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

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

by

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Summary

Fifteen sediment samples (of twenty-eight collected), a tiny amount of hand-collected shell, and two boxes of hand-collected bone, recovered from further excavations of early Romano-British (or undated) deposits, at Winterton Landfill Site, North Lincolnshire, were submitted to PRS for an assessment of their bioarchaeological potential.

None of the samples appeared particularly promising for the recovery of ancient biological remains but some did contain charred material and six were selected for assessment. Plant remains from the washovers were limited to small or very small amounts of charcoal and, in one case, a single charred cereal grain. One sample (from Context 177) gave a little charcoal that appeared to be of sweet chestnut, a species thought to have been introduced to England by the Romans, and it would be worthwhile to have this tentative identification confirmed. Other than this, none of the samples warrant further analysis for plant remains. These deposits—in addition to those examined previously—suggest that charred plant remains at this site are sparse and that the potential for preservation by anoxic ‘waterlogging’ is extremely limited.

The very few recovered shell remains were of no interpretative value.

The vertebrate assemblage from this site was not large or particularly well preserved. The main domestic species formed the bulk of the identified remains. Worthy of note were two sheep/goat skeletons which may represent special or ritual deposits. Providing dating is sufficiently reliable, the vertebrate remains, typically rare from rural sites of Roman date, deserve further consideration; a basic archive should be recorded for the current assemblage, including biometrical and age-at-death data.

In the event of any future excavation in this area, an appropriate programme of sampling of suitable deposits, and assessment of selected samples to check for the survival of plant remains, should be undertaken. However, the recovery of interpretatively useful invertebrate assemblages is extremely unlikely. Further excavation in the vicinity could produce a similar small amount of bone but a large and well-preserved assemblage is unlikely to be recovered.

KEYWORDS: WINTERTON LANDFILL SITE; NORTH LINCOLNSHIRE; ASSESSMENT; EARLY ROMANO-BRITISH (1ST-2ND CENTURY AD); PLANT REMAINS; CHARRED PLANT REMAINS; CHARRED GRAIN; INVERTEBRATE REMAINS; VERTEBRATE REMAINS

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Introduction

Further archaeological excavation was carried out by Humber Field Archaeology at Winterton Landfill Site, North Lincolnshire (centred on NGR SE 9127 1903), between the 4th of August and the 19th of September and the 2003.

The excavation was centred upon a Romano-British, rectangular, ditched settlement enclosure located during the earlier evaluation. The only dating evidence recovered was early Romano-British (1st-2nd century) pottery from deposits in the enclosure ditches.

Twenty-eight samples ('GBA'/'BS' *sensu* Dobney *et al.* 1992), a tiny amount of hand-collected shell, and two boxes of hand-collected bone, were recovered from the deposits revealed by the excavation. All of the hand-collected material and twenty-one of the samples were submitted to PRS for an assessment of their bioarchaeological potential.

Methods

Sediment samples

The submitted sediment samples were inspected in the laboratory and six were selected for assessment. Their lithologies were recorded, using a standard *pro forma*, prior to processing, 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 removed from the residues and returned to the excavator.

Hand-collected shell

The 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. These groups are represented in Table 1 by the category labelled '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 10 [fill of south arm of Romano-British enclosure ditch 011]

Sample 55/T (3 kg sieved to 300 microns with washover; approximately 4 litres of unprocessed sediment remain)

Dry, light to mid yellow-brown to light to mid brown, indurated and brittle to crumbly, slightly silty clay. Stones (2 to 6 mm and 20 to 60 mm), traces of charcoal and modern rootlets were present.

This subsample yielded a very small washover of about 50 ml of modern roots with just a trace of small (less than 5 mm) charcoal fragments; amongst these was a single, large (but very shrunken) charred wheat (*Triticum* sp.) grain, probably a hexaploid form.

There was a very small residue (dry weight 0.25 kg) of sand and stones (to 45 mm), with a single tiny pot fragment (1 g). Only two unidentified fragments of bone were recovered from this sample.

Context 44 [fill of pit 045]

Sample 51/T (7.5 kg sieved to 300 microns with washover; no unprocessed sediment remains)

Dry, light to mid yellow-brown to mid grey-brown (in places), indurated and brittle to crumbly, slightly silty clay. Stones (over 60 mm), traces of charcoal, fragments of large mammal bone and modern rootlets were present.

There was a small washover (approximately 70 ml) of modern rootlets with a few sand grains and earthworm egg capsules. Traces of charcoal (most to 1 mm with a few larger fragments to 4 mm) were also present.

The small residue (dry weight 0.88 kg) was of sand and stones (to 100 mm), with a little pottery (29 g, to 50 mm), a trace of charcoal (1 g) and some bone. The vertebrate remains recovered from this sample totalled 223 fragments, of which 118 were amphibian bones. The latter represented the remains of at least three individuals, all probably frogs. The rest of the assemblage was composed of very small (less than 25 mm in maximum dimension) mammal bone fragments which were extensively fragmented by fresh breakage, poorly preserved and mainly unidentifiable. One larger fragment was identified as part of a cow mandible.

Context 118 [fill of linear gully 119]

Sample 44/T (5 kg sieved to 300 microns with washover; no unprocessed sediment remains)

Dry, light to mid yellow-brown, indurated and brittle to crumbly, silty clay. Stones (2 to 60 mm), traces of charcoal and some modern rootlets were present.

The medium-sized washover (approximately 100 ml) was of modern rootlets and a few sand grains, with traces of charcoal (to 4 mm).

There was a small residue (dry weight 0.58 kg) of stones (to 50 mm) and sand, and a single pot fragment (3 g). This sample also produced seven fragments of bone, two of which were burnt. A single fragment represented a small mammal metapodial.

Context 177 [fill of small pit 176]

Sample 41/T (3 kg sieved to 300 microns with washover; no unprocessed sediment remains)

Dry, light to mid yellow-brown to light to mid brown, indurated and brittle to crumbly, slightly silty clay. Charcoal, stones (2 to 6 mm) and some modern rootlets were present.

The rather large washover of about 175 ml comprised modern roots and charcoal (to 15 mm). The latter appeared superficially to be oak (*Quercus*), but closer inspection revealed a lack of ‘giant rays’ which, given the fact that the wood was clearly not very young (the annual rings appeared to be wide and have a small curvature), suggests it was, in fact, sweet chestnut (*Castanea sativa* L.). This species is thought to have been introduced to England from Southern Europe by the Romans, though its fossil history in the British Isles is not well known.

The very small residue (dry weight 0.24 kg) was mostly sand, with some stones (to 20 mm), brick/tile (7 g), pot (2 g), and a trace of charcoal (2 g). Fifteen very small (less than 15 mm in any dimension) fragments of bone were also recovered from this sample. The fragments were very eroded with rounded edges and none could be identified.

Context 214 [fill of pit 215]

Sample 49/T (3 kg sieved to 300 microns with washover; approximately 4 litres of unprocessed sediment remain)

Dry, light to mid yellow-brown to light to mid brown, indurated and brittle to crumbly, slightly silty clay. Stones (2 to 20mm) and some modern rootlets were present.

The medium-sized washover (of approximately 50 ml) was mostly modern rootlets, with some tiny lumps of undisaggregated sediment (to 1 mm), sand grains, occasional fragments of charcoal (to 4 mm, but mostly less than 1 mm), and a single unidentified charred seed.

There was a very small residue (dry weight 0.29 kg) of sand and stones (to 30 mm).

Context 10003 [probably pre-Roman fill of ditch in Trench 10]

Sample 56/T (3 kg sieved to 300 microns with washover; approximately 5 litres of unprocessed sediment remain)

Dry, light to mid yellow-brown to light to mid grey-brown, indurated and brittle to crumbly, slightly silty clay. Modern roots and rootlets and fragments of charcoal were present.

There was a small washover (approximately 30 ml) of modern rootlets and some sand grains, with traces of charcoal (mostly to 1 mm, but a few to 4 mm).

The very small residue (dry weight 0.31 kg) was of sand and stones (to 90 mm).

Hand-collected shell

Hand-collected shell (total weight 39 g, including a little concreted sediment) was recovered from a single deposit (Context 4, the upper fill of the eastern boundary ditch of the Romano-British enclosure). Almost all of the remains were of *Cepaea/Arianta* sp. land snails and most likely of recent origin. A single small fragment of oyster (*Ostrea edulis* L.) and the two shells of *Discus rotundatus* (Müller) noted were perhaps contemporary with the formation of the deposit, however.

Hand-collected vertebrate remains

Thirty-three of the excavated deposits at Winterton produced 706 fragments of bone. A range of features, including pit, ditch and gully fills, were represented, the pottery from which suggested a date of late 1st to 2nd century AD.

Preservation of the remains was quite variable (between contexts), with bone from a number of deposits (Contexts 6, 20, 24, and 46) being recorded as of poor preservation. Overall, however, most fragments were of reasonable preservation, although the surfaces of many fragments showed evidence of root etch and chemical erosion damage. This was particularly noticeable for material from Contexts 8, 26 and 48. Extensive fresh breakage damage was also apparent, but was partly the result of the fragile condition of the bone in the ground. Evidence of butchery was scarce, as was dog gnawing, with burnt fragments being noted in the material from four deposits (Contexts 10, 12, 24 and 75).

A restricted suite of species was identified, cattle, caprovid and horse being the most numerous. Pig bones were few in number, whilst the fragments identified as dog were all from the maxilla and skull of a single

individual. The one tooth (M1) *in situ* in the maxilla was large and may represent a wolf but the fragmentary nature of the remains precluded any confirmation of this identification. Bird remains were scarce and represented by a single corvid bone of a size consistent with either a rook or a crow. A somewhat eroded fragment of human skull was recovered from Context 26.

By far the largest quantities of bone were assigned to the ‘unidentified’ category which included many large and medium-sized mammal fragments. The large mammal remains from one deposit (Context 4) were dominated by freshly broken mandible fragments, almost certainly representing further fragments from the three incomplete horse mandibles within the identified fraction from that context.

Caprovid remains were supplemented by the presence of two part sheep/goat skeletons recovered from Contexts 196 (pit fill) and 198 (fill of linear slot/gully). The bones from Context 196 (98 fragments) represented an individual that was less than 10 months old. Skeletal elements of the fore and hind legs were present including several phalanges. Cranial fragments, including horn core buds, were also present, whilst rib and vertebra fragments were scarce. The second burial from Context 198 was more complete than the first, although the mandibles were again absent. However, cranial and maxilla fragments were identified, together with skeletal elements representing all four limbs (including at least 14 phalanges). Few vertebrae and no rib fragments were recovered. Fusion data suggested that this individual was aged between approximately 10 and 12 months when it died. None of the bones from either skeleton showed any butchery marks and there was no evidence of the cause of death.

The most commonly occurring fragments for the main domesticates were isolated teeth. Horse teeth and mandible fragments were mostly concentrated in two deposits (Contexts 4 and 12). One incisor recovered suggested the presence of a horse of at least 18 years of age, whilst a second tooth (Context 12) was from a younger animal of about 5 years old. Additional horse fragments in Context 4 probably represent articulating lower limb elements (metacarpal and phalanges).

Discussion and statement of potential

These deposits—in addition to those already examined (Hall *et al.* 2003a)—suggest that charred plant remains at this site are sparse and that the potential for preservation by anoxic ‘waterlogging’ is extremely limited.

Much of the hand-collected shell assemblage seems likely to be of recent origin. Those remains that were perhaps of more ancient origin were too few to be of any interpretative value.

The vertebrate assemblage from this site was not large or particularly well preserved. Fresh breakage damage has somewhat reduced the number of measurable fragments. The main domestic species formed the bulk of the identified remains. Worthy of note were the two sheep/goat skeletons from Contexts 196 and 198. Animal burials (mainly cattle and sheep/goat in this region) have been recovered from a number of rural sites in the area dating to the Romano-British period (Hall *et al.* 2003b; Jaques *et al.* 2000; Mainland 1988). It has been suggested that they may represent deposits of ritual significance and are a continuation of ritual activities undertaken during the Iron Age. This type of deposit has been discussed at some length by Grant (1991; 2002), Hill (1985) and Wilson (1992). From the bones alone, however, it cannot be confidently ascertained that these remains from Winterton are ritual in nature.

Recommendations

It would be worthwhile to have the tentative identification of *Castanea* charcoal (Context 177) confirmed as a record in space and time, but no further work on the plant material represented here is justified. In the event of any future excavation in this area, an appropriate programme of sampling of suitable deposits, and assessment of selected samples to check for the survival of plant remains, should be undertaken, however.

No further work on the hand-collected shell is warranted.

Vertebrate material from rural sites of Roman date is rare and although not a large assemblage, the data from this material could provide a valuable contribution to any

synthetic projects carried out in the region. Therefore, providing dating is sufficiently reliable, the vertebrate remains deserve further consideration; a basic archive should be recorded for the current assemblage, including biometrical and age-at-death data. Further excavation in the vicinity could produce a similar small amount of bone but the soil conditions are such that a large and well-preserved assemblage is unlikely to be recovered from deposits such as those reported here.

Retention and disposal

Any remaining sediment samples may be discarded unless they are required for other study. The remains recovered from those samples processed for this assessment should be retained for the present.

The current vertebrate assemblage should be retained.

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.

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Table 1. Hand-collected vertebrate remains from excavations at Winterton, North Lincolnshire. Key: No. meas = number of measurable fragments capable of providing biometrical information; No. mands = number of mandibles capable of providing age-at-death information; No. frags = total number of fragments recorded. Number in parenthesis relates to the number of fragments recovered from two part sheep/goat skeletons from Contexts 196 and 198.

Species		No. meas	No. mands	No. frags
Canid	canid	-	-	1
<i>Canis</i> f. domestic	dog	-	-	14
<i>Equus</i> f. domestic	horse	8	2	34
<i>Sus</i> f. domestic	pig	-	2	5
<i>Bos</i> f. domestic	cow	4	4	28
Caprovid	sheep/goat	1	7	34 (209)
<i>Corvus frugilegus</i> L./ <i>Corvus corone</i> L.	rook/crow	-	-	1
<i>Homo sapiens</i>	human	-	-	1
Unidentified		-	-	379
Total		13	15	706