

LOCAL GEOLOGICAL SITES

COLCHESTER DISTRICT



CoG2 Fingringhoe Wick Nature Reserve

Site location: Fingringhoe Wick Nature Reserve, Fingringhoe, Essex

Grid Reference: TM 045 195

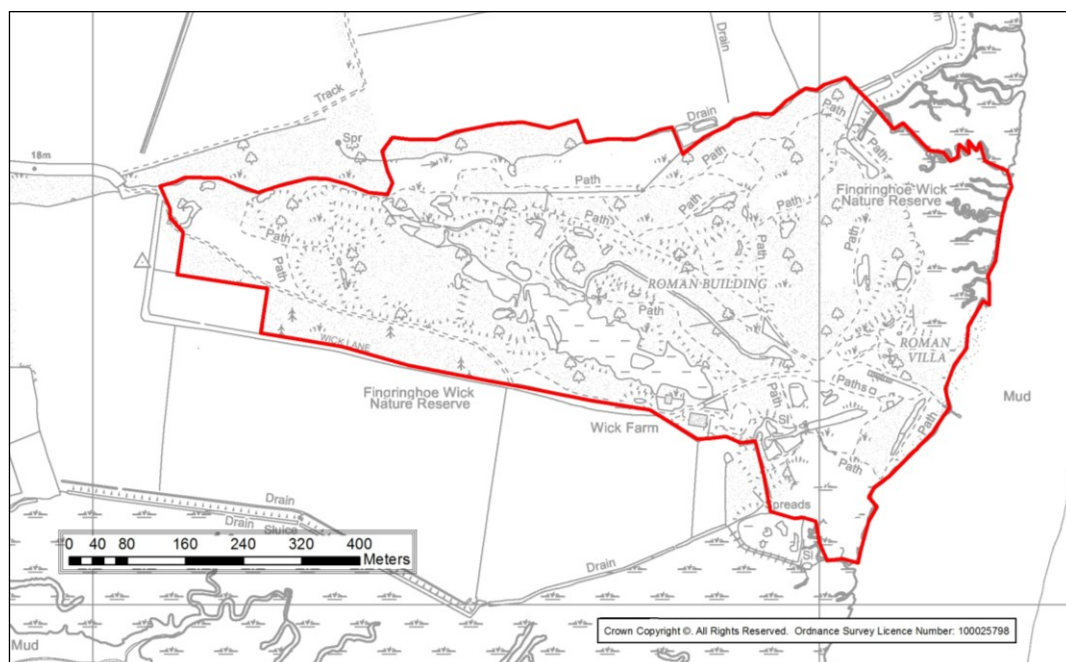
Status: Accessible during opening hours

Summary of the geological interest:

Fingringhoe Wick was a working gravel quarry, known as Freshwater Pit, between 1924 and 1959. Visible in many places are mounds and banks of glacial sand and gravel (known as Upper St. Osyth Gravel) which was deposited some 450,000 years ago by colossal torrents of meltwater issuing from the Anglian ice sheet, the edge of which was then situated only 12 kilometres west of here. At that time ice covered almost all of Britain to a maximum thickness of over one kilometre.

The gravel therefore provides evidence of an exceptionally cold period of the Ice Age, a time when Essex was barren of virtually all life - in stark contrast to the abundant flora and fauna that can be seen at Fingringhoe Wick today. A permanent cliff of gravel exists in the centre of the reserve where pebbles of several different rock types can be collected. These rocks provide clues to the origin of the ice and the rocks over which the ice sheet passed.

There are fine views of the Colne estuary from the edge of the reserve.



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

In the past, Fingringhoe Wick has been cited as providing exposures of Lower St. Osyth Gravel and Upper St. Osyth Gravel (Bridgland 1994). The **Lower St. Osyth Gravel** was laid down by the River Thames when it flowed through central Essex, to the south of Colchester, and out across the low-lying land that is now the North Sea to become a tributary of the Rhine. Shortly afterwards the Anglian Ice Sheet blocked the valley of the Thames upstream and diverted the river to its present course. As the ice sheet spread into central Essex the former Thames valley became a channel for glacial meltwater which flowed across the Fingringhoe area laying down the **Upper St. Osyth Gravel**, a typical glacial outwash deposit. The junction between the two gravels therefore represents the point at which the Thames ceased to flow through central Essex. The Thames at that time was a very large, braided river and its diversion must have been a catastrophic event.

Fingringhoe Wick is important because there are very few other sites in Essex where glacial gravel (in this case the Upper St. Osyth Gravel) can be so readily examined, although all cliff exposures are now very overgrown.

Other information

Fingringhoe Wick was a working gravel quarry, known as Freshwater Pit, between 1924 and 1959. It was purchased by the Essex Wildlife Trust in 1961.

For its biodiversity importance the site is included within the Colne Estuary Site of Special Scientific Interest (SSSI).

There is ample car parking but no access to the site by public transport.

Information Update

This site has become an important nature reserve which has been achieved by allowing abundant scrub to colonise the area with the result that very few exposures of the sand and gravel are now visible. Most of the few partly vegetated exposures are in made ground. The cliff shown on the site account was identified by the staff as being in a sensitive area from which the public are excluded.

The described site appears to be on the edge of a pit that has since been partially flooded. However vegetation cover did not allow us to determine any structures in the deposit or indeed if this material had not been disturbed during the gravel extraction activities as per many parts of the reserve. Elsewhere on the site (near the concrete base of the processing plant) there are spoil heaps of pebbles screened from the sand including all the usual elements of these deposits. North of the site, extraction has ceased at the Prior quarry and restitution work is in progress. The exposed cliffs have been graded to allow for revegetating. However, the west face has been left as a very good exposure, possibly as a nest site for sand martins. It is visible from the access road to the nature reserve and may offer a better profile of the St Osyth? beds than the reserve. This has been described as a separate geological site (Priors Fingringhoe Sand and Gravel Pit face).

References

Bridgland, D.R. 1994. **The Quaternary of the Thames**. Chapman and Hall.
(pages 288, 292, and 320 - 325)



*Visitors examining the cliff of glacial gravel at Fingringhoe Wick Nature Reserve.
Photo: W.H. George 2007
(The site is now infilled/ overgrown so cannot now be located. Feb 2025)*



A large area of gravel can be uncovered in front of the concrete silos/bunkers by removing some of the moss. It is not insitu but shows the components of the gravel well. Photo G Lucy Feb 2025