

# LOCAL GEOLOGICAL SITES

## THURROCK DISTRICT



### ThG10 Kennington Park

**Site location:** Kennington Park, Romford Road, Aveley,

**Grid reference:** TQ 560 812

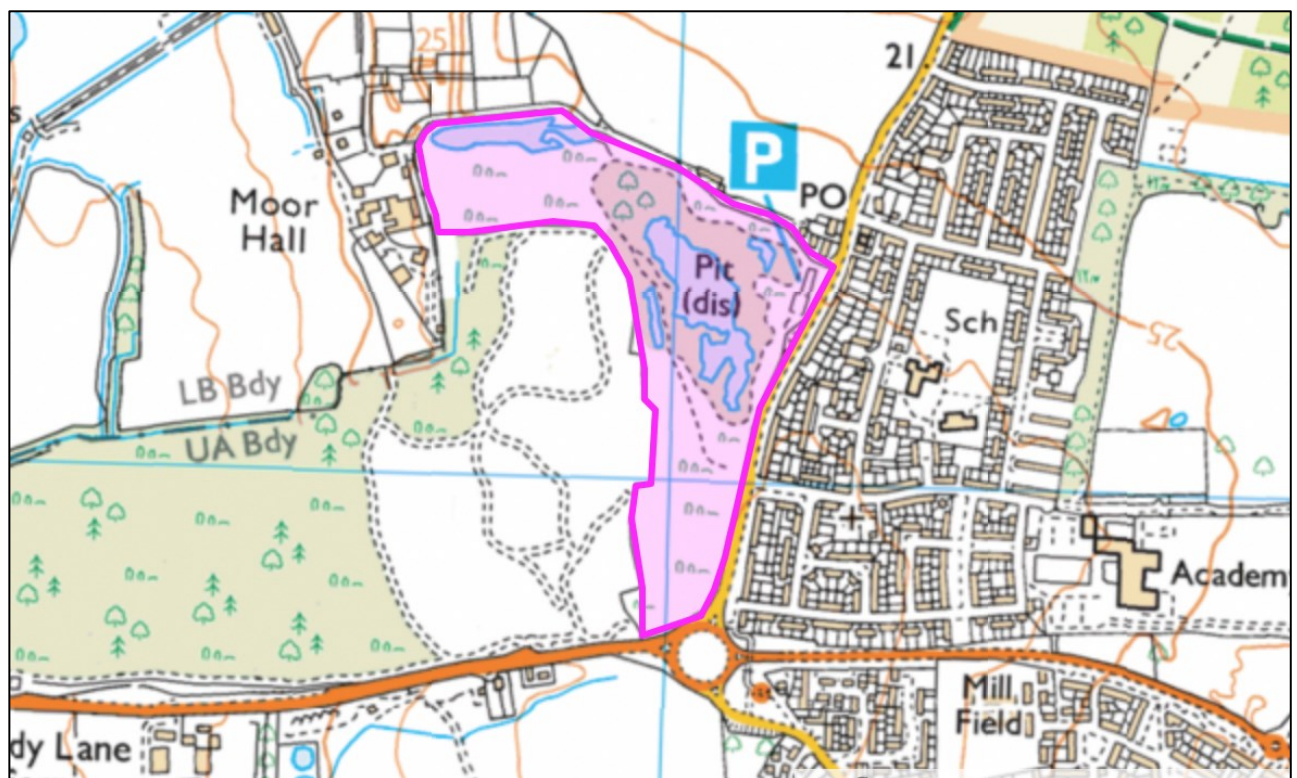
**Status:** Public access

#### **Summary of the geological interest:**

Kennington Park on the Romford Road is an area of disused gravel pits are now flooded and form public fishing lakes. The gravel is Orsett Heath Gravel which forms the oldest and highest terrace of the Lower Thames (the Boyn Hill terrace) and is about 400,000 years old. It is about 35 metres higher than the modern river.

When the park was created in the 1990s there were several exposures of gravel, particularly alongside the path on the northern edge of the park where it formed low cliffs up to 2 metres high. The best of these exposures is unfortunately now contained within a private, members-only fishing area known as Back Lake.

There is a car park and the park publicly accessible at all times.



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**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.

## Scientific interest and site importance

The Thames was diverted to roughly its present course by the ice sheet during the coldest period of the Ice Age, some 450,000 years ago. It was then a much larger river and its course extended across a wide area, depositing huge amounts of gravel, forming wide floodplains as far north as Hornchurch.

Subsequent glacial/interglacial cycles saw the river cut down through its floodplain to create another floodplain at a lower level, and leaving fragments of the former floodplain as terraces each side of the valley. This process was repeated several times leaving us with a complex sequence of terraces of different ages along the Thames valley, each one providing valuable information about the climate, flora and fauna of Britain during the Ice Age.

The gravel at Kennington park is Orsett Heath Gravel which forms the oldest and highest terrace of the Lower Thames (the Boyn Hill Terrace) and is about 400,000 years old.

This patch of Orsett Heath Gravel here at Aveley exists because it was preserved as a 'meander core', in other words it was at the centre of a loop of the Thames and therefore not destroyed when the river was cutting down through its floodplain during the following terrace cycle (Bridgland 1994).

The adjacent pit to the west was Sandy Lane Clay Pit which became famous in 1964 for the discovery of the Aveley elephants.

It is important to retain visible gravel exposures for scientific study and public education.

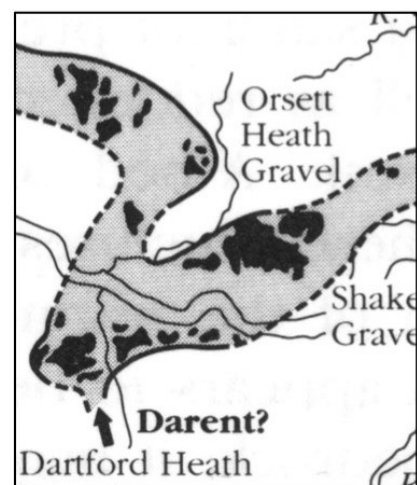


*400,000 year old Thames gravel (Orsett Heath Gravel) exposed in the northern section of Kennington Park.*

*Photo: © G. Lucy*

## Reference:

BRIDGLAND, D.R. 1994. **The Quaternary of the Thames.** Chapman and Hall. Geological Conservation Review Series.



400,000 years ago

**The route of the Thames through what is now Thurrock during deposition of the Orsett Heath Gravel.**

The existing course of the Thames is shown and the outcrops of the gravel are shown in black (map extracted from Bridgland 1994).