

**HAND-COLLECTED AND WET-SIEVED ANIMAL BONE FROM C261 CROSSRAIL
EARLY EAST-STEPNEY GREEN PHASE 2 EXCAVATION AND TARGETED
WATCHING BRIEFS (XRV10)**

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5. Quantification and evaluation

5.3 Site archive: finds and environmental, quantification and description

Table 1 Finds and environmental archive general summary

Animal bone	estimated 1386 fragments. Total 18.840 kg
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5.3.10 Animal bone

Table 13 Contents of animal bone archive

	Weight (g)	No. fragments	No. boxes
Animal bone (hand-collected)	17340	639	9 standard archive boxes
Animal bone (wet-sieved)	1500	747	1 standard archive box

Table 2: Hand-collected and wet-sieved animal bone from XRV10/summary (p:\multi 1051\env\zoology\assessment\bonetab01.xls)

Table 3: Hand-collected and wet-sieved animal bone from XRV10/detailed summary (p:\multi 1051\env\zoology\assessment\bonetab02.xls)

5.3.10.1 Introduction/methodology

This report, quantifies, identifies and assesses the animal bone from contexts [199] – [283]. Hand-collected animal bone from contexts [199] – [283] and wet-sieved animal bone from samples; [204] {1}, [217] {3}, [218] {2}, [250] {30}, [251] {31}, [275] {21}, [280] {4}, [283] {5}, [283] {10} and [283] {12} was recorded directly onto Excel spreadsheets in terms of weight (kg), estimated fragment count, species, carcase-part, fragmentation, preservation, modification, and the recovery of epiphyses, mandibular tooth rows, measurable bones, complete long bones, and sub-adult age groups. All identifications referred to the MOLA reference collection; and Schmid 1972. Fragments not identifiable to species or genus level were allocated to family level or an approximate category, particularly ‘cattle-sized’ or ‘sheep-sized’ as appropriate. Estimation of age followed Schmid 1972, 75.

Table 2 (p:\multi\1051\env\zoology\bonetab01.xls) gives a summary of the hand-collected and wet-sieved groups in terms of weight (kg), estimated fragment count, fragmentation, preservation, faunal composition, and the recovery of fusion and dental evidence and measurable bone.

Table 3 (p:\multi\1051\env\zoology\bonetab02.xls) gives a detailed summary of the hand-collected context groups and wet-sieved sample groups in terms of species, carcase-part, epiphysial fusion, age, modification and fragment counts.

5.3.10.6 Summary, post-medieval

This assemblage provided 18.840 kg, 1386 fragments, of well-preserved hand-collected and wet-sieved animal bone with a minimum fragment size generally in the 25-75 mm range. The bone groups mainly derived from ditch, drain and pit groups dated from early post-medieval to the 19th century.

The bulk of the hand-collected bone derived from adult ox (cattle) *Bos taurus* and sheep/goat *Ovis aries/Capra hircus* with smaller groups of pig *Sus scrofa*, chicken *Gallus gallus*, goose, probably domestic goose *Anser anser domesticus* and mallard or domestic duck *Anas platyrhynchos*; single fragments of horse *Equus caballus* [205], [218]; and occasional recovery of dog *Canis lupus familiaris* [217], [258] and [276].

Game species comprised wood pigeon *Columba palumbus* [283] {5}, fallow deer *Dama dama* [216] and rabbit *Oryctolagus cuniculus* [203], [204], [217], [250], [251], [258], [276] and [283].

Fish produced a more diverse group including marine/estuarine, freshwater and migratory species; ray, probably thornback ray or roker *Raja clavata* [258] and [283], herring (family) Clupeidae [251] and [283] probably herring *Clupea harengus*, cod *Gadus morhua* [204], [217] and [276], whiting *Merlangius merlangus* [283], plaice or flounder Pleuronectidae [217], mackerel *Scomber scombrus* [283], gurnard Triglidae [217] and [283]; carp (family) Cyprinidae including dace *Leuciscus leuciscus* [283]; and salmon (family) Salmonidae [283] and eel *Anguilla anguilla* [204],

Wet-sieving also produced a sparse fauna of small wild vertebrates derived from frog or toad; [217] {3}, [218] {2} and [251] {31}; hedgehog *Erinaceus europaeus* [218] {2}; field or short-tailed vole *Microtus agrestis* [218] {2} and [251] {31}; with unidentifiable fragments of mouse or vole [204] {1}, [217] {3}, [204] {1}, [217] {3} and [251] {31}.

There was no recovery of human bone.

There were no foetal or neonate animals and only very sparse recovery of very young animals; infant calf [217], [250], [251], [276] and [280]; infant sheep/goat [251]; and infant pig [276].

Clear tool mark evidence of butchery was noted on cattle and sheep/goat with occasional examples on chicken and rabbit. There was no tool mark evidence for working of horn, bone or antler. Evidence of rodent gnawing was noted on sheep-sized long bone from [199] only; there was no evidence for canine gnawing or for burning, pathological change or any other modification.

The largest and most significant groups are:-

The L – shaped ditch (small moat)

Fills [216], [217], [218] and [283] of this feature together produced 5.71 kg/347 fragments of animal bone derived mainly from cattle and sheep/goat with occasional recovery of pig [216] and [218], fish, poultry and game. Recovery of poultry comprised occasional fragments of adult chicken [216] and [283]; and goose [217] and [283]. Game produced a single metatarsal (hind-foot) of fallow deer [216]; with occasional fragments of wood pigeon [283] and rabbit [217] and [283]. Fill [217] also included an incomplete skeleton of an adult dog; fill [218] included a fragment of adult horse innominate (pelvis), one of only two fragments of this species from the whole assemblage.

Fill [283], produced a small, 0.60 kg/83 fragments, but very distinctive and diverse group derived, particularly in sample {5}, from marine, freshwater and migratory fish, poultry

and game, with a few unidentifiable fragments of cattle- and sheep-sized rib and long bone.

The moat

Fills [258] and [276] of this feature produced 6.60 kg/280 fragments of animal bone derived predominantly from the better meat-bearing elements of adult cattle and sheep/goat with comparatively minor recovery of marine fish, poultry, pig and game. Fish produced fragments of roker or thornback ray and cod; poultry produced occasional fragments of chicken [258], [276] and goose [276]; pig produced single fragments of infant, juvenile and adult pig [258], [276]; game produced occasional fragments of rabbit from [258] and [276].

Cess-pit fills

Cess pit fills [250] and [251], probably dated as 17th century, produced 5.55 kg/540 fragments of animal bone derived predominantly from adult and juvenile cattle and sheep/goat with occasional recovery of juvenile pig [250], adult chicken from [250] and [251], adult goose from [250] and infant calf from [250] and [251]. Cattle and sheep/goat were represented mainly by elements of good meat-bearing quality; vertebra, upper and lower leg, but with some recovery of head and foot elements. Chicken and goose mainly produced elements of prime meat quality with some recovery of foot elements indicating primary carcass preparation. Recovery of other species was extremely sparse; fish produced a single vertebra of herring (family) from [251]; game produced elements of at least two rabbits, an adult and a juvenile, from [250] only. Recovery of local wild fauna comprised fragments of juvenile frog or toad and an adult field or short-tailed vole, both from [251]. Fill [258] also included a fragment of a dog head element.

5.3.10.7 Assessment work outstanding

There is no outstanding assessment work.

6. Analysis of potential

6.10 Animal bone

This small but well-preserved hand-collected and wet-sieved assemblage derives from consumption of beef, mutton, pork, fish, poultry and game, with only a very minor contribution from local wild small vertebrate fauna. In view of the good preservation state and diversity of species and carcass-part recovery, the assemblage as a whole merits more detailed analysis and interpretation at both journal and popular levels, particularly with regard to interpretation of the local meat diet and patterns of waste disposal in terms of selection of carcass-part and age-group; and butchery technique.

Once the assemblage is fully recorded and analysed, there is also definite potential for production of an interesting and informative display board designed to illustrate:-

1. The main component species - cattle and sheep/goat.
2. The diversity of the other important faunal groups – fish, poultry and game
3. The distribution and availability of the fish and game species
4. Evidence for age group and butchery
5. The wild fauna

Analysis and comparison of the animal bone groups recovered in the three main assemblages; the L- shaped ditch, the moat and the cess-pit fills, will indicate possible spatial and temporal patterns of consumption and disposal, perhaps linked to dietary preference and social status.

In view of the scarcity of amphibians and small mammals in the wet-sieved sample groups, there is little potential for interpretation of local habitats and conditions at more than popular or display board level.

7. Significance of the data

7.10 Animal bone

The hand-collected animal bone is of limited local significance only, particularly in terms of meat diet, with emphasis on the skeletal representation and age-selection of cattle, sheep/goat, pig, fish, poultry and game. There is no wider significance or significance in terms of local habitats.

8. Revised research aims

8.10 Animal bone

RRA01 What are the characteristics of the local meat diet in terms of the selection of species, carcass-part, age-group and butchery technique?

RRA02 What does comparison of the bone groups from the L- shaped ditch, the moat and the cess-pit fills indicate about the intra-site distribution of consumption and waste disposal?

9. Method statement

9.10 Animal bone

The hand-collected and wet-sieved assemblages should be recorded onto the Museum of London Archaeology Oracle post-assessment database in terms of species, skeletal element, body side, fragmentation, epiphysial fusion, dental eruption and wear, modification and measurement. The faunal group from each context and sample group should then be analysed and interpreted with respect to available stratigraphic and

dating evidence. Analysis should focus on identifiable fragments and no unidentifiable fragments of long bone mid-shaft should be recorded.

The analytical report will then be used to provide the basis for a 'popular' report to emphasise the diversity of the meat diet, in terms of species, carcase-part, age and source, indicated by this small but well-preserved assemblage.

The resource requirements are:-

Task 1 Recording onto database	5.00 p/days
Task 2 Analysis and report production (journal)	5.00 p/days
Task 3 Report production (popular)	2.00 p/days
Task 4 Edit and archive	0.25 p/day
Task 5 Selection of bones for display board text/images	1.00 p/day
Task 6 Preparation of text for display board	1.00 p/day

10. Bibliography

Schmid, E, 1972 *Atlas of animal bones for prehistorians, archaeologists and Quaternary geologists*
London. Elsevier.

11. Tables

Table 2: Finds and environmental archive general summary

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