
New Hadley Brickworks

Highlights

New Hadley Brickworks is the best available site for showing the Etruria Formation in a high-energy, alluvial fan setting, and clearly demonstrates a number of key sedimentological characters (Figure 7.8).

Introduction

This claypit [SJ 683 118], on the eastern side of Hadley, Telford, Shropshire, is an exposure of the Etruria Formation in the Coalbrookdale Coalfield. Although in a working claypit, the face in question has not been worked for some time. Exposure is not exceptional, but is enough to demonstrate the characteristic features of the formation in this coalfield. The stratigraphical sequence here is summarized in a log shown by Besly (1988, fig. 15.7), and further details are given in the unpublished thesis by Besly (1983).

Description

The exposed sequence here is 30 m thick, and consists mainly of red mudstones and siltstones, and includes some palaeosol development (Figure 7.9). There are also numerous channels, filled with coarse sandstones and matrix-supported conglomerates. Many of the clasts in the conglomerates have a weathered ferruginous crust. Channel forms vary from steep- to shallow-sided, and seem to represent debris-flows in an alluvial-fan setting.

Some fine neptunian dykes, no more than 1 cm or so wide, can be seen at numerous places in the sequence. They are sand-filled, and can be observed cutting both the palaeosol and channel deposits.

Interpretation

This sequence shows the Etruria Formation in the alluvial fan association of Besly (1983), and clearly represents a high-energy, almost catastrophic depositional environment. It was probably in the proximal part of an alluvial fan running off from the nearby Northeast Shropshire High, which was a horst undergoing active uplift during the mid-Westphalian. The small neptunian dykes present may have been formed by seismic activity causing cracks to form in the sediment.

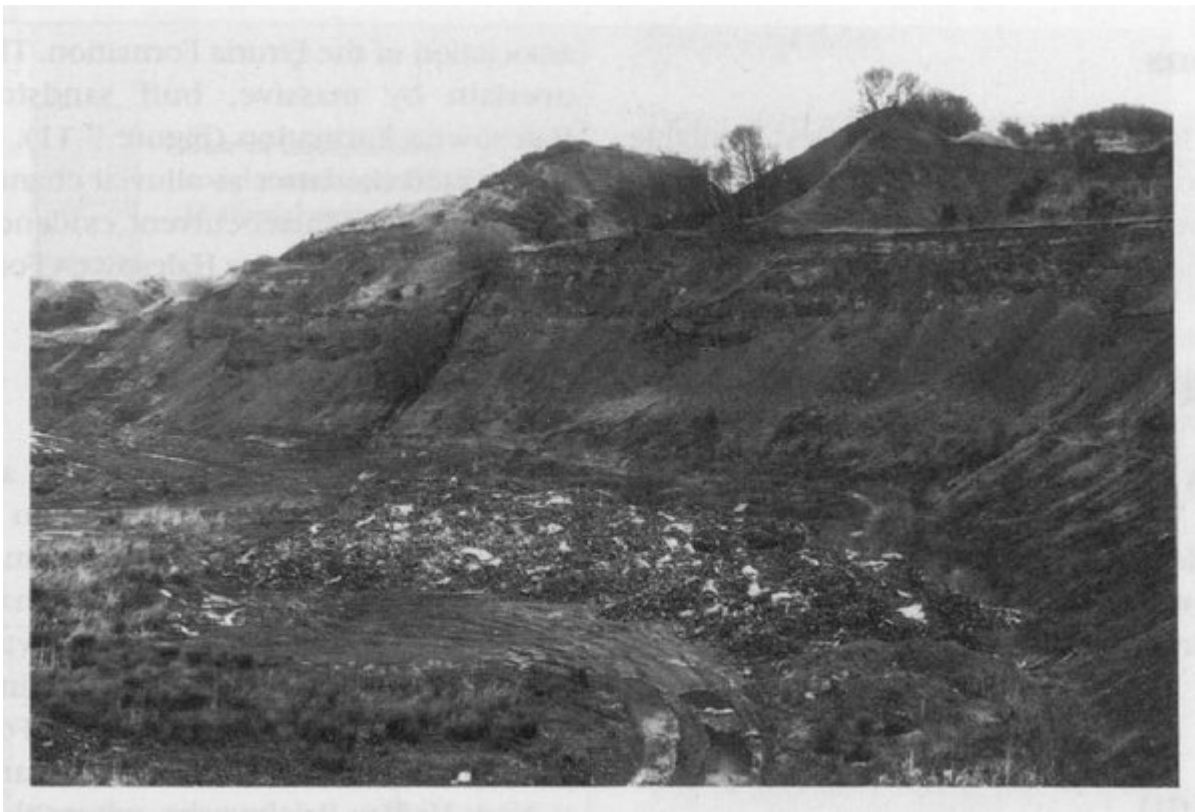
A significant feature of this facies-association in the Etruria Formation is that, despite it being an alluvial fan deposit, up to 50% of the sequence is mudstone and siltstone. Besly (1983) interpreted this as being due to the tropical weathering of the source area producing high proportions of fine sediment. In support of this, he compared them with similar, mud-dominated fans in present-day Papua New Guinea.

The type of sedimentary regime shown at New Hadley Brickworks contrasts strongly with that seen at Ketley Claypit, where deposition seems to have been in a much quieter, alluvial plain setting. This clearly shows that the traditional concept of the Etruria Formation covers more than one type of sedimentary facies-association, albeit producing strata of superficially similar appearance.

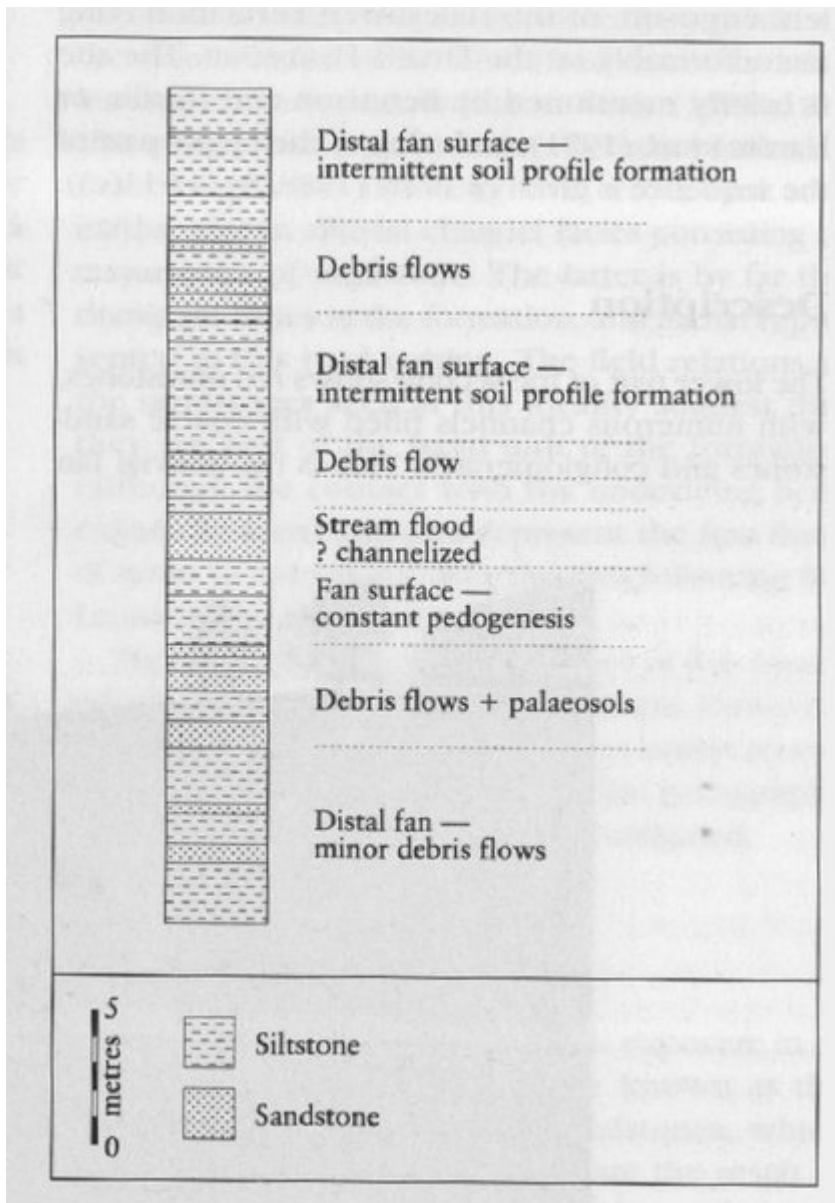
Conclusions

New Hadley Brickworks shows the best available example of rocks of the Etruria Formation (about 310 million years old), representing high-energy, alluvial fan deposits.

[References](#)



(Figure 7.8) Etruria Formation exposed at New Hadley Brickworks. (Photo: C.J. Cleal.)



(Figure 7.9) Vertical sequence through part of the Etruria Formation at New Hadley Brickworks. After Besly (1988, fig. 15.7c).