FITZWILLIAM COLLEGE LIBRARY, CAMBRIDGE

An Archaeological Excavation



Adam Slater

CAMBRIDGE ARCHAEOLOGICAL UNIT UNIVERSITY OF CAMBRIDGE



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With contributions by Katie Anderson, Emma Beadsmore, David Hall, Mark Knight, Vida Rajkovača, and Anne de Vareilles.

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Introduction

The Cambridge Archaeological Unit (CAU) undertook an archaeological excavation in the grounds of Fitzwilliam College, Cambridge (TL 439-595) between the 7th and 21st January 2008, in advance of building library and student facilities. The work was carried out following an earlier evaluation by the CAU (Cooper 2003), based upon a specification devised by CAU and overseen by Eliza Gore, CAO; the site code was FCL08.

The area of investigation comprised approximately 500sqm of land located on the northwestern side of Cambridge at TL 439 595 (figs 1 & 2). It lies at c. 19m OD on high ground to the northwest of Castle Hill and within what had been the grounds of *The Grove* (built 1813). The underlying geology is fourth Terrace Gravels overlying Lower Beds Chalk Marl dating from the Cretaceous period (British Geological Survey 1984). The area was, until just prior to the excavation, covered with trees, shrubs, and lawn associated with the College's grounds.

Archaeological and Historical Background

The development area falls within a landscape of considerable archaeological significance, close to the centre of Iron Age and Roman Cambridge. Excavations located immediately to the east have revealed a wealth of archaeology relating to these periods of occupation (fig. 3; see Alexander & Pullinger 1999).

The earliest archaeological material recorded in the area consists of scatters of flints dating from the Palaeolithic to Bronze Age periods, discovered during 19th century coprolite quarrying on Gravel Hill to the west of the investigation area. A Late Bronze Age ditch and a high density of prehistoric flint and large fragments of pottery presumed to be associated with a nearby settlement were also recorded immediately to the east of the site during excavations prior to construction at New Hall college (Evans 1996).

Much evidence of Iron Age occupation has been identified around the investigation area. A 1st century BC settlement was recorded during excavations on Castle Hill (Alexander & Pullinger 1999). In addition, an Iron Age enclosure ditch has been excavated to the southeast of the investigation area (Evans 1996) and a substantial mid to later Iron Age enclosure ditch with quantities of finds was encountered at Marion Close, off Huntingdon Road to the north of the College (Mortimer & Evans 1997).

There is considerable evidence for Roman occupation on the western side of the Cam crossing: 350m to the west of the area of excavation were the 4th century AD Roman town walls and 100m to the north was the alignment of the main Roman road from Cambridge to Godmanchester. Roman settlement features and finds, including pottery, burials and kilns, have been recorded over a wide area on and to the south of Castle Hill (RCHM 1959; Alexander 1975; Alexander and Pullinger 1999; Evans 1999). Roman finds and burials were also recorded during late 19th century coprolite quarrying 500m to the west of the site on Gravel Hill, and substantial Roman

buildings, fields and cemeteries were excavated just to the south of this at Vicars Farm in 1999 (Lucas & Whittaker 2002).

The substantial New Hall College excavations carried out immediately to the east of the site in 1993 revealed a possible Roman road 70m south of the present excavation, a large early Roman enclosure, extensive Roman gravel quarrying, six Late Roman inhumations and a series of 1st to 2nd century AD ditched enclosures (Evans 1996). Other recent investigations in the vicinity (Dickens 1996; Gdaniec 1991) have failed to identify any significant outlying features.

An absence of both historical and archaeological evidence of Anglo-Saxon occupation in the area of town to the west of the Cam is notable and no trace of Anglo-Saxon or Medieval activity was identified during the New Hall excavations or adjacent evaluations. The area of investigation lay within the agrarian 'West Fields' of Medieval Cambridge and is marked on the 1789 Bennet's College Corpus map as being within a large open parcel of land called *Dukmere* or *Wylwmere* (Hall & Ravensdale 1976). These names indicate wet conditions and further attest to the lack of habitation in the area.

Methodology

One area of excavation, which corresponded with the footprint of the new library building, was mechanically stripped. This was carried out in two phases. The first involved the removal of topsoil to identify any features directly associated with the early 19th century Grove House, as well as to locate any sub-surface services, pipes and ducts. A second phase of stripping was then carried out to reduce the subsoil to a natural, geological level and expose any underlying archaeology. Several baulks were left across the site to protect still live service; in total, an area of 510sqm was stripped.

This excavation was recorded using the CAU modified Museum of London Archaeology Service (MoLAS) system (Spence 1994). All archaeological features, profiles and locations of excavation segments were digitally planned using Leica 1200 Series TPS. All sections were hand-drawn at a scale of 1:10; photography consisted primarily of digital images supplemented with black and white film. Context numbers are indicated within the text in square brackets (e.g. **[001]**) and all identifiable features have been assigned feature numbers denoted by the prefix 'F' (e.g. **F.1**). Where they exist, feature numbers are generally used in discussion in preference to context numbers, the exception being for layers, which have not been assigned feature numbers. All features were metal-detected both before and during excavation.





Figure 1: Site location.

E: 544157.2650 N: 259351.1440



Figure 2. Plan of excavated area showing all features and slots.





Figure 3. Investigation area in relation to previous excavations at New Hall.

Excavation Results

In total, 14 features were revealed (fig. 2): five were Bronze Age in date, one was potentially Late Iron Age or Romano-British, another was Romano-British, one was Medieval and six were of Post-Medieval date.

Bronze Age

Two ditches could be dated from ceramic evidence to the Bronze Age. F.3 was a linear ditch, oriented northeast to southwest and was unfortunately located at the easternmost limit of the footprint of the site-area, which meant that its full width could only be exposed over a small distance. The total exposed length of F.3 was 22m and it was a maximum of 2.85m wide. The cut of F.3 was a maximum of 1.2m deep, moderately steep and generally straight-sided. It was more regular on the northwestern side, which steepened sharply towards a wide slightly concaved base. The majority of the fills were of compacted light brown sandy silts with many small to moderately sized, angular and sub-angular gravels found in even bands that respected the profile of the cut, and which attest to a steady silting up of the ditch over a prolonged period (fig. 4). The fills produced very little dating material: a single fragment of pottery suggested a Bronze Age date (see Knight below). A scant quantity of animal bone was recovered from the fills, with the exception of the uppermost which produced a significantly higher quantity of cattle bones. This may suggest an increase in domestic activity nearby during this stage of the ditch's infilling.

The uppermost fill of **F.3** was of a moderately compacted mid to dark grey-brown silty clay with occasional small stone inclusions. This followed the profile of the ditch cut and was truncated by the 19^{th} century landscaping **[87]** (see below), which makes any estimate of the original depth of the ditch impossible.

The second Bronze Age ditch, **F.1**, was oriented northwest to southeast, extended from the western limit of excavation and ended, with a squared terminus, after a total exposed length of 13m. A maximum of 1.9m in width, F.1 had a steeply sloping 'V'-shaped profile with a gently concave base (fig. 4). Its basal fills were compacted light brown sandy silts and were almost identical to those from F.3. The fills respected the profile of the ditch cut and, as in F.3, seemed to represent a constant and prolonged episode of natural silting. No traces of material culture were present within these deposits, with the exception of the uppermost (**[7]**, **[16]**), which contained a relatively high quantity of animal bone, some of which displayed butchery marks.

Following the deposition of the basal fills of F.1, the terminus of the ditch was redefined with a round-ended cut, **F.7**, which extended it to the southeast by 1.2 metres. This consisted of a moderately steep and rounded cut with a gently concave base and reached a maximum of 0.44m in depth. The extent of this recut to the west was not fully established, although it was limited to the terminus. The basal fill of F.7 was almost identical to those forming the lower fills of both F.3 and the original cut F.1 and represented the primary silting of the recut. The second and third fills were

darker and more humic silty clays, with a moderately large quantity of charcoal flecking. The uppermost fills of the recut seemed to correspond with the uppermost fill of the original cut identified elsewhere along its length and consisted of a moderately compacted mid brown sandy silt, which is also similar to the uppermost fills of F.3. Like F.3, F.1/F.7 was truncated by the 19th century landscaping in the eastern half of the site, but in the northwest quadrant of the excavated area the upper fills were sealed by the 17th century deposit **[84]**, suggesting that unless an earlier phase of ground modification had occurred; the profile of F.1 at this point was unaffected.

The northwest to southeast orientation of F.1 appears to mirror a ditch of similar orientation 15m to the northeast identified within the New Hall excavations (Evans 1996, 7). This ditch had a similar profile and depth to F.1 with almost identical fills and contained a 'placed' deposit of a cattle skull with pig mandibles against its forehead. Two cattle leg bones lay to its northern side along with a pebble hammer. This deposit potentially marked the southeastern terminus of the ditch, but later truncation made this impossible to verify. Unfortunately, no datable artefacts were recovered from this ditch.

It could be argued that the termini of F.1 and its recut F.7 respected the location of F.3 and that the original cutting of F.1 was either contemporary with that of F.3 or was dug whilst F.3 was still in use. The relatively high quantity of bone recovered from both ditches was generally focussed on a single silting episode or period and suggests a contemporaneous deposition ([7] & [16] for F.1; [42] for F.3). These deposits immediately predate the darker, more humic upper fills of both ditches, which also contained a high frequency of animal bone and pottery and again seem to be contemporary. The presence of relatively large quantities of material within these fills is indicative of settlement nearby which had not been present during the early use of the ditches.

Three eroded and truncated postholes were located in the southernmost area of the site and represented the only structural components exposed during the excavation. They formed what could be interpreted as a short segment of an 'arc' and potentially constituted part of the internal supports of a house or structure. One posthole, **F.13**, yielded a single sherd of Late Bronze Age ceramic. The largest posthole, **F.12**, is likely to represent the northernmost post of a doorway, suggesting a typically southeastern-facing entranceway. No eavesdrip-gully was present and this can be seen as further effects of later truncation on the site. The presence of a structure of a broadly contemporary date to the ditches F.1 and F.3 does correlate with the later fills of both ditches and suggests that construction and habitation of a probable house or houses was relatively late in the lifespan of the ditches and may have been part of a phase of occupation that lasted beyond the active use of the ditch system.



Figure 4. Sections.



Figure 5. View of the site from Northeast.

Late Iron Age/ Romano-British

F.6 was a feature of undetermined character cutting the basal and medial fills of F.3, limited to the northeastern section of the ditch, and was only partially exposed due to the eastern limit of the excavation. The lack of a recut elsewhere along the length of ditch F.3, and the absence of any features 'emerging' from the eastern side of it, suggests that this was either an isolated pit, or the terminus of a northwest- southeast aligned ditch, although the exact orientation could not be determined. A maximum of 0.8m in depth and 1.3m in excavated width, F.6 consisted of a wide, gradually sloping, straight cut at the surface, that became steep and generally straight with a concave base. The main, primary, fill was a thick deposit of compacted sandy silt with sub-angular stones at the base and bands of smaller gravels indicative of sequential silting over a prolonged period. This fill ([33]) contained a large quantity of bones from cattle and young pigs with occasional butchery marks, as well as several large fragments of butchered red deer antler which show the probable use of a cleaver, a tool indicative or a Late Iron Age or Romano-British date for the deposit (see Appendix 1). The uppermost fills of F.6 were darker, more humic sandy silts with a lower quantity of butchered animal bone and a higher quantity of charcoal flecking.

Romano-British

A single ditch, **F.4**, orientated across the site in an east-west direction and measuring 19m in length and up to 2.1m in width, was the only Romano-British feature revealed. This had a maximum depth of 0.24m and was immediately overlain by $18/19^{\text{th}}$ century garden soils, suggesting extensive truncation during the post-Medieval period (see below). The fill of the remaining basal portion of F.4 was a compacted silty clay containing 2^{nd} to 3^{rd} century A.D Greyware, as well as a small quantity of cattle bone, suggestive of a gradual 'natural' silting of the ditch, at least in its early stages. F.4 seems to be a continuation of a Romano-British ditch identified during the 1993 New Hall excavations 15m to the east (F.209, Evans 1996). This ditch butt-end was identified as forming the second (II) phase of Romano-British activity, truncating the fills of Romano-British quarry pits.

Medieval

A single tree-bowl, **F.5**, within the northwestern corner of the excavated area was the only disturbance of its type that was not dated, either by stratigraphy or by material content, as being late post-Medieval or modern. This tree-bowl, 2.1m in diameter, was sealed by 17th century deposit **[84]** and contained a large, abraded fragment of 14th century Grimston-type ware strap-handle.

Early Post-Medieval

Immediately overlying the 'natural' within a small, undefined area at the northwestern corner of the excavated area was a thin deposit of dark grey to black firmly compacted silty clay, **[84]**, a maximum of 0.22m in depth. This contained a relatively high quantity of small angular and sub-angular gravels as well as pottery and clay pipe stems of a 17th century date. The medieval tree-bowl F.5 was sealed by [84] and, although no *in-situ* cobbles or metalling characteristic of a deliberately placed floor or working area were identified, the well compacted nature of this deposit may indicate a path or trackway along the top of a east-west running ridge within the natural at this point. This deposit appears to have been truncated to the east and south prior to the deposition of the 19th century garden soils and landscaping associated with *The Grove* immediately to the south.

Later Post-Medieval

A large scale re-modelling of the landscape can be attributed to the construction of *The Grove* in the early 19th century (the house itself being constructed in 1813). The Romano-British ditch, F.4, as well as the upper fills of F.3 and 17^{th} century deposit [84], appear to have been truncated by cut [87] in order to facilitate the deposition of [81], a thick layer of mid to dark grey moderately compacted silty clay containing numerous 19th century ceramic, glass and clay pipe-fragments. This covered the entire site-area, was between 0.15 and 1m in depth and is thought to represent a ground consolidation deposit. This, in turn, was 'capped' within the western and southern area of the site by a 0.1-0.15m thick deposit of compressed red-brick, gravel and mortar ([80]). This is thought to represent a walkway or path nearest to *The Grove*, alongside gardens utilising the still-exposed [81] as a growing medium.

A cluster of small, sub-rounded and sub-square pits were cut through the ground-raising/garden soil deposit [81]. These were a maximum of 0.4m in diameter and 0.36m in depth; they were filled with garden soils very similar to [81] (if not slightly more humic) and contained 19th century ceramic, glass and tobacco pipe. These were interpreted as planting pits for trees or shrubs, constructed during what can be described as an ornate gardening phase following the construction of *The Grove*.

The latest archaeological feature identified during the excavation, **F.2**, truncated the walkway surface ([80]), as well as ground-raising/garden soils ([81]) and the 17^{th} century deposit ([84]). This was a narrow curvilinear gully, a maximum of 0.95m in width and 0.65m deep, with straight, steeply sloping sides leading to a concave base. Filled with dark grey loosely compacted garden soils, with slate, brick fragments and occasional mortar and charcoal mottling, F.2 may represent late 19^{th} or even early 20^{th} century truncation associated with the continued use of the area as a garden (its alignment along the highest point of the site would preclude its use as a drain).

Discussion

Given that a Bronze Age presence was attested to at the neighbouring New Hall site (Evans 1996), the recovery of features of that date on the Library Site are not unexpected (fig. 3). What was, however, surprising was the scale of the site's ditch system and the relative quantity of occupation debris they yielded. The nature of their fills suggests that they were broadly contemporary. The shallower east/southeast–west/northwest aligned ditch (F.1) apparently mirrored the orientation of, and was similar in shape to, the Bronze Age ditch identified as part of the New Hall excavations of 1993, which also had a sequence of fills comparable with both F.1 and F.3. The distance between the two projected continuations of the parallel ditches can be estimated at approximately 15m, and it is conceivable that they marked either side of a droveway. Yet, of course, if directly contemporary, the northeast-southwest oriented Library Site ditch, F.3, would have blocked this possible 'way'. Given this, it is probably more reasonable to consider them as relating to a series of Middle/later Bronze Age paddocks, perhaps a part of a much more extensive fieldsystem.

The robust scale of these boundaries are, for example, comparable to those recently excavated at Addenbrooke's Hospital and the Babraham Park-and-Ride Sites (Evans and Mackay 2005; Hinman 2001) and, based on a very limited sample, would seem more typical of Southern Cambridgeshire 'type' enclosures than the somewhat slighter Fenland systems (*eg.* Yates 2007). Certainly there is every reason to think that the Library Site ditches were part of a much more extensive network and related features probably extend throughout, at least, the area of the College's grounds.

There was relatively sparse evidence of Roman activity exposed within the site proper: only the F.4 ditch-line. Nevertheless, it is sufficient to indicate that the New Hall settlement of that period does continue west under Fitzwilliam College. Moreover, the alignment of that boundary would directly match that of the New Hall Roman-town approach road (fig. 3; Evans 1996).

No evidence of Saxon activity or occupation was identified during the excavation of Fitzwilliam College Library; this corresponds well with the paucity of such material from New Hall.

Although no evidence of direct occupation during the Medieval period was identified, the F.5 tree-bowl, with its large fragment of 14th century ceramic, might be indicative of a substantial tree between, at least, this period and the 17th century when it was sealed. The absence of further tree-bowls of this date indicated that the area was not managed woodland during Medieval times. The site was, indeed, situated within the Cambridge Medieval 'West Fields' (Hall and Ravensdale 1976), an area of open farmland. This might indicate that the sherd was imported during fertilizing. The use of traditional 'ridge-and-furrow' land management techniques was not identified, but once the scale of subsequent 19th century landscaping and the severe truncation of features such as the Romano-British ditch (F.4) is considered, it is hardly surprising that any such agricultural marks, generally relatively shallow, were obliterated.

Scant evidence of early Post-Medieval activity was identified in the area of excavation. A thin deposit containing 17th century domestic detritus within the northwest corner of the excavated area, conveniently sealing the Medieval tree bowl,

was heavily truncated by 19th century landscaping and may have been a metalled surface or simply the remains of a rubbish dump.

The construction of *The Grove* in 1813 had a significant and continuing local impact. Large-scale landscaping of the grounds can be seen in the truncation of archaeological features located, both during the current excavation and from previous evaluations (Gdaniec 1991) and excavations nearby (Evans 1996). Continued use of the land for formal gardens, as witnessed by the boundary gullies and planting pits within the site and at New Hall, was also identified.

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APPENDICES

1) Faunal Remains Vida Rajkovača

The animal bone assemblage recorded consisted of 346 bone fragments. This includes the material which was hand-collected, but excludes material from the sieving of bulk soil samples. The assemblage is predominantly made up of livestock species, but also includes four red deer specimens (all mandibular and skull elements).

Analysed material comes from Bronze Age and Romano-British ditches. The largest portion of the assemblage is dated to the Bronze Age (83.6%) and only a small number of bones were recovered from a ditch dated to the Roman period (F.4; 2.3%). F.6 (14.1%) was a recut of Bronze Age ditch F.3 and it is likely that it can be dated to the Late Iron Age to Roman period judging by the butchery marks noted on a red deer antler ([33]; <021>).

The zooarchaeological investigation followed the system implemented by Bournemouth University with all identifiable elements recorded (NISP: Number of Identifiable Specimens) and diagnostic zoning (amended from Dobney & Reilly 1988) used to calculate MNE (Minimum Number of Elements), from which MNI (Minimum Number of Individuals) was derived. All vertebrae (other than atlas or axis) and ribs were assigned only to a size category (Unidentified Large, Medium & Small Mammal), as they are impossible to assign to species. Ageing of the assemblage employed both fusion of proximal and distal epiphyses (Silver 1969) and mandibular tooth wear (Grant 1982; Halstead 1985; Payne 1973). Identification of the assemblage was undertaken with the aid of Schmid (1972) and reference material from the Cambridge Archaeological Unit. Where possible, measurement data was taken (von den Driesch 1976). Taphonomic criteria including indications of butchery, pathology, gnawing activity and surface modifications as a result of weathering, were also recorded when evident.

The material was reasonably well preserved, indicating that the bone suffered very little weathering or other erosive damage; however, the assemblage was highly fragmented. Of fourteen contexts analysed, six showed good or quite good preservation with minimal or no bone damage. Five contexts were recorded as 'moderately' and three as 'poorly' preserved. Actual figures that correspond to these categories show that 135 fragments demonstrated good preservation, compared to 211 fragments with bone surface damage or signs of weathering. Of the 36 bones identified as cattle, 14 were either fragmented, eroded, or fragmented and eroded.

Of the total 346 specimens recovered, 174 (50.3%) were possible to assign to element and only a further 59 (17%) to species. The low percentage of fragments identifiable to species is due in part to the relatively high numbers of fragmented limb bones which could only be assigned to a size category (Large, Medium or Unidentified Mammal). Of the identifiable elements, the majority were assigned to livestock species, with only four instances of wild fauna, all assigned to red deer. Cow accounted for the greatest portion of the assemblage, followed by pig, sheep/goat and red deer (Table 1).

Bronze Age Features

Hand-recovered assemblages are typically biased in favour of the bones from larger species, whilst the bones from smaller species tend to be overlooked. This assemblage is not an exception, with a high proportion of bones from common domestic species and a complete absence of small mammals. The Bronze Age sub-set elicited a sample of 286 bone fragments (137 bones identifiable to element and a further 39 to species), recovered from two features (**F.1** and **F.3**). Cattle dominate the assemblage within the context of both NISP (25 specimens) and MNI (two individual animals) (Table 1).

Species	NISP	% NISP	MNI
Cow	25	64.1	2
Pig	7	18	2
Sheep/goat	4	10.2	1
Red deer	3	7.7	1
UUM	6	3.9 (Σ=155)	-
ULM	75	68.8 (Σ=109)	-
UMM	17	15.6 (Σ=109)	-

Table 1: Species frequency by NISP (Number of Identifiable Specimens) and by MNI (Minimum Number of Individuals). Key: USM, UMM & ULM = Unidentified Small, Medium and Large Mammal; UUM = Unidentified Fragment. NB. Species percentages are out of 39; these differ from the identified counts as these are calculated on the basis of element identification (for USM, UMM & ULM) and total fragments (for UUM).

Butchery marks were recorded on four specimens (all coming from F.1), three of which were on cattle bones and one on an unidentified large mammal bone. Butchery evidence recorded on cow elements indicates signs of skinning (astragalus) and disarticulation (scapula). Cattle horn cores which were cut off have also been recovered. Some of the bones were split axially, probably for marrow removal. Carnivore gnawing damage was noted on two cattle bones, suggesting the presence of canids on the site, although the presence of dog has not been confirmed osteologically. No signs of pathology were observed.

Cattle were represented by both carcass portions and mandibular elements present on the site, with a slight predominance of meat-bearing bones, *i.e.* carcass portions. This can probably indicate local breeding, slaughter and consumption. Being both the main providers of meat and a multipurpose animal, it is not surprising that cattle were the most abundant livestock species.

Age ranges for cattle, obtained from mandibular tooth wear (Halstead 1985) and bone fusion data (Silver 1969) demonstrate the presence of immature, juvenile and adult animals on the site. Other domesticates are represented by sporadic finds. Ovicaprids were represented by four specimens and pig by five. The presence of red deer was indicated by loose teeth and fragments of one maxilla and one mandible.

Feature 6 was a recut within F.3, limited to the northern section of the ditch. No datable finds were recovered from this feature; however, a large antler portion of a mature red deer stag (four fitting fragments) demonstrates signs of butchering which might indicate a Roman date for this feature. The antler was shed naturally, after which the tines were cut off using a large implement. One of the fragments was cut off and broken and the other one was sawn off. The antler shows certain butchery marks which might be from a cleaver.

Cattle were also present in F.6, with nine bone fragments present; pig was represented by two mandibles and a loose tooth; other bones were unidentifiable. The age range, derived from mandibular tooth wear (two mandibles; Grant 1982) shows the presence of juvenile animals. Pigs are not multipurpose animals, as cattle or ovicaprids are. Being used only for their meat, therefore, they were probably killed at an early stage. One cow scapula was recovered with a hole on a blade which is typical of the meat curing process. No other butchered or worked bones were recorded in this feature.

Roman Features

A small number of bones were recovered from a ditch dated to the Roman period (F.4). One skull and one mandible were identifiable to species and they were assigned to cattle. Other bones were only possible to assign to a size category (unidentified large and medium mammal). The cleaver marks on the Red-deer antler are potentially Romano-British in date.

This was an impoverished assemblage in terms of species representation. The prehistoric fauna recovered on the Fitzwilliam College Library site is dominated by ruminants, as was the case for the previous assemblages recovered on the same site (Swaysland 2003,10). Apart from three red deer bones from F.1, small mammals, birds and wild fauna are absent. The prehistoric assemblage is quantitatively inadequate to sustain propositions about animal use, but it does provide some basic information for comparison on a superficial level. Being the main providers of meat, it is not surprising that cattle were the dominant livestock species. Also, it is not surprising that pigs were slaughtered before they reached maturity, bearing in mind that they could not be used for secondary products. In those terms, this was a fairly typical assemblage. The Roman sub-set elicited a sample of only eight bone fragments and it does not allow any other positive conclusions, apart from a statement of the species present on the site.

Cattle, being identified from a variety of elements, probably represent domestic kitchen waste. The antler portion assigned to a mature red deer stag is an interesting find, showing a number of butchery marks. All tines were cut off and the antler was cut and sawn into three large pieces (three recovered). Butchery marks indicate the use of a cleaver and therefore a Roman date for the recut F.6. Recognising the cleaver depends on noting a smooth entry point and fractured exit – bone fracturing usually results from the blow delivered travelling through the cortical structure of the bone (Seetah 2007). Saw marks noted on the antler are also important, since it is believed that saw marks are indicative of bone working and not butchery (*ibid.*); however, the presence of worked bone or antler fragments was not confirmed on the site archaeologically.

Although fairly small, this has proved to be an interesting assemblage. Clarifying age structures and kill off patterns from the material with a more in-depth analysis of toothwear and fusion data will definitely bring us closer to drawing more valuable conclusions about the economy of the site in the past.

2) Bulk Environmental Samples Anne de Vareilles

The three bulk soil samples taken on site were processed using an Ankara-type flotation machine at the Cambridge Archaeological Unit. The flots were collected in 300 μ m meshes and the remaining heavy residues washed over a 1mm mesh. The flots were dried indoors and scanned for the presence of charred plant macro remains and other ecofacts. The >2mm fraction of the heavy residues was sorted by eye; plant macro remains and mollusca recovered were recorded in Table 2.

Table	2: Plan	t Macro	Remains	and Mollusca	from the	Bulk Soil	Samples
I abic	A. I Iuli	i muoro	rtemanno	una monubea	in onit the	Dunk Don	Sumples

					-	-		
Sample number					2	3		
Feature Context		3 [45]	5 [45]	[53]	[53]	1 [10]	1 [10]	
Flot or Heavy Residue*			HR	Flot	HR	Flot	HR	
The of field y residue		Ditch, basal		Re-cut of		1100		
Feature type		fill		F.1		Ditch, basal fill		
				Bronze				
Phase / Date		M.	B.A	A	ge	Bronz	onze Age	
Sample volume - litres		100	7		3	10		
Fraction examined -%		100	100	100	100	100	100	
Cere	eal Grains		1	1	1	-		
Secale / Triticum	Rye or Wheat gain					1		
Indeterminate cereal grain fragi	ment				1			
C	harcoal		r	1	1			
>	>4mm		+		+	a	+	
2 -	4mm	-	+	+	b	с	c	
<	<2mm	++	N/A	b	N/A	d	N/A	
Culm	n node Straw fragment				1			
Wild	Plant Seeds							
Chenopodium sp.	Goosefoots					1		
Indet. Euphorbiaceae	seed of the Spurge family					1		
Sambucus nigra	Elder			2		2		
cf. Anthemis cotula	possible Stinking Chamomile	1						
Indeterminate wild plant seed fi	ragment	2		1				
M	lollusca		1	1	1			
Fresh water species	cf. <i>Hydrobia</i> sp.	-						
L	Lymnaea peregra/auricularia	++	-		-			
	L. truncatula	-	-	+	-	а	-	
	Anisus leucostama					b	++	
Damp/Shade loving	Succinea sp.					+		
	Carychium minimum/tridentatum			b		b		
	Cochlicopa lubrica/lubricella			a		а		
	Vallonia excentrica/pulchella	++				а		
	Clausilia sp.					-		
	Oxychilus / Aegopinella	++		a	+	b	+	
Catholic species	Trichia sp.	+	-	++	+	++	+	
	<i>Cepaea</i> sp.	-			-	a		
	Helix sp.		-				-	
	cf. Monacha sp.					++		
	Ceciloides acicula			а		b		

Key: '-' 1 or 2, '+' <10, '++' 10-25, 'a' 25-50, 'b' 50-100, 'c' 100-500 items

* Only the >2mm fraction of the Heavy Residue was sorted, by naked eye.

Sorting and identification of macro remains were carried out under a low power binocular microscope. Identifications were made using the reference collection of the George Pitt-Rivers Laboratory, McDonald Institute, University of Cambridge. Nomenclature follows Stace (1997) for flora and Beedham (1972) for molluscs. All environmental remains are listed in Table 2.

All plant remains were preserved through carbonisation. Intrusive rootlets, present in all samples, and the burrowing snail, *Ceciloides acicula*, are indicative of bioturbation through which ecofacts may have been lost and/or displaced. Other molluscs were also found, especially in Features 1 and 7.

The flot from F.1 was the only one to contain any meaningful quantities of charcoal. It also contained a wheat or rye grain (*Triticum/Secale*), two elder seeds (*Sambucus nigra*) and another two small wild plant seeds. F.3 contained three small seeds, one of which is a possible stinking chamomile (*cf. Anthemis cotula*). Two elder seeds, fragments of a seed and of a cereal grain, and a culm node were found in F.7.

The molluscan assemblages suggest that all features supported damp habitats with occasional standing water.

The intrusive rootlets raise the possibility that plant macro remains recovered are also intrusive, especially in Features 3 and 7 where levels of charcoal are low. Charred elder and stinking chamomile seeds are commonly found in later, *i.e.* post-Roman, deposits.

The carbonised remains do not reveal any conclusive information on the date or use of the features; any AMS dates obtained from such material should be viewed with caution.

3) Flint Emma Beadsmoore

One flint was recovered from the site: F.1 yielded a chronologically non-diagnostic secondary flake (3g).

4) **Prehistoric Pottery** *Mark Knight*

A small assemblage of 38 sherds of prehistoric pottery was recovered from five contexts (Table 3). The separate mean sherd weight was 1.9g. The assemblage was made up of small fragments but the pieces were a in a good condition (*i.e.* retaining original surfaces *etc.*). Over 80% of the sherds, or 92% of the total weight, came from a single feature, F.1, with the remainder comprising a single sherd from F.13 and very small crumbs from F.3. The assemblage generated a threefold fabric series dominated by crushed shell inclusions. A single raised cordon impressed with a fingertip represented the only feature sherd.

Feature	Context	Number	Weight	Fabric
			(g)	
1	6	4	25	1
1	7	24	42	1
1	16	3	2	2
3	28	6	1	1
13	70	1	5	3
Totals:	5	38	75	3

 Table 3: Assemblage Breakdown

F.1 - Contexts [6] and [7] produced fragments of a thick-walled vessel (10mm). A single raised/applied cordon on one of the pieces, decorated with a fingertip impression, suggests that the sherds belonged to

Deverel-Rimbury or Middle Bronze Age type urns. In contrast, the three sherds from context [16] came from a thin-walled pot (c. 5mm) with an applied slip and smoothed surface reminiscent of Late Bronze Age or Post Deverel-Rimbury fine wares.

F.3 – The tiny crumbs from context [28] were made of the same fabric as the Middle Bronze Age sherds from F.1.

F.13 – The featureless fragment from [70] can only be described as later Bronze Age or Early Iron Age.

Fabric Series

Fabric 1: Hard with abundant small shell

Fabric 2: Very hard with rare small to very small shell and rare small quartz

Fabric 3: medium hard with frequent small rounded voids and occasional small grog

5) Romano-British Pottery Katie Anderson

Four sherds of Roman Pottery weighing 34g were recovered from the evaluation, all of which came from a ditch, F.4. Context [20] contained three sherds, comprising one sandy Greyware beaded bowl, dating $2^{nd}-3^{rd}$ century AD, and two sandy Greyware body sherds, which could only be dated as Romano-British. Within this context there was a further body sherd from a post-Roman vessel. Context [47] contained one sandy Greyware sherd weighing 5g, which again could only be dated as Romano-British.

6) Medieval Pottery David Hall

One large fragment of strap-handle of a fine 14th century Grimston type ware was recovered from F.5 ([22]). It was decorated with a drawn spine and impressed circles which contain small reservoirs of light yellowy-brown glaze. The sherd may possibly have been burned.

7) Post-Medieval Pottery and Clay Tobacco Pipes Adam Slater

Pottery and Tile

The potentially earliest post-medieval pottery from FCL08 was three fragments of Salt-glazed stoneware of a 'Cologne'/ Frechen type from [84]. These were potentially from the same vessel; two rim fragments suggest a probable tankard or wide mouthed jug. This type of ceramic was common from the 17th to 19th centuries. Four fragments of undatable, heavily abraded earthenware tile were also recovered from this context. A similar, less abraded fragment of tile was recovered from F.4 ([20]). This is badly fired and unglazed. A provisional 17th century date for this and the smaller fragments is suggested.

Thirteen fragments of ceramic were recovered from [81]: an incomplete white stoneware marmalade jar transfer printed with 'JAMES KEILLER & SONS, DUNDEE MARMALADE' and expressing 'INTERNATIONAL EXHIBITION 1862'/ 'THE PRIZE MEDAL FOR MARMALADE'. A smaller fragment of brown stoneware jar, three transfer printed plate/bowl fragments, two late pearl ware bowl fragments and a rim of a slip-coated mixing bowl suggest a late 19th century date for this assemblage. Two fragments of an unglazed red-earthenware plant pot could not be accurately dated due to the generic nature of the material and vessel form.

Three fragments of unglazed red-earthenware plant pot were also recovered from F.2 ([13]). These, along with a heavily abraded fragment of brick, could not be dated.

A single sherd of 19th century pearl-ware was recovered from F.10 ([64]), as well as a fragment of lead-glazed red earthenware floor tile and three fragments of heavily abraded unglazed earthenware tiles.

A single, abraded sherd of blue slipware of a $19^{\text{th}}-20^{\text{th}}$ century date along with three very heavily abraded fragments of unglazed brick/tile were recovered from F.11 ([65]). Two fragments of undatable, very heavily abraded brick and tile fragments were recovered from F.8 ([58]).

Clay Tobacco Pipe

A total of eight fragments of stem and one complete Clay tobacco pipe bowl were recovered from the FCL08. The bowl, from context [81], is of a typically mid to late 19th century form, with thin walls, forward leaning mouth, a mould-imparted cartouche of 'TRADE MARK' around a reversed 'C' and distinctive raised lumps in imitation of wooden briar pipes.

With a single exception, the stem fragments all came from context [84]. All demonstrated a wide stem-bore, indicative of an early (17th-18th century) date, whilst three possessed a wide a partial or complete pedestal foot, again indicative of a 17th century date.

One fragment of stem was recovered from F.10 ([64]) and was not able to be accurately dated, although the smaller stem-bore suggests a later, 19th century, date.

8) Feature and Layer Descriptions

F.1 – Ditch, sampled in four slots. Cut **[12]/[19]/[38]** was an east-west orientated linear 13m in exposed length. It was steep sided and 'V' shaped in profile with a narrow, rounded base a maximum of 0.7m in depth and 1.9m in width. A narrow terminus, **[51]**, with a steeply angled 'V' shaped profile and sharply squared end, a maximum of 0.6m in depth marked the eastern end of the ditch. The primary fills of **F.1**, **[7]**, **[8]**, **[9]**, **[10]**, **[11]**, **[16] [17]**, **[18]**, **[49]** and **[50]**, were compacted light to mid brown clayey, sandy silts with very occasional charcoal flecking and a high level of root disturbance. These fills shared a similarity with the 'natural' clays of the site, consistent with gradual silting over a prolonged period. The upper fills of **F.1**, **[6]**, **[15]** and **[57]**, were generally darker, less compacted sandy silts which, as well as displaying a higher level of root disturbance, contained significantly high levels of disarticulated animal bone, burned flint, a low quantity of pottery sherds and occasional charcoal flecking. **F.1** was initially identified during the 2003 evaluation (FCL03; cut **[5]**, fills **[1]-[4]**). Bronze Age in date.

F.2 – Ditch, sampled in four slots. This was a narrow, shallow curvilinear ditch orientated across the area of excavation in an east-west alignment with a gradual curve to the south. The cut, **[26]/[14]/[86]**, measuring 16m in length by a maximum of 0.6m in width and 0.6m in depth had steeply sloping, concave sides leading to a concave base. The fill, **[13]/[25]/[85]**, was a very dark grey moderately compacted silty clay containing several fragments of late 19th century ceramics and building rubble. 19th century in date.

F.3 – Ditch, sampled in three slots. This was a wide, deep linear ditch orientated in a north-northeast to south-southwest alignment. The cut, [29]/[46]/[78], was 22m in length, with a maximum width of 2.85m and 1.15m in depth. It had moderately steeply sloping sides, generally straight to the east and moderately steep and straight with a rapid steepening towards the base to the west. The base was narrow and generally flat, although with a slight concavity. The basal fill, [28]/[45]/[77], was a compacted light brown-grev sandy silt with occasional small angular and sub-angular stones and very infrequent charcoal inclusions. [28] contained a small quantity of animal bone, burned stone and a very small amount of pottery. The secondary fill, [44]/[76], was a compacted, light grey-brown sandy silt with occasional yellow sandy mottling and very occasional charcoal flecks. [44] contained a small quantity of animal bone. The third fill, [27]/[43]/[75], was a firmly compacted light yellowy-brown silty sand with occasional loose sub-rounded stones and very occasional charcoal flecking; no finds were recovered from this fill. The fourth fill, [42], was a compact mid to light brownish grey, fine sandy silt with mottling of yellowy brown sandy clay and very occasional charcoal and small quantities of animal bone. The uppermost fill, [41], a moderately compact, mid to dark grey brown silty clay with occasional small angular and sub-angular stones, infrequent charcoal and occasional animal bone, represents a final silting of the ditch following abandonment. This final fill was truncated by both F.4 and F.2. Bronze Age in date.

F4-Ditch, sampled in two slots. A northeast to southwest orientated ditch crossing the excavated area. The cut, [21]/[48]/[83], was 19m in length, 2.1m in width and 0.24m in depth, with irregular, heavily eroded, moderately steeply sloping sides that became near vertical approaching the base, which was generally flat and irregular. The fill, [20]/[47]/[82], was a firmly compacted mid grey-brown sandy silt with common inclusions of small angular and sub-angular stones and occasional charcoal flecks. Five sherds of Romano-British pottery and animal bone were from this fill. F.4 truncated the upper fills of F.3 and was itself truncated by F.2. Romano-British in date.

F5 – Tree bowl. The 'cut', **[23]**, was a maximum of 2.1m in diameter by a maximum of 0.3m in depth. It was sub-rounded in plan, with irregularly sloping sides leading to an irregular though generally flat base. The fill, **[22]**, was a loosely compacted mid to light greyish-brown clayey silt with a very high quantity of root disturbance and one large fragment of medieval pottery. **F.5** was the only tree bowl not of a modern date to be identified on the site. Medieval in date.

F.6 – Ditch Recut, limited to the northern section of **F.3**. Cut **[34]** had wide, almost vertical straight sides with a sudden break of slope to become gradually sloping. These led to a wide, gently rounded base with a maximum of 0.7m in excavated width (estimated 1.1m in actual width), and a maximum of 0.8m in depth. The basal fill of **F.6**, **[33]**, was a compacted greenish-grey sandy silt with frequent small angular and sub-angular stones, with occasional charcoal flecking. It contained a considerable quantity of animal bone, both worked and unworked antler, and a quantity of burned flint and stone which

appeared limited to the base of the cut. A thin lens of moderately compacted mid to dark grey-brown sandy silt, **[31]**, containing occasional charcoal mottling, animal bone and burned stone, overlay **[33]**, and was itself overlain by the uppermost fill of the ditch, **[30]**. This was a moderately compacted mid grey-brown sandy silt with occasional charcoal flecking, animal bone, burned stone and flint. The extent of the recut **F.6** could not be ascertained due to the restrictions of the excavated area to the north and modern service baulks to the south. Late Iron Age/Romano-British in date.

F.7 – Ditch Recut. The terminus and upper fills of **F.1** were truncated by recut **F.7**. Cut **[56]** was rounded in plan, with moderately steeply sloping, slightly concave sides and a wide, irregular, slightly concave base, a maximum of 0.44m in depth and 1.76m in width. The westerly extent of the recut was not ascertained, but it extended 1.2m to the east, beyond the terminus of **F.1** and ended with a wide, rounded terminus. The basal fill, **[55]**, was a compacted mid to light grey-brown clayey sandy silt, almost identical to the primary fills of the original cut **F.1**, represented the primary silting of the recut and demonstrated high levels of root disturbance and very occasional charcoal flecking. The second and third fills, **[54]** <2> and **[53]**, were mid to dark grey-brown, moderately compacted silty clays with a relatively high quantity of charcoal and a high level of root disturbance, whilst the uppermost fill, **[52]**, was a mid grey-brown, moderately loosely compacted sandy clay with occasional charcoal flecking and a very high level of modern root disturbance. Bronze Age in date.

F.8 – Pit. Measures a maximum of 0.63m in diameter and 0.39m in depth. Cut **[60]** was circular in plan with generally straight, near vertical sides leading to a generally flat base demonstrating a slight concavity. The basal fill, **[59]**, was a moderately compacted light to mid grey-brown silty clay with a moderately high quantity of small angular and sub-angular stones. Upper fill **[58]** was a loosely compacted, dark grey brown peaty-silt with a high level of root disturbance. Several sherds of 19th century tile were recovered from this fill. 19th century in date.

F.9 – Gully. A narrow shallow gully orientated in a northwest to southeast alignment from the western limit of excavation, measuring a maximum excavated length of 4m and 0.36m in width. Cut **[62]** had moderately steep concave sides and a narrow concave base. It was a maximum of 0.15m in depth and filled with **[61]**, a moderately compacted dark to mid greyish-brown silty clay with occasional loose sub-rounded stones, flecks of charcoal and a high level of root disturbance. **F.9** may have been associated with **F.2**, and is truncated at the terminus by pit **F.11**. 19th century in date

F.10 – Pit. 0.65m in width and with a maximum depth of 0.47m. The cut, **[63]**, was rectangular in plan with near vertical straight sides leading to a flat base. Fill **[64]** was a loosely compacted, mid greybrown silty clay demonstrating high levels of root disturbance. Five sherds of 19^{th} century ceramic and tobacco pipe were recovered from this fill. 19^{th} century in date.

F.11 – Pit, a maximum of 0.74m in diameter and 0.41m in depth. The cut, [66], was sub-rounded in plan with straight, near vertical sides leading to a flat base. Fill [65] was a moderately compacted, mid to light greyish-brown silty clay with occasional gravel inclusions, charcoal and coal flecking, four sherds of 19^{th} century ceramic and shell. **F.11** truncated the terminus of **F.9**. 19^{th} century in date

F.12 – Posthole measuring 0.6m in width and 0.12m in maximum depth. The cut, **[67]**, was circular in plan and 'U' shaped in profile. The fill, **[68]**, was a moderately compact mid to light grey silty clay. Bronze Age in date.

F.13 – Posthole, measuring 0.2m in diameter and 0.1m in maximum depth. The cut, **[69]**, was circular in plan and 'U' shaped in profile. The fill, **[70]**, was a compacted mid reddish-grey silty clay containing a fragment of Bronze Age pottery.

F.14 – Posthole measuring 0.36m in diameter and 0.05m in maximum depth. The cut, **[71]**, was circular in plan and 'U' shaped in profile. The fill, **[72]**, was a moderately compacted mid to light reddish grey silty-clay. Bronze Age in date.

[79] – Deposit of very dark grey to black, moderately compacted clayey-silt with a maximum depth of 1.2m, overlying the whole excavated area. Overlay all previous garden features (F.2, F.9, F.8, F.10 and F.11) as well as concealing the cuts for all but the latest 20^{th} century service trenches.

[80] – Deposit of compacted gravel, brick, slate and mortar fragments which varied in depth between 0.1 and 0.15m and which, although generally level, undulated slightly to follow the profile of **[81]**. This represented a pathway, probably a walking surface associated with the first phase of garden activity in the area. It was truncated by **F.2**. 19^{th} century in date.

[81] – Deposit of moderately compacted mid grey silty clay varying in depth from 0.10m to 0.15m and covering the entire site. Fourteen sherds of 19th century ceramic were recovered from this layer which overlay [84] as well as immediately overlying the truncated Romano-British F.4. Was overlain by brick-rubble and gravel layer [80] and was truncated by F.2, F.9, F.8, F.9 and F.10. 19th century in date.

[84] – Deposit. A thin layer of compacted dark grey to black silty sand, a maximum of 0.22m in depth and restricted to an undetermined area within the northwestern quadrant of the site. **[84]** contained fragments of ceramic, clay-pipe, metal and a coin. It concealed the medieval tree-bowl **F.5** and was truncated by 19th century garden features **F.2**, **F.9**, **F.8**, **F.9** and **F.10**. 17th century in date.

[87] – Cut, only visible in the western section of the site, was moderately steep irregular sided leading to an irregular, generally flat base with a slight slope to the southwest. It varied in depth between 0.2 and 0.35m. Truncates **F.4** and **F.3** and is filled by [81]. 19th century in date.

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