

Churnet Valley Geotrail Section 2

From the parking at Whiston village hall exit left then head right up Black Lane towards the footpath that crosses Whiston Hall Golf Club. On the way, notice the buildings on the right made of blocks of copper slag (12) - waste from the Whiston smelter, now demolished.

Return to the footpath, crossing the golf course eastwards to the prominent block of Rough Rock (13) showing large scale cross-bedding formed by a Namurian river. Which way do you think the river was flowing? Try to find contortions of the bedding due to water escape as the sediment compacted and solidified. The trail follows a wall of local rock to a view (14) over Moneystone Quarry where silica sand was quarried until 21st century. On reaching the road, see how Rock Cottage (15) is built into the Rough Rock at one end.

Follow the road to the right and then immediately take the first footpath on the left, along an old salt lane, keeping the wall on your right. After 300m, turn right through a stile and cross two fields. At the top, continue through the squeezer stile to the farm track and turn right along a terrace. In this area (Cotton Dell), steeper slopes relate to the outcrop of resistant sandstones and grits, whilst gentler slopes occur on softer mudstones. The terrace here (16) is associated with a mudstone within the Chatsworth Grit. Lower down is another terrace in mudstone on top of the Roaches Grit. River erosion has cut down through more mudstone to the Ipstones Sandstone at the valley bottom. A fault along the valley then repeats the sequence with Roaches Grit forming the ridge at Cotton College. The Ipstones Sandstone forms the ridge on the horizon with the Carboniferous Limestone outcrops at Ribden and Cauldon Low lying beyond.

Follow the track southwards, through the woods, to a sharp left turn and follow the path downhill to the bottom of Star Wood and the valley floor. Turn left up the valley to a point where it meets a path from the right (17).



The fine grained, dark red/brown Ipstones Sandstone exposed here is the oldest rock on the trail. As the dip of the beds is steeper than the gradient of the valley, the rocks get progressively younger downstream towards Oakamoor. In the stream bed (18) is a red/buff iron-rich limestone. This unit, and the mudstones above, contain the marine goniatite *Reticuloceras Gracile*; those below, have the land plant fossil *Calamites*. Here is fossil evidence of global sea-level change in Carboniferous times.



Further south (19), mudstones contain more goniatites and a thin ironstone band. Return past the bridge (20), through the poorly exposed Roaches Grit. Mudstone blocks containing fossils occur in the brook (21). Further downstream, the Chatsworth Grit forms a large cliff on the opposite side of the valley (22). This grit is accessible across the bridge (23) whilst down in the stream purple siltstones occur at the base of the unit.

The trail descends into historic Oakamoor (24). (Here an excellent industrial archaeological trail is signposted around the village.)

To return to Whiston, take the path through Carr Wood, starting from Oakamoor Memorial Free Church, then cross the fields towards Crowtrees, and on to Whiston on the footpath alongside the quarry.

Features in this area

The Whiston Smelter

In 1769 the fifth Duke of Devonshire opened a Lead and Copper smelting works in Whiston to serve his mines at nearby Ecton. A large quantity of fuel is required for the numerous processes involved in copper smelting so works were located near to coal measures. The Duke owned collieries at nearby Foxwood and Hazlecross, part of the Cheadle Coalfield.



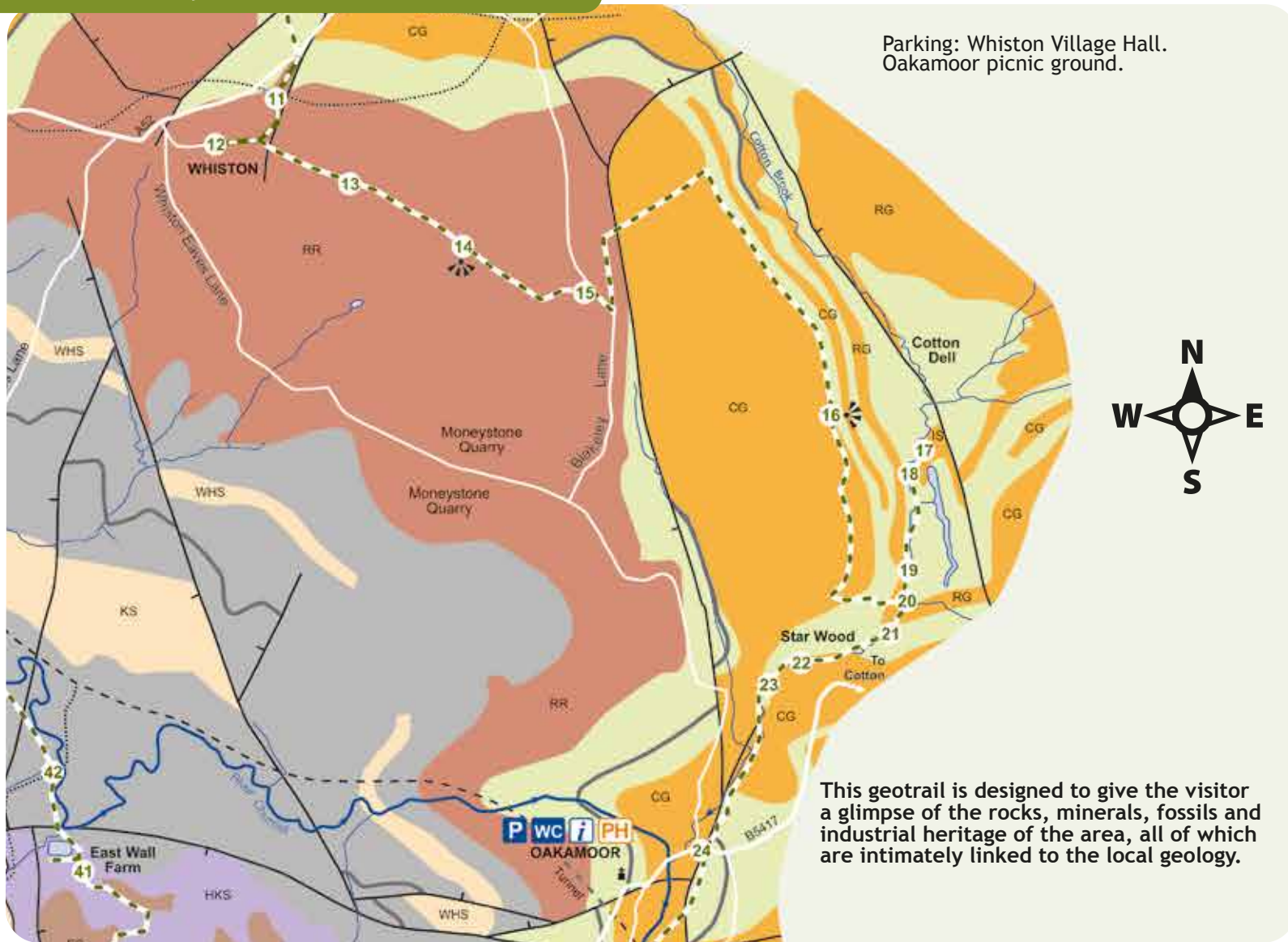
Sandstone

Silica sand was extracted until recently from the Rough Rock at Moneystone Quarry (14) primarily for use in the glass industry.



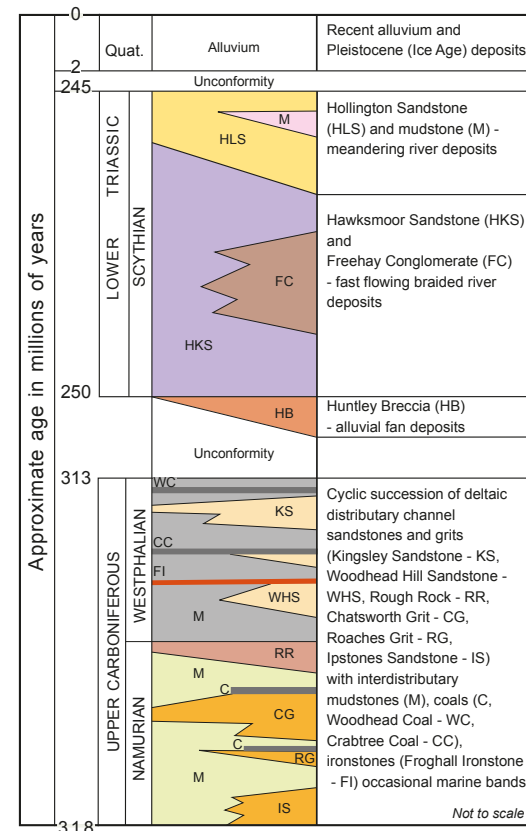
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Whiston - Moneystone - Cotton Dell - Oakamoor



Parking: Whiston Village Hall.
Oakamoor picnic ground.

This geotrail is designed to give the visitor a glimpse of the rocks, minerals, fossils and industrial heritage of the area, all of which are intimately linked to the local geology.



This trail is dedicated to the memory of Ken Rout, founding member of SRIGS.

The trail mainly follows public footpaths and other marked trails, including part of the Staffordshire Way. Visitors should note that some of these have steep sections and muddy, uneven terrain so suitable footwear is advised. There are also some sections along minor roads where care should be taken of the traffic.

Visitors are encouraged to view all features of interest from the geotrail itself unless a permitted access route away from the trail is indicated.

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