Channel Tunnel Rail Link

London and Continental Railways

Oxford Wessex Archaeology Joint Venture

Animal bone from Cuxton, Kent

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1 INTRODUCTION

1.1 The site

As part of an extensive programme of archaeological investigation carried out in advance of the construction of the Channel Tunnel Rail Link (CTRL), the Museum of London Archaeology Service was commissioned to undertake the detailed excavation of an Anglo-Saxon cemetery at Cuxton in Kent (centre at OS NGR 572000 167350) following desk-based assessment and trial trenching. In the course of the excavation a concentration of later prehistoric archaeological features was also exposed and recorded. The excavation was carried out between July 1999 and September 1998, under the project management of Rail Link Engineering, on behalf of Union Railways (South) Limited (a subsidiary of London and Continental Railways). Two principal phases of activity were recorded at the site: Traces of an early-middle Iron Age settlement comprised evidence for a possible hut within an enclosure and a number of large pits. The Iron Age site was overlain by an Anglo-Saxon cemetery, in use from *c* AD 580 to *c* AD 700. The cemetery exhibited a mix of 'pagan' and Christian features. For example, the prominent position of the cemetery on a terrace overlooking the River Medway, perhaps overlooking the settlement, and the inclusion of grave goods with some of the interments, being 'pagan' characteristics. On the other hand the grave alignments, which tend towards an east-west orientation, and the inclusion of two workboxes/reliquaries with Christian symbols attest to Christian influence.

1.2 Method

Details of the animal bone recording method can be found in the CTRL Section 1 Post-excavation Project Design, Volume 2, Contractor's Method Statements (ADS 2006).

1.3 The animal bone

A total of 92 (975g) fragments of animal bone were recovered from the excavations at Cuxton Anglo Saxon cemetery. A further 70 (32g) fragments were recovered from the sieved bulk samples.

Most animal bone came from the Bronze Age and Early Iron Age phases of the site. Sheep/goat is the most abundant taxon, followed by cattle. Pig, equid and dog are present in small numbers. Additionally two micro mammal and four amphibian bones came from the sieved assemblage.

Tables 1 and 2 summarise fragment numbers by phase for hand-collected and sieved material.

Table 1: Number of fragments of each taxon from the hand collected material, summarised by phase

	Phase			
Taxon	**Bronze Age/ Early Iron Age**	**Early Iron Age**	**Anglo-Saxon**	**Total**
Cattle	2	8		10
Sheep/Goat	13	8		21
Pig	1	1		2
Equid		2		2
Dog	1			1
Large Mammal	2	20		22
Medium Mammal	24	4		28
Unidentified		3	3	6
Grand Total	43	46	3	92

Table 2: Number of fragments of each taxon from the sieved material, summarised by phase

	Phase				
Taxon	**Bronze Age/ Early Iron Age**	**Early Iron Age**	**Early Iron Age?**	**Anglo-Saxon**	**Grand Total**
Sheep/Goat	2				2
Amphibian	2	2			4
Large Mammal		1			1
Medium Mammal	1				1
Small Mammal	7	1			8
Micro Mammal	1	1			2
Unidentified	3	7	5	37	52
Grand Total	16	12	5	37	70

2 RESULTS

2.1 Preservation and alteration

Condition

The condition of the bone within the hand collected assemblage is variable, ranging from grade 1 to grade 5 on the Lyman (1996) criteria (where 1 is pristine, 5 is just recognisable; Table 3). The majority of the assemblage falls between grades 1 and 3 giving an overall condition of good to moderate. The bone from the sieved assemblage is in much poorer condition falling generally within grade 5.

Table 3: Condition of the hand collected and sieved bone assemblages

Condition	% of hand collected assemblage	% of sieved assemblage
1	20%	7%
2	27%	9%
3	30%	0%
4	15%	11%
5	8%	73%
Grand Total	100%	100%

Distribution

All the bone came from Bronze Age/ Early Iron Age pit [343], Early Iron Age [106], possible Early Iron Age pit [80], and Anglo Saxon Graves [306], [324] and [379]. The remaining features on site did not yield any animal bone.

Butchery and Pathology

A single sheep/goat atlas was recovered from Bronze Age/ Early Iron Age pit [343] displaying butchery marks consistent with head removal. No evidence of pathology was noted.

Burning

A single fragment of equid femur from early Iron Age pit [106] was partially burnt on the third trochanter; this may have been accidental burning or a result of cooking. A further 8 fragments of burnt bone were recovered from the sieved samples from Bronze Age/early Iron Age pit [343] and 2 fragments from Early Iron Age pit [106].

Gnawing

A total of 7 sheep/goat and medium mammal bones, probably sheep/goat, displayed signs of carnivore gnawing. All of the gnawed remains came from Bronze Age/Early Iron Age pit [343]. The presence of carnivore gnawing would suggest that the remains had been left exposed long enough for scavengers to reach them.

2.2 Species descriptions

Sheep/goat

Sheep/ Goat is the most abundant taxon. There was no positive identification of either sheep or goat. The entire sheep/goat assemblage was recovered from pits [106] and [343]. Most skeletal elements are represented, suggesting that the entire carcass was present on site for utilisation. No complete bones were available to provide withers heights. A single sheep/goat atlas displaying disarticulation butchery marks came from Bronze Age/ Early Iron Age pit [343]. A burnt juvenile sheep/goat metacarpal was recovered from the same feature. There are not enough data to construct age-at-death profiles. A single mandible from an animal aged 18-30 months was recovered from Bronze Age/ Early Iron Age pit [343]. The sheep/goat assemblage included bones from both skeletally mature and juvenile individuals. An unfused radius from an animal aged below 10 months and an unfused femur from an individual aged below 3.5 years were recovered from pit [106]. No very young bones were recorded: this may indicate that sheep/goat were not bred on site, but may well be due to preservational bias and the small size of the assemblage.

Cattle

Cattle are less abundant than sheep/goat. A total of 10 fragments were identified. 8 from pit [106] and 2 from pit [343]. The few cattle remains from the assemblage all appear to have been from skeletally mature individuals. No evidence of butchery was noted on any of the bones. Little further information can be gained.

Pig

Two fragments of pig were recovered: a maxilla from Bronze Age/ Early Iron Age pit [343] and an ulna from early Iron Age pit [106]. Little further information can be gained, save the presence of the species on site.

Equid

Two fragments of equid were recovered from Early Iron Age pit [106]: an equid femur with a burnt patch on the third trochanter and an unfused humerus from an animal aged below 3-3.5 years.

Dog

A single fragment of dog skull was recovered from the Bronze Age/ Early Iron Age pit [343].

2.3 Micro mammals and amphibians

Two fragments of amphibian bones were recovered from the sieved samples from pit [106], and a further two fragments from pit [343]. From the same features a single micro mammal femur and an ulna were recovered from the sieved assemblage. The small number of bones provides little information save the presence of the species on site. However, the presence of these wild species suggests that the pits were left open for long enough to expose the assemblage to scavengers and accumulate pitfall victims.

2.4 Features of interest

Bronze Age/ Early Iron Age Pit [343]

A total of 43 fragments from the hand collected assemblage and 16 fragments of animal bone from the sieved assemblage were recovered from pit [343], mostly from sheep/goat. They appear to represent approximately two juvenile individuals. Most skeletal elements are represented and the majority of the bone displays evidence of carnivore gnawing. A single sheep/goat atlas displays evidence of butchery. The remaining pit assemblage consists of a fragment of dog skull, a pig maxilla, a cattle radius and innominate and a large mammal size rib and skull fragment. Two amphibian bone and a micro mammal ulna were found in the sieved assemblage. The assemblage appears to generally consist of domestic butchery/food waste. The gnawing evidence suggests that the remains were left uncovered long enough for scavengers to access them. Additionally the presence of the micro species may indicate that the pit was left open.

Early Iron Age Pit [106]

A total of 31 fragments of animal bone were recovered from pit [106]. The assemblage consists of at least one juvenile sheep/goat, a cattle mandible and several loose teeth, a cattle humerus, radius and ulna, an equid humerus and femur, a pig ulna and a fragment of large-mammal sized skull and long bones. Two fragments of amphibian and a micro mammal femur were also recovered from the sieved samples. The equid femur displayed evidence of burning. The assemblage appears to consist of domestic butchery and food waste.

Anglo Saxon graves [306], [324] and [379]

The animal bone recovered from the Anglo-Saxon graves was all in very poor condition and was not identifiable to species, it is uncertain whether the bone is residual or deliberate deposition.

3 DISCUSSION

The assemblage from the site is very small, coming mainly from only three pits. It may not be representative of the site economy. Sheep/goat are the most abundant species. The remains of 3 juvenile individuals are consistent with exploitation for meat. Cattle were all skeletally mature, suggesting that use for traction or dairying was more important than meat production. Pig, dog and equid were present but there is no evidence as to their roles: one equid fragment was burnt so could have been cooked. Micro-species such as amphibians and rodents are probably present as scavengers and/or pitfall victims. The assemblage was recovered primarily from two pits [106] (Early Iron Age) and Bronze Age/Early Iron Age) [343] and can be attributed to domestic butchery and food waste. The pits were left open for long enough to expose the assemblage to scavengers and accumulate pitfall victims. The small amount of unidentifiable bone from the Anglo-Saxon phase may have been residual; none was burnt.

4 BIBLIOGRAPHY

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