

**An evaluation of biological remains from excavations at Blanket Row
(Shaft 9), Hull (site code: BWH97)**

by

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Summary

A small group of sediment samples, a small hand-collected bone assemblage and some other material, of pre-14th century to modern date, from excavations at Blanket Row (Shaft 9), Hull, were submitted to evaluation.

Most of the sediment samples produced few plant or invertebrate remains, probably as a result of post-depositional decay rather than low input. One sample from a barrel pit (dated 18th century to present) gave an assemblage of plant and invertebrate macrofossils preserved by anoxic waterlogging, probably of mixed origins including human food, weeds from the surroundings, and hints of stable manure.

The small size of the animal bone assemblage limits its potential for further analysis. However, the quality of the remains suggests that a more complete picture of vertebrate utilisation at the site could be achieved if further excavation were to recover additional material. In a wider context the medieval material would provide an excellent opportunity for comparison with material from other sites in the region such as Lurk Lane and Eastgate, Beverley (Scott 1991; 1992) and various small sites in York including The Bedern (Hamshaw-Thomas, in prep).

There is clearly potential from the plant and invertebrate macrofossils and the vertebrate remains to address issues of site interpretation and human diet and activity. In the event of further excavation, a full program of sampling and post-excavation analysis should be allowed for.

Keywords: BLANKET ROW; HULL; PRE-14TH CENTURY TO PRESENT; EVALUATION; SEDIMENT SAMPLES; VERTEBRATE REMAINS; PLANT REMAINS; CHARRED PLANT REMAINS; WOOD; INVERTEBRATE REMAINS; INSECTS; MOLLUSCS; OIL

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Introduction

During March 1997 Northern Archaeological Associates undertook excavations at Blanket Row, Hull. Seven (provisional) Phases were identified, from pre-14th century to modern.

Eight sediment samples, two samples of wood, a horse skull and three additional boxes of hand-collected animal bone (42 x 24 x 17 cm) and a small quantity of oil, were recovered from the deposits. Seven of the samples were from Phase 3 (14-15th century) and one, together with one of the wood samples and the oil, from Phase 6 (18th century to present).

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

Methods

All eight sediment samples ('GBAs' *sensu* Dobney *et al.* 1992) were inspected in the laboratory and a description of their lithology was recorded using a standard *pro forma*. Subsamples of 2 kg were taken from six of the samples (Samples 073, 093, 097, 114, 134 and 146) and 3 kg from the seventh (Sample 098) for extraction of macrofossil remains, following procedures of Kenward *et al.* (1980; 1986). All of the remaining sample (Sample 132) was processed in the same way.

Additional material from four of the samples was bulk sieved to 500 :m (BSXS) to recover small bone, shell and artefacts—the latter were removed from the residues to be returned to the excavator.

None of the samples were deemed suitable for examination for microfossils.

All the hand collected bone was examined; subjective records were made of the

preservation, angularity (i.e. nature of the broken surfaces) and colour. Quantities and identifications were noted where appropriate. All fragments not identified to species or species group were recorded as 'unidentified', these included skull, vertebra, rib and shaft fragments and other elements where species identification was unclear.

Results

The results of the investigations are presented by phase (provisional) in context number order, with information provided by the excavator in square brackets.

The sediment samples

Phase 3: 14-15th century

Context 073 [Subsidence infill]

Sample 073 (2 kg paraffin flotation)

Moist, predominantly mid grey to mid brown (speckled with black, grey and white), crumbly (working plastic locally), ?moderately humic clay silt with fragments of brick/tile (to 10 mm) present and abundant white flecks of ?rotted mortar.

No identifiable plant macrofossils were recovered from this subsample; the tiny flot was of 'char' (vesicular charred material of low density, perhaps originating in the burning of wood or coal) and coal, whilst the large residue was mainly of sand, coal, mortar, and brick/tile. The only invertebrate remains were a single unidentified mollusc and an earthworm egg capsule.

Context 093 [Floor deposit or levelling layer]

Sample 093 (2 kg paraffin flotation and 5 kg BSXS)

Moist, mid grey brown, crumbly (working slightly plastic locally), slightly sandy slightly clay silt. Small and medium-sized fragments of chalk (6 to

60 mm) and ?charcoal were present and brick/tile was common in the sample.

Again, no identifiable plant macrofossils were observed. The small washover consisted of about 25 cm³ of 'char' with traces of charcoal and coal; the moderate-sized residue comprised sand with much fine coal and some brick/tile. There were no invertebrate remains.

The BSXS residue was mostly stone, sand, brick/tile and coal with some mortar, pot, shellfish and bone. The bone assemblage comprised eight herring vertebrae, four gadid vertebrae, eighty-four unidentified fish bones (mostly spines, fin rays and ribs which are non diagnostic) and twenty unidentified non-fish fragments. The shellfish were fragments of oyster (*Ostrea edulis* L.) and mussel (*Mytilus* sp.).

Context 097 [Floor deposit below Context 093]

Sample 097 (2 kg paraffin flotation and 13 kg BSXS)

Moist, dark grey brown to black, crumbly (working slightly plastic locally), sandy silt to silty sand. Brick/tile was abundant, ?fine charcoal (or possibly cinder or ash) common and mammal bone and rotted marine mollusc shell were also present in the sample.

Plant macrofossils were not recorded from this sample and the only invertebrate remains noted were a few earthworm egg capsules. The tiny flot of 'char' and coal contained some tiny scraps of ?very decayed wood <2 mm in maximum dimension, the moderate-sized residue was largely of coal with some brick/tile and sand and a little bone.

The BSXS residue was mostly sand and coal with gravel and brick/tile common and stones, two pot shards, cinder, fragments of mortar, charcoal, three charred grains (unidentified) and small shell and bone assemblages present. The bone assemblage was mostly fish, including herring, gadids, a pleuronectid, and eel. 10-20% of the fish remains were burnt and some others were scorched. There were a few sheep/goat fragments (some burnt) and two elements of a mouse (*Mus* sp.). The very small, poorly preserved, shell assemblage was mostly fragments of shellfish—mussel (*Mytilus*), oyster (*Ostrea edulis*) and cockle (?*Cerastoderma edule*

(L.)). A few operculae of ?*Bithynia tentaculata* (L.) and fragments of *Succinea* sp. were also noted.

Context 114 [Fill of shallow trench]

Sample 114 (2 kg washover)

Moist, mid grey brown, crumbly (working somewhat plastic), sandy slightly clay silt. Rotted mortar was abundant, coal common and brick/tile, ?charcoal and bone present in the sample.

The flot comprised barely 1 cm³ of 'char' and coal with traces of unidentifiable plant detritus, including very decayed wood, earthworm egg capsules, fragments of fly puparium and *Heterodera* type cysts; the moderately large residue was of sand and coal with some brick/tile.

Context 132 [Occupation deposit]

Sample 132 (1.5 kg washover)

Moist, mid to dark grey brown, crumbly (working plastic), sandy clay silt with brick/tile and flecks of mortar and charcoal present.

The very small washover from this subsample comprised a few cm³ of 'char', charcoal, cinder and coal; the moderate-sized residue was of sand and coal with much cinder, but no identifiable plant remains. No invertebrate remains were observed.

Context 134 [First thought to be a floor deposit but more likely to be bedding for a brick course]

Sample 134 (2 kg washover and 7 kg BSXS)

Moist, mid slightly grey brown, crumbly (working plastic), slightly sandy clay silt. Brick/tile was abundant and rotted mortar and rotted marine mollusc were present in the sample.

The tiny washover consisted of a few cm³ of fine charcoal and mollusc shell fragments with traces of very decayed wood; the few seeds present were very poorly preserved. The moderate-sized residue was of undisaggregated (sometimes concreted) silt clay clasts with some sand and four fish bones (two herring vertebrae and two unidentified fragments). The identifiable plant remains were of no interpretative value. The residue also contained a

small, poorly preserved, mollusc assemblage—mostly operculae of ?*Bithynia tentaculata* and unidentified fragments. Other freshwater taxa represented were *Hydrobia ?ulvae* (Pennant) and bivalves (*Pisidium/Sphaerium* spp.). In addition, there were four fragments of cockle (?*Cerastoderma edule*) and a single land snail *Succinea* sp.

The BSXS residue was mostly sand and brick/tile with some stones, coal, mortar, fish bone (two herring and two gadid vertebrae), mammal bone (thirteen unidentified fragments) and a small poorly to well preserved assemblage of freshwater molluscs and fragments of shellfish. The marine taxa represented were oyster (*Ostrea edulis*), cockle (?*C. edule*) and flat winkle (*Littorina* sp.). The freshwater assemblage included operculae of ?*B. tentaculata*, planorbids, freshwater bivalves (*Pisidium/Sphaerium* spp.), *H. ulvae*, ?*Valvata* sp. and four *Theodoxus fluviatilis* (L.). A single *Succinea* sp. was also noted.

The mollusc assemblages from this sample were remarkable for their mixed character. There were freshwater species from flowing clear water, others with less restricted habitat requirements, a saltmarsh species and marine forms. It seems most likely that the freshwater species were imported in sediment used for the make-up; if so then perhaps the two *Hydrobia ?ulvae* indicate collection from estuarine deposits, in which case the marine molluscs may have also been present.

Context 146 [Occupation deposit below Context 065]

Sample 146 (2 kg washover)

Moist, mid to dark grey brown, crumbly (working plastic), ?moderately humic, sandy clay silt with small (to 10 mm) patches of grey silt and dark brown ?humic material. Fish bone and marine molluscs were present in the sample.

The tiny washover consisted of 1-2 cm³ of 'char' with a little very decayed wood, fine charcoal, several earthworm egg capsules and *Heterodera* type cysts; the moderately large residue was of sand with fine coal. Two identifiable plant taxa present in trace amounts might indicate wetland habitats but are hardly valuable to interpretation.

Phase 6: 18th century to present

Context 098 [Fill of barrel pit]

Sample 098 (3 kg paraffin flotation and 21 kg BSXS)

Waterlogged, mid grey brown, soft (working plastic), very sandy silt. Very small stones (grit, 2 to 6 mm) were abundant and brick/tile, coal and post-depositional contaminant ?sump oil were present in the sample.

The tiny paraffin flot contained quite a few moderately well preserved seeds, though they exhibited some abrasion and silt-coating. There were moderate numbers of poorly preserved insect remains and a few mites. The former were rather typical of urban or other intensive occupation material, with arrange of species strongly favoured by human occupation. Grain pests were represented by two *Oryzaephilus surinamensis* (L.), and there were (weak and subjective) hints that stable manure may have contributed to the fauna.

The moderate-sized residue was of coal, cinder, brick/tile and chalk, much of it sand-grade; there was some bone, too (see below). A small washover of 100-200 cm³ was taken which was found to comprise mostly woody debris including hazel (*Corylus*) nutshell and some other eroded remains. Seeds were quite frequent and mostly well preserved; they included weeds of various kinds and a possible grassland (wet meadow, salt marsh?) element, and also food in the form of traces of grape (*Vitis*) seed fragments and several fig (*Ficus*) seeds. Some remains could not be identified and there is a need to pursue these identifications (and preferably also to process more material from similar contexts) in case they are of interpretative significance. Vertebrate remains amounted to 28 identifiable and 26 unidentifiable fragments. The identifiable fragments comprised a single caprovid maxillary molar and 27 fish bone fragments. These included single pleuronectid and herring (*Clupea harengus* L.) vertebrae, a single scale and a gadid cranial fragment; most of the remainder consisted of fin spines and ribs.

The BSXS residue was mostly sand, brick/tile and mortar with cinder and stones common and pot, coal, glass, metal, clay pipe, wood/twigs, nutshell (one fragment), four fish scales (?perch) and small assemblages of shell and bone. The bone assemblage was mostly fish including herring, eel,

pleuronectid and gadid vertebrae. Some of the remains were burnt and some showed surface acid etching indicative of having passed through the gut. Domesticated mammals were represented primarily by isolated teeth (seven mandibular and maxillary teeth of sheep/goat and a single pig incisor) although there were a large number of unidentified cranial, rib, shaft and vertebral fragments from a 'sheep-sized' animal. There was also a single cat metatarsal fragment.

Wood identifications

Two timber samples were submitted; both barrel staves (Context 078) and a large structural timber (Context 106) were oak (*Quercus*).

Oil

A small sample of oil collected during excavation was also submitted; from its appearance and smell it seems likely to have been relatively recent engineering or engine oil. It is certainly a mineral rather than animal- or plant-derived oil.

Hand-collected vertebrate remains

A small assemblage of hand-collected animal bones was recovered from all phases of activity on the site, amounting to a total of 243 identifiable (7,426 g) and 654 unidentifiable (4,713 g) fragments. For the purposes of the evaluation the phases have been grouped according to date: Phase 1 - pre 14th C; Phases 2-3 - 14th -15th C; Phase 4 - 16th-17th C and Phase 5-7 - 18th C onwards. Preservation of the fragments was fair and the angularity was 'spiky'. Although colour was variable, most contexts were fawn throughout, with a few being brown or mixed. More than 50% of the fragments were between 5 and 20 cm in length, between 10 and 20% of the fragments showed evidence of butchery and 0-10% were freshly broken. The butchery was mostly noted as chops and knife marks on ribs and vertebrae in the unidentifiable fraction; other butchery evidence was noted on a single caprovid cranium (split longitudinally) and a single heavily chopped cattle astragalus.

Several fragments were stained with copper alloy corrosion products. A horse skull and a caprovid femur from Context 098, initially, appeared to have

been burnt or scorched, however, on closer inspection the integrity of the bone structure appeared too intact, suggesting that the blackening may be the result of staining rather than burning. Chop marks on the occipital condyles of the horse skull indicated that it had been removed from the rest of the carcass.

Table 1 gives the number of fragments of each species by phase. There appeared to be little difference between most of the earlier phases but a greater range of species was represented in Phases 5-7 (18th C. onwards) including rabbit (*Oryctolagus cuniculus*), duck (*Anas* spp.) and pheasant (cf. *Phasianus colchicus*). There was also a single cat (*Felis f. domestic*) fragment from Phases 5-7. Cattle and caprovids were well represented in all phases, with pigs contributing less to the assemblage. Geese and domestic fowl were the most numerous identified bird species. Table 2 shows that there is a fairly high proportion of measurable cattle and caprovid bones, and also of teeth and mandibles useful for age-at-death determination.

In addition, two bone knife handles were present in the assemblage. One, recovered from Context 12 (Phase 4) was made in two parts of which only one survives. It was probably made from a large mammal long bone and had copper alloy rivets to hold the parts together; two of these are still in place. The second handle (unstratified) was made from a similar bone and was more modern in appearance.

Statement of potential and recommendations

Preservation of plant and invertebrate remains is extremely local on this site to judge from the samples seen. However, evaluation suggests that there is some potential for site interpretation using these remains. In the event of further excavation every effort should be made to sample contexts with even limited preservation by anoxic waterlogging and others were large concentrations of bone and/or molluscs are observed, especially if deeper-lying archaeological layers are explored.

The small size of the animal bone assemblage limits its potential for further analysis. However, the diverse range of

species represented, and the moderately high numbers of measurable bones, mandibles and teeth, (given the small amount of material excavated) suggest that should further excavation be undertaken it would be likely to produce a larger data set upon which a more detailed analysis should be undertaken. Also, in the light of the fish bone assemblages recovered from the sediment samples, it is likely that an intensive sieving program would produce a more complete picture of vertebrate utilisation at the site. In a wider context the medieval material would provide an excellent opportunity for comparison with material from other sites in the region such as Lurk Lane and Eastgate, Beverley (Scott 1991; 1992) and various small sites in York including The Bedern (Hamshaw-Thomas, in prep).

Retention and disposal

All of the material should be retained for the moment.

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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Table 1. Number of hand-collected bone fragments by phase from Blanket Row, Hull.

Taxon		Phase 1	Phase 2-3	Phase 3/4	Phase 4	Phase 5-7	Total
<i>Oryctolagus cuniculus</i> (L.)	Rabbit					3	3
<i>Felis f. domestic</i>	Cat					1	1
<i>Equus f. domestic</i>	Horse					1	1
<i>Sus f. domestic</i>	Pig	2	3	1	3	1	10
<i>Bos f. domestic</i>	Cattle	2	16	5	31	27	81
Caprovid	Sheep/goat		12	8	57	37	114
<i>Anser</i> spp.	Goose		2		3	3	8
<i>Anas</i> spp.	Duck					2	2
<i>Gallus f. domestic</i>	Fowl			1	2	1	4
<i>Gallus / Phasianus</i> spp.	Fowl/Pheasant		1				1
cf. <i>Phasianus colchicus</i> L.	?Pheasant					1	1
Charadriidae	Wader					1	1
Bird			3		6	1	10
Fish			1			3	4
Crab				1		1	2
Sub-total		4	38	16	102	83	243
Unidentified		13	85	29	362	165	654
Total		17	123	45	464	248	897

Table 2. Summary of hand-collected bone from Blanket Row, Hull.

Taxon		Total no. fragments	No. Measurable	No. Teeth	No. Mandibles	Total weight (g)
<i>Oryctolagus cuniculus</i> (L.)	Rabbit	3			1	3
<i>Felis f. domestic</i>	Cat	1				0.8
<i>Equus f. domestic</i>	Horse	1				2387
<i>Sus f. domestic</i>	Pig	10	1		1	207
<i>Bos f. domestic</i>	Cattle	81	12	5	4	3340
Caprovid	Sheep/goat	114	27	10	8	1394
<i>Anser</i> spp.	Goose	8	2			41
<i>Anas</i> spp.	Duck	2	1			5
<i>Gallus f. domestic</i>	Fowl	4	1			26
<i>Gallus / Phasianus</i> spp.	Fowl/Pheasant	1	1			2
cf. <i>Phasianus colchicus</i> L.	?Pheasant	1				0.7
Charadriidae	Wader	1	1			0.3
Bird		10				10
Fish		4				4
Crab		2				5
Sub-total		243	46	15	14	7426
Unidentified		654				4713
Total		897	46	15	14	12139