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**Evaluation of biological remains from excavations in Hengate,  
Beverley, East Riding of Yorkshire (site code HGB96)**

by

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**Summary**

*Deposits of medieval and post-medieval date from three trenches at Hengate, Beverley, were submitted for evaluation of their bioarchaeological potential. Plant remains preserved either by charring or anoxic 'waterlogging' were sparse and of limited interpretative value. The small hand-collected mollusc assemblage was also of no real interpretative value. Although the small size of the recovered bone assemblage precludes any further detailed recording and interpretation, it is clear that the material is well-preserved, and from deposits which appear to fit within a well-defined chronological framework. Consequently it is probable that further excavation would recover a larger collection of tightly dated and well-preserved material.*

*Should further development be undertaken at this site, it is essential that an appropriate sampling and recovery strategy be employed and that a comprehensive post-excavation programme be provided for.*

**Keywords:** HENGATE; BEVERLEY; EAST YORKSHIRE; EVALUATION; MEDIEVAL; POST-MEDIEVAL; SEDIMENT SAMPLES; VERTEBRATE REMAINS; INVERTEBRATE REMAINS; PLANT REMAINS; MOLLUSCS

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## Evaluation of biological remains from excavations in Hengate, Beverley, East Riding of Yorkshire (site code HGB96)

### Introduction

Excavations were undertaken at Hengate, Beverley, during November 1996 by the Humber Archaeology Partnership. Twenty-four samples, 3 boxes (39 x 31 x 16 cm) of hand-collected animal bone, and a single box of shell were recovered from the three excavated trenches. The deposits were assigned to six phases: from the early 13th century through to the post-medieval period.

This report considers the bioarchaeological potential of the material submitted to the EAU for evaluation.

### Methods

The sediment samples ('GBAs' and 'BSs' *sensu* Dobney *et al.* 1992) were inspected in the laboratory. Five were chosen for further investigation and a description of their lithology was recorded using a standard *pro forma*. A subsample of 1kg was taken from the five samples for extraction of macrofossil remains, following procedures of Kenward *et al.* (1980; 1986) and using a 'washover' to concentrate the less dense organic fraction.

The washovers and residues resulting from processing were examined for plant and invertebrate macrofossils and bone. Two of the samples were also examined for the eggs of parasitic nematodes using the methods outlined by Dainton (1992).

All the hand-collected bone (with the exception of unstratified material), and shell was examined; records were made of preservation, quantities, and

identifications where appropriate.

### Results

#### *The sediment samples*

The results of the investigations of the sediment samples are presented in context number order, with information provided by the excavator in square brackets.

#### **Context 117** [occupation accumulation] Sample 8/T

Moist, mid grey-brown, crumbly (working plastic), silty clay, with traces of rotted limestone. Very small stones (2-6 mm) were present.

The test subsample yielded a tiny washover of charcoal to 3 mm in maximum dimension, with traces of herbaceous detritus, fish scale, and *Chara* oogonia, the last (remains of a green alga) indicative of calcareous fresh water environments and perhaps brought to the site with water rather than having grown *in situ*. There were also moderate numbers of extremely strongly decayed poppy (*Papaver*, probably *P. argemone* L.) seeds, of no particular interpretative value.

The small residue consisted mainly of sand, small stones (mostly chalk) and traces of charcoal. A few fragments of fish bone were present, including several herring (*Clupea harengus* L.) vertebrae, a small number of indeterminate spines and some scale fragments. Also present were traces of eggshell and some very small fragments which may have been daub.

**Context 120** [fill of garderobe]  
Sample 16/T

Moist, light to mid brown, crumbly (working plastic), silty clay, with rotted limestone (to 60 mm). Fragments of brick/tile, animal bone, and traces of marine molluscs were present in the sample.

There was a tiny washover, mainly charcoal and other (unidentifiable) charred organic material, to 5 mm in maximum dimension. With these were traces of very decayed wood, and a single very poorly preserved charred cereal grain. A single elytron of *Palorus ratzeburgi* (Wissmann), a bug wing, and fragments of ?beetle cuticle and ?millepede were the only invertebrate remains present, although these fossils do demonstrate some potential for preservation in cut features at the site.

Sand, mortar, brick/tile fragments and small stones formed the main components of the residue. Traces of charcoal, coal, and cinder were noted, as were a few unidentified fish bone fragments. An iron object, represented by a heavily concreted mass of sediment in a more or less 'nail' shape, was also present.

No parasite eggs or other microfossils were present in the 'squash'.

**Context 126** [ash floor spread]  
Sample 13/T

Moist, mid grey-brown with lighter and darker mottles (to 1 mm), crumbly (working soft to slightly plastic), slightly sandy silty clay, with small clasts of light brown clay. Charcoal and flecks of rotted limestone were present in the sample.

The very small washover was mainly of charcoal to 15 mm (mostly much finer), with a single shoot of a moss (*Eurhynchium* sp.) sp., one rather well-preserved charred hexaploid wheat

(*Triticum* sp.) grain, and a fish bone.

The residue consisted of sand and small stones (2-20 mm, mostly chalk), with traces of charcoal, brick/tile fragments and fish bone.

**Context 132** [Fill of 131 - possible subsidence]  
Sample 15

No parasite eggs or other microfossils were present in the 'squash'.

**Context 138** [ash floor]  
Sample 19/T

Moist, brittle and layered (working crumbly, then sticky and soft), ashy clay silt, varying in colour from light brown to mid grey-brown to black. Charcoal, pottery and fish bone were present.

The small washover (about 20-30 cm<sup>3</sup>) was mainly of charcoal to 10 mm (mostly much finer). There were a very few nearly-whole or fragmentary seeds identified as Leguminosae (pea family), some of which may be cotyledon (seed-leaf) material. One of the more or less whole seeds may be lentil, *Lens*, another probably a species of vetch, *Vicia*. Charred material of two other plants (*Galium* and *Centaurea*) probably represent weeds of cultivation. There was a single charred hexaploid wheat grain.

A few very poorly preserved invertebrate fragments, representing four species of beetle (two weevils, one ?*Aphodius* sp., and one ?Staphylinid), were also present in the washover.

The small residue consisted of sand and gravel, with pottery fragments, charcoal and fish bone also being present. There were, in addition, a few traces of ?peat fragments less than 5 mm in maximum

dimension.

**Context 150** [build-up, possibly over natural]

Sample 21/T

Moist, vari-coloured from light brown to dark grey, crumbly (working soft), slightly sandy, silty clay. Stones (2-6 mm), mortar/plaster, rotted charcoal, and twigs were present.

The washover was small (about 20-30 cm<sup>3</sup>), mainly charcoal to 10 mm, but with some fine plant detritus, including very decayed wood. A few identifiable plant remains were present: oogonia of *Chara* (see above, Sample 8), an embryo of the aquatic water-plantain, *Alisma*, one very decayed fig (*Ficus carica*) seed and one charred cereal grain which may be rye (*Secale cereale*).

The main components of the small residue were sand, small stones (to 20 mm) and charcoal. A few fragments of fish bone were also noted.

### *Vertebrate remains*

Bone was recovered from deposits dated to all six phases, although the seven contexts assigned to Phase 5 (late medieval/early post-medieval) produced the largest assemblage (See Tables 1-3). From the whole assemblage, 82 measurable bones, nine mandibles with teeth, and five isolated teeth were recorded.

Most of the material was extremely well-preserved, particularly those fragments recorded from Phase 5. Two contexts (126 and 135), from Phase 2, contained some bones which were rounded and eroded in appearance. Colour variations within these contexts were also noted. Both periods (i.e. medieval and post-medieval) were represented by a broad

range of species, with the remains of common domesticates being dominated by cattle and caprovids (sheep/goat).

Butchery was recorded from most of the groups of bone, but at higher frequencies (20 - 50 per cent) in contexts from Phases 4 and 5. Cattle long bones had been split lengthways, and both cattle and caprovid vertebrae had been chopped longitudinally. Context 65 contained a sheep cranium which had been split along the sagittal plane, presumably for the removal of the brain. Little evidence for dog gnawing or fresh breakage was observed.

The incomplete skeleton of a chicken from Context 31 accounts for the high fragment total for this species in the assemblage from Phase 5.

Remains of geese were present in small numbers and, judging from the size of some of the elements recorded, they appear to represent domestic varieties. However, a distal radius recorded from Context 23 was similar in size to a modern barnacle goose and probably is from a wild individual.

A single rabbit (*Oryctolagus cuniculus* (L.)) metatarsal was recovered from Context 95 (Phase 3). Rabbits are generally accepted to have been introduced into this country in the twelfth century and their remains are usually scarce in the archaeological record until the post-medieval period. The preservation and condition of this fragment suggests that it is contemporary with the rest of the assemblage and is unlikely to be intrusive.

Also present were two fragments identified as red kite (*Milvus milvus* (L.)). Kites made up a significant part of the scavenger community in major urban centres of the

past and have been identified from medieval deposits at Lurk Lane, Beverley (Scott 1991) and from sites in York such as Skeldergate and Coppergate (Allison 1985; O'Connor 1989).

Fish remains, although fairly numerous from Phase 5 (particularly from Contexts 78 and 80), were mostly unidentifiable spine fragments. Those which could be identified were Gadidae and included cod (*Gadus morhua* L.), whiting (*Merlangius merlangus* (L.)), and ling (*Molva* spp.).

### *Molluscs*

The small hand-collected mollusc assemblage (representing remains from 11 contexts) consisted mostly of rotted oyster (*Ostrea edulis* L.) shell with a few fragments of other marine molluscs: mussel (*Mytilus edulis* L.) and cockle (*Cardium* sp.).

### **Statement of potential**

The sediment samples selected for analysis have no further potential with regard to the plant and invertebrate macrofossils but the nineteen remaining samples may not necessarily be of similar character. The overall impression gained is that preservation of organic material in these deposits is probably also generally rather poor, so that the likelihood of recovering larger assemblages of macrofossils from them is low. However, deposits such as these should not be damaged without sampling since any larger assemblages which could be recovered would be of considerable interpretative value.

During examination of the material from Contexts 78 and 80 (Samples 2, 3, and 4) many fragments of fish bones were noted;

while the small size of the budget put limits on further investigation at this stage, it is clear that these samples have potential for future analysis in this respect at least.

The small size of the recovered bone assemblage precludes any further detailed recording and interpretation, but most of the material is well-preserved and from deposits which appear to fit within a well-defined chronological framework. Consequently, it is probable that further excavation would recover a larger collection of tightly dated and well-preserved material. Important comparative samples within the region include, Lurk Lane and Eastgate, both in Beverley (Scott 1991; 1992).

The hand-collected mollusc assemblage is of no interpretative value other than to indicate the probable importation of shellfish as a food resource.

### **Recommendations**

Well-dated bone assemblages from the medieval and post-medieval periods are uncommon both regionally and nationally and, as such, should be considered as high priority for further research should more excavation be necessary.

Any destruction of these deposits should be accompanied by an adequate sampling strategy, with appropriate provision for a post-excavation programme. Similarly, if further excavations take place at this site then every effort should be made to investigate any revealed deposits (especially contexts with good organic preservation), including an intensive regime of sampling.

## Retention and disposal

All material should be retained for the present.

## Archive

All extracted fossils and flots are currently stored in the Environmental Archaeology Unit, University of York, along with paper and electronic records pertaining to the work described here.

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Table 1. Hand-collected vertebrate remains from Hengate, Beverley: Phases 1- 4.

Taxon		No. of fragments	No. measurable	No. of mandibles	*No. of isolated teeth
<i>Oryctolagus cuniculus</i> (L.)	rabbit	1	-	-	
<i>Felis f. domestic</i>	cat	4	-	-	-
<i>Equus f. domestic</i>	horse	2	1	-	-
<i>Sus f. domestic</i>	pig	17	1	-	1
<i>Bos f. domestic</i>	cattle	34	5	2	1
Caprovid	sheep/goat	28	3	1	-
<i>Anser</i> sp.	goose	6	3	-	-
<i>Anas</i> sp.	duck	1	1	-	-
<i>Gallus f. domestic</i>	chicken	2	-	-	-
Gadidae	cod family	5	-	-	-
<i>Sub-total</i>		<i>100</i>	<i>14</i>	<i>3</i>	<i>2</i>
Indeterminate fish		7	-	-	-
Unidentified		209	-	-	-
<i>Sub-total</i>		<i>216</i>	<i>-</i>	<i>-</i>	<i>-</i>
<b>Total</b>		<b>316</b>	<b>14</b>	<b>3</b>	<b>2</b>

\*Includes only those teeth of use for ageing or sexing information

Table 2. Hand-collected vertebrate remains from Hengate, Beverley: Phase 5.

<b>Taxon</b>		<b>No. of fragments</b>	<b>No. measurable</b>	<b>No. of mandibles</b>	<b>*No. of isolated teeth</b>
<i>Canis f. domestic</i>	dog	1	-	-	-
<i>Felis f. domestic</i>	cat	5	2	-	-
<i>Equus f. domestic</i>	horse	1	-	-	-
<i>Sus f. domestic</i>	pig	15	4	-	1
<i>Dama dama</i> (L.)	fallow deer	1	-	-	-
<i>Bos f. domestic</i>	cattle	67	6	1	2
Caprovid	sheep/goat	54	20	5	1
<i>Anser sp.</i>	goose	12	6	-	-
<i>Milvus milvus</i> (L.)	red kite	2	1	-	-
<i>Gallus f. domestic</i>	chicken	30	22	-	-
cf. <i>Gallus f. domestic</i>	?chicken	5	-	-	-
Gadidae	cod family	13	-	-	-
<i>Sub-total</i>		206	61	6	4
Indeterminate bird		5	-	-	-
Indeterminate fish		49			
Unidentified		315	-	-	-
<i>Sub-total</i>		369	-	-	-
<b>Total</b>		<b>575</b>	<b>61</b>	<b>6</b>	<b>4</b>

\*Includes only those teeth of use for ageing or sexing information



Table 3. Hand-collected vertebrate remains from Hengate, Beverley: Phase 6.

<b>Taxon</b>		<b>No. of fragments</b>	<b>No. measurable</b>
<i>Sus f. domestic</i>	pig	1	1
<i>Bos f. domestic</i>	cattle	7	2
Caprovid	sheep/goat	4	3
<i>Anser sp.</i>	goose	1	-
<i>Anas sp.</i>	duck	1	-
<i>Meleagrus gallopavo L.</i>	turkey	1	1
<i>Sub-total</i>		15	7
Unidentified		44	-
<i>Sub-total</i>		44	-
<b>Total</b>		<b>59</b>	<b>7</b>