

Site name: Ravenhead Brickworks

County: Lancashire

District: West Lancashire

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act 1981 (as amended)

Local Planning Authority: West Lancashire District Council
Lancashire County Council

National Grid Reference: SD 513 047 **Area:** 21.90(ha) 54.14(ac)

Ordnance Survey Sheet 1:50,000: 108 **1:10,000:** SD 50 SW

Previously notified (under 1981 Act): 11 Feb 1988

Date notified: 1 November 2002

Reasons for Notification:

Ravenhead Brickworks is a nationally important geological site for the exposures of the Late Carboniferous, Westphalian succession within this part of the Pennine Basin; lying between the Honley and Parkhouse Marine Bands. The sequence includes both marine and non-marine strata and demonstrates the patterns of deposition in a lower delta-plain setting at this time.

General description:

Ravenhead Brickworks is located immediately south of Up Holland, near Wigan and forms part of the active Ravenhead Quarry.

The site shows much of the characteristic sedimentology of the lower part of the Langsettian Stage in the Productive Coal Formation within the south-western part of the Pennine Basin. At least 90 metres of sediments, consisting of shales, siltstones, sandstones and thin coals are present. These form several coarsening-upward sequences but also include a succession of laminated sandstone/mudstone couplets, interpreted as crevasse splay deposits. The latter are of particular interest as they contain the moulds of bivalves as well as the traces of their burrows, some of which provide evidence for the swift escape of the bivalves under conditions where the sand was being rapidly deposited and the organisms threatened with suffocation. Each couplet has been interpreted as representing a year's deposition under seasonal conditions in a lacustrine setting. The coarsening-upward sequences show evidence that the environment of deposition changed from brackish at the base to non-marine at the top, whilst the upper parts of these sequences are capped by sandstones that sometimes show the development of seat-earth and thin coals above. These sequences are generally succeeded by a marine band.

All of the important marine bands of this part of the succession are represented here and both the Lower Foot Mine Marine Band and the Bullion Mine Marine Band have yielded faunas belonging to the *Gastrioceras*/Pectinoid Facies. The Bullion Mine Marine Band is particularly important for yielding well-preserved, three dimensional ammonoids from carbonate concretions. Non-marine bivalves form a sequence of assemblages in the basal 7 metres of the succession and again occur in the sandstone/mudstone couplets toward the middle of the succession.

The successions at Ravenhead Brickworks are of vital importance for the understanding of the environment and the deposition of the Productive Coal Formation, not only within the Pennine Basin, but also within the UK as a whole.

Other Information:

This is a *Geological Conservation Review* site.