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# Cheswardine Canal Cutting

## Highlights

Cheswardine Canal Cutting provides the best exposure of Upper Carboniferous red beds known as the 'Keele Beds' near its type area, and demonstrates the typical lithology of these strata (Figure 7.15).

## Introduction

This cutting on the west side of the Shropshire Union Canal, 2 km WNW of Cheswardine, and 4.5 km SE of Market Drayton, Shropshire [SJ 697 307] is one of the few exposures of the red 'Keele Beds' near its type area in the North Staffordshire Coalfield; this particular exposure is in an area of 'Keele Beds' lying between the Shrewsbury and North Staffordshire coalfields. There is no published account of the geology here, but a log was given by Besly in an unpublished excursion guide to the West Midlands (British Sedimentological Research Group, Upper Carboniferous Meeting — April 1986), and which is the basis of (Figure 7.16) in the present volume.

## Description

The 'Keele Beds' here are overlain unconformably by the Triassic Bunter Pebble beds. The most prominent feature is a sandstone unit with an erosive base, which may be a meandering channel-deposit, and can be seen on both sides of the canal. There are also thinner sandstones, which are probably crevasse-splay deposits. Overbank deposits are poorly exposed, but can sometimes be seen in minor landslips, and consist of laminated, micaceous shales.

## Interpretation

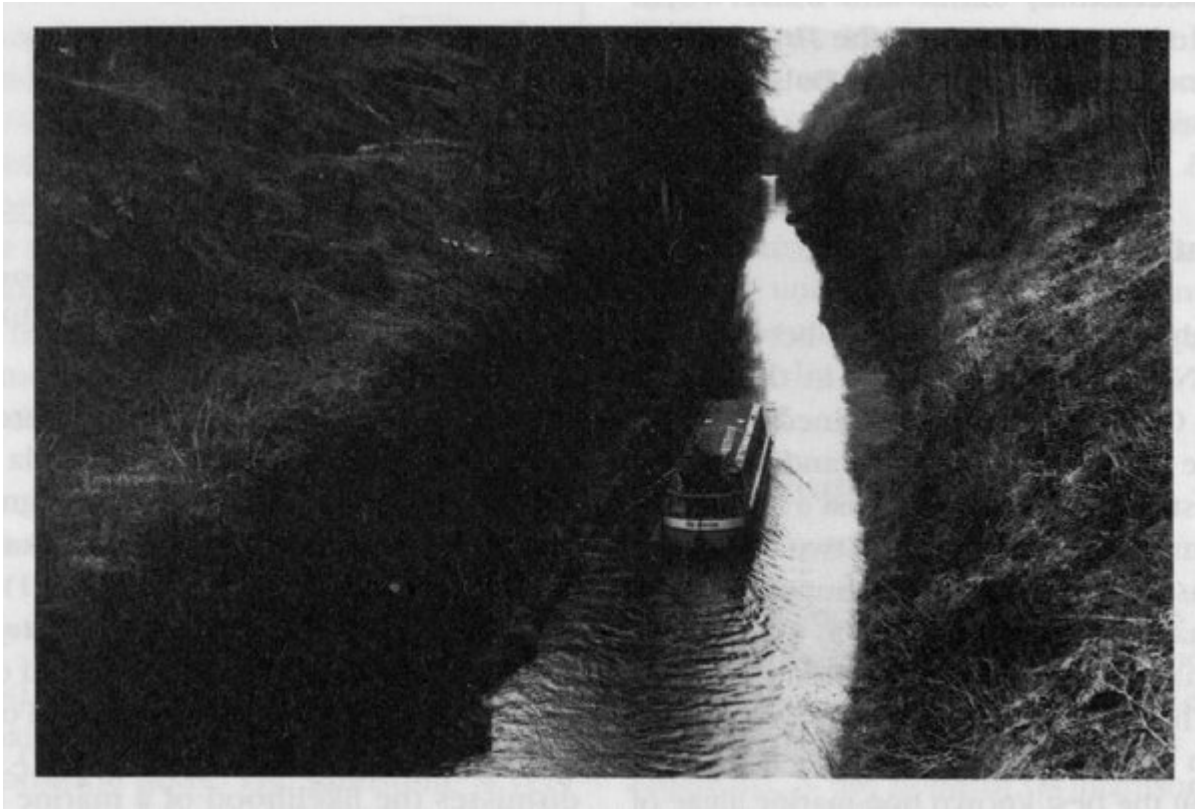
The term 'Keele Beds' has traditionally been used for the red measures thought to overlie the Halesowen and Newcastle formations in the English Midlands. They are on the whole poorly exposed, and have only recently been investigated in any detail. Unpublished work by Besly (pers. comm., 1990), based mainly on borehole evidence, has shown that the situation is in fact far more complex than previously thought, and that there are no such things as lithostratigraphically homogeneous 'Keele Beds'. It is as yet unclear how the Cheswardine Canal Cutting section fits into the more refined model being established by Besly.

There are superficial resemblances between these red beds and the stratigraphically lower red beds known as the Etruria Formation. However, the overbank shales exposed at Cheswardine Canal Cutting are significantly more micaceous and laminated than overbank mudstones of the Etruria Formation, and this is typical for the strata traditionally referred to as 'Keele Beds'.

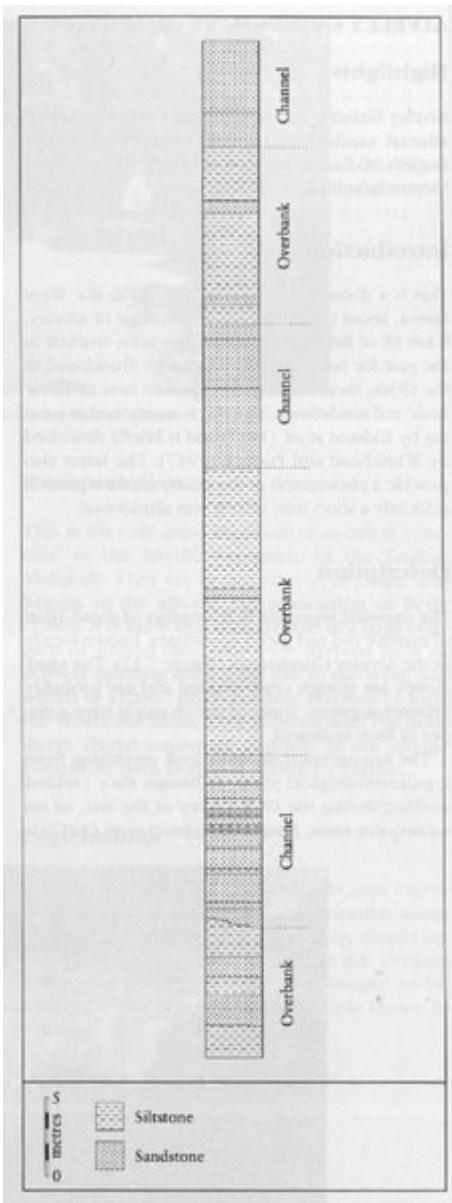
## Conclusions

Cheswardine Canal Cutting provides the best exposure of Upper Carboniferous red beds known as the 'Keele Beds' near its type area. The red coloration is thought to have been due to a low water table at that time, reflecting the general uplift of the English Midlands about 300 million years ago.

## [References](#)



*(Figure 7.15) Keele Beds exposed at Cheswardine Canal Cutting. (Photo: C.J. Cleal.)*



(Figure 7.16) Keele Beds exposed at Cheswardine Canal Cutting. Based on information supplied by B. Besly (pers. comm.).