



# Castleton Geology Trail - Long Distance Route



Trail Summary

Transport



The circular route explores geology from 350 million years ago to today, providing outstanding scenery high and low, near and far. There are some steep climbs and possibly a little mud involved.

Distance

7.5 km  
4.5 mi

Allow

5hr

Difficulty



*“Discover the heart of the Peak District’s geological story. Dramatic landslides, a Bronze Age settlement and a 3,000-year-old mine – in stunning hills formed under a tropical sea.”*

In the area around Castleton, Hope and Edale you can get to the heart of the Peak District’s 350-million-year-old geological story – in more ways than one! Explore the Peaks and visit the belly in Castleton’s four stunning show caves.

From Castleton you can scale the shale and gritstone heights of Mam Tor (the Mother Mountain), see the brooding Dark Peak gritstone of Kinder Scout to the northwest, and overlook the geologically older limestone White Peak area of Hope Valley, with Castleton and Hope villages tucked into the valley bottom.

This guide is intended to complement rather than replace 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:**

Castleton visitor centre in the village centre. OS White Peak Area, OL24. SK 149 829.

**Access:**

Regular buses to Castleton from Sheffield, Manchester and Edale. Or take a train to Hope and bus into Castleton from there. Call Traveline on 0871 200 22 33 for the latest information on times. Castleton has several car parks.



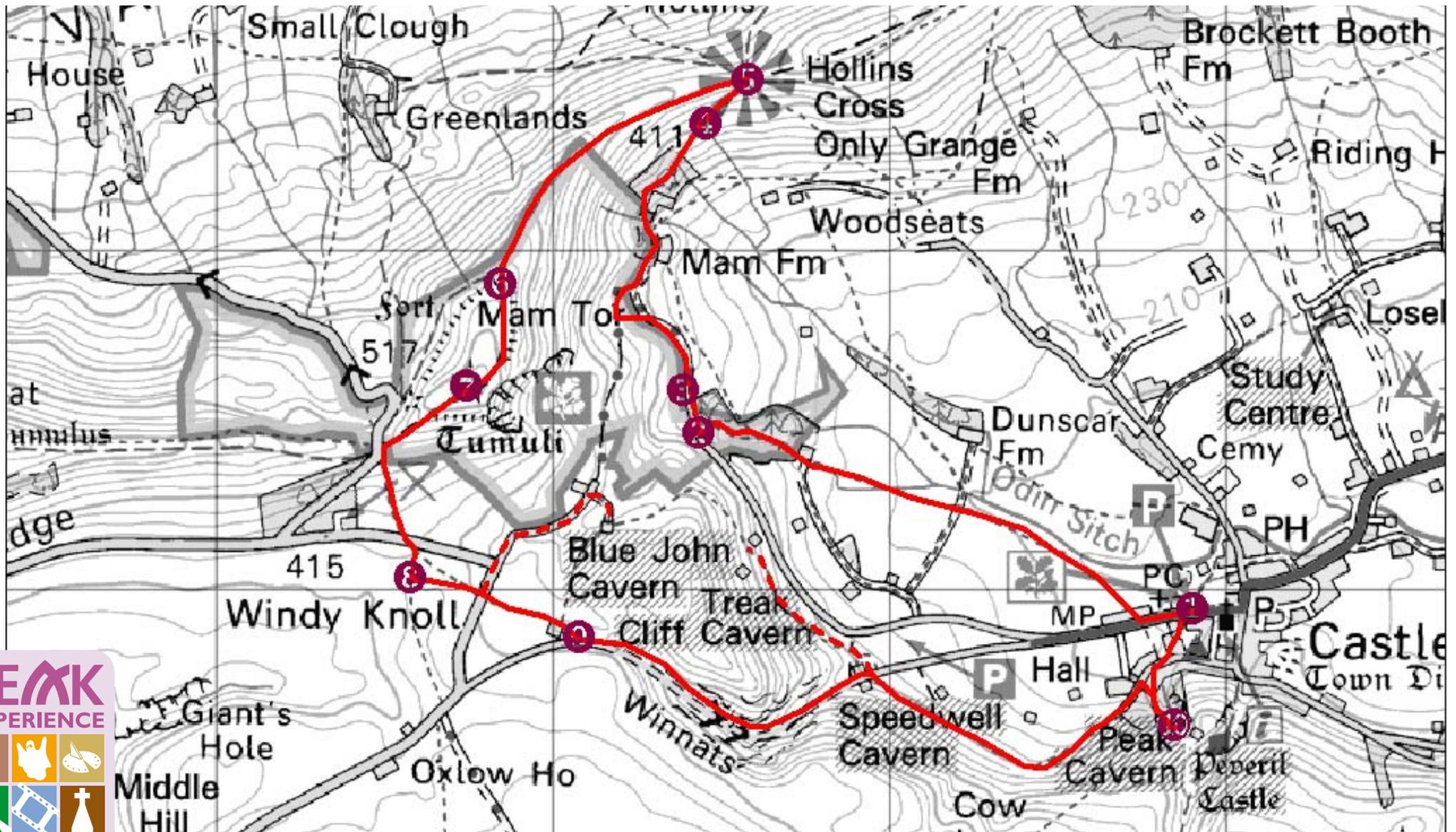
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## 1 Castleton Visitor Information Centre

Castleton information centre stands in the village centre by a large pay and display car park with public toilets. The centre contains a tourist information service, a museum, a shop and exhibitions by local artists. The museum has displays on Castleton's geology and prehistory, local history, hang gliding and climbing in the area.

Norman Peveril Castle, built of local stone, stands proud on the hillside opposite.

Exit the visitor centre, turn right and head along the A6187 (Buxton Road). Within 10 metres of passing the brown sign directing you to the entrance of Peak Cavern turn right by a wooden fingerpost and follow the narrow path between a house and stone wall into a field. This is Odin Stitch path. It may be muddy, and you will cross a number of stiles as you follow the fingerposts to Mam Tor and Odin Mine.

After nearly 1 mile you will reach the road. Turn right and head for the silver National Trust sign – your next stop.

## 2 Odin Mine

There's evidence to suggest this ancient lead mine has been mined since the Bronze Age, 3,000 years ago. It was first recorded in 1280, when John of Bellhag was caught poaching 'at the entrance to Odin'.

The National Trust board explains how miners set fires in the mine to split rocks for lead, in the days before powder explosives.

Odin Mine lead rake formed when mineral-rich molten rock (magma) ran through cracks in the limestone. Galena is the main Peak District lead type. The cliff behind formed at least 335 million years ago from a tropical reef near the equator, before this part of the Earth's surface drifted north over the molten rock below.

The small limestone cave you can see is safe to explore, although the approach can be slippery. The narrow chasm to the right, full of tumbled rock, is the way to the old mine entrance. Be aware of uneven ground while you explore.

The bumpy spoil heaps to the right are home to metallophyte ('metal-loving') wildflower species. Mountain pansy and spring sandwort or 'leadwort' live on lead-contaminated soils where most flowers cannot survive.

Go back over the road towards the bus stop to see the crushing circle.



Next to the metal crushing circle is a stone that looks like a millstone (image left, Mam Tor in background). Mining women used the horse-drawn wheel to crush rocks, so mules could take them to hilltop furnaces where precious lead was melted out and collected. Mining communities used cliff-face updrafts to power their furnaces, just like today's hang gliders use the updrafts to soar.

Leave Odin Mine and turn left, heading along the road that leads away from Castleton. Pause by the road gate next to the pond and information panel. Please be aware that vehicles still use this road.

## 3 Mam Tor Landslips

This excellent viewpoint shows Mam Tor's grey-brown shales exposed by a prehistoric landslip. Continuous landslips led to the road closure in 1979. The information board shows the geological origins and structure of the local area. Mam Tor is made of layered shales and gritstones washed in by prehistoric river systems in the Namurian Age about 315 to 330 million years ago.

Newts and other wildlife live in the small pond. Enjoy looking, but please don't disturb them.

Continue up the bumpy road and take either the first or second gate on your left. Follow the grassy path up to the most degraded part of the disused road. When you've finished exploring, head down to and through the gate on the hairpin bend. Go through the small wicket gate opposite, to the left of the National Trust's Mam Farm sign. The grassy ascent gives way to a sometimes muddy route, clearly etched into the hillside. Cross a stile and then pause at the abandoned, lichen-covered stone gateposts.

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The big metal ring you've just passed is about 5 metres across. What do you think it was used for?



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## 4 Views Over the Valley

From this fabulous view back over the valley, you'll see the prominent landmark of Win Hill to the left. As you pan around, Hope cement works, with its plumes of white smoke signalling the wind direction, is set in stark contrast against the natural backdrop of Abney Moor. Further across, the entrance buildings to the Treak Cliff and Blue John Caverns can be seen tucked into the hillside, whilst Mam Tor stands proud in the landscape to your right. Narrow medieval fields bounded with stone walls catch the eye and the Hope Valley runs like a river between the ridges. Use the panorama sketch to help you identify the other landmarks from this breathtaking spot.

Continue along the path until you reach a circular stone plinth at the top of your ascent.

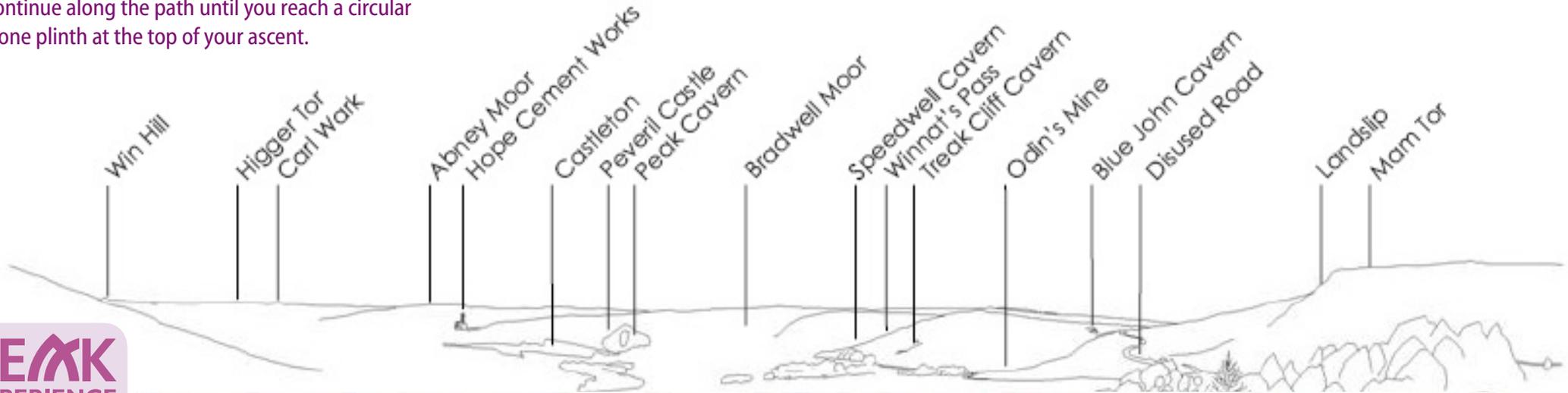
## 5 Hollins Cross

From the hilltop crossroads you get an overview of Peak District geology. Castleton lies in the limestone White Peak Hope Valley below. Over the ridge lies Edale with gritstone Kinder Scout dominating the Dark Peak skyline. Pale paths and dark stone walls criss-cross Edale and trees line its waterways. Edale Mill and the workers' cottages nearby are built of local gritstone and date from the 1790s. The isolated farmsteads or booths you see are typical of upland farm settlements. Notice where green pasture gives way to heather moorland, the high exposed soils too poor for many grasses. Skylarks sing overhead. The valley trains run from Manchester to Sheffield.

From the path you came up, turn left and head up along the ridge. Please use the paved way. It is essential erosion control, helping protect this popular walking route for the future.

Have a rest when the path ahead crests a hill between two mounds. They're the ends of the late Bronze Age / Iron Age ramparts which protected Mam Tor's hilltop enclosure, and this is an original entrance. The hillside shadow reveals the line of the ramparts.

Freshly broken wall stones show the true stone colour, before the exposed surfaces react with oxygen or are colonized by lichens.



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## 6 Mam Tor Iron Age Hillfort and Ramparts

You are standing at the original entrance to Mam Tor's hilltop enclosure, between the large ramparts our ancestors built to protect the enclosure, and impress their neighbours. Inside the enclosure, duck left off the path to look down on the sheer ramparts. About 3,000 years ago people used antler picks and wooden shovels to carve them out. For extra defence, they built a wooden palisade above the ramparts. They created more than 70 flat circular platforms for buildings – houses and stores. Now the only circular homes are for moles!

Return to the path and continue for a couple of hundred metres until you reach another modern-looking stone plinth.

## 7 Trig Point

This Trig Point was a reference point for surveyors and mapmakers. If you're here on a clear day, then take your time to digest the astounding views in all directions. See how today's quarry workings reveal layers of rock laid down over millions of years.

Follow the path down from Mam Tor and pause at the wooden handrail to look back along the ramparts. The National Trust board shows how they might have looked. Where the path briefly runs along the roadside, you can clearly see the exposed bedding planes in the eroded hillside opposite. Go through the wooden gate, take the steps down to the left through another wooden gate and cross the grassland to the asphalt road. Cross the road carefully – it's surprisingly busy – and go through the gate to the disused quarry ahead.



Mam Tor from the air. The remains of the ramparts are the dark channels in the middle of the image

## 8 Windy Knoll, the Disused Quarry and Mine

The rough crescent-shaped disused quarry can be fun to explore and Windy Knoll cave has quite a prehistory. Archaeologists found mammoth, rhinoceros, hyena, lion, wolf, fox and bear bones. Look out for fossil traces in the rocks. They're all jumbled up, suggesting the remains were already dead when they arrived here. You might see shiny galena spots too – traces of lead ore.

Look out for fallen pieces of black, sticky material (not to be confused with sheep droppings!). This is part of a Carboniferous tar lake that existed around 325 million years ago.

Across the road under Mam Tor you'll see bare white-grey rock exposed near the field wall. It's the only remaining sign of a disused mine.

Exit the quarry on the left and follow the grassy path that runs parallel with Mam Tor. You will see Blue John Cavern off to the left. Carefully cross the road, go through the gate and head across the field. After the second gate, follow the farm wall round to a pedestrian gate onto the road. Descend inside the wall line, off the well-used road, until you reach another gate.

One of a suite of downloadable trails available from [www.peak-experience.org.uk](http://www.peak-experience.org.uk)

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Mam Tor is sometimes called the Mother Mountain (mam = mother, tor = hill). It's also known more sinisterly as the Shivering Mountain, because of the many landslips in the area.



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## 9 Winnats Pass

You can just about stay off-road to descend this astounding gorge. Winnats Pass is cut into the limestone right through an ancient reef and is over 1 km long. Geologists have different theories about how the gorge came to be. The current favourite suggestion is that Winnats Pass is an ancient channel that filled with rock. Then over the last 2 million years Ice Age meltwaters broke the stone away and cleared the Pass again. Look out for fossils in wall stone and broken rocks.

Look up to see the extraordinary rock formations on the skyline. Try imagining the birds are all fish, to get a sense of how this land appeared when it was formed, still underwater. Perhaps the shadowy grass slopes lead you to imagine sea plants undulating with the currents.

The roadside is littered with blocks of limestone that have fallen because of the continuing processes of erosion. Rock falls are not common, but they cannot be predicted – so don't get too close to the rocky sides of the valley!

Look at the sheep. See how 'stuff' clings to the wool around their backsides. Further north in England, these lumps are called Winnats. Is this how Winnats Pass first got its name? From the lumps of rock seemingly clinging precariously to the cliff? Perhaps not. Many say 'Winnats' is a local contraction of 'Windygates', and it can certainly be windy here.

For millions of years underground water ate away at the limestone and formed networks of underground caves. At Speedwell Cavern there are toilets and refreshments, and the chance of an underground boat trip!

## 10 Peak Cavern: The Devil's Arse

Peak Cavern was the more refined name for Castleton's only fully natural show cave. But Peak's Arse or the Devil's Arse is the older traditional name. The other show caves are all mines.

From the 1600s to 1800s rope spinners lived inside the cave mouth. The damp conditions were ideal for making rope to supply the lead-mining industry. The workers built pylons all down the hillsides to stretch the ropes ready to sell – another example of Castleton's geology supporting local industry. Theresa Tomlinson's children's novel *The Rope Carrier* gives an excellent account of this.

From Peak Cavern, return to the visitor centre by following the righthand fork of the path, over a stone bridge. Happily, you'll find several teashops and ice-cream sellers on the way.

We hope you enjoyed this trail. If you have any comments please contact us on [peak-experience@peakdistrict.gov.uk](mailto:peak-experience@peakdistrict.gov.uk) or upload your images and comments to [www.mypeakexperience.org.uk](http://www.mypeakexperience.org.uk)

Written by Georgia Litherland and Dan Boys

Photos by Bill Bevan and courtesy of Treak Cliff Cavern

Panorama sketch by Dan Boys

Design by Dan Boys

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Just beyond Speedwell, brown signs direct you to Treak Cliff Cavern and Peak Cavern. Carefully cross over the road and head right towards the Longcliff National Trust sign. Follow the path, ensuring the wall is on your left. On entering the village, look for a green public footpath sign on a lamp-post directing you right. Follow this path to the cavern.