Channel Tunnel Rail Link

London and Continental Railways

Oxford Wessex Archaeology Joint Venture

Animal bone from Parsonage Farm, Westwell, Kent

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TABLE OF CONTENTS

LIST OF TABLES

1 INTRODUCTION

1.1 The site

The Museum of London Archaeology Service (MoLAS) was commissioned by Union Railways (South) Limited (subsequently London and Continental Railways) to undertake a detailed excavation to the west of Station Road near Westwell, Kent. Excavation in advance of the construction of the Channel Tunnel Rail Link (CTRL) at Parsonage Farm (NGR TQ 598050 146050), uncovered evidence for a medieval farm or manor.

The medieval site occupied the southern end of a low spur of land bounded to the south and east by streams. Its occupation was of three phases. A small area of the earliest, Phase 1 activity, comprising a timber building and associated linear ditch of late 12th-century date, was uncovered close to the eastern stream. In the late 12th or early 13th centuries the site was redeveloped (Phase 2). A timber hall measuring *c* 18.8 m by 7 m, whose main frontage faced north-east, was constructed. The hall was of four bays: that at the north-western end was partitioned off and is likely to have formed the service end of the building. Ancillary timber buildings, probably including a kitchen, lay to the rear of the hall.

Around the middle of the 13th century, or slightly later, the hall was completely reconstructed (Phase 3), on the same plot and alignment but on grander lines as an aisled structure measuring 21.5 m by 9.8 m. At this point the two streams bounding the site were remodelled to form, for the first time, a moat that completely surrounded the building complex. The ancillary buildings to the rear of the hall were also rebuilt on a reconstructed platform with masonry and timber revetting at its southern, moat end. After these works were completed, the solar wing was modified and an extension built on to its eastern side.

The scale of the hall, the masonry solar wing and the quality of many of the finds attest to the high status of the site by the end of Phase 2 and during Phase 3, and no doubt reflect the wealth of the rector (parson) of Westwell at that date. Although the archaeological evidence indicates that the buildings were dismantled and removed so that little trace of their fabric, other than large quantities of ceramic roof tile, remained on site, it also suggests that occupation continued into the 14th century and possibly as late as AD 1380. The rectory was appropriated to Canterbury Cathedral in 1397. Subsequently Parsonage Farm was leased out to farmers and perhaps not occupied until the new farm was built across the road in the 16th century.

Late and post-medieval occupation could not be coherently defined archaeologically and may have been ephemeral in nature, although a 19th-century smithy was uncovered outside the northern moat.

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 643 (7508g) fragments of bone were recovered during the excavations at Parsonage Farm (ARC PFM98). A further 347 (166g) fragments were recovered from the sieved assemblages.

A summary of the number of identified fragments from Parsonage Farm is shown in Tables 1, 3 and 4. Cattle remains dominate, closely followed by pig, then sheep/goat. Domestic fowl and goose remains are quite well represented. Equid, dog, red deer, fallow deer, and rabbit are present in small numbers. There is a range of birds as well as the usual domestic species, such as mallard, pheasant and woodcock. There were also a number of fish bones, mostly from the sieved assemblage (Table 5), and mainly of marine taxa.

Table 1 summarises the minimum number of individuals (MNI) although cattle are the most abundant species by NIF; the MNI's for pigs are higher for most of the medieval occupation phases, probably because of poorer preservation of pig remains.

Table 1: Minimum Number of Individuals (MNI)

Taxon	Early medieval	Late medieval	Medieval	Medieval - post medieval	Post-medieval
Cattle	2	0	2	3	1
Sheep/Goat	1	1	2	3	1
Pig	3	2	3	1	1
Equid	1	1	0	1	0

2 RESULTS

2.1 Preservation and alteration

Condition

The condition of the bone was variable, falling generally between grades 2 and 4 on the Lyman criteria (where 1 is pristine, 5 is just recognisable). The preservation of the bone is moderate to good; allowing 79% of the hand collected material and 24% of the sieved assemblage to be identified to species or size category.

Table 2: Condition of the hand collected and sieved bone assemblages

Condition grade (Lyman 1996)	% of hand collected assemblage	% of sieved assemblage
1	2%	
2	31%	12%
3	51%	81%
4	15%	7%
5	1%	

Distribution

There does not appear to be any form of selective deposition. Most species were represented within most feature types. No selective deposition of skeletal elements was noted. Many of the remains were recovered from robber cuts and therefore it is uncertain whether these assemblages are from initial deposits or if they have been disturbed and redeposited.

Butchery

A total of 26 fragments of animal bone recovered from the hand collected assemblage displayed evidence of butchery. A further 2 fragments displaying butchery marks were recovered from the sieved assemblage. All of the butchery marks are consistent with disarticulation and meat removal. No evidence of bone or horn working was noted.

Burning

No evidence of burning was noted on any of the bones.

Gnawing

Gnawing was observed on 12 fragments, mainly carnivore gnaw marks on pig and cattle limb bones. A single rib displayed rodent gnawing marks. Limb bones are usually from butchery and food waste, which may suggest carnivore scavenging during or after the deposition process.

2.2 Species descriptions

Cattle

Cattle were the dominant species. Most skeletal elements are represented, suggesting that the whole carcass was originally present. Butchery marks (chops and cuts) were seen on several skeletal elements consistent with the processes of carcass division and meat removal. Measurements of a single metacarpal from medieval/post- medieval occupation layer (382) provided an estimated withers height of 1.14m.

There was not enough ageable material to produce a formal age profile. Tooth wear data were obtained from five mandibles, three of which are from old adult individuals, and 2 from senile individuals. Four mandibles were from the early medieval phase, and one old adult mandible was from the medieval/post- medieval occupation layer (382). Most of the skeletal elements were from skeletally mature individuals. A femur from an animal aged below 42 months was recovered from early medieval robber cut [526] and a calcaneus from an animal aged below 36 months was recovered from medieval-post medieval occupational layer (382). The tooth wear age data from the mandibles suggests old adults dominate the assemblage. The fusion ageing data supports this but also suggests that younger individuals were also utilised. The lack of very young individuals within a fairly well preserved assemblage may suggest that the raising of cattle took place off site, and the animals were brought to the site for use. The majority of older animals suggest that dairying and traction were the primary reasons for the maintenance of cattle. The processing for meat was reserved for the older animals that were no longer able to produce milk or work.

Pig

Pig remains are well represented. Most skeletal elements are represented suggesting the entire carcass was on site for utilisation.

A humerus from medieval posthole [586] and a scapula from a medieval pit [127] displayed cut marks consistent with carcass division and meat removal.

A total of four mandibles provided tooth wear ageing data. A pair of mandibles recovered from an early medieval pit [680] were from an immature animal. A mandible from a sub-adult animal was recovered from medieval robber cut [559], and a mandible from a sub-adult animal was recovered from the medieval/post- medieval occupation layer (382).

The epiphyseal fusion ageing data supports the tooth wear ageing. Early medieval pit [571] contains a partial skeleton of a juvenile pig. Fusion ageing data suggests that the animal was below 12 months of age. As pigs are kept for meat, breeding regularly and in fairly large numbers and then are slaughtered at a fairly young age, the presence of mainly young individuals is unsurprising.

Sheep/Goat

Sheep/goat remains are much less abundant than either cattle or pig. A single adult skull identified as sheep was recovered from medieval pit [127]. No positive evidence for goat was identified.

The majority of skeletal elements represented are of long bones and meat bearing bones with occasional skull and mandible fragments. No phalanges or metapodials were identified. The sheep/goat assemblage is probably representative of general food waste. The

animals were possibly butchered at a different area of site or actually brought onto the site as joints of meat. A total of 3 sheep/goat bones display butchery marks, all consistent with disarticulation and meat removal.

Where it is possible to assess the sheep/goat remains are all from skeletally mature individuals. Only two mandibles that could provide tooth wear data were recovered from the assemblage. A mandible from an animal aged 3-5 years was recovered from medieval surface deposit (279) and a mandible from an animal aged 5-8 years was recovered from post medieval demolition deposit (207). The animals represented are all from older animals suggesting the consumption of mutton joints. It is possible that sheep/goat were retained for wool and milk primarily and then after a few years of production they would have been processed for meat.

Equid

A total of 3 fragments of equid remains were recovered from the assemblage. An equid second metacarpal was recovered from the late medieval pit [280]. A broken maxillary tooth was recovered from the medieval/post-medieval demolition layer (346). And a single tooth from an animal aged 11-15.5 years was recovered from early medieval pit [472].

Dog

A single dog forth metacarpal was recovered from early medieval pit [571].

Wild mammals

Red and fallow deer, rabbit and hare represent the wild species. Two fragments of red deer and two fragments of fallow deer were recovered. The represented skeletal elements are all meat bearing bones. The fallow deer tibia from medieval posthole [586] displays cut marks consistent with meat removal.

From the hand collected and sieved assemblages of early medieval pit [127] small numbers of both hare and rabbit remains were recovered. No evidence of butchery was noted on any of the bones. Although rabbit can often be intrusive there is no reason to suggest that these bones are not contemporary with the rest of the assemblage.

No micro mammals were recovered from either the hand collected or sieved assemblage.

Amphibians

A single amphibian urostyle was recovered from medieval/post-medieval posthole [541].

Birds

Bird remains are well represented. As well as the common domesticated species such as domestic fowl and goose, there were also wild birds such as mallard, woodcock and pheasant. From the sieved assemblage a single humerus of a small passerine, sparrow-sized, was recovered from late medieval pit [127]. No evidence of butchery or gnawing was noted on the bone. Two geese and one fowl bone displayed butchery evidence consistent with disarticulation. Pheasant is an introduced species and difficult to distinguish from domestic fowl, the presence of this bird may be an indication of high status of the site (Pers.Comm. S. Hamilton-Dyer). Domestic fowl and goose were often retained as a ready source of meat, eggs and feathers. Wild species of birds were widely exploited as a food source within the medieval phases.

A wide range of species appears to be primarily, although not exclusively, indicative of wealth/high status (Grant, 1989:168). The numbers of wild bird are not exceptional. However, due to certain hunting limitations within the medieval period, the presence of game birds may suggest a fairly rich or privileged household, especially by the late medieval period.

Fish

Fish remains are fairly well represented. Many of the large elements such as cod vertebrae were recovered by hand. However, the majority was recovered by sieving, mainly from medieval pit [127]. The identified species (Table 5) are all from marine taxa, for example cod, herring, whiting and flatfish. A single eel bone was recovered from the pit [127] assemblage. Common eel occurs in both salt and fresh water. As there are no other freshwater taxa, there is no evidence that local fresh water sources or fishponds were exploited. As marine taxa dominate the assemblage it suggests that fish was regularly traded from the coast, fresh, smoked or salted.

2.3 Features of interest

Late medieval pit [127]

A total of 90 fragments of animal bone and fish were recovered by hand from pit [127], with a further 285 fragments of fish and animal remains recovered from the sieved assemblage. The assemblage consists of predominantly meat-bearing bones such as limb bones and ribs. The assemblage contains the full range of species such as cattle, sheep/goat, pig, red deer, rabbit, hare, goose, fowl, woodcock, pheasant, whiting, herring and cod. The assemblage appears to be primarily food waste. There is also the occasional inclusion of large and medium mammal sized vertebra and skull remains which may suggest the inclusion of other forms of rubbish such as butchery waste.

3 DISCUSSION

The assemblage from Parsonage Farm is typical of the medieval period. As the extent of excavation of Parsonage Farm was limited, the animal bone assemblage is just a small proportion of what would have been produced from such a site. The majority of the animal bone assemblage appears to be specifically food waste, therefore limiting the information that can be gained on husbandry practices.

The cattle and sheep/remains are all from skeletally mature individuals: Where ageing data are available the animals are older adults. This suggests that secondary produce such as wool, milk, manure and traction were the primary concern when raising the livestock. Surplus animals would be then processed for meat. Pigs are very prominent. The assemblage consists of sub-adult and juvenile individuals. Pigs breed regularly and have large litters. Therefore many pigs are slaughtered at a young age as they are a ready supply of meat. Pigs were often kept for their ability to convert foodstuffs often poisonous to other species, such as acorns and beech mast, into meat (Grant, 1989:157). The fact that pigs could be allowed to forage in the woods for 'free' food or fattened on kitchen scraps makes them quite an economical animal for meat production.

Fish were a popular repast in the medieval period, especially due to the religious restrictions on the eating of meat. Marine species dominate most archaeological assemblages from the medieval period. Parsonage Farm is no exception to the rule. Trade routes from the coast and preserving methods such as smoking and salting, opens up another available resource of protein throughout the year.

The numbers of bird species are also typical of the medieval period. The retention of domestic fowl and goose as a ready source of meat and eggs was commonplace. The diet at Parsonage Farm was occasionally supplemented by wild species such as red and fallow deer, rabbit, hare and game birds. Most of the species discussed were usually available from managed resources, such as deer parks. The deer remains are meat-bearing bones, so it is possible that the animals were imported into the site as joints of meat rather than as entire carcasses.

Dog and equid remains are very limited and provide little information save to confirm the presence of the species on site. Dog and equid are very often working animals, dogs used for guarding, herding and hunting and equids were mainly utilised for riding and traction. Micro-mammals are absent from the assemblage. This may be a result of poor preservation or lack of collection due to the limited excavation. However, it could be explained by good pest control at the time of occupation, such as the employment of cats and dogs, secure containment of waste or food and thorough cleaning of the occupied areas. A single

amphibian bone was recovered from the assemblage, providing little information save the presence of the species.

The assemblage suggests that the site's principal occupants were comparatively wealthy. The majority of the meats consumed, of domestic cattle and sheep, is from the older surplus or redundant animals, possibly provided by the farmlands directly associated with Parsonage Farm. This basic diet is then supplemented with purchased or hunted 'high status' foods such as pheasant and deer.

Table 3: Number of fragments of each taxon from the hand collected material, by phase

	Phase						
Taxon	**Early Medieval**	**Late Medieval**	**Medieval**	**Medieval - Post Medieval**	**Post Medieval**	**Unphased**	**Total**
Cattle	30		42	24	3	2	101
Sheep/Goat	5	1	13	5	5	3	32
Sheep			1				1
Pig	24*	5	26	7	6	4	72
Equid	1	1		1			3
Dog	1						1
Red Deer *(Cervus elaphus)*		1	1				2
Fallow Deer *(Dama dama)*			2				2
Rabbit *(Oryctolagus cuniculus)*		2	1				3
Fowl	4	1	7		1		13
Goose	2	4	5				11
Mallard		1					1
Pheasant		1					1
Pigeon			1				1
Woodcock		1					1
Bird	1	2	2		1		6
Amphibian	1						1
Large Mammal	25	9	51	22	3	33	143
Medium Mammal	10	15	50	6	7	14	102
Small Mammal	2						2
Unidentified	32	7	70	7	3	15	134
Total	**138**	**51**	**272**	**72**	**29**	**71**	**633**

*Includes Partial Skeleton

Table 4: Number of fragments of each taxon from the sieved material, by phase

	Phase			
Taxon	**Late Medieval**	**Medieval**	**Unphased**	**Total**
Pig		4	1	5
Hare *(Lepus capensis)*		2		2
Rabbit*(Oryctolagus cuniculus)*	1			1
Lagomorph	1			1
Fowl		2		2
Song Bird	1			1
Bird	2	3		5
Large Mammal	1	13		14
Medium Mammal	2	10		12
Small Mammal	1	2		3
Unidentified	4	128	18	150
Total	**13**	**164**	**19**	**196**

Table 5: Number of fish identified to taxon, by phase

	Phase		
Taxon	**Late Medieval**	**Medieval**	**Total**
Cod *(Gadus morhua)*	1		1
Cod Family *(Gadidae)*		1	1
Ling *(Molva molva)*	1		1
Eel *(Anguilla anguilla)*	1		1
Flatfish *(Pleuronectes platessa)*	3	14	17
Herring *(Clupea harengus)*	6	30	36
Whiting *(Merlangius merlangus*)	7	22	29
Thornback *(Raja clavata)*		3	3
Shark/Ray (Elasomobranch)		1	1
Fish	28	33	61
Total	**47**	**104**	**151**

4 BIBLIOGRAPHY

ADS, 2006 CTRL Digital Archive, Archaeology Data Service, http://ads.ahds.ac.uk/catalogue/projArch/ctrl