

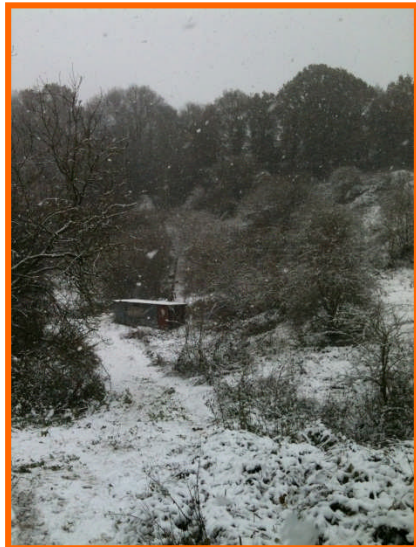
# Drilling Services

Marks Tey Paleo-environmental Survey Drilling



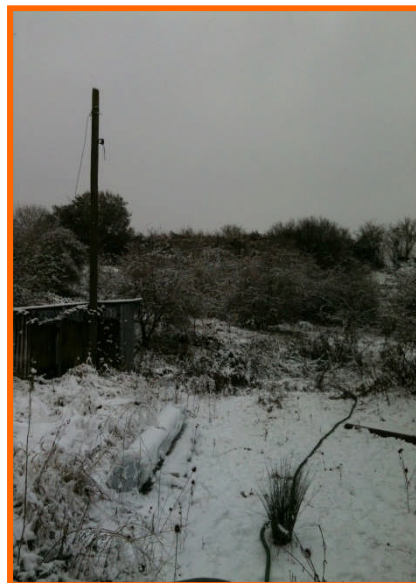
Ecologia were appointed to conduct 2 Exploratory Boreholes for paleo-environmental sampling of the Lacustrine Deposits below the base of a brick pit in Marks Tey, Colchester.

The site is of significant geological significance, since the underlying Middle Pleistocene Lacustrine Sediment deposits represent a record of the previous interglacial period, one which closely mirrored the climate of the current interglacial in which we live. As a result, the retrieval of high-quality samples would provide invaluable information in the study of both the deposits themselves and on going climate change in this era. The banding of the sedimentary material was extremely fine, with some of the transitions only millimetres thick.



It was therefore critical that there was full sample retrieval from both wells and that an overlap was allowed between the bores to ensure that all of the strata was accounted for.

To further complicate the works, the previous phase of drilling in the quarry, conducted in the 1960's had penetrated an artesian aquifer at 22m depth; just metres below the critical sample depth. This had resulted in a flow that flooded the pit and took over a month to contain. Combining this factor with some of the worst weather of recent years, the job had the potential to be seriously challenging.



Ecologia designed the works in order to prevent contact with the artesia, but mobilised appropriate equipment as a containment plan. In the event, artesian water strike occurred at 10m below ground level in both wells. Ecologia not only contained, managed and ultimately stemmed and capped this flow, but also completed both boreholes to their original target depths.

Sample quality was class 1, thanks to careful drilling and bit selection in conjunction with quality coreliner and clean water flush, and was all conducted using a 3m SWF corebarrel.

