

LOCAL GEOLOGICAL SITES

BASILDON DISTRICT



BaG2 Vange Hall Brick Pit

Site location: Former pit of Vange Hall Brickworks, on the site of Basildon Golf Course.

Grid reference: TQ 717874

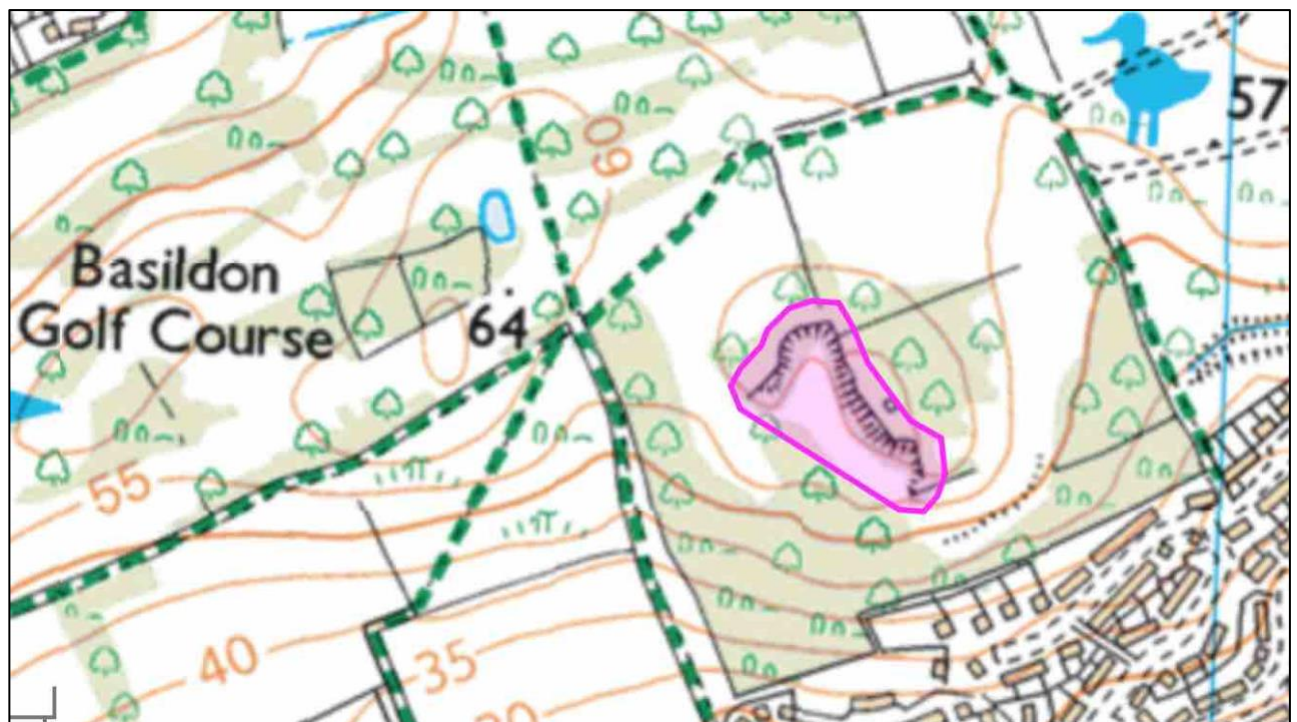
Status: Private land

Summary of the geological interest:

Vange Hill is a prominent area of high ground with steep slopes and land-slipped ground to the south. The eastern end of the hill, alongside Vange Hill Drive, is now a local nature reserve owned by Basildon Council. Basildon Golf Course occupies the western end and in the centre of the golf course, at the highest point, is the former pit of Vange Hall Brickworks.

The bricks were made from the Claygate Beds, a sandy clay which was laid down in a subtropical sea about 50 million years ago. There is a record of fossils of marine creatures that inhabited this sea being found in this pit.

The pit is now overgrown and mostly obscured, but it remains one of the only exposures of Claygate Beds in Essex.



Reproduced by permission of Ordnance Survey on behalf of HMSO © Crown Copyright. All rights reserved. Ordnance Survey Licence number xxx

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 bedrock geology of Pitsea and Vange is London Clay, which passes up into a sandy clay called the Claygate Beds as the sea became shallower. Due to erosion during the Ice Age only isolated patches of Claygate Beds now remain. One of these is a kilometre-long area on Vange Hill, which is a prominent area of high ground with steep slopes and land-slipped ground to the south. The Vange Hall pit provides a rare exposure of these beds.

The brickworks started life in the 1890s and worked the Claygate Beds, which were described in 1922 as laminated clays with beds of fairly coarse, current-bedded sands. In the lowest beds were septarian nodules that contained fossil shells – comprising six species of marine mollusc that lived in the shallow waters of the London Clay Sea.

In 1974 part of the pit face was cleared to reveal a 9 metre thick section, which was documented in detail (Lake et al 1986). It was assigned to the upper part of the middle division of the Claygate Beds.

References

BRISTOW, C.R., ELLISON, R.A. and WOOD, C.J. 1980. The Claygate Beds of Essex. *Proceedings of the Geologists' Association*. Vol. 91 (4). Pages 261-277.

ELLISON, R.A. 1979. Report of a field excursion to south Essex, 1st March 1975. *Tertiary Research*. Vol. 2. Pages 51-55.

LAKE, R.D., ELLISON, R.A., HENSON, M.R. and CONWAY, B.W. 1986. Geology of the country around Southend and Foulness. *Memoirs of the British Geological Survey*. HMSO. Page 20.

MERCER, I & MERCER, R. 2022. Essex Rock – Geology Beneath the Landscape, Pelagic Publishers. Pages 224-226.

WOOLDRIDGE, S.W. and BERDINNER, H.C. 1922, Notes on the geology of the Langdon Hills, Essex. *Proceedings of the Geologists' Association*. Vol. 33. Pages 320-323.