

APPENDIX 1 - ASSESSMENT OF ANIMAL BONE

1.1 Animal bone

By Bethan Charles

Introduction

- 1.1.1 Animal bone was recovered from the excavations at White Horse Stone, Pilgrim's Way, West of Boarley Farm and from the watching brief (ARC 410 57+500 98 and ARC 58+200-59+200 99). In addition, bone was also recovered from environmental samples. For the purpose of this assessment the sieved bone has been rapidly scanned and is mentioned only briefly.
- 1.1.2 The material was recovered and recorded in accordance with the specified Fieldwork Event Aims (see Section 2.2 above), in particular to assist in the understanding of animal husbandry, diet and cultural practices during the periods of occupation represented on these sites (aims 1-2, 11, 13). Information from the wild species recovered from the settlement sites, particularly the small mammals will provide some information regarding the surrounding environment.

Methodology

- 1.1.3 The calculation of the species recovered from the site was done through the use of the total fragment method. The presence of small mammals was noted, although these were not identified to species. All fragments of bone were counted including elements from the vertebral centrum, ribs, long bone shafts as well as individual teeth. In addition, the minimum number of individuals (MNI) was calculated for the main domestic species from the two major periods of occupation only, due to the small numbers of bone from all other periods. MNI was implemented using the most commonly identified fragments of bone per individual species by period. Mandibles were used for most of the species apart from the cattle and sheep from the late Neolithic deposits for which metatarsals and humeri were used respectively, following the calculations suggested by Chaplin (1971).
- 1.1.4 The sheep and goat bones were separated using the criteria of Boessneck (1969) and Prummel and Frisch (1986), in addition to the use of the OAU reference collection.
- 1.1.5 The ageing of animals was based on tooth eruption and wear as well as the epiphyseal fusion rates of the long bones. Silver's (1969) tables were used to give timing of epiphyseal closure for cattle, sheep, pigs and horses (all information is included in the text). Sheep's tooth eruption and wear were measured using a combination of Payne's (1973) and Grant's (1982) tables. Cattle tooth eruption and wear were measured using Halstead (1985) and Grants (1982) tables. However, none of the cattle mandibles from the assemblage were found within secure contexts. Pig tooth eruption and wear were measured using Higham (1967), Bull and Payne (1982) and Grant (1982), as defined by Hambleton (1999). Horse tooth eruption and wear were measured using Levine's (1982) tables. Again, none of the horse mandibles were found within secured contexts. All tooth eruption and wear tables can be found in the appendix.
- 1.1.6 The determination of the sex of cattle and sheep, was done through looking at the medial wall of the acetabulum, since the majority of innominate bones were incomplete. Horses were separated through the recording of the presence of the canine teeth and similarly, the pigs were separated through differentiation of tusks.

- 1.1.7 The measurements taken were those defined by von den Driesch (1976), although this is not discussed in the assessment. This data can be made available during the final report analysis stage.

Quantification

- 1.1.8 A total of 6964 fragments (56353 g) of bone was recovered from the sites excavated at White Horse Stone, Pilgrim's Way and West of Boarley Farm (Tables 10.1.5-7). From this number a total of 3359 fragments (17313 g) of bone was found at White Horse Stone, of which 42% of the bones were identified to species (Table 10.1.1). A further 1024 fragments (13587 g) of bone was recovered from Pilgrim's Way, of which 39% were identified to species (Table 10.1.2). Finally, 2581 fragments (25183 g) of bone was recovered from the site at West of Boarley Farm, of which 32% of the bone was clearly identified to species (Table 10.1.3). However, most of the unidentified fragments of bone, which are generally tiny, were recovered from a cattle burial and almost certainly belong to the skeleton. When this is taken into account the overall percentage of identified fragments can be increased to 90%.
- 1.1.9 An additional 273 fragments (1494 g) of bone was recovered from watching brief sites associated with White Horse Stone and West of Boarley Farm, of which 88 fragments (1120 g) of bone were identified to species (see Tables 10.1.8-9).

Table 10.1.1: Percentage of identified fragments of bone from White Horse Stone according to period.

Period	% of identified fragments								Count	Weight (g)
	Sheep	Cattle	Pig	Horse	Dog	Bird	Fish	Other		
EN	100	0	0	0	0	0	0	0	1	28
LN	1	98	1	0	0.1	0	0	0.1	846*	3945
M – LBA	33	53	7	0	7	0	0	0	15	409
EIA	39	36	15	3	1	0.3	0	6	347	6088
IA	33	17	17	33	0	0	0	0	6	162
M-LIA	86	14	0	0	0	0	0	0	7	35
Roman	33	33	33	0	0	0	0	0	3	30
Unphased	61	15	19	1	0	0	0	4	174	2360
Total									1399	13057

LN Late Neolithic M – LBA Mid to late Bronze Age EIA Early Iron Age IA Iron Age M-LIA Mid to late Iron Age

* 736 fragments from this total are from a single cattle skull from context 5073

Table 10.1.2: Percentage of identified fragments of bone from Pilgrim's Way according to phase.

Period	No. of identified fragments								Count	Weight (g)
	Sheep	Aurochs	Cattle	Pig	Horse	Dog	Bird	Other		
EPR	0	0	25	75	0	0	0	0	4	61
LPR	0	0	95	1	0	0	0	4	286*	3846
LNE	10	10	50	30	0	0	0	0	10	234
LIA	0	0	100	0	0	0	0	0	1	98
MD	57	0	14	0	29	0	0	0	7	170
Unphased	7	2	58	31	0	1	1	0	85	6018
Total									393	10427

EP = Early Prehistoric; LP = Late Prehistoric; MD = Medieval

* 243 fragments from this total are from a single cattle skull from context 862

Context	Period	% of identified species										Count	Weight (g)
965	LNE	0	0	50	50	0	0	0	0	0	0	2	33
967	LNE	100	0	0	0	0	0	0	0	0	0	1	4
896	LIA	0	0	100	0	0	0	0	0	0	0	1	98
392	MD	100	0	0	0	0	0	0	0	0	0	3	16
559	MD	25	0	25	0	50	0	0	0	0	0	4	154
366	0	100	0	0	0	0	0	0	0	0	0	1	17
449	0	100	0	0	0	0	0	0	0	0	0	2	5
498	0	100	0	0	0	0	0	0	0	0	0	2	17
563	0	0	0	0	100	0	0	0	0	0	0	1	21
568	0	100	0	0	0	0	0	0	0	0	0	1	16
640	0	0	0	0	0	0	0	0	100	0	0	1	0
860	0	0	0	100	0	0	0	0	0	0	0	5	367
888	0	0	0	100	0	0	0	0	0	0	0	7	908
899	0	0	0	100	0	0	0	0	0	0	0	1	22
905	0	0	0	100	0	0	0	0	0	0	0	2	423
907	0	0	0	0	100	0	0	0	0	0	0	1	17
910	0	0	0	67	33	0	0	0	0	0	0	9	471
912	0	0	0	14	71	0	14	0	0	0	0	7	166
914	0	0	0	17	83	0	0	0	0	0	0	6	19
924	0	0	0	56	44	0	0	0	0	0	0	9	111
935	0	0	50	50	0	0	0	0	0	0	0	4	1978
953	0	0	0	80	20	0	0	0	0	0	0	10	479
954	0	0	0	86	14	0	0	0	0	0	0	7	790
963	0	0	0	67	33	0	0	0	0	0	0	3	35
971	0	0	0	50	50	0	0	0	0	0	0	6	156
												393	10427

Table 10.1.7: Percentage of identified species from West of Boarley Farm according to phase and context.

Context	Period	% of identified species										Count	Wt (g)
		Sheep	Goat	Cattle	Pig	Horse	Dog	S. Mam	Bird	Fish	Other		
1037	IA?	20	0	60	0	20	0	0	0	0	0	10	281
1041	LIA/RO	13	0	87	0	0	0	0	0	0	0	15	6
1137	Mid Saxon	25	0	25	50	0	0	0	0	0	0	4	85
1034	Mid Saxon	7	0	92	0	0	0	0.3	0.3	0	0	348	8484
1060	Mid Saxon	0	0	0	0	100	0	0	0	0	0	245	12496
1148	Mid Saxon	15	0	27	4	0	0	2	42	10	0	52	657
1021	MD	38	0	50	0	6	0	0	0	0	6	16	335
1002	0	0	0	0	0	100	0	0	0	0	0	7	360
1030	0	56	0	44	0	0	0	0	0	0	0	18	317
1039	0	70	30	0	0	0	0	0	0	0	0	10	203
1042	0	0	100	0	0	0	0	0	0	0	0	1	31
1059	0	33	0	33	0	33	0	0	0	0	0	3	101
1128	0	100	0	0	0	0	0	0	0	0	0	1	16
1131	0	0	0	100	0	0	0	0	0	0	0	1	43
1135	0	0	100	0	0	0	0	0	0	0	0	1	10
1141	0	0	100	0	0	0	0	0	0	0	0	83	211
												815	23636

Table 10.1.8: Percentage of identified species from sites ARC 410 57+500 98 (White Horse Stone chainage site) according to context and phase.

Context	Interpretation	Period	% of identified fragments			Count	Weight (g)
			Horse	Cattle	Sheep		
608	Pit	EIA	50	50	0	2	333
630	Pit	EIA	0	67	33	3	15
642	Posthole	EIA	0	100	0	1	4
						5	352

Table 10.1.9: Percentage of identified species from sites ARC58+200 - 59+200 99 (West of Boarley Farm chainage sites) according to context and phase.

Context	Period	% of identified species										Count	Weight (g)
		Sheep	Goat	Cattle	Pig	Horse	Dog	S.Mam	Bird	Fish	Other		
15	LBA?	12	0	2	0	0	0	0	13	0	0	27	208
66	LIA	20	40	40	0	0	0	0	0	0	0	5	105
67	LIA	33	0	33	0	0	0	0	33	0	0	3	111
21	MD	0	0	0	100	0	0	0	0	0	0	1	3
24	MD	0	0	0	41	0	0	0	41	0	18	17	94
30	MD	25	0	25	50	0	0	0	0	0	0	4	46
34	MD	50	0	0	50	0	0	0	0	0	0	4	30
42	MD	100	0	0	0	0	0	0	0	0	0	1	6
11	Unphased	33	0	33	0	0	0	0	33	0	0	3	21
12	Unphased	82	0	6	6	0	0	0	6	0	0	18	144
	Total											83	768

Table 10.1.10: Tooth wear stages of sheep mandibles from White Horse Stone, Pilgrim's Way and West of Boarley Farm according to period (includes one mandible from sieved material).

Age	EIA	IA	Mid Saxon	MD	MO
2-6 months	1			1	
6-12 months	2				
1-2 years		1			1
2-3 years			1		
3-4 years	1				
4-6 years	1	1			
6-8 years	1				

Table 10.1.11. Tooth wear stages of pig mandibles from White Horse Stone and Pilgrim's Way.

Age	LPR	LNE	EIA	IA
0-1 month		1		
18-30 months	1		1	1
30 - 36 months			1	

1.1.10 All sieved bone from White Horse Stone was fully recorded. From the remaining sites only a small amount of sieved bone was recovered from environmental samples, which was scanned for the assessment.

1.1.11 As with the hand collected bone, the majority was in poor condition. Only a small amount of bone was identifiable to species and consisted mostly of sheep, pig and cattle bones. Other bone included a small amount of rodent, amphibian and bird bone. A few fragments of fish bone were recovered from West of Boarley farm in context 1148 within pit 1146. However, this feature has not been securely phased.

Provenance

Early and Late Prehistoric

- 1.1.12 Only four fragments of bone were recovered from an early prehistoric deposit (923) consisting of three fragments of pig bone and one cattle rib. All of the bone from the late prehistoric period was from a tree throw that also contained flint and pottery (861). The bones consisted of mostly cattle feet bones and a skull as well as a few pig bones and fragments of Red deer and Roe deer antler. All of the prehistoric material was recovered from the site at Pilgrims Way.

Late Neolithic

- 1.1.13 The majority of the late Neolithic material came from the site at White Horse Stone and consisted of a cattle skull, a fragment of vertebrae and a metapodial as well as three pig bones from context 5073. Of the remaining material the majority came from pit 4994 (fills 4996 - 4998), which also contained carefully constructed deposits of lithics, pot and burnt stone (see Appendices 1-3). Since the majority of the bone came from pit 4994, it is unlikely that the MNI (Table 10.4) is truly representative of the ratio of cattle, sheep and pig from this site.
- 1.1.14 The animal bone deposited included mostly foot, vertebrae, rib and fragments of skull from cattle as well as a few fragments of pig and sheep bone. It is possible that the hide of a cow with the skull and feet attached was deposited in the pit. Sheep were still quite rare in the late Neolithic period (Olsen 1994), which may again indicate the significance of this deposit.
- 1.1.15 Almost all of the cattle bone from this feature was identified as coming from calves and young animals. This is significant since it has been shown that the majority of the cattle bones recovered from Neolithic sites in England have been adult (Legge 1981). At least one element from a sheep was less than 10 months old and another fragment was from an individual of over 3 to 3.5 years of age. MNI suggests that bone from at least 3 or more cattle were placed within context 4998, which contained the majority of the deposit.
- 1.1.16 A dog mandible and a Roe deer antler were also found within the assemblage. Only a small amount of material came from the Neolithic long house structure and consisted of two cattle teeth and a calcaneum bone from contexts 4967 and 4969.
- 1.1.17 A small amount of late Neolithic material was recovered from Pilgrims Way and consisted of five fragments of cattle bone and a small amount of pig and sheep bone. One fragment of Aurochs vertebrae was also found in the assemblage. Two fragments of Aurochs long bone were also found in context 935, which was not dated.

Mid to late Bronze Age

- 1.1.18 The fragments of animal bone from mid to late Bronze Age deposits consisted of mostly teeth and fragments of foot bones from cattle, sheep and pig from the site at White Horse Stone. A single dog skull was also recovered from context 4100.
- 1.1.19 In addition to the bone from White Horse Stone, 27 fragments of bone were recovered from the watching brief (chainage site ARC58+200 - 59+200 99). However, it is not clear as to how secure the late Bronze Age dating of this deposit is since half of the bone retrieved came from domestic fowl, which is generally thought to be a later introduction.

Early Iron Age

- 1.1.20 All of the bone from the early Iron Age deposits came from White Horse Stone and the adjacent watching brief area. It consisted of the majority of bone found from the area within one phase of activity and is likely to provide the best information regarding the animal husbandry of the site.
- 1.1.21 Cattle and sheep were the most numerous animals found from within this period (Table 10.1). Both the percentage of identified fragments and the minimum number of individuals (MNI) shown in Table 10.4 indicate that sheep were slightly more numerous than cattle. However, it is highly probable that the sheep bones have been under represented due to the poor condition of the bones resulting in the larger bone being better preserved. This may suggest that the sheep were the most numerous animals kept at the site. This appears to be a more rational decision on the part of the inhabitants since sheep would have been more adept at surviving on dryer hilly slopes, whilst the cattle would have required lush pasture and a large supply of water. It has been shown that cattle can consume as much as 16 gallons of water a day (Reynolds 1987).
- 1.1.22 Pig bones may also have been under represented since they tend to be more porous and more prone to fragmentation than those of cattle and sheep.
- 1.1.23 Most of the information regarding the ages of the main domestic species were from this period of occupation. It appears from the rate of epiphyseal fusion of the cattle bones recovered from the site that none of the animals were killed before 3.5 years of age. In contrast, the data from the epiphyseal fusion of the sheep indicates that there was a mixture of animals being killed before maturity and in adulthood. The tooth wear stages (Table 10.10) indicates that at least half the sheep were killed before their first year, whilst the remaining sheep were kept until they were quite old. Since most of the lambs were likely to have been born in the spring, it is possible that many of the young sheep were killed before winter so as not to exhaust the supply of food for the winter months. It is likely that the remaining sheep were kept to an older age predominantly for their wool, milk and dung.
- 1.1.24 The ageing data from both the epiphyseal fusion of the elements and tooth wear stages of the pigs indicates that none of the animals were kept beyond three years of age. The majority is likely to have been less than 2 years old at death. Pigs would not have provided many secondary products and were almost certainly only kept for their meat.
- 1.1.25 Only a few fragments of horse bone were found at the site including a horse skull from posthole 4350 (part of 4-post structure 4503). The remaining elements were tooth and foot bones. It does not appear that horses were kept in great numbers at the site.
- 1.1.26 Two fragments of dog bone were recovered from context 2113 from within pit 2114. A single fragment of bone from a domestic fowl was found in context 4050. It is not certain as to whether domestic fowl was eaten at this site since, according to Julius Caesar, the inhabitants of Britain did not eat domestic fowl but kept them for amusement instead (Gallic War, V, 12).
- 1.1.27 Wild species from this period included a partially articulated toad skeleton from context 2187 and fragments of Red Deer and Roe Deer. Most of the deer consisted of antler fragments at least two of which had been shed, apart from two long bone fragments from Red deer. Wild animals do not appear to have made up a large part of the diet of the inhabitants.

Middle to late Iron Age (Including bones dated as Iron Age alone)

- 1.1.28 A small number of bones were recovered from the mid to late Iron Age period of occupation including a small number of cattle, sheep, goat, pig and horse bones. Very little information other than the presence of the animals at the site can be taken from this small assemblage.

Late Iron Age/Roman to Roman

- 1.1.29 Only 18 fragments of identified bone were recovered from this period of occupation. Pig bones were the most numerous fragments found from the sites along with a small number of sheep and cattle bones.

Middle Saxon

- 1.1.30 A fragment of a pig humerus and a tooth, along with a cattle humerus and a sheep mandible were recovered from context 1137 within pit 1142 which was dated to this period. The sheep mandible was aged to between 2 to 3 years of age. However, most of the bone from this period came from two animal burials (see animal burials section below) and from context 1148 within pit 1146 which contained 52 fragments of bone including sheep, cattle, pig, bird and a small amount of fish bone.

Medieval

- 1.1.31 Seven fragments of bone from horse, sheep and cattle were recovered from features dated to this period.

Modern

- 1.1.32 All of the bones from this period came from context 1021 within pit 1057. Most of the bones came from cattle and sheep. Part of a horse skull was also retrieved from the feature along with a Red deer antler that had been partially worked.

The animal burials

- 1.1.33 The majority of the animal burials came from the area excavated at West of Boarley Farm. These include the remains of cow and horse burials as well as the partially articulated skeleton of an immature horse and a neo natal pig. Radiocarbon dates on two of these burials (1034 and 1060) indicate a mid-late Saxon date (see Section 3.6). A third burial, that of a neo natal pig was dated by its association with LIA pottery.
- 1.1.34 The horse skeleton was excavated from within pit 1061 (1060). The animal was lying on its left side with its head pointing towards the south-east. The horse was female and all of the bones were fully fused, indicating that the animal was over 3.5 years of age (Silver 1969).
- 1.1.35 The cattle skeleton was excavated from within pit 1036 (1034) and like the horse burial was lying on its left side. The skull was slightly disturbed. It appeared to be pointing towards the east. The fusion rate of the bones indicated that the animal was less than 3.5 years of age (Silver 1969). However, the amount of wear on the teeth indicated that the animal might have been slightly older. It was not possible to sex the animal due to damage to the innominate bones (pelvis). The cattle burial was particularly interesting due to another small pit having been dug within the main pit to the right of the animal's right leg. Within this pit was a collection of goat foot bones consisting of 83 identifiable fragments. This may also date from the middle Saxon period. However, no dating material was associated with the deposit. MNI

showed that the bones belonged to at least four individuals. Goats may have been more valued due to the fact that they require more care than sheep.

- 1.1.36 A partially articulated horse skeleton of an animal less than nine months old was found within pit 1004 (ctx. 1002). It included part of the skull and both mandibles as well as the left and right radii and humeri. It was not clear how the animal was killed.
- 1.1.37 The remains of a neo natal pig were found in within LIA pit 1040 (ctx. 1041). Elements recovered included the left and right femur and humerus along with the left ulna and parts of the innominate bone (pelvis) and a metapodial.
- 1.1.38 One articulated skeleton was found from undated pit 5454 (ctx. 5462) at White Horse Stone. The bones belonged to a sheep. The animal was between 1 and 2 years of age according to the tooth wear and around 2.5 to 3 years of age according to the epiphyseal fusion. The innominate bones were too badly damaged to sex the animal.

Conservation

- 1.1.39 At this stage all the material should be retained. The animal bone is adequately boxed and should be kept in a dry environment for long term storage.
- 1.1.40 The condition of the bone was graded from 1 to 5 using the criteria stipulated by Lyman (1996). Grade 1 being the best preserved bone and grade 5 indicating that the bone had suffered such structural and attritional damage as to make it unrecognisable. Almost all of the bone apart from the animal burials was in poor condition with degrees of pitting and flaking. The bones were mostly around grade 4.
- 1.1.41 Many of the bones that did survive intact were reasonably complete even though the condition of the bone was poor. It is likely that much of the surviving bone was intentionally deposited within pits, ditches and gullies either as a result of clearing rubbish away or for cultural purposes. It is unlikely that much of the identified bone comprises rubbish left on the surface for any amount of time.
- 1.1.42 A high degree of fragmentation was also present throughout the site, mostly due to the poor condition of the bone, which contributed to the high number of unidentified bones and loose teeth. Many of the fragments broke apart during excavation and processing. The majority of the bone from the hand collected assemblage were elements from the larger mammals, which appears to indicate that the smaller bones have not survived as well.
- 1.1.43 Despite the general poor condition and fragmentation of the bone it was noted that the potential to re-assemble bones was high making identification possible.
- 1.1.44 Very few of the bones from the assemblage had clear butchery marks, much of which is likely to have been a result of the condition on the surface of many of the bones. There were no particular deposits of butchered bone, and the assemblage is likely to represent animals killed for domestic purposes. None of the bones had signs of pathological changes; this again may be as a result of the condition of the bones.

Comparative Material

- 1.1.45 There is very little information regarding the local archaeology of the site, and much of the comparative material will be taken from other sites excavated on behalf of CTRL such as Thurnham. Within the region of Kent there are no other comparable

sites with published data. However, comparative data is likely to come from the many published sites of the adjacent regions of southern England.

- 1.1.46 It would be of value to look at general studies by Grigson (1982), Noddle (1989) and Legge (1981) on the species from the Neolithic and Bronze Age periods. Comparative material from Iron Age sites such as Danebury (Grant 1991) as well as more general articles on animal husbandry in Iron Age Britain (Hambleton 1999, Grant 1984, Maltby 1991, Hill 1995) will provide information regarding regional differences.

Potential for further work

- 1.1.47 The general condition of the bone from the sites was not particularly good and often quite fragmentary. However, many of the fragmentary bones could be re-assembled making detailed identification possible.
- 1.1.48 The assemblage has considerable potential to address the Fieldwork Event Aims and publication will be important given the paucity of comparable assemblages from the region. Analysis will provide valuable information regarding the diet and farming practices of the inhabitants through the different periods of occupation. It will provide data on wild and domestic resources and will contribute to the understanding of domestic and ritual practices.
- 1.1.49 It would be of value to identify some of the small mammals, bird and fish bones from securely dated contexts in order to gain information regarding variety in the diet of the inhabitants as well as possible indicators of the environment surrounding the settlement. For further analysis the bone will need to be sent to a small mammals specialist (e.g. the Centre for Human ecology and environment at Southampton). A small number of residues collected from the sieved material will require sorting.

Neolithic

- 1.1.50 Whilst the animal bone from the early Neolithic structures is disappointing because of its near absence, the considerable quantity of material from late Neolithic deposits (e.g. Grooved Ware pits) will require further analysis. Most of the animal bone came from special deposits and is unlikely to represent the typical diet of the inhabitants. However, these deposits should be characterised as they may reflect particular sets of practices, such as feasting (Thomas 1996, 180).

Bronze Age

- 1.1.51 The animal bone from the small number of Bronze Age features will require further analysis. This will provide some information on economic and depositional practices during this period.

Iron Age

- 1.1.52 The early Iron animal bone assemblage is important because of its recovery from a range of features within a large open settlement. There are presently no other published assemblages of comparable size and character from Kent. Its study will make a considerable contribution to the region as a whole.

Roman

- 1.1.53 The very small collection of animal bone from features of this period is of limited potential, although its presence should be recorded.

Post-Roman

- 1.1.54 The early medieval animal burials are of particular importance and warrant further study because of their completeness, context and date.

Updated research aims

- 1.1.55 Themes concerning chronology, settlement, landscape and society (status, settlement organisation), material culture and processes of change have the potential to be addressed (see Palaeoenvironmental Overview section 4.5).

Chronology

- 1.1.56 What evidence is there for continuity or change in farming practices during prehistory?

Settlement, landscape and society

- What is the evidence for domestic animals during the periods represented?
- What evidence is there for domestic activity? Is there any evidence to suggest that the Neolithic structures were used for housing animals?
- What is the evidence for animal husbandry and what can this tell us about the social organisation of the societies that lived at the settlements?
- What evidence is there from the animal bone to suggest ritual activity?
- What meaning can be attached to the human and animal burials of Iron Age and Saxon date found near the Pilgrim's Way, considering the composition and location of the burials? What is the role of animal remains in ritual deposits? To what extent do these features reflect concerns with symbolism and cosmology rather than simple rubbish disposal?

Material culture

- What evidence is there from the animal bone remains that sheep were kept for wool and that textiles were produced at the settlement?

Processes of change

- What is the evidence for the introduction of domesticates and what evidence is there for the continued exploitation of wild animals and resources (e.g. shed antler).

Recommended Further work

- 1.1.57 The potential described above may be addressed by a programme of recording, followed by selective analysis. This will provide detailed information regarding the diet and animal husbandry practices of the inhabitants. It would be of value to look at the spatial distribution of the animal bones across the site to analyse trends and patterns in the deposition of refuse and to identify any special deposits and the extent of ritual deposits. Detailed analysis of the animal burials should be undertaken once the dating has been confirmed.
- 1.1.58 For further analysis the bone will need to be sent to a small mammals specialist (e.g. the Centre for Human ecology and environment at Southampton). A small number of residues collected from the sieved material will require sorting.

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