

HFNT22 Environmental Assessment

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Introduction

This report details the assessment of environmental material recovered from two 18 litre bulk samples taken during an archaeological trial trenching evaluation at Hall Farm, Northwold, Norfolk. Excavation revealed remains associated with post medieval agricultural systems, in the form of five linear features that were interpreted as field boundaries or the remains of ridge and furrow cultivation. Three pits were also identified. Samples from deposits (3805) and (3605), that filled two of these pits, [3604] and [2804], were assessed.

The samples were assessed to determine the presence and preservation of any environmental remains, and to evaluate their significance and potential for enhancing environmental and economic interpretation of the site.

Method

Samples were processed using a Siraf-style water floatation system. The floating material (flot) was collected using a 250µm mesh and the residue (retent) a 1mm mesh. Both fractions were air-dried, and the heavy residue was sieved at 10mm, 5mm and 1mm and then sorted for the recovery of finds and environmental remains. Once dried, the flots were scanned using a binocular microscope at magnifications up to x60.

Macro-botanical identifications were carried out with reference to standard catalogues (Cappers et al 2012, Jacomet 2006) and using modern reference material. Nomenclature for economic plants follows Van Zeist (1984) and for other plant taxa follows Stace (1991).

Faunal remains were examined by eye or under low magnification and, as far as possible, identified to species, taxonomic group and skeletal element, with reference to Schmid (1972) and Hillson (1992).

Results

Results of the assessment are presented in Table 1 (Environmental results).

Charred plant remains

Two wheat (*Triticum* sp.) grains were recovered from fill (3605) of pit [3604]. The grains were heavily abraded and broken, and species could not be determined. A single indeterminate fragment of cereal grain was also present.

Charred seeds of corn spurrey (*Spergula arvensis*) and ivy-leaved speedwell (*Veronica hederifolia*) were identified in deposit (3605). Corn spurrey is a common weed of arable land that can also be found growing on wasteland and disturbed ground. Ivy-leaved speedwell is a eurytopic taxon that is commonly found growing on cultivated ground (Clapham et al 1962), on walls and in woodland clearings.

Other plant remains

A small number of uncharred wild seeds were present. Seeds of ruderal taxa including goosefoot/orache (*Chenopodium* sp./ *Atriplex* sp.) and knotgrass (*Polygonum* sp.) were recovered. As there was no evidence for waterlogging in the sampled deposits it is likely that these seeds are modern.

Occasional uncharred cereal stems were also recovered in deposit (2805), together with abundant modern rootlets.

Charcoal

Deposit (2805) contained frequent abraded charcoal fragments measuring up to 10mm. Both oak and non-oak charcoal were apparent. Notably, the oak fragments were less fragmented and slightly better preserved than the non-oak fragments. Many of the fragments displayed signs of acute thermal degradation and some were partially vitrified. Vitrification occurs when charcoal is exposed to extremely high temperatures (Prior & Alvin 1983). Many of the fragments were also impregnated with mineral deposits, which were visible as orange-brown mineral accretions. The mineral deposits are believed to accumulate over time through post-depositional leaching of minerals, predominantly iron, through the soil profile (Austin 2009).

Deposit (3605) contained frequent, small (<5mm), abraded fragments of oak and non-oak charcoal.

Burnt bone

Sixteen fragments of burnt bone, ranging in size from 3mm to 12mm, and weighing 1.4g, were recovered from deposit (3605). The bone was partially charred and black in colour. Four of the fragments were both black and white in colour. It is likely that the bone was exposed to temperatures of less than 800 degrees Celsius, the temperature at which bone becomes fully calcined (Ellingham et al 2015). Due to the size of the fragments, it is not possible to say whether the bone is of human origin. It is probable the bone is mammalian, but the species or element cannot be determined.

Discussion

Environmental evidence recovered from Hall Farm was very limited. Two wheat grains were recovered from pit [2804]. The abraded, broken nature of the grains suggests that it is likely that they were incidentally incorporated into the feature by windblow. Occasional seeds of ivy-leaved-speedwell and corn spurrey were also recorded. It is possible that the seeds may have been incidentally gathered with the fuel wood. The presence of partially vitrified charcoal and charred bone, albeit in different deposits, suggests that high temperature activity may have been taking place in the area.

Summary

Due to the small size of the Hall Farm environmental assemblage little can be said regarding the environment or economy of the site. It is likely that the recovered material constitutes domestic waste that had been incidentally incorporated into the pits from which it was recovered.

Scientific dating potential of the remains

The dating potential of the remains will be dependent on the nature of the research questions posed. Both samples contained material that would be suitable for AMS (Accelerator Mass Spectrometry) radiocarbon dating. The short-lived plant remains such as the cereal grains and charred wild seeds in deposit (3605) are suitable for radiocarbon dating. Although the oak charcoal recovered from deposit (2805) is of a suitable size for radiocarbon dating, it is not recommended due to the potential of old wood effect.

Recommendations for further environmental research

No further work is recommended on the environmental assemblage.

Recommendations for discard

The environmental assemblage does not warrant archiving. It is proposed that the assemblage be discarded.

References

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