

APPENDIX 12: ASSESSMENT OF ANIMAL BONE

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1. Introduction

1.1 Animal bones were recovered during excavation works at West of Northumberland Bottom (ARC WNB 98), Hazells Road Diversion (ARC HRD 99) and also from the Package 330 Watching brief (ARC 330 98).

1.2 The study of the material was carried out to study the following fieldwork event aims,

- to determine the palaeo-economy of settlement through the recovery of charred plant material and other palaeo-economic indicators;
- to establish changes in the local environment through the recovery of suitable palaeo-environmental samples from the fills of cut features.
- to determine the ritual and ceremonial uses of the landscape.
- to establish if the medieval building located at the western end of the excavation at Northumberland Bottom (ARC WNB 98) is associated with activity of a similar date.

2. Methodology

2.1 Animal bones were recovered by hand-collection on site and through wet-sieving bulk samples taken in the field. All hand-collected animal bones were washed and air-dried, then bagged and labelled as context groups. Bulk samples were washed using a modified Siraf tank fitted with 1.0mm and 0.25mm flexible nylon mesh to retain the residue and flot fractions respectively. These fractions were visually sorted for floral and faunal remains and labelled as individual sample groups.

2.2 All contexts containing faunal remains were analysed and recorded onto the ORACLE CTRL animal bone database, subsequently transferred to RLE Datasets. No sub-sampling of contexts was carried out.

3. Quantification

3.1 The quantities of bones recovered from Area 330 Zone 3 are shown in Table 50. Included with the basic quantities are the overall numbers of identifiable (to species), ageable and measurable bones, as well as those which have been worked or show butchery marks. This overall data has been divided into the various areas/features within each sub-zone (Tables 51 to 57) by a selection procedure based on the quantities of bones recovered.

3.2 The Table 58 shows the percentage of identifiable fragments represented by all the specified species groups, within a selection of deposits. Those selected are meant as a representative sample of the sites. It is evident that the majority of the identifiable bones belong to cattle, sheep/goat, pig and horse. The percentage abundance of these species is obviously somewhat variable throughout the sites and site areas.

4. Provenance

- 4.1 Most of the bone assemblages from Zone 3 are in moderate to good preservation, while the level of fragmentation can be described as moderate to high. There is perhaps a greater quantity of poorly preserved assemblages within ARC WNB 98 and ARC 330 98, with such assemblages comprising about 15% of the total number (33 out of 207, and 9 out of 54 deposits respectively - Table 50). In comparison, ARC HRD 99 produced just 1 assemblage (out of 42) with a majority of poorly preserved bones. It can be conjectured that this difference could be related to a combination of factors. Notably the Hazells Road deposits include a relatively larger proportion dated to the medieval period, where the other two sites are largely composed of prehistoric or Roman levels. In addition, there is an obvious difference in the abundance of bone concentrations, as seen by the total quantity of bones in relation to the number of deposits. In contrast to Hazells Road, the vast majority of the Northumberland Bottom and Watching Brief deposits provided very few bones. Here it is assumed that the quantity of bones is in direct proportion to the level of disturbance.
- 4.2 It can be seen that the make-up of the assemblages is very clearly related to the noted levels of preservation and fragmentation. The great majority of the bones from most deposits were unidentifiable to species, and where they were identifiable, they invariably include a large proportion, or are solely composed, of tooth fragments. The low representations of identifiable bones and the associated low abundance's of age and size data, throughout the Zone 3 excavations, can be seen in Table 57.
- 4.3 Most of the bones were from Northumberland Bottom (Figures 8-15) and from the Hazells Farm Watching Brief excavations (Figure 5). Each of these two sites feature concentrations of assemblages dated to the prehistoric, particularly the Middle Iron Age, and Roman periods, while the Hazells Road (Figure 7) assemblages are mainly divided between those dated to the Roman and medieval periods. There are some differences between the assemblages recovered from the various areas/features within these sites. The following descriptions, will refer to each of these major areas/features, travelling from west to east across Zone 3 (Tables 51 to 56).

North of Hazells Farm (ARC 330 98)

- 4.4 The watching brief ARC 330 98, in the area to the north of Hazells Farm (Figures 4 and 5), provided a range of bone-bearing deposits (Table 51). This area comprised the post-medieval brick clamp [345], a work-hollow/waterhole [1427] with Late Bronze Age and Iron Age deposits, and two groups of pits dated to the mid to late Iron Age (Figure 5). The brick clamp and the work-hollow provided very few bones, and each provided just one and two identifiable fragments respectively.
- 4.5 A noticeably larger quantity of bones were recovered from the pit groups dated to the mid to late Iron Age. The identifiable portions of these assemblages were largely composed of the major domesticates, and mainly cattle and sheep/goat fragments (Table 58). Noticeably there were examples of very young lambs within two pits (one in each group), which strongly suggests local production. The samples provided very few bones, of which the great majority were unidentifiable to species. A few samples did, however, produce small rodent bones, probably a mouse or vole. An unusual aspect of a number of pits was the high proportion of calcined bones. These are clearly animal, rather than human, remains. Nevertheless, there is the possibility that they may represent the partial remains of cremations or the by-products of cooking.
- 4.6 Of great interest within this area to the north of Hazells Farm was the recovery of a particularly large collection of bones from the basal deposit from one of the pits [147] (Plate 3) in the above mentioned eastern group (Table 51). This, dated to the mid-late Iron Age and provided a very unusual assemblage, composed of a series of partial, and apparently disarticulated (jointed), skeletons. These included at least six relatively complete calves and at least three juvenile red deer. The age of the calves is perhaps more likely to be juvenile, rather than infant, and so it is perhaps unlikely that these would represent infant mortalities. There is, however, no butchery on the bones (either the calves or the deer), which suggests they were deposited as entire carcasses or perhaps as partial articulations (noticeably there are no red deer cranial fragments). The same deposit also produced an abundance of small rodent bones, clearly comprising a large number of mouse and vole skeletons (Table 58).
- Hazells Road Diversion (ARC HRD 99)*
- 4.7 At Hazells Road (ARC HRD 99), the bones were concentrated between Roman and medieval features. In particular they occur amongst the demolition deposits within the Roman malting kiln [229]; disuse levels over the bank associated with the metalled road; and a colluvial deposit, each of these dated to the Late Roman period. They also occurred in a series of Late Roman and early medieval pits and ditches.
- 4.8 The assemblages throughout these deposits are typically composed of the major domesticates, largely cattle and sheep/goat but, including some horse and dog bones. The Roman contexts, from which the majority of the bones within this site were recovered, provided a larger range of species, including chicken, small passer, small rodents and amphibian (all from samples). In addition there was a single piece of red deer antler from the road bank. One other antler fragment was recovered, unfortunately from an undated feature, which clearly represents antler working waste. It can be seen that the Roman levels generally produced greater concentrations of bones, the typical medieval deposit producing less than 5 bone fragments (Table 52). Of interest, amongst the malting kiln deposits, was a small assemblage composed almost entirely of cattle head and foot parts. This can perhaps be interpreted as processing waste. Also of interest, regarding the

West of Northumberland Bottom ARC WNB 98 – Western part of Area A/B

- 4.9 The Northumberland Bottom excavations (ARC WNB 98) can be divided into 6 areas, 5 within Area A/B, the sixth being Area C. At the westernmost end of Area A/B there is the remains of a ?medieval timber structure, largely composed of an extensive series of post-pits. Small quantities of bones were found within a number of these features (Table 53), in each case providing very few identifiable bones (Table 57). The latter bones were invariably identified from tooth fragments. The species represented include the major domesticates as well as horse. Amongst a series of small assemblages from the Iron Age features to the south, there were a few larger collections from middle/late Iron Age ditch fills.

West of Northumberland Bottom, ARC WNB 98 – Central part of Area A/B

- 4.10 In this area are a series of enclosures, typified by middle-late Iron Age dated deposits. Reasonably sized assemblages were recovered principally from ditch fills, but these contained a rather large proportion of unidentifiable fragments (Table 57). For example, one of the ditch fills mentioned in Table 58 produced 180 bone fragments, out of which just four were identifiable. The species represented include the major domesticates and small quantities of horse and dog.
- 4.11 The adjacent area, with Late Iron Age/Early Roman enclosures (Figure 10), also provided good quantities of animal bones. Most of the bones were recovered from the ditch and pit fills dated to the Early Roman period.
- 4.12 One otherwise undated pit, situated within the main Iron Age enclosure, contained a complete, articulated, adult horse skeleton (Plate 4). This skeleton is in a rather unusual position, with both front legs flexed and both hind legs extended, such that the feet of this animal overlap; the overlap suggesting that the lower limbs had been tied. In the absence of any other bones, apart from a single sheep tooth, it is perhaps likely that this animal was deliberately and ritually buried, as against casually deposited.
- 4.13 There were examples of other possible articulations, with the remains of at least two partial horse skeletons being found within a late Iron Age/early Roman ditch fill, situated just to the north of the horse burial pit.
- 4.14 Overall, the bone assemblages within this area provided the usual low proportion of identifiable fragments, with the major domesticates providing most of the identified portion. As well as horse, there were also single occurrences of dog, chicken and crow. Finally, a fragment of bone-working waste was recovered from an undated pit fill. This bone, a horse metacarpus, had been sawn through the shaft. It also showed signs of skinning marks, clearly suggesting that some horses at this site were used for their skins and possibly also for their meat.

West of Northumberland Bottom, ARC WNB 98 – Eastern part of Area A/B

- 4.15 The medieval enclosure at the eastern end of Area A/B provided a notable concentration of bones within ditch and pit fills, dated to the early medieval period (Table 53). A large proportion of the bones from this area were taken from undated fills, which perhaps, given their position, are more likely to be medieval than prehistoric or Roman. Most of the assemblages recovered from this area are comparable to those from the previously described areas, except that there is a noticeably smaller proportion of horse bones. The range of species is

West of Northumberland Bottom, ARC WNB 98 – Area C

- 4.16 Area C provided a reasonable quantity of bones from the various ditch fills which formed the boundaries of the east to west trackway and the field boundaries to the north (Table 55). Good assemblages were also recovered from a series of pits, in particular from those positioned to the north of the trackway. The majority, if not all of these features, would appear to date to the Early Roman period.
- 4.17 The ubiquitous major domesticates are accompanied, throughout these deposits, by small collections of horse and dog bones. The horse species is represented, within one of the pitfills, by a partial articulation, comprising a near complete pelvis and femur. Unusually for this site, a number of samples provided moderate quantities of bones; mainly from the pitfills. As well as the major domesticates, these contributed a few small rodent bones, identified as mouse/vole, with one definite field vole fragment.

Watching Brief ARC 330 98 at Northumberland Bottom Army Camp

- 4.18 Several small bone assemblages were recovered from various watching brief excavations (ARC 330 98) (Tables 54 and 56). Each provided the usual poor representation of identifiable bones, comprising the typical mix of major domesticates. The largest assemblages were recovered from trenches to the west of Area C (as described above), the bones arising from ditches which are clearly extensions of those either side of the trackway in this Area. These were dated to the Early Roman period. Of interest in these ditches was the recovery of two partial dog skeletons and a single bone representing the remains of an infant lamb.

5. Conservation

- 5.1 No specific conservation requirements are necessary on the animal bone assemblages. They are packed appropriately for medium and long term storage.
- 5.2 It is recommended that all material be retained until the analysis stage when final decisions regarding retention and discard can be made.

6. Comparative material

- 6.1 The material from these sites can be compared with similarly dated deposits from other sites within this project. There is, for example, a large quantity of bones from the medieval moated farmstead from Parsonage Farm (ARC PFM 98). It would certainly be of interest to compare the bones from this apparently higher status site with those from the medieval enclosures within Northumberland Bottom and Hazells Road.
- 6.2 There are a number of Iron Age and Roman sites within the general North Kent area including the Iron Age farmstead at Farningham Hill in the Darent Valley (Locker 1984. 71) and the Roman villa at Keston within the London Borough of Bromley (Locker 1999). There is obvious potential, as with the previously

mentioned medieval comparison, in a study of the bone assemblages from a possibly low status area, as located amongst the Zone 3 sites, and a high status villa economy.

- 6.3 Further comparisons should include the use of animals for ritual purposes, where the horse burial at Northumberland Bottom can be compared to the 'shaft' assemblages at Keston, which feature a series of articulated horse, cattle and dog skeletons. During the Iron Age there was undoubtedly an extensive use of animals for such purposes, as shown by, for example, the large number of pits with 'foundation deposits' composed of sheep skeletons at Danebury (Grant 1984).

7. Potential for further work

- 7.1 The potential value of these bones must take into account the limiting factors, as described above, concerning the effects of disturbance and also perhaps of soil conditions. This is shown by the very large proportions of unidentifiable fragments and the abundance of teeth fragments amongst the identified portions. There would appear to be large assemblages of bones at these sites, but the great majority of these can provide little to no information regarding animal usage through the occupation periods within this general area. The sample assemblages are particularly disappointing, these either providing very few bones or a mass of unidentifiable fragments.

- 7.2 However, the animal bone assemblages do have the potential to inform on the following CTRL research and fieldwork aims:

- *to determine the palaeo-economy of settlement through the recovery of charred plant material and other palaeo-economic indicators;*

- 7.3 Regarding the palaeo-economy of the various settlements represented at these sites, there are moderately large assemblages dated to the Middle to Late Iron Age, Late Iron Age/early Roman, Roman and medieval periods. These can be used to provide information on which animals were exploited within each period and area, and to a limited extent, how they were exploited, as suggested by the relatively good representation of ageable bones. The condition of the bones suggest that the younger individuals are likely to be underrepresented. However, the presence of older individuals does at least suggest that secondary products, as milk and wool, were important. It should also be pointed out that there was a scattering of very young individuals, usually calves or lambs, within these assemblages. Considering the poor survival potential of such bones, it can be assumed that these represent only a small proportion of all that were originally deposited. These bones clearly show, if proof were needed, that these sites represent production centres.

- *to establish changes in the local environment through the recovery of suitable palaeo-environmental samples from the fills of cut features.*

- 7.4 Establishing changes in the local environment is perhaps beyond the scope of most of these bone assemblages. Environmental indicators, as some birds, the smaller rodents and amphibians, were rarely recovered from these sites. There is,

however, one notable exception, the Middle to Late Iron Age pit within the Hazells Farm site (ARC 330 98). This provided hundreds of small rodent bones, clearly representing a large number of mouse and vole skeletons. A closer study of these bones could result in the identification of species, which could then provide some information concerning local environmental conditions during this prehistoric period.

- *to determine the ritual and ceremonial uses of the landscape.*

7.5 There are at least two deposits which can be viewed as ritual in origin, these being the Middle to Late Iron Age pit with numerous skeletons at Hazells Farm (ARC 330 98) and the horse burial within the Late Iron Age/early Roman enclosure at Northumberland Bottom (ARC WNB 98). Both clearly deserve further study, including research into comparisons from other contemporary sites on the CTRL project (for example Fawkham Junction ARC 330 98 Area 330 Zone 1; Springhead Roman Town; ARC SSR 99 - Area 330 Zone 2; White Horse stone ARC WHR 98; and Boarley Farm ARC BFM 98).

- *to establish if the medieval building located at the western end of the excavation at Northumberland Bottom (ARC WNB 98) is associated with activity of a similar date.*

7.6 The aim concerned with determining contemporary activity with the medieval building situated within Zone 3, can obviously be answered with reference to the medieval activity within other parts of this site as well as within the Hazells Road excavation. Relatively few bones were recovered from the post-pits making up this building, and it would appear that few similarly dated deposits were found in the immediate vicinity. There is, however, a reasonable quantity of bones from the medieval enclosure area situated at the eastern end of Area A/B.

7.7 It can be seen that the stated fieldwork event aims do not cover the full research potential of the information available from the Zone 3 bone assemblages. An additional aim should include an analysis of the stature of the major domesticates throughout the occupation periods. This study will be especially useful regarding the Iron Age/Roman transition, where evidence from other sites clearly shows an increase in cattle overall stature (Maltby 1981. 185). While the quantity of size data amongst these assemblages is not large, it is certainly adequate for this type of study where the aim is to deduce the presence/absence of larger animals.

8. Bibliography

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Table 50: Animal bone assemblages – overall quantities and the proportions of useful data

Event code	Hand collected				Soil samples			
	N. contexts	Weight (kg)	N. bones	N. iden.	N. samples	Weight (kg)	N. bones	N. iden
ARC WNB 98	207	41.56	2685	832	29	0.84	513	29
ARC HRD 99	42	6.76	380	210	25	0.82	130	32
ARC 330 98	54	21.42	1431	605	24	0.13	1205	600

Event code	Hand collected			
	N. Age-able	N. Meas	N. Butch	N. Worked
ARC WNB 98	279	70	7	1
ARC HRD 99	67	17	7	2
ARC 330 98	493	25	20	0

Table 51: Distribution of animal bones in Zone 3. North of Hazells Farm (ARC 330 98)

Site Area/ Features	Period	Interp	H.c.			Siv		
			N.cont	N.	Wt	N. Samp	N	Wt
Brick clamp	PM	floor	1	1	0.01			
Furnace/work hollow and assoc. features:								
- spread	LBA/EIA	Ext. dump	1	1	0.02			
- levelling over hollow	EIA/MIA	Make-up	1	1	0.02			
- fills	LBA/EIA	fill	3	3	0.12			
- backfill assoc waterhole	LBA/EIA	fill	1	8	0.07			
Pits to north-east:								
2 pits	LBA/EIA	pitfills	2	19	0.16	3	8	0.008
4 pits	MIA	pitfills	3	33	0.20	3	10	0.012
1 pit	MIA/LIA	pitfills	1	14	0.10	1	5	0.003
1 pit	RO	pitfills	1	10	0.05			
1 pit	?date	pitfills	2	16	1.02	1	3	0.002
Pits to east:								
1 pit	LBA/EIA	pitfills	3	60	1.05	4	29	0.021
1 pit	MIA	pitfills	6	48	0.52			
1 pit	MIA/LIA	pitfills	3	101 5	14.78	4	1016	0.057
Ditches:								
W of brick clamp		ditch	1	1	0.05			
- adj brick clamp	?RO	ditch	1	1	0.03			
- ?associated ARC HRD 99		ditch				3	6	0.01
- just W Downs Rd	RO	ditch	1	5	0.45	2	17	0.01
Misc. features:								
?mine	?LPR	pitfill				1	2	0.01
?quarry pit	?LIA/R0	pitfill				1	5	0.01

Table 52: Hazells Road Diversion (ARC HRD 99)

Site Area/ Features	Period	Interp	H.c.			Siv		
			N.cont	N.	Wt	N. Samp	N	Wt
Malting kiln – demolition	RO	dumps	4	64	1.51	2	3	0.02
Metalled road:								
- ruts		fill	1	2	0.08			
- dump over road	RO	dump	3	24	0.39			
Bank assoc. with road:								
- make-up of bank	RO	dump	1	3	0.05			
- dump over bank	RO	dump	3	57	0.97	1	10	0.02
Oven/kiln – disuse levels	MD	dumps	5	17	0.36	2	8	0.02
Oven structures	RO	Hearths	4	4	0.09	2	9	0.02
Series ditches:								
– earliest, cut by oven structures	RO	ditchfill				2	6	0.02
- other Roman ditches (5)	RO	ditchfill	8	72	0.75	4	9	0.04
– lots recuts, 3 ditches	MD	ditchfill	4	21	0.65	6	17	0.08
- other med ditches (4)	MD	ditchfill	3	13	0.26	2	15	0.02
Pits:								
- cut through Roman kiln	RO	pitfill	1	15	0.12	1	25	0.18
- undated		pitfill	1	5	0.12	1	3	0.02
Misc features:								
Series of 2 postholes	RO	fills	2	38	0.62	2	27	0.38
Colluvial deposit	RO	dump	1	40	0.67			

Table 53: Northumberland Bottom (ARC WNB 98) – Area A/B

Site Area/ Features	Period	Interp	H.c.			Siv		
			N.cont	N.	Wt	N. Samp	N	Wt
Med. timber structure with 13 post-pits	MD	fills	13	55	0.45			
Features adj. med bldg:								
- pit	MD	fills	1	5	0.01			
- hollows (2)	MD	fills	2	6	0.04			
- pit	?LPR	fill	1	12	0.04			
- pit	Undated	fill	1	10	0.11			
Features med bldg:								
- boundary ditch	MIA/LIA	fills	3	60	0.95			
- other ditches (1)	MIA	fills	3	8	0.07			
- quarry pit	?MIA	fill	1	3	0.02			
- pits (2)	LIA/RO	fill	2	25	0.14			
- hollow way	MIA/LIA	fill	1	3	0.01			
- natural hollow	MIA	fill	1	10	0.03			
M/LIA enclosures:								
- boundary ditches	MIA	fills	9	150	0.79	2	45	0.035
	MIA/LIA	fills	3	217	1.63	2	5	0.251
	?LIA/RO	fills	3	36	0.25			
- pits (2)	Undated	fills	1			1	5	0.001
- pit	RO	fills	3	14	0.29			
- pit	MD	fill	1	5	0.01			
LIA/ER enclosures:								
- boundary ditches	LIA/RO	fills	6	59	0.85	2	20	0.10
	RO	fills	9	190	3.69	1	9	0.01
	Undated	fills	9	39	0.66	2	21	0.041
- pit	LIA	fills	2	15	0.30			
- pits (2)	LIA/RO	fills	2	32	0.50			
- pits (5)	RO	fills	6	50	0.43			
- pit	RO	fill	1	8	0.05			
- pits (6)	Undated	fills	10	616	15.09			
- kiln (disuse)	RO	fill	2	2	0.03			
- oven (2) (disuse)	RO	fill	3	12	0.03			
- hollow way	LIA/RO	fill	2	13	0.73			
- external dump	Undated	dump	1	30	0.48			

Site Area/ Features	Period	Interp	H.c.			Siv		
			N.cont	N.	Wt	N. Samp	N	Wt
Medieval enclosures:								
- boundary ditches	MIA	fills	1	1	0.19			
	LIA/RO	fills	1	1	0.02			
	MD	fills	15	245	1.83			
	Undated	fills	5	92	1.06	1	10	0.01
- pits (3)	LIA/RO	fills	3	17	0.41			
- pits (3)	MD	fills	3	43	0.36			
- pits (2)	Undated	fills	2	11	0.16			
- post-pits (2)	Undated	fills	2	2	0.16			
- ?sunken building	MD	dumps	4	17	0.08	2	13	0.011
		pitfills	2	12	0.11			
- cremation	Undated	fill				1	25	0.04

Table 54: Watching brief adjacent Northumberland Bottom Area A/B (ARC 330 98)

Site Area/ Features	Period	Interp	H.c.			Siv		
			N.cont	N.	Wt	N. Samp	N	Wt
Boundary ditches north of M/LIA enclosures	RO	ditchfill	1	5	0.03			
Complex field ditches north of LIA/ER enclosures	Undated	ditchfill	1	1	0.06			

Table 55: Location of features with reference to Site Area/Features described for ARC WNB 98. Northumberland Bottom (ARC WNB 98) – Area C

Site Area/ Features	Period	Interp	H.c.			Siv		
			N.cont	N.	Wt	N. Samp	N	Wt
Enclosure ditches	RO	fills	25	268	4.83	4	62	0.045
Pits	RO	fills	21	91	2.67	10	294	0.291
Dumps	RO	dumps	2	5	0.06			
Eroded hollows	RO	dumps	4	45	0.25			
Trackway	RO	dump	1	2	0.04			
Base oven	RO	fill				1	7	0.01

Scatter of Early Roman dates throughout these deposits. It is assumed that this is the general date for the majority of features within this area

Table 56: Watching brief adjacent Northumberland Bottom Area C (ARC 330 98)

Site Area/ Features	Period	Interp	H.c.			Siv		
			N.cont	N.	Wt	N. Samp	N	Wt
W of Area C:								
- Extension encl. Ditches	RO	fills	5	64	1.01			
- N-S ditches	MIA	fills	4	24	0.49			
	RO	fills	2	19	0.20			
	Undated	fills	2	12	0.09			
- pit (1)	Undated	fills	2	10	0.08	1	2	0.006
- trackway	RO	dump	1	2	0.02			
N of Area C:								
- field ditches	LIA/RO	fill	1	1	0.04			
	RO	fill	1	21	0.34			
- modern test-pit	PM	fill	1	1	0.03			

Table 57: Quantities of identified bones, and age and size data, within selected groups of deposits (Hand collected bones only)

Event Code/ Features	Period	N. Bones	N. Iden.	N. Ageable	N. Meas.	N. Butch.	N. Worked
ARC 330 98							
North of Hazells Farm							
Pits to north-east :							
2 pits	LBA/EIA	19	3	1	0	0	0
4 pits	MIA	33	7	4	0	0	0
Pits to east:							
1 pit	LBA/EIA	60	21	6	2	5	0
1 pit	MIA	48	22	8	2	7	0
1 pit	MIA/LIA	1015	434	418	5	2	0
ARC HRD 99							
Malting kiln-demolition	RO	64	37	17	6	0	0
Bank assoc. with road:							
- dump over bank	RO	57	30	9	1	0	1
Ditches:							
- other Roman ditches (5)	RO	72	49	5	0	0	0
Misc features:							
Series of 2 postholes	RO	38	15	6	3	2	0
Colluvial deposit	RO	40	10	4	1	0	0
ARC WNB 98							
Area A/B:							
Med. Timber structure with 13 post-pits	MD	55	14	7	1	0	0
Features South of med bldg:							
- boundary ditch	MIA/LIA	60	4	1	0	0	0
M/LIA enclosures:							
- boundary ditches	MIA	150	26	8	0	0	0
	MIA/LIA	217	9	1	1	0	0
	?LIA/RO	36	20	3	1	0	0
LIA/ER enclosures:							
- boundary ditches	LIA/RO	59	7	4	0	0	0
	RO	190	71	22	7	1	0

Event Code/ Features	Period	N. Bones	N. Iden.	N. Ageable	N. Meas.	N. Butch.	N. Worked
- pits (5)	RO	50	17	6	5	0	0
- pits (6)	Undated	616	264	91	28	0	1
Medieval enclosures:							
- boundary ditches	MD	245	63	16	5	1	0
	Undated	92	21	9	1	0	0
- pits (3)	MD	43	17	6	0	1	0
Area C:							
Enclosure ditches	RO	268	104	23	9	1	0
Pits	RO	91	29	10	1	0	0
Eroded hollows	RO	45	15	2	0	0	0
ARC 330 98							
W of ARC WNB 98 Area C:							
- Extension encl. Ditches	RO	64	33	14	6	0	0

Table 58: Quantity and species range in selected contexts.

ARC 330 98

Context	Sample	Area	Interp.	Period	% identified fragments									Count	Weight
					S/G	Cattle	Pig	Horse	Dog	S. mam	Bird	Fish	Other		
108	0	HF	P	LPR	0	0	0	0	0	0	0	0	0	15	0.04
110	0	HF	P	MIA	25	75	0	0	0	0	0	0	0	30	0.16
130	0	NB-C	D	RO	20	40	40	0	0	0	0	0	0	15	0.08
141	0	HF	P	M/LIA	20	0	80	0	0	0	0	0	0	14	0.1
146	0	HF	P		0	10	0	90	0	0	0	0	0	25	1.15
146	44	HF	P		0	0	0	0	0	0	0	0	0	30	0.016
150	0	HF	P	LBA/EIA	40	30	30	0	0	0	0	0	0	20	0.35
202	0	HF	P		0	74	0	0	0	13	0	0	13	990	13.58
202	47	HF	P		0	0	0	0	0	100	0	0	0	1000	0.005
250	0	HF	P	MIA	58	34	8	0	0	0	0	0	0	30	0.346
268	0	NB-C	D		0	0	0	0	100	0	0	0	0	15	0.065
274	0	NB-C	D	RO	100	0	0	0	0	0	0	0	0	25	0.25
282	0	NB-C	D	RO	30	0	0	0	70	0	0	0	0	10	0.03
314	0	HF	P		50	40	10	0	0	0	0	0	0	10	0.42
315	0	HF	P		0	100	0	0	0	0	0	0	0	6	0.6
57	0	NB-C	D		60	20	20	0	0	0	0	0	0	20	0.32

NB-C deposits adjacent to Northumberland Bottom (ARC WNB 98) Area C; HF Hazells Farm

cont.

ARC HRD 99

Context	Sample	Interp	Period	% identified fragments									Count	Weight
				S/G	Cattle	Pig	Horse	Dog	S. mam	Bird	Fish	Other		
71	0	PK	RO	33	33	0	34	0	0	0	0	0	35	0.6
71	21	PK	RO	20	80	0	0	0	0	0	0	0	25	0.3
53	0	D		10	40	10	40	0	0	0	0	0	10	0.6
156	0	D	RO	50	50	0	0	0	0	0	0	0	10	0.2
131	0	D		20	40	40	0	0	0	0	0	0	25	0.3
75	0	D	RO	33	33	34	0	0	0	0	0	0	25	0.1
7	0	EO		45	45	0	10	0	0	0	0	0	35	0.77
67	0	EU	RO	0	33	33	34	0	0	0	0	0	40	0.67
86	0	ED	RO	0	0	0	100	0	0	0	0	0	15	0.3
80	0	P	RO	0	50	0	0	50	0	0	0	0	15	0.12
80	40	P	RO	16	26	16	0	16	26	0	0	0	25	0.18
178	0	DS		40	40	10	10	0	0	0	0	0	30	0.53
191	0	DB	RO	35	35	0	20	10	0	0	0	0	18	0.6

Cont.
ARC WNB 98

Context	Sample	Area	Interp.	Period	% identified fragments									Count	Weight
					S/G	Cattle	Pig	Horse	Dog	S. mam	Bird	Fish	Other		
2037	0	1	SP	MD	0	100	0	0	0	0	0	0	0	6	0.04
751	0	1	SP	MD	0	34	0	66	0	0	0	0	0	20	0.17
822	0	1	SP	MD	100	0	0	0	0	0	0	0	0	3	0.01
601	0	2	D		34	66	0	0	0	0	0	0	0	40	0.335
612	0	2	P	LIA/RO	40	0	40	20	0	0	0	0	0	15	0.105
258	0	3	D	M/LIA	0	20	20	20	40	0	0	0	0	35	0.41
268	0	3	D	MIA	0	5	95	0	0	0	0	0	0	60	0.265
268	35	3	D	MIA	0	0	100	0	0	0	0	0	0	40	0.03
296	0	3	D	M/LIA	0	50	0	50	0	0	0	0	0	180	1.2
417	0	3	D	?LIA/ RO	0	66	34	0	0	0	0	0	0	25	0.2
495	0	3	D	MIA	0	100	0	0	0	0	0	0	0	60	0.315
251	0	4	P	RO	0	75	0	25	0	0	0	0	0	30	0.24
385	0	4	SE	LIA	0	66	34	0	0	0	0	0	0	3	0.525
413	0	4	P		50	25	0	25	0	0	0	0	0	15	0.17
414	0	4	P		33	33	34	0	0	0	0	0	0	45	0.7
528	61	4	D		0	50	50	0	0	0	0	0	0	20	0.04
533	0	4	SK	?IA	0	0	0	100	0	0	0	0	0	525	13.81
568	0	4	D	RO	34	0	66	0	0	0	0	0	0	40	0.04
686	0	4	SE	RO	0	100	0	0	0	0	0	0	0	10	0.215
709	0	4	D	RO	21	16	0	63	0	0	0	0	0	45	2.215
710	0	4	D	RO	0	50	0	50	0	0	0	0	0	40	0.33
2163	81	5	G		0	0	0	0	0	0	0	0	0	25	0.04

Cont.

ARC WNB 98

Context	Sample	Area	Interp.	Period	% identified fragments									Count	Weight
					S/G	Cattle	Pig	Horse	Dog	S. mam	Bird	Fish	Other		
237	0	5	D		0	100	0	0	0	0	0	0	0	20	0.115
262	0	5	D	MD	20	60	20	0	0	0	0	0	0	150	0.965
319	0	5	PR	MD	80	10	10	0	0	0	0	0	0	40	0.23
885	0	5	D	MD	66	34	0	0	0	0	0	0	0	20	0.16
887	0	5	PR	LIA/RO	25	25	25	0	0	0	0	25	0	15	0.37
906	0	5	D	MD	0	50	50	0	0	0	0	0	0	20	0.22
947	0	5	D		0	80	20	0	0	0	0	0	0	85	0.89
997	0	5	P		34	33	0	33	0	0	0	0	0	10	0.145
1009	7	C	P		0	0	0	0	0	100	0	0	0	150	0.21
1036	0	C	P		0	0	0	100	0	0	0	0	0	10	0.45
1036	14	C	P		0	0	0	0	0	100	0	0	0	60	0.03
1051	0	C	D		50	25	25	0	0	0	0	0	0	50	0.21
1063	0	C	D		34	0	0	66	0	0	0	0	0	30	0.29
1113	0	C	D		0	0	0	100	0	0	0	0	0	10	0.12
1201	0	C	P		0	100	0	0	0	0	0	0	0	1	0.02
1201	68	C	P		0	0	0	0	0	0	0	0	0	20	0.001
1240	0	C	P		0	33	0	33	34	0	0	0	0	3	0.6
1262	69	C	D		0	0	0	0	0	0	0	0	0	30	0.02
1315	0	C	D	RO	0	0	0	100	0	0	0	0	0	10	0.68

Northumberland Bottom (ARC WNB 98) divided into the following areas: 1. Medieval timber structure; 2. Features to the south of this structure; 3. Mid/Late Iron Age enclosures; 4. Late Iron Age/Early Roman enclosures; 5. Medieval enclosures and C. referring to Area C at the extreme eastern end of this site, with features generally dated to the Early Roman period.