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Evaluation of biological remains from Waterside Road, Beverley, East Yorkshire (site code: BWA2000)

by

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Summary

Residues and washovers from seven processed samples (representing three contexts) and one box (of approximately 16 litres) of hand-collected bone, from excavations at Waterside Road, Beverley, were submitted for an evaluation of their bioarchaeological potential.

Three washovers and residues from three of the samples were examined and all of the residues were inspected for shell and vertebrate remains. Only traces of mostly charred plant remains were recorded and these were of no interpretative value. Very small assemblages of terrestrial and freshwater mollusc remains were recovered from each of the samples as well as a few fragments of marine shellfish (from Context 21). The shell remains were of some limited interpretative value, but the presence of both terrestrial and aquatic forms within the deposits strongly suggested mixed origins for the material.

A small vertebrate assemblage was recovered from deposits dating from the medieval period through to the 18th century. Most of the material was recovered from Phase 4 (late 15th-16th century) dump and pit fill deposits. Typically, cattle, caprovids and pigs were the most commonly occurring species. A small collection of caprovid metapodials were recovered from Context 21 (pitfill). These were interpreted as representing secondary butchery waste. A diverse range of fish, including freshwater and marine species, were identified from the sediment samples.

Although the vertebrate assemblage is small, it is recommended that a basic archive, including biometrical data, should be produced of all well-dated material. No further work is warranted on the biological remains (other than bone) from the samples.

KEYWORDS: WATERSIDE ROAD; BEVERLEY; EAST YORKSHIRE; EVALUATION; PLANT REMAINS; CHARRED PLANT REMAINS; MOLLUSC REMAINS; VERTEBRATE REMAINS

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Introduction

An archaeological evaluation excavation was carried out by Humber Field Archaeology (HFA) at Waterside Road, Beverley, in late November and early December 2000.

Fifteen samples (representing six contexts) were processed by bulk sieving prior to delivery to the EAU and seven of the residues and washovers (representing three contexts) were submitted for an evaluation of their content of biological remains. One box (of approximately 16 litres) of hand-collected bone was also submitted.

The deposits were attributed to one of five phases (four of occupation): Phase 1 – pre-occupation; Phase 2 – late 12th to 13th century; Phase 3 – 13th to mid 14th century; Phase 4 – late 15th to 16th century; Phase 5 – late 17th to 18th century.

Methods

Samples

All of the submitted material was examined in the laboratory. The washovers and residues from three of the samples (one from each represented context) were examined for plant and invertebrate remains. All of the residues were sorted for bone and shell and notes on other components were also made.

Hand-collected vertebrate remains

Data for the vertebrate remains were recorded electronically directly into a series of tables using a purpose-built input system and *Paradox* software. For each context (or sample) subjective records were made of the state of preservation, colour of the fragments, and the appearance of broken surfaces ('angularity'). Additionally, where more than ten fragments were present, semi-quantitative information was recorded concerning fragment size, dog gnawing, burning, butchery and fresh breakage.

Where possible, fragments were identified to species or species group, using the reference collection at the Environmental Archaeology Unit, University of York. Fragments not identifiable to species were described as the 'unidentified' fraction.

Results

Samples

The results are presented by phase. Archaeological information provided by the excavator is given in square brackets. Sediment descriptions, also provided by the excavator, are given.

PHASE 2 – LATE 12TH TO 13TH CENTURY

Context 65 [lower fill of pit 64]
Sample 15/BS (12.5 kg sieved to 1 mm with washover to 300 microns)
Wet, light brown to grey, soft and plastic, silty clay, with inclusions (to 10 mm) of very soft dark grey silt. Stones (2 to 20 mm, mostly chalk), mortar/plaster, brick/tile, charcoal, mammal bone and land and freshwater molluscs were present in the sample.

The tiny washover of a very few grammes consisted of coal and charcoal (to 5 mm), with traces of elder (*Sambucus nigra* L.) seeds and a few snails (including one *Discus rotundatus* (Müller) and one ?*Aegopinella* sp.), as well as a trace of ?modern herbaceous plant debris. The small residue of about 750 cm^3 was of gravel (to 110 mm, including chalk to 45 mm) and iron-concreted sandy silt sediment (the latter appeared to be entirely mineral in nature and is not thought to represent faecal material). Other components of the residue included ?daub (to 25 mm), brick/tile (50 mm), and a few additional snail taxa (*Trichia* sp., and single individuals of two freshwater forms—*Succinea* sp. and a planorbid).

A small collection of bone, amounting to 29 fragments, was recovered from this context. Most bones were less than 25 mm in largest dimension, but a few large mammal rib fragments were slightly larger (to 40 mm). Overall, the bones were rather battered in appearance and showed much variability of colour. Much of the material was unidentified, but fragments (2) of herring (*Clupea harengus* L.) and amphibian were recorded.

PHASE 3 – 13TH TO MID 14TH CENTURY

Context 47 [fill of pit/slot 48]
Samples 6, 7, and 8/BS (11.4 kg, 11.6 kg, and 11.4 kg respectively, sieved to 1mm with washover to 300 microns)
Wet, light brown, crumbly to soft and sticky (working soft, plastic and sticky), clay silt. Small chalk fragments (2 to 6 mm), mortar/plaster, brick/tile, pot, charcoal, mammal bone and land snails were present in the samples. Sample 8 showed some colour variation from light brown to light grey.

The washover and residue from Sample 6 were examined for plant and invertebrate remains. There was a tiny washover containing snails, charcoal (to 5 mm), coal (3 mm), and a single elder seed. Most of the snails present were *Cecilioides acicula* (Müller), a relatively recently introduced burrowing species, almost certainly intrusive to the deposit. Other terrestrial taxa present included *Vallonia* sp., *Cochlicopa lubrica* (Müller), *D. rotundatus*, and ?*Aegopinella* sp. Fragments of at least two freshwater planorbid snails were also noted. The small residue of about 500 cm^3 was mostly gravel (to 70 mm, including chalk to 45 mm) and grit with brick/tile (50 mm) with a few additional remains of snail taxa already recorded from the washover.

Approximately 80 fragments of bone were recovered from the three samples. With the exception of a single fragment that was greater than 70 mm, the remainder of the bones were small (less than 40 mm) and very fragmented. Although much of the assemblage was unidentified, some fish remains were present, including herring and eel (*Anguilla anguilla* (L.)) vertebrae. Additionally, caprovid, small mammal (including bank vole—*Clethrionomys glareolus* (Schreber)) and amphibian bones were recorded.

PHASE 4 – LATE 15TH TO 16TH CENTURY

Context 21 [fill of pit 22]
Samples 2, 3, and 4/BS (12.5 kg, 14.2 kg, and 13.5 kg respectively, sieved to 1mm with washover to 300 microns)
Wet, grey to brown, soft and crumbly (working soft and sticky), slightly sandy silt. Stones (2 to 20 mm, including chalk), brick/tile, pot, coal, cinder, charcoal, mammal bone and freshwater molluscs were present and mortar/plaster was common in the samples. Sample 3 also contained some bird bone.

The washover and residue from Sample 4 were examined for plant and invertebrate remains. There was a tiny washover of a few cm^3 of charcoal (to 5 mm in maximum dimension), with a little coal (to 10 mm) and some snails. These last included several terrestrial forms (*D. rotundatus*, *C. lubrica*, *Vallonia* ?*excentrica* Sterki, *Trichia* ?*hispida* (L.), and *Cecilioides acicula*) and a single valve of a freshwater *Pisidium* sp. bivalve. The rather large residue of about 2100 cm^3 was mainly of mortar (to 80 mm), with some tile (to 130 mm), gravel and stone to 90 mm). Other occupation material included cinders and mussel (*Mytilus edulis* L.) shell (in addition, the residue from Sample 3 also gave a little eggshell). The only plant remains other than charcoal were a single elder seed and one unidentifiable charred cereal grain in the washover (though a fragment of charred hazel (*Corylus*) nut and an additional charred grain were seen in the residue from Sample 3).

The residues from the three samples gave some additional shell, mostly of freshwater bivalves (*Sphaerium*/*Pisidium* sp(p).) but also including remains of marine taxa (one right oyster (*Ostrea edulis* L.) valve and a single periwinkle (*Littorina littorea* (L.)).

The three samples from this deposit produced 122 fragments of bone, which were fairly well-preserved, although somewhat battered in appearance. Many fragments were small (<40 mm) and unidentified. Although not present in large quantities, the fish remains included herring, eel, pike (*Esox lucius* L.), thornback ray (*Raja clavata* L.), stickleback family (Gasterosteidae), Gadidae (including whiting (*Merlangius merlangus* (L.)) and several ?perch (cf. *Perca fluviatilis* L.) scales. One fish vertebra had been burnt. A number of small mammal teeth and shafts were noted, along with three small sparrow-sized fragments and a couple of amphibian bones. Fragments representing medium-sized mammals were largely unidentified, although a single caprovid first phalanx was present.

Hand-collected vertebrate remains

Vertebrate material amounting to a single box (approximately 16 litres) of bone was recovered from deposits dating from the medieval period through to the 18th century. Twenty-three deposits yielded a small bone assemblage of 163 fragments, of which 61 were identified to species (Table a). Most of the remains (109 fragments) were recovered from five Phase 4 deposits, representing dumps, pit and slot fills.

Preservation was mainly recorded as ‘good’ or ‘fair’, with little material that was described as battered or eroded. Material from a single context (25) was described as variable, both in angularity (the nature of the broken surfaces) and in colour. Although bones from several deposits (Contexts 12, 21, 23, 25, 33 and 63) showed variability of colour, most fragments were fawn or brown. Evidence for dog gnawing, burning and butchery was noted but was not particularly common. Additionally, low frequencies of fresh breakage were recorded.

The three main domesticates (cattle, caprovid and pig) were represented, and, for Phase 4, where numbers of fragments were greater, caprovid remains were predominant (Table a). Context 21, a Phase 4 pitfill, from which the largest quantities of bones were recovered, produced a small accumulation of caprovid metacarpals and metatarsals. The latter represented the proximal half of the bones and most had been

deliberately chopped across the shaft. Whilst these remains could represent waste from the processing of hides, the butchery on the bones suggests that the lower part of the metatarsals were being removed and sent elsewhere, perhaps still attached to the skins. Thus, the caprovid remains in the pit would be more likely to represent secondary carcass processing.

Horse bones were scarce, but included a large and robust first phalanx from Context 10. Single fragments of duck and goose were also identified. In addition, Context 45 (Phase 3) contained a rabbit (*Oryctolagus cuniculus* (L.)) scapula, which showed possible evidence of cat gnawing. Rabbits, introduced into this country in the 12th century, were not extensively exploited until the post-medieval period. This bone may represent an early occurrence of this species or, because of the burrowing habits of rabbits, it may be intrusive.

In all, there were 25 measurable fragments and 3 mandibles with teeth *in situ* (Table b) of use for providing biometrical and age-at-death data.

Discussion and statement of potential

Plant remains were almost non-existent in the samples examined and insects lacking. Assuming no deposits with well preserved remains are encountered, no further sampling for plant or insect remains at this site is thought worthwhile.

The small assemblages of land and freshwater snails are of little interpretative value. The freshwater taxa may indicate that the cut features held standing water but, equally, they may have been introduced by dumping or occasional flooding. The terrestrial forms indicate a predominantly open grassland environment with some hints of scrub/woodland (*D. rotundatus*) and human disturbance (*D. rotundatus* and ?*Aegopinella* sp.). As with the freshwater taxa, the small numbers of recovered remains may indicate individuals living nearby (and killed in the pit-fall traps formed by the cuts) but may also have been introduced from further afield. The presence of both freshwater and terrestrial taxa within the deposits, and the marine shell (probably food waste) recovered from Context 21 (Samples 2 and 4), strongly suggests mixed origins for the assemblages. In view of this, any attempted reconstruction of the immediate environment from these few remains would be, at best, highly speculative.

Deposits from this site produced a small and well-preserved hand-collected vertebrate assemblage, which appeared to be fairly closely dated. A range of activities, including carcass preparation and dumping of domestic refuse, appeared to be responsible for the assemblage, however, too few fragments were recovered for any distinct patterns of refuse disposal to be discernible. The samples did not produce large assemblages, but a diverse range of both marine and freshwater fish were identified. Overall, the vertebrate assemblage shows that some deposits from this site show potential for the recovery of well preserved bones and this should be borne in mind if additional excavations are undertaken in this area in the future.

Recommendations

No further work is recommended on the remains (other than bone) recovered from the samples.

The size of the current vertebrate assemblage is too small for further, detailed analysis to be undertaken, but given the tight dating of the deposits and the reasonable number of measurable bones, it is recommended that a basic archive be made of the assemblage (including the material recovered from the samples and any remains from those samples not examined as part of this evaluation). This would allow

for the data to be used in conjunction with those from other excavations in Beverley, and enlarge the data sets to provide a wider understanding of the activities being undertaken in the town.

Retention and disposal

All of the current material should 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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Table a. Hand-collected vertebrate remains by Phase from Waterside, Beverley. ***Key****: ? = unphased.*

Species	**Phase**	**2**	**3**	**4**	**5**	**?**	**Total**
Oryctolagus cuniculus	rabbit	-	1	-	-	-	1
Equus f. domestic	horse	-	-	2	-	1	3
Sus f. domestic	pig	-	-	5	-	-	5
Bos f. domestic	cow	2	-	13	1	-	16
Caprovid	sheep/goat	2	2	25	2	3	34
Anser sp.	goose	-	-	1	-	-	1
Anas sp.	duck	-	-	1	-	-	1
Unidentified		7	7	78	3	7	102
Total		**11**	**10**	**125**	**6**	**11**	**163**

Table b. Number of contexts, fragments, mandibles with teeth in situ *and measurable bones by phase from Waterside, Beverley.* ***Key****: No. meas = number of measurable fragments; No. mand = number of mandibles with teeth* in situ.

Phase	**No. contexts**	**No. meas**	**No. mand**	**Total fragments**
2	2	0	1	11
3	5	0	0	10
4	11	23	2	125
5	4	0	0	6
unphased	1	2	0	11