

**GLA 19: Hornchurch Cutting, SSSI**

London Borough of Havering, TQ 547 874

Ownership: Network Rail

**Hornchurch Till and Black Park Gravel in the SSSI Hornchurch cutting**

The railway cutting adjacent to St. Andrews Park in Hornchurch is one of the most important Ice Age sites in Britain. It is the [type site](#) of the Hornchurch Till, a deposit of boulder clay laid down by a glacier or lobe of ice from the Anglian ice sheet in the Ingrebourne valley about 450,000 years ago and marking the maximum southerly extent of the ice sheet during the whole of the Ice Age. Here the boulder clay lies beneath the oldest gravel of the 'post-diversion' Thames (known as Black Park/Orsett Heath Gravel) and it is the only place where gravel of the modern Thames comes into contact with glacial deposits. The order of the strata in this one cutting is therefore the principal basis for considering that the entire modern Thames terrace system is younger than the main glaciation of Eastern England. In other words it proves that the Thames was diverted to its present course after the arrival of this ice sheet.

**Details of the site**

This discovery was made during construction of the Romford to Upminster branch line in 1892. The route required a cutting through a ridge of gravel-capped land running north-eastwards from Hornchurch parish church. The section exposed in the cutting was up to 8 metres (25 feet) deep and 600 metres (1/3 mile) long showing about 5 metres (15 feet) thickness of boulder clay apparently occupying a depression in the London Clay and overlain by sand and gravel. The geologist and then vice-president of the Essex field Club, T.V. Holmes (1840-1923), is credited with the discovery and his published observations and descriptions of the cutting have proved invaluable<sup>1</sup>. Holmes led a Geologists' Association field trip to the excavations in March 1892 and his field trip report states that many Jurassic fossils were collected from the boulder clay including a vertebra of a plesiosaur. Re-excavation of a section in the cutting by geologists in 1983 (at TQ 5470 8737) revealed over 3 metres (10 feet) thickness of boulder clay and confirmed that it is typical chalky boulder clay containing abundant Jurassic rocks and fossils brought here from the Midlands by the ice sheet<sup>2</sup>. The new excavation also confirmed that this site is of considerable significance for the correlation of the internationally important Thames terrace sequence with the glacial stratigraphy of southern Britain (see [Bridgland, D.R. 1994, pp.176-185](#)). SSSI information is at:

[http://www.sssi.naturalengland.org.uk/Special/sssi/sssi\\_details.cfm?sssi\\_id=1002354](http://www.sssi.naturalengland.org.uk/Special/sssi/sssi_details.cfm?sssi_id=1002354)

**Access**

In 2010 Network Rail cut back the trees along the slope and the section was reopened for re-examination. A television documentary was made about the site following the conservation. The site is on a slope beside the track owned by Network Rail and is only accessible with permission of Natural England and Network Rail (contact [enquiries@naturalengland.org.uk](mailto:enquiries@naturalengland.org.uk)).

<sup>1</sup> Holmes, T.V. (1893). The new railway between Upminster and Romford. Boulder clay beneath old river gravel at Hornchurch. Conclusions therefrom. *Essex Naturalist*. Vol. 7. p.1-14.

<sup>2</sup> Anon., 1984. Hornchurch Railway Cutting, Essex. *Earth Science Conservation*. No.21 (March 1984) p.42

The Hornchurch railway cutting when excavated in 1983. The pale-coloured steps are cut into Hornchurch Till whilst the reddish ones above are cut into the Black Park / Orsett Heath Gravel.

Photo: Phil Harding & Source: Peter Collins



Site Map

Source: London's foundations, page 151

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