

**HAND-COLLECTED AND WET-SIEVED ANIMAL BONE FROM BATCH 1 C257
CROSSRAIL CENTRAL – BROADGATE TICKET HALL EVALUATION, LONDON
EC2, CITY OF LONDON (XSM10)**

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1. Introduction and methodology

This report quantifies, identifies and interprets the animal bone recovered from hand-collected context groups [62], [74], [104], [108], [138], [142], [146], [150], [156], [160], [167], [208], [211], [212], [213], [214], [227], [230], [268], [298], [299], [301], [306] and [318]; and wet-sieved bulk samples [244] {9}, [283] {10}, [299] {11}, [306] <12> and [314] {14} at XSM10. All recovered animal bones were washed, air-dried and then bagged and labelled as context and sample groups.

Animal bone from each context was then described and recorded directly onto the MOLA animal bone post-assessment Oracle database in terms of species, skeletal element, body side, age, epiphysial fusion, dental eruption and wear, sex, fragmentation, modification and measurement of complete bones. Species and skeletal element were determined using the MOLA animal bone reference collection together with Schmid 1972. Evidence for age at death was derived from epiphysial fusion (Schmid 1972) and dental eruption and wear (Amorosi 1989). As far as possible, each bone fragment was assigned to species and skeletal element and recorded as an individual database entry. Unidentifiable long bone fragments were assigned to the approximate category 'cattle-sized' or 'sheep-sized' as appropriate. The complete sitecode assemblage is held on the Oracle post-assessment database for future reference and analysis with respect to available stratigraphic data.

Table 1 shows the overall assemblage catalogue in terms of species, skeletal representation, age at death and modification. All data are available for consultation on request on the Museum of London Archaeology Oracle animal bone post-assessment database.

2. Preservation and quantification (Table 1)

A total of 148 fragments, nine standard archive boxes, approximately 15 kg, of well-preserved animal bone were recorded from hand-collected and wet-sieved contexts. Maximum fragment size generally exceeded 75mm, with most bone in very good surface condition and all tool marks, gnawing evidence and fusion lines easily visible.

3. The fauna (Table 1)

The identifiable faunal assemblage included mainly ox (cattle) *Bos Taurus*, sheep/goat including sheep *Ovis aries* and horse *Equus caballus* with occasional chicken *Gallus gallus* [142], [156] and [283]; pig *Sus scrofa* and dog *Canis lupus familiaris* with single examples of adult mallard/domestic duck *Anas platyrhynchos* [213], red deer *Cervus elaphus* [299] and rabbit *Oryctolagus cuniculus* [283]. The remainder of the assemblage comprised fragments of unidentifiable 'cattle-sized' and 'sheep-sized' long bone and rib from [104], [142], [150], [208], [211], [213], [214], [306] and [314]. There was no recovery of fish, amphibians, scavengers or commensal species.

The majority of the assemblage derived from sub-adult and adult animals with occasional recovery of juvenile cattle, sheep/goat, pig and horse. Recovery of infant animals was confined to single bones of calf [212] and pig [208].

Contexts [211], [213] and [299] produced the largest context assemblages, respectively 19, 44 and 10 fragments. There was abundant, clear evidence of

butchery on chicken, cattle, sheep/goat (including sheep) and pig. Tool mark evidence of preliminary horn working was seen on sheep horn cores from [212] and [213]; evidence of skinning was seen on a red deer metatarsal from [299]. Estimated statures can be calculated from complete, fully-fused limb long bones of horse [214] and [318]; and dog [213], [299] and [306].

The context groups

Context [211] produced 19 fragments derived mainly from adult cattle mandibles, vertebrae, ribs, scapula, radius and innominate with sheep/goat mandibles and single fragments of sheep/goat scapula and sheep metacarpal (fore foot), male pig canine tooth and adult horse radius/ulna (lower fore-leg). The cattle bone showed clear evidence of butchery.

Context [213] produced 44 fragments, the largest context group in the whole assemblage. The group included cattle, horse and sheep/goat with single fragments of adult mallard or domestic duck radius (wing) and adult dog tibia (shin). The cattle group mainly included adult mandibles (lower jaws), sub-adult shorthorn horn core, vertebra and rib. The horse bones included mainly adult elements of the head and fore-foot. The sheep/goat group was particularly distinctive in that it included mainly adult head elements with 13 adult mandibles, a small group of adult sheep horn cores and single fragments of hyoid and scapula.

Context [299] produced ten fragments including single fragments of sheep/goat femur and caudal (tail) vertebra; pig tibia and juvenile metatarsal (hind-foot); horse mandible and juvenile radius; dog adult humerus and innominate. A single knife-cut red deer metatarsal provided the only recovery of this species from the whole assemblage.

Table 1: Hand-collected and wet-sieved animal bone from XSM10 batch 1/catalogue

4. Potential for further work

This small but very well-preserved assemblage indicates waste from three sources; each of these components of the assemblage has potential for further interpretation.

1. Primary processing, butchery and post-consumption waste mainly derived from consumption of chicken, beef, mutton and pork. The relatively large numbers of predominantly adult cattle and sheep/goat mandibles offers some potential for study of age at slaughter. Although poultry and wild game were represented, they are relatively minor components of the assemblage.
2. Chopped adult sheep horn cores from [212] and particularly [213] indicate waste from preliminary preparation for removal of horn for further use as an industrial raw material.
3. Recovery of horse and dog bones indicates disposal of non-consumed domesticates. Contexts [213], [214], [299], [306] and [318] included complete limb long bones suitable for calculation of estimated statures as withers ('shoulder') heights.

Analysis of the assemblage, now completely recorded on the Oracle post-assessment database, with reference to stratigraphic evidence for dating and feature description, will allow full interpretation with respect to meat diet (selection of species, carcass-part, age and butchery), industrial activity (tools and techniques associated with horn preparation) and non-consumed domesticates (stature).

The absence of small wild vertebrates prevents any comment on surrounding habitat and conditions.

5. Bibliography

Amorosi, T A, 1989 A post-cranial guide to domestic neo-natal and juvenile mammals: the identification and ageing of Old World species
BAR International series 533

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

6. Table

Table 1: Hand-collected and wet-sieved animal bone from XSM10 batch 1/catalogue