

Visiting

Eycott Hill Nature Reserve

We hope you enjoy visiting Eycott Hill Nature Reserve and following this self-guided geology trail.

The route isn't entirely way marked on the ground so please use the enclosed map.

We recommend following the white topped posts to the top of Eycott Hill.

A hand lens is useful for examining the rocks more closely. Please carefully replace any rocks you pick up and leave them so others can enjoy them.

Take home only photographs.

The ground at Eycott Hill Nature Reserve is uneven and at times very wet so sturdy wellington boots are recommended. Please note there are no visitor facilities on site.

Nearby facilities

The Sportsman's Inn, just off the A66 near Berrier, and the Mill Inn in Mungrisdale serve lunch and evening meals.

Cocklakes Farm Shop and Tea Room is on the other side of the A66, opposite the Sportsman's Inn.

There is a petrol station at Rheged, on the A66 near Penrith.

Close by, you may also like to visit...

Berrier Highbanks Wood Local Geological Site, just over the road



Photo by S. Woodhead

About us



Cumbria Wildlife Trust

Cumbria Wildlife Trust is the only voluntary organisation devoted solely to the conservation of the wildlife and wild places of Cumbria. The Trust stands up for wildlife, creates wildlife havens and seeks to raise environmental awareness.

JOIN US!

If you love Cumbria and wildlife too, why not support Cumbria Wildlife Trust? Visit www.cumbriawildlifetrust.org.uk

Cumbria GeoConservation is a specialist group of Cumbria Wildlife Trust.



The group aims to look after geological conservation sites in Cumbria, working closely with both the Cumberland and the Westmorland Geological Societies. Volunteers hold three formal meetings each year and aim to visit at least one geological site each month.

Thank you to Elizabeth Pickett, John Rodgers, Chris Thompson, and Sylvia Woodhead for their valuable advice and expertise.

Map reference

OS Landranger sheet 90, Explorer Map OL5. GR: NY 394 301. Size: 216 hectares. Status: Site of Special Scientific Interest.

Directions

By car

From the M6 junction 40 follow the A66 towards Keswick. After approx. 7 miles turn right, signposted Hutton Roof (look out for the Sportsman's Inn from the A66), follow this road round to the right and then take the left, signposted Hutton Roof, Berrier and Whitbarrow. Follow this road for 1.6 miles through the hamlet of Berrier, the nature reserve is on the left hand side.

By bicycle

Eycott Hill Nature Reserve is adjacent to National Cycle Network route 71 on the Mungrisdale loop. Follow NCN71 signs.

By public transport

The nearest bus stop is 1.5 miles away at the Sportsman's Inn just off the A66. The regular service between Penrith and Keswick stops here.

www.cumbriawildlifetrust.org.uk



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Eycott Hill Nature Reserve Geology

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Protecting Wildlife for the Future

Eycott Hill Nature Reserve millions of years in the making

Eycott Hill's geological story goes back almost 500 million years. Ancient lava flows, sandwiched between older siltstones and mudstones and younger limestones, give an insight into the origins and evolution of the Lake District and make this nature reserve nationally important for geology.

Ancient ocean

480 million years ago, early in the Ordovician Period, sediment washed into the ancient Iapetus Ocean. Layers of mud and silt built up, hardening to form the siltstones and mudstones known as the Skiddaw Group. These rocks, among the oldest in the Lake District, make up the nature reserve's western edge and the impressive masses of Skiddaw and Blencathra.

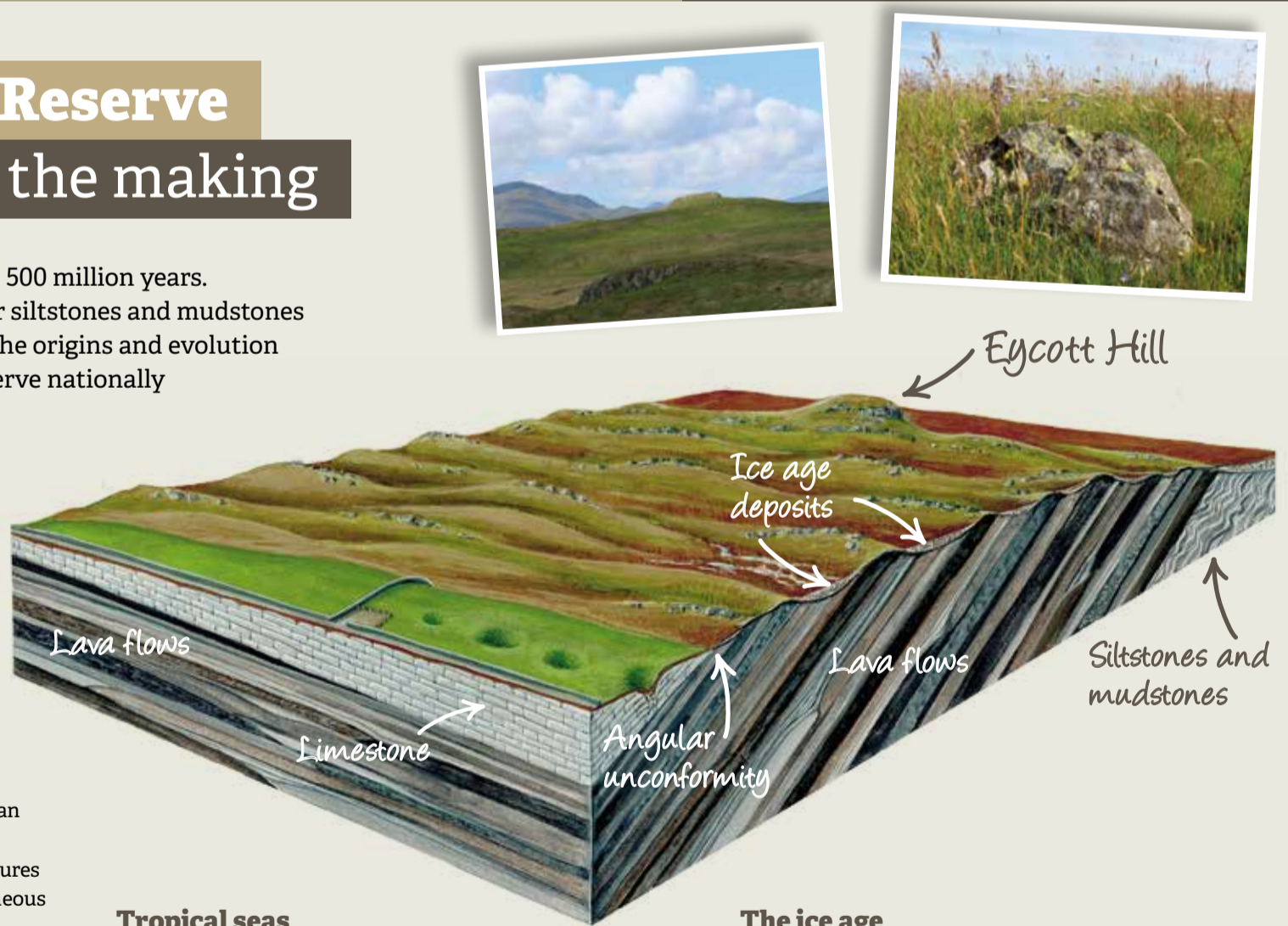
A volcanic landscape

Around 450-460 million years ago, the Iapetus Ocean began to close as surrounding continents moved together, triggering volcanic eruptions. Lava flowed from long fissures and vents in the earth's crust and formed a hard, dark igneous rock called andesite.

Over 20 separate lava flows were erupted and later tilted and eroded to leave the stepped landscape visible at Eycott Hill today.

The ridges are the remains of ancient lava flows and the hollows between formed as weaker layers and softer material eroded away.

The older lava flows on the nature reserve are noted for large, pale feldspar crystals, up to 4cm in length, which formed as molten rock cooled slowly in a magma chamber.



Tropical seas

Almost 100 million years later, during the Carboniferous Period, the eroded lava landscape was covered by a warm, shallow sea.

The remains of sea creatures accumulated on the sea bed as a limey mud which hardened over time to form limestone.

These limestone layers are now part of a 'ring' of younger rocks that tilt away from the central Lake District.

The ice age

During the last ice age, around 20,000 years ago, a thick ice cap covered the Lake District.

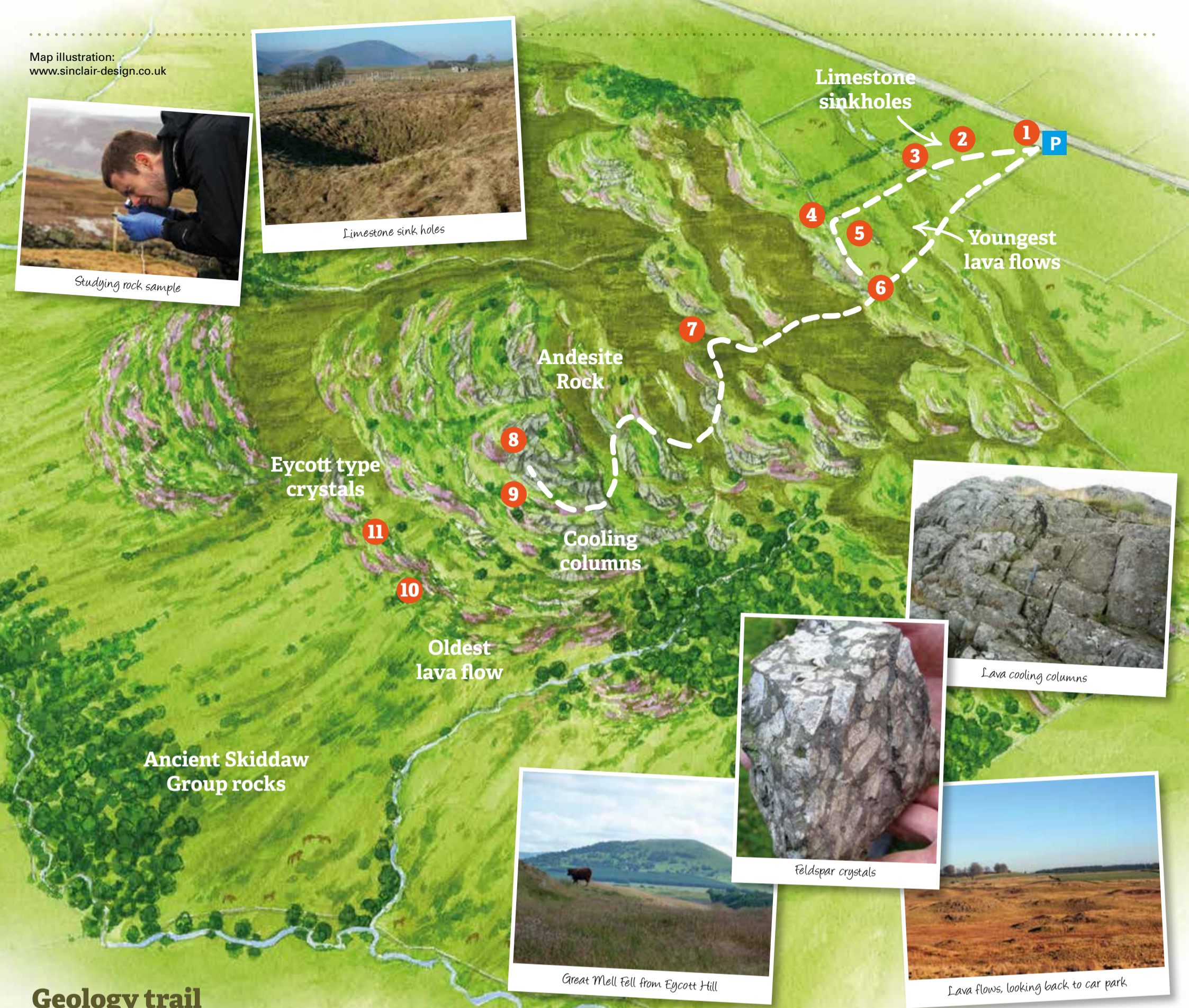
Ice streamed from the central fells and flowed over Eycott Hill. The ice carved out softer material and weaker rocks from between the lava flows and left behind 'erratic' rocks from other locations which help geologists determine ice flow directions.



Studying rock sample



Limestone sink holes



Lava cooling columns



Feldspar crystals



Great Mell Fell from Eycott Hill



Lava flows, looking back to car park

Geology trail

1. Enjoy a panoramic view taking in most of the Lake District rock groups including the Skiddaw Group of the northern fells, the Borrowdale Volcanic Group in the central fells, and the Eycott Volcanic Group.
2. Hollows in the ground, known as sinkholes are a clue to the limestone rock that lies below the glacial deposits, soils, and grass here. Limestone reacts with rainwater, which is very weakly acidic, and dissolves to form sinkholes.
3. Follow the white topped posts to cross the footbridge and stand on the first ridge of Eycott Volcanic rock dating back 450 million years. The lava flows here are the youngest on the nature reserve.
4. Continue following the posts to the viewpoint to see pale grey limestone, dark grey Skiddaw slate, and dark green, almost black volcanic rocks in the viewpoint walls.

Blocks of stone by the gate show large, pale feldspar crystals that formed in the oldest Eycott lava flows located to the west of the nature reserve.

5. The outcrop opposite the viewpoint shows evidence of 'flow banding'. These look like sedimentary layers, but formed when the lava was molten and flowing.
6. Follow the white topped posts to go through the fell gate, noting the small pieces of Eycott lava on the ground and large pieces in the stone wall.
7. As the path meanders through the wetland the hollows in the landscape between the ancient lava flows become more obvious.
8. At the summit look back over the lava ridges and enjoy the distant view east to the Pennines, Crossfell, Great Dun Fell and the Eden valley, south past Great and Little Mell Fell, and across to Blencathra, Bannerdale Crags, and Carrock Fell.

9. Get up close to the crags around the summit and look for a fresh face. The rock is still dark with small crystals indicating that it cooled quickly.

Some of the lavas here are quite thick and show some layering. As the lava cooled from about 1,000°C the rock contracted and formed rough cooling columns.

Make your way downhill from the summit to the lowest lava ridge. There is no way-marked path at this point so take extra care.

10. This is the oldest lava flow. Holes in the rock show where geologists have taken rock cores to find the latitude of the land when the lava cooled.
11. At the north end of the lowest ridge is an exposure of Eycott lava, with characteristic large pale feldspar crystals. Close up you can see flat shiny faces, which catch the light. These represent planes of cleavage in the mineral.

Retrace your route to the car park.