

Palaeoecology Research Services

**Evaluation of biological remains from excavations at
54-7 High Street, Kingston upon Hull
(site code: HSH2002)**

by

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Summary

Five sediment samples, half a box of hand-collected shell, and one-and-a-half boxes of hand-collected bone, recovered from excavations of deposits of early medieval to early modern date at 54-7 High Street, Kingston upon Hull, were submitted to PRS for an evaluation of their bioarchaeological potential.

*Three of the five samples examined gave evidence for a mixture of plant litter, including imported peat, and seem likely to represent stable manure or a similar kind of richly organic material. This was supported by the insect remains. The sample from a presumed culvert fill (Context 237) provided invertebrates consistent with this interpretation. The floor silts gave relatively few remains but there were some strong indicators of a domestic environment, including a dog flea. The litter-rich assemblages can be likened to some from the 'pre-Priory' phase at the nearby Magistrates' Courts site and some others from old town in Hull; the presence of peat is particularly characteristic of many sites, especially at Chapel Lane Staith. Another similarity to the deposits at the Magistrates' Courts and Chapel Lane Staith sites is the presence of *Cercyon* spp. typically associated with stranded seaweed, noted in small numbers in three samples.*

The hand-collected shell remains were too few to be of any great interpretative value. However, the bias of the recovered shell towards edible taxa, together with a percentage of shells showing evidence of having been opened using tools, strongly suggests that these assemblages derive exclusively from human food waste.

A small and, for the most part, well preserved assemblage of bone was recovered from deposits of medieval, post-medieval and early modern date. Medieval dumps, pit fills and river silts produced the bulk of the assemblage. Species identified included the remains of cattle, caprovid and pig, whilst a small quantity of goose and chicken bones were also present. In addition, single fragments of duck and grey partridge were recorded. Preliminary observations suggest that a large proportion of the assemblage was most likely to be of domestic food refuse, with a small component of butchery waste. Fish remains were well preserved and fairly numerous. Species present included the remains of large gadids and herring.

If the deposits can be dated more accurately, there is good potential for further analysis of insect remains, with recording of plant material to provide a suitable additional context for discussion. Any material not examined in this evaluation should be considered for analysis, too. Other deposits in this area are clearly worth considering for sampling to check on the nature and extent of organic deposition. The current bone and shell assemblages do not warrant further study, but the possibility of recovering larger, and more interpretatively valuable, assemblages of moderately well preserved remains should be considered in the event of further excavation at this site.

KEYWORDS: 54-7 HIGH STREET; KINGSTON UPON HULL; EVALUATION; MEDIEVAL TO 19TH CENTURY; PLANT REMAINS; CHARRED PLANT REMAINS; 'PEAT'; INVERTEBRATE REMAINS; SHELLFISH; OYSTER (*OSTREA EDULIS* L.); VERTEBRATE REMAINS

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Introduction

An archaeological evaluation excavation was carried out by Humber Field Archaeology at 54-7 High Street, Kingston upon Hull (NGR TA 1015 2860), during August and September 2002.

Five sediment samples ('GBA'/'BS' *sensu* Dobney *et al.* 1992), half a box of hand-collected shell, and one-and-a-half boxes of hand-collected bone, were recovered from the deposits. Subsamples of the samples and all of the hand-collected material were submitted to PRS for an evaluation of their bioarchaeological potential.

Provisional dating has assigned most of the deposits to the medieval period with some later (post-medieval and 18th-19th century) layers.

Methods

The submitted 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 flots resulting from processing were examined for plant and invertebrate macrofossils. The residues were examined for larger plant macrofossils and other biological and artefactual remains.

Insect preservation was recorded using the scale of Kenward and Large (1998).

Brief notes were made on the preservational condition of the hand-collected shell and the remains identified to species where possible.

For oyster (*Ostrea edulis* L.) shell additional notes were made regarding: numbers of left and right valves; evidence of having being opened using a knife or similar implement; measurability of the valves (though measurements were not taken as part of this evaluation); damage from other marine biota (polychaet worms and dog whelks); encrustation by barnacles. Preservation was recorded subjectively on two four-point scales for erosion and fragmentation as: 0 – none; 1 – slight; 2 – moderate; 3 – severe.

For the vertebrate remains, data 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, semi-quantitative information was recorded concerning fragment size, dog gnawing, burning, butchery and fresh breakage where more than ten fragments were present.

Where possible, fragments were identified to species or species group using the PRS modern comparative reference collection. Total numbers of fragments by species were recorded, together with the numbers of 'A' bones, i.e. mandibular teeth and mandibles (for age-at-death analysis), and measurable fragments.

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 is given (in round brackets) after the sample

numbers. No unprocessed sediment remains from the submitted samples but additional material from some of the deposits may have been retained by the excavator.

Context 200 [pre-C18th cess pit/dump]

Sample 1/T (2.4 kg sieved to 300 microns with paraffin flotation)

Moist, light grey, stiff and slightly sticky to crumbly (working soft), slightly sandy silty clay, with some fine herbaceous detritus and amorphous organic sediment.

This subsample yielded a very large residue of about 1100 cm³ of gritty granular detritus, much of it casts of 'fen' peat (amorphous detritus peat with abundant fine rootlets) to 20 mm in maximum dimension, but also with quantities of twig fragments, and some wood and bark, the former including chips. Other components present in moderate amounts included fish bone, charcoal and peat which had evidently come from a former raised bog, consisting largely of the moss *Sphagnum imbricatum* Hornsch. ex Russ. Some of this peat had evidently been burnt; there were some fragments of charred material to 10 mm. Some of the well preserved uncharred plant remains – including detached *S. imbricatum* leaves, as well as bogbean (*Menyanthes trifoliata* L.) seeds and sedge (*Carex*) nutlets – probably originated in the peat prior to charring. Other remains present pointed to a variety of other kinds of litter: bracken (*Pteridium aquilinum* (L.) Kuhn) stalk fragments, and abundant fragments of holly (*Ilex aquifolium* L.) leaves, including spines. Food remains were limited to some well preserved fragments of walnut (*Juglans regia* L.) and one seed of fig (*Ficus carica* L.) and seem unlikely to represent the kind of abundant food waste normally expected in a cess pit.

The flot was small, with woody and herbaceous plant debris, and moderate numbers of mites and insects. Preservation was generally rather good (E 1.5-3.5, mode 2.0 weak; F 1.5-3.0, mode 2.5, weak). Aquatics and waterside species were rather well represented (a minimum of eight taxa), including indicators of fairly clean water (e.g. the bryozoan *Lophopus crystallinus* (Pallas), of which there were at least two statoblasts). Bearing in mind the context type, this component seems likely to have been brought in water supplies rather than to have originated *in situ* (unless some or all came in the peat mentioned above – though there was no other obvious peatland insect component). Other components were 'house fauna' (several taxa in small numbers, including the human flea *Pulex irritans* Linnaeus), indicators of foul matter, and a few 'outdoor' forms. There were weak hints that material resembling stable manure may have been present, though this could equally have been house floor litter which had become moist after it was dumped. It is

likely that processing additional sediment (preferably around 5 kg) would give enough remains for the interpretation to be clarified, in combination with the botanical data.

Overall, the range of mixed litter, including peat, points to a deposit formed largely from something like stable manure.

This sample also gave 16 small (less than 25 mm in any dimension) fragments of bone, 12 of which were identified as fish bone. Mostly these fragments were not identifiable to species, the exceptions being two cod (*Gadus morhua* L.) vertebrae representing a large fish of approximately one metre in length. A single fragment of crab (*Brachyura* sp. indet.) was also noted. The fragments show no evidence of ingestion and are likely to represent food waste.

Context 231 [pre-C18th cess pit/dump]

Sample 5/T (3.1 kg sieved to 300 microns with paraffin flotation)

Moist, mid grey-brown, slightly sticky (working soft), ?humic clay silt (to silty clay) and fine and coarse herbaceous and woody detritus (including some twigs and wood 'chips').

The large residue (of about 900 cm³) was again of granular peat and woody detritus, with some sand and grit; it appeared to be very similar to the material from Context 200/Sample 1 with peat, wood chips, holly leaf fragments, and walnut shell all present, though with a somewhat more 'strawy' content (remains of probable cornfield weeds were perhaps slightly more in evidence here and there were modest numbers of rachis – ear stalk – fragments of a free-threshing wheat, *Triticum*). There was certainly further burnt peat and hints of the presence of grassland plants which are likely to have arrived in hay or dung.

The flot was fairly small, consisting of plant tissue and charcoal, with quite large numbers of insect remains. Preservation was very good to fair (E 1.0-3.5, mode 2.5 weak; F 1.0-3.0, mode 2.0 weak). The most striking feature of the beetle assemblage was the presence of a group of species which are most likely to be found together in rather foul, fairly open-textured, rotting matter. The most abundant of these was the little histerid *Acritus nigricornis* (Hoffmann), of which there were probably 10-20 individuals. There were also *Gyrophypnus* sp., *Cercyon unipunctatus* (Linnaeus), *C. terminatus* (Marshall), *C. haemorrhoidalis* (Fabricius), *Monotoma longicollis* (Gyllenhal), *M. ?bicolor* Villa, *Orthoperus* sp., *Acrotrichis* sp., some dung beetles (*Aphodius* spp.), and various others which may have lived with these. In addition, there were various house fauna taxa (including two human fleas), several plant-

feeders which may have been imported in cut vegetation (*Sitona*, *Meligethes* and *Ceutorhynchus* spp.), a small number of aquatics, and a grain weevil (*Sitophilus granarius* (Linnaeus)). A likely source is stable manure, for which this combination of ecological groups is part of the 'indicator group' (Kenward and Hall 1997). A single foraminiferan was noted, arriving in imported or flooding brackish water, saltmarsh hay, or perhaps eaten by livestock grazing on saltmarsh. This insect assemblage deserves to be recorded fully, preferably from a new subsample of 4-5 kg, both to refine site interpretation and to provide data for future synthesis.

As with Sample 1, this seems likely to be stable manure, or something like it, the low concentration of identifiable seeds and fruits probably reflecting the abundance of well-preserved 'matrix' material.

A small assemblage of bone, amounting to 13 fragments, was also recovered from this sample. Preservation of the fragments was mainly good, although the bones were rather fragmented as a result of fresh breakage. Eleven of the fragments were fish bone, including two herring (*Clupea harengus* L.) and one gadid vertebrae. The latter had been chopped.

Context 237 [medieval culvert fill]

Sample 3/T (4.4 kg sieved to 300 microns with paraffin flotation)

Wet, mid grey-brown, sticky, clay silt.

The tiny residue of about 50 cm³ consisted of grit, concreted sediment (to 5 mm) and some very decayed wood fragments amongst which were traces of fig seeds and *Sphagnum imbricatum* leaves, perhaps no more than casual contaminants from nearby deposits as this culvert filled.

The flot was very small, consisting mostly of insect fragments, with some herbaceous detritus and a trace of fine charcoal. Preservation of invertebrates was fairly good (E 2.0-3.5, mode 3.0 weak F 1.5-3.5, mode 2.5 weak). Abundant ostracods were present, of the order of 500. Their condition was very good (some pairs of valves had remained joined and the resulting 'capsule' appeared to contain appendages), and it seems likely that they originated *in situ*. In view of the description of this deposit as a culvert fill, these may be one of the benthic species able to exploit subterranean conditions. Such species were noted in the Roman sewer in Church Street, York by Meyrick (1976), who identified the bottom-dwelling *Candona*, which he states are often the only ones found in caves. Their good condition suggested that they lived in the Church Street sewer, too. There were some other aquatics in the present sample: two hydrophilic water beetles, and *Helophorus*

species, and a few pond snails. The only beetle present as more than two individuals (there were at least ten) was the subterranean *Trechus micros* (Herbst), another denizen of the Church Street sewer, also found in what seems to have been a covered drain at 16-22 Coppergate, York (Kenward and Hall 1995, 607), and a frequent component of supposed post-depositional invader communities in archaeological deposits (Carrott and Kenward 2001; Kenward and Allison 1994, 65-6). A battered fragment of another member of this community, *Coprophilus striatulus* (Fabricius), was also noted. The remaining fauna (only nine further species of beetles, all single individuals) had no clear character. It may be worthwhile to study the ostracods from this deposit, and to make a full record of the beetles, in view of the special character of the fauna.

Context 269 [medieval cess pit/dump]

Sample 10/T (1.2 kg sieved to 300 microns with paraffin flotation)

Moist, amorphous organic sediment and fine and coarse herbaceous and woody detritus (including wood fragments), with a little clay and sand, and some stones (6 to 20 mm).

This sample gave a very large residue of 600 cm³ of woody (and some herbaceous) detritus and a little sand; preservation was good and there was some black 'sulphide' staining (not seen in Samples 1 and 5). The woody material was mainly wood with some bark, but there was also some peat (including one fragment with *Menyanthes* seeds *in situ*), holly leaf fragments, and a 'strawy' component. Quite a lot of the larger clasts were undisaggregated compressed silty strawy sediment. There were a few probable food taxa amongst the chaffy/strawy debris – rare seeds of apple (*Malus sylvestris* Miller) and grape (*Vitis vinifera* L.) – but for the most part the seeds and fruits were of cornfield weeds (especially corncockle, *Agrostemma githago* L., and ?cornflower, *Centaurea* cf. *cyanus* L.) with a few taxa likely to have arrived in hay from grassland or in herbivore dung. Perhaps the key to interpreting this assemblage is the abundance of uncharred (but unidentified) cereal chaff, mainly glumes/lemmas and the fine (less than 1 mm) 'bran' fragments which were of wheat and/or rye (*Triticum/Secale*): these all point to a deposit formed largely of stable manure.

The evidence from the insects supports this interpretation. The flot was fairly small, with a substantial proportion of insect remains and some mites. Preservation was rather good (E 1.5-2.5, mode 2.0 weak; F 1.5-3.0, mode 2.0 weak). There was a clear component of beetles from rather foul conditions, including numerous *Platystethus arenarius* (Fourcroy), several *Oxytelus sculptus* Gravenhorst, and smaller numbers of *Cryptopleurum minutum* (Fabricius),

Cercyon analis (Paykull), *C. unipunctatus* (Linnaeus), *C. ?atricapillus* (Marsham), and *C. terminatus* (Marsham). The presence of species such as *Acritus nigricornis* (Hoffmann), *Gyrophypnus fracticornis* (Müller), *Anthicus floralis* (Linnaeus) (not *formicarius* (Goeze), the species usually found in archaeological deposits in the north of England), *Leptacinus* sp., *Carpelimus ?bilineatus* Stephens, and *Monotoma* sp., suggests open-textured foul decaying matter such as stable manure, and the more specific identification of this material (following the indicator group of Kenward and Hall 1997) is supported by the presence of species possibly brought in hay, grain pests (*Sitophilus granarius* (Linnaeus)), and house fauna (including *Tipnus unicolor* (Piller and Mitterpacher) and *Mycetaea hirta* (Marsham)). There was, however, perhaps some domestic waste since a human louse, *Pediculus humanus* Linnaeus, was present. Full recording of this insect material, preferably using a large subsample, would be worthwhile both for site interpretation and for future synthesis.

Context 278 [medieval floor silts]

Sample 11/T (1.5 kg sieved to 300 microns with paraffin flotation)

Moist, mid to dark grey-brown, crumbly (and layered in places) to slightly brittle (working soft), humic and ?ashy, slightly sandy silty clay, with some fine and coarse herbaceous detritus and charcoal. Small clasts (to 20 mm) of light to mid brown clay were also present.

The moderate-sized residue of about 350 cm³ was mostly sand, grit, coal and charcoal, with some brick/tile fragments; no material was much larger than about 10 mm, perhaps consistent with a deposit in which larger fragments had been pulverised under foot or one which formed where large fragments did not tend to accumulate in the first place. The lightest fraction included, somewhat enigmatically, moderate numbers of tree buds and scales, mainly oak (*Quercus*) but also some willow (*Salix*), one fig seed and one fragment of an umbellifer which may have been fennel, *Foeniculum vulgare* Miller.

Paraffin flotation produced a very small flot, with herbaceous and woody plant detritus and tiny fragments of coal. Insects were rare, only ten beetle taxa being noted, and although preservation was not especially poor, the remains had undergone a distinct colour change (E 2.0-4.0, mode 3.5 weak; F 2.5-4.0, mode 3.0 weak; change to brown 1-3, mode 2, weak). Although tiny, the assemblage had some interesting features. The spider beetle *Tipnus unicolor* (Piller and Mitterpacher), notable for its changing abundance through time, was represented by two individuals; there were grain beetles (*Sitophilus granarius* (Linnaeus) and *Oryzaephilus*

?surinamensis (Linnaeus)); there were several ostracods, presumably introduced with water; and a single dog flea (*Ctenocephalides canis* (Curtis)) was found. The strongly characteristic nature of this fauna makes further investigation worthwhile, using a larger subsample (perhaps 5 or more kg).

Hand-collected shell

Small quantities of hand-collected shell were recovered from 25 contexts (of which two were undated). The remains were mostly of rather variably preserved oyster (*Ostrea edulis* L.) valves from the medieval deposits. There were also some remains of other edible marine shellfish, namely cockle (*Cerastoderma edule* (L.)), common whelk (*Buccinum undatum* (L.)), and mussel (*Mytilus edulis* L.), and a single fragment of crab claw (?edible crab, ?*Cancer pagurus* L.) from Context 179 (18th/19th century).

Oyster shell was rather variably preserved (though approximately 71% of the valves could be identified as either left or right valves). Of the valves for which 'side' could be determined 26% were measurable (though measurements were not taken as part of this evaluation). Evidence of the oysters having been opened using a knife or similar implement (as shown by 'V'- or 'W'-shaped notches on the shell margins) was noted on 25% of the valves. However, 30% of the oyster valves showed some fresh damage (caused during or post-excavation) which may have destroyed some of the evidence of opening in antiquity. There was very little evidence of damage to the valves (e.g. polychaet worm burrows, dog whelk holes) or encrustation (e.g. by barnacles) by other marine biota.

Blue or blue-black staining of most of the recovered shell was noted.

Summary information for the recovered shell remains is presented by Context as Table 1, and by period as Table 2.

Hand-collected vertebrate remains

In total, 375 fragments were recovered by hand collection, from 32 deposits from two trenches. Information supplied by the excavator suggested that the contexts dated from the early medieval period through to the 19th century. Medieval dumps, pit fills and river silts produced the bulk of the assemblage.

Generally, preservation of material from both trenches was good, with few eroded fragments. Colour was mainly recorded as dark brown or brown, although some fragments from Context 164 were ginger/brown, and a few from Context 193 were almost white in

colour with a somewhat 'greasy' appearance. Variability of colour was noted for material from Contexts 167 and 215. Many of the bones had taken on the dark staining usually characteristic of waterlogged material. Ashy concretions were noted on fragments from Contexts 162 and 167. Little dog gnawing was noted throughout the assemblage, and few bones were affected by fresh breakage. Evidence of butchery was observed and was mostly restricted to cattle fragments. Knife marks were noted on the distal articulations of two tibiotarsi, one identified as chicken and the other as goose.

The range of identified species recovered from the excavations, together with the total number of fragments, is shown in Table 3. Mammals included the usual domestic species: cattle, caprovid and pig, with chicken remains also present. The goose remains were identified as one of the larger species of grey geese (*Anser* spp.); it was not possible to determine whether they represented domestic or wild individuals. The single duck carpometacarpus from Context 207 was of a size consistent with that of a modern mallard. In addition, an ulna identified as grey partridge (*Perdix perdix* (L.)) was recorded from Context 179.

Thirty-seven of the 43 bones recovered from 19th century deposits represented the part skeleton of a cat (Context 132). Many of the fragments represented the skull of the animal, which was a juvenile individual.

Remains of wild mammals included two rabbit bones from Context 193. These fragments were very pale fawn in colour and had a rather 'greasy' exterior surface. Additionally, one hare (*Lepus* sp.) shaft fragment was recorded from Context 253, a dump deposit broadly dated to the medieval/post-medieval period.

Fish bones were the most commonly occurring fragments, particularly from the medieval and 'pre-18th century' deposits. Many of the fragments were too broken to be identified to species but almost certainly represented Gadidae. A number of vertebrae, and skeletal elements representing the head and appendicular regions of the skeleton were identified as cod (*Gadus morhua* L.), whilst several fragments from Context 179 were possibly haddock (cf. *Melanogrammus aeglefinus* (L.)). Comparison of the cod and other gadid bones with those of modern reference specimens of known size indicated the presence of large fish of over a metre in length.

Nineteen measurable fragments and nine mandibles with teeth *in situ*, of use for providing biometrical and age-at-death data, were recovered from these deposits.

Discussion and statement of potential

Three of the five samples examined gave evidence for a mixture of plant litter, including imported peat, and seem likely to represent stable manure or a similar kind of richly organic material. This was supported by the insect remains. The sample from a presumed culvert fill (Context 237) provided invertebrates consistent with this interpretation, although the ostracods should ideally be identified more closely to shed further light on this and to provide a type assemblage for comparison with less archaeologically well defined deposits in the future. The floor silts gave relatively few remains but there were some strong indicators of a domestic environment, including a dog flea.

The litter-rich assemblages can be likened to some from the 'pre-Priory' phase at the nearby Magistrates' Courts site (Hall *et al.* 2000b; 2000c) and some others from old town in Hull; the presence of peat is particularly characteristic of many sites, especially at Chapel Lane Staith (Underdown 1979). Another similarity to the deposits at the Magistrates' Courts and Chapel Lane Staith (Kenward 1979) sites is the presence of *Cercyon* spp. typically associated with stranded seaweed, noted in small numbers in three samples.

The hand-collected shell remains were too few to be of any great interpretative value. However, the bias of the recovered shell towards edible taxa, together with the percentage of shells showing evidence of having been opened using tools, strongly suggests that these assemblages derive exclusively from human food waste.

From current evidence, the oysters could only have been imported to the site from the Kent, Essex or Suffolk coasts or the Firth of Clyde (Winder 1992). However, Kenward (1998) has speculated that exploitation of local (but as yet unlocated) oyster beds may well have been more widespread along the east coast of England. All of the other taxa present are

common off the coast of north eastern England today.

Most of the vertebrate material was well preserved, although the assemblages were not particularly large. There appeared to be little indication of reworked or redeposited material and the scarcity of dog gnawing suggests that the remains were quickly incorporated into the deposits. However, the integrity of a few of the deposits may be in doubt given that some of the material was recovered from river silts. —radiocarbon dating of material recovered from the excavation of river channels at Layerthorpe, York (Hall *et al.* 2000a) showed that there was much mixing of deposits in spite of the homogeneous appearance of the bone.

Regardless of period, the bone assemblages consisted of a mix of refuse, mostly representing domestic food waste, with only a small component of primary butchery waste.

Moderate quantities of fish bones were recovered from this site, particularly from the medieval deposits and from Context 200, cesspit/dump deposit (pre-18th century). The assemblage was dominated by the remains of large gadids, with a very few herring remains identified from Context 200. A number of sites in Hull, e.g. Blanket Row (Carrott *et al.* 2001) and Magistrates Court (Hall *et al.* 2000b; 2000c), have produced large assemblages of fish. These have proved to be of use for the interpretation of archaeological deposits and also for increasing our understanding of the exploitation of freshwater and marine fish in the medieval and post-medieval periods. The remains recovered from this site suggest that systematic sampling of deposits would produce similar assemblages.

Recommendations

If the deposits can be dated more accurately, there is good potential for further analysis of

insect remains, with recording of plant material to provide a suitable additional context for discussion. Any material not examined in this evaluation should be considered for analysis, too. Other deposits in this area are clearly worth considering for sampling to check on the nature and extent of organic deposition.

The current shell assemblage is too small to warrant further study. The possibility of recovering a larger and more interpretatively valuable assemblage of moderately well preserved shell should be considered in the event of further excavation at this site.

Further analysis of the current vertebrate material is not warranted. Additional excavation within the locality is likely to produce moderate quantities of well-preserved bone of use for both archaeological and zooarchaeological interpretation. Any further excavation at this site should employ a systematic sampling strategy for the recovery of bone.

Retention and disposal

All samples of deposits from this excavation, and fossils extracted from them, together with all of the hand-collected 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.

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Table 1. Summary information for the hand-collected shell from excavations at 54-7 High Street, Kingston upon Hull, by context. A '?' before numbers indicates possible numbers (e.g. '3/?4 = definitely 3, possibly 4). **Key:** 'Cn' = Context number; 'Date' = provisional date; u/s = unstratified; ? = unknown date; Emed = early medieval; Med = medieval; Pmed = post-medieval; pC18 = pre-18th century; C18/19 = 18th-19th century; C19 = 19th century; 'left' = number of left (or lower) valves; 'right' = number of right (or upper) valves; 'in' = number of valves of indeterminate side; 'meas' = estimated number of valves intact enough to be measured; 'e' = average erosion score for valves; 'f' = average fragmentation score for valves; 'kn' = number of valves showing damage characteristic of the oyster having been opened using a knife or similar implement; 'worm' = number of valves showing damage by polychaet worms; 'barn' = number of valves with barnacles; 'dog' = number of valves showing damage from dog whelk boring; 'fr' = number of valves showing fresh breakage; 'co' = minimum number of cockle valves; 'wh' = minimum number of common whelk; 'muss' = minimum number of mussel valves; 'wt' = total weight of shell in grammes.

Cn	Date	Oyster valves											co	wh	muss	wt
		left	right	in	meas	e	f	kn	worm	barn	dog	fr				
100	u/s	4	13	1	3	1	2	5	?1	0	0	6	-	-	-	300
114	C19	1	1	3	0	1	2	?1	0	0	0	2	-	-	-	75
122	C19	5	3	2	3	2	2	?2	1	0	0	4	1	1	-	395
132	C19	0	1	0	0	3	1	?1	0	0	0	0	-	-	1	21
133	C19	0	1	0	0	2	1	0	?1	0	0	0	-	-	-	12*
150	C18/19	1	3	0	2	2	1	?1	0	0	0	2	-	-	-	52
153	C18/19	-	-	-	-	-	-	-	-	-	-	-	6	-	3	19
154	C18/19	1	7	4	2	3	1	2	0	0	0	2	1	-	2	218*
160	Med	1	3	3	?1	1	3	2	0	0	0	2	-	-	-	85
162	Med	1	1	1	0	1	2	?2	0	0	0	?1	-	1	-	84
164	Emed	0	8	5	4	2	2	2	0	0	0	2	1	-	3	99
167	Med	5	6	8	3/?4	2	3	5	0	0	0	5	-	3	1	224
193	C18/19	0	1	1	0	2	2	0	0	0	0	2	-	-	-	26
196	?	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2
200	pC18	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3
206	Med	1	1	0	?1	1	1	?1	0	0	0	1	-	-	-	49
207	Med	0	0	1	-	1	2	?1	0	0	0	0	-	-	2	17
215	Med	3	3	1	0	2	2	?1	0	0	0	3	1	-	2	69*
217	Med	-	-	-	-	-	-	-	-	-	-	-	-	1	-	15
228	Med	2	1	0	2	1	1	1	0	0	0	1	-	-	-	75
237	Med	-	-	-	-	-	-	-	-	-	-	-	1	-	2	9*
246	Med	0	0	1	0	2	3	0	0	0	0	0	-	-	-	3
249	Med	1	3	0	2	1	2	2	0	1**	0	1	0	-	-	119
253	Med/ Pmed	1	0	2	1	1	1	0	0	0	0	0	-	5	-	139
261	Med	0	1	1	?1	2	1	2	0	0	0	1	-	1	-	118

* - these weights include some concreted sediment and small stones fused to the shell

** - the barnacles were too eroded to be identified or measured

Table 2. Summary information for the hand-collected shell from excavations at 54-7 High Street, Kingston upon Hull, by provisional date. See Table 1 for key to abbreviations.

Date	Oyster valves			co	wh	muss	wt
	left	right	in				
u/s or ?	4	13	1	1	0	0	302
Emed	0	8	5	1	0	3	99
Med	14	19	16	2	6	7	867
Med/Pmed or pC18	1	0	2	0	5	2	142
C18/19	2	11	5	7	0	5	315
C19	6	6	5	1	1	1	503

Table 3. Summary information for the hand-collected vertebrate remains from excavations at 54-7 High Street, Kingston upon Hull, by provisional date.

Species		early medieval	medieval	medieval/ post-medieval	post- medieval	Pre-18 th C	18 th -19 th C	19 th C	Total
<i>Oryctolagus cuniculus</i> (L.)	rabbit	-	-	-	-	-	2	-	2
<i>Lepus</i> sp.	hare	-	-	1	-	-	-	-	1
<i>Felis</i> f. domestic	cat	-	-	-	-	-	-	37	37
<i>Sus</i> f. domestic	pig	1	6	1	-	-	2	-	10
<i>Bos</i> f. domestic	cow	1	21	2	1	-	2	-	27
Caprovid	sheep/goat	2	8	2	-	-	2	1	15
<i>Anser</i> sp.	goose	-	5	3	-	-	1	-	9
<i>Anas</i> sp.	duck	-	1	-	-	-	-	-	1
<i>Perdix perdix</i> (L.)	grey partridge	-	-	-	-	-	1	-	1
<i>Gallus</i> f. domestic	fowl	-	5	-	-	-	-	1	6
Fish		2	48	9	-	36	8	-	103
<i>Sub-total</i>		6	94	18	1	36	18	39	212
Unidentified		14	113	17	1	4	10	4	163
<i>Sub-total</i>		14	113	17	1	4	10	4	163
Total		20	207	35	2	40	28	43	375