

# Laboratory For Molecular Biology, Robinson Way Cambridge: An Archaeological Investigation.



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**Laboratory for Molecular Biology, Robinson Way,  
Cambridge**  
*An Archaeological Excavation*

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### ***Non Technical Summary***

*Cambridge Archaeological Unit undertook an open area excavation on the site for the Laboratory for Molecular Biology between 12<sup>th</sup> September and 31<sup>st</sup> October 2008. The excavation identified a significant amount of archaeology including a substantial L shaped enclosure with a possible sub enclosure probably dating to the Roman period and a series of Early to Middle Anglo Saxon features including an SFB, which is quite rare in the South Cambridge area. Also present was a considerable amount of evidence for significant Bronze Age activity within the area.*

## **Introduction**

An archaeological excavation was carried out by the Cambridge Archaeological Unit (CAU) between the 12<sup>th</sup> September and 31<sup>st</sup> October 2008 on former agricultural land off Robinson Way, Cambridge, in advance of the construction of a Laboratory for Molecular Biology (LMB). Commissioned by BAM (formerly HGB), the excavation aimed to record the presence, date, state of preservation and significance of any archaeological remains. The excavation was carried out and this report written in accordance with an archaeological specification written by the CAU (Dickens 2008) in response to a brief by Cambridgeshire Archaeology Planning Countryside Advice (CAPCA). It was approved and monitored by a Senior Archaeological Officer from CAPCA.

### *Location, topography and geology*

The site was located on land formerly used for agricultural purposes off Robinson Way, Cambridge. It is bordered by the main Cambridge to London rail line to the west, Long Road Sixth Form College's sports fields to the north, Addenbrooke's Hospital to the east and the Cambridge Guided Busway to the south (see Figure 1). It was originally planned as being 10-15m south of its current location, however after the discovery of potentially important Early–Middle Saxon features just to the north of the site (Timberlake 2007a) the decision was made to move it as close to these features as was feasible. The area of excavation was approximately 128m long and 66m wide on an east-west alignment, with a total area of 8819 m<sup>2</sup>, or 0.882 hectares and was centred on NGR 545903/255223.

During construction at Addenbrooke's Hospital in the 1960's, topsoil and much of the subsoil from the site and immediately surrounding area were removed, and the excavated chalk marl was deposited over most of the LMB field upto a depth of 2m, creating an artificial rise in the land, which was subsequently covered with a thin topsoil layer.

After the removal of these overlying deposits it was observed that the underlying site topography gently sloped downwards from a height of 15.3m OD at the east end to 13.8m OD towards the west. A distinct geological change was noted approximately 26m in from the west end (see Figure 2), where the geology altered from reddish brown sandy Third Terrace gravels at the lowest end of the site, to chalk marl (The West Melbury Marly Chalk Formation of the Lower Chalk) which had frequent shallow, clay-silt filled solution hollows, (British Geological Society 2002). The distinct change can probably be attributed to the northeast edge of the former flood plain for Hobson's Brook (Timberlake 2007a).

### *Archaeological Background*

The landscape surrounding the environs of Addenbrookes Hospital has been subject to intensive study over the past several years by the CAU, including a desk based assessment (Evans 2002), large open area excavations (Evans, Mackay & Webley 2004), large scale evaluations, (Evans & Mackay 2005 and Slater 2008b), smaller

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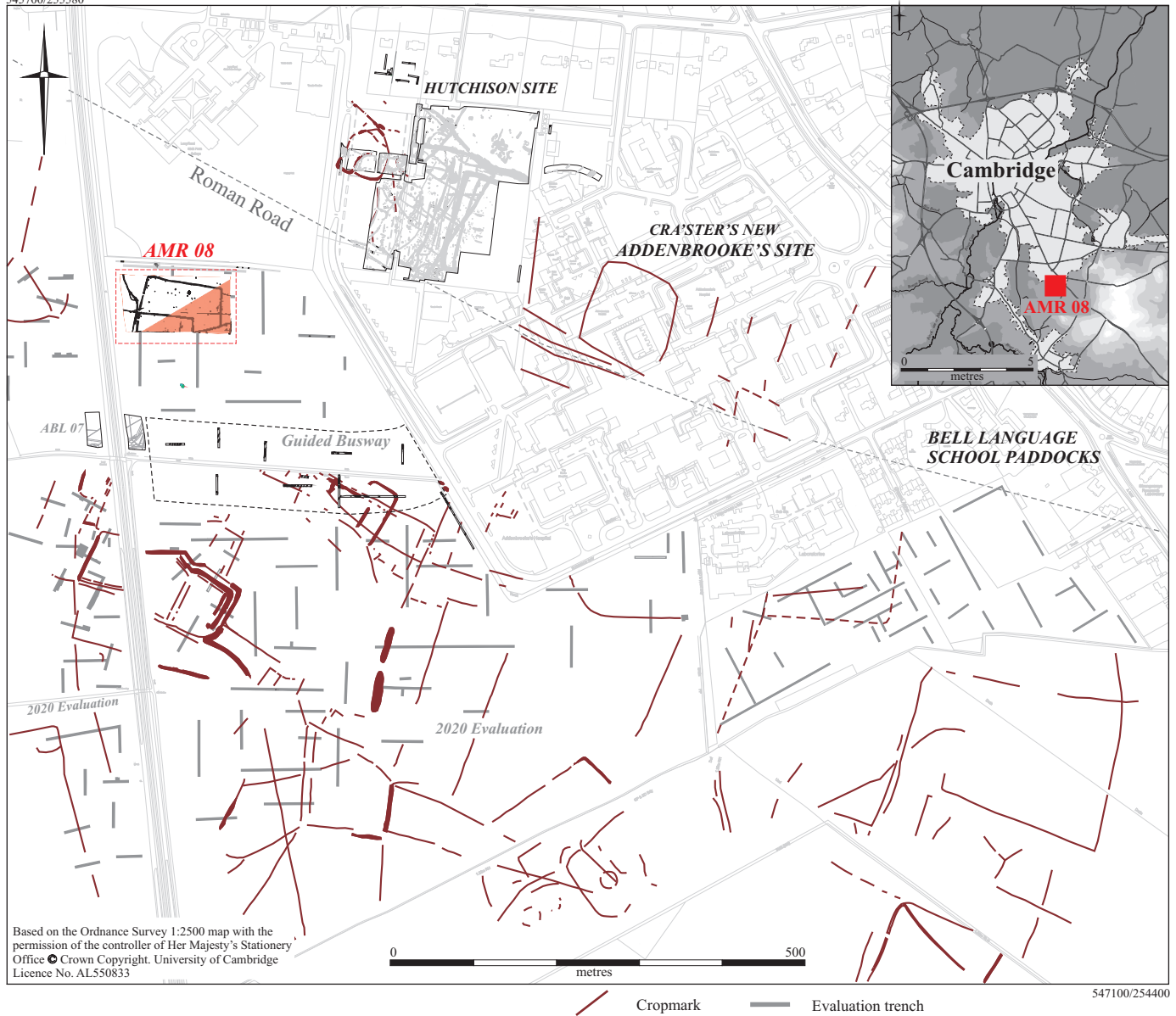


Figure 1. Location plan, cropmarks and previous archaeological investigations.

scale excavations (Timberlake 2007a), and publications (Evans, Mackay & Webley 2008). This archaeological background aims to place the site within its broader landscape taking into account these earlier works (see Figure 1).

The Hutchison site (Evans, Mackay and Webley 2008) located just to the east was a multiphase site stretching from the Neolithic through to the medieval period. The Neolithic phase consisted of two small pits suggestive of transient or background activity, and a similar story appeared to be the case for the Early and Middle Bronze Age. It was not until the Later Bronze Age that more, potentially settlement related activity, took place with evidence for a possible field system being established, some possible clay extraction for use in pot making and several pit and post clusters. The most substantial archaeology however was dated to the later Iron Age, Conquest period and later Roman phases, with evidence for a significant Middle Saxon presence also.

The Iron Age and Roman components consisted of substantial enclosures with evidence for buildings, pottery production (kilns), a trackway and a small cemetery, whilst the Middle Saxon period was represented by two rectangular structures, a possible enclosure ditch and a series of wells (Evans, Mackay & Webley 2008).

Just north of the present excavation area, a CAU evaluation (Timberlake 2007a), which ran the length of the current site, exposed a well within a pit cluster. This contained 5<sup>th</sup> – 6<sup>th</sup> century Anglo-Saxon pot, animal bone, iron-knife blades and fired and unfired clay, however no other features were identified. Just north of this, within the grounds of Long Road Sixth Form College, an evaluation uncovered numerous ditches, gullies and pits, which, despite being sealed by subsoil and interpreted as 'prehistoric' were undated (Abrams 2000). It is also worth noting the Roman trackway seen at the Hutchison site was projected to pass through the playing fields of the college on a northwest-southeast alignment, (Evans, Mackay & Webley 2008).

To the south of the excavation area, an evaluation (Cessford & Mackay 2004) and two small open areas (Collins & Dickens 2009) carried out prior to the construction of the Cambridgeshire Guided Busway showed a relatively dense area of archaeology. The archaeology identified within the trenches was dated to the later Iron Age and Roman periods and consisted of probable enclosure ditches with considerable amounts of material culture within them suggesting the presence of nearby settlement activity. The dating for many of the features within the open areas was more ambiguous, with several post medieval ditches present along with several which could only be dated as probably being prehistoric or Roman. To the south of these excavations, evaluation trenches relating to the 2020 developments showed a continuation of the later Iron Age and Roman activity identified during the Guided Busway work, which, together with aerial photographic results strongly indicates a significant 'spread' of settlement and field systems dated to that period extending across a wide area, (Evans & Mackay 2005). However, during the same evaluation a significant triple-ditched enclosure was identified that was originally tentatively dated to the later Iron Age, but after further work and carbon dating was re-phased to the mid to Late Bronze Age period.

To the west, on the opposite side of the London to Cambridge railway line, several trenches that were part of a 2008 evaluation (Slater 2008b) came within 75m of the excavation area. This group of trenches showed a concentration of archaeology close



to the railway but almost none further to the west suggesting a clear break in archaeological activity. The archaeology was interpreted as possibly being a series of Roman 'lazy beds' overlain with medieval/post medieval ridge and furrow.

The 2004 trench evaluation which incorporated the field the site is located in (Evans & Mackay 2005) appeared to indicate the presence of rather limited archaeology in the form of linears, occasional pits and a crouched inhumation. Many of the linears were tentatively dated to the later Iron Age, however subsequent reanalysis of the dating evidence in light of the results of this open area excavation led to many of these features being reclassified as potentially Middle Bronze Age (see Appendix 3). This, in conjunction with the triple ditched enclosure does suggest a significant Middle Bronze Age presence within the local landscape. Furthermore, the presence of Anglo-Saxon Ipswich ware in two features in the evaluation, of which only a few small examples are known within Cambridge, also indicated the possibility of Middle Saxon settlement activity.

Overall, it is clear this site exists within a varied landscape densely utilised during the later Iron Age and Roman periods. It is also apparent that there is potential to uncover significant Bronze Age and Saxon activity

### *Methodology*

The overlying marl was, after prior consultation, removed without full archaeological supervision leaving a variable depth of dirty/disturbed natural and subsoil across the site. This was carefully removed and the underlying deposits exposed under the supervision of an archaeologist by a 40 ton tracked 360° machine using a 3m wide toothless bucket. Due to the depth around the edges of the site (upto 2m in places), they were battered and compacted where necessary in order to prevent soil slippage, maintain stability and create a safer working environment. Excavation of exposed archaeological features was carried out using hand tools.

Recording of the site followed a CAU system (Dickens 2008) developed for extensive rural projects which assigns feature numbers, F., to stratigraphic events such as ditches, pits and postholes. Intervention numbers [100+] were assigned to each event (slot, half-section etc) carried out by archaeologists and all deposits within, and the cut of, an intervention, were assigned a context number [100.1+]. The excavation area plans were drawn at 1:50 and related directly to the National Grid, and sections were drawn at 1:10. Bulk environmental and monolith pollen samples were both taken where appropriate. All work was carried out in strict accordance with statutory Health and Safety legislation and with the recommendations of SCAUM (Allen and Holt 2007), and in accordance with a site specific risk assessment and the Cambridge Archaeological Unit Health and Safety policy. The site code was AMR 08 and the CHER number was ECB 3038.

### *Archive*

A total of 641 contexts from 334 interventions and 108 features were excavated and recorded and finds including prehistoric, Roman, Early Saxon and post medieval pot, animal bone, flint, brick, glass and metal objects including a partial bronze palstave, a pair of shears and several nails were recovered. A digital and black & white

photographic archive was also compiled. The documentary and photographic records and accompanying artefacts have been assembled into a catalogued archive in line with Appendix 6 of MAP2 (English Heritage 1991), and are being stored at the Cambridge Archaeological Unit offices.

## **Results**

Several phases of archaeology were identified on site (see Figures 2 and 3), however, the date for the dominant phases, consisting of a large L-shaped enclosure with several offshoots and a segmented gully system remains ambiguous. This is discussed in detail further on, but in light of this ambiguity, the results section is divided into two separate parts. The first part (Phased Archaeology) details the known and dated archaeology, whilst the second part (Unphased Archaeology) looks at the enclosure system and its off-shoots and the segmented gully system and presents the conflicting evidence for its dating.

### *Phased Archaeology;*

Although the most visible archaeology on site was the substantial enclosure and the segmented gully system, several other phases were also present and included Neolithic, Beaker, Early/Middle Iron Age, Roman, Anglo Saxon, late medieval and post medieval. These phases are detailed below;

### *Neolithic*

Several treethrows were identified on site and test excavated, but only F71 contained any material culture, and was therefore fully excavated and recorded. Here, a significant quantity of worked and burnt flint (see Appendix 1) and pot was recovered. The worked flint was characteristic of the Early Neolithic and a broken leaf-shaped arrow head was amongst the assemblage. Most of the pot recovered was also dated to this period except for several rather different sherds that were out of character with the rest of the assemblage and appeared to have a Middle Iron Age form, (see Appendix 2).

Pit F89, which appeared to be relatively isolated from other pits was also dated to the Neolithic by virtue of the small flint assemblage within it.

A significant amount of residual worked flint, including blades and bladelets and a number of small pot sherds dating from the Neolithic, and in the case of some of the flint potentially earlier, were recovered from later features and in particular from enclosure ditch F3 and its constituent parts, suggesting a certain amount of background activity was taking place during that period.

### *Beaker*

The only feature on site that could be dated definitively to this period was pit F66, which was relatively small and had steep sides leading to a flat base (Figure 11a). It was 100 percent excavated and several sherds of Beaker pot and a small assemblage of worked flint were recovered.

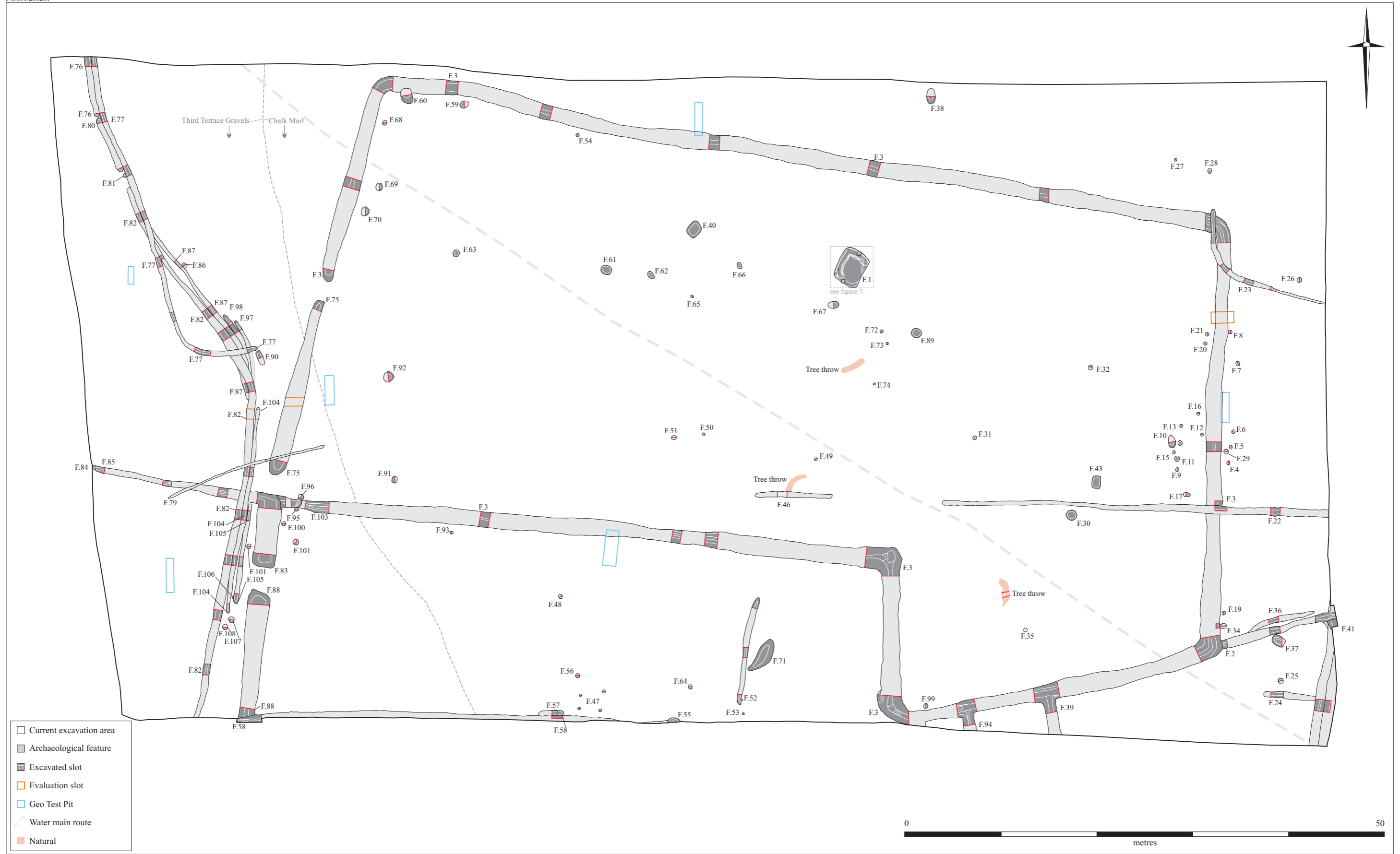


Figure 2. Plan of open area.

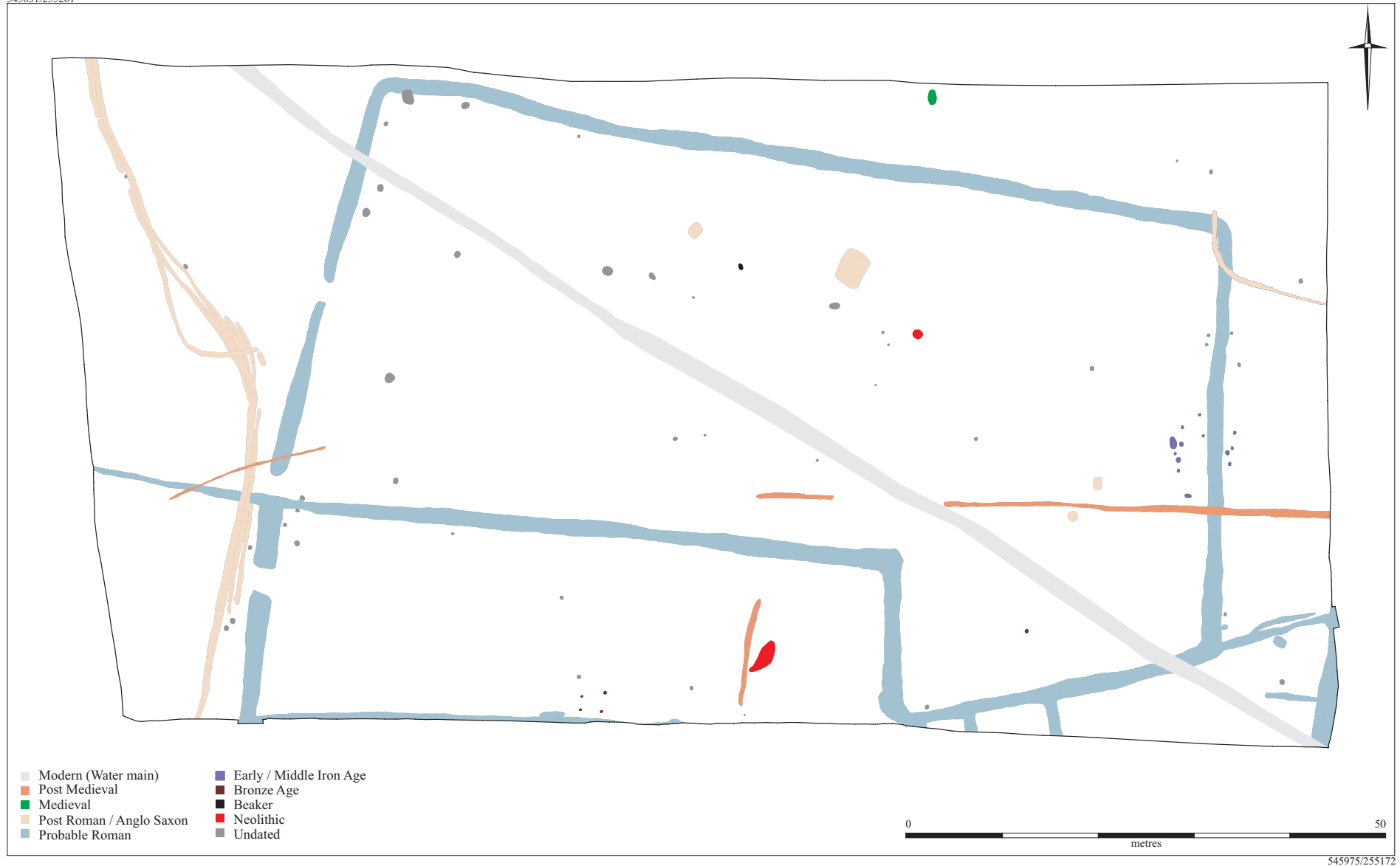


Figure 3. Archaeological Phase Plan.

### *Early/Middle Iron Age*

Most of the postholes grouped towards the eastern edge of the site shared a similar profile and fill type so due to the presence of Early/Middle Iron Age pot within posthole F9 they were ascribed to that period. The number of postholes within this cluster does suggest a structure existed here; however, what form that may have taken is not clear. It is entirely probable that ditch F3 truncated several postholes and it is equally likely, due to the shallow nature of many of the postholes, some could have been lost when the site was previously stripped.

### *Roman*

Pit F30 was a moderately sized circular feature with almost vertical edges and a flat base. It lay near to well F43 and contained a small amount of fragmentary animal bone, a piece of Roman flue tile (resting face down on the base at the centre) and a small triangular piece of window glass that dated from the 1<sup>st</sup>-2<sup>nd</sup> centuries AD (see Appendix 11). Environmental evidence showed a number of cereal grains were present along with a large amount of charcoal and a mineralised fly pupae (see Appendix 8).

A small amount of Roman pot was recovered from the site and consisted primarily of a few small abraded sherds primarily dating to the Early Roman period. These were probably residual in later features, apart from a single sherd of colour-coated Nene Valley ware recovered from the Saxon SFB (sometimes referred to as a sunken featured building or grubenhaus) which could have been curated, a practise common during the Saxon period (see Appendix 4). Some of the animal bone assemblage recovered from enclosure ditch F3 also bore the hallmarks of butchery practices often associated with the Roman period (see Appendix 7), although this ditch is discussed in greater detail further on.

### *Anglo-Saxon*

Several features were positively dated to this period and included an SFB, F1, and two wells, F40 and F43. It is also quite likely the segmented gully system seen on this site could date to this period, but this series of features is discussed in greater detail later on.

### *Wells*

Neither of these features showed much evidence for water logging but have been described as wells primarily because of their form, (see Figure 4). F40 was located approximately 15m west of F1 and was sub rectangular in plan with vertical sides near the surface which gradually bowed outwards to form a conical shaped profile. The well appeared to have been purposely backfilled and used as a dump. Cattle remains were found both resting on the base and slightly further up the fill sequence with evidence showing they were butchered in their first year (see Appendix 7). Also present within this well was a couple of abraded Early Roman pot sherds, several pieces of Niedermendig lava quern and several iron objects, including a complete set of probable 5<sup>th</sup>-6<sup>th</sup> century AD Saxon shears (see Figure 5 and Appendix 12), located within the upper fill. The quern was resting against a large (approx. 49 kilos) volcanic

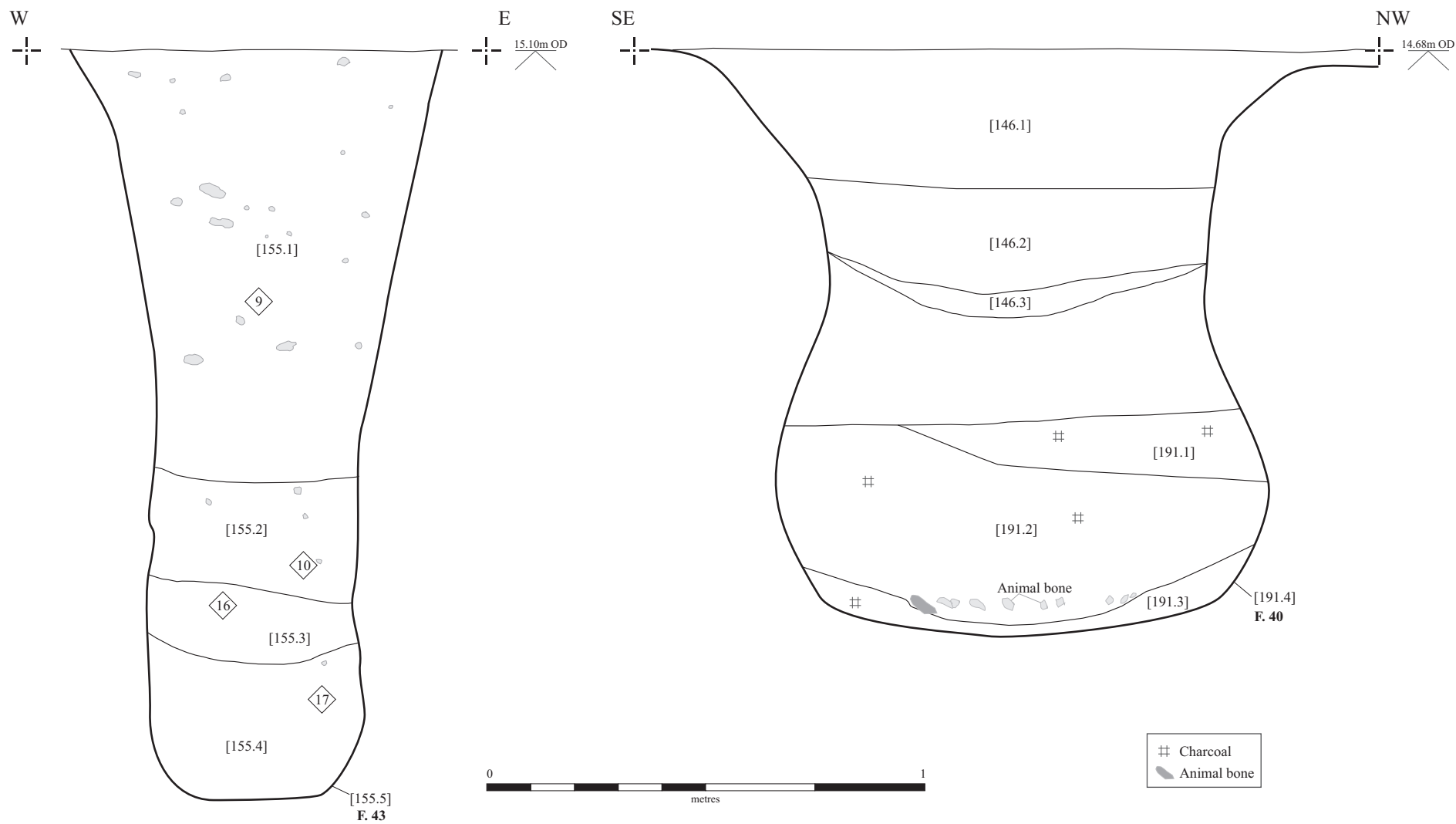


Figure 4. Sections showing probable Anglo-Saxon Wells.

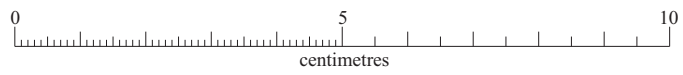


Figure 5. Early-Middle Anglo-Saxon shears recovered from well F. 40.

rock which was probably a glacial erratic but had clearly been pushed into the well at some point (see Appendix 13). The Niedermendig lava quern was quite distinctive and matched that which was recovered from a Saxon pit cluster and well just outside the northern edge of excavation (Timberlake 2007), see Appendix 12, and is typical of the Saxon period. Bulk environmental evidence from this well contained the largest assemblage of charred cereal remains from any feature on the site, but was only in sufficient numbers to suggest cooking and consumption waste accumulated over a period of time rather than being dumped specifically (Appendix 8).

F43 was just over 30m to the southeast of F1 and again was sub rectangular in plan, although this time almost vertical sides led to a small rectangular base (see Figure 10). Very few finds were recovered from this feature and included some fragmentary cattle and sheep bone (Appendix 7) and two small abraded sherds of Roman greyware dated 1<sup>st</sup>-2<sup>nd</sup> century AD. A bulk environmental sample did however reveal mineralised faecal deposits, although their density was low enough to suggest the well was not used as a proper toilet but as a place to discard occasional waste. Potentially further work on these deposits could provide data on the diets of people from the Saxon period, as evidence from cess pits of this period is rare, (Appendix 8). A pollen sample was taken from the basal fills of the well and although preservation was poor, the results from the analysis of this sample suggested the surrounding landscape at the time could have been a mixture of meadowland and mature and possibly riverine woodland (see Appendix 9).

## *SFB*

### *Excavation and Recording Methodology*

Due to the relative scarcity of SFB's within the Cambridge area, F1 was excavated in a manner designed to accurately plot finds distribution and maximise finds recovery. To facilitate this aim the SFB was divided into equal quadrants that were subdivided into 1m<sup>2</sup>. Initially, opposing quadrants were excavated and each 1m<sup>2</sup> was dug in 100mm spits, with each square being assigned an intervention number and each spit being individually recorded. The postholes and stakeholes that were subsequently identified were also assigned an individual intervention number and were initially half-sectioned. After the two opposing quadrants had been fully excavated and recorded the final two quadrants and remaining halves of the postholes and stakeholes were removed and recorded using the same methods. Figure 6 shows the SFB with the initial opposing quadrants removed and also, fully excavated. All spoil generated from digging this feature was also sieved for finds. After excavation the SFB was digitally planned and Figure 7 shows a contour plan and 3D rendition of the structure.

### *Results from the SFB*

The SFB was 3.72m long and 2.9m wide on a northeast southwest alignment. A total of 19 interventions, [209-218], [260-264], [266-269], were carried out within the SFB. Within the structure two substantial postholes with a depth of upto 0.62m and four small stakeholes were present. One posthole, F109, was located approximately midway along the northeast edge of the SFB and the second one, F110, was located



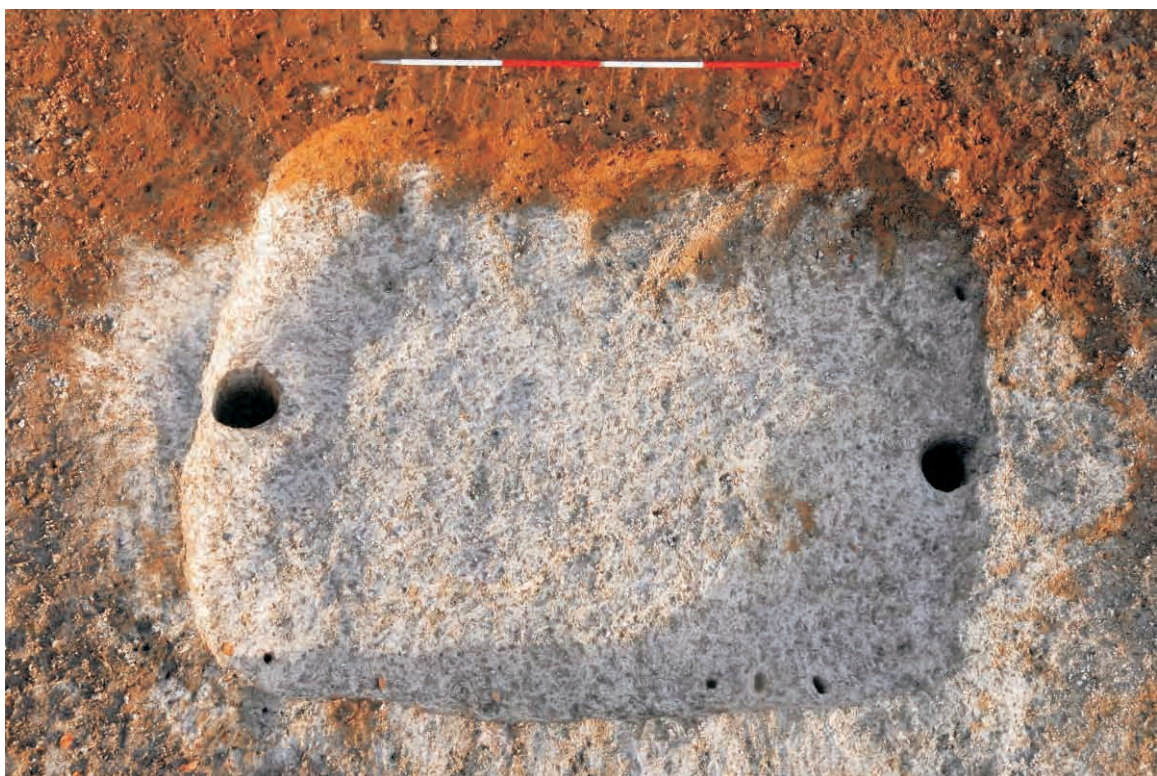


Figure 6. Half excavated and fully excavated Early Saxon SFB F.1.

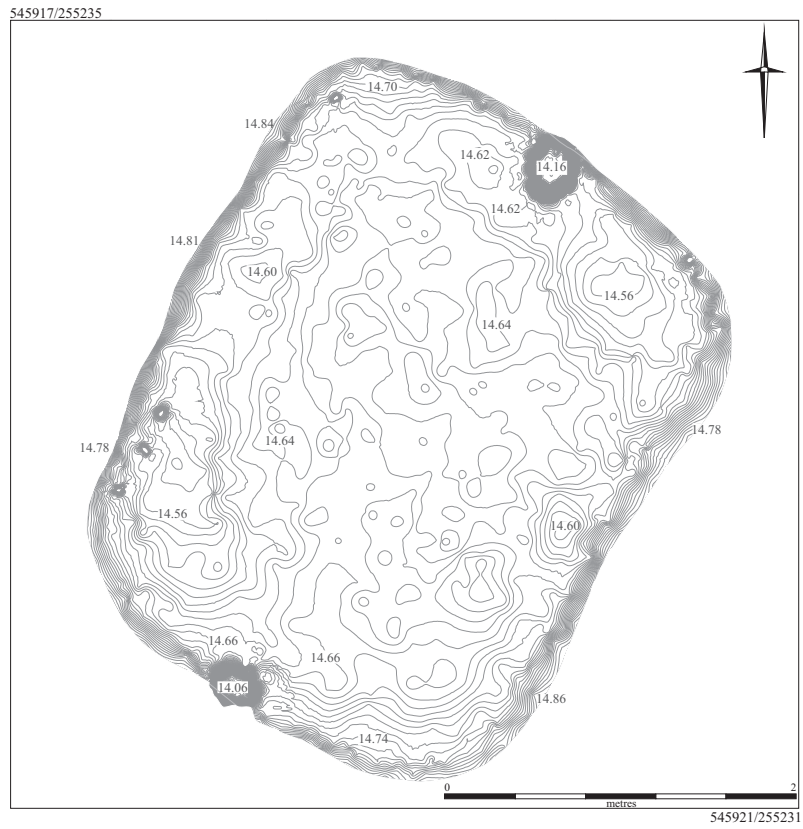


Figure 7. 10mm interval contour plan and 3-D rendition of Early Saxon SFB F1.

almost directly opposite along the southwest edge. The four stakeholes, F111, F112, F113 and F114 were all located along the northwest edge.

The depth of the SFB varied slightly but at its deepest was just 0.2m, however it is possible that some of the feature may have been truncated when the site was initially stripped prior to the 1960's dumping of chalk marl during construction at Addenbrooke's hospital. Figure 7 shows how the base of the SFB was noticeably deeper around the northeast and northwest edges. This slightly deeper 'trough' sloped fairly gently upwards to a level platform across the rest of the base and it is unclear at this stage whether this form served a function, although the location of the stakeholes within the trough could be significant.

The most significant find recovered was a crushed, but near complete, decorated vessel probably dating to the fifth century AD from intervention [213]. Vessels of this type and from this period are quite rare, particularly outside of a funerary context and its presence within the upper most part of the top fill suggests it may have been symbolically placed there after the building fell out of use (see Appendix 5). Small quantities of pot and fragmentary animal bone, as well as residual worked flint that were fairly evenly distributed throughout the fill were also recovered. The recovered pot included several highly abraded Bronze Age sherds, several Late Iron Age sherds, a base for a Nene Valley ware vessel dated 2<sup>nd</sup>–4<sup>th</sup> century AD as well as a number of sherds dated Early to Mid Saxon (see Appendices 1, 4, and 5). Many of the smaller finds were recovered from sieving the spoil, demonstrating this process can significantly increase finds quantities. A bulk environmental sample from the SFB was quite negative, with only a very small number of cereal grain fragments as well as some molluscs identified, although a reasonable amount of charcoal was present.

### *Medieval*

A single pit, F38, was dated to the late medieval period. It was oval in shape, relatively long and broad but quite shallow with some pot and animal bone present. Despite being located next to the northern edge of the excavation area, it is probable this feature was an isolated event as no other features dating to this period were identified on site.

### *Post-medieval*

The most obvious post medieval activity on the site was the deposition of excavated marl across the site during construction at Addenbrookes Hospital in the 1960's. The site was clearly stripped down to the underlying clay marl and Terraced gravels before the excavated material was placed on the site, and because of this it is possible archaeological features, particularly smaller, shallower ones such as postholes could have been truncated away. Also in evidence towards the eastern edge of site were several broad, but shallow wheel ruts probably caused by dumper trucks during the deposition of the excavated marl. These were also identified during the evaluation phase (Evans & Mackay 2005) and can initially look like linear ditches; however all were test excavated but none were planned or recorded. Several pieces of ambiguous brick and post medieval tile were identified apparently pressed into the tops of several features including enclosure ditch F3. However, their presence was deemed to be a result of the aforementioned disturbances and activities.

Two east-west orientated ditches (F22 and F46) and one north-south orientated ditch (F52) were dated to the post medieval period as all contained finds from that period. All three were quite small and shallow, and both F22 and F46 were highly truncated and were originally probably the same feature. Their alignments and position suggest all three previously formed part of the same post medieval field system.

Other post medieval activity on site included a regular series of parallel field drains on a northeast-southwest orientation (not shown on the site plan) and a substantial deactivated water pipe which dissected the site on a northwest-southeast axis, (see Figure 2). The water pipe cut across enclosure ditch F3 at two points, but aside from this, appears to have disturbed relatively little archaeology.

The site has also been subject to testing by geotechnical test pits; however none of these appear to have significantly affected the archaeology either, with two just clipping enclosure ditch F3.

### *Unphased Archaeology*

F3 was a substantial ditch (see Figure 8 and Figure 10) that formed a large, slightly irregular L shaped enclosure with an internal area measuring 3994m<sup>2</sup>. Eighteen interventions, [106], [130], [131], [138], [140], [145], [159], [165], [175], [181], [193], [199], [225], [229], [279], [280], [296] and [303] were excavated and showed it to be quite regular and substantial for much of its length, but it did become slightly shallower and narrower towards the west. Width varied from 1.87m to 1m and depth from 0.97m to 0.39m. Sides were generally steep to very steep leading to a fairly narrow, rounded base. No evidence of a bank was present, either on the surface (unsurprising considering the site has been stripped previously) or within the ditch itself. Finds were fairly evenly distributed throughout the individual interventions, and included quite large amounts of animal bone and burnt stone together with smaller quantities of pot, worked flint and a single bronze palstave fragment. The pot consisted solely of prehistoric sherds primarily dated Middle Bronze Age and included 58 sherds of Deverel-Rimbury. There did also appear to be a concentration of prehistoric pot towards the northwest corner of the enclosure. A number of Neolithic and Early Bronze Age sherds were also recovered but these tended to be a lot more worn and abraded than the later material, (Appendix 2). The bronze palstave (axe) fragment was the only piece of metalwork recovered from the ditch and was located in the upper fill along the southern edge of the ditch by metal detector. It probably dated from the Middle-Late Bronze Age period and the recovery of such a fragment from a ditch context is quite rare. Several bulk environmental samples taken at points around the ditch showed rather negative results with very few plant remains present, although the mollusc assemblage was sufficient in quantity to suggest the ditch had been damp, vegetated and seasonably wet. A pollen sample taken from eastern part of the enclosure showed relatively poor preservation, although cereal pollen was present in the lower fills which further up the fill sequence appears to have been replaced by more heath-land type species, perhaps suggesting the gradual abandonment of the enclosure (see Appendix 9).

Within F3 two specific dumping events were noted and given separate feature numbers. F44 was located within the northeast corner and comprised a dark earth deposit backfilled into the ditch, probably after it had fallen out of use. It contained a

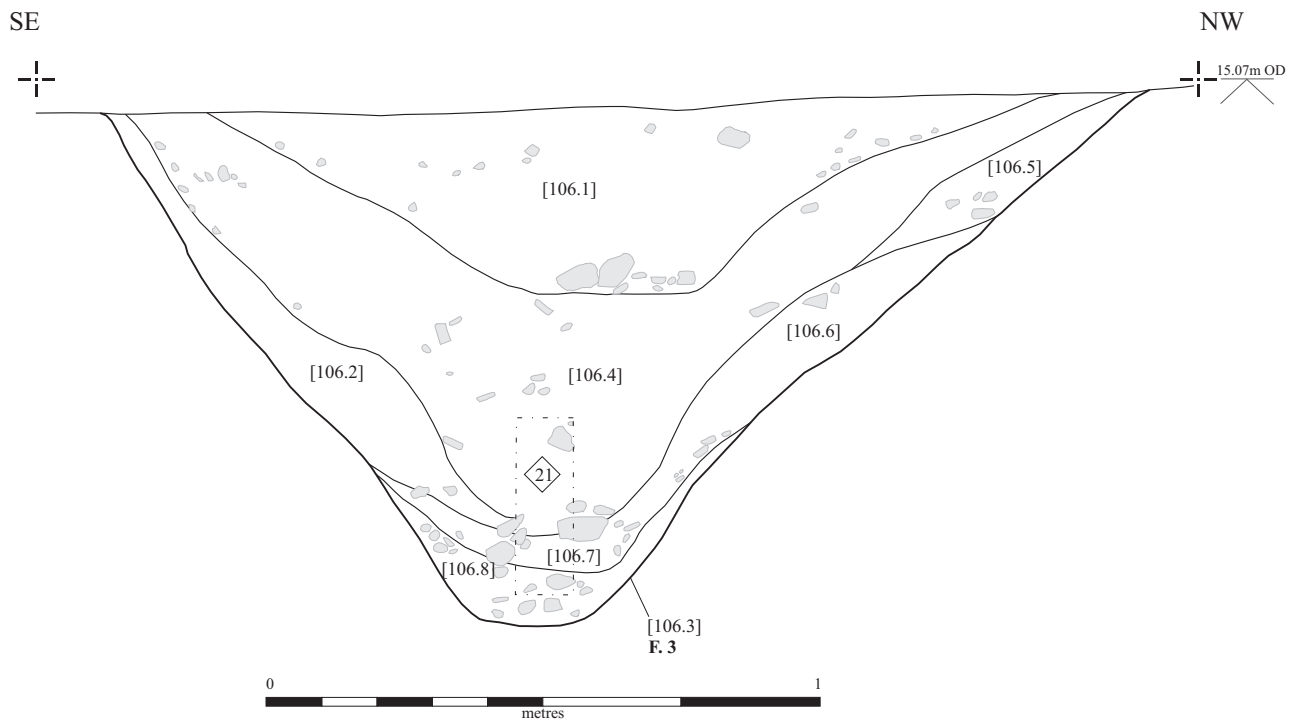


Figure 8. Enclosure Ditch F.3.

significant assemblage of animal bone, 31 sherds of Deverel-Rimbury pot and several worked flints and unworked burnt flint chunks. F78 was the deliberate deposition of a large amount of burnt stone into the ditch (see Figure 9b) and was located on the corner where the ditch turned 90 degrees from a north-south orientation to an east-west one along the southern edge. An environmental sample was taken from the context surrounding the burnt stone, which aside from a lot of charcoal, contained two hulled barley seeds. Due to the clear *in-situ* nature of this deposit it was decided to have these seeds dated through Accelerator Mass Spectrometry (AMS) radiocarbon dating. This process, with a probability of 95%, returned a date of AD 130–350, although this could be narrowed down further, with a probability of 68%, to a date between AD 290-320 (see Appendix 6).

At the west end of the enclosure, ditch segment F75 together with F3, formed two entranceways. A further entranceway (F103) appears to have been created through F3 just to the south by purposely backfilling a short section, approximately 4-5m, of ditch F3. This new entranceway was probably created in order to provide access to the possible smaller enclosure formed by ditch segment F83 and ditches F58 and F88, which, based on the fact F83 cuts into F3, was a later addition. An entranceway created by ditches F83 and F88 is shown in figure 9a. A pollen sample from F88 showed very poor preservation although, as with the sample taken from F3, cereal pollen was present in the basal fill but was replaced by wild heath-land style species in the upper fill again providing evidence for the possible abandonment of the site (see Appendix 9).

Towards the southeast end of site two parallel northwest-southeast orientated ditches, F39 and F94, joined onto the more substantial F3. No discernable relationship between these features and F3 could be identified suggesting they were contemporary. In the southeast corner a series of smaller ditches were present and clearly predated F3, given that F2 was cut by the larger enclosure ditch, and in turn it cut the northeast-southwest orientated ditch F41. These features yielded very few finds which included a small amount of animal bone and residual worked flint.

Post-dating the enclosure and its constituent parts was a segmented gully system located towards the eastern end of site. This system meandered across the site on a roughly north-south orientation, but with a distinct curve or bulge. Most of these gullies were very shallow with moderately steep sides and slightly rounded bases (see Figure 11b), and very few finds were recovered. The few finds included a small number of worn/abraded Late Iron Age/Early Roman pot sherds and some animal bone. Also, within the evaluation phase a sherd of Mid-Late Saxon Ipswich ware (based on observations made by Paul Blinkhorn) was recovered from F82. Bulk environmental samples taken from F77 and F82 showed the presence of wheat, barley and a grain of bread wheat which suggests a Roman or Post Roman date for these features (see Appendix 8).

The final phase of the gully system was F77. This differed somewhat from those gullies which preceded it in that it followed a relatively straight northwest-southeast orientation before it turned sharply 90 degrees and terminated. This form is matched by gully F23 located on the eastern edge of the excavation area which curved almost 90 degrees from a northwest-southeast orientation to a north-south one. The similarity in form and profile does suggest a similar date and function for these two features.

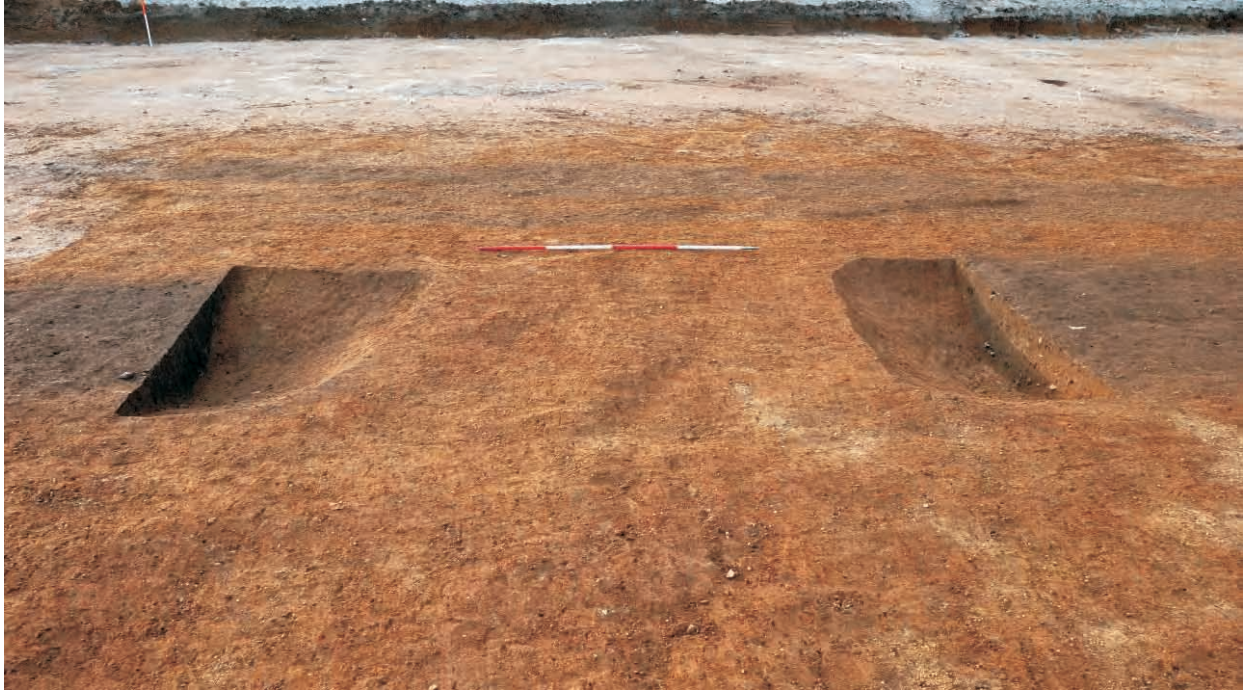


Figure 9a. The termini of ditches F.88 and F.83 which form an entranceway into an enclosure.



Figure 9b. Burnt stone deposit within enclosure ditch F.3.



Figure 10. The site under excavation, showing the enclosure system.



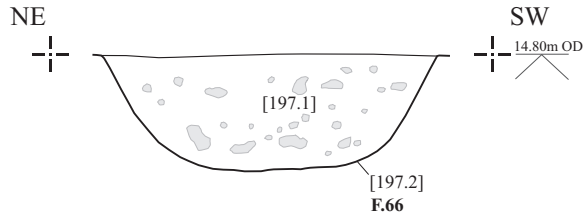


Figure 11a. Section of Beaker pit.

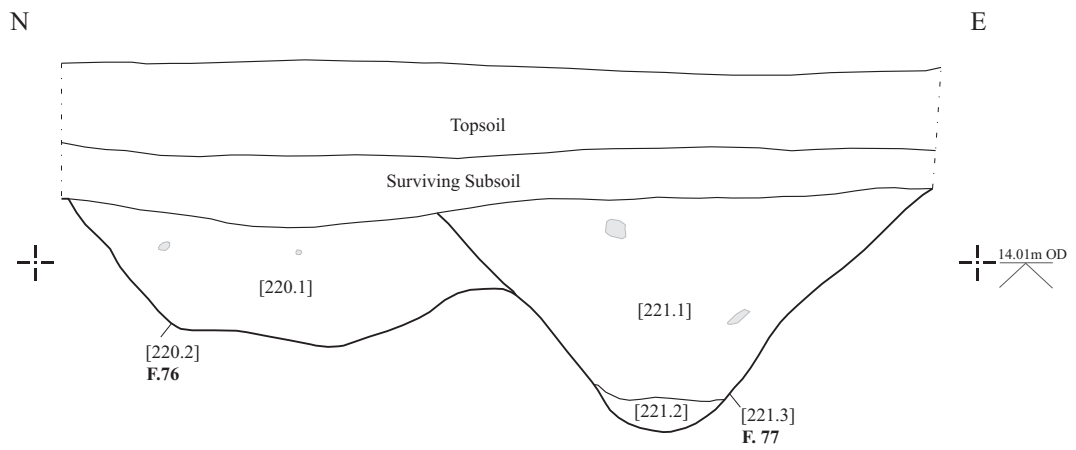
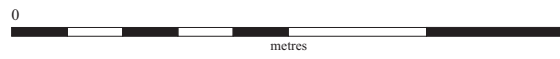


Figure 11b. Section from segmented gully system.

## Discussion

Although on a slightly smaller scale, the enclosure formed by F3 and F75 is of a similar shape and form to one observed at the Hutchison site (Evans, Mackay & Webley 2008). At that site the L-shaped enclosure had within the southwest corner a smaller sub-enclosure giving a roughly rectangular overall shape. At the AMR 08 site this pattern has potentially been repeated, with ditch segment F83 and ditches F58 and F88 forming the smaller sub enclosure. However, the C14 results indicated a Mid Roman date for this system, whereas the similar features at the Hutchinson site were attributed to the Conquest and Early Roman periods, suggesting the two systems were not in use during the same period.

The entranceways into the enclosures were all located on the western side of the system suggesting any settlement they were connected with was more likely to be in that general vicinity, rather than towards the east. Although conceivably postholes F8, F20 and F21, which sit either side of F3 at the east end of the enclosure could have supported some kind of walkway across the ditch. Also, trenches to the west of the site revealed no evidence for settlement activity at all (Slater 2008).

It is interesting to note that despite their small, shallow nature, and the relative lack of material culture within them, several sherds of Late Iron Age/Early Roman pot were recovered from the segmented gully system. Also, several sherds were recovered from both the Saxon SFB and wells, so there is clearly a Roman presence on this site, and yet no pot dating to that period was recovered from the numerous interventions within the enclosure ditches. To excavate so many interventions within an enclosure system that purports to be dated Roman and find no pot dating to that period is unusual. Even if these ditches were part of an outlying field system, some Roman material would be expected as previous excavations within this landscape (Collins & Dickens 2009, Mackay & Evans 2006 and Timberlake 2007b) have shown Roman pot to be ubiquitous even in peripheral or more remote features (Appendix 3).

Dumps of material within two of the enclosures corners (F44 and F78) were also quite unusual. For instance, whilst the large number of Neolithic, Early and Middle Bronze Age pot sherds found within ditch F3 could possibly be classed as residual, F44 contained 31 sherds of Middle Bronze Age Deverel-Rimbury pot and no later material. The presence of so much pot dated to this period within a supposed later deposit cannot easily be explained, particularly as this dumping event appears to have occurred once the ditch had fallen out of use. Burnt stone deposit F78 was a type of depositional event more often associated with the Bronze Age (based on comments by Mark Knight). Despite this, however, it was this feature which yielded the two barley seeds that were dated through AMS C14 methods to the Mid Roman period. It has been suggested though (see Appendix 8), that because of the poor quantity and quality of remains from the bulk environmental sample, there is a distinct likelihood these two seeds may have been introduced into an earlier context after the ditch had fallen out of use and filled in.

Overall it is probable that the enclosure system is dated to the Roman period, given its form, the results of the radiocarbon dating and the known presence of substantial, similar features within the landscape that are definitively dated to Roman. However, sufficient doubt remains to suggest the possibility the enclosure could be dated to the

Bronze Age and further work should aim to gather more definite dating evidence, for instance obtaining further radiocarbon dating data.

Pit F30, located near to well F43 could potentially have been a Saxon feature despite only Roman finds being recovered from it. No other such features dating to the Roman period were present on the site, and the types of finds recovered could have been curated by the Saxons, a practice common during that period. The small, triangular piece of window glass for instance had clearly been reshaped from its original form, and must have been brought in from outside the immediate area as no other window glass dating to the Roman period has been identified within the vicinity. Also the presence of a single (complete) tile suggests it too may have come from some distance away, as the closest known Roman buildings are located at the Hutchinson site to the east. Also, the presence of a mineralised fly pupa suggests the pit was open at the same time as the nearby well (see Appendix 8).

The two wells were dated to the Saxon period because, despite the presence of several abraded sherds of Roman pot, their form matches the number of Saxon wells identified at the Hutchison site. The lack of evidence for Roman occupation within the immediate area, the presence of imported German (Neidermendig) quern, and finds such as the shears, are all factors that also point towards that period. Furthermore, the results from the pollen samples suggest the wells were active within a landscape that was very different from that when the ditches were open.

The most definitively dated Anglo-Saxon feature on site was the SFB, and it is the only one of its kind identified to date within the surrounding area. Its actual purpose is unclear, but such features have been linked to both industrial/agricultural and domestic practices (see Lucy, Tipper & Dickens 2009 for the most recent discussion about the form and function of SFB's). However, the presence of shears and quern stone within the adjacent well, the lack of evidence for domestic style rubbish and the apparent small size of the feature point towards the building being a possible agricultural workshop. Although the potential symbolic placing of a whole pot, whose type is usually only seen in a funerary context, within the building after it had clearly fallen out of use does suggest it may have had more importance than just as a workshop.

The segmented gully system, by virtue of the presence of a single sherd of Mid to Late Saxon Ipswich ware found during the evaluation phase, has been tentatively attributed to the Saxon period. The segmented and curving nature of this gully system is certainly not a typical Roman form, as these are usually far more regular in their layout. A similar, if somewhat more substantial, boundary was observed during excavations at a site along the line of the Cambridgeshire Guided Busway near Longstanton (CGB:LMD in Collins & Dickens 2009). Here the system was attributed to the Iron Age and was perceived as being a field boundary that was re-established several times. However, whilst the system at AMR 08 has clearly been re-established on a number of occasions, if enclosure ditch F3 and its constituent parts are mid to late Roman then, as the gullies clearly cut these, they are certainly later. Also, very similar segmented gully systems have been identified as Saxon on other sites within the region, for instance at the Saxon settlement at West Fen Road, Ely, Cambridgeshire (Mortimer, Regan & Lucy 2005). Here they were largely interpreted as being field boundaries and this system probably had the same purpose.

The curving form of gullies F23 and F77 distinguished them as being slightly different from the other gullies, and this type of feature was also observed during excavations at the Hutchison site (Evans, Mackay & Webley 2008). Here, a similar feature, dated to the Saxon period, was interpreted as a semi circular enclosure which surrounded a rectangular building dated to the same period. Whilst no buildings were found close to the curving gullies at AMR 08, the presence of such features that have been definitively dated Saxon close by certainly suggests they were probably of a similar date.

Trenches just to the west of the excavation area and on the opposite side of the railway (Slater 2008b) revealed a number of gullies on a similar alignment to those here. Within the trenches they were interpreted as potentially being Roman 'lazy beds' as seen elsewhere within this landscape (Timberlake 2007b) although a lack of finds made dating these features difficult. However, they appear to lack the regularity of 'lazy beds' and in light of this excavation it is possible these gullies actually represent a similar roughly north-south orientated segmented gully system potentially dating to the Saxon period. The probability of these two sets of gullies being connected in some way is quite high because there is a clear lack of archaeology to the west and immediately to the south of the trenches, and other future work within this landscape may help to define the true purpose of these sets of features.

Despite the extensive archaeological investigations that have taken place within the surrounding landscape, very little Saxon activity has been positively identified. The Saxon activity on this site is in no doubt linked to the pit cluster and well found just outside the excavation area to the north (Timberlake 2007a). Therefore, the sunken floored building, the wells and pit cluster and potentially the segmented gully systems, together with the evidence from the Hutchinson site point towards a dispersed Saxon settlement that possibly followed the line of the Roman road which is projected to pass just to the north of this site. This is a view supported by the lack of Saxon material from investigations further towards the south.

Overall, more varied archaeology was identified on this site than perhaps was expected given the evaluation results. The evidence for dispersed Saxon settlement on this site adds an important element to the findings on both the Hutchison site to the east and the water main construction just to the north (Timberlake 2007a). Dating elements of the site, in particular the large enclosure does require further work, but these ditches are certainly an important component of a much wider landscape and further work within the area will hopefully put them into that broader context. Further analysis of the pollen samples could also be useful, because, despite the relatively poor pollen preservation levels, the results suggested significant changes in vegetation, with evidence from the ditches suggesting a cultivated landscape that became heath-land after they fell out of use, whilst the evidence from the wells suggested the area was a mixture of meadow and mature woodland.

## Appendix 1

### Worked Flint – *Lawrence Billington*

The excavations recovered 174 worked flints (961.1g) together with 70 unworked burnt chunks (2067g). The worked flint assemblage was generally in good condition with little edge damage. 56 pieces (33%) displayed patination, generally a light bluish sheen. Much of the worked flint represents residual material caught up in the fills of later features, especially the MBA enclosure ditches. Several discreet features did, however, produce probably contemporary flint assemblages including a relatively large earlier Neolithic assemblage from tree throw F71.

#### *Ditches*

The flint recovered from excavated ditch sections is listed by intervention in Table 1. The majority of this material appears to be residual with a small proportion perhaps associated with the Middle Bronze Age enclosure. Most clearly of earlier origin are a number of blades, bladelets and bladelike flakes recovered from F3, F36, F41 and F44. These removals are characterised by careful platform preparation and bear the regular narrow scars indicative of dedicated blade production. Blade based products such as these are typical of Mesolithic and earlier Neolithic flint working. Most of these pieces display similar traits to the material from tree throw F71 (see below), perhaps indicating an earlier Neolithic date for these flints. However several pieces, including two bladelets from F3, are more characteristic of Mesolithic material. A burin manufactured on a blade blank with a utilised edge from F88 is of Mesolithic or earlier Neolithic date. A laurel leaf recovered from F3, a characteristic bifacially flaked sub circular cutting tool, is of earlier Neolithic date. Also likely to be Neolithic were two broken bifacially flaked implements, both from F3.

The remainder of the assemblage consists of flake based debitage and occasional retouched tools. Much of this material appears to be the result of a technology aimed at the relatively controlled production of flakes of varied morphology. Occasional platform trimming was used to remove overhangs but generally platforms were plain and relatively thick with hard hammers being used to detach flakes. The flakes suggest that working generally took place from one dominant platform, with the ridges left by previous flakes often used to guide further removals and good flaking angles maintained. Flake based material such as this is characteristic of later Neolithic and Early Bronze Age technologies and probably represents residual material incorporated into the ditch features. Several of the retouched tools can be confidently assigned to this date including three finely retouched sub circular scrapers from F3.

An attempt was made to distinguish material possibly associated with the Middle Bronze Age use of the site. Flint work of this period is characterised by a decline in the use of flint and an increasingly expedient and informal approach to flake production accompanied by the virtual disappearance of formal tool types (Ford *et al* 1984). Although much of the flake based material from the ditches appears to be the product of somewhat earlier technologies (later Neolithic/Early Bronze Age) several pieces in particular may reflect flint use during the Middle Bronze Age phase of the site, including 2 flakes from F3 and a core fragment from F77.

The ditches produced 25 chunks of unworked burnt flint totalling 1495g with an average weight of 60g. F3 in particular contained concentrations of burnt flint.

### *Tree Throws*

61 worked flints and 27 unworked burnt flints (167g) were recovered from tree throw F71, listed in Table 2. This assemblage consists of debitage and tools characteristic of earlier Neolithic technologies. An earlier Neolithic date is most strongly indicated by a broken leaf shaped arrowhead formed by delicate marginal retouch on a thin blade blank. A backed and broken serrated flake and an end scraper are the only other retouched pieces in the assemblage. The unretouched removals are typical of earlier Neolithic technologies with a high proportion of blade based products exhibiting platform trimming and some use of soft hammer percussion. A total of nine of the unretouched removals showed macroscopic evidence of use (20% excluding chips). Based on these examples there was a clear preference for the use of blades and blade like flakes of relatively large size for use as tools. With a high proportion of retouched or utilised tools (24% excluding chips) the assemblage appears to reflect settlement type activities. Evidence for flint working is seen most clearly in the 12 chips, resulting from the trimming of cores and tools, and three wholly cortical flakes resulting from the initial preparation of cores. An attempt was made to find refits between the material without success, which, together with the variety of raw materials present, suggests this material represents a small sample of several episodes of reduction.

### *Pits, postholes and other features*

The remainder of the flint assemblage, numbering 49 pieces of worked flint and 18 pieces (405g) of burnt flint were recovered in low densities from discreet features including pits, postholes and wells. SFB, F1 also produced 13 pieces of residual flint. The flint from these features is listed by intervention in Table 3. Much of this material represents residual flint inadvertently caught up in the backfill of features. The worked flint mainly comprises of undiagnostic flake based debitage and is comparable to the assemblage from the ditches, of probable late Neolithic/Early Bronze Age date. Several pieces show the careful structured working associated with earlier Neolithic or Mesolithic technologies, including blade based debitage from pit F37.

Two pits, F66 and F89 contained small but coherent assemblages of worked flint. Both contained a similar, restricted, range of types. F66 produced 6 flakes, a chunk and a blade-like flake whilst F89 contained 6 flakes and a blade-like flake. The flints from F66 showed traits suggestive of an earlier Neolithic date, including platform trimming, some use of soft hammers and narrow or blade-like flake forms. The flint from F89 was less easily characterised but a date in the Neolithic would be most appropriate considering the inclusion of a fine blade-like flake.

Feature No.	Intervention No.	Feature type	chip	flake	blade like flake	Blade	Bladelet	scraper	laurel leaf	burin	retouched flake	retouched blade	bifacially flaked implement	core	core fragment	Worked flint total	unworked burnt chunk (g)	Totals
2	147	Ditch		1												1		1
3	106	Ditch		2		2	1		1				1			7		7
3	131	Ditch		1												1	3 (57)	4
3	140	Ditch						1								1		1
3	159	Ditch		2				1								3	1 (36)	4
3	198	Ditch						1								1		1
3	199	Ditch	1	2							1					4		4
3	225	Ditch		6		1	1	1								9	7 (98)	16
3	229	Ditch		1												1		1
3	279	Ditch		1												1	7 (853)	8
3	296	Ditch		1	4											5	1 (19)	6
23	158	Ditch	1													1		1
36	141	Ditch				1										1		1
39	144	Ditch		1										1		2		2
41	154	Ditch		1		1										2		2
75	219	Ditch		2												2		2
77	231	Ditch													1	1		1
77	273	Ditch										1				1		1
77	227	Ditch		3												3		3
82	290	Ditch														0	1 (7)	1
83	299	Ditch											1			1		1
88	245	Ditch								1						1		1
88	250	Ditch		3												3		3
44	157	Ditch		7	1											8	4 (95)	12
85	288	Gully		2												2		2
85	244	Gully		1												1	1 (330)	2
		<b>Totals</b>	2	38	5	5	2	4	1	1	1	1	2	1	1	64	25 (1495)	89

**Table 1:** Flint recovered from the ditches.

Feature No.	Intervention No.	Feature type	chip	flake	blade like flake	Blade	bladelet	scraper	leaf shaped arrowhead	retouched flake	Worked flint total	unworked burnt chunk (g)	Totals
71	205	Tree Throw	6	13	7	4					30	21 (111)	51
71	330	Tree Throw	6	15	2	4	1	1	1	1	31	6 (56)	37
		<b>Totals</b>	12	28	9	8	1	1	1	1	61	27 (167)	88

**Table 2:** Flint from tree throw feature 71

Feature No.	Intervention No.	Feature type	chip	chunk	Flake	blade like flake	blade	retouched flake	core	Worked flint total	unworked burnt chunk (g)	Totals
30	133	Pit			1					1		1
37	142	Pit			1		1			2		2
42	148	Pit			1					1		1
61	308	Pit								0	1 (7)	1
63	310	Pit			1					1	1 (1)	2
66	197	Pit		1	4	1				6		6
66	301	Pit			2					2	3 (10.5)	5
67	200	Pit			1					1		1
89	253	Pit			6					6		6
89	300	Pit				1				1		1
49	172	Posthole								0	1 (5)	1
40	160	Well?	2	1	2				1	6	2 (123)	8
40	201	Well?			1					1		1
43	155	Well?		1						1		1
55	183	Well?			1					1		1
47	168	Four poster				1				1		1
1	210	SFB			1					1		1
1	215	SFB	8		3			1		12	7 (20.5)	19
1	216	SFB			1	1				2	1 (192)	3
1	267	SFB	1		1					2	2 (46)	4
1	270	SFB	1							1		1

**Table 3:** Flint from discreet features

## Summary

The flintwork assemblage consists mostly of material considerably older than the archaeology represented by cut features. Earlier phases of activity are well represented. A Mesolithic presence is hinted at by several fine bladelets recovered from later features. Later features also produced evidence for later Neolithic or Early Bronze Age activity. The most interesting aspect of the assemblage was the presence of diagnostically earlier Neolithic material, both as a residual component in later features and as a discreet deposit in tree throw feature F71. Further possible assemblages of Neolithic flint were recovered from pits F66 and F89.

## Appendix 2

### Prehistoric Pottery – *Mark Knight*

The Earlier Prehistoric Pottery assemblage comprised 178 sherds weighing 542g (MSW 3.0g). The bulk of the material consisted of small abraded pieces or very small crumbling fragments. The overall condition of the assemblage would appear to reflect



its depositional circumstances and the overriding sense that much of the material was recovered from residual, or at the very least secondary, contexts. The fragmented character of the assemblage was also evident in the high number of different fabric types present (11 in total). Shell was the dominant opening material, although flint and grog tempered pieces were also prevalent. Feature sherds were rare and included four rim, three base and four decorated pieces.

Over half of the assemblage was made up of shell-rich Deverel-Rimbury sherds (56.7% by number and 54.2% by weight) with the next largest component being flint-rich Early Neolithic sherds (21.8% by number and 31.5% by weight). A small generic EBA collection (i.e. non-distinct thick walled grog tempered body sherds) and a single Beaker assemblage (pit F66) made up the remainder of the material.

	Number	Weight	MSW	Fabric Types
Early Neolithic	56	118g	2.1g	6, 7, 9
Beaker	6	36g	6.0g	10, 11
Early Bronze Age	15	94g	6.3g	2, 4
Deverel-Rimbury	101	294g	2.9g	1, 3, 5, 8
<i>Totals</i>	<i>178</i>	<i>542g</i>	<i>3.0g</i>	<i>11</i>

**Table 4:** Assemblage Composition

### *Fabric Series*

Fabric	Description
1	Soft-medium with abundant small crushed SHELL or small VOIDS (corky)
2	Medium with frequent small-medium rounded GROG and rare SAND
3	Very hard with abundant small crushed fossil SHELL and occasional medium-large fossil shell
4	Medium hard with poorly sorted small to medium SHELL, chalk, FLINT/grit and SAND
5	Hard with frequent SAND, GROG and crushed fossil SHELL (abrasive)
6	Hard with abundant small and very small angular QUARTZ
7	Medium hard with frequent small burnt FLINT and common/occasional SAND
8	Medium hard with frequent small VOIDS (lost shell) and occasional small GROG
9	Hard with frequent angular SAND/grit and regular small GROG (compact)
10	Hard with abundant small evenly distributed burnt FLINT and abundant SAND
11	Hard with frequent SAND and common small burnt FLINT and small GROG

**Table 5:** Fabric types

### *Early Neolithic*

Tree-throw F71 produced a small collection of Early Neolithic pottery that included a couple of diagnostic rim/neck fragments. It also produced four sherds from what appears to have been a Middle Iron Age form (thick-walled, a flattened T-shaped rim and a 'scored' body that was made in a compact fabric – Fabric 9). The diagnostic Neolithic sherds incorporated the rim and neck of a closed bowl with a slightly everted but simple rim.

### *Beaker*

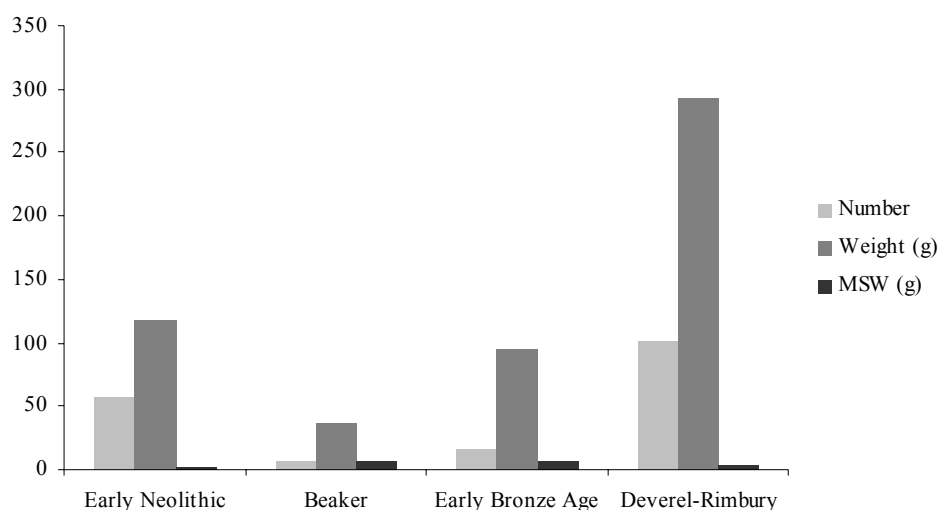
Pit F66 contained a decorated small thin-walled body sherd (horizontal rows of drag and stab decoration) and the refitting base and base angle of another incised decorated vessel.

### *Early Bronze Age*

A series of worn/abraded grog tempered body sherds many of which shared the same contexts as the Deverel-Rimbury assemblage have been attributed to a generic Early Bronze Age category. A false-rim sherd belonging to a large diameter vessel from F35 looked as if it might have come from the neck of a Collared Urn. Otherwise the EBA attribution was based upon fabric alone.

### *Deverel-Rimbury*

Almost all of the Deverel-Rimbury assemblage (95.0% by number and 95.9% by weight) came from the fills of the enclosure system (F.3, F.44 and F.88). The main attribute of the Middle Bronze Age assemblage was the presence of super shell-rich fabrics. Two feature sherds, a simple rounded rim and a thick-walled vessel and a body sherd with a cordon of fingertip impressions, represented the only definitive Deverel-Rimbury pieces. Larger Deverel-Rimbury assemblages made up of sherds characterised by the same abundant crushed shell inclusions have been found south of Cambridge at Barrington Cement Quarry (Dickens, Knight & Appleby 2006) with an associated radiocarbon date of 1450-1300 Cal BC (at 95% probability), and at the nearby Hutchison Site (Knight in Evans, Mackay & Webley 2008; pp 34-35). Whilst substantial assemblages of Deverel-Rimbury pottery are relatively rare outside of a funerary context, recent excavations at Briggs Farm, Thorney, Peterborough (Pickstone & Mortimer 2009), and Whitfield Land, Langtoft, Lincolnshire (Hutton 2008) produced large unambiguous collections similarly distinguished by shell-rich fabrics.



**Chart 1:** Composition of assemblage based on sherd count, weight and MSW.

Feature	Context	Number	Wgt (g)	Fabric	Type
3	106.01	6	8	2, 6	DR
3	131.02	4	2	5	DR
3	159.01	2	1	1	DR
3	181.01	10	48	3	DR
3	193.02	17	60	5	DR
3	225.05	9	22	1, 2	DR
3	297.01	9	20	1, 5	DR
3	333.02	1	14	1	DR
3	199.03	2	12	2	EBA
3	279.02	1	4	2	EBA
3	296.03	1	2	2	EBA
3	106.02	1	2	7	Neo
3	106.04	1	1	6	Neo
24	124.01	1	1	7	Neo
34	137.01	2	8	2	EBA
35	139.02	2	52	2	EBA
36	141.02	1	1	2	EBA
44	157.01	31	102	1, 4	DR
47	169.01	2	2	1	DR
54	182.01	3	10	8	DR
66	197.01	4	32	10	BK
66	301.01	2	4	10, 11	BK
71	205.01	16	22	7	Neo
71	205.02	1	10	7	Neo
71	330.01	22	58	7, 9	Neo
71	330.02	13	12	7	Neo
75	219.01	1	2	2	EBA
75	224.01	2	1	2	EBA
83	299.01	1	4	2	EBA
85	244.01	2	8	2	EBA
88	245.02	3	4	3	DR
88	245.02	4	1	3	DR
88	250.02	1	12	7	Neo
<i>Totals:</i>		178	542		

**Table 6:** Context-Type Correspondence.

### Appendix 3

#### Prehistoric Pottery (reassessed from trench evaluation – Evans & Mackay 2005) – Mark Knight

Pottery from four contexts was re-examined in light of a significant assemblage of Middle Bronze Age pottery recovered from the excavation phase of the same landscape (AMR 08). The four contexts produced seven sherds weighing 31g (MSW 4.4g). None of the pieces were larger than 3 x 3 cm and all were plain body sherds and all belonged to relatively thin-walled vessels (7-9mm). Two fabric types were identified: 1) medium hard with abundant small crushed shell; 2) medium hard with abundant small grog and occasional very small shell.

Feature	Context	Number	Weight (g)	Fabric
50	123	2	14	2
53	131	3	4	1
59	146	1	8	2
65	165	1	5	1
<i>Totals:</i>	<i>4</i>	<i>7</i>	<i>31</i>	<i>2</i>

**Table 7:** Assemblage Composition

The two fabric types are characteristic of later Bronze Age wares and therefore can be included as part of the greater Middle Bronze Age ‘domestic’ assemblage generated by the open area excavation.

## Appendix 4

### Late Iron Age and Roman Pottery - *Katie Anderson*

A small assemblage of Late Iron Age and Roman pottery, totalling 24 sherds (128g) recovered from 12 the excavation. All of the material was analysed and details of fabric, form, and date were recorded, along with any other information deemed important.

#### *Feature Analysis*

F1, a Saxon SFB, contained five sherds of pottery, comprising four Late Iron Age sandy sherds and one Nene Valley colour-coated sherd, dating Mid 2nd-4th century AD. It is unclear whether these sherds were residual, or curated, as is fairly common in the Saxon period.

F2 contained two sherds weighing 3g, which could only be dated Early Roman. A single sherd, weighing 4g was recovered from Feature 37, comprising a sandy greyware sherd which could only be dated Romano-British. F40 contained three sherds, weighing 5g, from early Roman coarsewares. Two greyware sherds were recovered from Feature 43, weighing 17g. Both date mid 1st-2nd century AD. F61 contained one sherd (4g) from an early Roman greyware vessel. Three Late Iron Age sherds were collected from Feature 76 (6g), while one sandy jar, with a slight beaded rim was recovered from F79. F77 and F82 contained one sherd each, which could only be dated Late Iron Age/Early Roman in date. Finally, 2 sherds weighing 3g were collected from F89, from a Late Iron Age jar.

## Discussion

Overall the assemblage comprised small, abraded and fragmented sherds, which on the whole, date Late Iron Age and Early Roman, although the Nene Valley sherd recovered from F1 suggests a later presence. The small quantity and poor condition of the sherds suggest many maybe residual, or else had been either redeposited, or else been kicking around on the surface for some time before being deposited. The pottery evidence seems to indicate a very peripheral Roman presence, as had this area been a focus of activity, much more material would be expected, as seen at the Hutchison site for example (Evans et al 2008).

Interestingly, a large enclosure ditch (F3), suggested by radio-carbon dating to be mid Roman in date, contained no Roman pottery, or any other material which would support this date. It is unusual (although not impossible) for a Roman feature to contain no Roman material. Even if this were part of an outlying field-system, within this landscape, some Roman material would be expected, as the numerous excavations in and around Addenbrooke's, have shown a tendency for Roman pottery to be present in even the outlying features, even if only representing a small quantity of material (see Anderson in Mackay and Evans 2006, Timberlake 2008). This combined with the fact that all of the material recovered from this feature is of Middle Bronze Age date (See Knight, Timberlake and de Vareilles), suggests that the Roman date for this feature is questionable.

## **Appendix 5**

### **Early Anglo-Saxon Pottery - Paul Blinkhorn**

The Early Anglo-Saxon pottery assemblage comprised 30 sherds with a total weight of 1206g. It largely comprised small sherds of early/middle Anglo-Saxon hand-built wares, although a single, near-complete vessel with pressed boss decoration was also present.

#### **Fabric**

Fabric 1: Moderate to dense sandstone up to 2mm, most free sub-angular quartz grains up to 1mm, moderate fine flecks of silver mica, occasional angular red flint up to 2mm.

Fabric 2: Ferruginous sandstone. Moderate to dense iron-cemented sandstone up to 2mm, most free sub-angular quartz grains up to 1mm, rare sub-rounded ironstone up to 2mm, occasional sub-angular chalk fragments up to 1mm.

Fabric 3: Chaff and quartz. Sparse to moderate organic voids up to 3mm, rare to sparse sub-angular quartz up to 1mm.

In addition, two small sherds (6g) of flint-tempered Bronze Age material were present, along with six sherds (8g) of extremely abraded Romano-British wares. The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 8. Each date should be regarded as a *terminus post quem*. The range of fabric types is fairly typical of early Saxon sites in the region.

#### **Chronology**

The entire Anglo-Saxon pottery assemblage occurred in the SFB, F1. It largely comprises small, plain bodysherds which can only be broadly dated to the early/middle Anglo-Saxon period (c AD450-850). However, context 213.1 produced a crushed but near-complete Anglo-Saxon vessel. The pot is of a biconical form, with a fairly well-pronounced carination half-way up the body and a slight hollowing to the neck, and seven evenly-spaced, pressed-out bosses running vertically across the carination. Vessels of this shape were seen by Myres (1977, 2-3) as dating to the

earliest part of the early Saxon period, and generally fifth-century in date. He also noted that vessels of this form with bosses along the carination, but otherwise no decoration, are well-attested around Cambridge and in West Suffolk (*ibid.* 10-11), and again of fifth-century date.

More recent work by Leahy (*ibid.* 2007) identified a long typological sequence of Anglo-Saxon cremation urns based, uniquely, on stratigraphic evidence. The site in question, Cleatham, is in Lincolnshire, but it appears that the sequence generally holds good nationally. He found that plain bossed vessels occurred throughout the sequence, from the earliest phase to the latest (*ibid.* 89). Hamerow (1993, 45) noted that, at Mucking in Essex, bossed pottery occurred in both fifth and sixth century contexts and also that such pottery was rare. Just 3% of the decorated sherds from domestic contexts had bosses, although 35% of the pottery from the cemeteries had them. She also presented evidence that biconical jars, although rare, occurred in both fifth and sixth century contexts (*ibid.* Table 27). It is worthy of note that this vessel shows signs of wear, with the 'wet-hand' slip on the surface of the pot being entirely worn on the top of the rim, on two areas of the neck on opposite sides of the vessel, and also on one of the bosses, suggesting that it was not new when deposited.

It would appear therefore that the dating of this vessel must remain broad; while it is entirely possible that it dates to the earliest part of the early Anglo-Saxon period, it may also equally likely be later, so is given a date of the 5<sup>th</sup> – 6<sup>th</sup> century.

### **An Anglo-Saxon 'Special Deposit'?**

Hamerow (2006) has suggested that, in the early and middle Anglo-Saxon periods (*c.* AD450-850), objects or groups of objects were deliberately placed in the backfill of abandoned structures, in the main sunken-featured buildings, but also pits, graves, 'halls' and other features. Such deposits were generally animal or human bone, but pottery vessels also appear to have been used in this manner. She noted that in such deposits '*complete or semi-complete objects, especially pottery vessels, are found lying on the base or primary fill of a feature, against a background of an otherwise highly fragmented finds assemblage*' (*ibid.* 17). The pottery from this sunken-featured building certainly falls into that category. Other than the complete vessel, there was very little pottery from the fill of the feature, and nearly all of it was extremely small, fragmented sherds. The complete pot also has decoration which is much more usually found on vessels in cemeteries rather than at settlement sites, and shows signs of wear which suggest that it was not new when deposited (see above).

There is some evidence for similar practices taking place at other sites in the region. Hamerow cited Godmanchester and Car Dyke as sites in Cambridgeshire which are likely candidates (*ibid.* 18-19), and the practice of placing 'termination deposits' in abandoned structures appears fairly widespread in Anglo-Saxon England (*ibid.* 28). It seems very likely therefore that the pot from the SFB at this site is not simply rubbish which was thrown in during the backfill of the hollow when the structure had fallen from use, but was placed there as part of a 'closing' ritual, and is a 'special deposit' of the type suggested by Hamerow.

Context	PHIST		RB		Fabric 1		Fabric 2		Fabric 3		Date
	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	
210.1	1	2	1	1							RB??
211.1			1	2							RB??
213.1					2	1065					ES
215.1	1	4	3	4	1	10			1	1	E/MS
215.2					2	4	6	17	4	5	E/MS
216.2							3	69			E/MS
218.1							2	19			E/MS
218.2					1	2					E/MS
268.2			1	1							
Total	2	6	6	8	6	1081	11	105	5	6	

**Table 8:** Pottery occurrence by number and weight (in g) of sherds per context by fabric type

## Appendix 6

### Radiocarbon Dating – *Beta Analytic INC.*

#### Introduction

Two seeds were recovered from a bulk environmental sample taken from enclosure ditch F3, context [223.1] and dispatched to Beta Analytic Inc. of Miami, Florida, USA for the purpose of dating using Accelerator Mass Spectrometry (AMS) radiocarbon dating methods.

Dates are reported as RCYBP (radiocarbon years before present, ‘present’ = AD 1950). By international convention, the modern reference standard was 95% of the <sup>14</sup>C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby <sup>14</sup>C half-life (5568 years). Quoted errors represent one relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background and modern reference standards. Measured <sup>13</sup>C/<sup>12</sup>C ratios (delta <sup>13</sup>C) were calculated relative to the PDB-1 standard.

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotopic fractionation, calculated using the delta <sup>13</sup>C. On rare occasions where the Conventional Radiocarbon Age was calculated using an assumed delta <sup>13</sup>C, the ratio and the Conventional Radiocarbon Age will be followed by “<sup>c</sup>”. The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the “Two Sigma Calibrated Result” for each sample, (Beta Analytic, 2009).

*Pre-treatment Protocol: ‘acid/alkali/acid’*

The sample was first gently crushed/dispersed in deionised water. It was then given hot HCl acid washes to eliminate carbonates and alkali washes (NaOH) to remove secondary organic acids. The alkali washes were followed by a final acid rinse to neutralise the solution prior to drying. Chemical concentrations, exposure times and number of repetitions were applied accordingly with the uniqueness of the sample.

Each chemical solution was neutralised prior to application of the next. During these serial rinses, mechanical contaminants such as associated sediments and rootlets were eliminated. This type of pre-treatment is considered a “full pre-treatment”, (Beta Analytic, 2009).

## Results

Results analysis showed with a 95% probability the seeds dated between AD 130 to 350 (2 Sigma calibrated results), with a 68% probability they dated between AD 290 to 320 (1 Sigma calibrated results. See Table 9 below.

<b>Conventional Radio Carbon Age</b>	1780 +/- 40 BP
<b>2 Sigma calibrated result (95% probability)</b>	Cal AD 130 to 350 (Cal BP 1820 to 1600)
<b>Intercept of radiocarbon age with calibration curve</b>	Cal AD 240 (Cal BP 1710)
<b>1 Sigma calibrated result (68% probability)</b>	Cal AD 290 to 320 (Cal BP 1660 to 1630)

**Table 9:** AMS carbon dating results.

## Conclusion

The seeds clearly dated to the mid Roman period with a high probability that date could be narrowed down to a distinct 30 year period, AD 290–320.

## Appendix 7

### Faunal remains - *Vida Rajkovača*

#### Introduction

Over a hundred contexts produced animal bone, amounting to 925 fragments, weighing 22213g. This report outlines the results following zooarchaeological analyses of the bone material recovered from features dated to Roman and Saxon period. Undated features were considered separately. Therefore, three sub sets based on the chronology of the material have been created in order to study the site (Table 10). Romano-British and Saxon components of the assemblage will be at the focus of this report since it produced the largest amount of bone fragments.

<b>Groups</b>	<b>Contexts (out of 133)</b>	<b>%</b>	<b>Number of fragments</b>
Romano-British	56	42	598
Saxon	59	44	249
Undated	18	14	78

**Table 10:** Sub-division based on chronology of the material

#### *Methodology*

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. Ageing of the assemblage employed both mandibular tooth wear (Grant 1982) and fusion of proximal and distal epiphyses (Silver 1969). Identification of the assemblage was undertaken with the aid of Schmid (1972) and reference material from the Cambridge Archaeological Unit, Grahame Clark Zooarchaeology Lab, Dept. of Archaeology, Cambridge. Birds were identified with the help of (Cohen&Serjeanston 1996). Where possible, the difference between sheep and goat elements has been made (Boessneck 1969) and the measurements have been 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.

## Results

### *Romano-British contexts*

Bone material demonstrated moderate to poor overall preservation indicating that extensive weathering, erosive damage and root action had occurred to the bone. Of 56 contexts included in the analyses only seven showed quite good preservation with minimal or no bone damage compared to 47 contexts ranging from moderate to poor in preservation. Two showed mixed state of preservation. The material was highly fragmented and 472 (79%) bones were assigned to a size category (unidentified large, medium-sized and small mammal). Of 181 bones assigned to species, 81 (45%) were eroded and 11 (6%) showed signs of gnawing activity. The presence of dogs on site in the Roman period was also confirmed osteologically. Cattle dominate the assemblage followed by medium-sized domesticates such as sheep/goat and pig. Other domestic animals are horses and dogs (non-food species). Some evidence for exploiting wild fauna is present and that are the remains of Red deer (Table 11). MNI count for cattle of four individual animals on site demonstrated the clear predominance and the importance of cattle as the main providers of meat, as well as secondary products such as dairy commodities, manure, transport and draught qualities.

SPECIES	NISP	%NISP	MNI
Cow	128	70	4
Ovicaprid	26	15	1
Pig	19	10	1
Dog	4	3	1
Red deer	3	1.5	1
Horse	1	0.5	1
ULM	175	175 ( $\Sigma=472$ )	-
UMM	109	109 ( $\Sigma=472$ )	-
USM	6	6 ( $\Sigma=472$ )	-
UUM	127	1 ( $\Sigma=598$ )	-

**Table 11:** NISP and MNI counts for Romano-British contexts

Key: UMM & ULM = Unid. Medium and Large Mammal / UUM = Unid. Fragment. NB: Species percentages are out of 181. These differ from the unidentified counts as these are calculated on the basis of element identification (for UMM & ULM) and total fragments (for UUM) (corresponding to  $\Sigma$  in brackets).

Butchery marks were recorded on less than *c.*1% of all post-cranial bones recorded in the sub-sample mostly showing carcass dismemberment. In addition to that, one large mammal metatarsal bone has been split axially and then worked into a point. There is

a circular line cut into the bone around the very end of the point, almost creating a kind of a bulb (F. 44; [157.1]).

One ovicaprid horn core has been positively identified as sheep (Schmid 1972:91). This could support the idea that sheep were kept in larger numbers than goats. However, it should be noted that this was based on one specimen. Despite the poor preservation, it was possible to obtain some ageing data with only five ageable specimens present in this sub set. One cow mandible was aged to between 18-30 months (Grant 1982). In addition to that, cow tibia was aged to 0-2 years of age (Silver 1969). Ovicaprid calcaneum was aged to 0-2 years. Pig mandible and second phalanx were aged to 14-21 months and 0-1 years respectively.

### *Saxon contexts*

The bone preservation ranged from moderate to poor, with a significant portion of porous, eroded and fragmented bones. Actual numbers show that out of 249 bone fragments, 94 were recorded as being well preserved, compared to 155 with some bone damage. Bone remains recovered from Saxon contexts totalled 249 bone fragments, 244 (97%) of which were assigned to element and further 83 (33%) to species level.

<b>SPECIES</b>	<b>NISP</b>	<b>%NISP</b>	<b>MNI</b>
Cow	47	56	2
Ovicaprid	18	22	2
Pig	13	16	2
Horse	4	5	1
Red deer	1	1	1
ULM	46	46 ( $\Sigma=244$ )	-
UMM	104	104 ( $\Sigma=244$ )	-
USM	5	5 ( $\Sigma=244$ )	-
UUM	8	3 ( $\Sigma=249$ )	-
UUB	3	3 ( $\Sigma=244$ )	-

**Table 12:** NISP and MNI counts for Saxon contexts

Key: UMM & ULM = Unid. Medium and Large Mammal / UUM = Unid. Fragment. NB: Species percentages are out of 83. These differ from the unidentified counts as these are calculated on the basis of element identification (for UMM & ULM) and total fragments (for UUM) (corresponding to  $\Sigma$  in brackets).

Again, cattle are a dominant species which was followed by the other two main domesticates, ovicaprids and pigs (Table 12). Horse and red deer are present with four and one specimens respectively. Only one chop mark was noted on unidentified medium-sized mammal maxilla. In addition to butchery, a fragmented bone point was recorded in this sub set (F23; [161.1]; <117>). One sheep specimen has been positively identified based on an ovicaprid humerus and with the aid of Boessneck (1969:339).

Despite the poor preservation and small size of the sub set, significant amount of ageing data was recovered. Fusion and mandibular toothwear data jointly produced a consistent kill off profile for cattle, demonstrating the early slaughter of the animals within their first year (Silver 1969; Grant 1982). Element count shows that almost all the body elements are present, possibly reflecting local slaughter and consumption. Sheep/goat mandible toothwear data shows that one individual was killed within its

first year, one during the second year and one between 8 and 10 years of age (Grant 1982). Only one pig mandible was aged to 14-21 months.

### *Undated contexts*

The preservation within this sub set ranged from moderate to poor. Of 78 bones, 66 (85%) were possible to assign to element and further 25 (32%) to species. Main livestock species dominate the sub set, with only one red deer specimen recorded (Table 13). One cattle and two sheep/ goat ageable specimens were recorded and they all demonstrated the age at death within their first year. No pathology, butchery or gnawing activities were noted in this sub set.

SPECIES	NISP	%NISP	MNI
Cow	13	52	1
Ovicaprid	8	32	1
Domestic fowl	2	8	1
Pig	1	4	1
Red deer	1	4	1
ULM	12	12 ( $\Sigma=66$ )	-
UMM	27	27 ( $\Sigma=66$ )	-
USM	1	1 ( $\Sigma=66$ )	-
UUM	12	0 ( $\Sigma=78$ )	-
UUF	1	1 ( $\Sigma=66$ )	-

**Table 13:** NISP and MNI counts for undated contexts

Key: UMM & ULM = Unid. Medium and Large Mammal / UUM = Unid. Fragment. NB: Species percentages are out of 78. These differ from the unidentified counts as these are calculated on the basis of element identification (for UMM & ULM) and total fragments (for UUM) (corresponding to  $\Sigma$  in brackets).

## **Discussion and conclusions**

The overall composition of the assemblage is in common with most archaeologically recovered assemblages in Britain. It is dominated by the remains of the livestock species such as cattle, sheep/goat, pigs, and to a lesser extent, horse.

The Romano-British sub set has for its main component cattle, followed by ovicaprids and pigs, reflecting the importance of cattle in the Roman economy. This component of the assemblage is the most abundant one. Dietary preference for beef is believed to have come from the continent with Roman legions populating Britain and it was suggested that military and, therefore, Romanised sites would have higher proportions of cattle than rural civilian sites, which are likely to continue with the native Iron Age tradition (King 1999: 180). Kill-off profile based on dental eruption and wear is needed for further studies of Romano-British subsistence bases and also to provide the important information about the uses to which cattle in this region were put.

The features dated to Saxon period were one sunken floored structure, pits, wells and gullies and these features have produced a significant amount of bone material. Following the analyses of the bone material, the results reflect the diet heavily relying on domestic resources. Findings from this excavation are in keeping with the results from the contemporary sites within East Anglian region (Crabtree 1996: 63), where

cattle dominate followed by ovicaprids, pig and horse. As far as a small Saxon portion of the assemblage is concerned, it seems to represent a self-sufficient economy in terms of animal production and consumption, as there are no signs of a more specialised production. Also, body part distribution could support the same idea. Small size of the assemblages precludes any conclusions about the site in later periods. However, spatial analysis of the bone would enhance the study of the patterns of deposition on the site. Furthermore, the study of seasonality could be extremely important and the supporting data could be obtained from the remains of the wild species, as well as from ageing and kill-off patterns of the livestock species.

## **Appendix 8**

### **Assessment of Bulk Environmental Samples - *Anne de Vareilles***

#### **Introduction**

##### *Methodology*

14 bulk soil samples from ten features of possible Bronze Age, Romano-British and Anglo-Saxon dates were selected for archaeobotanical analysis, and processed using an Ankara-type flotation machine. Flots were collected in 300µm sieves and the remaining heavy residues washed over a 1mm mesh. Both flots and residues were dried prior to analysis. For this assessment, only heavy residue components greater than 4mm were sorted by eye. The smaller 1–4mm fractions have been stored for future reference. Sorting of the flots was carried out under a low power binocular microscope (x6–40) in the George Pitt-Rivers Laboratory, McDonald Institute, University of Cambridge. Nomenclature follows Zohary and Hopf (2000) for cereal, Stace (1997) for all other flora and an updated version of Beedham (1972) for molluscs. All macro-remains are listed in Tables 14, 15 and 16.

##### *Preservation*

Charred plant macro-remains were found in all samples. One sample, from F43, also contained mineralised items from faecal deposits. Mineralised components do not float well so the <4mm heavy residues should also be checked. Although the quantity of archaeobotanical remains is highly variable between features, the quality of preservation is poor throughout. The majority of seeds and caryopses are broken, puffed and pitted, resulting in a large ‘indeterminate cereal grain fragment’ category. Parenchyma (plant storage tissue) fragments tend to be most numerous in samples with high grain counts, suggesting that the small (all <1mm) bits with no original surface surviving are probably broken caryopses.

The presence of molluscs varies considerably between samples and may be a reflection of sampling location within features rather than alternating conditions conducive to snail preservation. Modern rootlets and intrusive seeds were not found in all samples or in high concentrations.

## Results

The results are presented by feature type since most of the phasing remains uncertain.

*Large enclosure ditch, F3 [106.8], [165.1], [193.2] and [199.4], and burnt stone deposit within the ditch, F78 [223.1].*

Evidence, including artefacts found within the ditch indicates a possible mid to late Bronze Age date for F3. However, the two barley seeds found in the burnt stone deposit above context [199.4] were dated as mid-Roman. Whilst it is possible that the burnt deposit is later than the ditch or that the Bronze Age artefacts were not found in their primary contexts, the AMS date obtained may not be wholly representative. F.78 contained only a few plant remains that form an unreliable assemblage; the likelihood that these ecofacts are not *in situ* and that they originate from different burning events is quite high. Plant macro-remains from Roman and Anglo-Saxon use of the site may easily have been re-worked into earlier contexts. The four samples from F3 only produced one seed, offering no further indications of the ditch's date.

The molluscan assemblages from the ditch suggest it was a damp, vegetated feature which may have been seasonally or temporarily wet. Two species that occurred in very low quantities suggest the wider landscape was a dry, well drained surface. Burnt stones and charcoal in F78 may explain the near absence of snails in [223.1] and underlying [199.4].

*Ditches F75 [219.1] and F83 [299.1]*

The ditches formed an entrance way into the enclosure delineated by F3. No wild plant seeds, a few damaged cereal grains and many small bone fragments were found, suggesting that loose 'domestic' waste gathered in the ditches.

*Pit F30 [133.1], possibly Roman*

Some cereal grains including hulled barley and wheat (*Hordeum vulgare sensu lato* and *Triticum spelta/dicocum*), a relatively high quantity of charcoal and one non-cereal seed were recovered. Despite the poor preservation (that may account for the absence of chaff and small wild plant seeds) the grains seem to have been accidentally charred during cooking or consumption. The unexpected mineralised fly pupa is likely to originate from the adjacent 'well' F43 after [135.2] of F43 had formed (see below).

*Anglo-Saxon Well F40 [146.2/3]*

The largest assemblage of charred cereal remains was recovered from this sample. A total of 75 grains, at least 200 grain fragments and only four chaff segments were noted. Wheat, of both free-threshing and hulled varieties, is the dominant type followed by hulled barley and then rye (*Secale cereale*). A few oat caryopses (*Avena* sp.) were also found but these may simply have been arable weeds. A very common Romano-British and later arable weed is corncockle (*Agrostemma githago*), found in both this feature and F43. The few other wild plant seeds fit into a sandy, well-drained and disturbed soil environment. The absence of any waterlogged plant matter and fresh water snails show that F40 was not being used as a well by the time contexts [146.2 and 146.3] were building up. It would appear that cooking and consumption waste accumulated (perhaps unintentionally) into the deposit.

#### *Anglo-Saxon Well F43 [135.2] and [154.4]*

Although both contexts contained frequent mineralised fragments of coprolite, they differed considerably in their carbonised remains. Context [135.2] had a similar range of cereal remains as F.40 but in smaller quantities. It also contained a small number of wild plant seeds that grow well on disturbed soils such as arable fields or settlements. Conversely, context [154.4] contained only two cereal grain fragments and no charred or mineralised wild plant seeds. Unlike [135.2] the archaeobotanical remains in [154.4] were not consciously discarded into the 'well'.

The mineralised faecal deposits retrieved from the flots are small (<2mm), pale brown, clinker-like agglomerations of bran and other indeterminate components. Mineralised straw (of rushes, sedges or grasses) was also found, sometimes adhered to the lumps of coprolite. The latter are not necessarily indicative of herbivore dung since "it is likely that straw and/or hay had been used to soak up liquids and dampen odours" (Carruthers 2005). Other remains in [135.2] suggestive of cess include pips of apple and/or pear (*Malus/Pyrus*), possible pulses (*Vicia/Lathyrus/Pisum*), a fish scale and arthropods common in sewage. It seems that the well was not covered to prevent flies laying their eggs within the moist and nutrient rich deposit, where conditions were ideal for mineralisation to occur. Bones found in both contexts are mostly of amphibians, presumably drawn by the high levels of moisture (the bones are not mineralised, nor do they appear digested). Neither context had many molluscs, though a fresh water snail was found in [154.4] and may reflect fluctuations in the water-table.

#### *Gullies F77 [221.1] and F82 [325.1], possibly Anglo-Saxon*

A handful of grain and a few small seeds were found in each feature. From the wheat and barley in F77 one grain was identified as bread wheat (cf. *T.aestivum sl.*) which suggests a Roman or later date for this gully (Grieg 1991). Cereal chaff was absent and the snails, though not numerous, suggest damp and shady features in a drier landscape.

### **Conclusion**

Overall few of the 14 samples analysed had high concentrations of charred botanical remains. Most of the cereal remains were found in the more securely dated Roman or Anglo-Saxon features and provide yet more evidence of their extensive use of this landscape (Evans, Mackay & Webley 2008). Where cereal grains are sparse and assemblages generally poor the possible provenance of macro-remains has to be carefully considered. As mentioned above, it is considerably easy for plant remains to be scattered on the surface and/or moved within a deposit. The dates obtained for the two barley grains in F78 should not be used as a reliable date for F3 without further confirmation from other sources.

Poor levels of preservation are visible throughout the samples; the majority of grains are puffed, distorted and heavily fragmented. Pre-depositional factors as well as the sandy matrix of the soil are likely candidates; however I do not believe they are solely responsible for the almost complete absence of cereal chaff. Two glume bases were found in the Anglo-Saxon sunken building feature, four in well F40 and only one in well F43, which, compared to the amount of grain, is a very small quantity. The

absence of crop processing waste assemblages is unusual and may indicate that crops were brought into the site as clean grain, ready for grinding and cooking. This assumption can only be verified through further sampling and by considering its relationship to other sites within the broader Roman and Anglo-Saxon landscape. For example, it is possible that chaff was set aside as fuel for the kilns at the near-by Hutchinson site (Roberts 2004).

Two wells were revealed during excavations. However, unlike those found at the Hutchinson site the contexts that were sampled did not prove to be waterlogged or have any evidence of a waterlogged past (*ibid.*). Instead, both features were found to contain ‘domestic’ waste such as burnt cereal grains, bone fragments and, in F43, mineralised faecal deposits. In comparison to the very well documented Anglo-Saxon latrines at St Mary’s Stadium, Southampton (Carruthers 2005), the density of faecal remains and loose mineralised seeds in F43 is low, showing that it did not become a designated latrine but rather was used to discard general waste. As mentioned above, further data on Anglo-Saxon diets is likely to be found in the heavy fractions of samples 10 and 17 since mineralised ecofacts are often too dense to float. The later should be processed especially as evidence from Saxon cess pits is still rare (*ibid.*).

The environmental conditions on site can be loosely extrapolated from the few wild plant seeds and snails recovered. At the Hutchison site evidence was found for farming on heavy, clay-rich soils (Roberts 2004), and although crop-processing waste (where evidence for cultivated soil type is usually found) is missing from this site, the majority of the wild plant seeds found would have grown on the lighter sandy soils found on the western side of the site. Unsurprisingly, the information gained from the snails is mixed with evidence for both dry, sandy surfaces as well as damp, poorly drained soils. The latter points to differences not only between negative features and the open landscape, but also between the two geological strata of clay marl and sand and gravel terrace that meet at this point.

Sample number	18	1	27	12	22	21	25
Context	281.1	106.8	165.1	193.2	199.4	223.1	219.1
Feature	1	3	3	3	3	78	75
Feature type	g.hut	large enclosure ditch			deposit	ditch	
Phase/Date	A.Sax	mid/late B. Age or mid Roman?				=F.3	
Sample volume – litres	11	5	11	9	10	10	11
Flot volume – millilitres	3.5	6	7.5	3.5	1	3.5	1
Flot fraction examined - %	100	100	100	100	100	100	100
large charcoal (>4mm)					(-)		
med. charcoal (2-4mm)	+	+	+	+	-	+	+
small charcoal (<2mm)	+++	++ +	++ +	++ +	++	+++	+++
vitrified charcoal	-	++	+	-	-	+	
parenchyma frags - undifferentiated plant storage tissue		-	-	-		+	
<b>Cereal grains</b>							
<i>Hordeum vulgare sensu lato</i> - hulled barley grain						2	
<i>Triticum cf. spelta/dicocum</i> - spelt/emmer wheat grain							

<i>Triticum/Hordeum</i> sp. - wheat or barley grain							
Cereal grain fragments indet.	2					2	2
<b>Cereal chaff</b>							
<i>Triticum</i> sp. glume base - glume wheat chaff	2						
<b>Non Cereal seeds</b>							
<i>Polygonum</i> cf. <i>hydropiper</i> - water-pepper						2	
<i>Polygonum</i> sp. – knotgrass						2	
Poaceae fragment indet.	1						
culm node Poaceae indet. - grass stem							2
seed indet.					1	3	
<b>Fresh water mollusca</b>							
<i>Lymnaea truncatula</i>		++		++			
<b>Damp / Shade loving species</b>							
<i>Carychium tridentatum / minimum</i>		+	++	+			
<i>Columella edentula</i>		++ +	++	+	-	-	-
<i>Vallonia excentrica / pulchella</i>	+	++	++ +	++	+	+	-
<i>Vertigo antivertigo</i>	-				-		
<i>Cochlicopa lubrica/lubricella</i>		++	+			-	
<i>Ena obscura</i>		+					
<i>Oxychilus/Aegopinella</i>	+	++	-	++			
<b>Dry environments</b>							
<i>Pyramidula rupestris</i>			-	-	-		
<i>Helicella itala</i>		++			-		-
<b>Catholic species</b>							
<i>Trichia</i> sp.		++ +	++ +	++ +	-	++	
<i>Ceciloides acicula</i> –Blind burrowing snail	+++	++ +	++ +	++ +	+++	+++	++
>2mm bone	+						+
<2mm bone	+	+				++	++
Intrusive seeds	-	-	+	-	-	-	
Modern rootlets	P	P	P	P			

**Table 14:** Charred Plant Macro-Remains and Mollusca from the Bulk Soil Samples. Key: ‘-’ 1 or 2, ‘+’ <10, ‘++’ 10-50, ‘+++’ >50 items. ( ) indicate items found in the >4mm residues. P = present



Sample number	3	8	10	17	24	33	28
Context	133.1	146.2/3	135.2	154.4	221.1	325.1	299.1
Feature	30	40	43	43	77	82	83
Feature type	pit	well	Well		gully	gully	ditch
Phase/Date	R.B?	Roman or Early Saxon			Saxon ?		=F.3
Sample volume - litres	14	10	10	9	12	10	11
Flot volume - millilitres	17	21	17	3	14	11	7
Flot fraction examined - %	100	100	100	100	100	100	100
large charcoal (>4mm)	+	+	+		-	+	
med. charcoal (2-4mm)	+++	++	+++	++	++	++	++
small charcoal (<2mm)	+++	+++	+++	+++	+++	+++	+++
vitrified charcoal	+			-	++	++	++
parenchyma frags - undifferentiated plant storage tissue	++	+++	++		++	+++	++
<b>Cereal grains</b>							
<i>Hordeum vulgare sensu lato</i>							
hulled barley grain	1	4	13		8	7	1
<i>Triticum cf. aestivum sl.</i>							
free-threshing wheat		10	9		1		
<i>Triticum cf. spelta/dicocum</i>							
spelt/emmer wheat grain	1	5	3				1
<i>Triticum sp.</i>							
wheat grain	2	32	19		4	5	
cf. <i>Secale cereale</i>							
rye grain		4	2				
<i>Triticum/Hordeum sp.</i>							
wheat or barley	1	13	9		7	8	1
<i>Triticum/Secale</i>							
wheat or rye		7					
cereal grain fragments indet.	12	+++	++	2	13	18	2
<b>Cereal chaff</b>							
<i>Triticum sp.</i> glume base							
glume wheat chaff		4	1				
culm node	1						
<b>Non Cereal seeds</b>							
<i>Arenaria serpyllifolia</i>							
Thyme-leaved Sandwort		1					
<i>Agrostemma githago</i>							
Corncockle seed		1	1				
cf. <i>Fallopia convolvulus</i>							
Black bindweed		1					
<i>Polygonum aviculare</i>							
Knotgrass			1				
small <i>Rumex sp.</i>							
small dock seed			1			1	
<i>Malva sp.</i>							
Mallows			1*				
<i>Brassica / Sinapis</i>							
Cabbages / Mustards	1		3, 1*				
<i>Malus / Pyrus</i>							
Apple or Pear pip			2*				
<i>Vicia / Lathyrus / Pisum</i>							
Vetches / Wild Pea / Pea			2*			1	
<i>Medicago / Trifolium</i>							
Medics or Clover			2				
<i>Tripleurospermum inodorum</i>							
Scentsless Mayweed		1					
Trigonous <i>Carex sp.</i>							
trilete Sedge seed			2*				
Lenticular <i>Carex sp.</i>							
flat Sedge seed			1*				
<i>Avena sp.</i>							
wild / cultivated oat		3			1		
small Poaceae indet. (<2mm)							
medium wild grass seed			2, 1*				
Poaceae fragment indet.	5	+++			1	5	1
seed indet.							
		2	10*				
Monocot leaf fragment		1	++*				
Mineralised fly pupae	1		+	1			
Mineralised earthworm cocoons			++				

mineralised millipede segments				+				
fish scale - mineralised?				1				
Mineralised fragments of coprolite				+++	+++			

**Table 15:** Charred Plant Macro-Remains and Mollusca from the Bulk Soil Samples  
Key: '-' 1 or 2, '+' <10, '++' 10-50, '+++' >50 items. ( ) indicate items found in the >4mm residues

Sample number	3	8	10	17	24	33	28
Context	133.1	146.2/3	135.2	154.4	221.1	325.1	299.1
Feature	30	40	43	43	77	82	83
Feature type	pit	well	well		gully	gully	ditch
Phase/Date	R.B?	Roman or Early Saxon			Saxon ?		=F.3
Sample volume – litres	14	10	10	9	12	10	11
Flot volume – millilitres	17	21	17	3	14	11	7
Flot fraction examined - %	100	100	100	100	100	100	100
<b>Fresh water mollusca</b>							
<i>Anisus leucostama</i>				-			
<b>Damp / Shade loving species</b>							
<i>Carychium tridentatum / minimum</i>					+		
<i>Columella edentula</i>	+			-	+	-	+
<i>Vallonia excentrica / pulchella</i>	++	++	+	++	++	++	+
<i>Vertigo antivertigo</i>	-	-				+	
<i>Cochlicopa lubrica/lubricella</i>		-					
<b>Dry environments</b>							
<i>Helicella itala</i>	+		-		-	-	-
<b>Catholic species</b>							
<i>Trichia sp.</i>	+	++	-	-	++	++	+
<i>Ceciloides acicula</i> –Blind burrowing snail	+++	+++	++	+++	+++	+++	+++
>2mm bone		+		+	+		+
<2mm bone	++	++	+++	+++	++	++	++
'clinker' type particles							+
Intrusive seeds			-		+	-	
Modern rootlets				P			P

**Table 16:** Charred Plant Macro-Remains and Mollusca from the Bulk Soil Samples  
Key: '-' 1 or 2, '+' <10, '++' 10-50, '+++' >50 items. P = present

## Appendix 9

### Pollen Analysis of Monolith Samples – Simon Timberlake

Three 30cm monoliths were collected from excavated features on this site. The latter included two enclosure ditches (F3 cat.no <21> and F88 cat. no <26>) and a Roman/early Saxon well (F43 cat. no <16>).

## *Methodology*

The samples were extracted by scalpel and spatula from the measured and described (logged) monolith tin cores and then bagged up whilst still damp into small polygrip plastic sample bags. Each sample represented approximately a 10mm interval within the monolith. Prior to sampling the surface of the monolith was first cleaned by slicing off up to 5mm from the outside of this in order to ensure that sampling proceeded from a clean and uncontaminated surface. The removed samples were then weighed and packed into other sealed plastic bags before being sent (by post) to the Department of Geography and Environment at the University of Aberdeen to be prepared for pollen extraction.

The process used for extraction followed that described by Barber (1976); this involved potassium hydroxide digestion to remove some of the plant material, followed by hydrochloric acid treatment to dissolve up carbonate, then acetolysis using sulphuric acid and acetic anhydride (and subsequent washes in glacial acetic acid) to remove the remaining cellulose. Hydrofluoric acid treatment was undertaken on those samples high in mineral matter (particularly silica). The remaining residues containing the palynomorph fraction were then mounted in glycerine. These residues were returned within small plastic phials to the Cambridge Archaeological Unit for analysis.

During the preparation of the pollen samples exotic marker grains (in this case two tablets containing a known number of exotic *Lycopodium clavatum* spores) were added for the purposes of working out a pollen grain density, such that it would be possible to calculate from the proportions observed the original number of grains of each taxon within the sediment sample.

## **Results**

The samples were found to contain very little pollen indeed (<20 grains each) plus occasional fern spores, and of the few grains which could be identified most were very poorly preserved. The exceptions to this were the grains recovered from the damp fill of the enclosure ditch F3, particularly from its base. Although quite thin in pollen, the preservation here was better than for any other sample. Very few of these pollen grains could be identified to species level.

The pollen presence is recorded within tables 17, 18 and 19 constructed for each monolith, ones which also show the sample depth and sedimentology (context) log for each core. Microscopic charcoal inclusions (relative densities) have only been mentioned where considered to be relevant. Counts of exotic spore grains have been included for each sample within the table captions.

## **Discussion**

The limited data available from the AMR 08 monoliths only serves to confirm the poor potential for survival of pollen within most of the ditch fill samples collected from this site. The exception to this perhaps was the monolith taken from the

enclosure ditch F3. The base of this, in particular, showed reasonable pollen preservation, though the density of pollen was still quite low, something which is suggested by the moderately high numbers of *Lycopod* marker grains counted. The good preservation here was probably linked to the level of contemporary waterlogging, indicated also by the presence of mollusc shell within the basal sample. The absence of marl (traces of chalky sediment) within this may also reflect slightly lower pH conditions which would likewise favour preservation.

The presence of fern spores within the base (Sample <1>: [106.8]) of enclosure ditch F3, including those of Common Polypody, may well just reflect local conditions on the sides of these damp ditches and banks, but much more interesting perhaps are the indications of cereal pollen, grasses, and some meadow (Scabious) or meadow/cultivated field species plant such as the thistle. Though not statistically comparable in any way, these serve to confirm local cereal cultivation. *Triticum sp* (wheat) seemed to be a more likely identification than *Hordeum sp.* (barley), though given the level of preservation, this could not be determined for certain. Tree pollen such as that of oak, ash and hazel suggests the presence of mature deciduous woodland nearby. However, the occurrence of small numbers of indeterminate Ericales (heathers), both in this and overlying samples, presents something of an anomaly. Perhaps these reflect the existence of heath type vegetation colonising areas of uncultivated (undisturbed) soil resting on top of the sandy gravels of the terraces, soils which would gradually change as ploughing began to mix these sands into the underlying chalky strata. If anything, however, the rather more meagre pollen evidence from the overlying samples 2 and 3 ([106.7] and [106.4]) suggests an increase in heathland conditions towards the top of the sequence. This could be relevant if it reflects the gradual abandonment of the settlement and cultivated field landscape, though it would be wise not to draw too many conclusions from this, given the small size of the samples and the possibly unrepresentative pollen preservation. However, cereal pollen was recorded from Sample 2 along with Corn Buttercup, suggesting some level of grain cultivation continued within the area as the enclosure ditches silted up.

The much poorer level of pollen preservation within the fill of the other enclosure ditch (F88) adds very little to this picture. However, it is interesting that the only cereal pollen recovered comes from the base of this ditch, whilst the indications of ferny vegetation (ferns and horsetails) associated with the upper fill must reflect the increasingly damp and overgrown conditions pertaining locally. Microscopic charcoal is much more evident within the pollen residues than the macroscopic sample description would suggest.

The sediments from Anglo-Saxon well (F43), though once again pollen-poor, include traces of fern spores and meadow/ cultivation (?) pollen (such as buttercup) at its base, and above this, the introduction of tree pollen (oak and alder), the latter reflecting the presence of mature and possibly riverine woodland within the Addenbrooke's landscape.

13 – 30 cm	Light chocolate brown to brown-grey silt with some stones, occasional charcoal flecks and weathered flint [106.4]	<b>Sample 3</b> (23 – 24.5 cm)  <b>Sample 2</b> (13.5 – 15 cm)	<i>Dryopteris</i> sp (fern) <i>Epilobium</i> sp ? Graminae (x3) Ericacea indet.? fungal spores  <i>Blechnum</i> or <i>Dryopteris</i> (ferns) Ericacea indet. (x3) Graminae (x4) cereals (x2) <i>Ranunculus arvensis</i> (corn buttercup) <i>Betula</i> sp (birch)
9 – 13 cm	Similar to 0 – 8 cms but becomes browner and more stony [106.7]		
0 – 8 cm (from base)	Light grey-brown stony silty clay with flint (both weathered and unweathered) plus mollusc shell and charcoal inclusions [106.8]	<b>Sample 1</b> (4 – 5 cm)	<i>Polypodium</i> sp. (?common polypody) x2 Ferns indet. Graminae (grasses) x3 cereals (x3) Ericacea indet. <i>Polygonum</i> sp <i>Scabiosa</i> sp (scabious) <i>Quercus</i> sp. (oak) <i>Fraxinus</i> sp.(ash) <i>Corylus avellana</i> (hazel)

**Table 17 :** Monolith core AMR08 F3 [106] cat no. <21> (Sample 1: 42 exotic marker grains; Sample 2: 47 exotic marker grains; Sample 3: 23 exotic marker grains)

22 – 30 cm	Mid-dark brown silty sand with occasional clasts of bleached white angular flint (weathered) and charcoal	<b>Sample 3</b> (24.5 – 26 cm)	higher charcoal content <i>Dryopteris</i> sp or other fern <i>Equisetum</i> sp.? (horsetail) fungal spores and zoospores
8 – 22 cm	Dark brown – grey sandy silt with occasional gravel and charcoal flecks	<b>Sample 2</b> (13.5 – 15 cm)	much microscopic charcoal
0 – 8 cm (from base)	Dark brown silty sand with lumps of gravel and occasional angular flint pebbles and charcoal	<b>Sample 1</b> (4 – 5 cm)	much microscopic charcoal fungal spores and zoospores degraded cereal pollen?

**Table 18:** Monolith core AMR08 F88 [250] cat no. <26> (Sample 2: 4 exotic marker grains; Sample 3: 2 exotic marker grains)

16 – 30 cm	Loose grey – dark grey crumbly silt (soil) with voids, rootlets and increased presence of charcoal plus flecks of burnt rock	<b>Sample 3</b> (25 – 26.5 cm)	
8 – 16 cm	Mid grey – dark grey fairly compact silty clay soil with slightly more charcoal and inclusions of grit and with angular – round flint	<b>Sample 2</b> (13.5 – 15 cm)	<i>Quercus</i> sp (oak) x4 <i>Alnus</i> sp. (alder) x2
0 – 8 cm (from base)	Crumbly and mottled white- mid grey marly soil with lumps of broken down chalk and occasional angular white flint and charcoal	<b>Sample 1</b> (4 – 5 cm)	<i>Dryopteris</i> sp or other fern (x3) <i>Ranunculus</i> sp. zoospores

**Table 19:** Monolith core AMR08 F43 cat no. <16> (Sample 1: 27 exotic marker grains)

## Summary

The sediments of the enclosure ditch F3 provide the most promising option for future sampling for pollen at this site. The basal context [106.8] of this, in particular, might provide a more representative pollen record; if a statistically large enough sample could be counted (probably a minimum of 300 grains). Unfortunately, if this cannot then be compared with an equally well preserved pollen sample from the top of the monolith, or from earlier or later contexts elsewhere on the site (or from previously excavated sites nearby), it is difficult to see how useful such an exercise might be in monitoring anthropogenically induced environmental change within the surrounding landscape.

## Appendix 10

### Iron Shears - *Sam Lucy*

A pair of shears was recovered from well F40; they were complete, but in three fragments (SF6-7). Reconstructed, the shears are 168mm long, and rather fine. The two blades have curving backs down to a straight cutting blade. The arms are circular in cross-section (Diam 5mm), and flatten into the simple unexpanded loop (W. 11mm; Th. 3mm) at the top. The shears appear to have been in a damaged condition before being deposited into the well: the blades are splayed apart from each other, and one of the blades is bent out of plane close to the tang. These shears are of a size which would have been used in crafts such as weaving, sewing or leatherwork, and have the simple U-shaped bow common to early and middle Saxon shears (Ottoway 1992, 548). Seventh-century shears at other sites in East Anglia have been observed to have slightly expanded bows, and this might suggest that unexpanded loops, as here, might belong to the later fifth or sixth century.

## Appendix 11

### Glass – Vicki Herring

A single small glass sherd was recovered from pit F30. The matt surface on one side and the 4mm thickness and the blue/green colour of the small glass fragment from this pit indicates that it was cast, an Early Roman method of producing flat glass. It was most likely window glass produced locally within the 1<sup>st</sup> or 2<sup>nd</sup> century AD. The glass has later been cut into a small triangular piece. It is unclear when this modification took place and for what purpose.

## Appendix 12

### Worked Stone – Simon Timberlake

A small collection of worked stone was recovered from the site, most but not all of it included within the collection of burnt stone recovered from the Late Iron Age/Roman enclosure ditches and the pit/well associated with the Early Anglo-Saxon *Grubenhäuser* or sunken-featured building (SFB) F1. Just one or at the most two of these worked stone objects appear to be actually associated with the spread of burnt stone material.

#### *Catalogue of worked stone*

<160> F3 [199.2] One of 11 burnt cobbles found associated together and collected as part of the burnt stone assemblage from this site. This consists of a more or less intact rounded sub-square/ sub-rectangular dense cobble composed of a microgranite or microdiorite rock (70mm x 55mm x 40mm (300g)) appears to have been used as a small hammerstone at one end prior to its discard and re-burial, and subsequently, its later use as burnt stone. The wear is all along one edge, though here it appears to be well used and rounded from striking, the area of the batter evident on two of the corners, and most visible where the original patina has been removed. The presence of a subsequent and overlying weathered patina, burn stain, and calcification deposits attest to its subsequent burial history, and then to its re-use, and also the period of time which has elapsed. Original use is probably Bronze Age or earlier.

<177> F1 [210.1] A crumb from the surface of a Niedermendig lava quern (<1g). A tiny non-diagnostic fragment of worked stone found amongst a collection of burnt and unburnt stone.

<116> F40 [160.15] Small Find no. 9. One very small fragment of lava quern, possibly from the edge of a quern stone. A small area of grind surface may just be visible (8g).

<273> F1 [262.2] Some small non-diagnostic fragments (crumbs) of lava quern (28g).

<146> F40 [191.2] Small Find no. 11. A partly fragmented, possibly burnt fragment of Niedermendig lava quern (170mm x 80mm x 40mm thick; weight 1kg). Though quite crumbly, the original surfaces of the most intact piece are still discernable, the

flattest probably being the grinding surface of this rotary quern. Neither the outer or inner rim of the quern appeared to be present. In all probability, the minimum diameter of this quern mill would have been at least 500mm. A considerable number of small fragments seem to have become detached from this. This state of deterioration appears to be fairly typical of much Early Saxon lava quern.

<221> F3 [225.5]. A small fragment of quern (dimensions: 60mm diameter, 60mm wide and 40 mm thick, weight 220g) consisting of a medium grained calcareous sandstone which was found amongst an assemblage of burnt stone. It was not possible to be certain whether this was part of the edge (rim) of a rotary quern, or instead a fragment of a shallow saddle quern or rubbing stone. However, the thickness (35mm – 40mm) and the angle of the top of this suggests that this was more likely to be the upper stone of a rotary quern of which the grinding surface is worn smooth. From the slight curve of the rim edge it seems possible that this rotary quern is likely to have exceeded 450mm in diameter. The stone itself may be Permian or Cretaceous in age, though it shows few lithologically diagnostic features. It is not clear whether the stone shows any evidence of burning and breakage.

## Discussion

The soft and quite friable condition of the Niedermendig lava quern is quite distinctive and is similar to the preservation and form of the fragmentary remains found associated with other Early Anglo-Saxon features on nearby sites. An example of this appears to be the almost identical fragments recovered from the Early Anglo Saxon pit cluster which lies some 50m to the north-west of the possible Anglo-Saxon well (F40) associated with the SFB F1. The latter was excavated as part of the Addenbrookes Water Main trench evaluation in November 2007 (Timberlake 2007). However, rather similar degraded lava quern fragments of the same thickness (approx. 40mm) were recovered from wells and other features on the Addenbrookes Hutchison site which lies several hundred metres to the north-east (Evans et al. 2004). A further link suggesting an Anglo-Saxon origin for this quern is the presence of tiny fragments (crumbs) of quern within the base of the SFB. An examination of the fragmentation of this quern does not suggest burning as an agent, though quite possibly the quern has lain on the ground and been significantly weathered following the abandonment of the SFBs and the Anglo-Saxon settlement.

The small piece of quern made of sandstone, on the other hand, seems typical of the type recovered from Roman/ RB contexts (Timberlake et al. 2009 *forthcoming*), though the actual lithology of this was not composed of Millstone Grit. One possibility is that this represents a small fragment of saddle quern rather than rotary quern, or that it is an earlier form of the latter. This would seem to fit better with a Late Iron Age/ Early Roman context for its use, assuming that this is the date of the enclosure. However, it seems very unlikely that this could be related to any *in situ* deposit or location for quern use on site, most of the other stone in this ditchfill clearly having been redeposited.

The hammerstone recovered from amongst the burnt stone from the same enclosure ditch (F.3) is probably of prehistoric date. As a small cobble of hard igneous rock this may have been collected and used as a tool for the preparation of flint nodules for



striking to make blade tools, alternatively, it could have had some other domestic function. It seems likely that the use of this has a Neolithic- Early Bronze Age origin, though a Middle Bronze Age date is possible.

## **Appendix 13**

### **Stone - *Simon Timberlake***

A large and probably glacial erratic boulder of basalt was recovered from the base of F40 (thought to be a Saxon well) where it was found resting against the NW edge of the hollowed-out base of the shaft together with a fragment of Niedermeyer lava quern. The association of this boulder (which must have been brought to the site) and other possible workshop or domestic waste, including a pair of probable Early-Mid Anglo Saxon iron shears and a considerable amount of butchered cattle bone, suggests that the stone was collected for a purpose, and possibly used, though subsequent examination has revealed no obvious evidence of working or wear apart from a few small original fractures and chips which could have resulted from it having been hit with a hammer or other heavy implement.

This boulder composed of a fine grained vesicular basalt which in hand specimen appeared to consist of a pyroxene-rich groundmass with some larger phenocrysts of probable clino-pyroxene and some smaller crystals of olivine weighed 48.6 kilos, and was approximately polygonal (seven-sided) in shape (dimensions: 350mm x 330mm x 250mm), the flattish sides and convex/ concave basal surfaces of which suggested the presence of original cooling joints in a basalt flow; surfaces which were then rounded off through abrasion associated with its subsequent glacial transport. A possible geological provenance for this erratic would be the Scottish Inner Hebrides where there are numerous possible outcrops of rather similar columnar basalts of Tertiary age.

The shape, hardness and density of the rock may have made this an ideal candidate for possible use as an impromptu workshop anvil. Alternatively the rough vesicular nature its surface, similar to that found on the contemporarily used lava querns, might have suggested to the collector its potential use for fabricating a saddle quern. However, the absence of any clear indication of use suggests that this had been dumped (perhaps from a nearby hut) then rolled into the abandoned well as part of its backfill.

## **Appendix 14**

### **Burnt Stone – *Simon Timberlake***

Some 315 pieces of burnt stone (weighing 58.63 kg), mostly of cracked or near complete pebbles, were recovered from some 19 sampled features on the Addenbrooke's site. None of these showed any obvious signs of *in situ*. use and/or deposition, though assemblages or concentrations of burnt stone in some cases would seem to imply purposeful disposal of stone into ditches or pits from areas of burning close by, though it appears that the hearths themselves may have been earlier features.

*Catalogue of burnt stone*

<061> F40 [146.1] x3 pebbles of Bunter quartzite, Cretaceous sandstone? and possible Old Red sandstone (698g)

F43 [155.1] x3 broken pebbles: fractured fossiliferous sandstone with plants (Jurassic or Cretaceous), a sarsen (Cretaceous quartzitic sandstone pebble), and a dreikanter of Old or New Red Sandstone (526g)

<030> x17 broken fragments of burnt pebbles: these include x3 fossiliferous volcanic tuffs (Palaeozoic), a possible Precambrian quartzite, and Carboniferous (Coal Measure), Jurassic and Cretaceous sandstones (556g)

<033> F3 [131.4] x13 fragments of broken both burnt and cracked pebbles of quartzitic sandstone, some slightly micaceous and carbonaceous (or fossiliferous). No distinctive characteristics, but maybe Jurassic or Carboniferous. Additionally one fragment of Bunter Trias cobble plus two pieces of a coarse ?Palaeozoic gritstone pebble (1288g).

<043> F3 [140.2] x7 fragments of burnt and reddened sandstone. This includes four pieces of the same fine grained flaggy sandstone plus another piece of micaceous flaggy sandstone which may be Upper Carboniferous in date (502g).

<123> F3 [165.2] x6 fragments of pebble and broken pebble composed of various types of sandstone plus one small fragment of burnt and cracked limestone or chalk. At least two of the pieces of sandstone show no evidence of burning (916g).

<087> F44 [157.1] x13 fragments of six different pebbles, all of them composed of slightly different rock types. This includes three different sorts of what are probably Upper Carboniferous micaceous sandstones, one of them probably a Coal Measures seat earth or ganister which contains a plant fossil, possibly a stem or rootlet. Another two fragments are of Lower Palaeozoic rhyolitic tuff, the final piece being a well burnt and cracked fragment of a small spherical pebble of weathered granite or granodiorite. All of these pebbles show evidence of burning with internal reddening and cracking, some of them with a reduced exterior, suggesting these had been buried inside of a hearth. Total weight 716g.

<112> F40 [160.10]. One fragment of burnt quartzitic sandstone. This could be Lower Cretaceous or basal Eocene in date (possibly a sarsen). Weight 246g.

<106> F40 [160.8]. One small fragment of quartzitic sandstone (probably the same as <112>). Weight 36g.

<109> F40 [160.9]. One small fragment of quartzitic sandstone (probably the same as above). Weight 74g.

<020> F23 [123.1]. One heat fractured and bleached quartzitic siltstone/ sandstone (Mesozoic?) and two small pieces of a slightly darker and less competent sandstone (128g).

<095> F40 [160.1]. One heat fractured fragment of a highly silicified cobble of quartzite. This could be of a Bunter Trias cobble, but may be Mesozoic (200g).

<149> F3 [193.2]. x13 cracked and reddened fragments of what are probably between four and five different pebbles, all of them composed of a slightly different sandstone. At least one of these may be of an Upper Carboniferous rock (472g).

<136> F3 [181.1] A single broken fragment of a slightly burnt and naturally polished meta-sandstone pebble (almost gneissose texture). The latter is no more than 10mm deep and 40mm wide. The pebble appears to be a ventifact, although geologically this may relate to periglacial exposure on the gravel terraces (56g).

<160> F3 [199.2] x11 pieces of burnt rock from at least seven different cobbles or smaller pebbles. Most of these are composed of fine to medium grained sandstone, some of these being micaceous. The assemblage includes two small fragments of cherty limestone plus two fragments of burnt and cracked (but not calcined flint). Total weight 1732g.

Another of the burnt cobbles, a more or less intact rounded sub-square/sub-rectangular dense cobble composed of a microgranite or microdiorite rock (70mm x 55mm x 40mm (300g)) appears to have been used as a small hammerstone at one end prior to its discard and re-burial, and then later use as burnt stone. The wear is all along one edge, though here it is well used and rounded from striking, the area of the batter evident on two of the corners, and most visible where the original patina has been removed. The presence of a subsequent and overlying weathered patina, burn stain, and calcification deposits attest to its subsequent burial history, and then to its re-use, and also the period of time which has elapsed. Original use probably Bronze Age or earlier.

<156> F3 [198.1] x4 large pieces of burnt, reddened and fractured sandstone cobble, one of them only slightly heat affected and still intact. Consists of at least three different types of sandstone and quartzitic sandstone (1692g).

<153> F66 [197.1] A single fractured piece of bleached whit orthoquartzitic sandstone complete with several casts of fossil plant stem, root or animal burrow. Possibly Upper Carboniferous (Coal Measures) in date, though may be later (58g).

<177> F1 [210.1] x5 small pebbles. This includes two pebbles (a yellow (iron) stained quartzite and a meta-sandstone or greywacke) which clearly aren't burnt, and two fractured and patinated sandstone and orthoquartzitic sandstone pebbles which are. Total weight 276g.

In addition there is a tiny non-diagnostic fragment of worked stone included; a crumb from the surface of a Niedermendig lava quern (<1g).

<195> F1 [215.2] A small burnt pebble of sandstone (38g).

<190> F1 [215.1] Two small fragments from the same flattened sandstone pebble (36g).

<164> F67 [200.1] One fragment of burnt flaggy or fissile micaceous sandstone (possibly Upper Carboniferous) 148g.

<182> F71 [205.1] Two fragments of cracked whitish orthoquartzitic sandstone, possibly Upper Carboniferous (Coal Measures?) with plant fossil stems, root holes or burrows (weight 58g).

<075> A large flat slabby pebble burnt (reddened) and sooted on exterior An orthoquartzitic sandstone (892g).

<204> F1 [218.1] A small rounded and only slightly burnt (reddened) quartzitic sandstone (114g).

<103> F40 [160.6] Two large cobble fragments of fine grained quartzitic sandstone/siltstone, one of them slightly micaceous, plus two small lumps of burnt and reddened flint (1232g).

<252> F88 [245.2] x8 large fragments of burnt cobble consisting of medium-fine grained sandstones and also meta-quartzite (in total six different rock types). At least one of the larger cobbles appears to be an orthoquartzitic sandstone with vertical burrows or casts of plant stem or roots. Possibly Upper Carboniferous (Coal Measures). Total weight 2644g.

<245> F85 [244.1] x5 lumps of burnt stone: one of the rough cobbles may be composed of brown chert, the others consist of a slightly ferruginous sandstone, some quartzitic sandstones, and a small piece of burnt flint (1092g).

<234> F77 [231.1] A small roundish cobble of weathered and yellow patinated (iron stained) orthoquartzitic sandstone. This doesn't obviously show signs of burning (438g).

<236> F77 [234.1] A fragment of a pebble of meta-arkosic grit (114g)

<244> F85 [243.1] x3 pebbles including a burnt (reddened fire-cracked) cylindrical piece of flint, a broken silicic yellowish quartzite cobble (similar to <095>), and a laminated micaceous flaggy sandstone (weight 1262g)

<221> F3 [225.5] x 23 broken cobbles, all of different (14) sorts of sandstone and a small lump of burnt flint. Some of these are of cherty and orthoquartzitic meta sandstones. Two pieces have much fossil plant and rootlet and are probably Upper Carboniferous (Coal Measures). One of these may be a reworked clast of Bunter pebble quartzite (Total weight 6.36kg).

One of these might be a small fragment of sandstone quern composed of a medium grained calcareous sandstone. It was not possible to tell whether this was part of the edge (rim) of a rotary quern, or whether it was a fragment of a shallow saddle quern, or a rubbing stone. The thickness (35mm – 40mm) and the angle of the top of this suggests that this was more likely to be the upper stone of a rotary quern (dimensions: 60mm diameter, 60mm wide and 40 mm thick, 220g). This may be Permian or

Cretaceous, though it shows few diagnostic features. The grinding surface is fairly worn smooth. Shows minor evidence of burning and breakage associated with this.

<229> F77 [227.2] A single fragment of micaceous sandstone (92g)

<223> F78 [223.1] x30 fragments of stone from ten different cobbles and rock types. This includes several sorts of fossiliferous sandstone, most seemingly plant fossils, and possibly from the Jurassic Estuarine Series or Coal Measures, some micaceous sandstones and quartzites, a Lower Palaeozoic? tuffaceous meta-sandstone with lapilli inclusions, and a rhyolitic tuff. One well-rounded pebble of coarse crystalline quartzite is the same lithology as in <234>. Total weight of assemblage is 3436g.

<360> F71 [330.1] x5 fragments of burnt and cracked sandstone from at least two small pebbles. One of the sandstone rocks is mottled with lithic clasts, the other is a clean quartz and slightly micaceous sandstone, now heavily cracked (210g)

<295> F3 [279.1] x8 fragments from at least seven different cobbles. This includes a broken Bunter quartzite pebble, a pebble of yellowish-brown quartzitic sandstone, a calcareous and fossiliferous siltstone-fine grained sandstone with burrows or rootlets (similar to <252> etc.), another sandstone with plant material (Jurassic?), and a micaceous sandstone (1044g )

<333> F83 [299.2] x2 burnt and cracked fragments of a coarse orthoquartzitic grit or meta-grit (Lower Palaeozoic?) and a complete (and unburnt?) pebble of dense micaceous sandstone (780g)

<282> F1 [268.1] A largish slab and fragment from a slightly decalcified sandstone, one with evidence of iron oxide grains perhaps weathered Lower Greensand (624g)

<265> F30 [252.1] x2 large fragments of sandstone cobbles, one a calcareous siltstone-sandstone with an exfoliating outer surface, the other a dense orthoquartzite (1940g)

<297> F3 [279.1] x8 pieces of rock from five different cobbles and rock types. This includes a heat-fractured quartzite (possibly Bunter, Trias) cobble, a fractured fine grained micaceous and calcareous sandstone, entire orthoquartzitic cobble, weathered sandstone cobble, a slightly fossiliferous (Jurassic?) fine grained calcareous sandstone, and an fragment of an exotic hornblende-rich rock, possibly a deformed amphibolite or a hornblende schist. The latter whilst it could have a Scottish origin, is more likely to be an erratic from Scandinavia (Total weight 2542g).

<382> F89 [300.1] A small cobble of yellowish-brown quartzitic sandstone (similar to <295>) with a strong reddish patina from burning on the exterior (weight 380g).

<269> F9 [254.1] x3 burnt rock fragments including two adjoining pieces from a large cobble of a micaceous lithic quartzitic sandstone (?Palaeozoic in origin). The surface of the latter cobble shows evidence of earlier weathering beneath the heat reddened patina; polishing perhaps from Pleistocene periglacial ventifaction. The spall shows the effect of further burning following thermal dehision. Another small

rock pebble is of very weathered igneous rock, possibly a microgranite porphyry. Weight 634g.

<364> [333.2] x2 fragments from the same or similar cobble of orthoquartzitic sandstone, perhaps one with a formerly calcareous cement and grains of iron oxide. Possibly Cretaceous- Jurassic. Weight 302g.

<364> F71 [330.2] A single small reddened and burnt fragment of what is probably a rhyolitic tuff (4g).

<327> F83 [299.1] x7 pieces of fine-medium grained sandstone, all of the same lithology. One is a fire-cracked pebble, the others fragments from another. Probably a Jurassic-Cretaceous rock (878g).

<316> F3 [296.2] One small broken pebble of laminated sandstone (Jurassic – Cretaceous). Weight 106g.

<311> F85 [288.1] A single fire-split fragment of quartzitic sandstone cracked along a joint (88g).

<306> F3 [282.1] x3 fragments which make up an entire cylindrical-shaped fire-cracked cobble of a laminated (banded) and slightly micaceous sandstone., possibly Jurassic -Cretaceous (524g).

<329> F3 [279.6] A broken rounded pebble of a volcanic, probably a crystalline tuff, containing sanidine feldspar and biotite mica. Possibly a British source (114g).

<342> F82 [306.1] Small sub-cylindrical pebble of quartzitic sandstone (144g).

<255> F58 [246.3] x3 small pebbles of (partly fire fractured) sandstone, one of them an orthoquartzite, another a calcareous siltstone (378g).

<257> F88 [250.1] x2 fractured pebbles: one of microdolerite, the other of a calcareous (and slightly decalcified sandstone). Weight 254g.

<261> F88 [250.2] x4 cobbles of sandstone, all of which are slightly burnt and fire cracked. Two of these are calcareous sandstones, one of them with trace fossils (probably Jurassic – Cretaceous). Weight 2804g.

<223> F.78 [223.1] x27 pieces of sandstone representing some 13 different pebbles and cobbles and some ten different lithologies. This includes those containing plant fossil debris (including pale quartz sand and micaceous lithic sandstones – possibly all Jurassic), calcareous sandstones, ferruginous sandstones, and an orthoquartzitic grit (Palaeozoic?). Total weight 4278g.

<223> F78 [223.1] Part of the same assemblage as above: x15 pieces of burnt sandstone representing some 12 cobbles, including complete ones. Amongst these we find a similar pale quartz sand-siltstone with fossil plant debris (Jurassic), some calcareous sandstones, orthoquartzitic sandstones and gritstone etc. Total weight 4390g.

<223> F78 [223.1] Part of the same assemblage as above: x22 pieces of burnt sandstone representing some 15 cobbles, including one or two complete ones. One of the smallest fragments appears to be of a tuffaceous sandstone (Palaeozoic), although amongst these there is a cobble of (Palaeozoic) orthoquartzitic grit, sandstones (Jurassic) with fossil plant debris and roots, and some ferruginous and quartzitic sandstones. Weight 4304g.

## **Discussion**

The impression gained from the recovery of burnt stone from features and from test pits, and also by its widespread distribution across the site, is that much of this could be redeposited, and derive from still earlier archaeological levels. This is supported by the general association throughout the Addenbrookes landscape of this type of burnt stone with prehistoric, and in particular Middle Bronze Age burnt stone features, the latter seemingly associated with settlement, and most probably cooking functions (see Timberlake in Slater 2008; Timberlake 2007b; and Armour 2007 & 2008). Nevertheless, it is interesting that on the AMR 08 site a much higher percentage (40%) of this burnt stone was recovered from the putative Late Iron Age/ Romano-British enclosure ditch, than from features of an earlier or later date. Another 26% came from a single burnt stone feature (F78), but only 15% from known or potential Anglo-Saxon features or levels.

Table 13 shows the different categories of burnt stone. The make up of this assemblage suggests that we are probably looking at a sample (in total) of 211+ cobbles, most of which would have been collected from the river terrace gravels within the Addenbrookes valley (the earlier Vicar's Brook – a former tributary of the River Cam). The evidence of this suggests selection of non-flint cobbles, almost all of which will have had origins as (non-local) glacial erratics. Sandstone and quartzite lithologies appear to make up some 92% of the burnt cobbles, with some 5.7% consisting of other lithologies. Chief amongst these are the igneous rocks such as dolerite and microgranites or microdiorites, and volcanics or volcanic sediments such as rhyolite or rhyolite tuffs, with a still smaller proportion (0.6%) of more distant erratics such as gneisses and schists from Scandinavia. However, rather than an intentional selection of specific lithologies, the make-up of this assemblage may just reflect the composition of erratic pebbles in the gravel. What is clear though is that these stones were selected for burning, and perhaps then for boiling water in to cook food (as suggested by the nature of the cracking); the latter most probably in preference to the ubiquitous flint. Burnt flint in fact makes up only 1.9% of this burnt stone, and as none of the pieces showed any evidence for calcination, it seems likely that this was not used in the same way. Indeed, it is quite possible that the inclusion of flint in the burning was accidental, and simply reflects the presence of hearths on the contemporary ground surface. For certain the sandstones/quartzites and other crystalline rocks possess heat – retaining properties, moreover, they do not fragment into shards like flint. For this reason these sandstone lithologies appear to have been selected for use in burnt stone mounds and cooking features, and with the exception of the Neolithic-Bronze Age Fen edge burnt flint mounds (Beadsmoore 2005), such basic selection procedures are now suggested to be commonplace in the Bronze Age (Timberlake 2007b).

Rock type	Sandst						Other					BF
		Bunter pebble	Palaeoz quartzit/ grits	Upper Carb.	Jurass	Cretac		Vol tuff	Doler	Gran	Scan gneiss /schis	
Number frags.	291	8	12	8	33+	20+	18	8	1	3	2	6
Number cobbles	195	5	8	8			11		1	3	2	5
Weight (kg)	53.1						5.53					0.2
Size cobbles (mm)	60 - 160	<90					<90		<90	<90	<60	<45
Natural ventifac		1	1								1	
Burnt worked stone						1 (rot quern)				1 (ham stone)		

**Table 20:** Categories of burnt stone and its lithological make-up

The same or else similar proportions of different lithological types have been found within many of the prehistoric assemblages of burnt stone looked at from sites in East Anglia. At Broom in Bedfordshire, Middle Iron Age cooking pits yielded burnt stone which consisted of 75% non-local sandstone, 10-15% local sandstone, and less than 10% of igneous and other rock type cobbles (Slater 2008). At Striplands Farm in Cambridgeshire a similar assemblage of stone was recovered from the fill of a Late Bronze Age well, though here the increased proportion of igneous and metamorphic rock types probably just reflects the much higher percentage of these erratics present within the gravels and boulder clay outcrops nearby (see Timberlake in MacKay & Knight 2007). However, at West Deeping in Lincolnshire, the percentage of sandstone and quartzite cobbles used was still higher (81%), compared to the 7.5% of other rock types (including igneous), and the 7% of flint and chert, all of which appear to be associated with Middle Bronze Age burnt stone features (Timberlake in Murrell *forthcoming*). Much closer still, on the opposite side of the Addenbrookes valley at Clay Farm, a range of different burnt stone features and spreads (all of them Middle Bronze Age in date) contain an almost identical assemblage of selected cobbles, with similar proportions of different rock types to those found at the MRC site. Between 80-95% of these consisted of non-local sandstones and quartzites, with rarely more than 5% of other rocks, the latter however including vein quartz and Carboniferous Limestone as well as some of the smaller igneous cobbles (Timberlake 2007b). The size of the selected and used cobbles also lay within a similar size range (from about 40mm – 160mm diameter), with most being around 90mm. Some of the cobbles show evidence of their being natural ventifacts, suggesting that these had remained exposed at surface on the gravel terraces during cold periods.

Altogether the picture is one of local selection and collection of non-flint cobbles from the exposed areas of gravel terrace, perhaps aided by pitting or small-scale quarrying for additional suitable material. The one exception to this stone cobble resourcing perhaps was the discovery of a burnt flint ‘roasting bed’ during the 2008 Clay Farm Green Corridor evaluation near Addenbrookes (Slater 2008b). The extent of this burnt stone resourcing remains difficult to assess whilst the date of these MRC site burnt stone spreads remains unknown. However, the close similarity between this



and other burnt stone assemblages in the Addenbrookes valley suggests that for the most part we could be looking at re-deposited Middle Bronze Age cooking pit or cooking mound material, the greater part of which was shifted and dumped either intentionally or unintentionally into ditches during the next major phase of earthworks affecting this part of the valley, i.e. that carried out during the Late Iron Age or Early Roman period. The discovery of a probable prehistoric hammerstone amongst the assemblage of burnt stone cobbles might provide some relative help in dating, although perhaps significant also was the discovery of a fragment of ?Roman rotary hand quern which appears to have been burnt, yet which may or may not have been part of the actual burnt stone spread itself. It seems that burnt and broken-up quern is common on Roman and rural Romano-British sites, used perhaps as a technique to fragment old and worn quern for the purposes of posthole packing, rubble hardcore for road surfaces, or even reuse as the lining for ovens or small kilns (Timberlake et al. 2009 *forthcoming*). The recovery of even just small amounts of residual Deveril Rimbury pottery and other artefacts (such as the bronze palstave) from the AMR 08 site attests to a Middle Bronze Age presence, and at the same time a parallel for the widespread re-distribution of burnt stone within Late Bronze Age – Roman features can be seen in the Addenbrooke's Link Road Site 3 at Clay Farm (Timberlake 2007b).

## **Appendix 15**

### **Slag – *Simon Timberlake***

Only one piece of ferrous material labelled as slag was recovered from this site and was clearly a piece of weathered ironworking slag,

<220> F40 [233.5]. A small fragment of very weathered and not particularly well differentiated ironworking slag (weight =18g). It seems possible from the appearance of this that the slag is redeposited.

Little in the way of any conclusion can be drawn from a single piece of slag. However, the appearance of this does not suggest that it is modern.

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Site Director: Matthew Collins

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## Appendix 16

### Feature Descriptions

**F1** Sunken floored structure that was rectangular in shape and measured 3.6m long, 2.9m wide and 0.2m deep. Excavated in quadrants, interventions [209-218], [251] and [260-269] showed almost vertical sides leading to an undulating base. An almost whole Early Anglo-Saxon urn was recovered from intervention [213] and small quantities of pot, bone and flint were also recovered. Two substantial, circular postholes, F109, [230] and F110, [251] were present, one at each end, and four circular stake holes, F111, [247], F112, [248], F113 [249] and F114, [286], were located within the structure along the northwest edge. Postholes were upto 0.38m in diameter with vertical sides leading to a flat base. Depth was upto 0.62m. The stakeholes were upto 0.09m in diameter with vertical sides leading to a pointed base. Depth was upto 0.1m.

**F2** NE-SW orientated ditch that was cut by the southeast corner of enclosure ditch F3 to the southwest and went beyond the area of excavation to the northeast leaving a visible length of 12.5m. It cut ditches F36 and F41 and pit F37. Three interventions [105], [147] and [163] were carried out and generally had steep sides leading to a narrow rounded base with width averaging 0.70m and depth 0.20m. Fills were natural silting and consisted of mid to dark greyish brown silty clay. Contained flint, bone and pot.

**F3** Enclosure ditch that formed the basis for a slightly irregular L shaped enclosure with a total internal area measuring some 3994m<sup>2</sup>. Eighteen interventions, [106], [130], [131], [138], [140], [145], [159], [165], [175], [181], [193], [199], [225], [229], [279], [280], [296] and [303] were excavated and showed it to be quite substantial for much of its length, but did become slightly shallower and narrower towards the west. Width varied from 1.87m to 1m and depth from 0.97m to 0.39m. Sides were generally steep to very steep leading to a fairly narrow, rounded base. Upper fills were generally backfill consisting of mid to dark grey sandy silts and silty clays and lower fills tended to be natural silting consisting of paler yellowish and orangey brown silty sands and clays. It contained significant quantities of animal bone, flint and burnt stone and small quantities of pot and a bronze palstave fragment.

**F4** Sub oval posthole. Intervention [100] had moderately sloping sides leading to a rounded base. Length was 0.38m, width 0.38m and depth 0.14m. Fill was natural silting consisting of mid greyish brown silty clay.

**F5** Sub oval posthole. Intervention [101] had steep sides leading to a flat base. Length was 0.38m, width 0.36m and depth 0.08m. Fill was topsoil derived backfill consisting of dark greyish brown silty clay.

**F6** Sub oval posthole. Intervention [102] had moderately steep sides leading to a rounded base. Length was 0.36m, width 0.35m and depth 0.13m. Fill was probable natural silting consisting of mid greyish brown silty clay.

**F7** Sub oval posthole. Intervention [103] had moderately steep sides leading to an uneven base. Length was 0.40m, width 0.36m and depth 0.007m. Fill was mid greyish brown silty clay.

**F8** Sub oval posthole. Intervention [104] had moderately steep sides leading to a rounded base. Length was 0.27m, width 0.27m and depth 0.09m. Fill was mid to dark greyish brown silty clay.

**F9** Sub oval posthole. Intervention [107] had almost vertical sides leading to a tapered base. Length was 0.36m, width 0.28m and depth 0.31m. It appeared to have a stone/gravel lining with a charcoal rich dark greyish silty clay fill. Contained pot and bone.

**F10** Shallow sub oval pit. Intervention [108] had moderately sloping sides leading to a flattish base. Length was 0.75m, width 0.65 and depth 0.10m. Fill was natural silting consisting of mid brownish grey clay silt. Contained bone and a FE nail.

**F11** Sub oval posthole. Intervention [109] had steep sides leading to a rounded base. Length was 0.45m, width 0.42m and depth 0.22m. Fill was topsoil derived backfill consisting of mid greyish brown silty clay.

**F12** Sub circular posthole. Intervention [110] had steep sides leading to a rounded base. Diameter was 0.22m and depth 0.16m. Fill was pale to mid greyish brown silty clay.

**F13** Sub circular posthole. Intervention [111] had moderately steep sides leading to a rounded base. Diameter was 0.24m and depth 0.11m. Fill was light brownish grey clay silt.

**F14** Sub oval posthole. Intervention [112] had moderate sides leading to a rounded base. Length was 0.43m, width 0.40m and depth 0.16m. Fill was backfill consisting of mid greyish brown clay silt.

**F15** Circular posthole. Intervention [113] had moderately steep sides leading to a flattish base. Diameter was 0.25m and depth 0.006m. Fill was backfill consisting of mid greyish brown clay silt.

**F.16** Sub oval posthole. Intervention [114] had moderately steep sides leading to a flattish base. Length was 0.40m, width 0.37m and depth 0.007m. Fill was backfill consisting of mid brown silty clay.

**F17** Sub rectangular posthole. Intervention [115] had undercutting sides leading to an uneven base. Length was 0.64m, width 0.34m and depth 0.16m. Fill was backfill consisting of pale to mid grey clay silt.

**F18** Circular posthole. Intervention [116] had moderately steep sides leading to a flattish base. Diameter was 0.30m and depth 0.007m. Fill was backfill consisting of mid greyish brown clay silt.

**F19** Sub oval posthole. Intervention [117] had steep sides leading to a rounded base. Length was 0.40m, width 0.30m and depth 0.20m. Fill was backfill consisting of mid brownish grey sandy silt.

**F20** Truncated circular posthole. Intervention [118] had moderately steep sides leading to a flattish base. Diameter was 0.41m and depth 0.007m. Fill was backfill consisting of mid greyish brown sandy clay silt.

**F21** Truncated circular posthole. Intervention [119] shallow sloping sides leading to an uneven base. Diameter was 0.32m and depth 0.008m. Fill was backfill consisting of mid to dark greyish brown sandy clay silt.

**F22** E-W orientated post medieval ditch that cuts enclosure ditch F3. It is highly truncated towards the west and is probably the same ditch as F46, and went beyond the area of excavation towards the east leaving a visible remaining length of 29m. Two interventions, [120] and [129] were excavated and showed moderately sloping sides leading to an uneven base with width averaging 0.92m and depth 0.20m. The fill varied little and consisted of mid greyish brown silty clay. Contained tobacco pipe and post medieval brick.

**F23** Curvilinear gully that does an almost 90° turn from a north-south to an east-west axis. It is highly truncated towards the east but clearly carried on beyond the area of excavation, and terminated towards the north, leaving a visible length of approximately 17.5m. The gully cut across enclosure ditch F3 and five interventions, [121], [122], [123], [158] and [161] were excavated. These showed moderately steep sides leading to a rounded base with width averaging 0.46m and depth 0.12m. Fill varied little and primarily consisted of dark greyish brown clay silt with a thin layer of lighter material visible underneath this in the slightly deeper interventions. Contained bone.

**F24** E-W orientated ditch that was truncated away towards the west and by ditch F41 to the east leaving a visible remaining length of 5m. Two interventions, [124] and [152], were excavated and showed moderately steep sides leading to an uneven base with width averaging 0.75m and depth 0.12m. Fill was primarily mid greyish brown sandy clay silt. Contained pot and bone.

**F25** Circular posthole. Intervention [125] had moderately steep sides leading to a rounded base. Diameter was 0.50m and depth 0.14m. Fill was dark brownish grey silty sand.

**F26** Sub oval posthole. Intervention [126] had moderately steep sides leading to a flattish base. Length was 0.40m, width 0.35m and depth 0.007m. Fill was backfill consisting of mid brownish grey clay silt.

**F27** Circular posthole. Intervention [127] had moderately steep sides leading to a rounded base. Diameter was 0.30m and depth 0.006m. Fill was backfill consisting of dark brownish black clay silt with frequent charcoal.



**F28** Sub oval posthole. Intervention [128] had moderately steep sides leading to a flattish base. Length was 0.43m, width 0.38m and depth 0.006m. Fill was mid brownish grey clay silt.

**F29** Small circular pit. Intervention [132] had moderately steep sides leading to a flattish base. Diameter was 0.62m and depth 0.19m. Fill was backfill consisting of blackish brown clay silt.

**F30** Small circular pit. Interventions [133] and [252] had vertical sides leading to a flattish base. Diameter was 1m and depth 0.32m. Upper fill was backfill and consisted of dark blackish brown clay silt with frequent charcoal and the lower fill was a weathered natural consisting of pale grey clay silt. Contained bone, worked flint, glass and a piece of tile laid on the base.

**F31** Sub oval posthole. Intervention [134] had moderately steep sides leading to a rounded base. Length was 0.30m, width 0.25m and depth 0.09m. Fill was mid greyish brown sandy silt.

**F32** Circular posthole. Intervention [135] had moderately steep sides leading to a rounded base. Diameter was 0.30m and depth 0.10m. Fill was mid greyish brown sandy silt.

**F33** Circular posthole that cuts pit F34. Intervention [136] had moderately steep, irregular sides leading to a flat base. Diameter was 0.35m and depth 0.27m. Fill was mid orangey brown sandy clay silt.

**F34** Small probable circular pit cut by enclosure ditch F3 and posthole F33. Intervention [137] had moderately steep sides leading to a slightly irregular base. Depth was 0.26m. Fill varied between pale to mid brownish grey clay silt. Contained pot.

**F35** Circular posthole. Intervention [139] had vertical sides leading to a rounded base. Diameter was 0.42m and depth 0.21m. Fill was backfill and consisted of mid greyish brown clay silt. Contained pot.

**F36** NE-SW orientated ditch/gully that is parallel to ditch F2. Truncated away towards the northeast and was cut by F2 to the southwest leaving a visible remaining length of 6.75m. One intervention, [142], was excavated and showed very steep sides leading to a slightly rounded base. Average width was 0.42m and depth 0.19m. Fill varied little and consisted of brownish grey silty clay. Contained pot and flint.

**F37** Oval pit. Intervention [142] was cut by ditch F2 and had near vertical sides leading to a rounded base. Length was 1.28m, width 1.06m and depth 0.75m. Upper fill was dark brownish grey silty clay, changing to pale brownish grey silty clay towards the base. Upper fill contained pot, bone and worked flint.

**F38** Oval pit. Intervention [143] was cut by a modern field drain and had steep sides leading to a flat base. Length was 1.75m, width 1.10m and depth 0.32m. Fill was primarily backfill consisting of dark greyish brown clay silt with some redeposited light brownish yellow clay silt towards the base. Contained pot and bone.

**F39** NW-SE orientated ditch that joins onto enclosure ditch F3 to the northwest and goes beyond the area of excavation to the southeast leaving a visible length of 3.5m. One intervention, [144], was excavated and showed steep sides leading to a rounded base. Average width was 1.03m and depth 0.51m. Fills were natural silting and consisted primarily of mid greyish brown clay silt with some mid orangey brown clay silt weathering towards the base and edges. Contained bone and worked flint.

**F40** Sub rectangular well. Interventions [146], [160], [191] and [201] showed vertical to undercutting sides leading to a flattish base. Length was 1.53m, width 1.31m and depth 1.38m. Fills varied considerably, with the upper fills being backfill and consisting of dark greyish brown sandy clay silts with occasional charcoal lenses and finds of pot, bone, tile as well as some metalwork including a set of FE shears. Lower fills appeared to be a combination of backfill and natural silting and contained the incomplete and disarticulated remains of several animals, including three bovine skulls along with lava quern stone and a large, purposely dumped boulder.

**F41** NE-SW orientated ditch that cut ditch F24 and layer [153] and was cut by ditch F2. It carried on beyond the area of excavation at both ends and had a visible length of 13.5m. Two interventions, [149] and [154] were excavated and showed steep sides leading to a narrow rounded base with width averaging 1m and depth 0.5m. Fill varied little and consisted of dark reddish brown sandy clay silt with some weathering towards the base.

**F42** Pit only partially exposed at the edge of the excavation area. It cut ditch F41 and was cut by ditch F2. Intervention [148] showed slightly irregular steep sides and the base was not reached. Exposed portion was 1.1m in length, 1.05m wide and 0.4m deep. Fill was primarily dark reddish brown clay silt with some yellowish brown clay silt weathering towards the edge. Contained worked flint.

**F43** Sub rectangular well. Interventions [155] and [156] showed vertical sides, except near the surface where they taper outwards, and a slightly rounded base. Length was 1.30m, width at top 0.85m, width at base 0.40m, depth 1.75m. Fills varied considerably with the upper fills being backfill and consisting of variable dark grey silty sand with brown silt patches and mid brownish grey silt, whilst the lower fills were natural silting and weathering consisting of pale greyish brown silt and whitish grey marl. Finds were concentrated in the upper fills and consisted of small quantities of bone, pot and worked flint.

**F44** Possible recut of the northeast corner of enclosure ditch F3 or a possible dumping event after the ditch had gone out of use. It was also cut by curvilinear gully F23. Intervention [157] showed moderately steep sides leading to a flattish base with length of approximately 10m, width 1.60m and depth 0.25m. Fill was topsoil derived backfill consisting of dark brownish grey sandy silt that contained pot bone and worked flint.

**F45** Circular posthole. Intervention [164] had moderately steep sides leading to a flat base. Diameter was 0.35m and depth 0.009m. Fill was backfill and consisted of dark blackish brown, charcoal rich clay silt.

**F46** E-W orientated post medieval ditch that is probably the same feature as F22. It cut a treethrow and was truncated away at both ends leaving a remaining length of 8m. Intervention [166] showed gently sloping sides leading to a rounded base with width averaging 0.40m and depth 0.008m. Fill varied little and consisted of mid orangey brown clay silt. Contained post medieval brick.

**F47** A group of four circular postholes lying in a roughly rectangular pattern and clearly part of the same structure. Interventions [167], [168], [169] and [170] all showed almost vertical sides leading to a rounded base with width averaging 0.21m and depth 0.14m. Fills were quite similar in each intervention and primarily consisted of dark grey sandy silt with a basal fill of mid greyish brown sandy silt. Contained pot and flint.

**F48** Circular posthole. Intervention [171] had almost vertical sides leading to a rounded base. Diameter was 0.30m and depth 0.23m. Fill was backfill consisting of dark greyish brown slightly clayey sandy silt.

**F49** Circular posthole. Intervention [172] had vertical sides leading to a flattish base. Diameter was 0.25m and depth 0.24m. Fill was mid brownish grey clay silt. Contained burnt flint.

**F50** Square posthole. Intervention [173] had vertical sides and a rounded base. Diameter was 0.23m and depth 0.19m. Fill was mid greyish brown clay silt.

**F51** Circular posthole. Intervention [174] had moderately steep sides leading to a rounded base. Diameter was 0.49m and depth 0.20m. Fill primarily mid greyish brown clay silt with an underlying weathered deposit of pale to mid orangey brown clay silt. Contained bone.

**F52** N-S orientated post medieval ditch which terminated at each end and had a total length of 11.60m. Three interventions, [176], [177] and [179], were excavated and showed gently sloping sides leading to a slightly rounded base with width averaging 0.40m and depth 0.12m. Upper fill was mid greyish brown silty clay and the lower one was weathered pale greyish white silty marl clay.

**F53** Circular posthole. Intervention [180] had moderately steep sides leading to a rounded base. Diameter was 0.20m and depth 0.007m. Fill was natural silting consisting of orangey brown clay silt.

**F54** Circular posthole. Intervention [182] had vertical sides leading to a flat base. Diameter was 0.32m and depth was 0.24m. Fill was dark orangey brown clay silt. Contained pot.

**F55** Fairly substantial, probably circular pit only partially exposed against the southern edge of the excavation area that cut ditch F58. Intervention [183] had steep to undercutting sides leading to a rounded base. Diameter was 1.20m and depth 0.60m. Upper fill was probably backfill and consisted of dark greyish brown silty clay whilst the lower fills were probably slumping and weathering and consisted of pale to mid orangey brown clay silt with white marl patches.

**F56** Circular posthole. Intervention [184] had moderately steep sides leading to a rounded base. Fill was mid brownish grey clayey sandy silt.

**F57** Elongated oval shaped feature that lies adjacent to and cuts ditch F58. Intervention [185] had moderately steep sides leading to an uneven base. Length was 2m, width 0.57m and depth was up to 0.15m. Fill was mid brown sandy clay silt.

**F58** E-W ditch that straddles the southern edge of the excavation area, cut pit F55 and ditch F88 and was cut by F57. It carried on beyond the area of excavation at both ends and had a visible length of 47m. Three interventions, [186], [195] and [246] were excavated and showed steep sides leading to rounded base with depth averaging 0.50m. Upper fill was dark reddish brown sandy silt and lower fill was mid orangey brown silty sand.

**F59** Sub oval posthole. Intervention [187] had vertical sides leading to a flat base. Length was 0.67m, width 0.42m and depth 0.37m. Fill was mid greyish brown sandy silt.

**F60** Oval pit. Intervention [188] cut enclosure ditch F3 and was truncated by a modern field drain. It had vertical sides leading to a flat base. Length was 1.11m, width 0.90m, depth 0.06m. Fill was dark blackish brown sandy silt.

**F61** Slightly irregular oval pit. Intervention [189] had almost vertical sides leading to a slightly uneven base. Length was 1.10m, width 0.80m and depth 0.25m. A layer of charcoal rich greyish black silt ran around much of the edge of the feature suggesting some in-situ burning. Upper fill was backfill consisting of dark brownish grey sandy silt and the lower fill was redeposited natural mixed with brown sandy silt.

**F62** Small oval pit. Interventions [190] and [307] showed almost vertical sides leading to a flat base. Length was 0.80m, width 0.50m and depth 0.30m. Fill was primarily backfill consisting of dark brownish grey silt mixed with clusters of redeposited chalk marl. Contained bone.

**F63** Circular pit. Intervention [192] had almost vertical sides leading to a slightly rounded base. Diameter was 0.60m and depth 0.36m. Fill was backfill consisting of pale to mid brownish grey sandy clay silt.

**F64** Circular posthole. Intervention [194] had gently sloping sides leading to a flattish base. Diameter was 0.40m and depth 0.006m. Fill was backfill consisting of mid greyish brown silty clay.

**F65** Circular posthole. Intervention [196] had moderately steep sides leading to a slightly rounded base. Diameter was 0.40m and depth 0.14m. Fill was mid reddish brown sandy silt.

**F66** Small oval pit. Interventions [197] and [301] had steep sides leading to a flat base. Length was 0.75m, width 0.60m and depth was 0.21m. Fill was dark greyish black sandy clay silt with frequent charcoal flecks. Contained pot, bone and worked flint.

**F67** Burnt oval pit. Intervention [200] had steep sides leading to an uneven base. Length was 1.05m, width 0.65m and depth was 0.19m. Fill was dark grey silt with frequent charcoal. The charcoal pattern suggested in-situ burning. Contained worked flint.

**F68** Slightly ovoid posthole. Intervention [202] had steep sides leading to a rounded base. Length was 0.46m, width 0.42m and depth 0.28m. Fill was mid orangey brown sandy silt.

**F69** Small oval pit. Intervention [203] had moderately steep sides leading to a rounded base. Length was 0.65m, width 0.59m and depth 0.10m. Fill was mid yellowish brown silty sand. Contained burnt flint and bone.

**F70** Small circular pit. Intervention [204] had moderately steep sides leading to a flat base. Diameter was 0.62m and depth 0.12m. Fill was mid orangey brown silty sand.

**F71** Treethrow. Interventions [205] and [330] had sides varying from a gentle to steep gradient and an uneven base. Length was 4m, width up to 1.50m and depth up to 0.38m. Fills were naturally derived mid orangey brown sandy silt. Upper fill contained worked flint, including a leaf shaped arrowhead, burnt flint and pot.

**F72** Circular posthole. Intervention [206] had very steep sides leading to a rounded base. Diameter was 0.24m and depth 0.20m. Fill was mid greyish brown sandy silt.

**F73** Circular posthole. Intervention [207] had very steep sides leading to a rounded base. Diameter was 0.21m and depth was 0.11m. Fill was mid brownish grey sandy silt.

**F74** Circular posthole. Intervention [208] had moderately steep sides leading to a rounded base. Diameter was 0.21m and depth 0.09m. Fill was mid reddish brown sandy silt.

**F75** NE-SW orientated ditch that formed part of two entranceways through enclosure ditch F3 and had a total length of 20m. Both termini were excavated, interventions [219] and [224], which had steep sides leading to a rounded base. The ditch narrowed and shallowed off towards the northwest from a maximum width of 1.4m and depth of 0.69m to a width of 1.1m and depth of 0.49m. Upper fills were backfill consisting of mid to dark greyish brown sandy silt and lower fills were natural slumping/silting composed of light orangey brown sandy silt. Contained pot, animal bone and worked flint.

**F76** Small, shallow N-S orientated gully that terminated to the south and went beyond the area of excavation to the north. It was cut by parallel gully F77 and had a visible length of 6.35m. Two interventions, [220] and [226] were excavated and showed steep sides leading to a slightly irregular base. Width averaged >0.68m and depth 0.2m. Fills were dark brownish grey sandy silt. Contained pot and animal bone.

**F77** Curvilinear gully that sharply turns from a NW-SE orientation to an E-W one. It terminated to the east and went beyond the area of excavation to the NW. It cut gullies F76, F80 and posthole F81, and had a visible length of approximately 40m.

Seven interventions, [221], [227], [234], [239], [272], [273 and [274] were excavated and showed quite steep sides leading to a slightly rounded base. Width varied between 0.85m to the northwest and 0.27m on the axis of the curve, and depth varied between 0.40m at the northwest end and eastern terminus and 0.07m on the axis of the curve. Fill was uniformly mid to dark grey sandy silt. Contained small quantities of pot, animal bone, worked flint and burnt stone.

**F78** Burnt stone deposit. A deliberate dump of burnt stone numbering approximately 100 pieces within enclosure ditch F3, intervention [199].

**F79** Small, NE-SW orientated post medieval drainage gully that cut ditch F75. Contained pot.

**F80** Small N-S orientated gully segment that terminated at both ends and had a total length of 6m. It was cut by parallel gully F77. Both termini were excavated, interventions [228] and [232], and showed moderately steep sides leading to a rounded base. Average width was 0.55m and depth 0.15m. Fill was mid reddish grey sandy silt.

**F81** Circular posthole that was truncated by gully F77. Intervention [233] had almost vertical sides leading to a flat base. Diameter was 0.34m and depth was 0.20m. Fill was mid brownish grey sandy silt.

**F82** Curving gully that terminates to the northwest and goes beyond the area of excavation to the southwest with a visible length of 61m. It cut ditch F85 and gullies F87, F98 and was cut by gullies F77 and F104. Ten interventions, [235], [240], [290], [295], [306], [317], [319], [322], [325] and [334] were excavated and showed width varied between 0.45m and 0.8m and depth between 0.08m and 0.33m. Fills were primarily brownish grey sandy silt. Contained small quantities of pot and animal bone.

**F83** Broad NE-SW orientated ditch segment that forms part of two possible entranceways into two enclosures and had a total length of 7.5m. Two interventions, [236] and [299] were excavated and showed width averaging 2.6m and depth 0.55m. Upper fills were backfill consisting of mid greyish brown sandy silt and the lower fills were natural silting consisting of orangey brown sandy silt. Contained animal bone and flint.

**F84** Probable terminus of a NW-SE orientated segmented ditch which is conjoined with ditch F85. It went outside the area of excavation to the northwest and joined with F85 to the southeast with a total visible length of 0.3m. Intervention [237] had steep sides leading to a rounded base. Width was 0.55m and depth was 0.45m. Fill was mid brownish grey sandy silt.

**F85** NW-SE orientated ditch that joined with ditch F84 to the northwest and apparently joined with ditch F3 to the southeast, with a total length of 22m. It was cut by gully F82 and ditch F.83, and cut postholes F95 and F96. Five interventions, [238], [243], [244], [284] and [288] were excavated and showed moderately steep sides leading to a rounded base with width varying between 0.55m and 0.89m and depth

between 0.2m and 0.4m. Upper fill was mid brownish grey sandy silt and lower fill was pale orangey grey sandy silt. Contained pot, flint and animal bone.

**F86** Large circular posthole that cuts gully F87. Intervention [242] had vertical sides leading to a rounded base. Diameter was 0.53m and depth was 0.32m. Fill was mid to dark brownish grey sandy silt. Contained animal bone.

**F87** Curvilinear gully that was roughly orientated NW-SE. It was truncated by gully F77 to the northwest and terminated to the southeast with a total length of 20.5m. It was also cut by gully F82 and posthole F86. Four interventions, [241], [289], [294] and [305] were excavated and showed moderately steep sides leading to a rounded base. Width averaged 0.42m and depth 0.13m. Fill was mid grey sandy silt.

**F88** NE-SW orientated ditch that terminated to the northeast and was cut by ditch F58 to the southwest with a visible length of 14m. It formed part of an entrance way into an enclosure and two interventions [245] and [250] were excavated. These showed steep sides leading to a flattish base with width averaging 2.38m and depth 0.58m. Fill was mid orangey brown sandy silt. Contained pot, animal bone and flint.

**F89** Circular pit. Interventions [253] and [300] had steep sides leading to a slightly uneven base. Diameter was 0.90m and depth was 0.15m. Fill was mid orangey brown sandy silt. Contained pot and animal bone.

**F90** Elongated oval pit that was offset 90 degrees from the eastern terminus of gully F77. Intervention [275] had steep sides leading to a flat base. Length was 1.5m, width 0.58m and depth 0.16m. Fill was mid brownish grey sandy silt.

**F91** Sub circular pit. Intervention [276] had gently sloping sides leading to a rounded base. Diameter was 0.6m and depth 0.09m. Fill was reddish brown sandy silt.

**F92** Sub circular pit. Intervention [277] had gently sloping sides leading to a rounded base. Diameter was 1.1m and depth 0.14. Fill was dark reddish brown sandy silt.

**F93** Circular posthole. Intervention [278] had steep sides leading to a rounded base. Diameter was 0.3m and depth was 0.06m. Fill was dark reddish brown sandy silt.

**F94** NW-SE orientated ditch that forms a T junction with enclosure ditch F3 to the northwest and goes beyond the excavation area to the southeast with a total visible length of 2m. Two interventions, [281] and [304] were excavated and showed moderate to steep sides leading to a fairly narrow flattish base. Fill was primarily natural silting consisting of pale to mid grey sandy clay silt.

**F95** Oval posthole that is probably linked with posthole F96, both of which straddle a purposely backfilled section of enclosure ditch F3. Intervention [283] had moderately steep sides leading to a rounded base. Length was 0.48m, width 0.24m, and depth 0.13m. Fill was pale to mid brownish grey clayey sandy silt.

**F96** Oval posthole that is probably linked with posthole F95. Intervention [285] had moderately steep sides leading to a rounded base. Length was 0.49m, width 0.26m and depth 0.11m. Fill was mid brownish grey clayey sandy silt.

**F97** Truncated NW-SE orientated gully that terminated to the northwest and was cut by gully F98 to the southeast leaving a total length of 2m. Intervention [291] had quite steep sides leading to a rounded base. Width was 0.40m and depth 0.11m. Fill was mid grey sandy silt.

**F98** Truncated NW-SE orientated gully that terminated to the northwest, cut gully F97 and was cut by gully F77 leaving a total length of 8m. Interventions [292] and [293] had moderately steep sides leading to a rounded base. Width averaged 0.30m and depth 0.07m. Fill was mid grey sandy silt.

**F99** Sub circular posthole which exhibited signs of a post pipe. Intervention [309] had very steep sides leading to a flat base. Diameter was 0.42m and depth 0.21m. Fill was dark orangey brown sandy silt with a gravel deposit towards the base suggestive of packing material.

**F100** Circular posthole. Intervention [311] had steep sides leading to a tapered base. Diameter was 0.28m and depth 0.30m. Fill was mid to dark greyish brown.

**F101** Small oval pit. Intervention [312] had moderately steep sides leading to a flattish base. Length was 0.80m, width 0.61m and depth 0.19m. Fill was pale to mid brownish grey sandy silt.

**F102** Circular posthole. Intervention [313] had moderately steep sides leading to a rounded base. Diameter was 0.40m and depth was 0.16m. Fill was mid greyish brown sandy silt.

**F103** Section of ditch which links both NW-SE orientated ditches F85 and F83. This section of ditch appeared to have been purposely backfilled in order to create a crossing point across the ditch – possibly when ditch F83 was created. Steep sides led to a slightly rounded base. Length was approximately 2.5m, width 1.12m and depth 0.58m. Fill was redeposited orangey sand and gravel mixed with pale grey silt.

**F104** Small NE-SW orientated gully that cut parallel gullies F82 and F105 and ditch F85. It terminated at both ends and had a total length of 21.5m. Four interventions, [318], [320], [323] and [326] were excavated and showed moderately steep sides leading to a rounded base. Width averaged 0.46m and depth varied between 0.03m and 0.12m. Fill was mid reddish brown sandy silt.

**F105** Small NE-SW orientated gully that was cut by parallel gully F104 and cut posthole F106. It was truncated away to the northeast and terminated to the southwest with a total remaining length of 10.5m. Three interventions, [321], [324] and [328] were excavated and showed moderately steep sides leading to a rounded base. Width averaged 0.45m and depth 0.09m. Fill was mid reddish grey sandy silt.

**F106** Circular posthole truncated by the southeast terminus of gully F105. Intervention [327] had steep sides leading to a rounded base. Diameter was 0.30m and depth was 0.13m. Fill was mid brownish grey sandy silt.



**F107** Circular posthole. Intervention [331] had moderately steep sides leading to a rounded base. Diameter was 0.52m and depth 0.14m. Fill was mid brownish orange sandy silt.

**F108** Circular posthole. Intervention [332] had moderately steep sides leading to a rounded base. Diameter was 0.51m and depth 0.13m. Fill was mid brownish orange sandy silt.

**F109-F114** See F1.

*Context summary table*

<b>Int. No.</b>	<b>Feature No.</b>	<b>No. of contexts</b>	<b>Context type</b>
100	4	2	1 Fill. Cut = [100.2]
101	5	2	1 Fill. Cut = [101.2]
102	6	2	1 Fill. Cut = [102.2]
103	7	2	1 Fill. Cut = [103.2]
104	8	2	1 Fill. Cut = [104.2]
105	2	2	1 Fill. Cut = [105.2]
106	3	7	6 Fills. Cut = [106.7]
107	9	3	2 Fills. Cut = [107.3]
108	10	2	1 Fill. Cut = [108.2]
109	11	2	1 Fill. Cut = [109.2]
110	12	2	1 Fill. Cut = [110.2]
111	13	2	1 Fill. Cut = [111.2]
112	14	2	1 Fill. Cut = [112.2]
113	15	2	1 Fill. Cut = [113.2]
114	16	2	1 Fill. Cut = [114.2]
115	17	2	1 Fill. Cut = [115.2]
116	18	2	1 Fill. Cut = [116.2]
117	19	2	1 Fill. Cut = [117.2]
118	20	2	1 Fill. Cut = [118.2]
119	21	2	1 Fill. Cut = [119.2]
120	22	2	1 Fill. Cut = [120.2]
121	23	2	1 Fill. Cut = [121.2]
122	23	2	1 Fill. Cut = [122.2]
123	23	2	1 Fill. Cut = [123.2]
124	24	2	1 Fill. Cut = [124.2]
125	25	2	1 Fill. Cut = [125.2]
126	26	2	1 Fill. Cut = [126.2]
127	27	2	1 Fill. Cut = [127.2]
128	28	2	1 Fill. Cut = [128.2]
129	22	3	2 Fills. Cut = [129.3]
130	3	2	1 Fill. Cut = [130.2]
131	3	4	3 Fills. Cut = [131.4]
132	29	2	1 Fill. Cut = [132.2]
133	30	3	2 Fills. Cut = [133.3]
134	31	2	1 Fill. Cut = [134.2]
135	32	2	1 Fill. Cut = [135.2]
136	33	2	1 Fill. Cut = [136.2]
137	34	4	3 Fills. Cut = [137.4]
138	3	1	1 Fill (layer)
139	35	3	2 Fills. Cut = [139.3]
140	3	2	1 Fill. Cut = [140.2]
141	36	2	1 Fill. Cut = [141.2]

142	37	4	3 Fills. Cut = [142.4]
143	38	3	2 Fills. Cut = [143.3]
144	39	2	1 Fill. Cut = [144.2]
145	3	2	1 Fill. Cut = [145.2]
146	40	5	4 Fills. Cut = [146.5]
147	2	2	1 Fill. Cut = [147.2]
148	42	3	2 Fills. Cut = [148.3]
149	41	2	1 Fill. Cut = [149.2]
150	N/A	1	1 Fill (layer)
151	N/A	1	1 Fill (layer)
152	24	2	1 Fill. Cut = [152.2]
153	N/A	1	1 Fill (layer)
154	41	3	2 Fills. Cut = [154.3]
155	43	5	4 Fills. Cut = [155.5]
156	43	5	4 Fills. Cut = [156.5]
157	44	2	1 Fill. Cut = [157.2]
158	23	3	2 Fills. Cut = [158.2]
159	3	6	5 Fills. Cut = [159.6]
160	40	17	16 Fills. Cut = [160.17]
161	23	3	2 Fills. Cut = [161.3]
162	N/A	N/A	N/A
163	2	2	1 Fill. Cut = [163.2]
164	45	2	1 Fill. Cut = [164.2]
165	3	3	2 Fills. Cut = [165.3]
166	46	2	1 Fill. Cut = [166.2]
167	47	3	2 Fills. Cut = [167.3]
168	47	3	2 Fills. Cut = [168.3]
169	47	3	2 Fills. Cut = [169.3]
170	47	2	1 Fill. Cut = [170.1]
171	48	2	1 Fill. Cut = [171.2]
172	49	2	1 Fill. Cut = [172.2]
173	50	2	1 Fill. Cut = [173.2]
174	51	3	2 Fills. Cut = [174.3]
175	3	2	1 Fill. Cut = [175.2]
176	52	2	1 Fill. Cut = [176.2]
177	52	3	2 Fills. Cut = [177.3]
178	52	3	2 Fills. Cut = [178.3]
179	52	3	2 Fills. Cut = [179.3]
180	53	2	1 Fill. Cut = [180.2]
181	3	2	1 Fill. Cut = [181.2]
182	54	2	1 Fill. Cut = [182.2]
183	55	4	3 Fills. Cut = [183.4]
184	56	2	1 Fill. Cut = [184.2]
185	57	2	1 Fill. Cut = [185.2]
186	58	2	1 Fill. Cut = [186.2]
187	59	2	1 Fill. Cut = [187.2]
188	60	2	1 Fill. Cut = [188.2]
189	61	4	3 Fills. Cut = [189.4]
190	62	3	2 Fills. Cut = [190.3]
191	40	4	3 Fills. Cut = [191.4]
192	63	4	3 Fills. Cut = [192.3]
193	3	3	2 Fills. Cut = [193.3]
194	64	2	1 Fill. Cut = [194.2]
195	58	2	1 Fill. Cut = [195.2]
196	65	2	1 Fill. Cut = [196.2]
197	66	2	1 Fill. Cut = [197.2]

198	3	2	1 Fill. Cut = [198.2]
199	3	7	6 Fills. Cut = [199.6]
200	67	2	1 Fill. Cut = [200.2]
201	40	4	3 Fills. Cut = [201.4]
202	68	2	1 Fill. Cut = [202.2]
203	69	2	1 Fill. Cut = [203.3]
204	70	2	1 Fill. Cut = [204.2]
205	71	3	2 Fills. Cut = [205.3]
206	72	2	1 Fill. Cut = [206.2]
207	73	2	1 Fill. Cut = [207.2]
208	74	2	1 Fill. Cut = [208.2]
209	1	3	2 Fills. Cut = [209.3]
210	1	3	2 Fills. Cut = [210.3]
211	1	3	2 Fills. Cut = [211.3]
212	1	3	2 Fills. Cut = [212.3]
213	1	3	2 Fills. Cut = [213.3]
214	1	3	2 Fills. Cut = [214.3]
215	1	3	2 Fills. Cut = [215.3]
216	1	3	2 Fills. Cut = [216.3]
217	1	3	2 Fills. Cut = [217.3]
218	1	3	2 Fills. Cut = [218.3]
219	75	2	1 Fill. Cut = [219.2]
220	76	2	1 Fill. Cut = [220.2]
221	77	3	2 Fills. Cut = [221.3]
222	78	1	1 Fill (layer)
223	79	2	1 Fill. Cut = [223.2]
224	75	2	1 Fill. Cut = [224.2]
225	3	N/A	N/A
226	76	2	1 Fill. Cut = [226.2]
227	77	2	1 Fill. Cut = [227.2]
228	80	2	1 Fill. Cut = [228.2]
229	3	2	1 Fill. Cut = [229.2]
230	1	2	1 Fill. Cut = [230.1]
231	77	2	1 Fill. Cut = [231.2]
232	80	2	1 Fill. Cut = [232.2]
233	81	2	1 Fill. Cut = [233.2]
234	77	2	1 Fill. Cut = [234.2]
235	82	2	1 Fill. Cut = [235.2]
236	83	3	2 Fills. Cut = [236.3]
237	84	5	4 Fills. Cut = [237.5]
238	85	3	2 Fills. Cut = [238.3]
239	77	2	1 Fill. Cut = [239.2]
240	82	2	1 Fill. Cut = [240.2]
241	87	2	1 Fill. Cut = [241.2]
242	86	2	1 Fill. Cut = [242.2]
243	85	3	2 Fills. Cut = [243.3]
244	85	3	2 Fills. Cut = [244.3]
245	88	2	1 Fill. Cut = [245.2]
246	58	3	2 Fills. Cut = [246.3]
247	1	2	1 Fill. Cut = [247.2]
248	1	2	1 Fill. Cut = [248.2]
249	1	2	1 Fill. Cut = [249.2]
250	88	5	4 Fills. Cut = [250.5]
251	1	2	1 Fill. Cut = [251.2]
252	30	3	2 Fills. Cut = [252.3]
253	89	2	1 Fill. Cut = [253.2]

254	9	3	2 Fills. Cut = [254.3]
255	11	2	1 Fill. Cut = [255.2]
256	12	2	1 Fill. Cut = [256.2]
257	1	2	1 Fill. Cut = [257.2]
258	1	2	1 Fill. Cut = [258.2]
259	1	2	1 Fill. Cut = [259.2]
260	1	3	2 Fills. Cut = [260.3]
261	1	3	2 Fills. Cut = [261.3]
262	1	3	2 Fills. Cut = [262.3]
263	1	3	2 Fills. Cut = [263.3]
264	1	3	2 Fills. Cut = [264.3]
265	1	2	1 Fill. Cut = [255.2]
266	1	3	2 Fills. Cut = [266.3]
267	1	3	2 Fills. Cut = [267.3]
268	1	3	2 Fills. Cut = [268.3]
269	1	3	2 Fills. Cut = [269.3]
270	1	3	2 Fills. Cut = [270.3]
271	1	2	1 Fill. Cut = [271.2]
272	77	2	1 Fill. Cut = [272.2]
273	77	2	1 Fill. Cut = [273.2]
274	77	3	2 Fills. Cut = [274.3]
275	90	2	1 Fill. Cut = [275.2]
276	91	2	1 Fill. Cut = [276.2]
277	92	2	1 Fill. Cut = [277.2]
278	93	2	1 Fill. Cut = [278.2]
279	3	9	8 Fills. Cut = [279.9]
280	3	6	5 Fills. Cut = [280.4]
281	94	3	2 Fills. Cut = [281.2]
282	3	3	2 Fills. Cut = [282.3]
283	95	2	1 Fill. Cut = [283.2]
284	85	2	1 Fill. Cut = [284.2]
285	96	2	1 Fill. Cut = [285.2]
286	1	2	1 Fill. Cut = [286.2]
287	1	2	1 Fill. Cut = [287.2]
288	85	4	3 Fills. Cut = [288.4]
289	87	2	1 Fill. Cut = [289.2]
290	82	2	1 Fill. Cut = [290.2]
291	97	2	1 Fill. Cut = [291.2]
292	98	2	1 Fill. Cut = [292.2]
293	98	2	1 Fill. Cut = [293.2]
294	97	2	1 Fill. Cut = [294.2]
295	82	2	1 Fill. Cut = [295.2]
296	3	10	9 Fills. Cut = [296.10]
297	3	4	3 Fills. Cut = [297.4]
298	85	3	2 Fills. Cut = [298.3]
299	83	4	3 Fills. Cut = [299.4]
300	89	2	1 Fill. Cut = [300.2]
301	66	2	1 Fill. Cut = [301.2]
302	3	8	7 Fills. Cut = [302.8]
303	3	6	5 Fills. Cut = [303.6]
304	94	5	4 Fills. Cut = [304.5]
305	87	2	1 Fill. Cut = [305.2]
306	82	3	2 Fills. Cut = [306.3]
307	62	3	2 Fills. Cut = [307.3]
308	61	4	3 Fills. Cut = [308.4]
309	99	5	4 Fills. Cut = [309.5]

310	63	4	3 Fills. Cut = [310.4]
311	100	3	2 Fills. Cut = [311.3]
312	101	2	1 Fill. Cut = [312.2]
313	102	2	1 Fill. Cut = [313.2]
314	3	2	1 Fill. Cut = [314.2]
315	35	3	2 Fills. Cut = [315.3]
316	3	3	2 Fills. Cut = [316.3]
317	82	2	1 Fill. Cut = [317.2]
318	104	2	1 Fill. Cut = [318.2]
319	82	2	1 Fill. Cut = [319.2]
320	104	2	1 Fill. Cut = [320.2]
321	105	2	1 Fill. Cut = [321.2]
322	82	2	1 Fill. Cut = [322.2]
323	104	2	1 Fill. Cut = [323.2]
324	105	2	1 Fill. Cut = [324.2]
325	82	2	1 Fill. Cut = [325.2]
326	104	2	1 Fill. Cut = [326.2]
327	106	2	1 Fill. Cut = [327.2]
328	105	2	1 Fill. Cut = [328.2]
329	103	7	6 Fills. Cut = [329.7]
330	71	3	2 Fills. Cut = [330.3]
331	107	2	1 Fill. Cut = [331.2]
332	108	3	2 Fills. Cut = [332.3]
333	3	11	10 Fills. Cut = [333.11]
334	82	2	1 Fill. Cut = [334.2]

**Table 21:** Summary of contexts within interventions