reserve.



The Peak District rock story

The Peak District's rock story begins long before the Carboniferous Period, way back in the Ordovician Period, over 450 million years ago. It was then that the basement rocks were laid down, rocks only seen now in deep boreholes.

At the beginning of the Carboniferous, around 350 million years ago, the area was a warm, shallow sea. Tiny remains of sea creatures fell to the sea floor and over millions of years they compressed into a thick series of limestones – what we now call the White Peak. Later, in the Upper Carboniferous the Millstone Grit was laid down on top of the limestone, giving us the Dark Peak.

Over time luxuriant equatorial forests grew up and died back many times as the climate changed. This created the Coal Measures. Some still remain, away to the east in the Sheffield and Chesterfield area.

Since the Carboniferous Period, the Peak District has been uplifted, folded and eroded and has also moved thousands of kilometres to its present latitude. What you see in the landscape is largely the result of processes that have been active over the last 2 million years, a period that has seen rapid climatic change from Ice Ages to times when it was warmer than today.

The story continues. Geological processes are not static, as you will see as you move around the trail. Not only will you see effects caused by natural processes, you will also see the impact of human activity upon the landscape, in the form of several quarries.



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1 Grindleford Railway Station, Upper Padley

Close your eyes and imagine, just for a moment, that you can travel back in time, back to the time when this was a major river delta, 320 million years ago. Padley Gorge as you see it now was a river channel with million of tons of sediment.

Open your eyes and become a 'rock detective', hunting for the clues along the way that lead us to such a momentous conclusion!

Head for the station café, to your right if you've come from Manchester, or opposite if you've arrived from Sheffield.

2 Grindleford Station Café

Dating from around 1898, the old station is now a walkers' café. Please do not park in their car park.



3 Totley Tunnel

Gritstone-built Totley Tunnel is 5½ km long – Britain's second longest inland railway tunnel. It opened in 1893. You can see the date carved into the keystone (image right).

The tunnel took 4 years to build. Work started from both ends in 1888. Amazingly, the workers met in the middle with a very close match. The Navvies who worked here suffered appalling conditions and many died from the work. When the Derwent dams were constructed at the turn of the century there was a very different approach to the navvies' welfare. Find out more about Birchinlee Tin Town in the Industrial Peak leaflet.

Cross the railway bridge.

4 Burbage Brook and Padley Mill

Burbage Brook tumbles down to the River Derwent from high on the gritstone moorland below Burbage Edge.

Padley Mill dates from around 1475. From the 1580s it was used for smelting lead mined at Eyam. A water wheel drove the bellows. In the 1760s it became a flour mill. By 1860 it was a sawmill and you can still see traces of its pulley-and-wheel power system.

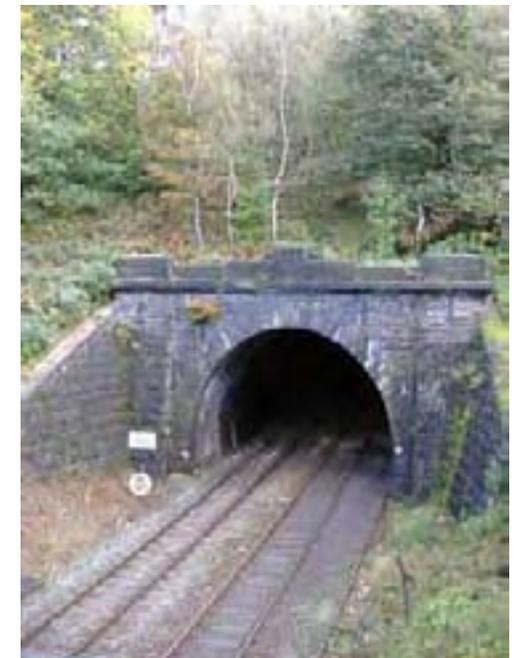
Stay on the track past the railway workers' cottages to Padley Chapel.

5 Padley Chapel and Ruins

Gritstone-built Padley chapel was once gatehouse to the now ruined Padley Hall. It was used as a barn for over 100 years, until it was restored as a chapel in 1933. The Padley Martyrs were found here – two Roman Catholics priests put to death for their faith in 1588.

Over the track you'll find Brunt's Barn volunteer conservation centre. The name honours Harry Brunt, who did much for the National Park – see the plaque by the door. There's a medieval pigsty alongside (image left).

Continue to the National Trust sign at the cattle grid.





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6 Cattle Grid and Bridge

Down to your left you see the stone walls of a bridge. This crossed over Bole Hill quarry's inclined railway (point 8), which brought stone down from the quarry to the valley railway line to build Derwent and Howden dams between 1901 and 1914. You can see the incline through the silver birch trees.

Turn back towards the gate and make your way up the slope from there.

7 Quarry Sites and the Inclined Railway

The old quarry was not the tranquil wood you find now but a noisy, dangerous industrial site full of machinery. The wood only grew after the quarry was abandoned. The areas of level ground on your left are the bases of workers' huts and workshops. There are concrete platforms below.

Follow a small path off to your left to the route of the inclined railway.

The railway ran on a counterweight system, with a large winding drum. The weight of descending stone-laden trucks hauled empty trucks back up to be filled. Imagine the thousands of tons of rock it transported – all formed millions of years ago from river sand and gravel.

Upslope you can see where quarry workers carved a gully through the cliff for the railway (below). **Take the path to the top.**



8 Base of the Winding Drum

Here you can see the remains of the hilltop winding drum (image right).

Turn right and after about 20 metres take the clear path up the steep slope on the left. Continue up a second and third slope. Follow the well-defined path along, then sharp left up a stony path to a plateau. Stay on the track and after about 500 metres go through the silver birch trees to the quarry face. Continue along the quarry face to a small pool.



9 Quarry Face and Pool

Take a look at the rock face – not too close to start with. You should be able to see some near-horizontal lines or layers in the rocks. These are bedding planes. They are one of the telltale signs that you are looking at sediment laid down under water.

Move in close and you may be able to see rounded quartz pebbles. These probably rolled or bounced along the river bed, moved by the current, then dropped and settled. If you are lucky, you might be able to see some small areas of soft sediment, known as clay balls. The prehistoric river picked up fine clay sediments as it flowed, rolled them, then dropped them again as clay balls among the rock we now find.

Quarrymen extracted millstones with great care, prizing out the blocks of high-quality stone along natural joints and bedding planes. You can also see drill holes in the rock face to the right of the pool.

Go back to the main track and continue another 100 metres to a stack of large millstones.

One of a suite of downloadable trails available from www.peak-experience.org.uk

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10 Abandoned Crushing stones

Millstones, grindstones and crushing stones were made here for over 600 years. Imagine the work that went into crafting these circular stones. Cutting the stones from the rock face, shaping and hauling them. Some of the abandoned work is perfect, but elsewhere you can discover the faults that forced craftsmen to abandon unsaleable work. The stones you see here were crushing stones destined for export to Scandinavia to crush wood into pulp for the paper industry. But the industry collapsed in the 1930s and the stones were simply left here.

There's a solitary millstone to the left of the track. Take the path opposite (on your right) up the face to the top. Cross the stile then continue on the clear path parallel to the road. The second gate on your left takes you onto a path down to a deep hollow.

11 Hollowgate

This old packhorse route is called Hollowgate.

Follow the path to a stream.

12 Burbage Brook Footbridge

Take in the view: Unmissable on the horizon to your left are the flat-topped natural gritstone outcrops

of Higger Tor and Carl Wark. Carl Wark was used as a prehistoric enclosure. An impressive stone and earth rampart cuts off the outcrop to the west and a stone wall skirts the top of its southern cliff. It is probably late Bronze Age (about 3,000 years old).



For refreshments: Make an enjoyable round trip to Longshaw Lodge (point 13).

Continue the trail: Pick up the trail at point 12.

13 Longshaw Lodge

Cross the stone footbridge and busy minor road and follow the signs through estate parkland to Longshaw Lodge National Trust tearoom.

It was the 5th Duke of Rutland's shooting lodge and dates from the 1820s. The lodge is built of local gritstone in typical grand estate style. It's about 2 ½ km there and back.



14 Quarry and Millstones

Stand at the bridge looking downstream. There is an old quarry on your right, down a footpath among trees. Discarded millstones lie around, testimony to unpaid labour. Look out for quartz pebbles in the clean-broken rock faces, ancient stones that fell among the sediments which make up this gritstone.

Return to the streamside path for the Padley Gorge nature trail through Burbage Wood reserve.

15 Padley Wood

This nationally important site is typical of the upland oak and birch woods that thrive on acidic gritstone soil. The National Trust manage the nature reserve – home to outstanding wildlife, including woodland flowers and autumn fungi. It is illegal to pick these! Spotted and pied flycatchers are special treats among the many woodland birds who live here.

Follow the path through the reserve.

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16 Gunpowder store

Note the small waterfall to your left, from a stream that passes under the road.

Keep going and keep an eye out for more millstones until you see a small stone building on your right.

This was a gunpowder store for Bole Hill quarry. If you look inside you will see the roof is arched.

Continue along the path to the large stone building on your right.



17 Valve House

The large stone building is a valve house along the aqueduct carrying water from Derwent Dam (left).

Exit the wood by the National Trust Padley Gorge sign and walk down the lane. At the end of the lane turn left to rejoin your earlier path. Cross the railway at Topley bridge and then why not check out the refreshments at the Old Station Café?

We hope you enjoyed your walk! Please tell your friends.

There are more Peak Experience Self-guided Trails for you to download at www.peak-experience.org.uk

Inspired by the landscape? Send us photos or stories from your walk to share with others on www.MyPeakExperience.org.uk

And if you or your children were inspired to create poetry, songs, paintings or drawings we'd love to see them.

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