

LOCAL GEOLOGICAL SITES

UTTLESFORD DISTRICT



UfdG14 Debden Water Gravel Pit, Newport

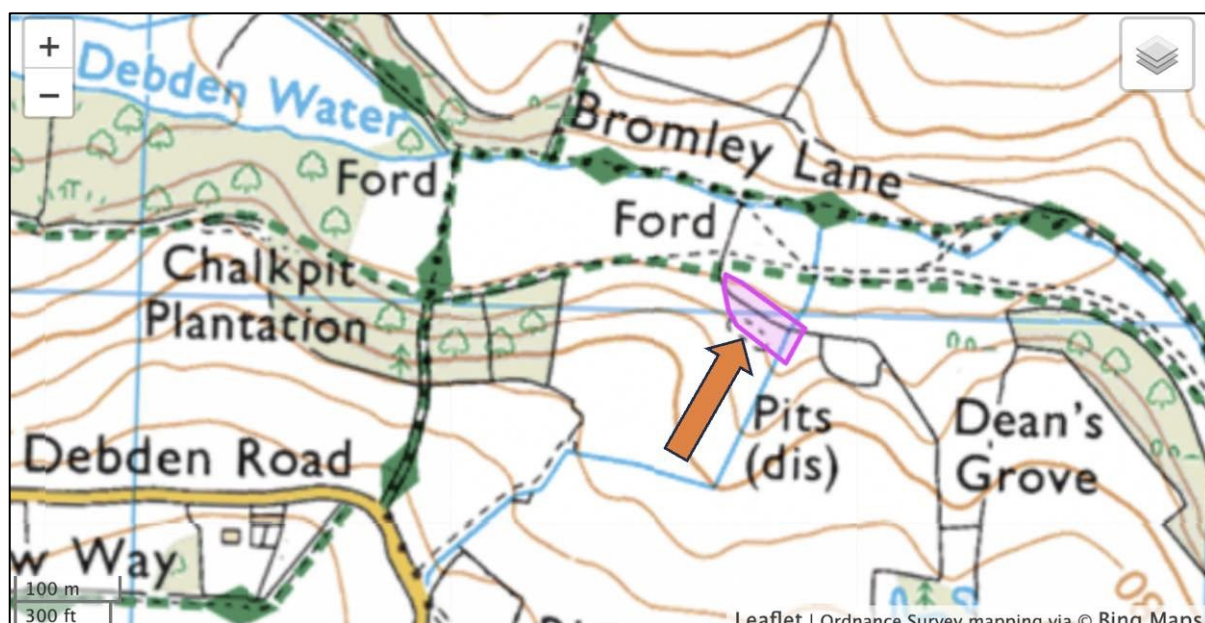
Site location: A small disused gravel pit in the valley of the Debden Water

Grid Reference: TL 5358 3399

Status: Accessible on private land next to a public footpath.

Summary of the geological interest:

This site is a small disused gravel pit, thought to date back to the nineteenth century, in the valley of the Debden Water east of Newport. A low cliff of glacial gravel can be seen here which was laid down by torrents of meltwater from the Anglian Ice Sheet 450,000 years ago - in marked contrast to the sedate nature of the valley today. Piles of gravel with large nodular flints can be seen on the floor of the pit.



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

Debden Water is now a small stream that runs into the River Cam at Newport. The great width of this valley was once filled with ice which produced torrents of meltwater depositing glacial gravel. A reasonable section through the gravel can be seen at the north end of this pit which is one of several disused gravel pits in this valley. Excavations have been carried out here by the British Geological Survey.

Whitaker et al. (1878) describes several pits here but it is not clear which is which. There are several pits along the valley, some are excavations for gravel and some for chalk. All are now overgrown with little gravel or chalk visible. This particular pit has the best visible exposure of gravel.

Lake and Wilson (1990) describe an excavation in the base of this pit which proved over 2.5 metres of gravels, soliflucted gravelly clays and chalk breccias, the base of which was not penetrated. An excavation in the southern face of the workings revealed a wall of shattered chalk, either in-situ or little moved, which defines the southern limit of the deposit. These gravels may be the exhumed relics of a formerly extensive deposit that filled the valley and was probably connected to the main buried channel complex at Newport.

The pit is on private land but the uncultivated land alongside the stream is largely public open space. The pit is next to the public footpath. It is adjacent to but not part of the Debden Water biological Site of Special Scientific Interest (SSSI).



Debden Water Gravel Pit. Photo: G.Lucy