

LOCAL GEOLOGICAL SITES

CHELMSFORD DISTRICT



ChG16 Bushy Hill, South Woodham Ferrers

Site location: North of Burnham Road, South Woodham Ferrers.

Grid Reference: TQ 813986

Status: Accessible at all times via public footpaths

Summary of the geological interest:

Bushy Hill is a prominent and locally important landscape feature with a landform characterised by repeated landslips. It is the southernmost point of a ridge of high ground overlooking South Woodham Ferrers. The hill is composed of Eocene London Clay capped by Claygate Beds with a relatively thin overlying protective cap of gravel, probably a remnant from a south bank tributary of the ancestral Thames.



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

There are fine views from this ridge across the valley of the Crouch with the Bagshot Beds hills of Rayleigh to the south and the Langdon Hills to the south-west. Although there are no public footpaths to the summit, which is occupied by a radar research station, similar views can be had from the minor road which runs across the ridge to the north (near Edwins Hall) and from the public footpath from this road around the western slopes of the hill. To the east of the hill is typical London Clay landscape.

There are very good examples of landslips on the southern and western slopes that can be seen from aerial photographs. The landslips can also be inspected close to from the public footpath that traverses the south-eastern slopes of the hill. Here there is hummocky ground from previous landslips which sometimes provide exposures of Claygate Beds. The Claygate Beds are found to consist of brown-buff silty clays with seams of silty sand. London Clay is also revealed in places, with occasional septarian nodules weathering out of the clay.

The landslips on Bushy Hill, which are of several different types, have been taking place here for thousands of years and will continue until the slopes reach an angle of about 8 degrees which is required for ultimate stability on London Clay and Claygate Beds. These landslips probably originated in periods of periglacial activity when this part of Essex was close to the southern limit of the Anglian ice sheet, 450,000 years ago. Less than a kilometre (half a mile) north of Bushy Hill is an isolated patch of boulder clay, or till, which indicates that a lobe of ice from the ice sheet briefly penetrated beyond Hanningfield to this point. The slippage is exacerbated by springs emerging from seams of sand in the Claygate Beds.

Other Information

Bushy Hill is known locally as Radar Hill due to having been visually dominated by the radar station. Before the radar station was built it was known as Landslip Hill as the landslips on the south face periodically left a bare escarpment, which was clearly visible from the village.

References

BRISTOW, C.R. 1985. **Geology of the country around Chelmsford**. Geological Survey Memoir. British Geological Survey. HMSO. Page 71 & 85.

GREENSMITH, J.T., BLEZARD, R.G., BRISTOW C.R., MARKHAM R., & TUCKER E.V. 1973. **Geologists' Association Guide No. 12. The Estuarine Region of Suffolk and Essex**. Geologists' Association. Pages 33-34.

HUTCHINSON, J.N. 1965. **A Survey of the Coastal Landslides of Essex and South Suffolk**. Building Research Station Note No. EN 36/65. Ministry of Technology. Pages 26-28.



Septarian nodules weathering out of the London Clay on the south side of Bushy Hill.

Photo: Jeff Saward, November 2024.