

## TRAIL 2

# Martley Village

... traversing the divide



Martley straddles the divide of modern and ancient Britain, geologically speaking that is! In Martley this divide lies on a deep seated and ancient line of weakness in the Earth's crust known as the East Malvern Fault. To the west of this fault lie Palaeozoic (*ancient life*) rocks, whilst to the east are Mesozoic (*middle life*) rocks. The rocks of ancient Britain visited on this trail are those seen at Martley Rock geological site; those of modern Britain are the Triassic rocks of the 'Nubbins'.

**Start Point:** The Old Weighbridge (GR: SO 75365997)  
**Trail map:** Inside page  
**Ordnance Survey map:** Explorer 204  
**Parking:** Martley Memorial Hall, Church; Crown car park (ask)  
**Provisions:** Crown pub and Central Stores opposite weighbridge, Masons Arms 1 mile east B4204; Admiral Rodney 1 mile south B4197  
**Other Trails:** see overview maps on Weighbridge noticeboard

1) Start at the Old Weighbridge, opposite shops and Crown pub, central Martley where the B4204 crosses the B4197. Walk leaflets, information, geology and other, are available here or in the shop. Cross the B4197 and follow the footpath between the pub and garage to the field edge.

Take a look at the ground around you on the path and in the field. The distinctive red soil is indicative of the underlying geology - a red Triassic aged sandstone. Over 60 % of the parish of Martley is underlain by Triassic (251-199 million years old) aged rocks. All the Triassic rocks present are sedimentary in nature (sedimentary rocks are made up of particles deposited in layers), though not all are sandstones. The fields lying in front and ahead of you, together with the escarpment running north-east to south-west along the right hand edge of these fields, are underlain by the Triassic Bromsgrove Sandstone.



The Nubbins escarpment

Follow the field edge on the left to an old shed where paths cross. Turn right along the nearside hedge towards and then through a strip of woodland. Walk up the steps, through a gate, up more steps and on to a track.

You now stand on the lower reaches of 'The Nubbins' the local name for the sandstone escarpment. The Nubbins rise to a height of 90m OD, some 25m higher than that of the field you have just crossed. One possible explanation for the Nubbins' relative height to the fields below is that of a long-gone fluvial or glacial system whose erosive powers could have shaped the land as seen today. No evidence exists today to support this theory.

2) Turn left and follow the wide track for around 120m before turning right up a diagonal path to a terrace below a quarry face. Please note that this section of the trail (all the way to point 4) follows a private path on private land.

This exposure of Bromsgrove Sandstone allows you to take a close look of the nature of the rock. Historically the rock has been quarried as building stone, however it is a soft, friable rock. Rock falls from the unstable upper layers at these sandstone sites do occur. For your own safety, we strongly advise visitors not to approach the rock faces. The interpretation board located at the south-western end of the rock face explains the environment under which the Bromsgrove Sandstone formed and the industrial archaeology of the site.



Bromsgrove Sandstone

To leave the quarry area, go to the south-western end where the rocks peter out. Traverse the knoll along the narrow path and up to



Traversing the knoll; blue trail direction arrows shown

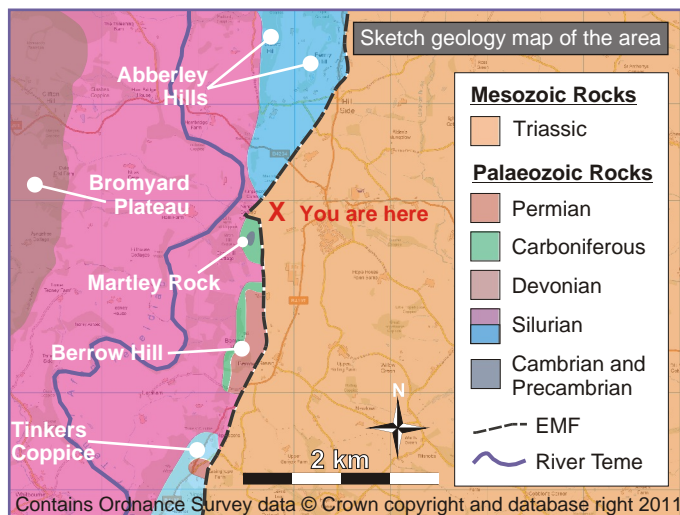
the right. You are now walking back on yourself at a higher level.

### The East Malvern Fault (EMF)

This dividing line is called the EMF; a line of weakness in the Earth's crust along which movement has taken place. Around 300 million years ago major earth movements compressed the crust, thrusting deep-seated rocks up to the surface and buckling (folding) the layers of rock. The resulting local landform indicates that huge mountain building forces had been in action.

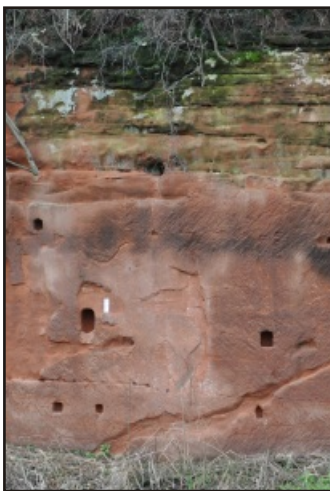
In Martley, to the west of the EMF lie the Palaeozoic rocks that make up Tinkers Coppice, Berrow Hill, Martley Rock and the Abberley Hills (listed south to north). To the east lie Mesozoic rocks of the relatively and generally low lying land in the parish (refer to sketch geology map).





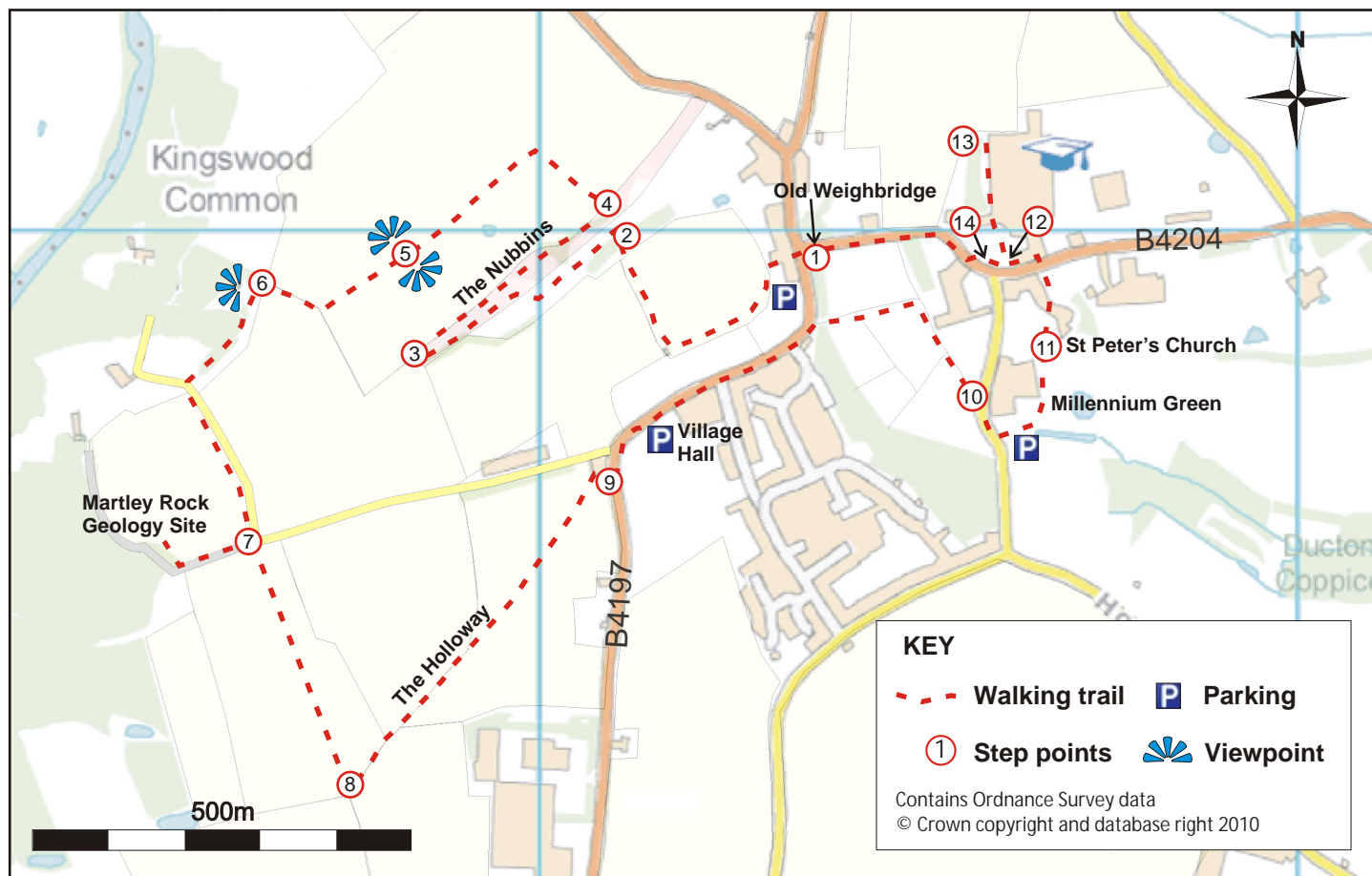
3) Continue ahead, without climbing any higher, along a narrow path, to reach another large quarry face of the Bromsgrove Sandstone which you can explore but beware of falling rocks -do not approach too close.

The layers (beds) of rock in this quarry face are referred to as being massive due to their thickness. To be defined as massive a bed must generally exceed 1m in thickness. This would have made them attractive for use as building stones. The pick marks and the purposeful looking man-made holes in the rock face, which presumably once supported timbers in a shelter or industrial building, are testament to the site's industrial past (picture right).



From the eastern end of the quarry keep to the high, narrow path (do not descend to the original wide track below) and out into the open to a metal gate on the left.

4) Continue through the gate, cross the field and join a path that runs north-east to south-west from the road and where there should be a small metal waymarking sign. Turn left until you reach the highest point of this dome-shaped hill. The 360 degree views from the subtle crest of the hill are wonderful (see over). In the spring and summer months, also enjoy the song of the skylarks.



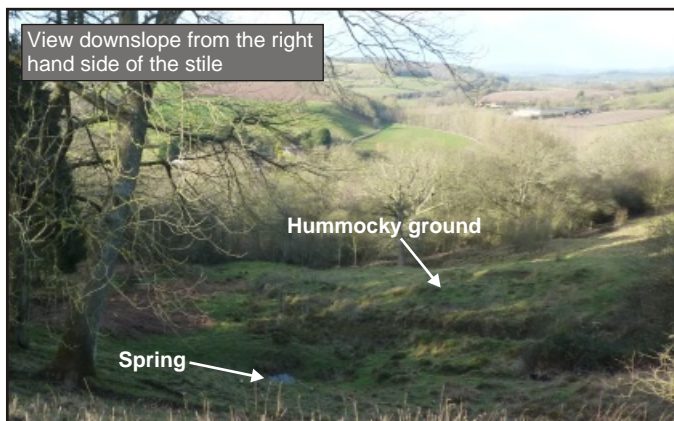
The landscapes seen from this viewpoint reflect the nature of the rock types from which they are derived (ages below are given in millions of years).

- In the north-east on the horizon are the Clent Hills (Permian, 299) and Lickey Hills (Ordovician, 488)
- In the foreground to the east are the lowlands of the Worcestershire Plain (Triassic, 210)
- To the south-east Bredon Hill (Jurassic, 190) rises in front of the Cotswold escarpment beyond (Jurassic 175)
- To the south are the Malvern Hills (Precambrian, 700) with Berrow Hill in the foreground (Permian, 299)
- To the west, across the Teme Valley, lies the Bromyard Plateau (Devonian, 410)
- To the north-west are the Clee Hills (Carboniferous, 310)
- In the north are the Abberley Hills (Silurian 420)



5) Continue ahead to reach a gate/gap. Turn right along the hedge under an ancient, lonely, pear tree often covered with hard fruit from which perry jelly can be made. Cross the stile.

Here you stand in close proximity to the contact between two differing rock types: Immediately to the east - the permeable and porous sandstones that make up the Nubbins; underfoot and to the west - soft clays, mudstones and siltstones which have a much depleted capacity to allow water to flow through them.



The landform downslope, both to the right and left of the stile, exhibit slope failure - minor landslips have occurred creating the hummocky topography seen. The addition of water (several springs emerge along the slope) to the already unstable nature of these soft rocks has magnified the rate at which downward creep has taken place. The immediate proximity to a number of fault lines will have also played a part in weakening the shear strength of the rocks and hence the slope failure.

6) Turn left following a rough track that runs above some beautiful old apple trees. Watch out for the sight and sound of the green woodpecker. The old English name for the bird is the 'yaffle' which means laughter, entirely suited to the call when you hear it.

Years ago there were many dwellings in this area and a thriving community; remains of cottages are to be found in the woods. Local historians have put together a most interesting history.

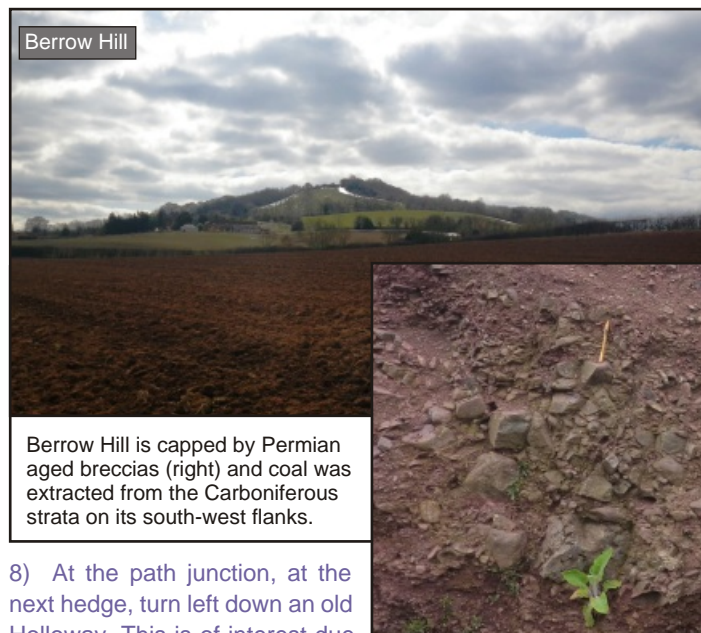
At the end of the track pass through the gate, cross Kingswood Lane, and into a field on the Worcestershire Way. Follow the hedge on your left downhill.

This ordinary looking field is quite extraordinary! Geologists over the centuries have visited it and those that have worked it have commented on its variable nature, shall we say! As with so many of the geological features in Martley parish it is the East Malvern

Fault that has exerted its presence on this field, running straight through it, dissecting it in two; one half ancient Palaeozoic Britain, the other modern Mesozoic Britain. Walking down the path you stand on red Triassic sandstones, yet if you were to traverse the field you would cross Precambrian, Cambrian, Silurian and Carboniferous aged rocks and a plethora of different rock types, all near the surface, make working this particular field a challenge. Evidence and explanation of this wonderful geology can be viewed at Martley Rock geological site.

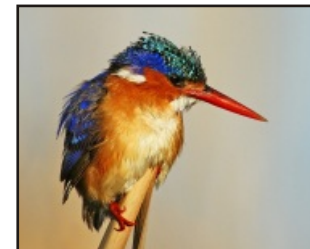
7) At the track/lane junction, with the large sign, turn right along the private drive to visit Martley Rock. After exploring this unique assemblage of six different geological periods retrace your steps to the large sign and then turn right following the Worcestershire Way south across the field.

From this point on the trail follows relatively low ground which is all underlain by the Triassic Bromsgrove Sandstone. The sandy, orange-red soil in this field and in others to come, along with the small, low exposures and excavations by badgers in the 'Holloway' all show that this is the case.

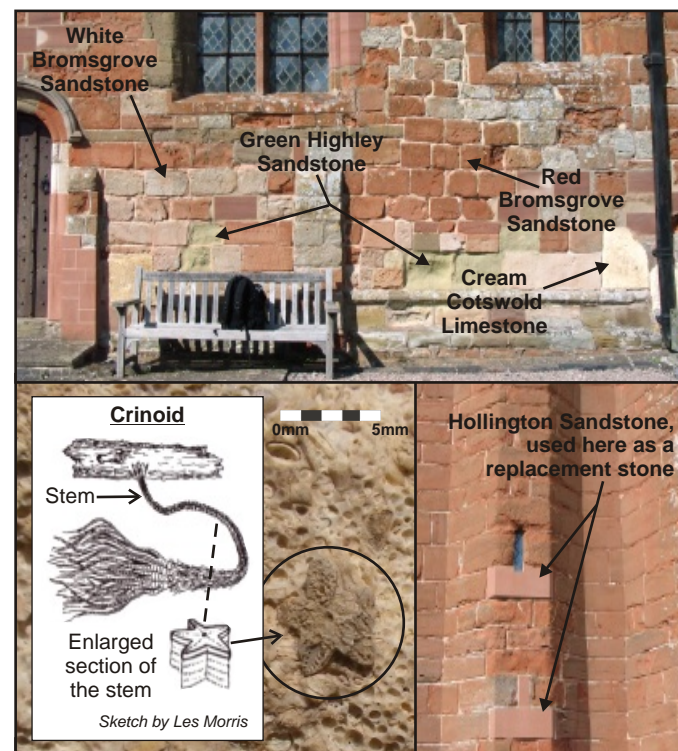


8) At the path junction, at the next hedge, turn left down an old Holloway. This is of interest due to the old coppiced trees, now grown out. The path leaves the Holloway, heading diagonally left crossing a field under pylons. From the pylon pole half way across the field you can see the full extent of the Nubbins escarpment. When you reach field edge, at the corner of a garden, turn right following a permissive path along the field edge to the road (B4197).

9) Cross the road and turn left, around the corner, past the village hall, over Jewry Lane and Mortlake Drive to the next road bend. Turn right, through a gate, over a stile and into a field. Walk straight ahead, over another stile and on towards a farmstead. Turn right just before reaching the farmstead, then through another gate, before finally exiting on to Church Lane.



10) Watching carefully for any traffic, veer right down the lane a short distance to a small car park on your left where you will find a map illustrating Martley Circular Walk and a leaflet dispenser. If you have time, stop and take in the peace and tranquillity of Martley Millennium Green. A quiet visitor may see a range of waterbirds including moorhens, kingfishers and just occasionally, a snipe. Turn left up to the church.



**Top:** Nave wall (porch side) built predominantly from Bromsgrove Sandstone, though a wide range of stone can be seen.  
**Below left:** Crinoid ossicle fossil in the Cotswold oolitic limestone. Crinoids are marine animals. Complete fossils are rare, more commonly sections of their stems, ossicles, are found.  
**Below right:** Replacement stone in the tower.



St Peter's dates from the 12<sup>th</sup> century and is built predominantly from local red sandstone (some of which is not red, but a buff/white variety of the Bromsgrove Sandstone). However, a walk around the church shows that various other stones have been used including buff, green, white and purple sandstones, plus a few large blocks of oolitic limestone.

11) After inspecting the church, (go inside if you have time - it is usually open and of great interest), proceed straight up through the churchyard and cross the road (B4204). Follow the driveway to the left of the Chandlery, with a stone built wall on its left.

The wall is built from a rough grey stone. The rock is a Silurian aged (444-416 million years ago) sedimentary rock probably sourced from the north of the parish. Unlike the red sandstones encountered along the trail which were all formed on land, this rock formed in an ocean when the area was covered by a shallow sea. The rock is rich in calcium carbonate; a silty limestone.



The diversity of the geology in Martley has provided rich natural resources which have been utilised over the years: limestone has been extracted to produce lime, quarried for aggregate and used as a rough building stone. Mudstones and clays have been extracted to produce bricks and coal has been mined, albeit on a very small scale. Igneous rocks and sandstone have been extracted for use as aggregate and building material respectively.

12) Walk up the drive, at the top of which you pass into the grounds of Chantry School. Follow the path ahead, a damson arcade, to reach the school's excellent geology garden on the left of the path. This garden, opened in 2011, was built by the school pupils and is a comprehensive introduction to the geology of Worcestershire. The large specimens in the garden were all sourced from within the county.



13) Retrace your steps down to the road. Turn right across a small car park and then along the grass verge for 20m, roughly opposite a T-junction on the other side of the road, to reach a 1m wide clearing on the embankment. Please stay on the verge and do not stand in the road.

The rocks exposed in the embankment are all Triassic in age. The lower reaches of the exposure (below the white line) are composed of the same orangey-red sandstone seen at the Nubbins, Bromsgrove Sandstone. Above the sandstone are thin layers of siltstone and mudstone, some cream, others red in colour. These fine-grained sedimentary rocks are slightly younger than the Bromsgrove Sandstone. Rather than forming in rivers, as the sandstone was, these rocks formed in shallow playas (temporary lakes).

Dominating the higher reaches of the exposure, sandwiched between the thin layers of mudstone and siltstone, is a hard, white sandstone. This is likely to have formed from an event such as a flash flood which brought material into the playa.



14) Cross the road, taking great care. Walk down towards the Weighbridge and your starting point. En-route note the stone wall made from locally quarried Bromsgrove Sandstone. Check the size of some of the pieces!

## Teme Valley Geological Society

The Society was formed in 2010 and comprises a group of keen, amateur, local geology enthusiasts with a scattering of unstuffy professionals. All are really excited about exploring and promoting Martley and the Teme Valley.

The society is based in Martley, Worcestershire, in the valley of the River Teme. Regular talks and field trips are held covering both the local area and further afield.

Contact details for the secretary:

Phone: 01886 888318

Email: [info@geo-village.eu](mailto:info@geo-village.eu)

[WWW.GEO-VILLAGE.EU](http://WWW.GEO-VILLAGE.EU)

## The Martley Geo-Village Project

- To audit and document the geological sites in Martley parish
- To develop Martley Rock and four other sites as visitor points
- To provide educational materials and training for teachers at local primary schools
- To provide geology courses for adults and for young persons
- To add two more geology trails with fully illustrated guides
- To develop sustainability through a geo-tourism initiative

It will help the society a great deal if you are able to find the time to visit the **Feedback Page** on the website to leave your comments