LOCAL GEOLOGICAL SITES
UTTLESFORD DISTRICT

GeoEssex
Promoting the geology and landscape of Essex

UfdG3 Arkesden War Memorial

Site location: St Mary's Churchyard, Arkesden, Essex.

Grid reference: TL 4821 3456

Status: Accessible at all times

Summary of the geological interest:

The war memorial in St. Mary's churchyard consists of a very large single boulder of Hertfordshire puddingstone 1.7 metres by 1.7 metres by 0.8 metres in size and is one of the most unusual war memorials in Essex.

Hertfordshire puddingstone is a unique type of rock containing well-rounded flint pebbles bound together with quartz 'cement'. It is named after its resemblance to a plum pudding and the fact that it can be found in Hertfordshire 'in-situ'. The cement and pebbles are homogeneous and both equally hard, which makes puddingstone a very tough rock and very resistant to erosion. This particular puddingstone boulder is one of the most conspicuous examples in Essex.

Arkesden is unique in Essex for the number of puddingstone and sarsen stone boulders that are scattered around the village. They can also be seen on the roadside, in the stream bed, by the inn, and in private gardens. These boulders are known as 'glacial erratics' and were probably carried here first by an early course of the River Thames, and then scattered by the Anglian Ice Sheet which covered almost the whole of Britain during the coldest period of the Ice Age, some 450,000 years ago.

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.*

Date of selection/last revision: March 2020

Scientific interest and site importance

Hertfordshire Puddingstone was 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 and puddingstones) has been the subject of recent scientific debate. Research has compared the conditions under which sarsens and puddingstones may have been formed with the present-day climate in the Kalahari Desert and parts of Australia.

The boulders of puddingstone that are found in Essex most probably originated in Hertfordshire and were brought to Essex by the Thames when it flowed far to the north of its present course. However, the abundance of puddingstones and sarsens in Arkesden raises the intriguing possibility that there might have once been a more local source.

Erratic boulders link geology and social history. This boulder was apparently brought here from somewhere on the Wood Hall estate, probably less than a mile to the south, and transported by horse-drawn sledge (Green 2014). Investigations are currently being made to establish its precise origin.

References

BRIDGLAND, D., CLEMENTS, D. and GREEN, C. (2014). How puddingstone catches imaginations. Earth Heritage. No. 42 (Summer 2014). Pages 33-34.

CATT, J. (ed.) (2010). Hertfordshire geology and landscape. Hertfordshire Natural History Society.

GEOESSEX. 2010. Puddingstone. GeoEssex Factsheet No. 2. GeoEssex.

GREEN, C. (2014). Silcretes of East Hertfordshire and North-West Essex. Field guide for the Geologists' Association field visit on Saturday 17th May 2014. Geologists' Association.

The War Memorial Puddingstone. Photo: M. Ralph

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