

Palaeoecology Research Services

**Evaluation of biological remains from excavations at  
Winterton Landfill Site, North Lincolnshire  
(site code: WLS2003)**

by

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**Summary**

*Twenty-eight sediment samples, a tiny amount of hand-collected shell, and a small quantity of hand-collected bone, recovered from excavations of early Romano-British (or undated) deposits, at Winterton Landfill Site, North Lincolnshire, were submitted to PRS for an evaluation of their bioarchaeological potential.*

*None of the samples appeared particularly promising for the recovery of ancient biological remains but some did contain charred material. Six (one from each of Trenches 2 and 3, and four from Trench 5 – no samples were taken from Trenches 1 and 4) were selected for evaluation. Plant remains from the washovers from the six samples examined were limited to small or very small amounts of charcoal and a few charred cereal grains. Modern roots were present in all the washovers. No insect remains were recovered from the samples. None of the samples appears to warrant any further analysis for plant remains and it seems unlikely that further deposits at this site will provide useful material for interpretative purposes. However, the possibility that there may be primary feature fills with large concentrations of charred cereal remains should be borne in mind in any further interventions and appropriate sampling and archaeobotanical investigation undertaken. Sufficient charcoal could probably be recovered from Context 2010 for a radiocarbon date to be attempted, though the possibility that the small fragments were from old trunks, and would, therefore, give an unduly old date for the feature, must be considered.*

*The very few recovered shell remains were of no interpretative value and the likelihood that further excavation would recover more useful assemblages appears small.*

*The small vertebrate assemblage recovered from the excavations at Winterton was, on the whole, fairly poorly preserved, with the result that few fragments were identifiable and none were measurable. The deposits investigated during the current excavation show no potential for the survival of interpretatively useful assemblages of bone.*

*The current material need not be retained unless further charred material from Trench 2 contexts (notably Context 2010) is required for radiocarbon dating.*

**KEYWORDS:** WINTERTON LANDFILL SITE; NORTH LINCOLNSHIRE; EVALUATION; EARLY ROMANO-BRITISH (1<sup>ST</sup>–2<sup>ND</sup> CENTURY); PLANT REMAINS; CHARRED PLANT REMAINS; INVERTEBRATE REMAINS; SHELL; VERTEBRATE REMAINS

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## Evaluation of biological remains from excavations at Winterton Landfill Site, North Lincolnshire (site code: WLS2003)

### Introduction

An archaeological evaluation excavation was carried out by Humber Field Archaeology at Winterton Landfill Site, North Lincolnshire (centred on NGR SE 912 190), between the 6<sup>th</sup> and the 31<sup>st</sup> of January 2003.

Twenty-eight sediment samples ('GBA'/'BS' *sensu* Dobney *et al.* 1992), a tiny amount of hand-collected shell, and a small quantity of hand-collected bone, were recovered from the deposits revealed by the excavation. All of the material was submitted to PRS for an evaluation of its bioarchaeological potential.

The only dating evidence recovered was early Romano-British (1<sup>st</sup>-2<sup>nd</sup> century) pottery from deposits in Trench 5.

### Methods

#### *Sediment samples*

The sediment samples were inspected at Humber Field Archaeology and their lithologies recorded following a standard format. None of the samples appeared particularly promising for the recovery of ancient biological remains but some did contain charred material. Six (one from each of Trenches 2 and 3, and four from Trench 5 – no samples were taken from Trenches 1 and 4) were selected for evaluation and were processed, following the procedures of Kenward *et al.* (1980; 1986), for recovery of plant and invertebrate macrofossils.

The washovers and residues resulting from processing were examined for plant and invertebrate macrofossils. The residues were examined for larger plant macrofossils and other biological and artefactual remains.

Recovered artefacts were returned to the excavator.

#### *Hand-collected shell*

The tiny amount of hand-collected shell was examined and a brief record made.

#### *Hand-collected vertebrate remains*

Records were made of the hand-collected vertebrate remains concerning the state of preservation, colour of the fragments, and the appearance of broken surfaces ('angularity'). Other information, such as fragment size, dog gnawing, burning, butchery and fresh breaks, was noted, where applicable. Fragments were identified to species or species group using the PRS modern comparative reference collection. The bones which could not be identified to species were described as the 'unidentified' fraction. Within this fraction fragments were grouped into a number of categories: large mammal (assumed to be cattle, horse or large cervid), medium-sized mammal (assumed to be caprovid, pig or small cervid) and completely unidentified.

### Results

#### *Sediment samples*

The results are presented in context number order. Archaeological information, provided by the excavator, is given in square brackets. A brief summary of the processing method and an estimate of the remaining volume of unprocessed sediment follows (in round brackets) after the sample numbers. No insect remains were recovered from the samples.

**Context 2010** ['natural']

Sample 4/T (1 kg sieved to 300 microns with washover; approximately 2 litres of unprocessed sediment remain)

Just moist, light to mid grey-brown, unconsolidated and slightly sticky (working soft), ashy clay, with some charcoal and burnt bone present.

There was a small residue of about 30 cm<sup>3</sup> of sand and gravel (to 25 mm in maximum dimension), with a trace of charcoal. The moderately large washover of about 50 cm<sup>3</sup> comprised charcoal (to 10 mm) with a few modern roots and modern grass flowers, inflorescences and culm remains, and decayed, uncharred modern woody root. The charcoal appeared to include willow/poplar/aspens (*Salix/Populus*) and ash (*Fraxinus*) and perhaps some other non-oak species.

Twenty-three small (<10 mm) and somewhat rounded fragments of bone were also recovered from this sample. Most fragments were burnt and all were unidentified.

The presence of bone and charcoal in this deposit suggests that it is not part of the 'natural'.

**Context 3006** [gully fill in 3007]

Sample 3/T (2 kg sieved to 300 microns with washover; approximately 5 litres of unprocessed sediment remain)

Just moist, light grey and light brown to mid grey-brown (in jumbled shades), sandy clay to clay sand, with some modern roots and rotted woody root present.

The very small residue of about 20 cm<sup>3</sup> was sand and gravel (to 25 mm), with one mineral-impregnated earthworm egg capsule. The washover of about 20 cm<sup>3</sup> was mostly modern roots, including woody roots, with a trace of charcoal (to 2 mm).

**Context 5015** [slot fill in 5016, early Romano-British]

Sample 17/T (2 kg sieved to 300 microns with washover; approximately 4 litres of unprocessed sediment remain)

Just moist, light to mid yellow-grey-brown, crumbly to unconsolidated (working more or less plastic), slightly silty clay, with some modern rootlets and stones (2 to 25 mm) present.

The small to moderate-sized residue of about 150 cm<sup>3</sup> was sand and gravel (to 40 mm), with one fragment of charred hazel (*Corylus avellana* L.) nutshell. The very small washover of a few cm<sup>3</sup> comprised modern roots and a trace of charcoal (<5 mm)

**Context 5017** [fill in pit 5018, early Romano-British]

Sample 10/T (2 kg sieved to 300 microns with washover; approximately 6 litres of unprocessed sediment remain)

Just moist, light to mid yellow-grey-brown (lighter and darker in places), unconsolidated to crumbly (working plastic or soft), sandy clay to clay sand, with some rotted charcoal present.

The small to moderate-sized residue of about 200 cm<sup>3</sup> consisted of sand and gravel (to 80 mm), with a trace of charcoal. There was a very small washover of a few cm<sup>3</sup> of modern roots with a trace of charcoal (to 5 mm) and two poorly preserved charred barley (*Hordeum*) grains. Bone recovered from this sample amounted to three fragments, one of which was of a large-sized mammal rib.

**Context 5025** [pit (or posthole?) fill in 5026, early Romano-British]

Sample 9/T (2 kg sieved to 300 microns with washover; approximately 5 litres of unprocessed sediment remain)

Just moist, light to mid yellow-grey-brown, crumbly to unconsolidated (working more or less plastic), ?slightly silty clay, with some charcoal and modern roots present.

This sample yielded a small to moderate-sized residue of about 125 cm<sup>3</sup> of sand and gravel (to 30 mm), with a trace of charcoal. The moderate-sized washover of about 70 cm<sup>3</sup> comprised modern roots and charcoal (to 15 mm), the latter all rather iron-stained. It was probably mostly oak (*Quercus*). There were, in addition, a very few barley grains.

**Context 5034** [fill in enclosure ditch 5035, early Romano-British]

Sample 15/T (2 kg sieved to 300 microns with washover; approximately 6 litres of unprocessed sediment remain)

Just moist, light yellow-grey-brown, crumbly (working more or less plastic), slightly sandy clay, with some modern rootlets and a little charcoal present.

The small to moderate-sized residue of about 160 cm<sup>3</sup> was of sand and gravel (to 40 mm); there were many small (<5 mm) mollusc shell fragments which may have originated in Jurassic rock from the local solid or drift geology (shelly ferruginous limestone and ironstone formed the bulk of the gravel in these samples). The small washover consisted of a few cm<sup>3</sup> of modern roots and a trace of charcoal (to 5 mm), with one ?bread/club wheat (*Triticum 'aestivo-compactum'*) grain.

### *Hand-collected shell*

Only tiny amounts of hand-collected shell were recovered from two contexts, both containing early Romano-British pot, in Trench 5 (Contexts 5003 – a ditch fill, and 5017 – a pit fill). Context 5003 gave fragmentary remains of two land snails (*Cepaea/Arianta* sp. and ?*Trichia* sp.), and Context 5017 a poorly preserved left oyster (*Ostrea edulis* L.) valve.

### *Hand-collected vertebrate remains*

The excavations at Winterton produced a very small quantity of animal bones, amounting to 38 fragments. These remains were recovered from Trenches 2 (1 context) and 5 (9 contexts). A range of features produced the bone, including ditch, pit and slot fills. Dating evidence was not recovered from Trench 2, but many of the deposits which produced bone in Trench 5 contained early Romano-British pottery.

Bone preservation was quite variable between contexts. Some material was quite reasonably preserved (that from Contexts 5003, 5017, 5028, 5030 and 5042), whilst bones from Contexts 2003, 5025, 5034 were extremely eroded and battered in appearance. No evidence of butchery or dog gnawing was noted.

Remains representing the major domesticates (cattle, caprovid and horse) were identified (Table 1), however, most bones could not be identified to species and were only recorded as being from large or medium-sized mammals; these included shaft and rib fragments. No measurable bones were recorded.

## **Discussion and statement of potential**

Plant remains from the washovers from the six samples examined were limited to small or very small amounts of charcoal and a few cereal grains. Modern roots were present in all the washovers.

Processing of the remaining sediment from Context 2010 would probably yield sufficient charred plant remains (in combination with those already recovered) for radiocarbon dating of the deposit to be attempted. The charcoal seen in this evaluation was not especially eroded, and so probably primary, though the possibility that the small fragments

were from old trunks, and would, therefore, give an unduly old date for the feature, must be considered. In view of this, radiocarbon dating could only provide an 'earliest possible' date for the deposit.

The recovered shell remains were of no interpretative value and the likelihood that further excavation would recover more useful assemblages appears small.

The small vertebrate assemblage recovered from the excavations at Winterton was, on the whole, fairly poorly preserved, with the result that few fragments were identifiable and none were measurable. The deposits investigated during the current excavation show no potential for the survival of interpretatively useful assemblages of bone.

## **Recommendations**

None of the samples appears to warrant any further analysis for plant remains and it seems unlikely that further deposits at this site will provide useful material for interpretative purposes. However, the possibility that there may be primary feature fills with large concentrations of charred cereal remains should be borne in mind in any further interventions and appropriate sampling and archaeobotanical investigation undertaken.

No further investigation of the shell remains is recommended.

No further analysis of the vertebrate remains is warranted.

## **Retention and disposal**

The current material need not be retained unless further charred material from Trench 2 contexts (notably Context 2010) is required for radiocarbon dating.

## Archive

All material is currently stored by Palaeoecology Research Services (Unit 8, Dabble Duck Industrial Estate, Shildon, County Durham), along with paper and electronic records pertaining to the work described here.

## Acknowledgements

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Table 1. Handcollected vertebrate remains from excavations at Winterton, North Lincolnshire. Key: No. frags = total number of fragments recorded; No. mands/teeth = number of mandibles and/or teeth capable of providing age-at-death information.

| <b>Species</b>           |            | <b>No. frags</b> | <b>No. mands/teeth</b> |
|--------------------------|------------|------------------|------------------------|
| <i>Equus</i> f. domestic | horse      | 1                | -                      |
| <i>Bos</i> f. domestic   | cow        | 3                | 1                      |
|                          | sheep/goat |                  |                        |
| Caprovid                 | t          | 6                | 2                      |
| Unidentified             |            | 28               | -                      |
| <b>Total</b>             |            | <b>38</b>        | <b>3</b>               |