

LOCAL GEOLOGICAL SITES

BRAINTREE DISTRICT



BraG9 The Finchingfield Boulder

Site location: On the pavement, on the west side of The Causeway, Finchingfield.

Grid Reference: TL 6849 3290

Status: Accessible at all times

Summary of the geological interest:

A large boulder of basalt, about 85 centimetres (nearly 3 feet) long, can be seen on the pavement on the left hand side of The Causeway, when travelling north out of the village.

Stones such as this boulder are known as glacial erratics and were carried to Essex by the Anglian Ice Sheet that covered almost the whole of Britain during the coldest period of the Ice Age, some 450,000 years ago. At this time Essex was situated at the southern edge of the ice sheet, which was up to 2 kilometres (over a mile) thick in places. Its extent is fairly well known because it has left behind evidence of its existence in the form of a rock called boulder clay, or till. A great thickness of boulder clay exists across north Essex except in river valleys where it has been removed by erosion.

This boulder was probably discovered in a local field, having been washed from the boulder clay as the River Blackwater cut down through the boulder clay plateau.



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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

As the ice moved it ground up and carried along pieces of the rocks over which it passed, just as glaciers and ice sheets do today, and when the ice melted an unsorted clayey residue called boulder clay, or till, was left behind. Boulder clay contains rocks transported long distances by the ice and known as glacial erratics. By matching rock types with known outcrops in other parts of Britain geologists are able to establish the direction of ice movement across the country from its origins in Scotland or Scandinavia.

Glacial erratic boulders of basalt and other igneous rocks are rare in Essex, especially those over about 50 centimetres in size. This example in Finchingfield, in a conspicuous position on the side of the road, is very unusual. The boulder may have been brought to Essex by the ice from Scotland. Analysis of the boulder's composition may give a clue to its precise origin.

This history of this boulder is not known. It is assumed to have been discovered in a local field or pit and brought to the village for a practical reason, perhaps as a mounting block in the 19th century.



The Finchingfield boulder. Photo: G. Lucy



The Finchingfield Boulder Photo Derek Potts 2023