

# LOCAL GEOLOGICAL SITES

## CHELMSFORD DISTRICT



### ChG1 Beehive Lane Sarsen Stone, Gt. Baddow

**Site location:** Sarsen stone in the car park of the Beehive Public House in Beehive Lane, Great Baddow.

**Grid Reference:** TL 71948 05544

**Status:** On private land but accessible at all times.

**Summary of the geological interest:**

A sarsen stone 90cm x 70cm x 60cm (3' x 2'4" x 2') in size sits in the car park of the Beehive Public House in Beehive Lane. It was obtained from the old 'Beehive' gravel quarry nearby before 1906.

Sarsens are boulders of extremely hard sandstone that were formed about 55 million years ago during the Palaeocene period in sandy strata called the Reading Beds that occur on top of the Chalk. The stones in the Chelmsford area were carried here from north and west of Essex by the Thames when it flowed through central Essex about 500,000 years ago.

Sarsens are not uncommon in Essex, but this is a large example in a conspicuous position, and tells a story about the history and geology of the area.



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

## **Scientific interest and site importance**

Sarsens are an extremely hard sandstone formed around 55 million years ago when the climate of Britain was hot and a layer of sand beneath the surface of the ground became cemented with quartz. The formation of silcretes (which includes sarsens) has been the subject of recent scientific debate. Research has compared the conditions under which sarsens were formed with the present day climate in the Kalahari Desert and parts of Australia. The stones are tough and very resistant to erosion and have survived the rigours of the Ice Age. They probably originated on the chalk downland to the north-west of Essex and must have been brought here by the early Thames which flowed through this area about 500,000 years ago.

This sarsen stone came from the former Beehive Gravel Pit nearby. This must have been before 1906 as it is recorded by Salter (1906). Bristow (1985) provides a short account of the pit which was working the Kesgrave (Thames) Sands and Gravels. Several sarsen stones were apparently found in the pit, together with Hertfordshire puddingstone and other glacial erratics, including small boulders of far-travelled volcanic rocks.

This stone is water-worn and typical of sarsens elsewhere in Essex.

The distribution of sarsen stones across Essex is of scientific interest. Sarsen stones are also of historic interest. They link geology, archaeology and social history.

## **References**

BRISTOW, C.R. 1985. **Geology of the country around Chelmsford**. Geological Survey Memoir. British Geological Survey. HMSO. Page 42.

SALTER, A.E. 1906 **Meeting in the Danbury and Little Baddow districts in conjunction with the Geologists' Association**. *Essex Naturalist*. Vol. 14. Page 262.



*Photo EFC database*