LOCAL GEOLOGICAL SITES
EPPING FOREST DISTRICT

EpG7 Lord's Bushes

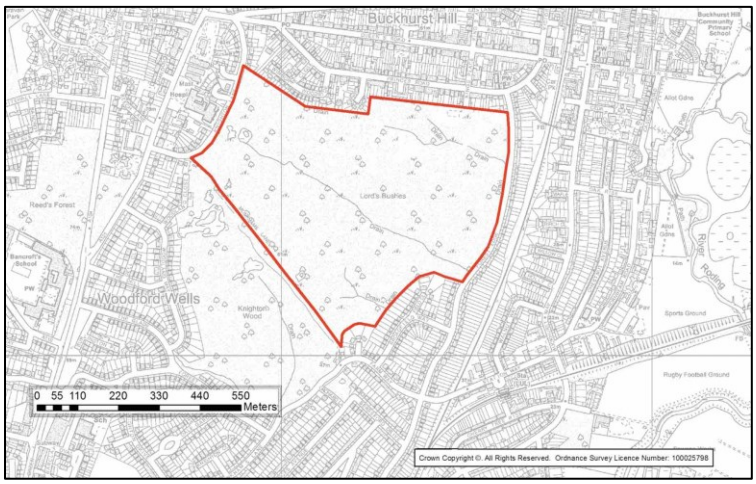
Site location: Lord's Bushes and the adjoining Knighton Wood are an isolated portion of Epping Forest immediately south of Buckhurst Hill.

Grid Reference: TQ 413 935

Status: Accessible at all reasonable times.

Summary of the geological interest:

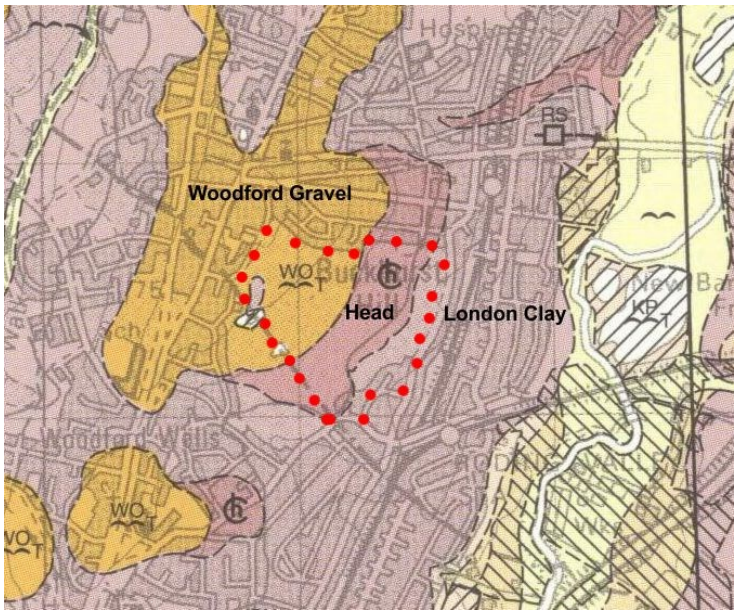
Lord's Bushes and Knighton Wood are areas of adjoining oak and hornbeam woodland on the border of Essex and Greater London. The woods form part of the eastern edge of the Epping Forest ridge. Lord's Bushes is in Essex and Knighton Wood is in the London Borough of Redbridge.



The site lies on the western side of the Roding Valley, with Woodford Gravel in the higher western area, giving way downhill, eastwards, to London Clay, with downwash (head) obscuring the junction.

The origin of the gravel (Woodford Gravel) is a subject of scientific debate; as a deposit of a northward-flowing tributary of an early Thames that crossed central Essex at the time or, diametrically opposed, as southward-flowing outwash from the Anglian glacier. Thus, there is significant value in investigating the gravel further. (See also Blackweir Pond and Strawberry Hill Pond, all three serve to illustrate the distribution and genesis of the Woodford Gravel).

Date of selection/last revision: Nov 2018
last visited June 2025



Map courtesy of the British Geological Survey

Site Assessment. *Local Geological Sites (LoGS) in Essex are assessed using criteria based on DEFRA guidance. An assessment form is used which asks key questions under four value categories: scientific, educational, historical and aesthetic. This site has been assessed and qualifies under these criteria.*

Access

Lord's Bushes and Knighton Wood are part of Epping Forest, lying between Knighton Lane and Forest Edge, and are accessible at all times. They are also a site of special scientific interest (included within Epping Forest SSSI). The site is within easy walking distance of Buckhurst Hill or Roding Valley Underground stations.

Scientific interest and site importance:

The Woodford Gravel is found on both sides of the Roding Valley, extending on the western side over c.10 km discontinuously from Great Monk Wood in the north to South Woodford, and 3 km on the eastern side from north of Chigwell to Woodford Bridge. The Woodford Gravel overlies London Clay.

One line of argument is that the Gravels are hill-top deposits, declining in height northwards, laid down by a northward-flowing tributary of the ancient Thames which crossed central Essex about 500,000 years ago, before the Anglian glacier blocked it and diverted it into its present valley. The presence of Greensand chert suggests a source in the Weald of Kent/Surrey. However, geological mapping of the Gravels shows them to be valley-side deposits, declining in height from 80+ m OD in the north at Great Monk Wood, some 20 m lower than the Stanmore Gravels capping the Epping Ridge at High Beach, to 50-60 m OD in South Woodford. Only in South Woodford, where the Epping Ridge is lower, is the Woodford Gravel a hill-top deposit. More detailed stone counts show the presence of a wide range of northern stone types, such as Rhaxella chert, brought in by the Anglian glacier c.450,000 years ago, which extended down what is now the Roding Valley.

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Associated with the Woodford Gravel are boulder clay (till) deposits, giving direct evidence of the presence of the Anglian glacier.

The valley-side positions of Blackweir Pond, Strawberry Hill Pond and Lord's Bushes are crucial evidence indicating that the Woodford Gravel is not a hill-top deposit but lateral outwash deposits, possibly forming kame terraces, of the Anglian glacier.

Condition report. 13 June 2025

No exposures were seen during this visit, but sandy gravel has been reported in the higher, western area, on the banks of ponds there which are disused gravel pits, and also in the roots of fallen trees.

References

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ELLISON, R.A. 2004 Geology of London. Special Memoir for 1:50,000 Geological sheets 256 (North London), 257 (Romford), 270 (South London) & 271 (Dartford)British Geological Survey. Pages 52-57.

GIBBARD, P.L. 1994 Pleistocene History of the Lower Thames Valley. Cambridge University Press. Page 14.

HANSON, M.W. 1983 Lords Bushes: The History and Ecology of an Epping Forest Woodland. Essex Naturalist Booklet No. 7. Essex Field Club.

THOMPSON, P. 1914 On the occurrence of Rhaxella chert in Epping Forest gravel. Essex Naturalist. 17. Pages 256-260.

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