
Walk 7: Morley Quarry

Start: grid reference [SK 4765 1785]

This former quarry is a RIGS (Regionally Important Geological and Geomorphological Site), with explanatory notice boards. It can easily be reached on foot from the Cricket Club car park along Morley Lane, just off Ives Head Road, south of Shepshed. The rocks can be viewed in complete safety from the central part of the quarry, but it is necessary to wear a hard hat when examining them close to the quarry faces. They form part of the oldest Charnian unit, the Ives Head Formation, which here consists of well-stratified volcanoclastic mudstones, siltstones and sandstones that were deposited from sediment-laden turbidity currents on the floor of a deep sea.

Wearing a hard hat and looking carefully, you may be able to see some angular pieces of grey laminated tuff in the rocks. These were ripped up from the sea floor by turbidity currents. On the north-western quarry face, look for folding of the Charnian cleavage adjacent to a fault zone.

The base-Triassic unconformity is magnificently displayed along the southern quarry face. The lowest Triassic bed contains angular Precambrian rock fragments derived from the Triassic forerunner of Morley Hill and probably deposited from the downslope transport of rock waste during rainstorms. Beneath it, the unweathered Precambrian surface shows sharp irregularities where Triassic erosion picked out the weaker, more fractured rocks corresponding to subvertical joints. Along the top of the quarry face, the Triassic strata are overlain by 1 to 2m of 'head', which here consists of abundant angular Precambrian rock fragments in a pale brown, sandy or silty matrix. The head extends on to the Precambrian rocks of Morley Hill as a scree deposit, formed by freeze-thaw activity during the cold climates that prevailed about 12000 to 30000 years ago.

Figures

(Figure 63) The very sharp Triassic unconformity at Morley Quarry.



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