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**Assessment of biological remains from excavations at Holmechurch Lane,  
Beverley (site code: HLB96)**

by

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**Summary**

*Sediment samples, and hand-collected animal bone and molluscs, were submitted for an assessment of their bioarchaeological potential. The animal bones are of little interpretative value in view of the small size of the medieval assemblage and the modern date of the remainder of the material. The shell assemblage from Context 7 is also of limited interpretative value other than to indicate that the ditch feature contained freshwater. Determination of water quality would require more precise identification than the condition of the shells reasonably allows. The hand-collected shell was all identified as oyster. The sample from Context 96 yielded a modest assemblage of plant and invertebrate macrofossils which would merit further work in order to establish the extent of human occupation.*

*Attention is drawn to the limits imposed on this assessment by the very small budget; at least three further samples (from Contexts 4, 5, and 35) would have been processed for recovery of molluscs, had funds allowed. The deposits at this site clearly have the potential to yield further bioarchaeological material and in any future development adequate funding should be made available for its recovery.*

**Keywords:** HOLMECHURCH LANE; BEVERLEY; ASSESSMENT; MEDIEVAL; PLANT REMAINS; CHARRED PLANT REMAINS; INVERTEBRATES; INSECTS; VERTEBRATE REMAINS; MOLLUSCS

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## Assessment of biological remains from excavations at Holmechurch Lane, Beverley (site code: HLB96)

### Introduction

Excavations were carried out by Humber Archaeology Partnership at Holmechurch Lane, Beverley, during 1996. Eleven General Biological Analysis samples ('GBAs' *sensu* Dobney *et al.* 1992) and one box (39 x 30 x 12 cm) containing hand-collected bone and a very small amount of hand-collected shell (from three contexts) were submitted for an assessment of their biological potential. The material was of medieval and modern date.

### Methods

All the material was initially inspected in the laboratory and described using a *pro forma*. Unfortunately, as a result of budgetary constraints, only four of the GBA samples could be selected for assessment. A 1 kg subsample was taken from these four GBAs for extraction of macrofossil remains, following procedures of Kenward *et al.* (1980; 1986). The washovers and residues resulting from processing were examined for their content of plant and invertebrate macrofossils. Notes were made of the quantity of fossils and principal taxa.

The bone and hand-collected shell were examined, and records made of preservation, quantities, and identifications, as appropriate.

### Results and discussion

The results are presented in phase then context number order. Context information

provided by the excavator is given in square brackets.

#### *Sediment samples*

##### *Un-phased - pre mid 19th century*

##### **Context 96, Sample 2/T**

[ditch/marsh - evidence for marshland or ditch fill? Stagnant or running water?]

1 kg processed

Moist, mid-dark, brown, stiff to crumbly (working plastic to sticky) clay silt with a few fragments of ?woody roots.

The flot was large and consisted mostly of fine herbaceous detritus; there were abundant achenes of water-crowfoot (*Ranunculus* Subgenus *Batrachium*), a group of plants exploiting water-bodies and marshland of various kinds, and oogonia of stonewort (*Chara*), a green alga (mainly) of calcareous water bodies. Also present was a suite of wetland taxa including lesser spearwort (*Ranunculus flammula* L.), water-plantain (*Alisma*), bogbean (*Menyanthes trifoliata* L.), and marsh pennywort (*Hydrocotyle vulgaris* L.).

The flot also yielded a small assemblage of mostly aquatic invertebrates with a range of beetle taxa (including *Ochthebius* sp., *Hydrobius fuscipes* (Linnaeus), and various dytiscids) which, like the plants, indicate an at least fairly unpolluted, marshland environment, with pools of standing water.

**Phase 1 - late 12th to 13th century**

**Context 5 , Sample 8/T**

[lower fill of ditch 3]

Moist, mid brownish grey. Locally with red mineralisation in voids, stiff (working crumbly to stiff, and plastic when wet), slightly sandy silty clay with stones present in the size range 2-60 mm. Land snails were also present.

No further analysis undertaken. Ideally this sample would have been selected for extraction of the molluscs. Otherwise it was judged to be of low potential.

**Context 35, Sample 10/T**

[fill of ditches 83 and 84]

Almost dry, light-mid, greyish brown, with a distinct orange cast, indurated (working plastic and sticky when wet), slightly sandy, silty clay. Chalk stones were common at the 2-6 mm scale and present in the size range 6-60 mm. Freshwater molluscs and live roots were present.

No further analysis undertaken. Ideally this sample would have been selected for extraction of the molluscs. Otherwise considered to have little potential.

**Phase 2 - 14th century**

**Context 7, Sample 9/T**

[fill of ditch 8]

1 kg processed

Moist, light-mid brown, mottled grey at the millimetre scale, stiff (working plastic), slightly sandy silty clay with a few 6-20 mm stones. Plant detritus and freshwater molluscs were present.

The washover was very small and consisted of a little very decayed herbaceous detritus and rootlets; no plant remains of interpretative use were observed, but two capsules of the stonewort *Chara* sp., were noted. The

residue yielded a small assemblage of mostly freshwater molluscs (planorbids and *Pisidium/Sphaerium* sp.). Most of the fossils were poorly preserved, being both eroded and broken.

**Context 32, Sample 1/T**

[fill of slot 31 - any evidence of use, ie. drainage/structural?]

Light-mid orange-ish brown, stiff to crumbly (working stiff and sticky), slightly sandy silty clay. The sediment was also observed to be more grey in patches. Brick/tile, coal, and stones (including chalk) in the size range 2-6 mm, were present. Modern rootlets were noted.

No further analysis undertaken; the material was considered to have little potential.

**Phase 3 - 17th century**

**Context 4 , Sample 11/T**

[upper fill of ditch 3]

Moist, mid brown, crumbly and just stiff (working plastic and sticky when wet), slightly sandy silty clay. Stones, possibly including chalk, were present in the size range 6-60 mm. Land snails were also noted.

No further analysis undertaken. Ideally this sample would have been selected for extraction of the molluscs, although otherwise it appeared to have little potential.

**Phase 4 - modern (18th century onwards)**

**Context 71, Sample 7/T**

[fill of pit 70]

1 kg processed

Mid grey-ish brown, locally orange brown on the millimetre scale, crumbly (working soft and very sticky when wet), slightly sandy, clay silt. Coal was

present. Overall, the sediment was slightly jumbled in appearance.

The flot was tiny, though it contained moderate amounts of very decayed seed coat fragments, probably testa of the common weed of cultivated and disturbed soils, *Atriplex*. This is no more than circumstantial evidence for cultivation of the area! Some fragments of charcoal (to 5 mm) and one very poorly preserved fragment of weevil cuticle (typical of deposits in which most insects have decayed) were the only other remains recovered from the flot. The residue consisted mostly of sand, with a few small stones, some brick/tile, charcoal (to 1.5 cm), two fragments of animal bone, and a piece of ?glass.

#### **Context 79, Sample 6/T**

[watercourse or marsh. Any evidence for marshland or ditch fill? Stagnant or running water?]

Moist, mid-dark, slightly brownish grey, slightly more yellow-brown locally, crumbly (working plastic and sticky when wet), sandy clay silt with stones (rotten chalk/lime) present in the size range 2-20 mm. Brick/tile, pot, vivianite, coal, and charcoal were also present. Worm burrows and many irregular millimetre-scale voids were noted.

No further analysis undertaken. If excavation evidence showed this deposit to have been *in situ*, then particle size analysis of the pure material might indicate the means of deposition. The presence of worm burrows indicates the likelihood of post-depositional mixing, however.

#### **Context 90, Sample 4/T**

[fill of pit 87 - evidence of pit usage?]

1 kg processed

The sediment was a moist, mid greyish brown, locally more orange to yellowish brown at both

millimetre and centimetre scales, slightly sandy clay silt. The texture was crumbly and soft, working plastic and sticky when wet. Stones in the size range 2-60 mm were present, as were brick/tile, coal, cinders, charcoal, and very rotted twigs.

The flot was tiny; it contained a little herbaceous detritus and very decayed wood, a trace of coal, slag and ?'char', and a few very decayed *Atriplex* seeds. A few worm capsule fragments and one fly puparium were the only evidence of invertebrates. The residue contained stones, sand, brick/tile, one fragment of burnt animal bone, charcoal (to 1.5 cm), and coal (to 7 mm). The residue was tiny but rich in herbaceous detritus; no further identifiable plant taxa were recorded from it, however.

Processing a very large subsample might provide limited evidence of the nature of the pitfill.

#### *Bone*

Preservation of the assemblage was usually good, with broken surfaces generally appearing 'spiky'. Colour varied between contexts and ranged from gingery brown to fawn. Little butchery or dog gnawing was present.

The assemblage was very small, and consisted of material from twelve contexts, of which only six identified and eight unidentified fragments were dated to the medieval or post-medieval periods. The remainder (24 identified and four unidentified fragments) were recovered from deposits of modern origin.

The material included the remains of horse, cattle, caprine, cat and hare (see Appendix). Two metapodials were tentatively identified as goat on the basis of their size and morphology. The part

skeleton of a cat (17 bones in all) was recovered from Context 62 (a pitfill); the remains were of a large and robust individual.

### *Molluscs*

The molluscs from Context 7 (Sample 9) indicate that this ditch feature contained freshwater. Determination of water quality would require more precise identification than the condition of the shells allows.

The hand-collected shell was all identified as oyster (*Ostrea edulis* L.). Four valves were recovered from Context 4, a single valve from Context 32 and one fragment from Context 71; all of the fossils were very rotted.

### **Statement of potential**

The vertebrate assemblage, although well preserved, is of little interpretative value because of the very small quantity of medieval bone, and the modern date of the remaining material. Similarly, the assemblage of hand-collected shell has no further potential. Land and freshwater molluscs from Context 7 seem unlikely to provide much information, but those from some of the other, unassessed, contexts may have value.

Further investigation of the material from Context 96 might reveal the nature of the local environment and the extent of human influence, but the evidence from assessment of the plants and invertebrates indicates a clean, and apparently undisturbed, wet environment. Analysis of a large subsample from Context 90 may allow identification of at least some components of the pitfill. The material has very limited potential above the level of site analysis.

### **Recommendations**

No further work on the mollusc or vertebrate material is recommended, but on the basis of such limited assemblages it is extremely difficult to make further recommendations regarding the potential of material still unexcavated. However, it is possible that further excavation would recover well-preserved material and any destruction of these deposits should be accompanied by an adequate sampling strategy, with appropriate provision for a post-excavation programme.

It is recommended that further work for the recovery of plant and insect macrofossils is undertaken on the material from Context 96, and, if identification of the pitfills is regarded as a high priority, Context 90. All of the remaining sediment from these contexts should be processed.

Funds should also be made available for a more comprehensive assessment of the samples from Contexts 4, 5, and 35, with a contingency for further analysis of molluscs at least. These samples clearly have the potential to yield assemblages of molluscs which may shed light on conditions in the ditches from which the deposits were recovered.

The following times should be allowed for further work on the material mentioned above:

Technician: 16.5 hours  
 Research Assistant (insects): 32.5 hours  
 Research Fellow (insects): 6.5 hours  
 Research Fellow (plants): 8.5 hours  
 Research Assistant (molluscs): 16.5 hours (as contingency)

If further excavations take place on this site in advance of damage caused by development then every effort should be made to investigate any revealed deposits

including an intensive regime of sampling. The deposits certainly should not be damaged by development without proper excavation and sampling, and commensurate funding for post-excavation analysis should be made available.

## **Retention and disposal**

The sediment from Contexts 4, 5, and 35, should certainly be retained and the remaining sediment from Contexts 90 and 96 should also be retained to allow for future analysis. All washovers and residues should be kept in the longer term. The bone and molluscs should also be retained for the present.

## **Archive**

All material is 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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## Appendix: Hand-collected bone from Holmechurch Lane, Beverley

### Context 4 (Phase 3)

[upper fill of ditch]

Preservation - fair  
 Angularity - spiky  
 Colour - fawn

*Horse* - 1 metacarpal, heavily dog gnawed.  
*Cattle* - 1 radius fragment, chopped.  
*Unidentified* - 4 fragments, including cow-sized shaft, rib and cranium fragments.

Weight of identified fragments - 178g  
 Weight of unidentified fragments - 31g

### Context 7 (Phase 2)

[fill of ditch]

*Unidentified* - 1 sheep-sized rib fragment.

Weight of unidentified fragment - 1g

### Context 9 (Phase 2)

[levelling dump]

Preservation - good  
 Angularity - spiky  
 Colour - fawn

*Horse* - 1 mandible (M3 only).  
*Hare* - 1 tibia shaft fragment.

Weight of identified fragments - 178g

### Context 32 (Phase 2)

[fill of slot]

*Unidentified* - 1 fragment, burnt.

Weight of unidentified fragment - 1g

### Context 35 (Phase 1)

[fill of ditches]

Preservation - good  
 Angularity - spiky  
 Colour - fawn  
*Cattle* - 1 humerus fragment, heavily chopped.  
*Caprine* - 1 metacarpal fragment (measurable).  
*Unidentified* - 2 fragment, cow-sized shaft fragments.

Weight of identified fragments - 109g  
 Weight of unidentified fragments - 18g

### Context 50 (Phase 4)

[fill of ditch/gully]

?*Goat* - 1 metatarsal.

Weight of identified fragment - 32g

### Context 62 (Phase 4)

[fill of pit]

Preservation - excellent  
 Angularity - spiky  
 Colour - fawn

*Cat* - part skeleton, 17 fragments (7 measurable), including skull fragments, maxillae (plus teeth), mandibles, 2 humeri, 2 radii, 2 ulnae, 1 femur and 1 pelvis. Large and robust individual represented.

Weight of identified fragments - 38g

### Context 69 (Phase 4)

[fill of pit]

Preservation - good  
 Angularity - spiky  
 Colour - gingery-brown

*Caprine* - 1 calcaneum (measurable), 1 second phalanx (measurable) and 1 maxillary molar.

Weight of identified fragments - 16g

### Context 73 (Phase 4)

[fill of pit]

?*Goat* - 1 metacarpal fragment.  
*Unidentified* - 1 fragment, cow-sized vertebra fragment.

Weight of identified fragments - 21g  
 Weight of unidentified fragments - 5g

### Context 79 (Phase?)

[water course or marsh]

?*Cat* - atlas fragment

*Unidentified* - 1 cow-sized rib fragment, sawn.

Weight of identified fragments - 1g

Weight of unidentified fragment - 35g

**Context 90 (Phase 4)**

[fill of pit]

*Unidentified* - 2 sheep-sized fragments.

Weight of unidentified fragments - 11g

**Context 95 (not dated)**

[levelling dump]

*Cattle* - 1 premolar.

Weight of unidentified fragment - 4g