

## Joint Field Excursion with the Black Country Geological Society to Black Country sites, led by Alan Cutler

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DOLAMORE, L. (1984). Joint Field Excursion with the Black Country Geological Society to Black Country sites, led by Alan Cutler. *Proceedings of the Shropshire Geological Society*, 4, 4-6. The area visited included Round Oak Steel Works, with derelict mine workings from which plant fossils were obtained.

The afternoon was concerned with the geology adjoining two branches of the Western Boundary Fault in the general area of Wordesley.

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Report of the excursion on Sunday 23<sup>rd</sup> October 1983 led by Alan Cutler.

A bright, sunny, but rather chilly day, when a group of about twenty from both Societies met in the centre of Dudley, moving off rather sedately, to the area near the Round Oak Steel Works. The site was in derelict mine workings with some 120 known mineshafts, which had been in use since mediaeval days, but exploited industrially since about 1850, finally becoming uneconomic about 1950.

In order to return the land to a condition suitable for new industrial buildings, the area is being stabilized, firstly by open casting, then refilling and consolidating, similar to the areas of Telford which had also been mined over long periods. The site, loosely called the Hurst, is the western side of an anticline in the Upper Carboniferous with one thick and several thin seams outcropping towards the axis. On our previous meeting in the Black Country we visited the Doultons Claypit, which is on the eastern side of the anticline, and the same coal seams were outcropping. The excavation operations are now exposing three seams, "Thick Coal" which is about nine metres average thickness, "Upper Heathen Coal" 1 m thick and "Lower Heathen Coal" 0.8 m thick.

Overlying the coal seams are bands of fireclays, black carbonaceous shales and ironstones which vary considerably in thickness and quality. The depth of the excavations is about 30 to 40 metres and workings from various episodes of mining are being exposed: adits, galleries, pillars, voids and pit prop supporting timbers in large quantities. The coal extracted is helping the overall stabilization operation to be economically viable, although some of it is only low quality.

Naturally, there were plenty of plant fossils to be obtained, also some fresh water molluscs. Thanks to Mr. David Patterson of Johnson, Poole and Bloomer for showing us around.

Lunch was taken in the open with free entertainment supplied by some organized BMX cycle racing close at hand. The afternoon was concerned with the geology adjoining two branches of the Western Boundary Fault in the general area of Wordesley. This fault runs approximately N-S with branches off in several places which trend NE-SW. The eastern side of the fault is an upthrust exposing the Carboniferous.

Walking westwards onto younger formations, the first exposure, a large road cutting, was in Bunter Pebble Beds. These are early deposits of the Triassic and are very widespread over the Midlands area. The pebbles vary considerably in size and origin, the details were seen in the later field trip to Stoke on Trent (13<sup>th</sup> May 1984). Moving further west we crossed current bedded sandstone with occasional marl beds which indicates alternating wet/dry conditions. We then turned north and walked up a ridge of Bunter Pebble Beds to a vantage point to look at the topography of the immediate area. The present structure of the area was largely evolved during the Hercynian uplift in the area of N. France. The Midlands of England were not folded but affected by major fault movements, the western boundary fault being one of these. The next exposure visited was a small quarry in Lower Mottled Sandstone, older than the Bunter Pebbles, and this is an aeolian deposit formed from dune sand deposited by strong dry winds blowing from the East in a desert valley situation.

The next site after crossing the western branch of the Western Boundary Fault was an exposure of

Enville Beds. These are scattered outcrops of breccia of sandstones, marls and calcareous conglomerates. These breccias occur in Shropshire, Staffordshire, Worcestershire and Warwickshire with varying composition and differing names. The breccias underlie the Lower Mottled Sandstone and were formed as scree deposits in very arid and cold conditions. No fossils are found in the breccias, so they are difficult to date exactly.

The last exposure visited was on the eastern side of the Western Boundary Fault. This was in

Carboniferous deposits, and comprised greeny yellow sandstones of Etruria Marl (Upper Coal Measures). The material is still quarried for the clays from which blue bricks are made.

All the afternoon sites were within a few hundred yards of each other and straddled the fault which could be clearly seen as the base of a scarp slope.

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