

*Reports from the Environmental Archaeology Unit, York 2001/39, 6 pp.*

**Evaluation of biological remains from excavations at Waterside Road,  
Beverley, East Riding of Yorkshire (site code: WAT2001)**

by

Allan Hall, Harry Kenward, Deborah Jaques, Stephen Rowland and John Carrott

**Summary**

*Six sediment samples from deposits of Romano-British to medieval date, revealed by excavations at Waterside Road, Beverley, East Riding of Yorkshire, were submitted for an evaluation of their bioarchaeological potential.*

*With the exception of the samples from the ditch recut fills, which were rich in wood fragments, plant and invertebrate remains were quite scarce. The wood-rich deposits, Contexts 1082 and 1084, however, may be worthy of further analysis if they can be more securely dated. These deposits may provide some insight into local environmental conditions and human activity.*

*A small assemblage of vertebrate remains was recovered from a floor deposit, Context 1041. Most fragments were small and unidentifiable, but a number of fish were identified, including herring, eel, flatfish and stickleback. Similar assemblages, but on a far larger scale, have been recovered from medieval floor deposits in Hull and York. Whilst the current assemblage from this site does not warrant further analysis, there is clearly potential for the recovery of a larger, and more useful, fish assemblage from deposits in this area.*

**KEYWORDS:** WATERSIDE ROAD; BEVERLEY; EAST RIDING OF YORKSHIRE; EVALUATION; ROMANO-BRITISH TO MEDIEVAL; PLANT REMAINS; INVERTEBRATES; INSECTS; VERTEBRATE REMAINS; FISH BONE

Authors' address:

Palaeoecology Research Services  
Environmental Archaeology Unit  
Department of Biology  
P. O. Box 373  
University of York  
York YO10 5YW

Prepared for:

Humber Field Archaeology  
The Old School  
Northumberland Avenue  
Hull HU2 0LN

Telephone: (01904) 433846/434475/434487  
Fax: (01904) 433850

17 July 2001

## Evaluation of biological remains from excavations at Waterside Road, Beverley, East Riding of Yorkshire (site code: WAT2001)

### Introduction

An archaeological evaluation excavation was carried out by Humber Field Archaeology at Waterside Road, Beverley, East Riding of Yorkshire (NGR TA 0487 3929), between 21 and 31 May 2001.

Six sediment samples ('GBA'/'BS' *sensu* Dobney *et al.* 1992) were recovered from the deposits. Preliminary evidence gave dates ranging from Romano-British through to medieval for the deposits.

All of the material was submitted to the EAU for an evaluation of its bioarchaeological potential.

### Methods

#### *Sediment samples*

The sediment samples were inspected in the laboratory and their lithologies were recorded, using a standard *pro forma*, prior to processing, following the procedures of Kenward *et al.* (1980; 1986), for recovery of plant and invertebrate macrofossils. The washovers and residues were examined for plant remains. The washovers were also examined for invertebrate remains, and the residues were examined for other biological and artefactual remains.

### Results

#### *Sediment samples*

The results are presented in context number order. Archaeological information, provided by the excavator, is given in square brackets.

**Context 1041** [floor accumulation deposit. Medieval]  
Sample 6/T (1 kg sieved to 300 microns with paraffin flotation and washover)

Just moist, light brown to mid to dark grey-brown (in shades of brown and grey-brown), brittle to crumbly (working soft), slightly sandy clay silt. Charcoal, fragments of bone, ?mortar/plaster, and some modern contaminant mould were present in the sample.

There was a moderate-sized residue of about 75 cm<sup>3</sup> of sand and angular gravel (to 15 mm in maximum dimension), with traces of pottery and bone (both to 30 mm); the small washover of a few cm<sup>3</sup> in volume comprised ?ancient roots, charcoal (to 5 mm) and a single charred wheat/barley (*Triticum/Hordeum*) grain. The small flot contained some more ?ancient root fragments and a few stonewort (Characeae) oogonia; the latter—resting bodies of a group of aquatic green algae—indicate aquatic deposition or the incorporation of waterlain sediment into this deposit.

A small assemblage of bone was recovered from this sample. Most fragments were well preserved and mainly <15 mm in dimension. Of the 48 (2.9 g) fragments recorded sixteen were identified as fish and included the remains of eel (*Anguilla anguilla* (L.)), herring (*Clupea harengus* L.), flatfish, possibly flounder (cf. *Platichthys flesus* (L.)), and stickleback (Gasterosteidae). A single small mammal pelvis was also present. The remaining 31 fragments were unidentified.

**Context 1059** [dump of ash/burnt material around primary hearth. Medieval]

Sample 5/T (0.55 kg sieved to 300 microns with washover)

Dry, varicoloured (from orange to black through shades of grey-brown), brittle and layered to crumbly (working soft), very ashy, burnt, slightly sandy clay silt. White flecks and a little ?mortar/plaster were present in the sample.

The moderate-sized residue of about 40 cm<sup>3</sup> was of material which may have included brick/tile, pot and baked clay/daub, though it was difficult to determine which from the small fragments (the largest was 10 mm in maximum dimension, but see account for Sample 7 from this context). There was also a trace of bone, including fish bone (to 5 mm) and some sand

and gravel. The small washover of a few cm<sup>3</sup> in volume consisted of ?ancient root, charred material (mainly charcoal, to 10 mm, but also burnt ?peat, to 5 mm) and more ?baked clay.

This sample produced 10 (0.3g) small fragments of bone, which, with the exception of a vole tooth and several fish spines, were unidentified.

Sample 7/T (2 kg sieved to 300 microns with washover)

Dry, varicoloured (orange-brown to mid to dark grey-brown to black), indurated and brittle to crumbly, burnt, slightly sandy clay silt with some stones (2 to 6 mm) present.

The large residue of about 250 cm<sup>3</sup> was rich in baked clay/daub (to 40 mm), with a little sand and gravel; the moderately large washover of about 40 cm<sup>3</sup> was of very decayed root material (?ancient) with a trace of coal, charcoal, and ?burnt peat (all to 5 mm), and a single elder (*Sambucus nigra* L.) seed.

Six bone fragments (0.1 g) were recovered from this sample. An amphibian humerus and an eel vertebra were identified, whilst 2 unidentified fish spines were also recorded.

**Context 1082** [frequent organic lenses within silts of fill of re-cut early ditch. Romano-British pottery]  
Sample 1/T (2 kg sieved to 300 microns with paraffin flotation and washover)

Moist, locally layered, mixture of light yellow-brown soft, sticky (working more or less plastic) silty clay, mid to dark grey soft clay silt, and coarse ('woody') detritus with a little sand.

A moderate-sized residue of about 150 cm<sup>3</sup> was obtained, of which about 70% by volume was clean quartz sand and gravel, the rest rather coarse woody detritus. Amongst the wood fragments (which were up to 20 mm in maximum dimension), there were some 'chips' and a little bark, together with hazel (*Corylus avellana* L.) nutshell and modest but component of woodland or scrub taxa with a few aquatic plants, the whole suggesting deposition in a ditch close to a hedge or wood, into which a quantity of woodworking debris was cast.

Invertebrate remains were not very abundant, and variably preserved (E 1.5-3.0, mode 2.0 weak; F 1.5-5.0, mode 2.5, weak). They indicated aquatic deposition, although aquatic insects and Cladocera were present only in limited numbers. Much of the fauna may have exploited waterside vegetation and

litter. Fully terrestrial forms (as opposed to species which may have lived in water margins) were not common, but there were hints of decomposers typical of open-textured foul material such as stable manure. A larger subsample would probably permit a clearer reconstruction of depositional conditions and the wider surroundings.

**Context 1084** [frequent wood detritus and organic material within fill of re-cut of early ditch. Romano-British pottery]  
Sample 2/T (2 kg sieved to 300 microns with paraffin flotation and washover)

Sediment description as for Sample 1 (Context 1082) but more 'woody' (and including some wood 'chips') and with some inclusions of light grey clay.

There was a large residue of about 600 cm<sup>3</sup>, mostly 'chunks' of wood (up to 70 mm), probably largely originating in woodworking—much of it was rather flaky and in the medium fractions rather pale and well preserved; it included some 'chips'. There was in addition about 100 cm<sup>3</sup> of clean quartz sand and some gravel and a single potsherd (to 55 mm). The concentration of identifiable plant macrofossils was low (given the abundance of wood debris) but preservation was mostly quite good. The taxa present included a small range of cornfield and waste ground weeds, some fen/marsh plants, and woodland/scrub/hedgerow plants. Much the same comment can be made about this deposit as for Context 1082.

Invertebrate remains were not common, but fairly well preserved (E 1.5-3.0, mode 2.0 weak; F 1.5-4.0, mode 2.5, weak). A large proportion of the fragments noted came from a single individual of the large water beetle *Dytiscus ?dimidiatus* Bergstraesser. There were a few other aquatics, but terrestrial forms predominated. The most abundant species ('several') was *Platystethus arenarius* (Fourcroy), associated with foul matter, especially dung. A few taxa typical of occupation deposits were noted. It is possible, but not certain, that a large subsample might produce interpretable quantities of insect remains.

**Context 1093** [ditch fill (earliest archaeological feature). Mineralised deposit—?bog iron]  
Sample 3/SPT (visual examination and description only)

The sample consisted of large (to 150 mm) lumps of dark brown to slightly orange brown iron-rich concreted material, which on closer inspection seemed to be mainly angular quartz sand and amorphous iron oxides in a matrix of slightly calcareous finer mineral sediment. It seems unlikely that such a deposit with

such a high mineral content would form in a peat bog, so it is perhaps some kind of 'pan' formed in a sandy subsoil. For a more informed opinion, it should be examined by a competent geoarchaeologist.

## Discussion and statement of potential

Except in the samples from the ditch recut fills rich in wood fragments, plant remains were sparse, and invertebrates barely present, in these deposits and there is a low potential for archaeobotanical analysis. By contrast, the wood-rich deposits gave moderate-sized groups of plant and invertebrate remains. They may be worthy of further analysis if they can be dated securely: they would probably provide some insight into local environmental conditions and human activity.

The number of fish bones recovered from Sample 6/T (Context 1041) was small, but they demonstrate the potential for the survival of these remains within certain deposits. Interesting assemblages of fish have recently been recovered from medieval and early post-medieval floor deposits from several sites in Hull (Hall *et al.* 2000; Carrott *et al.* 2001) and York (Jaques *et al.* 2001). The investigation of fish assemblages such as these advances our understanding of the exploitation of past fish stocks and the supply of fish between different types of settlements, an aspect of zooarchaeology which, until relatively recently has been somewhat neglected. This should be borne in mind if further excavations are undertaken in this area.

## Recommendations

Providing dating is reasonably secure, further analysis should be carried out on the wood-rich deposits, Contexts 1082 and 1084, preferably with additional material from the processing of larger samples.

The current assemblage of vertebrate remains does not warrant further analysis.

Any subsequent excavation should be accompanied by sampling and bioarchaeological assessment of any well-stratified and -dated deposits thought likely to contain plant and invertebrate remains.

## Retention and disposal

The samples should be retained for the present and the sampling of any further material threatened with destruction through development should be considered carefully.

## 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.

## Acknowledgements

The authors are grateful to Trevor Brigham and Sophie Tibbles of Humber Field Archaeology for providing the material and the archaeological information, and to English Heritage for allowing AH and HK to contribute to this report.

## References

- Carrott, J., Hall, A., Jaques, D., Johnstone, C., Kenward, H. and Rowland, S. (2001). Technical report: Plant and animal remains from excavations in Blanket Row, Kingston-upon-Hull (sitecodes BWH97-00). *Reports from the Environmental Archaeology Unit, York* 2001/12, 127 pp.
- Dobney, K., Hall, A. R., Kenward, H. K. and Milles, A. (1992). A working classification of sample types for environmental archaeology. *Circaea, the Journal of the Association for Environmental Archaeology* 9 (for 1991), 24-6.
- Hall, A., Carrott, J., Jaques, D., Johnstone, C., Kenward, H., Large, F. and Usai, R. (2000). Technical report: Studies on biological remains and

sediments from periods 1 and 2 at the Magistrates' Courts site, Kingston-upon-Hull (site codes HMC94 and MCH99). Part 1: Text. *Reports from the Environmental Archaeology Unit, York 2000/25*, 78 pp.

Jaques, D., Hall, A., Kenward, H., Rowland, S. and Carrott, J. (2001). Assessment of biological remains from excavations at 41-9 Walmgate, York (sitecode: 1999.941). *Reports from the Environmental Archaeology Unit, York 2001/26*, 17 pp.

Kenward, H. K., Hall, A. R. and Jones, A. K. G. (1980). A tested set of techniques for the extraction of plant and animal macrofossils from waterlogged archaeological deposits. *Science and Archaeology* **22**, 3-15.

Kenward, H. K., Engleman, C., Robertson, A. and Large, F. (1986). Rapid scanning of urban archaeological deposits for insect remains. *Circaea* **3**, 163-172.