

The Landscape of the Illey Valley

This trail is characterised by boundaries, both natural and man-made. One of these is a ridge which marks the watershed for the West Midlands stretching from the Lickey Hills in the south to the Rowley Hills and beyond. In this area the M5 crosses the ridge and has been a prominent feature in the landscape since it opened in the 1960s. To the east of the ridge is the Birmingham Plateau with dense urban development reaching up to the M5. This contrasts with the rural landscape to the west, with the Clent Hills dominating the view as the land drops away steeply towards the Severn Valley. Numerous streams rise from springs on this side of the watershed and flow anonymously to join the Illey Brook barely a mile from their source. The Illey Brook rises to the north of Romsley Hill and runs in a northerly direction to the west of the trail route, joining the River Stour in Halesowen.



The Clent Hills

At the height of the Ice Age around 450 thousand years ago this area was deeply covered by an ice sheet. As the ice melted, erratic boulders were left in its wake on the land surface or buried in the glacial till beneath. Below the till the bedrock in this area is of Carboniferous Age (around 300 million years old) and consists of mudstones and sandstones visible in a few places on the trail.

Boundaries have always played an important part in human society, from personal territorial limits to national borders, and this area has had many changes. Illey Parish has been in Shropshire, Worcestershire and then Dudley MBC since 1974. Boundaries often follow streams and field edges, and the M5 has created a new boundary, its eastern edge now dividing Birmingham from Dudley MBC. The current boundaries mean that this trail lies mostly in Dudley MBC, starting and finishing in Birmingham, with a short stretch in Worcestershire. But erratic boulders knew no boundaries except those dictated by nature.

Extra Special Boulders

Erratic boulders are all part of our heritage, but some have gained extra significance. The Bench Mark Boulders (1 & 2) are the only erratic boulders we know of to have been used in this way. The mark usually consists of an arrow pointing to a line (a spot in these examples). In the late 19th century the Ordnance Survey created a network of bench marks at stable sites to provide an accurate record of the height above mean sea level at many points. The data was recorded on large scale Ordnance Survey maps with the initials BM and the height in feet. At Locality 1 the height is recorded as 555.5 and at Locality 2 as 522.1 feet above sea level. These stones were clearly regarded as stable features in the past.

Boulder 5 lies within the Illey Pastures Site of Special Scientific Interest designated for its wild flower meadows. It lay almost buried until unearthed during this project (*see photo overleaf*). Along with boulder 6 it was known to John Humphreys, a glacial researcher from Bromsgrove. In a paper on 'The Great Ice Age' in 1902 he recorded many boulders around SW Birmingham, including both of these huge specimens. His description tells us that they are "veritable giants in size, one lying on a sloping bank, slab-like in form with its surface polished as if it had lain with its face on the rock floor under the glacier..." He goes on to say: "It is a truly remarkable boulder and has doubtless given its name to the adjacent Warstone Farm." (*See Locality 6 for more on this.*) Of boulder 5 he noted that it was almost buried, but "the portion exposed measures nine feet in length". Humphreys descriptions closely resemble recent observations, but the full size of these Ice Age giants remains unknown.

Visit our website: erraticsproject.org

© 2023 Herefordshire & Worcestershire Earth Heritage Trust
Glacial Boulder Trail 8, July 2023



Made possible with

Heritage Fund

UNIVERSITY OF
BIRMINGHAM



Birmingham's Erratic Boulders Heritage of the Ice Age

Glacial Boulder Trail 8 Illey Wilderness Trail Woodgate Valley Country Park to Illey Pastures



Take a trip back into deep time to discover relics from the Great Ice Age half a million years ago. Thread your way past glacial erratic boulders, mostly from the mountains of Wales and brought here by the power of ice. This trail links these little-known bastions of our prehistoric heritage.





Arenig Fawr

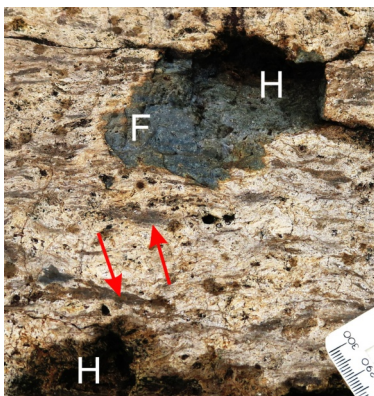
What are glacial erratic boulders?

These are boulders moved by a glacier to a different place and left there when the ice melts. The boulders can often be matched with their source, allowing the flow of the glacier to be reconstructed. The photo shows the eroded east face of Arenig Fawr, the source of most local erratics.

What is distinctive about the Arenig rocks?

The volcanic rocks from Arenig in North Wales display features showing they formed as pyroclastic flows which are very hot, ground-hugging flows of rock debris and gas such as those which buried the Roman city of Pompeii. The photo (right) shows a clear example of a cleaned rock.

The weathered surface of the rock is cream-coloured, but where the surface has chipped away (F) the dark green colour of the fresh rock is seen. Larger rock fragments in the deposit often weather out as holes (H). Elongated black fragments (indicated by the red arrows), were originally



blocks of pumice (volcanic glass full of gas holes) which became flattened by the weight of overlying deposits whilst they were still hot. Geologists call this a welded tuff.

What is special about the Birmingham boulders?

The boulders on the trails originated not in the last ice age, but in a more severe, older one, probably 450,000 years ago. Most of these erratics are volcanic rocks from the Arenig area of North Wales - around 80 miles (130km) to the west of Birmingham, but a few are basalts and sandstones from the Midlands. The rocks are exceptionally tough, resulting in unusually large erratics up to three metres across. The photo (top right) shows one of the largest in the area, which is on private land.



What have these boulders meant to local people?

In ancient times the size of the boulders was an obstacle to movement, so many were used to mark district or property boundaries just where they were left by the ice, or moved short distances. But where had they come from? They were unlike the local red sandstone, which was relatively easy to work for building stones. Theories abounded: were they brought with the Biblical Flood? by giants? or were they meteorites?

Through the 19th century scientists began to unravel the real story of their glacial origins. As more and more were unearthed during building works in the late 19th and early 20th centuries, they became valued as curiosities to be preserved and celebrated.

The photo below shows a large boulder in Cannon Hill Park at the turn of the 20th century, preserved with metal railings and later accompanied by an explanatory notice. The original



Photo by W.J. Harrison. British Geological Survey, P236744

notice and metal railings are gone, but the boulder is still there and is included in Glacial Boulder Trail 7, 'Boulders by Bike'. The smaller boulder in the photo is now missing.

The walking and cycling trails in this series show some of the ways in which these boulders have captured the interest and imagination of scientists, historians and local people.

Trail 8 Route Details

This trail starts and finishes in the urban fringe of SW Birmingham but is mainly focussed on exploring the glacial legacy in the farmland and countryside beyond. From Woodgate Valley Country Park (WVCP), Clapgate Lane, B32 3DS, the trail heads west over the M5, then follows tracks and paths with some rough ground to the Black Horse Inn on Illey Lane. Continuing to an enormous hidden erratic beside a stream, it then passes through Illey Pastures Site of Special Scientific Interest (SSSI) to another hidden erratic in the bank of a gorge. Retracing your steps across Illey Lane the route goes over a motorway footbridge, continues through the southern extension of WVCP and back via a surprise erratic in Broadhidley Wood.



Unearthing Boulder 5

Trail length and alternatives: 5¼ miles (8½ km). There are no easy alternative routes, but the Black Horse Inn, Illey Lane makes a suitable place to split the route into two halves. Locality 7 could be visited as an add-on to Trail 4 which also starts in WVCP (*see project website or the Trail 4 leaflet*).

Accessibility: This is a challenging route with narrow paths (sometimes a little overgrown), several stiles to cross, and some muddy ground. Walkers should wear good boots and suitable clothing, and be able to climb over stiles. Walking poles are recommended. Livestock may be encountered.

Facilities: The Black Horse Inn, Illey Lane, Halesowen, B62 0HJ; Woodgate Valley Country Park Visitor Centre (open for toilet facilities only, at the time of writing); The Old Crown Inn, Carter's Lane, B62 0EP (320m); shops on Woodgate Lane not far from WVCP.

Localities 1 and 2 - The Boundary and Bench Mark Stones

Here at Locality 1 a large boulder forms a stepping stone at the stile. Known locally as an old boundary stone, its origins go much further back. It is a typical Arenig ash glacial erratic boulder, made in a volcanic eruption around 450 million years ago (Ma), and brought here on a glacier from Arenig Fawr mountain in Wales around 450 thousand years ago. Though worn by generations of feet and often covered in mud, close inspection shows the hard, fine texture of the rock is very different from the local coarse red sandstones and softer mudstones. Look more closely and you will see a man-made feature on the top surface. This is an Ordnance Survey bench mark (*see Extra Special Boulders overleaf for more on this*). Thousands of erratics were left by the ice, but this is one of few survivors, probably because it was put to good use as a boundary stone with a bench mark.

Continue between the posts on the track into Cooper's Wood. Pause at a stream crossing. The stream bed to the right has rounded pebbles brought with the glacier and later meltwater. Step across the stream if safe. In the bank to the right is an exposure of boulder clay, the source of all the erratics. There is one here, trapped within the clay since the Ice Age. **Cross the stile ahead, turn right and go 45m to a gate and stile, Locality 2.**

At Locality 2 there is another Arenig ash boulder marking a boundary and this also bears an Ordnance Survey bench mark, which is clearer than the mark at Locality 1 (*see photo below*). This boulder shows aligned rock fragments which built up horizontally as the ash settled and turned to rock. Close inspection shows white quartz veins running through the rock (*see Locality 7 for more on vein quartz*).

Go over the stile and head diagonally across the field to another stile situated to the left of a gate, Locality 3.

Locality 3 – The Stepping Stone

At the stile, can you find a small rounded stone with a rough, knobby texture? It stands out as another Arenig ash erratic, boulder 3. **Cross the stile. An optional 75m diversion along the hedgerow to the left will take you to a boulder embedded in the roots of an enormous oak tree. (NB: this is a diversion from the public footpath.)** It is an erratic made of red sandstone, a softer rock than Arenig ash boulders so is unlikely to have travelled far with the ice.

From the stile, follow the path slightly right to a gateway at the bottom corner of the muddy field. This area is known as the 'Lowlands'. The field shows 'ridge and furrow' strips which are a legacy of medieval farming methods and show that it has not been ploughed in recent times. **A short scramble down to the right brings you to another stream, Locality 4.**

Locality 4 – Lowlands

Look towards a pool on the left. Just below the pool is an erratic boulder made of basalt (4). This is a volcanic rock made from lava on or near the surface, very different from the explosive Arenig rocks. It comes from nearby Rowley Regis, picked up by the ice on its way from the Arenig mountains. Look across the stream and to the right. Can you see the purple-coloured bedrock? This is of Carboniferous age (around 300Ma) and it is overlain by glacial till, as seen in Cooper's Wood earlier. The stream beds in this area are a fertile hunting ground for erratics.

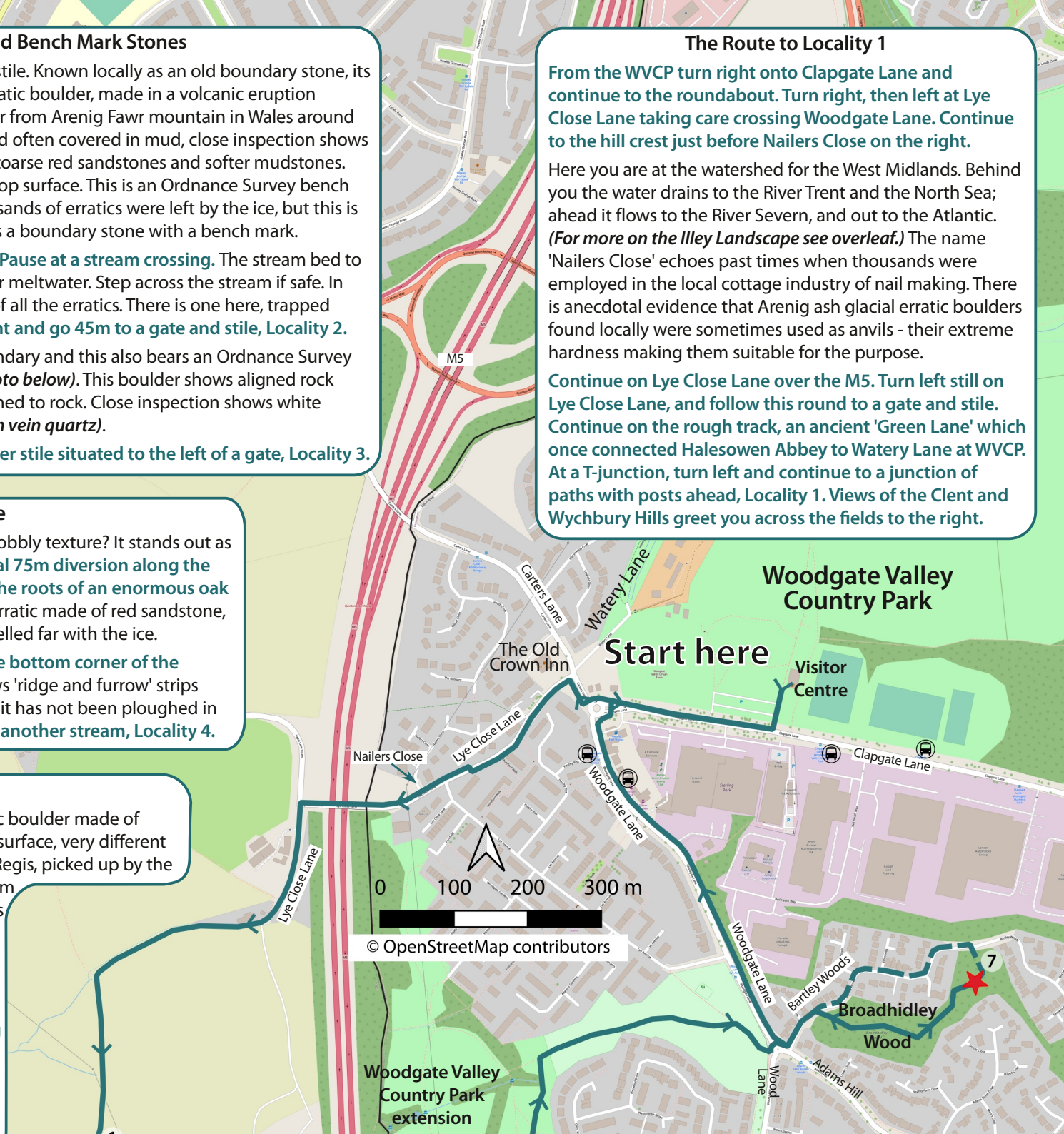
Through the gateway continue on a farm track, then over a stile and uphill passing Lowlands Farm on the left to a kissing gate. At the time of writing, a large white boulder lies to the right just before this gate. It is made of vein quartz, a hard rock foreign to this area, and almost certainly a glacial erratic from Wales (*see Locality 7 for more on vein quartz*).

The Route to Locality 1

From the WVCP turn right onto Clapgate Lane and continue to the roundabout. Turn right, then left at Lye Close Lane taking care crossing Woodgate Lane. Continue to the hill crest just before Nailers Close on the right.

Here you are at the watershed for the West Midlands. Behind you the water drains to the River Trent and the North Sea; ahead it flows to the River Severn, and out to the Atlantic. (*For more on the Illey Landscape see overleaf.*) The name 'Nailers Close' echoes past times when thousands were employed in the local cottage industry of nail making. There is anecdotal evidence that Arenig ash glacial erratic boulders found locally were sometimes used as anvils - their extreme hardness making them suitable for the purpose.

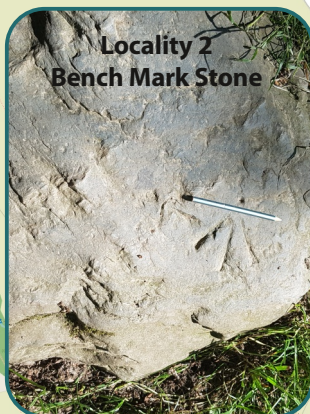
Continue on Lye Close Lane over the M5. Turn left still on Lye Close Lane, and follow this round to a gate and stile. Continue on the rough track, an ancient 'Green Lane' which once connected Halesowen Abbey to Watery Lane at WVCP. At a T-junction, turn left and continue to a junction of paths with posts ahead, Locality 1. Views of the Clent and Wychbury Hills greet you across the fields to the right.



Through the kissing gate, take care crossing busy Illey Lane. The Black Horse Inn on the right is a good place to stop for refreshments. The trail continues on a track to the left of the pub car park. Go on 500m with views to Romsley and Clent hills on the right. Passing Illey House Farm and a finger post signed to Frankley on the right, stop a few metres downhill.

On the right there is an exposure of small brick-like blocks of Carboniferous sandstone. This formed higher in the rock sequence than the mudstone seen at Locality 4. It is more resilient and you can see the separate layers which formed as the sand was deposited by a river.

Continue to a gate and stile. Over the stile walk 15m and turn right through vegetation on a vague path towards a willow tree, Locality 5.



Locality 2
Bench Mark Stone

The Black Horse Inn

Lowlands Farm

Illey

Carboniferous sandstone

Warstone Farm
300m this way

Illey Pastures

Dudley MBC

Worcestershire

Locality 7 - Broadhidley Wood

Though this boulder is a little difficult to find it is well worth the effort (*see front cover photo*). It is made of vein quartz which forms from circulating fluids filling up cracks in a parent rock and it has characteristic white colouring. This boulder probably came from a vein within the volcanic ash rock of the Arenig mountains, and was carried here by ice in the same way as the Arenig ash erratics. It is the largest quartz boulder known in the area, and has been maintained by local residents. It is a fine erratic and a fitting finale to this glacial boulder trail.

Retrace your steps through the wood or return via Bartley Woods road to Woodgate Lane (dashed line on the map). Turn right and continue for 500m to Clapgate Lane. Cross the road at the refuge and turn right to return to the WVCP.

Locality 6 - The Warstone?

Here the stream has cut a deep gorge and revealed this massive Arenig ash boulder (*see front cover photo*). It lies about 300m west of Warstone Farm. Warstone is a corruption of 'hoarstone', which means 'boundary stone'. Old records mention a boulder at Warstone Farm, but this project has found no evidence of one at the farm. Could this boulder have marked the farm boundary giving the farm its name? (*For more on this boulder, see overleaf.*)

Continue on the path to a stile. Over the stile, you are on a right of way through a private property. Go on to the gate and open it using a button on the wall to the right. Turn right and retrace your steps to the stile after Locality 2. Go past it and straight on over another stile. Follow the field edge uphill. At the top, turn right with the M5 on your left and views of the Clent and Wychbury hills. Continue to a wooded area and climb a fence/stile to the right of a gate. Skirt round to metal bars/stile, bizarrely close to a motorway sign. Climb the stile and go over the M5 into the extension of WVCP. Pass a bench and go downhill under power cables and through a hedge, then turn right heading for the higher ground. Bear left with woodland on the right (*see map*). Continue 500m to a gate. Through the gate, keep right then right again where the path forks to exit the park at a roundabout. Cross Woodgate Lane at the refuge. Turn right, then left into the road named Bartley Woods. After 55m cross and enter Broadhidley Wood. Follow the path weaving in a curve round to the left for 250m. Locality 7 is before a drop to a large clearing.

Locality 5 - Illey Pastures

Lying beside a stream is a large flat stone slab and although it is only partially visible, it has an amazing story to tell. It is one of the largest of all the Arenig boulders recorded during this project. It has the characteristic pitted texture and at least one flat, smooth face typical of many of the larger Arenig ash erratics. Its surface is known to be about 3m x 3m, but its depth is unknown (*see overleaf for more on this boulder and a photo*). It has lain here for thousands of years dumped by the retreating ice. This begs the question: how many more erratics are yet to be found?

Retrace your steps to the track, turn right and go up a slope to the edge of Illey Pastures. Bear left along the edge of the field. Turn left to cross a stile at a hedge and continue through the field towards a gap in a hedgerow. Turn left before the hedge and continue on the indistinct path to the corner of the field then into woodland veering left onto a wide track over a bridge. Continue over a stile and go on, bearing left where a path joins from the right. As the path narrows, look out for a sandstone boulder in the stream bank just before a culverted crossing.

This is most likely an erratic due to its substantial size and irregular shape, but many local red sandstone blocks can be found littering the streams and countryside, and it can be difficult to distinguish those of glacial origin.

Cross the stream and continue uphill. Near the top, look out for a large slab of rock buried in the side of the gorge to the left, Locality 6. Walk down the slope carefully to view it from above. (NB: this area is on a steep slope and has been subjected to fly-tipping. Take great care around the boulder.)