APPENDIX 7: ASSESSMENT OF ANIMAL BONE

Kevin Rielly

1. Introduction

1.1 Animal bones were recovered during excavation works at ARC STP 99, Station Road ARC SSR 99 and also from the Watching Brief ARC 330 98.

1.2 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.

1.3 The study of the material was carried out to study the following fieldwork event aims:

- *to establish changes in the local environment through the recovery of suitable palaeo-environmental samples from the fill of cut features.*
- *to determine the spatial organisation of the landscape, and changes through time.*

2. Methodology

2.1 All contexts containing faunal remains were analysed and recorded onto the ORACLE CTRL animal bone database. No sub-sampling of contexts was carried out.

3. Quantifications

3.1 The quantities of bones recovered from this zone is shown on the tables below. No measurable, worked or butchered bones were recovered. Each of the tables lists the data recorded from both the hand collected and sieved assemblages.

3.2 The tables show the percentage of identifiable fragments represented by all of the specified species groups. Cattle and sheep/goat are clearly the dominant species among the generally small collections of identifiable bones. Other species include pig, horse and small mammal (possible rat).

4. Provenance

4.1 A large proportion of the bones were moderately well preserved, while fragmentation levels were generally moderate to high. Such levels of preservation and fragmentation where noticed within five and four assemblages respectively, out of the eight ARC SSR 98 assemblages; and within one out of the two ARC 330 98 assemblages. Higher levels of fragmentation, as described here, refer to collections of bones where the majority are under 75mm in length.

A moderate to poor preservation level is where most of the bones show some to heavy surface abrasion. The overall results suggest that there may well have been some disturbance of the faunal material after deposition, although adverse soil conditions could also be cited as causatory agents.

4.2 There was just one prehistoric feature with bones, represented by a gully in ARC STP 99. This provided a single unidentified bone fragment. There is a notable paucity of other bone fragments within the various prehistoric features. It is difficult to assess whether absence is related to lack of use or to disturbance and/or soil conditions. This single fragment is actually well preserved.

4.3 Most of the bones were recovered from ditch fills within ARC SSR 99, all of which are likely to date to the 1st century AD. Each of these fills provided just one or two fragments, invariably representing loose teeth (mainly identified as cattle and sheep/goat), with the exception of a horse tarsal from [27] and the possible rat vertebra from [30]. Otherwise, this site also produced a small collection of fragments, again cattle and sheep/goat teeth, from a floor level within a 1st century oven. The dominance of teeth fragments within these assemblages can be taken as a sure sign of high fragmentation, where, in such cases, teeth stand a better chance of survival and retrieval.

4.4 The bones recovered from ARC 330 98 were taken from three undated fills, a pit, a ditch and one other deposit. Identifiable bones were limited to the pitfill, which provided a cattle and a horse fragment, and the third feature from which was recovered a possible partial articulation of a juvenile pig.

5. Conservation

5.1 It is recommended that all material be retained for the next stage of analysis and for any future comparative work. No specific conservation needs are required.

6. Comparative material

6.1 There are a number of sites within the present project which provided large comparable collections of animal bones, most notably the Iron Age through to medieval deposits from Area 330 Zone 3 and the medieval deposits from Area 430 Parsonage Farm. Other published sites in the North Kent area include 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).

7. Potential for further work

7.1 Each of these three sites provided rather small collections of bones which can be seen to be only moderately well preserved and obviously highly fragmented. The dating evidence, where present, appears to be rather broad.

7.2 There is clearly very little value in attempting a study of these bone collections, when they are obviously biased in terms of skeletal part representations and

possibly also regarding the range of species present. High levels of fragmentation will tend to favour the presence of the larger species.

7.3 The presence of the major domesticates clearly demonstrates the local use of these animals, presumably for their meat, if not for any other product. Again the information is too slight, and probably biased, to suggest how these animals may have been used to shape the local environment eg whether they were farm animals. Of some interest perhaps, is the presence of horse within the Roman-British levels at the Station Road site. This could be indicative of high status, as most of the farmwork during this period was done by cattle. Horses were essentially used as pack animals or for riding (Maltby 1981, 184).

7.4 The rat-size vertebra from the Station Road site (ARC SSR 99) may be of some use in establishing local environmental conditions, and could also demonstrate the spread of an introduced species. It has been established that the black rat was introduced to this country during the Roman period. The earliest confirmed archaeological specimen was recovered from an early second century AD fill of a well in York, while 1st and 3rd century AD examples have been found in London (Armitage *et al* 1984).

8. Bibliography

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Maltby, M. 1981. Iron Age, Romano-British and Anglo-Saxon animal husbandry - a review of the faunal evidence. In M. Jones and G. Dimbleby (eds). *The environment of man: the Iron Age to the Anglo-Saxon period.* B.A.R. British Series 87. 155-203.

Table 23. The site assemblages – overall quantities and the proportions of useful data

Site	Hand collected					Soil samples			
	N. Con-texts	Weight (kg)	N. bones	N. Iden	Num. Agable	N. samples	Weight (kg)	N. bones	N. iden
ARC SSR 99	5	0.10	8	6	4	3	0.03	3	3
ARC STP 99	0	0	0		0	1	0.01	1	0
ARC 330 98	2	0.08	8	4	3	1	0.01	1	0

N total number. Iden identifiable to species or species group.

Table 24: Assessment of Animal Bone – quantity of identifiable bones, age, measurements

Site	Context	S.No	N. iden.	N. Ageable
ARC SSR 99	12	0	1	1
ARC SSR 99	12	6	1	0
ARC SSR 99	19	0	1	1
ARC SSR 99	27	0	2	1
ARC SSR 99	30	5	1	0
ARC SSR 99	39	0	1	1
ARC SSR 99	65	0	1	0
ARC SSR 99	65	23	1	0
ARC STP 99	81	22	0	0
ARC 330 98	304	78	0	0
ARC 330 98	1066	0	2	1
ARC 330 98	1262	0	2	2

S.No – sample number. N - approximate number of bones. Iden - bones identifiable to species/species group

Table 25: Assessment of Animal Bone – species, quantity and interpretation

Site	**Context**	**S.No**	**Interpret-ation**	**Period**	**% of identified fragments**									**Count**	**Weight**
					Sheep goat	Cattle	Pig	Horse	Dog	Small mammal	Bird	Fish	Other		
ARC SSR 99	12	0	Ditch	LIA-ER	100	0	0	0	0	0	0	0	0	1	0.01
ARC SSR 99	12	6	Ditch	LIA-ER	100	0	0	0	0	0	0	0	0	1	0.01
ARC SSR 99	19	0	Ditch		0	0	100	0	0	0	0	0	0	1	0.01
ARC SSR 99	27	0	Ditch	LIA-ER	0	50	0	50	0	0	0	0	0	2	0.03
ARC SSR 99	30	5	Ditch		0	0	0	0	0	0	0	0	100	1	0.01
ARC SSR 99	39	0	Ditch	LIA-ER	0	100	0	0	0	0	0	0	0	2	0.02
ARC SSR 99	65	0	Floor of oven	Ro	0	100	0	0	0	0	0	0	0	2	0.03
ARC SSR 99	65	23	Floor of oven	Ro	100	0	0	0	0	0	0	0	0	1	0.01
ARC STP 99	81	22	Gully	?Preh	0	0	0	0	0	0	0	0	0	1	0.01
ARC 330 98	304	78	Ditch		0	0	0	0	0	0	0	0	0	1	0.01
ARC 330 98	1262	0			0	0	100	0	0	0	0	0	0	4	0.07