

Palaeoecology Research Services

**Evaluation of biological remains from further excavations at Site R<sub>3</sub>, Island Wharf, Hull Marina, Kingston upon Hull (site code: HUM2002)**

by

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*PRS 2003/23*

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### **Summary**

*Two sediment samples and one box of hand-collected bone, recovered from further excavations (Trenches 3 and 4) of deposits of late post-medieval to early modern date and some ?natural estuarine/alluvial deposits, at Site R<sub>3</sub>, Island Wharf, Hull Marina, Kingston upon Hull, were submitted to PRS for an evaluation of their bioarchaeological potential.*

*Interpretatively useful assemblages of plant and invertebrate remains were recovered from the samples. Amongst the identifiable plant remains from Context 4010 was a small food component and numerous spinach fruits. The latter are in contradiction to the other seeds of edible plants in that they are unlikely to have been consumed as food (and therefore perhaps originated in imported seed?), they are an unusual—perhaps the first—example of the plant in the British archaeological record. The plant assemblage from Context 4030 showed a mixture of taxa representing hay, straw and other kinds of litter is consistent with an origin in something like stable manure. In this case, there was certainly a peatland component as well as a little peat per se. A small group of well-preserved insect remains was picked from the washover including water beetles, one of the two species of Cercyon which colonise stranded seaweed and other salt-impregnated litter, a dung beetle and several clover weevils. A few snails were also noted, two of which were cautiously identified as *Potamopyrgus jenkinsi* (Smith) which, if confirmed, would indicate a rather later date for this deposit (mid 19<sup>th</sup> century onwards) than originally thought.*

*The site produced one box of hand-collected bone (a total of 107 fragments, of which 48 were identified to species or species group) representing 18 deposits (from Trenches 3 and 4) and five phases of activity from the 17<sup>th</sup> century through to the 19<sup>th</sup> century. Species identified within the assemblage, included the remains of the common domesticates (cattle, caprovid and pig) together with horse, cat, dog, hare, rabbit, duck and goose bones. A small assemblage of bones, including some fish bone, was also recovered from the sample from Context 4010.*

*Plant remains were mostly well preserved in these deposits and sufficiently abundant and interpretatively significant for more work to be carried out on the material and for further material from related contexts to be considered for analysis. The invertebrate material from Context 4030, from a larger subsample subjected to appropriate extraction, would provide an opportunity to explore further the origin of the clover weevils found in Hull and possibly the date of the deposit. The vertebrate remains recovered from these excavations were too few to be of much interpretative value, although it is more than likely that most of the fragments represented a mix of refuse, including domestic and butchery waste. The poor preservation of the bones from Trench 3 suggests that much of this material may have been re-deposited or reworked. Further investigation of the vertebrate remains is not warranted because of the small size of this assemblage, the poor preservation and the likelihood of the inclusion of re-deposited material.*

**KEYWORDS:** SITE R<sub>3</sub>; ISLAND WHARF; HULL MARINA; KINGSTON UPON HULL; FURTHER EVALUATION; ?NATURAL ESTUARINE/ALLUVIAL DEPOSITS; LATE POST-MEDIEVAL; EARLY MODERN; 17<sup>TH</sup> TO 19<sup>TH</sup> CENTURY; PLANT REMAINS; INVERTEBRATE REMAINS; VERTEBRATE REMAINS

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25 March 2003

## Evaluation of biological remains from further excavations at Site R<sub>3</sub>, Island Wharf, Hull Marina, Kingston upon Hull (site code: HUM2002)

### Introduction

A further archaeological evaluation excavation was carried out by Humber Field Archaeology at Site R<sub>3</sub>, Island Wharf, Hull Marina, Kingston upon Hull (centred on NGR TA 0965 2807), between mid November and mid December 2002.

Two sediment samples ('GBA'/'BS' *sensu* Dobney *et al.* 1992) and one box of hand-collected bone, were recovered from the deposits revealed by the excavation of Trenches 3 and 4. All of the material was submitted to PRS for an evaluation of its bioarchaeological potential.

Provisional stratigraphic and ceramic evidence suggested the following archaeological phases:

Phase 1: 17<sup>th</sup> century or earlier

Phase 2: mid 17<sup>th</sup> century

Phase 3: late 17<sup>th</sup>-18<sup>th</sup> century

Phase 4: early to mid 19<sup>th</sup> century

Phase 5: mid 19<sup>th</sup> century onwards

### Methods

#### *Sediment samples*

The sediment samples were inspected in the laboratory. Both were selected for evaluation and their lithologies 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 resulting from processing were examined for plant and invertebrate macrofossils. The residues were examined for larger plant macrofossils and other biological and artefactual remains.

Recovered artefacts were returned to the excavator.

#### *Hand-collected vertebrate remains*

For the hand-collected vertebrate remains that were recorded, data were entered directly into a series of tables using a purpose-built input system and *Paradox* software. Records were made concerning the state of preservation, colour of the fragments, and the appearance of broken surfaces ('angularity'). Other information, such as fragment size, dog gnawing, burning, butchery and fresh breaks, was noted, where applicable.

Fragments were identified to species or species group using the PRS modern comparative reference collection. The bones which could not be identified to species were described as the 'unidentified' fraction. Within this fraction fragments were grouped into a number of categories: large mammal (assumed to be cattle, horse or large cervid), medium-sized mammal (assumed to be caprovid, pig or small cervid), unidentified bird and totally unidentifiable.

### Results

#### *Sediment samples*

The results are presented in context number order. Archaeological information, provided by the excavator, is given in square brackets. A brief summary of the processing method and an estimate of the remaining volume of unprocessed sediment follows (in round brackets) after the sample numbers.

**Context 4010** [Phase 4: possible levelling layer overlying 18<sup>th</sup> century building but very similar to the deposits making up the building floor surfaces]

Sample 12/T (2 kg sieved to 300 microns with washover; approximately 4 litres of unprocessed sediment remain)

Just moist, mid to dark grey-brown, brittle to crumbly (working soft), slightly sandy clay silt. Small stones (2 to 6 mm), fragments of brick/tile, pot, coal, glass, bone, and marine shell (including cockle, *Cerastoderma edule* L.) were present in the sample.

There was a small washover of about 50 cm<sup>3</sup> of uncharred organic debris, though the coarsest material was cinder and coal (to 15 mm) with some slender wiry roots which may have been of recent origin. Cinders and coal made up much of rest, too, though there were modest numbers of well-preserved and unusual seeds and fruits and other structures such as leaf fragments and unidentified bud-scales. Some material was rather more eroded and may have originated from a different source. Amongst the identifiable remains was a small food component—rare seeds of fig (*Ficus carica* L.), raspberry (*Rubus idaeus* L.) and blackberry (*R. fruticosus* agg.) but most numerous were the highly characteristic fruits of spinach, *Spinacia oleracea* L., all (except perhaps one) of the ‘prickly-seeded’ kind. There were also some unidentifiable umbellifer fruits some of which may have been of edible kinds and a single seed which may have come from some asiatic spice but which could not be identified within project constraints. Other remains were restricted to a few weed or wetland taxa of no great significance. Though the spinach fruits are in contradiction to the other seeds of edible plants in that they are unlikely to have been consumed as food (and therefore perhaps originated in imported seed?), they are an unusual—perhaps the first—example of the plant in the British archaeological record and the assemblage as a whole is sufficiently unusual that, even though the material is of rather recent origin, a further subsample should be examined and a proper listing of the plant material made. There were a few fly puparia, an earwig and a mite, but no beetle remains were noted (but the subsample had not been submitted to paraffin flotation so any small remains may well have been overlooked).

Twenty fragments of mostly well preserved bone were recovered from this sample. Most fragments were tiny (less than 10 mm in any dimension) and four were burnt. The few identifiable fragments included a stickleback (*Gasterosteidae*) spine and a tarsometatarsus fragment of a small sparrow-sized bird. Several unidentified fish finrays and a scale were also noted. The remainder of the small residue (dry weight 205 g) was mostly of coal, cinder and sand, with some stones (to 20 mm). A few small fragments of brick/tile (to 10 mm), one piece of clay pipe stem, a pot sherd, a few small pieces of glass, some marine shell fragments (including one almost complete cockle valve), and a single unidentified land snail were also recovered.

**Context 4030** [Phase1: upper 0.20 m of estuarine/alluvial silt containing ?decayed organic material]

Sample 13/T (3 kg sieved to 300 microns with washover; approximately 3 litres of unprocessed sediment remain)

Moist, mid brown to mid grey (and black internally, with a slight sulphide smell when broken open), brittle (working soft and slightly sticky), slightly clay silt. There were no obvious inclusions in the sample.

This subsample yielded a small washover of about 40 cm<sup>3</sup> of organic debris with mostly good ‘waterlogged’ preservation and some black sulphide staining. There was a rather low concentration of identifiable plant remains within a matrix of herbaceous detritus, which also included some animal hairs. The mixture of taxa representing hay, straw and other kinds of litter is consistent with an origin in something like stable manure. In this case, there was certainly a peatland component (including moderate numbers of *Sphagnum imbricatum* Hornsch. ex Russ. leaves and shoot tips, and some sweet gale (bog myrtle, *Myrica gale* L.) leaf fragments as well as a little peat *per se*). A small group of well-preserved insect remains was picked from the washover (paraffin flotation was not carried out); they included water beetles, one of the two species of *Cercyon* which colonise stranded seaweed and other salt-impregnated litter, a dung beetle and several clover weevils (*Sitona* sp.). The last of these have been unexpectedly abundant in some other deposits in Hull, notably at the Magistrates’ Courts site (Hall *et al.* 2000a, b) and at Blanket Row (Carrott *et al.* 2001), both quite close to the present site but in rather earlier contexts. The origin of these *Sitona* remains has been discussed in these two reports. In the present case, importation with stable manure seems possible, the weevils having originated in hay, or leguminous crops (such as the haulms of beans, vetches or other plants or the seeds of beans used for fodder). A few hydrobiid snails were also noted, two of which were cautiously identified as *Potamopyrgus jenkinsi* (Smith) a species of fresh and brackish (salinity <16%) water first recorded in this country in the mid-19<sup>th</sup> century.

Deposition seems likely to have taken place in a brackish-water environment (not surprising, in view of the location of the site!). There were some unusual fruit or seed fragments with thin, transparent, colourless but characteristic walls, which could not be identified but which might be diagnostic for interpretation. If the identification of *P. jenkinsi* can be confirmed then this would indicate a rather later date for this deposit or, at least, certain components of it.

The tiny residue (dry weight 16 g) was a single conglomerate of cinder, stone and concreted sediment (to 35 mm), with two smaller cinder fragments (to 10 mm).

### *Hand-collected vertebrate remains*

Further excavations at the Hull Marina site produced one box of hand-collected bone representing 18 deposits from Trenches 3 and 4. Contexts were assigned to one of five phases of activity from the 17<sup>th</sup> century through to the 19<sup>th</sup> century. The recovered assemblage amounted to 107 fragments, of which 48 were identified to species or species group (Table 1).

Preservation of the bone was quite variable. Much of the material from Trench 3, particularly from Contexts 3003, 3004 and 3005, was extremely poorly preserved, with flaking and eroded surfaces. Material from this trench tended to be fawn in colour, whilst that from Trench 4 was mainly dark brown. The latter trench produced bone that was, on the whole, fairly well preserved. Dog and rodent gnawing were observed, whilst evidence of butchery, mostly in the form of chop and saw marks, was noted throughout, but was especially apparent on material from Context 4010.

Species identified within the assemblage, included the remains of the common domesticates—cattle, caprovid and pig. Context 3018 (Phase 1) produced a single canid mandible of a size consistent with a fox or small dog. Additionally, cat and hare (*Lepus* sp.) bones were recovered from Phase 3 deposits (Contexts 4029 and 4048 respectively), with horse, dog and rabbit (*Oryctolagus cuniculus* (L.)) remains identified from Phase 4. Fragments identified as dog from Phase 4 came from two different deposits (Contexts 3004 and 3005) but probably represented the same large individual. Birds were represented by single fragments of duck (*Anas* spp.) and goose (*Anser* sp.) recovered from Context 4029, a possible floor.

Few measurable fragments of use for providing biometrical data were recovered and only a single mandible with teeth *in situ* was noted.

## **Discussion and statement of potential**

### *Sediment samples*

Plant remains were mostly well preserved in these deposits and sufficiently abundant and interpretatively significant for more work to be carried out on the material and for further material from related contexts to be

considered for analysis. The insect material from Context 4030, from a larger subsample subjected to appropriate extraction, would provide an opportunity to explore further the origin of the clover weevils found in Hull. Further snails may also be recovered from Context 4030 which might allow more definite identification and, in turn, provide information regarding the earliest possible date for this deposit.

### *Hand-collected vertebrate remains*

The vertebrate remains recovered from these excavations were too few to be of much interpretative value, although it is more than likely that most of the fragments represented a mix of refuse, including domestic and butchery waste. The poor preservation of the bones from Trench 3 suggests that much of this material may have been re-deposited or reworked. Although of considerably better preservation, the fragments from Trench 4 showed evidence of dog gnawing, which in some cases was quite extensive (Context 4006). Overall, few fragments of use for providing age-at-death and biometrical data were recovered.

## **Recommendations**

The existing washovers from the sediment samples should be subjected to paraffin flotation to separate the insect from the plant remains. The remaining sediment from each sample should be processed, again employing paraffin flotation, and the plant and invertebrate remains recovered fully analysed in conjunction with full recording of those from this evaluation.

In spite of the paucity of data from animal bone assemblages of late post-medieval and early modern date, further investigation of the vertebrate remains is not warranted because of the small size of this assemblage, the poor

preservation and the likelihood of the inclusion of re-deposited material.

## Retention and disposal

The current material should be retained for the present.

## Archive

All material is currently stored by Palaeoecology Research Services (Unit 8, Dabble Duck Industrial Estate, Shildon, County Durham), 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. AH and HK wish to thank English Heritage for allowing them to contribute to this report.

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Table 1. Hand-collected vertebrate remains from further excavations at the Hull Marina site. Key: No info. = no dating information supplied.

Species		Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	No info.	Total
<i>Oryctolagus cuniculus</i> (L.)	rabbit	-	-	-	2	-	-	2
<i>Lepus</i> sp.	hare	-	-	3	-	-	-	3
Canid	dog family	1	-	-	-	-	-	1
<i>Canis</i> f. domestic	dog	-	-	-	4	-	1	5
<i>Felis</i> f. domestic	cat	-	-	1	-	-	-	1
<i>Equus</i> f. domestic	horse	-	-	-	2	-	-	2
<i>Sus</i> f. domestic	pig	-	-	-	3	-	-	3
<i>Bos</i> f. domestic	cattle	-	1	3	7	1	-	12
Caprovid	sheep/goat	-	3	3	10	1	-	17
<i>Anser</i> sp.	goose	-	-	1	-	-	-	1
<i>Anas</i> sp.	duck	-	-	1	-	-	-	1
unidentified		-	9	16	29	1	4	59
<b>Total</b>		<b>1</b>	<b>13</b>	<b>28</b>	<b>57</b>	<b>3</b>	<b>5</b>	<b>107</b>