LOCAL GEOLOGICAL SITES
UTTLESFORD DISTRICT

UfdG36 Whitehill Wood Chalk Pits, Saffron Walden

Site location: In Whitehill Wood next to the Ashdon Road.

Grid Reference: TL 5578 3915

Status: Publicly accessible

Summary of the geological interest:

This site consists of two adjacent chalk pits in Whitehill Wood, a large eastern pit and a smaller western pit. The pits date back at least to the beginning of the 20th century. They are much overgrown with minor exposures of Chalk, but there are also rare exposures of the overlying boulder clay (glacial till).

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 report of an Essex Field Club visit to this pit in 1914 states that the actual junction of the Chalk and overlying till was then visible, and that *"the grinding action of the ice was illustrated by the fact that the Chalk was scooped out in basin-like hollows filled with reconsolidated chalk rubble, containing only a small quantity of clay."*

Date of selection/last revision:
March 2024

Despite the encroachment of vegetation and accumulation of talus, it is still possible to see chalk and till, although much would be gained by removal of talus and cleaning of the sections. The Chalk in these pits contains fossils, such as stout pieces of the bivalve shell *Inoceramus,* which occur in profusion.

In the larger eastern pit, as described by Morris, above the talus is about one metre of what appears to be Chalk but is actually glacial till composed entirely of reconsolidated chalk rubble in the form of hard chalk pebbles in a soft chalk matrix. It is barely distinguishable from the Chalk bedrock which is shattered due to freeze-thaw action. Whitehill Wood is a Local Wildlife Site.

The nature of chalk

Chalk is a special type of limestone formed on the floor of a tropical sea about 80 million years ago during the Cretaceous period. The Chalk Sea is thought to have covered most of northern Europe, the purity of the chalk being evidence that coastlines were then far away and sea level was very high. At this time the European continent had not yet separated from North America.

There are widely-spaced courses of nodular flint and layers and oblique veins of tabular flint. Flint is an extremely hard, black form of quartz that originates from the skeletons of sponges that were dissolved by sea water and precipitated as mostly horizontal layers.