

**GLA 75 Watt's Common, Candidate LIGS**

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London Borough of Hillingdon, TQ 0539 9147  
Ownership: London Borough of Hillingdon (tbc)

Watt's Common is a small area that is mostly woodland and is marked on old Ordnance Survey maps as rough pasture, covering the same area as today. It features small exposures of the Gerrards Cross Gravel (Pleistocene, pre-Anglian) in shallow pits mainly in the NW parts of the wood. The Gerrards Cross Gravel was laid down by the pre-diversionary Thames and forms the only known outcrop of the gravel in Greater London. Banks can easily be scraped for more exposure. Water accumulates in several pits after a wet spell, and implies that clays of the Lambeth Group (Paleogene) are not far below the surface. A fallen tree provides the best exposure with a mixture of sand with silt/clay lenses and pockets of gravel. This is best seen in winter/early spring (see 'Access').

**The geology**

The cold-stage Gerrards Cross Gravel (and the younger Winter Hill Gravel) crops out on the plateau on which Harefield is situated, and belongs to the Sudbury Formation which are mainly fluvial deposits of the pre-diversionary River Thames. At Watt's Common, it rests unconformably on the above-mentioned Lambeth Group. With outcrops from South Buckinghamshire through to the Radlett area, the Gerrards Cross Gravel was deposited in the early Middle Pleistocene when the Thames flowed through the Vale of St Albans and Essex, via Chelmsford and Colchester. The river was diverted to its present course during the extensive Anglian Glaciation of c.450,000 years ago (i.e., in marine oxygen isotope stage 12) when ice penetrated as far as north and north-east London. The age of the Gerrards Cross Gravel has been assigned to MIS 18<sup>1,2</sup> (c. 750,000 years), a cold substage within the Cromerian Stage<sup>3</sup> of the Pleistocene.

The gravel consists mainly of flint pebbles, but ones of quartzite and vein quartz also occur (characteristic of most pre-Anglian Thames terrace gravels). At Watt's Common, scraping with a trowel on the side of a pit shows pebbles supported by a matrix of orange-brown sand. Before diversion, the Thames' upper catchment may have lain beyond the Cotswolds (where it now is), i.e., the Midlands and even North Wales, the source areas of the quartzite and vein quartz. Alternatively, glacial transport in the early Pleistocene could have carried the quartzite and vein quartz into the upper catchment if confined to the Cotswolds. In the Midlands, outcrops of quartzite pebble beds within the Triassic Chester Formation occur; these were formerly known as the Bunter Pebble Beds prior to reclassification by the BGS.

**Access**

On-street parking is available on Hall Drive, a turning off the Rickmansworth Road just north of its junction with Hill End Road. Cross Rickmansworth Road (moderate traffic) and go through metal stymie gates (to stop cyclists) opposite. Immediately turn right and follow a narrow path through trees to a kissing gate in a hedge on to playing fields (Taylor's Meadow). Walk to the far-left hand corner of the field. Enter the wood through a hole in the hedge and follow a short length of narrow path. Within the woodland, there is a nettle hazard in the summer and using the path avoids much of it. Unfortunately the nettles obscure the fallen tree exposure, impeding access, but is visible in the winter/early spring. However, as mentioned above, scraping a small area with a trowel will reveal fresh sand and gravel.

*References*

1. Whiteman, C.A., Rose, J., 1992. Thames River sediments of the British Early and Middle Pleistocene. *Quaternary Science Reviews* **11**, 363–375.
2. Westaway, R. 2011. A re-evaluation of timing of the earliest reported human occupation of Britain: the age of the sediments at Happisburgh, eastern England. *Proceedings of the Geologists' Association*, Volume 122, Issue 3, 383-396 (the age of Gerrards Cross Gravel is quoted in Table 3 and explained in the text. It correlates with the Moreton Gravel of north-east Essex).
3. Gibbard, P. and Cohen, K.M. 2018. Global chronostratigraphical correlation table for the last 2.7 million years. <http://quaternary.stratigraphy.org/wp-content/uploads/2018/04/episodes2008-243-247.pdf>



**Shallow pits**



**Gravel on rim of one of the pits (phone case 130mm)**



**Fallen tree giving exposure of sand and pockets of gravel**



**Part showing lenses/streaks of grey silt or sand (camera case 130mm long)**

Photos: Allan Wheeler, February.2018

Site Map

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