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An evaluation of biological remains from excavations of medieval deposits at North Beckside (site code NBS93) and Beckview Tilery (1827.1986 BLY), Beverley

by

John Carrott, Keith Dobney, Allan Hall, Deborah Jaques, Ian Manser and Harry Kenward

## Summary

A small collection of sediment samples (including two samples of medieval pit fills) and a small assemblage of hand-collected bone and shell from North Beckside were examined. The quality of preservation of organic remains in the pit fills showed that they generally offered good prospects for further analysis. Some peats exposed beneath three separate areas of the site indicated the presence of an extensive area of natural or semi-natural marsh or fen carr prior to occupation on the site, and there was good evidence for an episode of hemp processing (probably retting) in one of the areas.

The bone assem age was too small for detailed interpretation but included an intriguing murine bone worthy of closer identification and some concentrations of fish bones which should be examined further.

Some very small samples, together with hand-collected bone and shell from the Beckview Tilery site have been surveyed and are not thought worth further examination.

Authors' address:

Environmental Archaeology Unit University of York Heslington York YO1 5DD Prepared for:

Humberside Archaeology Unit Property Services Department Humberside County Council County Hall Beverley N. Humberside HU17 9BA

September 15, 1993

Telephone: (0904) 433843-51

Fax: (0904) 433850

# An evaluation of biological remains from excavations of medieval deposits at North Beckside (site code NBS93) and Beckview Tilery (1827.1986 BLY), Beverley

This report deals with samples of sediment and hand-collected bone and shell from two excavations in Beverley, in an area of medieval tile-making just to the north of Beverley Beck (a medieval cut linking the centre of the town with the Hull River). The Beckview Tilery site was dug in 1986 and only a small body of bioarchaeological material was recovered. More recent excavations further west in North Beckside have offered a better opportunity to study the archaeological stratigraphy in this area. The report deals first with the sediment samples from the Beckside and then the Beckview Tilery site, followed by a consioderation of the shell, and bone.

## I. Sediment samples

- (i) North Beckside
- (a) Methods

Two sets of samples from North Beckside were available for study. The first group were taken during excavation by Humberside Archaeology Unit from the open area excavations (Trench A) reported by Tibbles and Evans (1993), and consist mainly of pit fills with obvious waterlogged preservation of organic remains. The second series were obtained by AH and Dr A. Milles (during a visit to the site on 29.4.93) from Trenches B and C where peats were encountered at the base in at least one part of each trench where machining had extended deepest.

The nature of the sediment in all of the samples Beckside in the first group was described in the laboratory using a standard pro forma and 1 kg 'test' subsamples washed following methods of Kenward et al. (1980) and Kenward et al. (1986). For two samples selected by the excavator, 'flots' from paraffin flotation were examined in some detail for plant and insect macrofossils and the residues were checked for plant remains and other macroscopic components. For the remaining samples, a more cursory examination of flots (and in two cases 'washovers') and residues was undertaken to assess quality of preservation. The material collected by EAU staff had been described in some detail in the field. 'Test' subsamples of 1 kg were processed in the same way as for the other samples but only the flots were examined (rather briefly) to assess the content of plant and invertebrate remains and their quality of preservation.

(b) Results

Samples selected by excavator for closer examination

Context 423 (pit fill in pit 409; Phase I, pre-1300, contains C13th pottery)

Sample 450 (dark brown to black, fibrous, slightly sandy, compressed coarse herbaceous detritus with traces of wood (?wattle fragments) and 'straw' (perhaps bracken).

There was a huge flot rich in fibrous plant fragments ('straw'), which was not examined more closely for plant remains. There was a small group of insects, probably derived from organic waste produced by human occupation. The insect fauna appeared to have been greatly diluted by the abundant plant debris; preservation was good. The residue, which was large, was found on closer examination to consist in large part of cereal straw with nodes and culm fragments. There was also a moderate amount of bracken (Pteridium aquilinum) stem and pinnule fragments, and moderate numbers of meadow-sweet (Filipendula ulmaria) fruits, small grass (Gramineae) caryopses (including heath-grass, Danthonia procumbens) and the moss Calliergon cuspidatum. Other taxa also suggested that this deposit was largely litter of some kind, perhaps stable manure rich in straw with perhaps also some hay. Unfortunately the insect remains were so sparsely distributed in the well preserved plant material that a very large quantity of sediment would need to be processed to retrieve a useful assemblage.

Context 438 (primary pit fill of pit 437, Phase I, pre-1300, contains 13th-14th century)

Sample 442 (varicoloured: orange-brown to black to grey to dark brown to olive to buff, crumbly (working slightly plastic), very humic silt with traces of wood fragments and ?soot (rubs black).

The rather large flot gave moderate numbers of elderberry (Sambucus nigra) seeds and celery-leaved crowfoot (Ranunculus sceleratus) achenes with a modest assemblage of fairly or well preserved remains of weed and damp ground taxa. A large proportion of the flot was made up by fragments of immature insects. There were abundant aquatic and terrestrial beetles, probably enough for further work to produce useful information concerning the depositional environment. The residue consisted of a fairly small amount of very strongly decayed wood fragments greater than 4 mm, with some finer plant detritus. The most abundant identifiable plant macrofossils (scoring 2 on a four-point scale of abundance) were elderberry seeds, persicaria (Polygonum persicaria) nutlets and stinging nettle (Urtica dioica) achenes with a range of other taxa indicative of disturbed and perhaps also damp places. They were all typical of medieval occupation deposits and appear not to have formed as a result of deliberate disposal of any particular kind of organic waste.

Other sediment samples from Trench A (in phase and context order)

Phase I (pre-1300)

Context 423 (pit fill in pit 409)

Sample 426 (mid/dark brown, brittle, fibrous, working crumbly, very humic slightly clayey, slightly sandy silt with traces of stones 2-20 mm, twigs, and fruitstones)

The modest-sized flot was quite rich in moderately well preserved 'seeds', with some fine 'straw' debris and a small assemblage of weeds, including corncockle (Agrostemma githago) and weld (Reseda luteola). There were some moderately well preserved beetle fragments and a large fly puparium. The residue was rich in fine plant detritus.

Context 424 (layer below levelling dumps)

Sample 454 (very dark brown to black, brittle to crumbly, working plastic, slightly humic, silty clay, with traces of stones 2-20 mm, rootlets, wood fragments and small fragments of mammal bone)

A tiny flot consisted of mineral detritus with some herbaceous or woody fragments, a single charred?bread/club wheat (Triticum aestivo-compactum) grain, and a mint (Mentha) nutlet.

Context 438 (primary pit fill of pit 437)

Sample 471 (mid brown to mid grey-brown (with black patches in undisturbed matrix)), crumbly, layered, very humic slightly silty clay with herbaceous detritus and traces of twig fragments)

A large flot with moderately well-preserved insects, several fruits of hemlock (Conium maculatum), together with some wood/twig fragments and earthworm egg capsules; the residue was large and rich in fine herbaceous detritus, apparently very decayed straw and wood.

# Phase II (1300-1500)

Context 361 (pit fill)

Sample 362 (mid grey-brown, crumbly, working plastic, silty clay, with traces of stones 2-20 mm, small clasts of light grey clay, and abundant fish bone)

A small to modest-sized washover was obtained for this subsample, which was rich in very decayed rootlets, and also contained some stinging nettle (*Urtica dioica*) achenes and some other weeds, mostly rather poorly preserved.

# Phase III (1500-1700)

Context 340 (fill of garderobe)

Sample 348 (mid/dark grey-brown, crumbly, working plastic, silty clay with traces of stones 2-6 mm, rotten mortar/plaster and twig fragments)

A small flot with well-preserved beetle remains and *Daphnia* ephippia, a few seeds, mostly *Stellaria media*, a snail (probably a freshwater species) and traces of *Sphagnum* leaves.

Context 354 (fill of garderobe)

Sample 355 (mid brown (with black traces internally), brittle to fibrous, working plastic, slightly humic herbaceous detritus with traces of charcoal)

The flot was rich in fine 'straw' debris with some quite well preserved insects; the residue was rich in organic detritus including some possible purple loosestrife (*Lythrum salicaria*) seeds (indicative of water-marginal/fen habitats).

Context 383 (lower fill of garderobe)

Sample 458 (very heterogeneous: light/mid grey-brown plastic to soft, sticky, working plastic, slightly silty clay, with light grey sandy clay and black very humic clay, traces of stones 2-6 and 20-60 mm, brick/tile, charcoal, and wood fragments)

A modest flot rich in wheat/rye 'bran' (mostly < 1 mm) and insect fragments; preservation was excellent.

Context 416 (fill of rectangular slot)

Sample 443 (mid brown, crumbly clay with about 70% by volume fish bone)

There was quite a large washover from this subsample, which was rich in rootlets; most of the rest of it was made up by decayed fish (and perhaps some other) bone fragments.

Sample 457 (light/mid brown, brittle to crumbly, working plastic, clayey herbaceous detritus with traces of twigs

The modest flot consisted mostly of very fragmentary 'straw' debris and a few insect fragments.

# Other samples from Trench A

Two samples were taken from the spoil heap of blackish woody detritus peat excavated from a layer beneath the fill of a large C16th pit (context 466); they were given laboratory sample numbers 40011 and 40012.

Sample 40011 produced quite a large flot rich in beetles and herbaceous detritus, with alder (Alnus) fruits, several gipsywort (Lycopus europaeus) nutlets. There were some Daphnia ephippia and remains of aquatic and waterside insects. Terrestrial forms were rare and

included a single Aphodius dung beetle. BS residue of wood and twig fragments and herbaceous detritus only.

Sample 40012 gave a small flot with many hemp-agrimony (*Eupatorium cannabinum*) achenes and a trace of caddis larvae. The BS residue was of wood and twig fragments and herbaceous detritus.

It seems likely from this limited examination that this was a natural peat formed in a fen carr environment. Dating by radiocarbon assay would certainly be feasible, though since the material examined was taken from the spoil heap, the exact stratigraphic position would have to be inferred from the excavation record.

## Samples from Trenches B and C

The following notes were compiled by AH and AM during sampling; sample numbers were given in the laboratory:

## Trench B, Section I

Depth (m)	Sample(s)	Description
0.00-0.40		disturbed soil with abundant brick/tile, modern roots, stones (context 1001)
0.40-1.45	10021-2	brittle, dark grey-brown silt with abundant flecks of rotted limestone and brick/tile, occasional flecks of charcoal, oyster shell, and with mammal bone to 30 mm; some penetration by modern roots; much more disturbed and with larger stones (to cobble size) in upper 0.8 m (unit 4; context 1002)
1.45-1.97	10031-4	mottled olive-brown to dark brown humic silt; below approx 1.65 m, predominantly olive, rather soft; above this, predominantly brown (oxidising), and much more firm/consolidated (unit 3; context 1003)
1.97-2.10	10041-2	slightly reddish-brown, soft, silty herbaceous detritus with wood fragments (unit 2; context 1004)
2.10-base	10051	pale grey, soft, wet clay with abundant wood and other plant detritus (unit 1; context 1005)

Section Ia was approximately 1 m to the west of I. There appeared to be some kind of cut exposed in this corner of the trench but its nature (well, pit, ditch?) could not be determined. It was filled with a coarse rubbly deposit with some large fragments of pot, including feathered ware. The sequence was:

0.00-1.40 - as unit 4, above (context 2001 = 1002)

1.40-1.75		mid brown sandy silt with abundant very large (100-150 mm) of brick/tile, some fragments of waterlogged wood and ?charcoal (context 2002)
1.75-1.90	20031-2	mid brown/mid orange-brown to grey-brown, very sandy silt with brick/tile fragments and pot (unit 5; context 2003)
1.90-2.15	20041	crumbly humic silt with patchy/irregular mottling of light brown and black; merges laterally into unit 2 (context 1004) but with a distinct more or less vertical joint through which water was seeping
2.15-base	20051	unit 1, as above (2005 = 1005)

At 1.35-1.45 there was a lens of gritty sediment with much roundwood to about 20 mm diameter, perhaps all aligned with the long axis running into the section (deliberately laid brushwood? context 2006, sample 20061)

## Trench C, Section II

Water was flowing into this trench (which cut through one or more land drains) too fast to be removed by the pump and only limited examination of the sections was possible. Three samples (30011-3) were taken of a mid to dark brown, highly humified silty peat or peaty silt (which was darker and had an increasing content of ever more coarse woody detritus downwards; context 3001). The samples came from a depth of 0.85-1.10 m depth from the ground surface.

The result of examination of the paraffin flots and bulk-sieving residues (and 'squashes' carried out to test for parasite eggs) from subsamples of the larger of these samples was (in stratigraphic order from bottom to top of the lower parts of Sections I and Ia, followed by the rest of sections I and Ia and then II)):

#### Context 1005/2005

Sample 10051: a small flot with fine plant detritus; Eupatorium, Rubus idaeus, Lamium Section Lamiopsis and Sambucus nigra all present. BS residue mostly wood and twig fragments with a few small (<20 mm) stones.

Sample 20051: a small flot with several fragmentary *Eupatorium* achenes, and some ostracods. BS residue of a few fragments of wood and/or bark and one *Sambucus nigra* seed.

#### Context 1004

Sample 10042: a modest flot of herbaceous detritus and a few beetles but no obvious identifiable plant macrofossils. BS residue entirely of wood and bark fragments with several female cone axes of alder and a trace of oak (Quercus) buds.

Sample 10041: small flot with quite a few insect fragments and some plant detritus; ?Glyceria caryopses. BS residue of wood and twigs and herbaceous detritus only.

#### Context 1003

Sample 10034: a large flot, rich in plant detritus, many *Daphnia* ephippia and quite a few large and small beetle fragments; some fool's watercress (*Apium nodiflorum*) fruits. BS residue of wood fragments, brick/tile to 15 mm, coal, charcoal, roots and hemp (*Cannabis sativa*) achenes.

Sample 10033: a large flot rich in *Daphnia* ephippia and with some *Eupatorium* and some well preserved but sometimes fragmentary hemp achenes. BS residue of wood/twig fragments with some small brick/tile to 15 mm, coal to 10 mm, and more hemp achenes.

Sample 10032: a large flot rich in beetle fragments, and insect immatures (probably mainly flies) and with abundant *Daphnia* ephippia and several hemp achenes. The beetles and bugs were probably from a community tolerant of nutrient rich water. BS residue of wood and twig fragments with more hemp achenes.

Sample 10031: a modest flot with several hemp achenes, many *Daphnia* ephippia and a few willow (*Salix*) buds and fruits. BS residue included a large tile fragment, the remainder being wood/twig fragments and more hemp achenes.

#### Context 1002

Sample 10022: a small flot but quite rich in insect fragments; Apium nodiflorum present, together with several watercress (Rorippa nasturtium-aquaticum) seeds and quite a large number of weed seeds, especially purple deadnettles (Lamium Section Lamiopsis). BS residue with brick/tile to 40 mm, twig fragments, stones (including chalk), coal, an iron object (bracket?) and cinders.

Sample 10021: a small flot with traces of Eupatorium and Apium nodiflorum but with a component of weeds associated with occupation/disturbance-elderberry (Sambucus nigra), greater celandine (Chelidonium majus) and Lamium Section Lamiopsis. BS residue of brick/tile to 40 mm, cockle shell, flint, stones to 50 mm, burnt and unburnt coal.

#### Context 2004

Sample 20041: a tiny flot with only elderberry seeds noted. BS residue with two large or

very large fictile fragments (?tilery waste), brick/tile to 30 mm, coal and fish bone.

#### Context 2003

Sample 20032: a small well preserved plant macrofossil assemblage which included weeds and damp ground indicators but few or no insect remains. A single whipworm (*Trichuris*) egg was noted from a squash. BS residue of fictile (tilery waste?), bone, coal and brick/tile fragments.

Sample 20032: a small flot with few identifiable plant remains and a few insect fragments. BS residue of fictile, bone coal and brick/tile fragments.

Sample 20031: a small flot with few identifiable plant remains and only a few insect fragments. BS residue with several large fragments of fictile (including a jug handle and ?tilery waste), brick/tile to 20 mm, coal, charcoal, cinders.

#### Context 2006

Sample 20061: a modest-sized flot rich in fine herbaceous detritus and purple deadnettle nutlets, with a trace of bugle, *Ajuga reptans*. BS residue included a jug handle fragment, some brick/tile fragments to 30 mm, wood, small stones, coal, an iron ?nail and modest amounts of charcoal.

#### Context 3001

Sample 30011: a small flot with small numbers of beetle fragments. There were remains of several aquatic taxa and a few terrestrial forms. The latter might all have lived at the margins of water, apart from single individuals of two species of *Aphodius* dung beetles. The flot also contained several fragments of *Iris pseudacorus*, sedge nutlets and buttercup. BS residue included a few fragments of brick/tile, coal, wood, and small stones.

Sample 30012: a large flot mostly of fine herbaceous detritus; the BS residue of wood and herbaceous detritus.

Sample 30013: a modest flot with a few beetle fragments and some herbaceous detritus; taxa included *Viola* sp., *Rubus idaeus*, *Stellaria ?neglecta* and *?Mercurialis perennis*. Sample too small to be bulk-sieved.

Comments: the lower deposits (units 1 and 2) of sections I and Ia appear to be natural clays and wood peats, likely to have formed in a marsh or fen carr. Increasing evidence of disturbance is seen through the sequence as weeds replace plants of natural habitats. At the period represented by context 1003, hemp retting appears to have been carried out (in what was evidently still a body of standing water).

Context 3001 is apparently a natural peat formed in an area with woodland close by for at least part of the time. There is abundant material suitable for <sup>14</sup>C dating, though it may not be possible to determine the exact stratigraphic position of the samples.

## (ii) Beckview Tilery

A total of 16 samples of about 100-200 g were available. Many were labelled 'ash' and only one (sample 199 from context 200) appeared to have an appreciable organic content. In view of the small size of these samples it is not though worth pursuing the analysis of them unless important archaeological questions are posed.

#### II. Hand-collected bone

## (i) North Beckside

The excavations at North Beckside produced three standard-sized boxes of animal bones. On the basis of the archaeological information provided, the assemblage can be divided into four main chronological groups: phase I (pre-1300), phase II (1300-1500), phase III (1500-1700) and phase IV (1700+).

The entire assemblage (excluding fish fragments) consisted of a total of 910 fragments weighing 14.675 kg. Of this total, only 471 fragments (10.015 kg) could be identified to species.

Most of the animal bone recovered was from deposits of phase I (a total of 458 fragments from 26 contexts, 212 of which could be identified to species). Bone from phase II consisted of 278 fragments from 24 contexts, that from phase III 143 fragments from 16 contexts, and from phase IV a mere 2 contexts producing 31 fragments.

All material had been hand collected and as a result subject to serious bias in favour of larger species and elements. However, two contexts (416 and 361), visibly rich in fish bones during excavation, were sampled for subsequent wet sieving.

Preservation overall was fair, although some contexts contained bones that were classified as well preserved and a few had bone that was poor to very poor. The colour of the bones was also variable, ranging from dark brown to white, beige, fawn, and ginger. This variation occurred within contexts and does indicate the possibility of mixed assemblages. Very few fragments showed evidence of burning and a few fragments from phase II (contexts 335 and 336) had concreted material of some kind on their surface. Dog gnawing and fresh breakage was observed from all phases but was limited in extent. Evidence of butchery was noted, again in all phases, mostly on cow-sized fragments. Worthy of note, however, are three horse bones: a scapula (phase I context 419), proximal femur (phase II context 246) and a 1st phalanx (phase 3 context 302) all of which had been chopped.

The bulk of the identifiable bones derived, not surprisingly, from domestic mammals and included cattle (109 fragments), sheep/goat (109 fragments), pig (33) and horse (11). Bird

remains were also present in relatively high numbers (121 fragments) consisting mostly of domestic fowl (61 fragments) and goose (10 fragments). Over half of all the chicken remains were recovered from two contexts (383 and 354) from phase III.

Canid remains were rather numerous, with a total of 75 fragments recovered from the whole assemblage. Amost all (73 fragments) derived from two contexts (371 and 375) from phase II, however, and probably represent the same small individual. In addition two cat fragments were also recovered from phase 1 and phase III.

Of considerable interest was the recovery of a complete large murine femur from context 208. Although certainly rat, it is larger than any black or brown rat specimens in both the EAU and AML reference collections. Further comparative work is necessary in order to confirm its identification. Unfortunately no samples for bulk sieving were taken from the context and it is therefore uncertain whether more of the individual was present.

From the whole assemblage a total of 107 measurable fragments were recovered (36 cattle, 24 sheep/goat, 20 pig and 27 domestic fowl. Twenty-two mandibles with teeth were also recovered (6 cattle, 8, sheep/goat and 6 pig) and only 15 isolated teeth.

Two contexts contained large numbers of fish bones and 1 kg samples of raw sediment of each were taken. Species represented included approximately 80% large gadid vertebrae and some skull fragments, including otoliths, with the remainder consisting of the remains of mackerel (Scomber scombrus), salmon (Salmo salar), plaice (Pleuronectes platessa) and herring (Clupea harengus). All appear to have come from large fish and since raw sediment samples were taken in this instance, there is no recovery bias. There is evidence of filleting and excavation damage and it would appear that these are primary dumps of commercial filleting waste.

#### Worked bone

Three fragments of worked bone were recovered from the assemblage. These were a bone point (proximal horse metatarsal context 271), a possible skate fragment (proximal and shaft fragment of a horse metacarpal context 403) and a worn but unidentifiable fragment (context 200).

# (ii) Beckview Tilery

A very small assemblage of animal bones was recovered from the excavation which, on further inspection, proved to be of no interpretative value.

#### III. Shell

Hand-collected shell from both of these sites was available. For Beckside, there was a corpus of material from 50 contexts, most assemblages consisting of less than 10 oyster (Ostrea edulis) valves. Some samples also contained a few mussel (Mytilus edulis) or cockle

(Cerasto derma edulis) shell or shell fragments, and there were occasional garden snails (Helix aspersa) and one or two unidentified taxa.

The material from the Beckview Tilery site consisted of twelve samples, all of very small numbers of fragments, mostly oyster.

The small and diffuse nature of the assemblages means that detailed analysis is inappropriate. It may be useful to compile species lists for the two collections (option 1) or record the material more comprehensively (option 2).

#### IV. Timber

Two timbers from the machine-dug northern end of Trench C were submitted for identification: 395 and 396; both were oak (Quercus sp.).

### V. Recommendations

## Sediment samples

For a selection of the GBA samples available—perhaps 10—representing the archaeologically and biologically most important deposits, a proper record should be made of their content of plant and animal remains.

Most of the North Beckside animal bone assemblage is limited in its potential research value by the lack of quantitative recovery, the small size of the assemblage and the broad dating of phases. These factors, combined with the limited numbers of fragments providing biometrical and age-at-death data, renders the assemblage of relatively low zooarchaeological priority.

However the presence of a possibly exotic species of rat (as yet unidentified), or a very large brown rat dating from the late 16th century, is important and as such worth some additional work utilizing further reference collections and colleagues. Also the two rich fish bone contexts are worth recording in detail since they can provide some additional and important information on the exploitation of fish from medieval Beverley, data from which can be directly compared with those from Eastgate (Scott 1992).

# VI. Costings for recommended future work

Sediment samples		
(Beckside only) process, record, report	3.5 days (Tech.	(282.52)
	5 days (AH)	£,825.90
		£825.90
	1 day (AM)	£128.34

Shell		
Option 1 (species lists) record and report	1 day (AM)	£128.34
Option 2 (full analysis) do.	2 days (AM)	£256.68
Bone		
(i) identification and report on ambiguous murine femur	5 days (KD)	£697.20
(ii) sorting, identification, recording and quantification of fish bone from contexts 361 and 416	2 days (RA)	£235.02
report	2 days (RA)	£235.02
Total cost (Shell: Option 1) (Shell: Option 2)		£3358.24 £3486.58

#### VI. References

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