

5.1.14 Trench 10 animal bone

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Trench 10 is composed of three ditches: [10003], [10020] and [10025]. The total of all these ditches is presented on Table 5.180 by time period. The discussion of each individual ditch will follow below. Except for the pig bone in the Late Bronze Age-Early Iron Age which is dated stratigraphically to this phase (see further below), all other bones are placed in contexts with an approximate time period.

Although the amount of bone is very low, there are certain trends which can be fleshed out. There is more sheep/goat in possibly Early Iron Age than pigs, cattle or horse, with cattle gaining some ground possibly Middle Iron Age at the expense of sheep/goat, pig and horse, which diminish slightly.

	?LBA- EIA	?Early Iron Age		MIA		Total ditch	
Taxon	NISP	NISP	%	NISP	%	NISP	%
Cattle		5	23	39	35	44	33
Sheep/Goat		12	54	51	46	63	47
Sheep		[2]		[11]		[13]	
Goat				[1]		[1]	
Pig	1	3	14	12	11	16	12
Horse	1	2	9	8	7	11	8
Total identifiable	2	22		110		134	
% identifiable			45		60		57.5
Large Mammal		13		41		54	
Medium Mammal		14		31		45	
Total unidentifiable	0	27		72		99	
% unidentifiable			55		40		42.5
Grand Total	2	49		182		233	

Table 5.180 Species representation according to NISP and percentage for animal bones Trench 10.

Ditch [10003]

As with other ditches on site, the amount of animal bone is not outstandingly large. The preservation overall is good as over half are identifiable (Table 1). Bones found in excellent condition are rare at 4%. Bones in poor condition are not common either and only 6% are in poor condition. The bones are not particularly complete which aids identification, as only 7% were found complete and are mostly teeth. Gnawing is also low at 9% and burning is practically non-existent with only two bones burnt. So overall, the preservation and the lack of other pre- or post-depositional attrition aid the identification of the bones.

?Late Bronze Age and Early Iron Age

An adult horse bone was found in fill (10022) and it is a well preserved distally fused humerus which had the proximal articulation gnawed off. There were no butchery marks but it must have been separated from the carcass at some point, when dogs had access to it, and it was then deposited in this ditch.

	Ditch 10003											
	?Late Bronze Age-Early Iron Age		?Early Iron Age		Middle Iron Age							
Fill	10022	10029	10014	10021	10005	10006	10009	10013				
Taxon	NISP	NISP	NISP	NISP	NISP	NISP	NISP	NISP	Total MIA	% MIA	Total Ditch	% Ditch
Cattle				2	7	2		7	16	27	19	28
Sheep/Goat				2	18			15	33	56	34	51
Sheep					[3]			[5]	[8]		[8]	
Goat								[1]	[1]		[1]	
Pig		1			6	1		1	8	14	9	13
Horse	1			2	1			1	2	3	5	7
Total identifiable	1	1	0	6	32	3	0	24	59		67	
% identifiable										55		52
Large Mammal			1	3	14	2		8	24		28	
Medium Mammal			5	3	9		2	14	25		30	
Total unidentifiable	0	0	6	6	23	2	2	22	49		61	
% unidentifiable										45		48
Grand total	1	1	6	12	55	5	2	46	108		128	

Table 5.181 Species representation according to NISP and percentage fills in Ditch [10003].

In fill (10029), the one pig bone is an excellently preserved and complete (except for the proximally unfused epiphysis) of a first phalanx of an animal younger than 1-2 years at death. Although it does not have any butchery marks, it must have been separated from the other bones in the foot at some point. Fill (10029) is the secondary fill in this ditch and it seems that it was formed through weathering and erosion. This is in total contrast to the pig bone (and the horse bone above) and must mean that either the bones were thrown and/or deposited and quickly covered, or they are intrusive due to bioturbation processes. However, although it is likely that a small pig bone, as a first phalanx is, might be an intrusive, the horse humerus is a very strong and large bone which would not be possible to move except by human or animal intervention (i.e. dogs). So it remains a mystery as to why the bones are so well preserved when they were found in fills which were weathered and eroded.

Early Iron Age

The two cattle bones from fill (10021) are two different parts of the same adult mandible. The two horse bones are a distal articulation of a humerus (echoing the humerus in (10022) above) and fragment of a scapula. Although both are meat-bearing bones, there are no butchery marks. Both of these are from adults, which is not the case for the two immature sheep/goat bones, one tibia and one radius. These are only cylinders, i.e., without the proximal and distal ends of the bones, since those areas have been gnawed off by either dogs or humans.



Fig. 5.31 Large Mammal humerus with areas of infection. NB: Blue tack used to temporarily secure bone while being photographed. Photo by P. Lange.

Taxon	Element/Side	dp4	P4	M1	M2	M3	MWS	Age	Bone no.	Fill
Cattle	Mandible/R	h		U			6	1-8 mos.	AC15302	10005
Cattle	Mandible/R			k	h	g	40	Adult	AC15301	10005
Sheep	Mandible/L	e		c	C		9	6-12 months	AC15375	10013
Sheep	Tooth/R	e		[c?/d?]	[C?]		9/10	6-12 months	AC15320	10005
Sheep/goat	Mandible/R	e		d	[C?]		10	6-12 months	AC15318	10005

Table 5.182 Cattle and sheep toothwear, after Grant (1982) and Hambleton (1999), for fills in Ditch [10003].

Middle Iron Age

It is only in this time period that we have a larger sample, even though numbers are still small for each species (Table 5.181). The bones are overall in good condition as 55% are identifiable. As is usual for the Middle Iron Age, sheep/goats dominate the sample at 54% followed by cattle at 29%. But pig remains provide a substantial amount at 14%. Horse bones continue to be found in small numbers.

Two cattle mandibles were aged at 1-8 months and the other one just as an adult (see Table 5.182). There is a distinctive non-metrical pathology on the adult mandible which is that the posterior pillar is missing on the lower molar 3. This genetic trait is mainly found in Middle Iron Age context at Alfred's Castle though it has been found in layer (3159) dated sometime in the Roman period in ditch [3516] and in an Early Medieval layer (5121) in Trench 5.

Although no other pathologies were found in bones identified as cattle, there is a distal humerus shaft, identified as a Large Mammal, with extensive areas redeposition of bone on the distal anterior shaft due to an infection (see Fig. 5.31).

Oral pathologies are found in sheep/goat mandibles and teeth. In a young mandible which could not be aged further, there was interdental attrition between posterior cusp of deciduous premolar 3 and deciduous premolar 4 (not present) indicating a crowded mandible. The sheep left mandible aged 6-12 months (see Table 5.182) had plaque deposits

on lingual and buccal sides of the deciduous premolar 4 and on the lingual side of the molar 1.

Unfortunately, there were no pig mandibles available for ageing. Pig bones are restricted to cranial elements and fore-leg elements (Table 5.183). Two right maxilla with dentition represent two individuals. Cranial remains (including mandibles and loose teeth) of all species are more common than other parts of the skeleton. Horn cores are found more commonly than normal. A goat one was found which is unusual as goats are rare at Alfred's Castle. Scapulae which are the most common element for sheep/goat represent two individuals which matches well with mandibular evidence. Cattle elements also represent two individuals matching the mandibles.

Only three bones have butchery marks. A sheep astragalus has skinning marks and a Medium Mammal has cuts on a rib to remove the meat (both from fill (10013)). The most interesting butchery mark belongs to a cattle scapula in which a hole has been made in the centre of the scapula blade for the purpose of hanging it for smoking (fill (10005)) and it also had cut marks for dismembering it from the humerus. Other cattle scapulae with holes for hanging were found very sporadically at Alfred's Castle, i.e. in fill (20757) of pit [20754] dating to the Middle Iron Age and in fill (1010) of ditch [1004], dating to the third-fourth century AD. Sheep/goat scapulae have also been found with what might be holes for hanging in fills (4077) and (4116) of pit [4063], dating to the Middle Iron Age. Unfortunately, this part of the sheep/goat scapula is fragile and it is often difficult to determine whether this area was purposely pierced or whether it was broken during excavation. In any case, these types of holes are found more often in Middle Iron Age contexts than Roman contexts at Alfred's Castle.

Compared to other ditches at Alfred's Castle, there is a sizeable amount of bone, although numbers are still low for the earliest time periods. Overall (Table 5.181), sheep/goat continue to be more common followed by cattle and pig but horses are more common at the expense of pigs.

Ditch [10025], possibly Early Iron Age

With only 31 bones, it is not possible to come to any significant conclusions (Table 5.184). Nevertheless, it is important to note that there are no horses or dogs which, although never found in large quantities, are found frequently in other ditches at Alfred's Castle. Only two bones are excellently preserved and two poorly preserved. So the great majority are well preserved and that can be corroborated as over half are identifiable.

The predominance of sheep/goat over cattle and pig is a characteristic of Middle Iron Age contexts at Alfred's Castle but it is not possible to make the same conclusions for the Early Iron Age with the amount of bone available. It is more common to have bones of larger animals in ditches but in this ditch this is not the case, and sheep/goat remains are more common (Table 5.184). Only one sheep/goat mandible was aged as 2-6 months. Except for a distally unfused sheep/goat tibia, aged younger than 1.5.-2 years, all other bones are from adults. The most common elements found are tibiae, with four recorded, but these are the only meat-bearing bones found in this ditch. The rest are a metacarpal, a metatarsal, cranial elements and an axis. There were no butchery marks.

	Cattle	Sheep/goat	Pig	Large Mammal	Medium Mammal
Element	NISP	NISP	NISP	NISP	NISP
Horn core	2	2 (1G)			
Cranium	2	4	1	2	1
Maxilla			2		
Loose maxillary teeth only			1		
Mandible	2	4	1		
Loose mandibular teeth only	2	5			
Hyoid					
Atlas		1			
Axis		1			
Cervical					
Thoracic					1
Lumbar	1	1			1
Sacrum					
Caudal					
Vertebra Fragments					
Rib					5
Ossified cartilage					
Scapula	1	3	1		
Humerus			1	1	
Ulna		1			
Radius	2	1	1		1
Carpal					
Metacarpal	1	1			
Pelvis	1	1		1	
Femur					
Patella					
Tibia	1	2			
Fibula					
Astragalus		1			
Calcaneum					
Tarsal					
Metatarsal		4			
Phalanx 1		1			
Phalanx 2					
Phalanx 3	1				
Metapodial					
Long bone				11	15
Unidentified				9	1
Total	16	33	8	24	25

Table 5.183 Species and body part representation according to NISP for all fills of Ditch [10003]. (G=Goat)

A sheep/goat maxilla has receding gums around the upper molar 1 and upper molar 2 due to periodontal disease. The roots of both these and the third upper molar have root pearly due to old age.

	Ditch 10025			
Fills	10007	10030		
Taxon	NISP	NISP	Total	%
Cattle		3	3	19
Sheep/Goat	1	9	10	62
Sheep		[2]	[2]	
Pig	3		3	19
Total identifiable	4	12	16	
% identifiable				52
Large Mammal		9	9	
Medium Mammal	1	5	6	
Total unidentifiable	1	14	15	
% unidentifiable				48
Grand total	5	26	31	

Table 5.184 Species representation according to NISP and percentage for Ditch [10025].

All three cattle bones (an upper premolar 4, a metatarsal and a first phalanx) could be from one adult individual. The same situation can be applied to the three pig remains (a humerus, a tibia and first phalanx) which all may belong to one adult. There are no butchery marks or pathological problems on any of the cattle or pig bones.

Ditch [10020], Middle Iron Age

As with other ditches in this trench ([10003] and [10025]) the amount of bone is small. Overall, the bones are not well preserved, with none in excellent condition and 12% in poor condition. The percentage of bone in poor condition is very high for Alfred's Castle but not so surprising for ditch fills. Nevertheless the bones are in good enough condition to be identifiable (69%) perhaps due to 73% which are complete or almost complete. Unidentifiable bone is quite low at 31% but it must be kept in mind that this is a small sample. It is not so surprising that we have such a high percentage of identifiable bone as only two bones are gnawed and none are burnt, both post-mortem attritional processes which weaken bone and have not contributed to the fragmentation of the bones.

Cattle

Cattle remains are more numerous than sheep/goat which is unusual for Alfred's Castle but not for ditch fills which usually have larger animals like cattle and horse (Wilson 1996). One isolated lower molar 3 was aged at 30-36 months (Table 5.186) and all other bones present are fused and could go with this one individual (Table 5.187). However, there are in fact two individuals as we have two left radii. Vertebrae are absent but meat-bearing bones are common. There are no pathological problems but three bones have butchery marks. An ulna from fill (10011) was chopped to separate it from the radius and a pelvis had a chop to separate it from the rest of the trunk. But one interesting chop mark was found on a scapula in fill (10019) which is associated with cutting away of meat firmly attached after smoking.

Although part of this same scapula was found in fill (10011) there is no hole for suspension as was found on a cattle scapula in ditch [10003]. But both the one in this fill and the one in ditch [10003] do have butchery marks associated with filleting the meat off the scapula once it has been smoked.

Sheep/goat

All teeth and bones are from adults which is unusual for Alfred's Castle but not for fills in a ditch where the younger, more fragile bones do not survive. Only two loose molar 3 can be aged and both are quite old for the typical age of death for sheep/goat in the Middle Iron Age (see Table 5.186). Half the elements present (see Table 5.187) are loose teeth which implies a sample which has gone through pre- and post-depositional attrition in which only the strongest elements survive as might be the case in an open ditch. There are no butchery marks or pathological problems.

Pigs

All elements are either cranial or vertebral (Table 5.186). The one cervical vertebra is from a newborn to a few months individual as the centrum has not fused with the arch yet which occurs at around 3-6 months. The other elements could all belong to an adult female as there is an anterior mandible with the lower canine present. There are no butchery marks or pathological problems.

Horse

Equid remains are more common than pigs (Table 5.185) and this is probably due to the fact that larger animals are more frequently deposited in ditch fills. This also applies in this ditch as cattle are more common than sheep/goat. All elements belong to adults and the majority are post-cranial bones (an almost complete scapula; one pelvis broken into two fragments; and a lateral metapodial). In addition, two upper loose teeth were also present.

	Ditch 10020							
Fills	10004	10010	10011	10015	10019	10027		
Taxon	NISP	NISP	NISP	NISP	NISP	NISP	Total	%
Cattle	8	4	5	2	2	2	23	45
Sheep/Goat	7	1	5	1	1	3	18	35
Sheep					[1]	[2]	[3]	
Pig	1		1		2		4	8
Horse	5		1				6	12
Total identifiable	21	5	12	3	5	5	51	
% identifiable								69
Large Mammal	3	4	10				17	
Medium Mammal		2	3		1		6	
Total unidentifiable	3	6	13	0	1	0	23	
% unidentifiable								31
Grand total	24	11	25	3	6	5	74	

Table 5.185 Species representation according to NISP and percentage for all fills of Ditch [10020].

Taxon	Element/Side	dp4	P4	M1	M2	M3	MWS	Age	Bone no.	Fill
Cattle	Tooth/R					d	34	30-36 mos.	AC15435	10004
Sheep/Goat	Tooth/L					e	33	3-4 years	AC15445	10004
Sheep/Goat	Tooth /R					g	39	4-6 years	AC15485	10011

Table 5.186 Cattle and sheep toothwear, after Grant (1982) and Hambleton (1999), for fills in Ditch [10020].

	Cattle NISP	Sheep/goat NISP	Pig NISP	Large Mammal NISP	Medium Mammal NISP
Element					
Horn core	1				
Cranium	3		1	1	
Maxilla					
Loose maxillary teeth only		3			
Mandible	2	1	1	1	
Loose mandibular teeth only	3	5	1		
Hyoid					
Atlas					
Axis					
Cervical			1	2	
Thoracic		1			
Lumbar				1	
Sacrum					
Caudal					
Vertebra Fragments					
Rib				1	3
Ossified cartilage					
Scapula	2	2			
Humerus	1	1		1	
Ulna	1	1			
Radius	3				
Carpal	2				
Metacarpal		3			
Pelvis	2				
Femur					
Patella					
Tibia	1				
Fibula					
Astragalus					
Calcaneum					
Tarsal					
Metatarsal		1			
Phalanx 1	1				
Phalanx 2	1				
Phalanx 3					
Metapodial					
Long bone				10	3
Unidentified					
Total	23	18	4	17	6

Table 5.187 Species and body part representation according to NISP for all fills of Ditch [10020].