

Ashes Quarry, on the edge of Stanhope, is surrounded by the North Pennines Area of Outstanding Natural Beauty (AONB) and European Geopark

European Geoparks

The North Pennines AONB is Britain's first European Geopark, a status endorsed by UNESCO, and a founding member of the Global Geoparks Network. Geoparks are special places with outstanding geology and landscape, and where there are strong local efforts to make the most of geological heritage through interpretation, education, conservation and nature tourism. To find out more visit www.europeangeoparks.org

What's in a name?

The Weardale quarrymen called the layers of limestone 'posts' and gave each a name that described its appearance or, in some cases, its toughness to work, such as 'Crabby', 'Mucky', 'Thin Cockle' and 'Bastard'. The layer called 'Stiff Dick' formed the quarryman's bench (see overleaf).

SECTION OF LIMESTONE									
Scale 4 feet to the inch									
No	NAME OF POST	Thickness	ROCK	Height from bottom	Height from top	Height from bottom	Height from top	Gravity	
1	Red Indian	4		4	67 9			Light	
2	Plate Bed	1 4		5 4	66 5			Do.	
3	Key Top Post	1 4		6 8	65 1			Do.	
4	Plate Bed	1 6		8 2	63 7			Do.	
5	Top Post	3 10		12	59 9			Do.	
6	Plate Bed	1 2		13 2	58 7			Average	
7	Second Post	2 2		15 4	56 5			Do.	
8	Third Post	1 4		16 8	55 1			Heavy	
9	Crab Post	3 10		20 6	51 3			Do.	
10	Second Crab Post	1 2		21 8	50 1			Do.	
11	Logger Head	4 8		26 4	45 5			Do.	
12	Toby Gifles	1 6		27 10	43 11			Do.	
13	Crabby	6 6						Do.	
14	Mucky Post	2 2		34 4	37 5			Centre	
15	Red Post	1 4		39 6	34 3			Average	
16	Eleg	2 2		42 4	29 5			Do.	
17	Thin Cockle	7		44 5	27 4			Do.	
18	Thick Cockle	2 7		47 1	24 8			Do.	
19	Three Toms	2 1		49 9	22			Light	
20	Black Bed	2 8		53 9	18			Average	
21	Five Thin Posts	2 8		57 11	13 10			Bench line	
22	Dun Kit	4		60 3	11 6			Average	
23	Bastard	4 2		61 6	10 5			Heavy	
24	Dun Jin	2 4						Do.	
25	Stiff Dick	1 8						Do.	
26	Whaley	3 6						Do.	
27	Jack Post	6						Do.	
28	Yard Post	2 6						Do.	
29	Newcastle Post	1 9						Do.	
30	Bottom Post	2						Do.	

With thanks to June Crosby, Stan Harrison and William Stobbs for their invaluable help in producing this leaflet.

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NORTH PENNINES
Area of Outstanding Natural Beauty



The North Pennines is one of England's most special places – a peaceful, unspoilt landscape with a rich history and vibrant natural beauty. In recognition of this it is designated as an Area of Outstanding Natural Beauty (AONB). The area is also a Global Geopark – an accolade endorsed by UNESCO.

Follow this 2-mile (3km) walk from Stanhope and gain a fascinating insight into Weardale's industrial past.

North Pennines AONB Partnership
www.northpennines.org.uk
+44 (0)1388 528801
info@northpenninesaonb.org.uk

NorthPenninesAONB
@NorthPennAONB
northpennines
northpennaonb

The AONB Partnership has a Green Tourism award for its corporate office



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info@northpenninesaonb.org.uk
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NORTH PENNINES
One of the AONB family

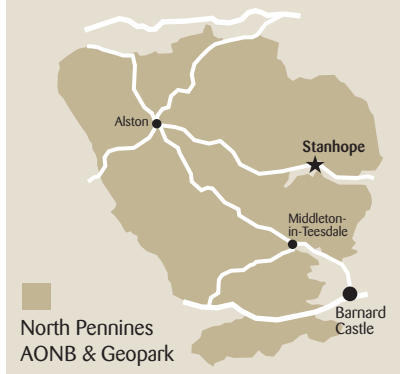
Ashes Quarry

Here, for 70 years and more, hundreds of men toiled by hand using only the most primitive of tools to dig the Great Limestone out of the Weardale fells, just a short distance from the centre of Stanhope. They left behind a huge, mile-long hole in the ground which today, over 60 years since they downed tools, nature is slowly reclaiming.

This 2-mile circular route follows the paths the quarrymen would have once taken to work. It rewards a bit of a climb at the start with fantastic views over Stanhope and a fascinating insight into Weardale's industrial past.

Look out for the START on the map overleaf and follow in their footsteps...

Walk length/time: 2 miles (3 km), taking about 1 – 1½ hours. A shorter version (about ½ mile/less than 1km), avoiding the climb and rougher paths on the fell, is shown on the map.



Start: Durham Dales Centre car park, Stanhope. GR NY 996 393

Terrain: With no stiles to climb, the route follows public footpaths (and short stretches of minor roads) on stony and grassy tracks and paths. Two footbridges take the path across a disused quarry before climbing to the edge of open moorland. Strong shoes or walking boots are recommended as the ground is rough and boggy in places. Please take note of the safety signs.



Danger – steep rock faces



Do not climb fences – stay away from the edge



Please keep to footpaths



Keep dogs on a lead – sheep grazing

Public transport: Buses run to Stanhope from Bishop Auckland and Durham (Mon-Fri only). For timetable information call Traveline on 0871 200 2233.

Facilities: Stanhope has many shops, pubs and cafés, including one at the Durham Dales Centre where there are also public toilets.

Useful maps:

Ordnance Survey – 1:25 000 Explorer 307 Consett & Derwent Reservoir

British Geological Survey – 1:50 000 Geological Sheet 26 Wolsingham

Welcome to a special landscape...

The landscape around Stanhope has been over 300 million years in the making. From tropical seas and deltas, to mining and quarrying – all have played their part in shaping this beautiful landscape.

Tropical North Pennines

The rocks that make up most of the North Pennines are layers of limestone, sandstone and shale. They formed in the Carboniferous Period – 360 to 300 million years ago. In those distant times, the North Pennines lay near the equator and was periodically covered by shallow tropical seas. Limy ooze and the shelly remains of sea creatures accumulated on the sea floor. Rivers washed mud and sand into the sea, building up vast deltas on which swampy forests grew.

In time, the limy ooze hardened to limestone, the mud and sand turned into shale and sandstone, and the forests became thin coal seams. Periodically, the sea rose and deposited limestone again. This cycle happened many times, building up repeating layers of limestone, shale, sandstone and coal. One of these layers is the Great Limestone, the rock that was once quarried at Ashes Quarry.



Carboniferous tropical sea in which the Great Limestone formed

© NPAP/Elizabeth Pickett

Layers in the landscape

The contrast in hardness of these different rocks has shaped the North Pennine hills. Layers of hard limestone and sandstone stand out as terraces, whereas the softer, easily eroded shales form the gentler slopes between the terraces. On this walk you'll not only see the Great Limestone that was quarried, but sandstone, shale and terraced hillsides too. The limestone beds at Ashes Quarry are either horizontal or gently folded which helped make quarrying viable as a long term activity.

Quarrying in the dale

We can see today how Weardale's many old quarries in the Great Limestone have left their imprint on the landscape. The opening of the Stanhope and Tyne Railway in 1834 paved the way for large scale extraction of limestone from the dale, via the unique Crawleyside incline.

Ashes Quarry

Limestone quarrying began near the foot of the incline at Ashes in the 1870s. The loaded wagons were hauled over 1½ miles up the incline to nearly 1500 feet above sea level by an ingenious system using ropes, gravity and winding engines.

The Consett Iron Co. Ltd bought the quarry in 1900 as it needed a secure supply of limestone for its expanding steel works. Limestone was used as a flux in the furnaces and helped remove impurities as slag. In its heyday, at the start of the First World War, the quarry produced 136,000 tons of limestone in one year.



Ashes Quarry c.1914

With a coil of fuse and tin of detonators under his arm, shotfirer Jack Harrison stands in the centre of a group of quarrymen including some German PoWs. Several of the workers are carrying their 'mells' – the large hammers used to break up the rock which was then loaded from the 'bench' into the North Eastern Railway's wagons seen on the right.

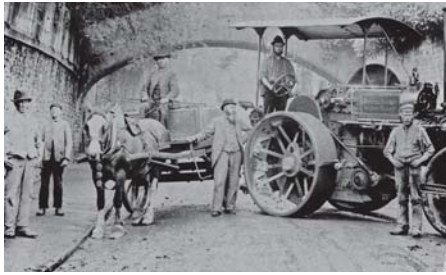
By 1920, 200 men were employed, a small army of quarrymen continually working the face. Pairs of quarrymen, often father and son or two brothers, would then set to work a 'panel' (about 10 – 15m long) of the face. The best could fill two wagons of rock in a day – 24 tons of limestone.

As quarrying ate further into the hillside, the effort and cost of removing the thick 'overburden' – the sandstone and shale that had to be removed before the limestone could be worked – made the whole operation uneconomic. Production finally ceased in the late 1940s.

Ashes Quarry

1 Stanhope

By the 1900s lead mining had declined in Weardale with quarrying becoming the main source of employment. The market town of Stanhope was the centre of much of the quarrying activity in the dale.



Roadstone – one of the quarry's products

Weardale District Highway Board steamroller and horse-drawn water cart repairing the road with stone from local quarries outside Stanhope Castle, close to the site of the Durham Dales Centre. Note the old footbridge, which was demolished in the 1960s and allowed the road be widened for large lorries needing access to the new Blue Circle Cement works up the dale.

Turn left out of the Dales Centre, pass St Thomas' church and the fossil tree on your left and then turn left again up Church Lane. Turn left at the top along High Street.

2 Methodist chapel

Ashes Quarry supplied both builders and sandstone for this impressive chapel, completed in 1871. Comfortably seating 350, it stands as a testimony to the important role that Chapel played in the lives of the many mining and quarrying families who were devout Methodists.

Turn right at public footpath sign and follow the path (known locally as 'The Paddicks') up towards the quarry.



An old 'steam navy' removing the overburden. It required two drivers, a fireman, a banksman – 'to keep things right' – and horsemen.

3 Stop, Look and Listen!

Towering above you at the entrance to the quarry are the waste tips of overburden. You are crossing the old railway track that, to your left, took the limestone away to Consett via the Crawleyside incline – there are still some wooden sleepers buried in the trackbed in places. Next to the railway line there are still a few remains of the old 'knapping benches'. Here men used hammers to break up limestone with ironstone impurities for use as roadstone.



"There were once so many of them, you couldn't hear the individual hammering but just a continuous noise in the town", Stan Harrison recalls being told by former quarrymen.

4 Pay day

A little further up the path on your left are the foundations of the small, blue-slate roofed office where the quarrymen would collect their weekly pay packets. A huge range of skilled workers – from horsemen and engine drivers, fitters and firemen, to drillers and platelayers, joiners and blacksmiths – were paid weekly according to the hours they worked and were known as 'datal' workers. In contrast, the men who worked at the face were on piece work and got paid for what they produced. From these earnings they had to pay for their own tools, any repairs and the blasting of their 'panel'.

5 Two bridges

These two footbridges spanned the railway tracks which carried the extracted overburden to the waste tips. From this point you can really begin to appreciate the full extent and scale of the quarry workings stretching away both to your left and right. On your left are the old concrete remains of the Compressor House. Air was pumped from here to the rock faces to power the compressed-air hand boring machines.



Ashes Quarry c.1920s

The overburden was removed from the quarry in horse-drawn tubs which were tipped from the top of the finger-shaped waste heaps.

6 Ridley's Vein

The section of rock you have just walked over was never quarried, as a mineral vein, known as Ridley's Vein, runs vertically through it and spoils the limestone. The remains of 'Crawlah' lead mine which predated the quarry workings, can still be seen here. Begun in the 1830s, it extended northwards from here into the hillside for over a mile. In the small spoil heaps look for lead-grey galena, the lead ore.

Follow the path close to the fence along the edge of the quarry to your left.



7 Quarry workings

The full extent of the quarry workings comes into view. Look for the old cast-iron compressed-air pipes left hanging in mid air over the quarry edge and, far below on the quarry floor, the remains of the gunpowder hut. You can also just make out, though it is now overgrown by trees, the tunnel entrance where railway engines would haul away the wagons full of the hard-won rock. As you leave the fence to follow the footpath, you cross a small ditch that ran the length of the quarry to stop surface water running off the fell from washing down the quarry face.



Climb to a gate in the wall, turn right through a wooden kissing gate and then turn left. Keeping the fence on your left, after 30m turn right to follow a path which climbs to the top of Crawley Edge.

8 View from Crawley Edge

There's a great view of Weardale and the old limestone quarry workings on the other side of the river. The valley sides above Stanhope are typical of the North Pennines landscape: horizontal terraces, which mark the layers of hard sandstone and limestone, with softer shales underlying the gentler slopes between them.

Continue on the path along the edge of the moor, which skirts round many old sandstone quarries.

9 Splendid isolation?

High up on the windswept moors, far away from the townsfolk, these long low cottages once housed an isolation hospital for those suffering from smallpox and other infectious diseases. It was built in 1910 to replace earlier tents, where the unfortunate patients must have received plenty of fresh air! The hospital closed in 1951.

Turn right and follow the path by the wall to the left of Spring House, the first cottage you can see. Continue down to join East Lane.

10 East Lane

You are now walking down the old drove road which led up to the fell. It is lined with the stone-built houses of former quarry workers. By 1902 the quarry workings had reached East Lane. A tunnel had to be built under the road so that quarrying could continue on the other side towards Shillelough Burn.



Cut down loco

The Consett Iron Co. had this little steam engine specially built by Hawthorn, Leslie & Co. Ltd at their Forth Banks Works in Newcastle in 1920 to fit in the tunnel which linked the two parts of the quarry. Its cab and chimney are much lower than the company's standard design.

11 Landfill

As you walk down the hill, look over the open fields to your left where Ashes Quarry once extended. Much of this was infilled with waste from Blair's Foundry, Stanhope's steelworks, in the 1980s and restored as farmland.

Turn right through the gate to re-enter the quarry and continue past the old farm sheds.

12 The Great Limestone

You are walking on the quarry waste. To your right you can see the layered grey rock; this is the Great Limestone, at 20m one of the thickest layers of limestone in the North Pennines.

13 Back to nature

In recent years, with the old quarry now in the hands of the Stobbs family, some of the old waste heaps have been landscaped and trees planted. Other areas are just being left for nature to reclaim. Where once was all noise and dust and activity – hammering, drilling, blasting, steam engines whistling and wagon wheels screeching round the sharply-curved railway tracks – now just a few sheep quietly graze and the sounds you are most likely to hear are those of the birds that are returning to nest here. The dust has settled in Ashes Quarry.



Turn left to follow the track down through a small wood to emerge at a gate. Continue down the path with Fairfield House, the old Stanhope & Rural District Council offices, on your left. Turn right on to High Street and, after 200m, left again down Church Lane to retrace your steps back to the Durham Dales Centre.