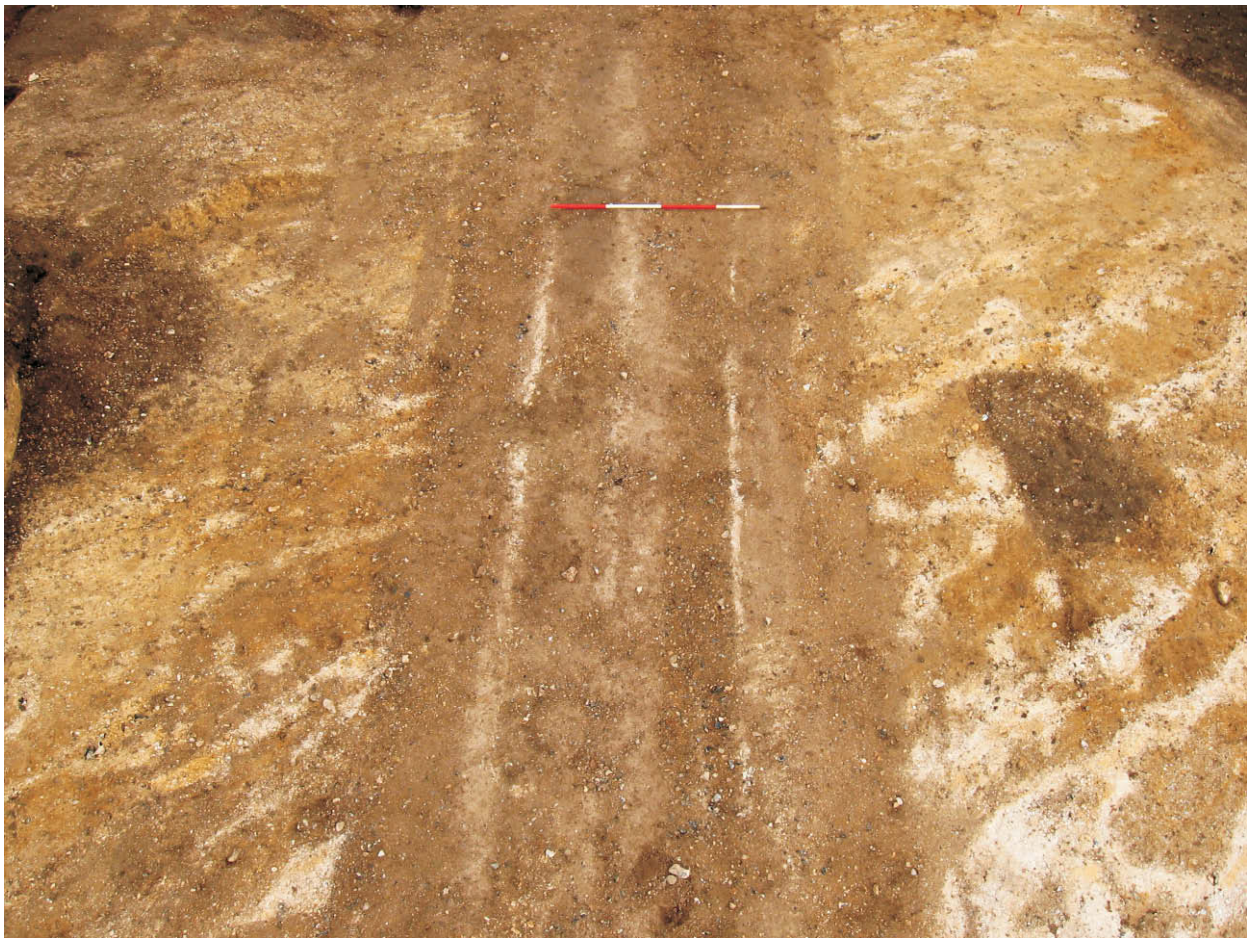
Archaeological Investigations at Babraham Research Campus, Cambridgeshire 2005-2007



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UNIVERSITY OF CAMBRIDGE

Archaeological Investigations 2005 - 2007

The Babraham Research Campus Cambridgeshire

ARES Access Roadway, Campus Road and Car Park Excavations plus site watching briefs

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INTRODUCTION

This report details archaeological investigations undertaken at the Babraham Research Campus, Babraham Hall (TL 5095 5080) from November 2005 to November 2006. The works were commissioned by Roland Estall, Commercial Estate Manager, on behalf of Babraham Bioscience Technologies Limited and undertaken by the Cambridge Archaeological Unit (CAU).

The archaeological programme was initiated to accompany a scheme of construction work and upgrading to the campus infrastructure. This primarily covered improvements to the campus access roads and car parking areas, phase one having been covered by a trenching evaluation in July 2005 (Armour 2006*a*). Further work followed the construction of various ancillary services relating to the new ARES building, the footprint of which was excavated over the autumn of 2005 (Armour *et al* 2007).

A trenching evaluation was carried out during the spring of 2006 to investigate the proposed area of two new buildings beside the River Granta; this has been covered in a separate report (Timberlake and Armour 2006).

Site monitoring was conducted by Kashia Gdaniec for Cambridgeshire Archaeology Planning and Countryside Advice (CAPCA), the projects were managed by Chris Evans and Robin Standring of the CAU, and excavations were undertaken by CAU staff directed by Nick Armour.

The Archaeological Investigations

ARES Access Road

In November 2005 an excavation in the footprint of the new access roadway to the ARES site was undertaken concurrently with the excavations. The western end of this roadway was located along the south-eastern edge of the site in an area previously occupied by former Institute of Animal Physiology farm buildings and extended to the west as far as the campus access road. The roadway footprint measured 101m long and eight metres wide; the total area investigated was 848 m² (Figures 2 & 3).

Campus Access Road Evaluation – Phase 2

Phase 2 of the campus access road evaluation started on the 15th August 2006. Six trenches were excavated at a total length of 171m. The trenches covered a length of access road not previously available for evaluation and were sited to investigate an area that had previously indicated the presence of human remains and 12th century pitting activity (Hatton 1997). See Figures 2 & 4.

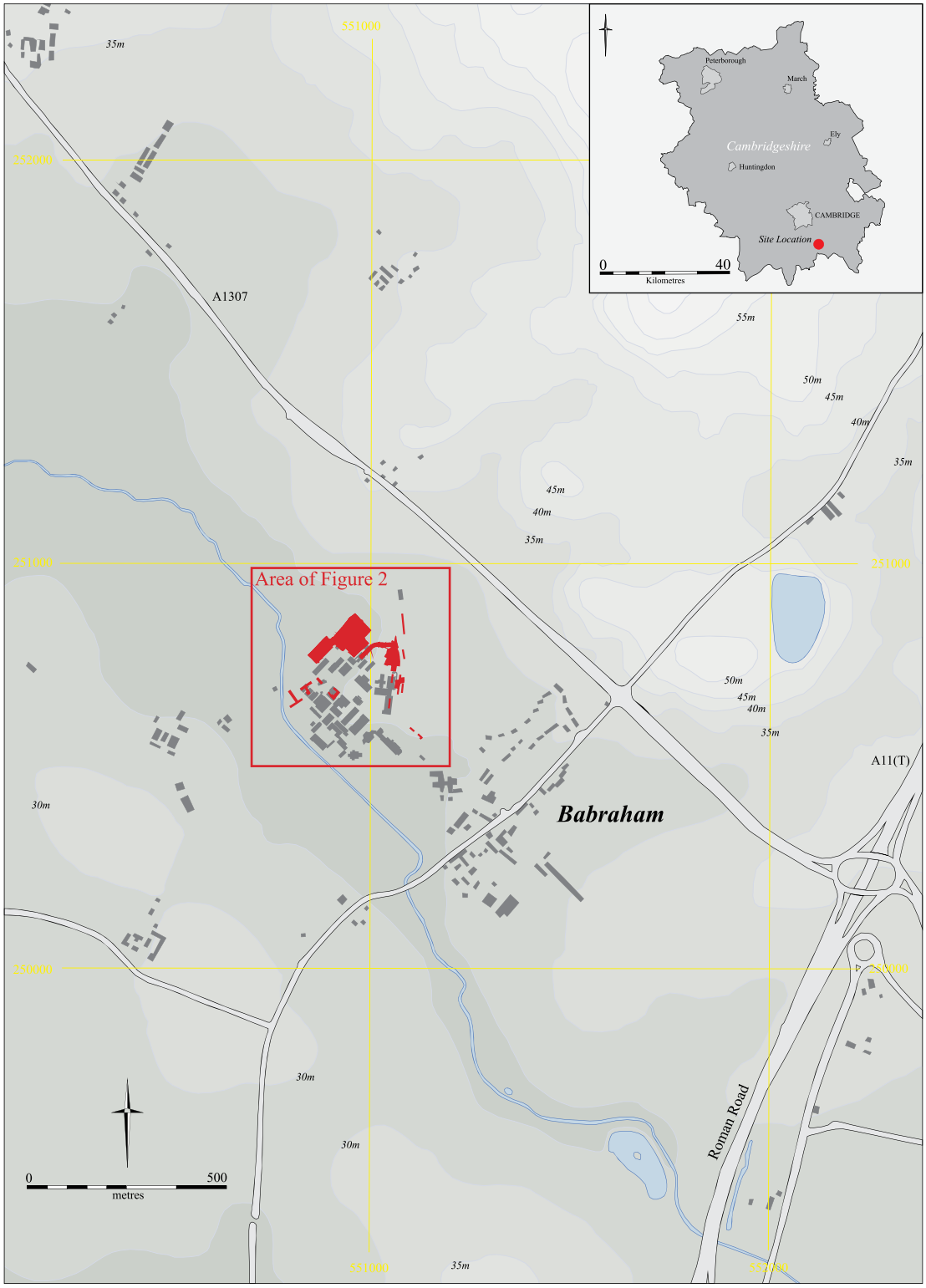


Figure 1. Location plan

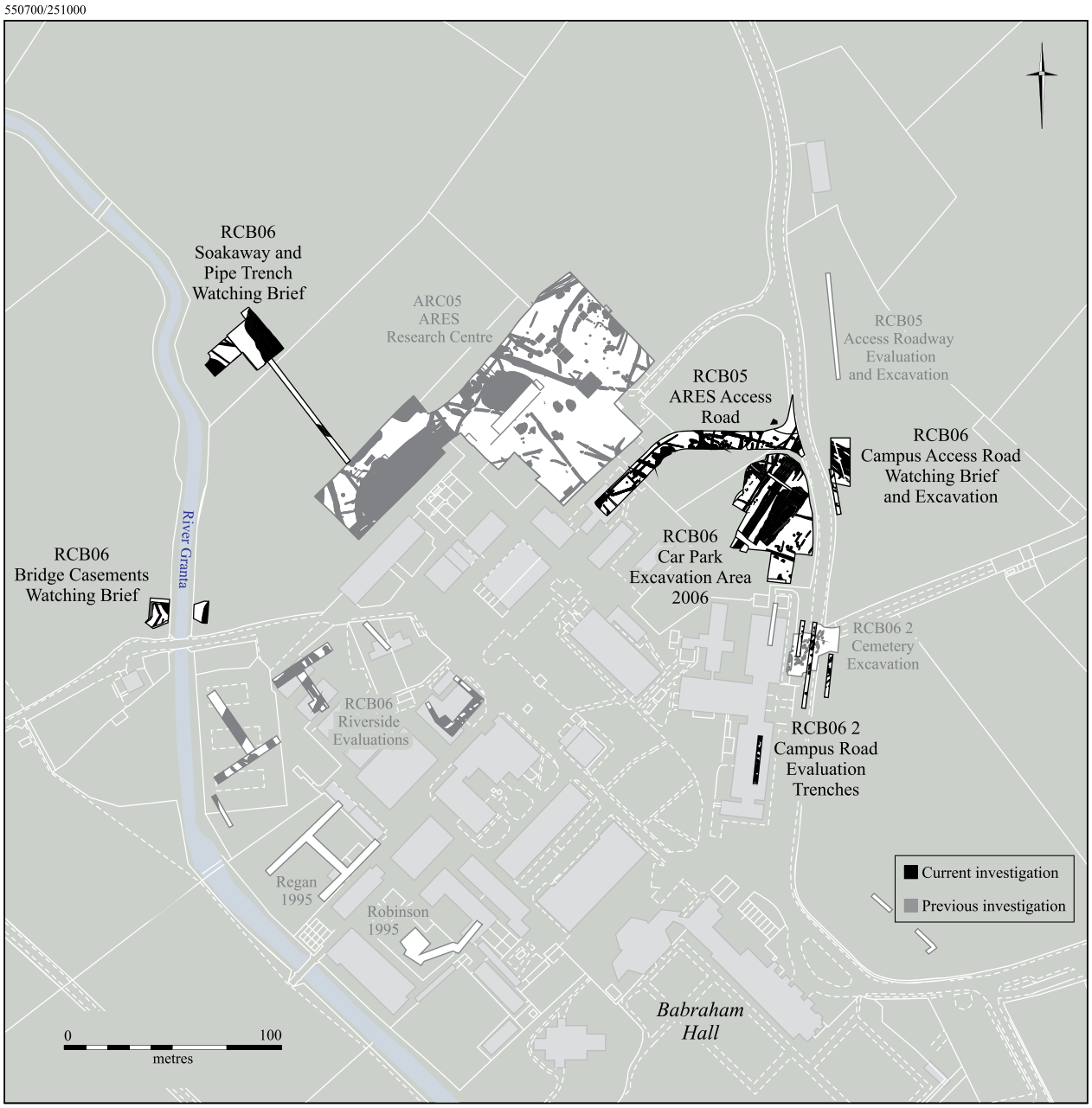


Figure 2. Current and previous investigations at Babraham

Trench 12 Extension – Cemetery Site

The recovery of human remains from the northern end of Trench 12 led to an open area excavation between 30th of August to 20th September 2006, which covered an area of 0.35 hectare (see Figure 2). The results of this excavation are to be published separately due to the specialist analysis required (see Timberlake and Armour *forthcoming*).

The Car Park Excavation

An open area excavation covering 1518m² (0.12 hectare) was undertaken from the 2nd October to the 3rd of November 2006 in advance of the construction of a new car park facility. This represents the first phase of construction and further work will be necessary. Figures 2 & 5.

Soak-away Watching Brief

Expansion of an existing soak-away and replacement of drainage pipes enabled a watching brief and minor excavation to be carried out during April and May of 2006. The soak-away was located close to the river Granta approximately 75m to the north-west of the ARES site, to which it was linked by a pipe trench. The area covered by the watching brief measured 465m² and the pipe trench was 45m in length and 2m wide (see Figures 2 & 6).

Campus Access Road Watching Brief

With various phases of construction occurring simultaneously it was necessary to perform watching briefs on certain sections of the new access road and bridge foundations. The campus access road watching brief covered a stretch of proposed carriageway between Trenches 11 and 12 approximately 9 metres wide by 100 metres long. The contractors were following a project design that required stripping of the topsoil with minimal impact into underlying deposits. However, a 40m stretch of carriageway north of Trench 11 was under threat of truncation through levelling. This section was therefore carefully monitored by CAU staff. When archaeological deposits were identified within a 9m by 20m area (180m²), this was cleaned by machine and limited sample slots excavated and recorded. The remaining 60m of stripping left a minimum of 200mm of subsoil which covered any possible archaeological features, preserving these *in situ*. (see Figures 2 & 7).

Bridge Casements Watching Brief

The construction of concrete piers for a new road bridge across the Granta provided a window into deposits of potentially archaeological interest closely adjacent to the river. This resulted in the monitoring of two areas covering a total of approximately 160m². Archaeological features were revealed in the western casement (C2) and a sequence of layers in the eastern casement (C1). Figures 2 & 8.

Environment and Geology

Babraham Research Campus is located within the valley of the River Granta with parkland extending north as far as the lower slopes of the Gog Magog hills. The underlying geology consists of Lower Chalk beneath the lower valley sides and beds of Melbourn Rock within the Middle Chalk towards the higher north-east of the site. To the south-west, in the valley base, lie First and Second Terrace River Gravels (British Geological Survey 1989). Two periglacial solution hollows and a palaeo-

channel were identified during the ARES site excavations (Armour *et al* 2007). An evaluation carried out on the proposed Riverside site indicated that a series of redundant channels were braided across the floor of the river valley in antiquity (Timberlake and Armour 2006).

The archaeological work at Babraham continues to expand our picture of the ancient environment. In the early prehistoric periods a series of grassy gravel terraces dropped towards a wide river channel in which a series of shallow intercutting streams flowed swiftly north-west towards the River Cam. It seems likely that up to the Bronze Age, the Late Glacial river terrace gravels were exposed as a dry land surface above the level of the River Granta flood plain (Boreham in Timberlake 2006). This is supported by molluscan evidence from the periglacial hollows that had formed in these terraces and which were also dry in the prehistoric period (de Vareilles in Swaysland 2005)

The widespread later Neolithic and Bronze Age clearance of woodland within the landscape is thought to have affected many river valleys in southern England. The release of silts through erosion from areas previously covered by woodland caused the movement of river channels and established broad, silt-rich floodplains. This appears to have happened to the Granta river valley as the periglacial channels and hollows show evidence of heavy silting in the Bronze Age (Boreham in Armour *et al* 2007). Dating from the worked flint assemblage correlates well with this silting episode which covers Neolithic horizons (Armour *et al. ibid*). Very little flint from the early Bronze Age has been recovered from the site, but where it was found it was usually associated with worked flint of earlier periods. This strongly suggests the wholesale movement of soils through erosion and the collection of artefactual material in depressions regardless of origin or former stratigraphy (Armour 2005).

The next major episode of silting appears to have started in the later Romano-British period and is characterised by fine silvery grey silt deposits that cover a raised gravel causeway constructed around the beginning of the 2nd century AD (Timberlake and Armour 2006). These elevated levels of silting have been observed in other southern British river valleys and were probably influenced by Roman land management practises (French 2003). Recent excavations near the River Granta show that alluviation deposited at least 1.00m of silts, raising the ground level across the floor of the valley. This model fits well with the observed molluscan assemblage which suggests periodic flooding and waterlogged deposits. It also points to a damp and shady environment with little change throughout the Roman period, suggesting that the river valley was boggy and covered by leafy vegetation and broken woodland (de Vareilles in Armour *et al.* 2007)

The medieval floodplain silting appears to be much more limited. Although fairly thick sequences were recorded within the palaeo-channel sections in Trenches 4 & 5 of the Riverside Evaluation, the floodplain silts which extended beyond this were relatively thin, and consisted mostly of overbank deposits composed of alluvium rather than the extensive Romano-British grey silt (Boreham in Timberlake & Armour 2006).

Historical and Archaeological Background

Recent archaeological investigations at the Babraham Institute have demonstrated a strong chronological sequence of remains dating from the early Romano-British period through Saxon and medieval settlement to the establishment of the formal estate in the 1570s. A prehistoric presence in the Neolithic and Bronze Age periods has also emerged, based around the exploitation of the Granta river valley flint sources.

Prehistoric

The 2005 ARES site excavations recovered 1159 pieces of worked flint, most of which were Neolithic (mainly Early Neolithic) in date (Armour *et al* 2007). The majority of this flint work came from two periglacial hollows (1021 pieces) or as residual material (138 pieces) retrieved from various contexts across the site. This assemblage predominantly consists of debitage from flint nodule testing and reduction to create blade producing cores. A small part of the assemblage represented tools and utilised flakes, suggesting that activities other than blade production were also being carried out (Armour *et al ibid*). As yet no direct evidence for occupation has been found within the Campus area. The 2005 trenching evaluation along the proposed access road route also indicated the wider presence of Neolithic and Bronze Age peoples, but again no direct settlement evidence (Armour 2006).

Similar prehistoric activity has been recorded at Duxford Mill (Schlee & Robinson 1995) and in the various investigations at Hinxton Hall; an overview of which suggests ad hoc collection of the available flint nodules and primary working of these into a useable raw material (Bishop in Kenney 2004). A small but significant quantity of Early Neolithic features found at Hinxton Quarry imply a primary emphasis on settlement at this period, in contrast to the majority of sites, which suggest exploitation of local resources one stage removed from habitation (Mortimer & Evans 1995). This exploitation of natural hollows as a source for flint was also encountered at the Hunt's Road Trial Investigations, Duxford (Evans 1991).

Elsewhere within the Granta valley, prehistoric people seem to concentrate on the availability of natural resources, either environmental or geological, the latter being linked into the raw flint nodules available from chalk or river gravels (Evans 2002). Excavations at Bourn Bridge, 1.5km to the southeast of the Babraham Institute provided an example of scattered low intensity prehistoric occupation and flint procurement from the Mesolithic to the Late Bronze Age (Pollard 1995). Here a post-glacial hollow had also been utilised as a source of flint both in the Early Neolithic and later Bronze Age and provided evidence of both knapping and processing. Much of this activity appears to have been specific to single episodes or events, the overall picture being one of accumulated material, sometimes re-worked, which had gathered over a long period of time. To the south of Bourn Bridge at Granta Park (Great Abington) archaeological excavations on the gravel terrace and its junction with the chalk have revealed significant evidence of flint extraction and working dating from the Mesolithic to the Early Bronze Age (Cooper and Hinman 1997), plus some rare examples of Iron Age flint knapping (Armour 2006a).

Romano-British

The Romano-British settlement at Babraham is of particular interest due to its location near an important junction of the *Via Devana* with the Icknield Way and good communication links to Great Chesterford to the south. This Romano-British town began as a 1st century Roman fort and later developed into a large settlement from the early 2nd century onwards. The town was fortified in the early 4th century with a circuit of masonry walls, robbed for building materials in the later eighteenth century (Draper 1985). Cambridge (*Durolipons)* had a similar development and may have been a staging point on the '*Via Devana*' between Colchester and Chester.

The foundation of a new settlement at Babraham during the Conquest period would have enabled it to not only exploit easy access to emerging Roman markets during the 1st century AD, but also the

existing trade routes between the tribes of the Catuvellauni and Iceni (Armour 2007). These contacts and opportunities may be reflected in the grave goods recovered from the female burial located northwest of Structure A, where a combination of cultural traditions appear to be represented. It would appear that the inhabitants were not financially established by the end of the 1st century as the site at this time shows little evidence for the importation of high status goods or material.

The small (possible) farm building represented by Structure A appears to have become redundant as a dwelling and instead may have been altered for a more agricultural use. Certainly, the well was being backfilled by the Flavian period (69 – 96 AD) and the rubbish pits also stop being used at this time (Anderson in Armour 2007). The lack of Flavian period pottery in the assemblage points to an episode of stagnation or perhaps a settlement shift to another location. The disruption of trade routes and suppression of the Iceni following the Boudiccan rebellion may have impoverished the economy of a settlement reliant on both Roman and native markets.

The ARES site saw a reorganisation in the 2nd century AD. It appears that occupation focus moved elsewhere, as although a rectilinear field system was established there was no direct evidence for habitation. The re-organisation may have been widespread at this time as the Riverside evaluation identified a causeway that appeared to have been built out onto the active floodplain (Timberlake and Armour 2006) perhaps linking higher gravel 'islands' with each other. Nearby occupation clearly continued throughout the 2nd to 3rd centuries as demonstrated by the quantities of pottery recovered from pits and ditches. However, analysis of the assemblage identified a lessening of pottery use from the mid 3rd century on, suggesting a decline in the settlement.

The one area that consistently produced later 3rd to 4th century pottery wares, albeit a fairly small sample, was the abandonment layer in Hollow B which also produced a large number of metal artefacts and 88 Roman coins. These were predominantly mid to late 4th century coins of the *Fel Temp Reparatio* type and unofficial barbarous radiate copies. The latest coins were two examples minted by the emperor Theodosian II (388 – 402 AD). The coin evidence is therefore at odds with the pottery and may be explained by a shift in the activities the settlement was engaged in, perhaps moving away from an agricultural base towards a mercantile economy.

This may be explained by the evidence of heavy silting across the valley floor discovered during the Riverside evaluation. From around the middle of the 2nd century the water and silt levels continued rising. The gravel causeway was initially maintained, but eventually it was abandoned and was covered by the floodplain silts. This suggests that the river valley became untenable, although how hard this effected the settlement is unknown. Certainly, the quantity of quern stones and burnt cereal processing waste recovered from the ARES site suggests a mixed arable and pastoral farming strategy. If the soft and fertile silts of the valley floor became unusable for growing cereals then this may have reduced income enough to encourage the settlement to concentrate on other forms of trade.

Whatever the reason, there was clearly still some form of late or post-Roman activity happening at Babraham, as evidenced by the accumulation of deposits in Hollow B, a further re-organisation of the field systems and, cutting all, the foundation of enigmatic Structure B.

Saxon and Medieval

Excavations undertaken in 2004 prior to the construction of the new 'Minerva' building located an area of Saxon settlement on the south-eastern side of Babraham Hall. Established during the 6th century AD this consisted of a sunken floored building (SFB) from which potsherds, animal bone fragments, a fine bone spindle whorl and the head of an early Saxon square-headed brooch were recovered (Wills 2004). This area of settlement appears to have had a relatively early foundation, which continued through the Middle Saxon period. The excavation of eight pits backfilled with material containing pottery sherds dating to the 10th and 11th centuries AD suggest the presence of a settlement here throughout the Saxon period. Other SFBs have been located nearby at Bourn Bridge (Pollard 1996) and Hinxton (Mortimer and Evans 1996).

On the north-western side of the Campus archaeological evaluations of the ARES site also demonstrated a rare Middle Saxon presence where a piece of Ipswich ware pottery was recovered from

the top of a periglacial solution hollow (Swaysland 2005). However, when later excavated no other material of this period was found, suggesting that this sherd was a chance discovery.

Archaeological monitoring of a water main 200m to the southwest of the ARES site and 150m north of Babraham Hall revealed a single disturbed inhumation and a series of pits containing pottery from the 12th to 15th centuries AD (Hatton 1997). These remains may have related to the original settlement at Babraham which is commonly believed to have been moved to the current location following landscaping of the surrounding parkland in the 16th century.

The church of St Peter, south of Babraham Hall, was probably associated with the medieval settlement, although an earlier church may have been founded in the same place during Saxon times. In 1085, the Domesday book records land being held by 'Alric the priest'. The current church appears to date to the 12th century but was reworked in the Perpendicular style during the 15th century.

Post-Medieval

The post-medieval unity of the Babraham estate was only formalised in 1576 when the manor was bought by Robert Taylor who paid off all other claimants. From this point on the remaining manorial lands were systematically purchased and amalgamated into an estate that covered most of the parish. Pastoral farming formed the main economic basis of the parish with only a small amount of arable (VCH, Vol. VI 1978).

Taylor built a grand Gothic style house arranged around a central courtyard in 1580. Much admired in its day, it was built of brick with stone dressings (*ibid.*). The exact location of the original 'Baberham Place' of AD 1576 remains uncertain due to its demolition in 1766-7, although a recent reassessment offers a good probable reconstruction of the early house and gardens (Taylor 2004). A notable achievement in this phase of the estate's history was the diversion of the River Granta to provide a canalised 'feature' running along the southern side of the formal gardens.

The small Georgian house that replaced the earlier hall in 1770 was demolished in 1832-3 and the current 'Babraham Hall' was built in 1833-7 (Butcher 1954). The gardens were thought to have been re-established on a 16th century plan in 1864, although references to this probably refer to decorative beds rather than the full original scheme. In 1947, the estate was bought by the Institute of Animal Physiology.

Methodology

Under archaeological supervision the topsoil and subsoil were removed by a 360° tracked excavator utilising 2m wide toothless buckets. Once cleaned, the areas to be investigated were planned at 1:50 scale and discrete features were tested by a combination of half sections (e.g. pits and postholes) and 1m wide slots through linear features and spreads (e.g. ditches). Where it was considered necessary, features were fully excavated and slots were extended.

The CAU-modified version of the MoLAS recording system (Spence 1990) was employed throughout: excavated stratigraphic entities (e.g. a cut, a fill) were recorded as individual contexts, with interrelated events (e.g. a ditch cut and its associated fills) assigned feature numbers. Sections were drawn at 1:10, base plans at 1:50. The photographic archive consists of digital images, slide and monochrome. Bulk environmental samples were taken where necessary.

RESULTS

Phase 1: Prehistoric

Soak-away Watching Brief

Located closely adjacent to the east bank of the River Granta, the contractors on site had opened up a 21.5m by 16m excavation to a depth of up to 1.40m, cutting through 0.35m of plough soil, 0.4m of subsoil and 0.65m of alluvial silts and clay. The base of the excavation cut through natural deposits of orange sand and gravel with lenses of fine yellow sand and frequent inclusions of medium-sized flint nodules [001]; the remnants of a post-glacial hollow or relict channel. Five further deposits were identified within the observed extent of the hollow, however, only two produced evidence of prehistoric activity.

Layer [003] was a greyish-green fine sand and gravel with approximately 20% silt component and with small fractured flint nodules throughout. Layer [004] was a mid greenish-brown silty sand with small fractured flint nodules and occasional rounded pebbles. A noticeable organic component to this deposit suggested some form of stabilised buried soil. A total of 24 pieces of struck flint were recovered from these layers, the working of which suggested a Neolithic date (Appendix 1).

Bridge Casement Watching Brief

Also by the river were two Roman period ditches (**F.175** & **F.179**) from which worked flint and burnt flint were recovered. Ditch **F. 179**, in particular, yielded 41 unworked burnt flints. It seems likely that these are residual, potentially providing evidence for still earlier prehistoric activity close to the river. The flint was white and cracked, characteristics that Crowson (2004) argues results from heating the flints to quite high temperatures and then quickly cooling them in water. A close relationship between burnt flint and water is a key feature of Late Neolithic/Early Bronze Age burnt flint mounds. Although the quantities of burnt flint recovered from the ditch is limited, burnt flint mounds can vary in size and form, depending on the duration and intensity of the activities that produced the features. Rather similar but more substantial spreads of calcined flint were recovered from another riverside location some 100m upstream to the south of this watching brief. Here they were interpreted as being possible burnt flint mounds (Timberlake & Armour 2006).

Phase 1 Discussion

The small quantities of struck flint recovered from the watching brief hollow are almost certainly due more to the limitations of collection than any actual paucity of material. Hollow A revealed in the ARES site produced 872 pieces of struck flint, the majority of which came from approximately 3 square metres of intensive activity. It can therefore be seen that the depositional areas appear quite limited, so without further excavation and sampling the full potential of the watching brief hollow remains unknown. It does however reinforce the idea that utilisation of naturally available flint sources was widespread across the Granta valley floor.

The presence of burnt flint, albeit residual, in a riverside context is significant. A certain amount of this material was retrieved from the Riverside evaluation and was interpreted as possibly having derived from ‘burnt mound’ type features, a result of activity in the Bronze Age (Timberlake and Armour 2006). Further evidence for this kind of activity is welcome as it helps establish the scope of prehistoric activity at Babraham.

Phase 2: Late Iron Age / Early Romano – British (1st – 2nd Centuries AD)
(Figure 9)

ARES Access Road

The ARES Access Road revealed three features with pottery that placed them broadly into phase 2. The most substantial feature was **F.33**, a large pit with steep sides over 1.12m deep and of approximately 1.50m diameter. The secondary fill contained potsherds dated to the mid 1st to 2nd centuries AD although potsherds from the 2nd to 4th centuries were recovered from the upper fill. The primary fill of **F.33** had no finds and so the initial use of the pit remains obscure, however the later fills contain potsherds and the accompanying finds of animal bone, oyster shell and tile fragments are consistent with rubbish disposal or deliberate backfilling.

F.45, a small pit located at the western end of ditch **F.22** contained three sherds of pottery dated to the 1st and 2nd centuries AD. This was probably associated with **F.33** and may provide another example of early occupation in this area.

Feature **F.54** contained two sherds of pottery dated from the 1st to 3rd centuries AD and were located approximately 18m to the northwest of **F.33**. This was a shallow ditch or gully aligned north-east to south-west and it contained other finds of animal bone and oyster shell. Partially truncated away by **F.9**, it was also obscured by the baulk and so little could be inferred as to function or form.

Features **F.1**, **F.5** and **F.6** made up a small group located towards the eastern end of the ARES access road that contained a sparse assemblage of small abraded potsherds dated to the 1st and 2nd centuries AD. The nature of the pottery from these features strongly suggests a residual assemblage deposited into later features. This group is therefore discussed more fully in phase 3.

Car Park Excavation

The most unexpected feature of this phase was located to the south of the car park excavation. Feature **F.201** was the terminal end of a wide shallow ditch which was aligned north north-east to south south-west and which was obscured beneath the southern limit of excavation (revealing a length of 1.4m). The fill was found to contain 82 sherds from seven vessels dated to the mid to late 1st century AD (Appendix 2). This assemblage was a primary deposition with large unabraded sherds and it also contained 27 pieces of animal bone. Ditch **F.202** adjoining **F.201** to the east appeared to have been cut at almost the same time as **F.201**, both had near identical fills and profiles, but no dating evidence was recovered.

Phase 2 Discussion

Although a Conquest period building and occupation features were found during the ARES excavation it was thought that this would represent the full evidence of early Romano-British occupation within the wider landscape. This largely holds true, although the discovery of a good assemblage of 1st century pottery from the butt-end of F.201 hints at a second area of early Romano-British occupation in the environs of the Calcutta Building.

Figure 4. RCB06 2 Campus Access Road Evaluation; Trenches 12-13 and 15-16

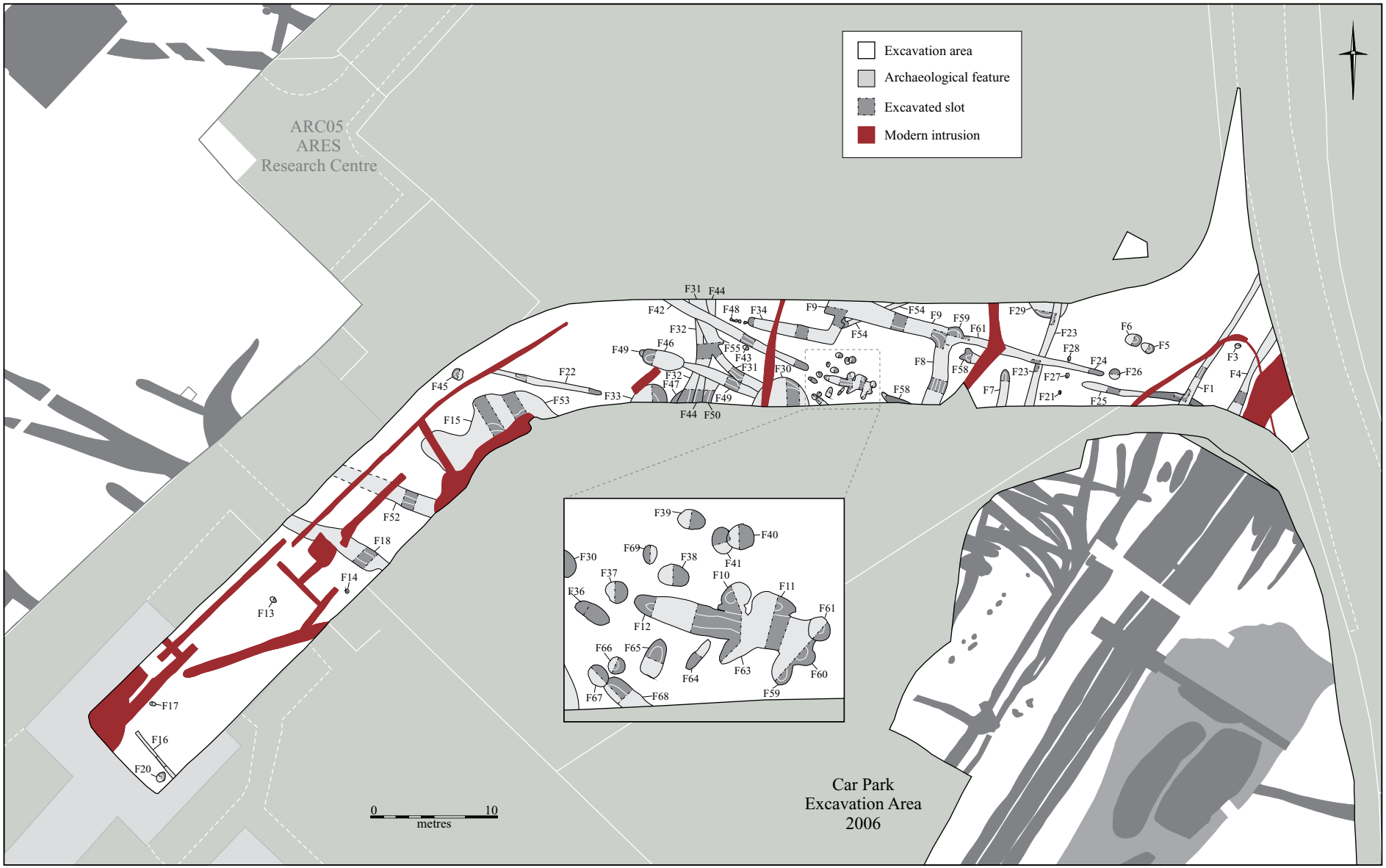


Figure 3. RCB05 ARES Access Road Excavation

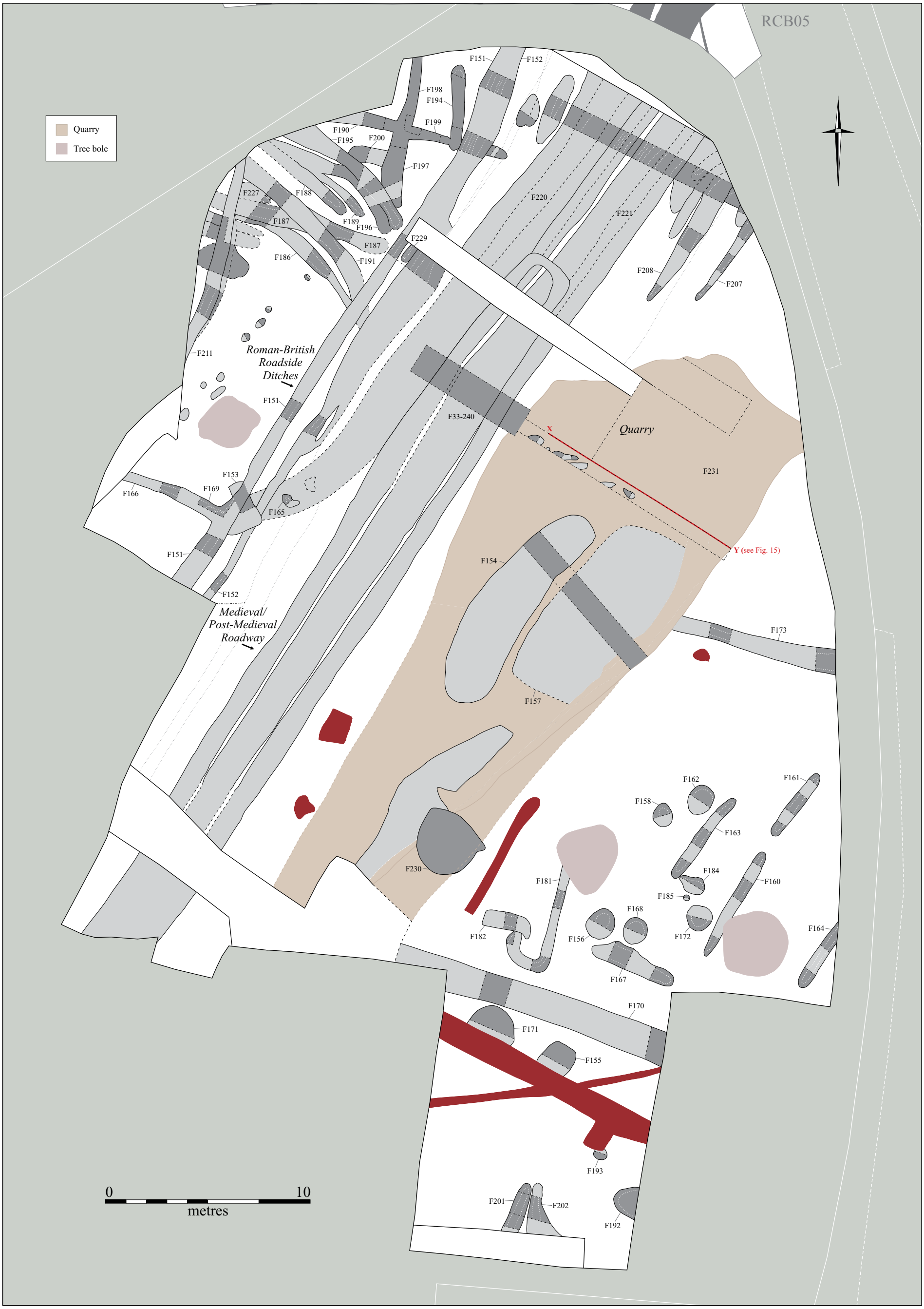


Figure 5. RCB06 Car Park Excavation

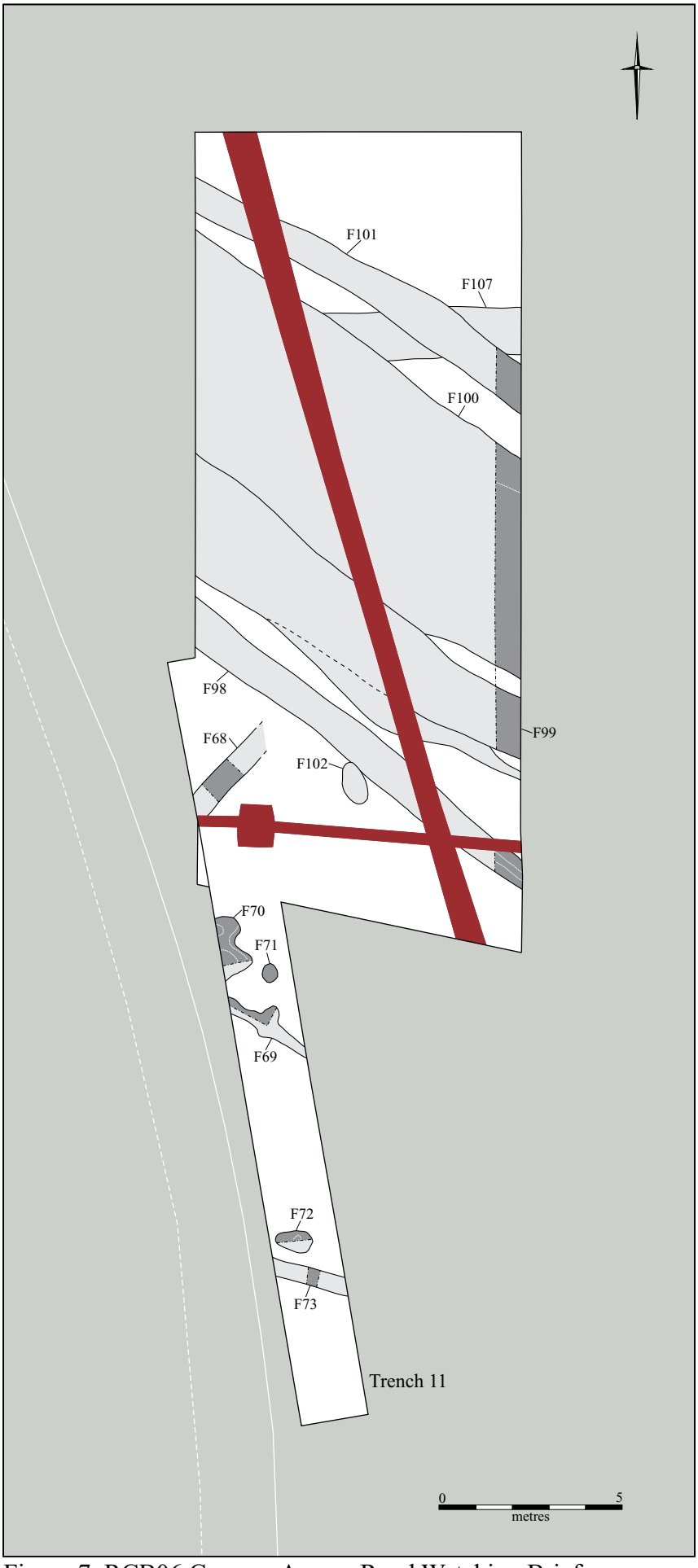


Figure 7. RCB06 Campus Access Road Watching Brief

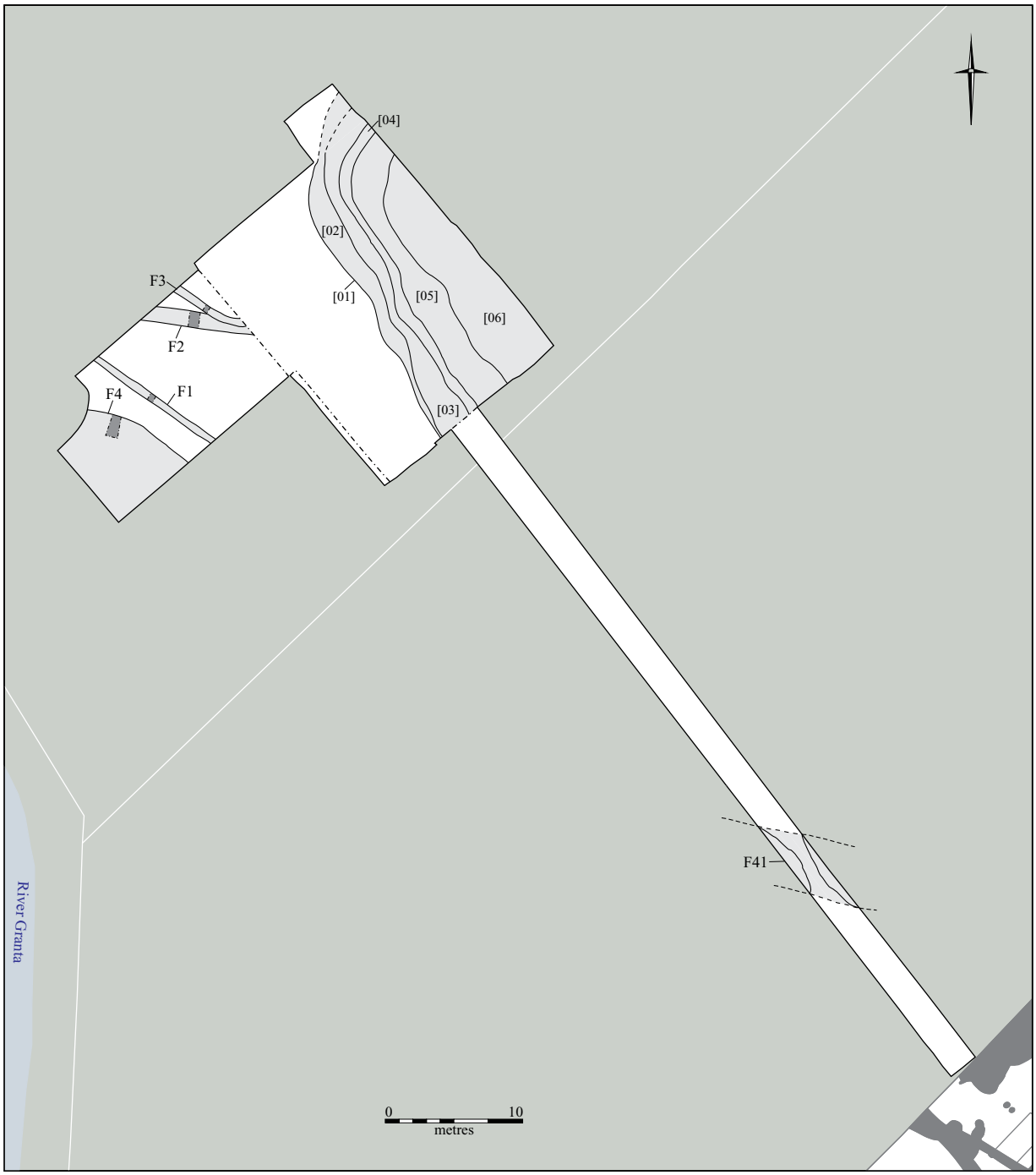


Figure 6. RCB06 Soak-Away Watching Brief

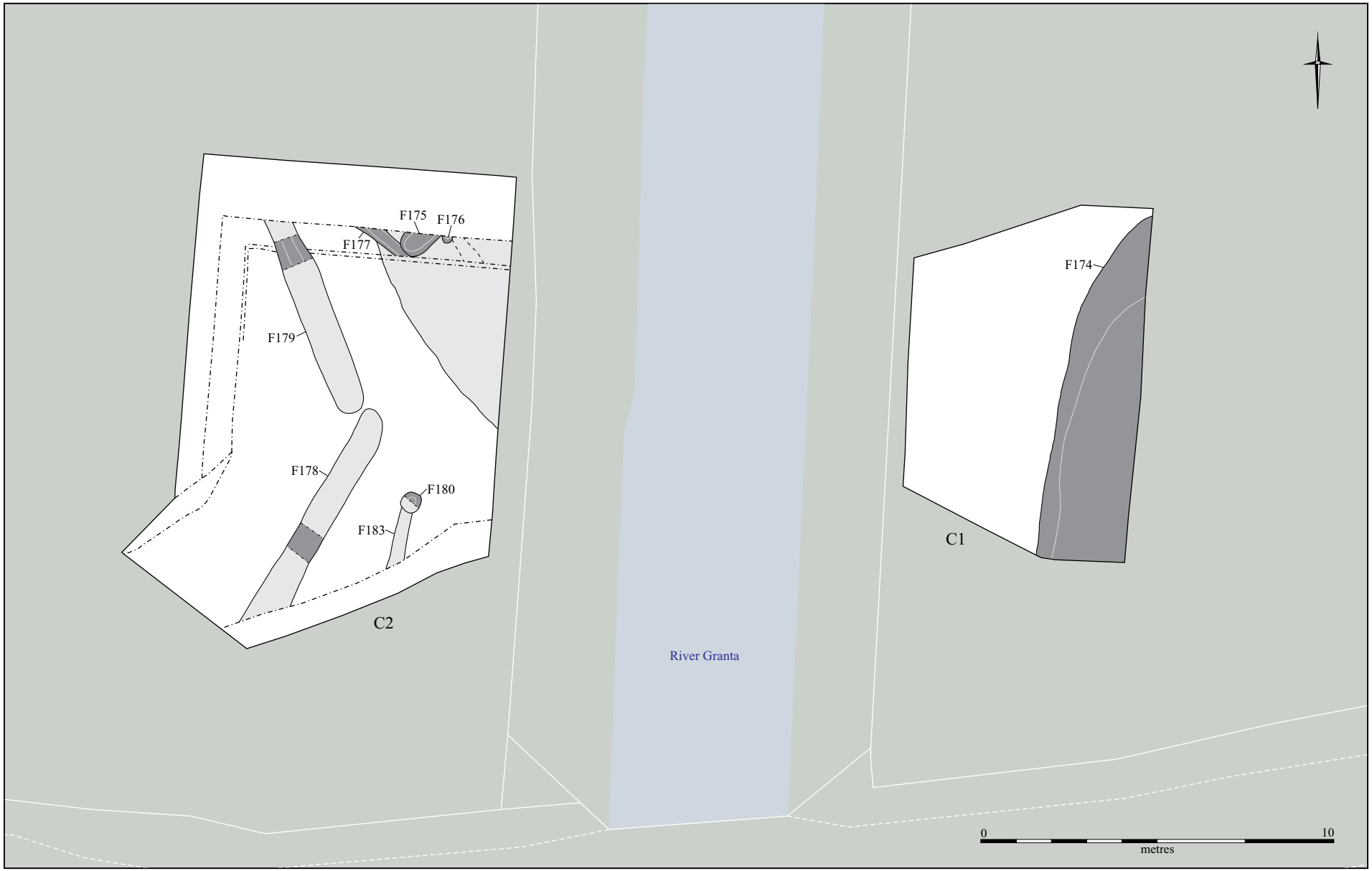


Figure 8. RCB06 Bridge Casements Watching Brief

Phase 3: Mid Romano – British (2nd – 3rd Centuries AD)

This phase represents by far the largest number of features from both the ARES access road and the car park excavations. Due to the longevity of the pot fabrics and forms used within this period, and a general lack of closely datable imports (see Appendix 2) it has been decided to split the results into earlier and later subsets of this phase in order to better illustrate the stratigraphic sequence. The discussion will deal with the phase as a whole.

Early Phase 3 Features (Figure 9)

ARES Access Road

A profusion of features suggest activity centred on a post built structure partially uncovered by the ARES Access Road excavation. The possible structure covered 4.00m by 4.00m but was obscured by the baulk on the southern side. The features associated with the activity engendered by this structure appeared to continue eastwards and were subsequently located in the Car Park excavation.

Structure C

Structure C consisted of thirteen postholes; **F.10**, **F.36**, **F.37**, **F.38**, **F.39**, **F.40**, **F.41**, **F.59**, **F.61**, **F.62**, **F.65**, **F.66** and **F.67** (see Figure 3). These were predominantly circular in plan with diameters ranging from 0.40 – 0.60m and depths from 0.19m to 0.40m. No post pipes were identified, although occasional packing stones were recorded and one piece of quern gritstone (see Appendix 4, cat no.<212>) may well have been re-used as post pad. A shallow gully, **F.68**, was identified to the south of the group and may have been a beam slot, although this could not be confirmed.

Dating this structure is problematic. Pottery analysis suggests a foundation date of 1st to early 2nd century (Appendix 2) but the oval pits apparently cut within the structure are dated 2nd to 4th centuries. The structure was certainly ruinous by the 4th century as a coin of Valens (minted AD 364 – 378) was retrieved from the surface of posthole **F.68** (Appendix 7).

The plan presented by these features was somewhat confused and probably represents several phases of re-construction and repair. Additionally much of the plan was obscured beneath the southern baulk. A rough spatial pattern could be discerned, however, suggesting a construction of post uprights set at just over one metre intervals. Internal postholes may have supported some form of ridge pole arrangement. No sign of daub or cob walls were found but it seems certain from the interruption of a later ditch that significant remains existed at the time it was being cut. The alignment of the structure seems to have been set on a north-east to south-west axis, but with so much obscured beneath the southern limit of excavation it was not possible to confirm this.

The plan was further confused by the presence of four small shallow pits (**F.11**, **F.60**, **F.63** and **F.64**) which had been cut within the structure. These were all located in the eastern side of the group and were oval in plan and shallow in depth. Pottery recovered from **F.60** represented commonly available wares of the 2nd to 4th centuries AD. The other fills were largely of the same materials seen in the subsoil covering the site, little insight into the function of these pits could be determined. Truncating this group was a late ditch segment (**F.12**), which produced a small piece (239g) of *opus signinum.* This is not considered to have been associated with the post built structure and was probably imported from elsewhere on site.

Enclosure Ditches

Ditches **F.9**, aligned east to west, and **F.8**, aligned north to south, joined to form a ninety degree angle to the north of Structure C. The western end of **F.9** then seems to have turned due north, although

confirmation of this was obstructed by the northern baulk. Both features had sections suggesting frequent re-cutting, at least three episodes appear likely; one had a V-shaped profile, one a U-shaped profile and a third probably had a shallow rounded profile cut along the eastern and southern sides. The U-shaped cut appears to have been the earliest form although the subsequent re-cuts had largely obliterated the stratigraphy of filling episodes. Potsherds recovered from both features were primarily rare small fragments dated to the 2nd to 4th centuries AD. It should be noted that less fragmented potsherds and other finds were recovered from cleaning over the surfaces of both features after machining. In particular the surface of **F.8** yielded up a large quantity of animal bone. This suggests secondary deposition during the 'life' of these features and when redundant the disturbed ground was used directly for middening.

Pit **F.57** was located at the junction of ditches **F.8** and **F.9** and had been truncated by both. The profile of this pit was of regular near vertical sides (stepped on the eastern side) leading to a flat base. Approximately 1.40m in diameter, it had a depth of 0.86m and was filled by a sequence of four fills. The primary fill ([120]) had been sealed by a layer of degraded chalk ([119]) which was followed by a dump of material including a substantial quantity of saltwater mussel shells (*Mytilus edulis*) and two cockle shells (*Clinocardium nuttallii*). A sample collection numbered over 200 individual shells, accounting for only a small proportion of the whole, most of which were fragmentary. The excavator noted that the shells were lying in 'tip lines' suggesting a short depositional episode. That mussel shells were also recovered from the lower fills suggests a limited earlier disposal followed by wholesale dumping. The pit was loosely dated 2nd to 4th century, but is early in the stratigraphic sequence.

Ditch **F.32**, which curved towards the south-west from a north to south alignment probably forms the western side of this enclosure. Again stratigraphically early, it was of substantial size, 2.30m wide and 0.97m deep, and had a U-shaped profile. At its southern end it truncated two earlier features, **F.50**, a small N-S aligned gully and **F.47**, a pit. A shallow U- shaped profile re-cut (**F.44**) truncated its eastern side. The potsherds recovered from the fills of F.32 were small and dated to the 2nd to 4th centuries AD. Also found were a human scapula from a neonate, pieces of animal bone, a large lump of iron slag and a substantial iron hook with provision for a pulley (see Appendix 6, cat no.<300>). In common with features **F.8** and **F.9** the surface of **F.32** produced larger and less fragmentary potsherds.

The east to west alignment of **F.19** appears to have superseded (and truncated) a north to south aligned ditch, **F.23**. The alignment of **F.23** is at odds with the northeast to southwest orientation of the roadside ditches. A large proportion of redeposited chalk was seen at the basal interface with natural chalk deposits. This is suggestive of spoil tumble, perhaps from a bank. Again due to modern truncation it measured 0.60m wide but was only 0.07m deep. No finds were recovered.

F.19 was 0.46m wide at its greatest extent but only a depth of 0.08m remained. The shells <316> of three crushed bird eggs (waterfowl?) were recovered from the feature but otherwise the fill was sterile of finds. Truncated at its western end by **F.9** and terminating close to pit **F.26**, it appeared to have been cut specifically between **F.26** and the substantial pit **F.57** (also truncated by **F.9**). Between **F.19** and **F.23** the butt end of a shallow ditch was identified as **F.7**. Aligned north to south it seems to be the northern end of **F.211** seen in the car park excavation. No finds were recovered from this feature.

Pit **F.29** was truncated by the northern end of **F.23** and remained partially obscured by the edge of excavation. Total dimensions are therefore unknown but a three metre length of the feature was exposed. The fill was 0.21m thick and consisted of a light brown sandy silt with lenses of natural yellow sand. One small sherd of Romano-British pottery was recovered. The feature was interpreted as being a possible quarry pit.

Features east of the enclosure

The excavation area to the east of enclosure ditch **F.8** was substantially truncated, probably as a result of landscaping in the 1950s. The remnants of features revealed in this part of the site were correspondingly slight. Ditch **F.25** has been mentioned above in relationship to the Roadway ditches. However, it clearly also shared a spatial relationship with **F.9** and ditch **F.19**, resulting in a piecemeal reinforcement of the east to west boundary alignment. The arrangement of features at the western end of **F.25** is suggestive of purposeful demarcation, firstly by pit **F.26**, and secondly by a north to south alignment of posts represented by **F.21**, **F.27** and **F.28**.

F.26 was respected by both **F.19** and **F.25** which appeared to have been cut to the south with the intention of avoiding it. However the pit was truncated so thoroughly that only 0.04m depth of fill was left, although the diameter of 0.85m hints at a quite substantial original feature. The three postholes were located 3.50m to the west of the pit, and again these were heavily truncated. **F.27** and **F.28** were noted as having chalk and pebble packing supporting the posts.

Three pits were located to the north of these features. Pits **F.5** and **F.6** were possibly earlier (as noted in Phase 2, above) but little else could be determined as to form or function. They seemed to be contemporary, and contained three sherds of 1st to 2nd century AD pottery, two worked flints and a small quantity of animal bone. The presence of worked flint is almost ubiquitous in the sub-soil around the campus, and when considered with the abrasion of the pottery, this suggests re-deposition. Pit **F.3** was essentially a patch of burned natural chalk measuring 0.51m in diameter. The fill was a mixture of burnt clay or earth and reddened chalk lumps and was interpreted as the remnants of a hearth or oven base. Identification of this feature as being Romano-British must however remain provisional as no datable finds were recovered.

Features west of the enclosure

To the west of **F.31** two other finds-rich features probably also belong to this same phase. **F.22** was a shallow gully aligned east to west which measured 8.50m long by 0.48m wide and 0.18m deep. The dark brown silty fills produced 43 sherds of pottery, 23 pieces of animal bone and various assorted burnt materials and CBM. The pottery represented long-lived manufacturing centres so dates were broadly 2nd to 4th century AD. One sherd of Central Gaulish Samian Ware was more narrowly dated to a manufacture date of 120 – 150 AD. Various iron nail fragments <306> and a circular fitting <307> were also recovered (see Appendix 6).The function of this gully is not certain although it appears to have been cut to demarcate the edge of **F.15**, a probable midden measuring approximately 10.00m long by 1.50m wide, most of which was obscured beneath the baulk. Although not more than 0.10m thick, the dark brown sandy silts filling **F.15** produced 236 potsherds weighing 3834 g from surface cleaning and from two one metre sample slots. The pottery is predominantly domestic in character with a high proportion of coarse wares, although some finer wares are also represented (Appendix 2). A relatively small quantity of animal bone was recovered (39 pieces) along with small amounts of CBM, burnt stones, charcoal, fuel ash slag and burnt clay. Perhaps the most striking assemblage of finds was a selection of discarded ironwork which included two nails, a broken reaping hook, a possible handle with copper-alloy grip and a large socketed hook that may have previously been part of a *pilum* (see Appendix 6, cat no.<314>).

A large network of animal burrows were found on the western side of **F.15**. These were excavated as feature **F.53**. Dating the feature was problematic as all fill material was presumably derived from **F.15**, however the most likely animal culprit is the Rabbit (see Swaysland, Appendix 8) suggesting a post-Norman date.

Southern boundary ditches

The ARES Access Road was able to provide an extension to the field system noted in the main excavation report (Armour *et al* 2007). Truncated by modern activity, **F.52** was identified as a ditch aligned east to west which could be seen to join the main excavation area as a heavily truncated soil mark cut by **F.142**. It measured 1.22m wide and 0.38m deep and produced two sherds of mid Romano-British pottery. Located parallel to **F.52**, at a distance of 4.00m, was ditch **F.18** identified as an eastern extension of Ditch **F.123**. This feature measured 1.15m in width and 0.24m deep. The alignment of these ditches suggest that they formed a continuous line as far as **F.166** on the car park excavation site and may have reached as far as **F.173** at the eastern edge.

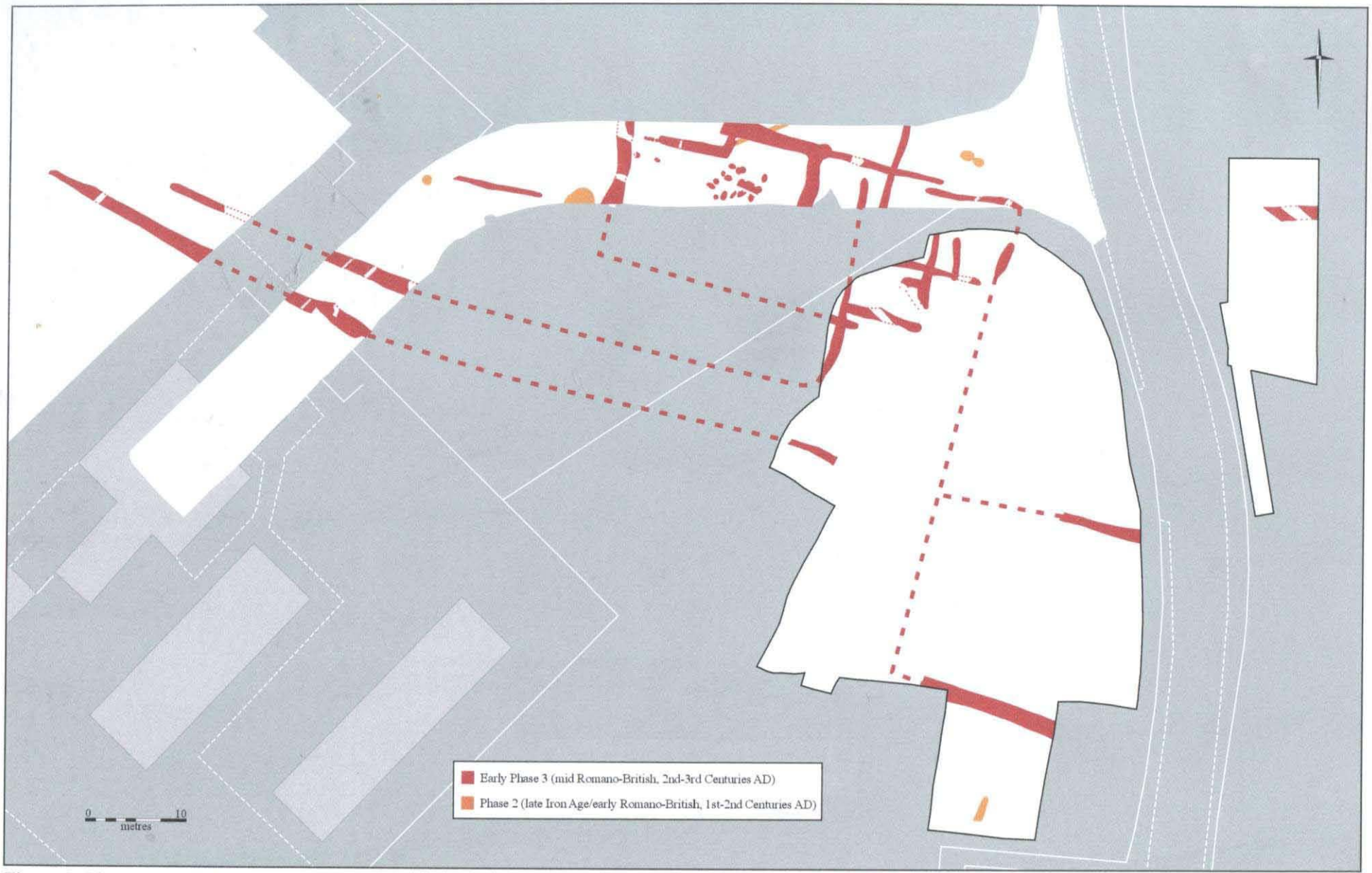


Figure 9. Phase 2 and Early Phase 3 features

Figure 10. Later Phase 3 features

Car Park Excavation

Enclosure Ditches (see Figure 5)

Two linear features; **F.190** and **F.197** continue the rectilinear series of enclosures appearing to be centred on Structure C to the west. Their regularity initially suggested they might be structural, so they were fully excavated accordingly. However no evidence was found to support this theory and it became clear that the features represented the western expansion of the enclosures seen in the ARES access road site, following the same north to south and east to west alignments. Both ditches were U-shaped in profile and contained similar fills which produced a broad range of potsherds centred on the late 2nd to 3rd centuries AD. The main axial ditches are **F.190** and **F.197** and these follow the same relative sequence seen in the ARES access road, namely that the north to south ditch **F.197** is cut and superseded by the east to west aligned **F.190**.

Five metres to the south of **F.197**, and running parallel to it, was ditch **F.187**, identified as representing the southern boundary of the enclosure system. Dating of this feature was difficult as although it appeared to be quite early in the sequence, the pottery recovered from it was more closely dated to the 3rd and 4th centuries AD. These sherds may have derived from **F.191** which cut across it, alternatively they may have been intrusive or introduced through animal disturbance. The relationship between ditches **F.187** and **F.186** also remained uncertain, not made clearer by the identical natures of the fills and paucity of finds from **F.186**. To the south of this ditch, and running parallel to it, are the butt ends of two more ditches, features **F.215** and **F.216**, which almost certainly represent further re-cuts of the southern enclosure boundary.

Later Phase 3 Features (Figure 10)

ARES Access Road

Two ditches, **F.1** and **F.4**, were located towards the eastern edge of the ARES Access Road area. At the time they were excavated it was not realised that they delineated the western extent of a probable roadway. The full extent of this road was only revealed within the Car Park excavation. Both ditches were aligned north-east to south-west and were roughly parallel. A scarcity of finds suggested they were peripheral to any settlement activity, even though Structure C lay only 25m to the west. The only find was one sherd of pottery from **F.1**, which was dated to the 1st - 2nd century AD.

Feature **F.1** cut another ditch, **F.25**. This was aligned east to west but at its eastern end it appeared to be turning south as it became obscured by the baulk. No finds were recovered from the feature and so it was undated except through stratigraphic relationships. Ditch **F.1** was seen to continue into the Car Park excavation, where it was recorded as features **F.151** and **F.152**, more closely dated to the 2nd to 4th centuries AD. **F.4** and **F.25** could only be identified as probable continuations.

Enclosure ditches

A secondary phase of ditching cuts across the earlier layout. These again lie upon a roughly N-S / E-W alignment, although the focal point provided by Structure C appears to have been superseded (Figure 10).

F.34 truncated the western end of **F.9** and was aligned north to south before turning sharply west 3.00m from the baulk and butt-ending after 6.5m. U-shaped in profile the ditch measured 1.13m wide by 0.38m deep at its broadest extent. The fills indicated an initial period of erosion and stabilisation followed later by intentional backfill which was indicated by a high frequency of chalk inclusions and finds. In total 85 potsherds and 84 bone fragments were recovered. Other finds included oyster shell, CBM, burnt stone and a quern fragment <259>. Apart from a small number of residual 1st to 2nd century sherds the pottery dates clustered around the 3rd century AD, although some later 3rd to 4th century wares were also represented.

Extending from the western end of **F.34** was an alignment of six small post or stake-holes, recorded as **F.48**. This alignment had also been observed cutting into the southern edge of **F.34** for approximately fifty centimetres, and therefore measured a total length of 1.85m. It was interpreted as a palisade or wattle structure. Two small post holes, features **F.55** and **F.43** were located 2.00 metres south and parallel to this alignment, suggesting they were associated structural elements. If features **F.43**, **F.48** and **F. 55** had formed a free-standing structure then it would have covered two square metres and been of fairly lightweight construction. No pottery was recovered from any of the structural elements, thus phasing is through stratigraphic sequence and spatial similarity.

To the south of this group lay feature **F.70**, a substantial post hole with near vertical sides and a flat base measuring 0.74m in diameter and 0.80m deep. This was truncated by **F.49**, a shallow east to west aligned ditch that may have formed part of an enclosure associated with **F.34**, to which it ran parallel. Few finds were recovered from this feature and it appears to have been short-lived. A new ditch, **F.31**, was cut in an arc curving north-west to south-east. This appeared to be an attempt to intentionally isolate the western extremity of **F.34** and its associated structural elements.

F.31 was wide but shallow, and truncated ditch **F.49** at its eastern end. Being curvilinear it clearly marks a break from the previously rigid rectilinear system. In common with **F.34** the ditch was also finds rich. These appear to have accumulated over time and the fill was composed of a rich black silt with charcoal inclusions. This produced a considerable amount of animal bone (118 pieces) and potsherds dating to the 2nd to 4th centuries AD. One find of particular interest was the snapped handle from a cast copper-alloy toilet spoon (Appendix 6, <295>), with carved decoration along one side.

Car Park excavation

Later Ditches

The southern end of the earlier feature **F.197** evidently marks a significant boundary or focal point located at the south-eastern corner of the enclosure group. Two curving ditches, **F.196** and **F.186,** are notable for their parallel and spatial relationship which appears to acknowledge both the enclosure group and the later roadway. These were exposed for a length of approximately 9.00m. Both were shallow with U-shaped profiles and were heavily truncated by later ditch-cutting activity. Few finds were recovered; **F.186** produced three sherds of later Romano-British pottery and some animal bone, but **F.196** produced nothing. Interpretation of these features suggests that although slight, they might represent the formal delineation of a small track or access route into the southern side of the enclosure group, and thus pre-date the later roadway.

F.188, **F.195**, **F.191, F.189** form a close spatial sequence of four ditches that curve away from the roadway and continue towards the west on a south-east to north-west alignment (see Figure 12). This multiple cutting of boundary ditches at an oblique angle across the enclosure group seems to indicate that occupation at Structure C had ceased, and that the area was being reintegrated into a wider system of land use characterised by larger, less rigidly rectilinear enclosures.

Roadside Ditches

The principal ditches on the western side of the roadway were features **F.151** and **F.152**, which were revealed for a length of 30.50m within the car park excavation. Aligned north-east to south-west they ran parallel for roughly 20m at a separation of 0.50 – 0.60m and represent a continuation of F.1 from the ARES access road excavation. The pottery recovered from these features suggests a late 2nd to 3rd century date for their construction (Appendix 2). Between **F.152** and the mass of metalling that made up the later road surfaces, a third roadside ditch was tentatively identified, largely in section. This ditch, **F.218**, was 1.42m wide and 0.70m deep and was very likely the southern continuation of **F.4** to the north. It truncated **F.217** to the west, which was identified as the southern extension of **F.25** seen within the ARES access road. On the eastern side it cut [601], a deposit of metalling that consisted of a hard calcareous mass of sand and gravel cemented within a fine silt matrix. The position of [601] suggests that it may be a remnant of the original Romano-British road surface, however no dating

evidence was recovered from within it. The southern continuation of **F.218** was very difficult to trace due to later erosion and disturbance, however it appears to have terminated or turned west level with the eastern end if **F.166**.

It is regrettable that the relationship between ditches **F.166**, **F.151** and **F.152** was entirely obliterated by later animal activity (such as the burrows **F.159** and **F.169**). These features were recorded at their junction at a midway point to the west of the site. Thus the stratigraphic sequence cannot be demonstrated between this major west to east alignment and the roadway.

The eastern flanking ditches, **F.207** and **F.208**, were particularly badly affected by erosion and also by truncation resulting from later quarrying activity. **F.208** contained four sherds of Romano-British pottery. This ditch was tentatively identified in the road section as **F.224.** However, it was thought more likely to represent later truncation and disturbance, as this produced potsherds dating to the 12th-13th centuries AD.

South East Grouping

To the south-east of the Car Park excavation a group of thirteen features were clustered between two parallel enclosure ditches, **F.170** and **F.173**. The northern ditch, **F.173** was truncated towards the west by later quarrying, so that only 7.80m remained. This remnant was also truncated by post-medieval land management practises and measured 1.39m in width and 0.27m depth at its maximum extent. The southern enclosure ditch, **F.170**, was less seriously truncated and measured 1.70m wide and 0.75m deep. The ditches appear to be contemporary in terms of form and spatial alignment, and although **F.173** produced no finds, **F.170** was dated by six small potsherds to the 2nd - 4th centuries AD. There seems little doubt that these ditches represent a further eastern extension to the ARES site field system.

Taken as whole, the nature and purpose of this group was not obvious. Four possible beam slots; **F.160**, **F.161**, **F. 163** and **F.164** formed a distinct sub-group aligned north-east to south-west. This alignment is totally at odds with that of the enclosure ditches, but does mirror that of the track. All four features had very similar profiles, consisting of steep straight sides leading to rounded bases. Average width was around 0.60m, although depths were more variable, from 0.13m to 0.36m, but generally consistent across the base of individual features. Fills were soft brown sandy silt with moderate quantities of graded, redeposited gravel and stone inclusions. Potsherds were generally scarce, although **F.161** provided a moderate quantity which was of mid to later Romano-British date.

Five semi-circular pits; **F.162**, **F.158**, **F.172**, **F.156** and **F.168** are probably contemporary with the beam slots. The form for all five is similar with moderately steep sides leading to flat or gently curving bases. With the exception of **F.158**, which was slightly larger, the pits were roughly the same diameter, between 1.10m and 1.26m, although the depths varied between 0.15m and 0.34m. As these variations were largely due to the vagaries of horizontal truncation, it seems probable that the pits were almost identical when cut, suggesting some uniformity of purpose. The fills were similar to those of the beam slots and once again produced an impoverished finds assemblage consisting of occasional animal bone fragments, and from **F.156,** a single sherd of red slipped ware dating to the 3rd to 4th centuries AD.

To the north of pit **F.172** was pit **F.184** and a possible posthole **F.185**. Both were ill-defined and shallow, having been disturbed by root action and truncated. Neither of these had any finds. It is possible that prior to truncation, pit **F.184** was as large and well defined as the others, suggesting that the pit group was originally arranged in pairs.

To the south-west of this group were three undated features; **F.182**, **F.167** and **F.181**. It was uncertain as to how these related to the other features in the group, as their axial alignments were dissimilar. **F.167** produced one piece of undiagnostic worked flint, whilst the other two were sterile of finds.

With the exception of **F.201,** out of the six features located to the south of **F.170**, only pit **F.192** produced any dating evidence, a single sherd of Romano-British pottery. Pits **F.171** and **F.193** were sterile, but **F.155** produced small quantities of animal bone, as well as worked and burnt flint. Interpreting these features, however, remains a difficult task. The fills of all of them contain similar looking layers of redeposited sand and gravel within a silty matrix, suggesting a very limited period of

use. The general paucity of finds contributes to this picture, indeed even when finds are present, they could have derived from unstratified material in the subsoil.

Campus Road Watching Brief

Seven features belonging to phase 3 were identified within the watching brief area; **F.98**, **F.99**, **F.100**, **F.101**, **F.102**, **F.107** and **F.108**. With the exception of **F.102** and **F.108,** these were all ditches. **F.98**, **F.99**, **F.100** and **F.101** ran parallel to each other on a south-east to north-west alignment. The largest of these was **F.100**, which at just less than six metres wide, would appear to be substantial. However, the limited opportunity for investigation meant it was only excavated to a depth of 1.20m below the modern land surface, thus little could be deduced as to its full form, although potsherds were recovered which dated the upper layers to between the 2nd - 3rd centuries AD.

F.98, **F.99** and **F.101** were considerably less extensive, being on average 1.40m wide and 0.30m deep. Only **F.99** produced any pottery, again dated to the 2nd - 3rd centuries AD. Ditch **F.107** was on a different alignment, east to west, and was the earliest identified in the watching brief, being truncated by both **F.100** and **F.101**. Pit **F.108**, only fully identified within the section, was truncated by **F.99** and **F.100**. It had lenses of burnt clay and charcoal within its primary fill which suggested it had been used to dispose of hearth or oven waste, however no pottery was recovered. Pit **F.102** was also quite charcoal-rich and produced one sherd of Nene Valley colour-coated ware dating to the 3rd - 4th centuries AD.

The interpretation of this group of features remains obscure. At first sight they appear to be a characteristic set of roadway ditches, yet the scale and location of ditch **F.100** argues against this. This of course assumes that **F.100** is a ditch and not a sunken roadway. The profile tends to argue against this as it appears too clean, the top fill offers no sign of metalling, and the feature seems to have silted up rather early in the history of the site. If the ditch really is six metres wide, and not for example a series of two or three shallower ditches creating the impression of a larger feature, then it should be somewhere in the region of 2.50m to 3.00m deep. The gradient and uniformly sloping sides suggested that it was unlikely to be a large linear quarry pit.

Soak-away Watching Brief

Evidence for field systems running down to the river can be seen in the form of three linear ditches, one (**F.2**) approx. 1 m wide and 0.5m deep lay on an earlier 2nd century AD WSW-ENE alignment (see Figure 12 a+b), whilst the two narrower and shallower ditches (**F.1** & **F.3**) both lay on a WNW-ESE alignment, one of them (**F.3**) curvilinear and also deeper (0.25m) than the other. From the bottom of a slot cut through ditch **F.2** came a single Romano-British potsherd found within a yellow-grey silty sand and gravel containing shelly material. Filling the top of this ditch was the ubiquitous silver-grey floodplain silt, a good marker horizon for the late 2nd century flooding which affected much of the utilised lower areas of the Babraham site.

Phase 3 Discussion

Much of the activity seen over Phase 3 is dated through stratigraphic relationship rather than pottery sequences. Indeed, the pottery from primary fills of features near the rectilinear enclosures and Structure C are of an abraded and fragmentary nature, suggesting secondary deposition. Either consumption of pottery was slight and therefore little ended up as rubbish or there were organised middens and dumping of waste into old features as indicated by F.15 and F.33. Perhaps one hundred years of occupation are represented by the enclosures surrounding Structure C, even though pottery dating may place its foundation earlier (Appendix 2).

Figure 11. View of Car Park Excavation from West, showing late Romano-British ditches abutting possible Roman to Post-Medieval road

If we follow the pottery evidence for Structure C and place its construction in the earlier Romano-British period (Phase 2) it may explain the presence of the earlier nearby features F.33 and F.54, and also provide a source for the residual early sherds recovered from later features. However this hardly explains the profusion of later Romano-British features that appear to surround it. In any case even if the pottery is not residual it stands to reason that it was already old when it was deposited within the posthole. Better then to date the structure to the beginning of the phase 3 and accept that it is contemporary with the enclosure ditches F.8 and F.9.

From this core the enclosures appear to multiply, expanding eastwards across a former north to south aligned boundary, represented by F.23, before adding a final eastern enclosure delineated by ditches F.24 and F.190. Most probably at this time the enclosure is also reworked at its western edge and ditch F.34 with its associated structure added. The previous western north to south boundary represented by F.32 and F.44 may have gone out of use, or perhaps the cutting of Ditch F.34 was specifically to close an access corridor in the north-west corner of the enclosure.

In all probability the basic core of this occupation area stayed the same for some time and created a focal point for various ancillary features such as rubbish pits and the middening. Unfortunately much of the evidence for this will remain lost or obscured beneath the unexcavated portions of the site. Also missing are the southern sides of the enclosure, although features F.215, F.216 and F.187 probably represent the approximate location of these in the car park excavation.

The track or road is probably established late in the 2nd or early in the 3rd centuries AD (Appendix 2). The oblique way it cuts through the corner of the rectilinear occupation core and establishes a new alignment speaks rather more of an imposition than an agreed compromise. The western roadside ditches are the first to be cut and they clearly truncate the settlement edge. Based on a northeast to southwest alignment there appears to be no attempt to reconcile them with the earlier boundaries. Of course it is possible that these had already been abandoned. Structure C must have been derelict when ditch segment F.12 was cut through the middle of it on an alignment set at right angles to that of the roadway. It seems possible that the focus of settlement also shifted and is represented by the group of features located to the southwest of the car park excavation, however the picture is clouded by a general lack of finds and un-diagnostic feature types. The group does appear to be aligned on the roadway and is set between two earlier boundary ditches and could be a replacement of focus for occupation after the redundancy of Structure C.

There is, however, a suggestion that traffic was already established from the southeast corner of the enclosure group, heading south towards the river, and it may be this precedent that informed a later decision to create a formal roadway and extend it north. Ditch F.187 could have been cut to re-establish the corner of the enclosure group up to the edge of the later roadside ditches. That there is interplay between the enclosure ditches and the roadside ditches strengthens the case for the establishment of the roadway in the Romano-British period rather than in the later medieval period.

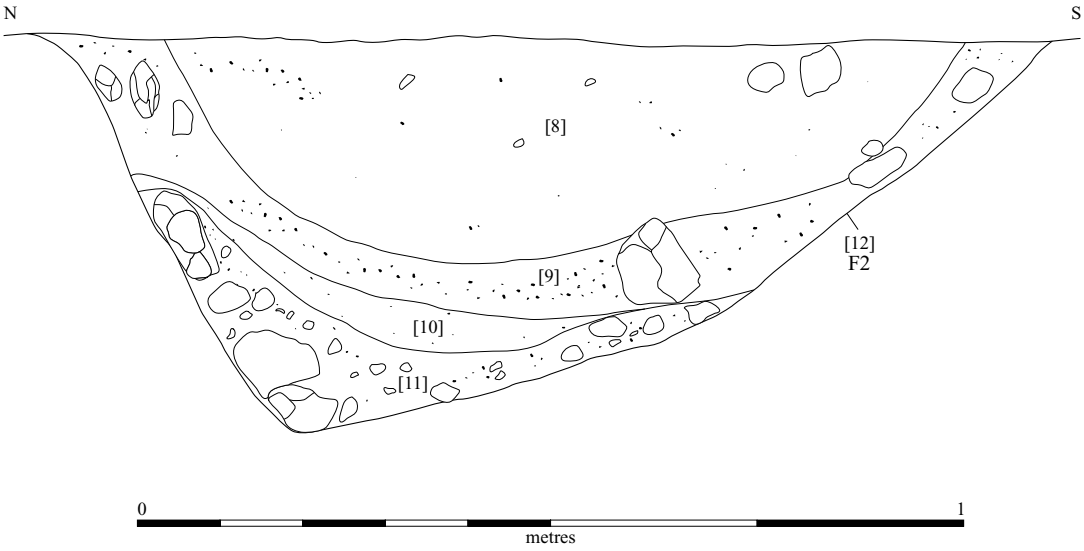


Figure 12. Photograph and section of probable early 2nd Century AD ditch F2. Note the distinctive marker horizon of silver-grey flood plain silt [8] indicating the late Roman flooding event

The ditch features seen in the Campus Road watching brief are also somewhat enigmatic, the more so due to the relative lack of dating. That they are on a co-axial alignment with the road gives them relatively stronger dating although the questions posed by F.100 are by no means answered by this. If we first accept the fact that this feature represents a ditch then it would be of significant size. That the uppermost fills contained a scattering of 2nd to 3rd century AD pottery suggest that it is either redeposited into a later feature, backfilled into a contemporary feature or the final stages of silting into a much earlier feature. Unfortunately these questions will not be answered without further examination, although the presence of these ditches still tend to suggest the discovery of a significant new boundary.

Phase 4: Late Romano-British Features (4th Century AD)

Access Roadway

F.42/ **F.12**, **F.56** Possible tree-throw ? Contain late Romano-British potsherds, animal bone and oyster shell (perhaps a later feature with residual pot).

Car Park

A reddish-brown sandy silt layer with stone and chalk inclusions [571] formed a spread covering ditch features F.186 – F.191. This contained a number of finds including, worked stone, bone and later Romano-British pot.

Bridge Casement Watching Brief

Seven features were located in the western bridge casement watching brief area. Dating for most of these was uncertain, two pits and a gully, **F.175**, **F.176** and **F.177**, located against the northern trench edge were undated. They were cut into deposit [500] which contained potsherds dating to the 2nd to 4th century AD, interpreted as a layer of river alluvium filling an earlier channel or hollow. To the west of this, and perhaps spatially respecting it, were ditches **F.178** and **F.179**, both of which were machine truncated. The profiles of each were very different, suggesting that they were not cut at the same time, although they were clearly all related. **F.178** had no dating evidence but **F.179** was dated from the 3rd to 4th centuries AD. To the east of **F.178** was a small pit (**F.180**) and a gully (**F.183)**, both of which were undated. It seems likely that despite a lack of dating, most of these features were cut in the late Romano-British period.

Soak-away watching brief (pipe trench)

An unexpected discovery was **F.41**, a large ditch measuring 4.00m wide by 1.30m deep. The full extent of this remained unknown, as this was only revealed in the sides of a pipe trench, but the alignment could be ascertained as being approximately east to west. Seven late Roman coins attributed to Magnentius (AD 350 – 353; Appendix 7 <001> - <007>) were recovered from spoil dumped at the side. The soil adhering to the coins suggested they had been lying within the primary fill. The ditch was cut at the interface between a higher piece of ground on a chalk bank and the lower terrace river gravels. This had the effect of adding approximately 0.50m height to the southern side, and seems to have been used to aid defensibility.

Phase 4 Discussion

The dumping of material into the tops of features in the ARES access road excavation and the layer (571) of middening that covered the north-western ditch features share similar features with the ARES site abandonment layer in Hollow B. All three examples represent the final stratigraphical episodes in their particular sequences and contain frequent inclusions of relatively large but abraded sherds of mid Romano-British AD pottery. Significantly though, the assemblages also have 3rd to 4th century wares not seen within the fill deposition of the majority of features. Pottery of a similar date was recovered from ditch F.179 within the western bridge casement, suggesting the continuance of activity into the Late Roman Period within this partially or periodically flooded riverside area. However, it is the recovery of late Roman coinage from these middening layers associated with the ARES access road which is most important, since this demonstrates a clear continuity with the material from Hollow B. Meanwhile, the discovery of a group of seven Magnentius coins dating to the mid 4th century within ditch F.41 of the soak-away, either a contemporary loss or else an intentional deposition, provides perhaps the best supporting evidence for this latest phase of activity on site. Yet another 'late' feature might be deduced in the form of the ditches of the unidentified Structure B (the latter associated with the ARES Access Roadway). Although quite sterile of artefacts, this cuts through, therefore clearly post-dates Hollow B.

Phase 5 - Medieval (6th – 15th Centuries AD; - Figure 14)

The eastern roadside ditch **F.224** contained six potsherds of which most were derived from Romano-British sources, however two were dated to the 13th century, suggesting that the ditch was re-cut or disturbed during the medieval period. It seems likely therefore that the Roman road and associated areas of activity continued in use into the medieval period. This tends to fit with the results of the Campus road trenching evaluation which identified 27 medieval features, predominantly dating to the 12th to 13th centuries AD. Trench 11 was located 15m to the east of the car park excavation, and so the seven 12th to 13th century features it revealed were close to **F.224**.

Campus Road Trench Evaluation

Phase Two of the Trial Trenching Evaluation located 27 features which were predominantly Early Medieval. The greater proportion of features were located to the south of the evaluation area in Trenches 12 – 16 (see Figure 4). Trench 11, located towards the north and roughly adjacent to the Car Park Excavation Area, contained a further seven features.

Trench 11

Seven features were located within Trench 11, four of which could be positively dated to this phase. A small pit, **F.71**, was found to contain a nearly complete St. Neots ware pot that had been placed upright on the floor of the pit. This was closely dated to the late 12th or early 13th centuries AD. One possible explanation for this feature is that it represents the remnants of a coin hoard pot, which in this case had been emptied by its owner.

To the south and west of **F.71** were features **F.70** and **F.69**, a pit and linear ditch respectively. Both features were irregular in plan and profile, suggesting they had been affected by root or animal

disturbance. Both produced St Neots and Thetford potsherds dating to the 12th and 13th centuries AD. To the north of this lay ditch **F.68**, aligned north-east to south-west. Nineteen pieces of animal bone were recovered from this ditch, but no dating evidence. It seems probable that the ditch is contemporary with the other nearby features.

Features **F.72** and **F.73**, a pit and ditch respectively, were located towards the south of Trench 11. Pit **F.72** was oval in shape and contained no finds, ditch **F.72** was aligned approximately east to west and contained two sherds of pottery dating to between the 14th and 15th centuries AD.

Trench 13

Trench 13 revealed a group of four large pits, two small pits, a posthole and a pair of shallow ditches. The four large pits, **F.50**, **F.51**, **F.53** and **F.54,** were predominantly oval in shape and between 0.40m and 0.53m deep, containing similar dark greyish brown sandy silt fills with infrequent or rare inclusions of redeposited natural. A good assemblage of finds were recovered from across this group, with **F.54** producing 30 sherds of St. Neots, Thetford, Grey and Pink Shelly ware pot. The dating suggests a tight 12th to 13th century AD date for the group. **F.53** had been truncated by **F.54,** which was probably the latest of the pits, the others only having St. Neots and Thetford wares which are predominantly 12th century in date. Animal bone accounted for the majority of other finds with 84 pieces retrieved, over half of which were again found in **F.54**. The dark silty nature of the fills and quantity of bone recovered suggested that these pits were probably specifically cut as rubbish pits rather than quarry pits.

The two smaller pits, **F.52** and **F.59** again appeared to be oval in shape, although their full extent was obscured by the trench edge. The fills were generally sterile reddish brown sandy silts with a high component of backfilled natural. One piece of animal bone was recovered from **F.52**. These features were probably dug and backfilled quickly leaving little evidence of their function. Posthole **F.57** lay one metre to the east of **F.56** but contained no dating evidence or supporting structural elements.

Ditches **F.55** and **F.56** were parallel, aligned north-east to south-west, and of similar widths and profile. Both were U-shaped and measured 0.71m to 0.78m in width, and 0.20m to 0.24m deep. Similarities like these suggest they are contemporary, however **F.55** contained one sherd of 13th century Pinkware, and **F.56** a sherd of 17th century Redware. Either sherd may be redeposited or intrusive, yet the primary interpretation is that these are boundary ditches. As they appear to delineate the 12th century rubbish pits situated to the north they would seem to be earlier rather than later.

Two more large pits, **F.61** and **F.64**, were located in Trench 12, approximately five metres to the west of Trench 13. Both were partially obscured by the trench edge, but appeared to be roughly oval in plan, and had near identical dark greyish-brown sandy silt fills, similar to those in Trench 13. Pit **F.61** produced six pieces of bone, two of which were human, and three sherds of St. Neots and Thetford wares dating to the 12th century AD. Pit **F.6**4 contained a large assemblage of animal bone (30 pieces) and one sherd of Lyveden pottery dating this to the 13th century. These pits appear to be a continuation of the pitting activity seen in Trench 13. The human bone was almost certainly redeposited from the Roman-British cemetery located less than five metres to the north of **F.61**.

Trench 16

Trench 16 was positioned to locate the western extent of the Romano-British cemetery identified in Trench 12. Three medieval features were located; Postholes **F.65**/**F.66** and pit **F.91**. Feature **F.65** contained a small assemblage of 12th century potsherds. Pit **F.91** was cut into the cemetery and consequently truncated a number of graves. It was circular in plan and measured 1.85m in diameter. The dark brown sandy silt fill produced 30 thirty sherds of St Neots and Thetford ware pottery dating to the 12th century, as well as a quantity of redeposited Romano-British pottery, flint, animal bone and fragmentary (disarticulated) skeletal remains (see Timberlake & Armour *forthcoming*).

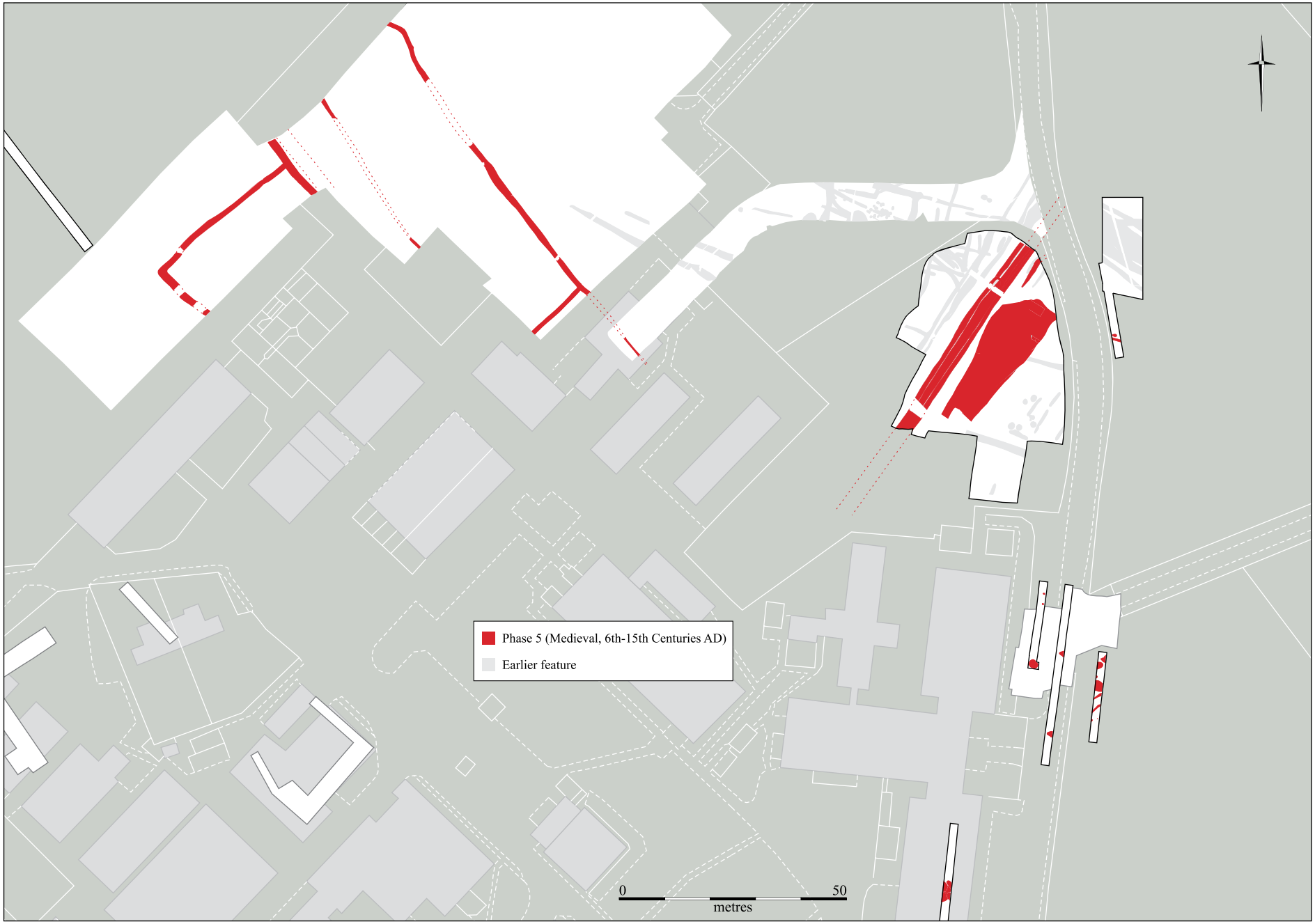


Figure 13. Phase 5 features

Trench 15

Trench 15 revealed a profusion of quarry pits which had been dug for the extraction of chalk. Features **F.74**, **F.75**, **F.76**, and **F.77** were highly irregular in form, and were of varying depths, the largest measuring 2.50m by 1.75m and up to 1.07m deep (see Figure 4). The pits had been backfilled with a mixture of redeposited chalk lumps and excavation debris, with occasional lenses of a dark brown sandy silt. Many of the smaller chalk pieces displayed numerous tool marks from shaping, but having been rejected, these were dumped back into the pits. Examination of the marks suggest a wide bladed bolster was being used to tidy up the quarried chalk blocks, suggesting that these were being squared for building purposes. **F.77** produced 22 sherds of pottery representing Grey-ware, Glazed Red Earthenware, Scraffito and Buff wares, with a date range spanning the 14th to 16th centuries AD (Late Medieval to Early Post-medieval).

Car Park excavation

Quarry

A large roadside quarry (**F.231)** was revealed in the course of excavating the Car Park area. This consisted of a large, sub-rectangular and shallow cut excavated through the chalky breccia, gravels and sand down to the level top of the chalk, recognisable by the solution features covering its surface (Figure 5 & 15 a+b). Some 34+ m long, 12 m wide (6 m at the south end) and > 1.6 m deep at its deepest point, this covered an area of approx. 1000 sq metres to the east of and parallel with the road or hollow way. The quarry shallowly cuts the planated roadway surface at its western end, thus is clearly later than the earliest use of this road. However, the later phases of this road represented by the inter-cutting ruts always runs to the east of this suggesting that this continued in use throughout the life of the quarry, influencing both its location, its NNE-SSW orientation, and also the limits to the extension of this feature westwards. The quarry cut [677] consists of a steep-sided benched quarry face on the eastern side, with a 45° slope to the lower step, cut through a hardened cemented chalk and flint breccia. The layers of chalk breccia, sand and flint removed may have been quarried for the purposes of road metalling, or else for making mortar, perhaps even for the construction of stamped flint and chalk floors. No clear evidence of tool-marks could be seen on the surface of the chalk . It seems reasonable to suppose that this quarry edge and quarry floor was cut using iron picks and iron-tipped spades.

The quarry fell into disuse following the working out of these layers, and after this the area seems to have been abandoned. This then shows evidence for gradual infill, first with rock talus and soil [653-655] against the steeper eastern quarry face, and then with a probable redeposited cultivation soil [667] from which 13 sherds of medieval (13th – 15th century AD) pottery were recovered. The latter may well be a drifted medieval headland soil spilled over from a field system located to the east of the then abandoned quarries. Two irregularly shaped later features (**F.154** and **F.157**) cut through this earlier quarry infill within the middle of the quarry area, possibly the bases of large (8-10 m long) cultivation trenches, rubbish pits, or even secondary quarry pits Along with slag, bone, flint, burnt clay, and tile these contained a few abraded sherds of redeposited Romano-British pottery. However, the relationship of these features to the underlying deposits suggests that a late medieval or early post-medieval date is much more likely. At the south end of the quarry a circular steep-sided pit (**F.230**) at least 1 m deep had been cut down through the basal quarry fill and into the chalk. This was described as being a possible well or rubbish pit, although the infill of this was not examined in any detail. None of the pottery recovered from this feature appeared to be residual, and all of it was Early Medieval in date. Whilst the identity and limits of this feature are still not properly understood, the dating of it would appear to provide yet another *terminus post quem* for the quarry's use and abandonment. By far the greater portion of the quarry infill across the site is to be found above this horizon, consisting of post-medieval plough soil [651] etc., much of which appears to have been formed *in situ.* Rubble infill and levelling deposits overly this. These represent modern landscaping and probably relate to the construction of the Institute in the 1950s, and more recently to building demolition.

Feature **F.231** has been interpreted as being an Early Medieval roadside quarry, although there could be some earlier Roman elements to it. However, these earliest extraction areas may well have been quarried away.

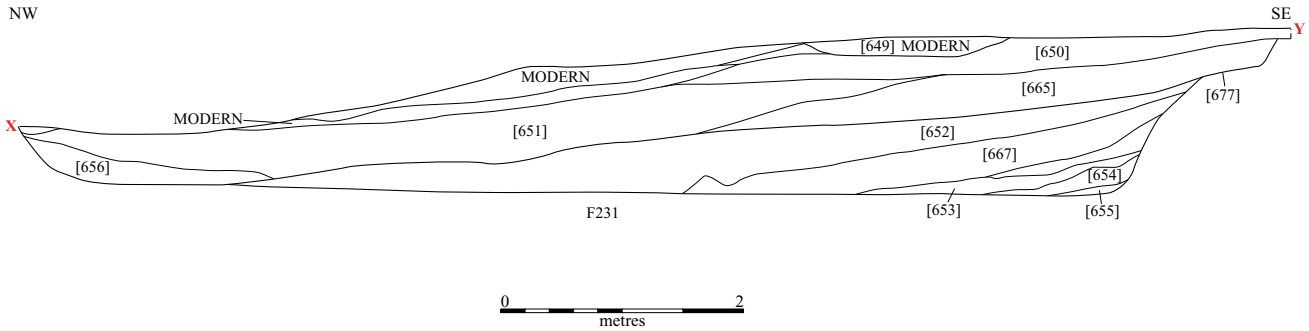


Figure 14. South-facing section and photograph through infilled Medieval quarry F231

ARES Access Road

Features west of enclosure

A large network of animal burrows were found on the western side of feature **F.15** (a 2nd- 4th century AD midden deposit).These burrows were excavated as feature **F.53**. Dating the feature was problematic as all fill material was presumably derived from F.15, however the most likely animal culprit is the rabbit (see Swaysland, Appendix 8), suggesting a post-Norman date, but probably medieval or later.

Phase 5 Discussion

Evidence for medieval activity within the area encompassing all of the current watching briefs, evaluations and excavations appears centred on the south-east. Medieval features include the flint-metalled road, the large roadside quarry to the east of it, and either side of the Roman cemetery, a host of rubbish pits, quarry pits and possible evidence of cultivation.

The 12th-13th century pottery and associated animal bone found within many of the pits uncovered during the Campus Access Road evaluation (Trenches 11-13 & 15-16) some 150 m north of the Hall, suggests that this could represent an outlying area to the Early Medieval settlement, the core of which would probably have been centred on St. Peter's Church. This northerly fringe might be a zone set aside for the deposition of middens, pitting and quarrying at the interface between the settlement and the cultivated fields beyond. It seems that rubbish pits might have been defined by an enclosing ditch, suggesting a dedicated area for this activity, the use of which was probably limited to the 12th or 13th century AD. Conceivably this might represent the only surviving archaeological evidence for gardens and/or timber dwellings, perhaps crofts or tofts aligned parallel or at right angles to the medieval road.

Medieval quarrying on the other hand ranged from the digging of small pits into the chalk (up to 2m wide and 1m deep) for the purposes of extracting cut building stone, perhaps from the harder layer of Melbourn Rock, quite possibly an *ad hoc.* strategy undertaken as and when required for house footings or foundations, and the more systematic extraction of chalky flint breccia and sand from a single large roadside quarry. It seems that the latter may well have been quarried to make mortar, perhaps for use in the foundations and walls of the church constructed during the 12th, but then re-built in the 15th century AD. Equally as likely, however, this mixture of flint, chalk and sand was used in making the foundations of the road as this was extended southwards towards the river, perhaps even in the construction of a causeway over the damp floodplain. The types of pottery recovered from the smaller quarry pits are much more likely to be contemporary, implying a Late Medieval – Early Post-medieval vernacular use for this building stone, whilst the 13th – 15th century abraded pot recovered from the roadside quarry infill would appear instead to be associated with the washed-in soil derived from a medieval headland and cultivated field system which lay to the east. What this implies therefore is that quarry was already abandoned and at least partly infilled by the late 12th/ early 13th century AD. Meanwhile, the occurrence of similar dated pottery within the fills of the roadside ditches confirms the suspicions that this was being worked whilst the road was still in

use. It seems likely that the use of this rural road, in common with many braided-track hollow-ways, persisted throughout the history of the site.

Phase 6 - Post - Medieval

Car Park excavation

Road

The mass of accumulated metalling within the roadway hollow appears largely undated (Figure 16a). The exception was **F.220**, a complex profile representing a pair of ruts backfilled with a coarse flinty sand and gravel with common pieces of post-medieval pegtile as ballast (Figure 16b). Above this, layer [604] appears to have been an attempt to stabilise the surface followed by a thick dump of coarse material (layer [603]) which also totally filled the western part of **F.220**. This fill was recorded as [606], and contained peg-tile, brick, potsherds and a livery button bearing an heraldic 'tyger' motif <205>. Pottery finds also suggested an 18th century date for this last re-surfacing of the road. Layers of sub-soil [612], washed-in chalk fragments [611], and topsoil subsequently accumulated over the roadway to a depth of between 0.45m and 0.50m. A layer of modern rubble and waste soil filled in the last vestiges of the road hollow in an episode of landscaping brought about during improvements to the Institute of Animal Physiology in 1953.

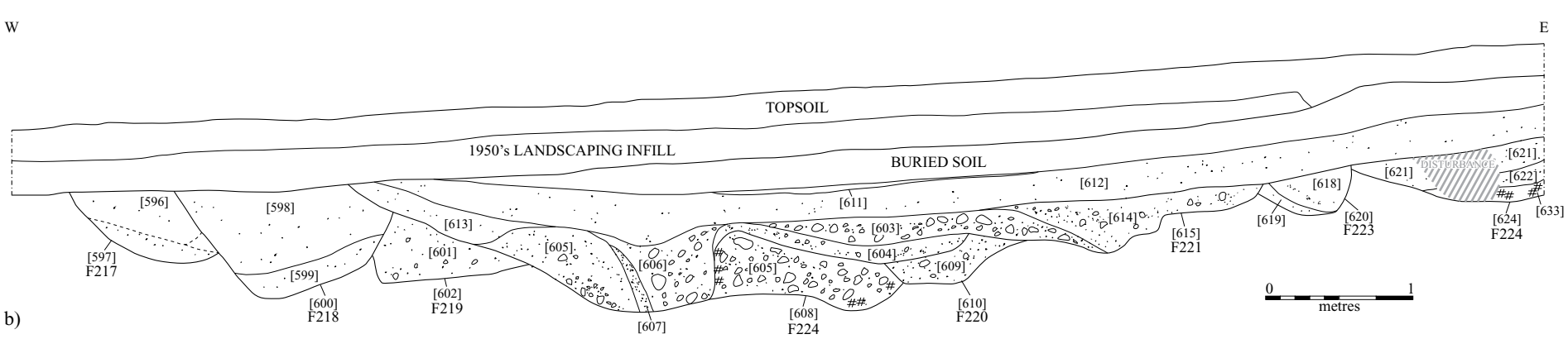
Some 15m to the south of this another section (see Figure 16 c+d) was cut through the roadway in order to try and verify the sequence of continuing use, and also to examine the relationship of this with the large roadside quarry (**F.231**) to the east. Nine possibly ten distinct wheel ruts were identified cutting into the underlying surface of the chalk, all except the earliest (but undated) example (**F.232**) being infilled with a metalling of broken flint. In places this metalling had been heavily compressed into the ruts, some of which were up to 150mm deep and 200-300mm wide. At least three phase of rutting could be identified. The main (or 2nd phase) group of ruts (**F.233, F.235-F.238** & **F.240**) were likewise undated, but based on the similarity to the northernmost section, they probably reflect a late medieval to post-medieval use of this road, most likely the latter. However, two distinctly later wheel ruts (**F.239** and **F.234**) cut this earlier phase, the much narrower (<100 mm) ruts cutting into the metalled fills of the earlier ones exactly 2m apart from one another. The latter information might at least provide some indication of the type and dimensions of cart or horsedrawn vehicle used. Most likely this had narrow iron-shod wheels. The presence of crushed pegtile and brick together with flint added as a road repair in this case helps to provide a very approximate date for the last use of this road.

An interesting modern discovery was made in the form of feature **F.153**, which consisted of the remnants of a sheep carcase buried along with the casing of a .303 calibre blank round.

What are probably post-medieval rabbit burrows (**F.159** & **F.169**) and a tree throw (**F.165**) were found associated with the medieval/ post-medieval roadway and an earlier Romano-British roadside ditch. Redeposited Romano-British potsherds alongside some sherds of post-medieval porcelain and animal bones were recovered from **F.159**, suggesting that some or all of these features may be modern.

a)

b)



c)

d)

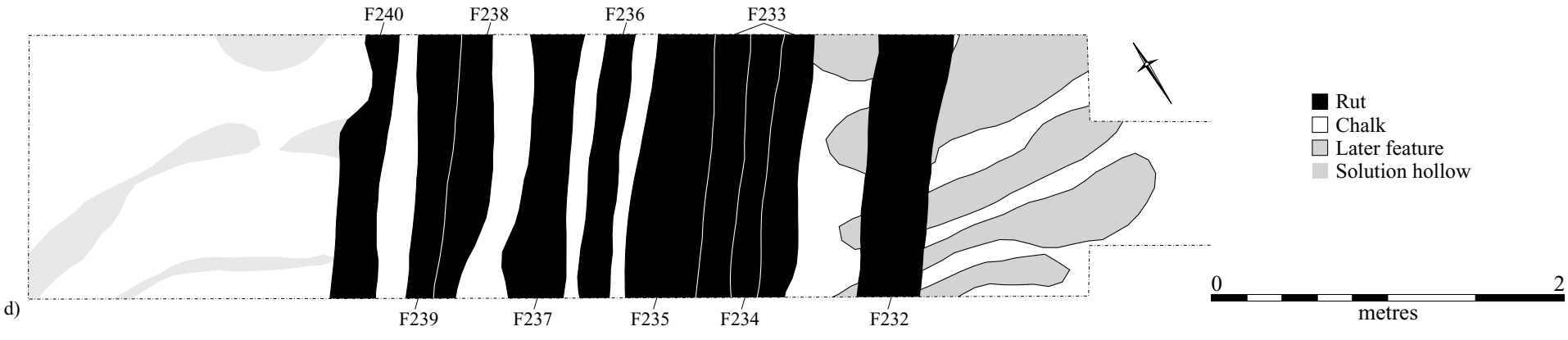


Figure 15; a) Medieval to Post-Medieval roadway metalling; b) Section through roadway; c) Photograph of wheel ruts in Post-Medieval roadway, d)Plan of excavated wheel ruts

DISCUSSION

The Neolithic utilisation of periglacial features across the Granta valley is further attested with 24 worked flints recovered from another hollow during the Soak-away watching brief. This form of flint exploitation, also seen at the nearby site of Granta Park, Abington (Armour 2006a; Brudunell 2004) is in contrast to that witnessed in Norfolk, notably Grimes Grave, and elsewhere, where the mining of flint was required to obtain suitable nodules for tool making. A thin but extensive spread of residual prehistoric flintwork was also recovered from Romano-British and later features. The flint bore characteristic working patterns of prehistoric activity from the late Mesolithic to the Bronze Age.

This 'background' presence now seems to be a ubiquitous element of excavations, regardless of period, across the Babraham Campus. How this activity relates to prehistoric settlement at Babraham remains uncertain and may represent only ad hoc utilisation of an easily accessible resource. Importantly, the site and immediate area appears to lack any current evidence of Bronze Age and Iron Age field systems and settlement, despite the close proximity of evidence for activity in the wider environs (see Evans *et al*. 2006, 2004). The recovery of quantities of burnt flint from Romano-British features close to the Granta River give further circumstantial evidence that Bronze Age burnt mounds may be located along the river valley.

There is still no evidence to suggest that an Iron Age settlement was located within the Campus area. This reinforces the view that the ARES Site excavation enclosure and its building, attributed to Phase 2 of the Romano-British period, were new foundations. The few scattered early potsherds found on the ARES Access Road and Car Park excavations also hint at a wider spread of early Romano-British period settlement features. However, with the clear exception of ditch F.201, there seems to be a strong element of potsherd residuality, with earlier material being reworked into later features (Appendix 2). Indeed, examination of the stratigraphic relationship of features suggests earlier deposits are notably lacking in any type of finds. This again fits the picture of a highly localised occupation placed within a largely empty landscape.

The ARES Site evidence supports an early 2nd century AD shift in settlement focus and a possible change of use for Structure A (farmstead to barn/cattle-shed/stables) concurrent with a re-organisation of the earlier enclosure system to infields or paddocks of the settlement. If this is the case, it poses the question of whether Structure C and the enclosures (ARES Access Roadway) actually represent the new core of the settlement or whether it is just one of several dispersed settlement foci. Ultimately, the answer to this lies in further fieldwork as the recent excavations offer only a limited area for analysis. However, it can be stated that although the area is small the results are remarkably consistent with those already seen.

Many settlement sites show growth from the beginning of the 2nd century. This is often displayed in the creation of small rectilinear enclosures within the settlement core, such as at the Vicar's Farm site (Lucas 2001) or the establishment of completely

new enclosure systems as seen at Langdale Hale (Evans *et al*. forthcoming). Historically, this may be a result of the Roman military consolidating their grip on the province; by the early to mid 2nd century AD Roman Civil administration and economic structures had been fully introduced into Southern Britain. At the Addenbrookes site this period saw the displacement of the original inhabitants and re-organisation of what had previously been settlement into a system of fields. Towards the south, the 1st century AD fort at Great Chesterford provided the basis for the foundation of a new town in the early second century. It thus seems that a re-organisation of the Romano-British hinterland of south-eastern Cambridgeshire was occurring and Babraham was likewise affected.

These latest investigations have helped illuminate the range of the infield and outfield systems as well as introducing the first concrete evidence of a presence on the western bank of the current Granta River. It seems evident that the valley floor was used intensively during the early to mid Romano-British phases. The outfield systems appear to have been established early, perhaps initially as a statement of ownership, and then been developed and subdivided to encompass different needs. Some of these enclosure ditches can now be followed across the various sites for several hundred metres. Quarrying for sand and gravel also appears to have been a common activity, perhaps explained by the creation of hard standing and causeways through the boggy areas of the valley (Regan 1995; Timberlake and Armour 2007).

It is likely that as the 2nd century progressed into the 3rd century the economic basis and status of Babraham remained similar to those of other similar sites (Armour *et al*. 2007). Even though the environmental evidence for cereal processing diminishes during the 2nd and 3rd centuries AD, quern stone fragments were also found within the locality of Structure C, indicating that cereal processing continued on site. However, as before, this suggested that quern stone was being removed and deposited away from the primary cereal processing areas. There is very little evidence to suggest that this kind of activity was taking place on or near the ARES Access Road and Car Park excavation areas. As a comparison, the quantity of quern recovered indicates a similar or higher scale of processing to that seen at Vicar's Farm and Orton Hall (Lucas *et al.* 2001; Mackreth 1996). Therefore, it must be concluded that the primary location of this activity is yet to be established at Babraham. The shift towards animal and stock rearing can still be seen, with horse forming a significant proportion of the faunal assemblage, from the 2nd century AD onwards, although cattle remain dominant (Appendix 8). If anything an even higher proportion of horse bone was recovered from the ARES Access Road site, accentuating the importance of horses to the settlement's economy.

The reason for this apparent change in stock management may be accounted for by the discovery of the Roman trackway or road that cuts across the eastern part of the enclosure system. The foundation of this road does not appear to be related to the early 2nd century AD re-organisation of the settlement. It shares no spatial affinity with the enclosures and field system set out at that time and was probably established close to the beginning of the 3rd century (Appendix 2). The precise interpretation of this roadway is complicated by the later truncation, but it appears to have been adopted as a popular route and the wear it received as a result eroded away most of the original features. Hence we cannot say with certainty that there was an '*agger*', or revetting with the eastern flanking ditches truncated to stubs at the north of the site

and entirely quarried away to the south. As a result, it is difficult to gauge whether this was a high status or military road, the re-routing of a local track or the formalised adoption of a farmers drove-way.

We cannot easily date the abandonment of the Structure C occupation area. Certainly, it appears to go out of use by the end of the 3rd century AD, and probably earlier. This is not necessarily an effect of the construction of the road, but it appears that there was simply no will to renew this occupation area; perhaps it was easier to start again elsewhere. At some point, river flooding must have adversely affected the agricultural regime of the immediate area, with the valley floor becoming untenable, thus making re-location more attractive. However, in certain areas we can see a re-establishment of field boundaries at this later period and it may be that land use or ownership changed. This decline and change to the field system seen at Babraham is reflected on other rural sites in Cambridgeshire, for example the Camp Ground, Earith (Evans *et. al* forthcoming), where a more 'organic' system of field boundaries and enclosures develop from an earlier more 'formalised' system of land division from the mid 3rd century onwards.

After the abandonment of this area it appears that some time later, probably much later, the uneven ground created by a concentrated group of ditches, pitting and building remains was classified as wasteland and levelled off. The ARES Site excavation identified the uppermost deposit of Hollow B as an abandonment layer, and posed the question whether this held any special significance or was a piece of damp ground simply used for dumping rubbish. The discovery of further instances of middening involving relatively large quantities of 2nd to 3rd century Romano-British pottery intermixed with smaller proportions of 3rd to 4th century wares and associated plus some late Roman coinage tends to point towards the latter.

We must consider whether this dumping of material represents an opportunistic middening in areas of marginal utility due to a change in the environment, or a deliberate attempt to level up elements of the landscape where previous activity has left undulating terrain. Any landscaping for aesthetic purpose seems counter-intuitive, suggesting a more practical reason for such dumping or levelling. The crux of the matter is the apparent lack of nearby later Romano-British occupation to source the creation of midden type deposits. The pottery assemblage strongly suggests the re-working of deposits created during the main 2nd to 3rd century occupation activity, with the addition of small quantities of later 3rd to 4th century pottery and significant amounts of later Roman coinage. This tends to argue against a stratified sequence of deposition, but rather a re-organisation of the landscape involving the movement of large quantities of spoil. What we miss from this picture of the Babraham sites is a focus for the later activity.

This inevitably raises the question of a source for the ceramic building materials also associated with these later deposits. The ARES Access Road and Car Park excavations produced material representing almost every type of tile available at the period and, interestingly, the first instance of *opus signinum*. Examination suggested it was an example of hydraulic mortar with crushed ceramic pozzolanic additives to aid setting. This type of mortar is commonly associated with hypocaust systems and higher status buildings. The Romano-British structures so far identified at Babraham are very unlikely to have had any of these materials forming a significant part of their

fabric. The conclusion must be that the later Roman coinage, pottery and high status building materials are associated with and being brought into the area from a location as yet undetermined, a site probably containing a villa-like structure or associated building, such as a bath house. Presently this remains pure speculation, but at least this suggests that the ARES site may represent a nearby settlement or farmstead connected to an estate.

The coinage in particular is of interest as it covers the age of the Western Empire, formed by Diocletian in AD 286, lasting to the end of Roman Britain. The period brought a devalued monetary system, barbarian invasion and internecine warfare amongst the Roman ruling classes, destabilising the empire. However, economic growth in Britain was generated though the supply of grain and other material assistance to the continent leading to the creation of large estates and piecemeal renewal of the larger private, military and civic structures (de la Bedoyere 1999). One might see the walling of the town at Great Chesterford as a part of this trend and not just a result of Saxon raiding along the British coastline. It seems probable that the coinage found at Babraham is a result of this economic growth, perhaps through trade in grain or supply to the military. The coinage was, however, worthless by the end of Roman Britain and was probably discarded freely towards the end of the fourth century (Reece 1988).

The one probable exception to this coin assemblage are the four Magnentius coins recovered from ditch F.41. Firstly, they were discarded within a feature rather than a layer of midden material and, secondly, they were found in a concentrated group rather than a scatter. This is a remarkable find in many ways as the coins can only have been minted between 350 and 353 AD and were of limited distribution. Furthermore, Constantius II purged the British supporters of Magnentius (de la Bedoyere *ibid.*) so perhaps they were discarded on purpose, although this doesn't explain the presence of three coins of other issues found associated with them. What seems more certain is that as a whole, the coins represented are of small, near worthless, denominations more closely related to market trading or religious tokens than the silver and gold used in commerce.

The Romano-British occupation currently appears to fall largely into the category of rural sites within the region; founded in the mid 1st century AD as a new concern then abandoned, re-created in the early 2nd century then expanded, declining through the 3rd century and finally being re-ordered again in the late 3rd and early 4th centuries AD. There are still some things that stand out. The greater concentrations of horse in the faunal assemblage; the lack of a substantial focal point in the 2nd and 3rd centuries and the late Roman coinage associated with what appears to be a vigorous re-working of the land in the 4th century AD.

The line of the Roman road appears to have been preserved through the medieval period and still used as such. It seems possible that this stretch of road is part of a longer road mentioned in a medieval itinerary as being part of the Icknield Way (Wilkes & Elrington 1978), which ran north towards Copley Hill. However, the alignments do not seem to particularly confirm this. The medieval enclosures and trackway identified in the ARES Site excavation appear to be aligned almost at right angles to the line of the road. An expansion of the village in the 12th and 13th centuries AD is seen in tenant records and it is possible that the activity recorded in the Campus

Access Road evaluation relates to this growth. The discovery of a series of pits closely dated to the 12th and 13th centuries AD could represent some form of occupation at that period, perhaps of tofts and crofts with frontages aligned along the old trackway? Further excavation is necessary to confirm this interpretation. Unfortunately, the construction of the Calcutta Buildings in the 1950s may have truncated much of this evidence.

The main Cambridge to Linton road (A1307) was a post-medieval addition to the landscape, built in the mid 18th century (Butcher 1953) and made into a turnpike road in 1766 (Wilkes & Elrington *ibid.*). Prior to this, the Roman 'Worsted Street' was the principal east to west route and so it seems probable that the road joined it at some as yet undetermined point. This would explain the large quantity of metalling, rutting and wear that the road appears to have received as most traffic would have had to used the road to get to Bourn Bridge, a well known staging post. However, with the 1830s construction of Babraham Hall and various estate improvements this became redundant and was replaced by a new estate road.

The discovery of medieval features and road has begun to fill gaps in the history of Babraham. There appears to be a conservation of road alignments that is not yet fully understood but which seem to have more to do with ancient precedence than Manorial endeavour. Several questions remain to be answered, particularly the southern projection of the roadway, its relationship with the church and the comparative lack of activity after the 14th century AD.

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APPENDICES

*Appendix 1: Flint (*Emma Beadsmoore*)*

Car Park Excavation and Watching Briefs

A total of 126 (<2478g) flints were recovered from the sites; 71 (<1265g) were worked and unburnt, 3 (<44g) were worked but also burnt, whilst 52 (<1169g) were just burnt. The flints are listed by feature and type in Table 1.

	Type															
Feature/ context	chip/chunk	secondary blade	primary flake	secondary flake	tertiary flake	irregular core	single platform ccore	two platform core	core fragment	multiple platform core	core rejuvenation flake	burin	retouched and worn flake	edge used flake	unworked burnt chips/chunk	Totals
layer C	4		1	5	4				2							16
layer D			2	4	1				1							8
151	1				2											3
154				2		1										3
155		1								1						2
157				2									1			3
161												1				1
164				1												1
167					1											1
169					1											1
170				1												1
175				1												1
179				3	1										41	45
188	1															1
201				1												1
211	1			2												3
215					1											1
[500]			1	7	2										11	21
stray	3			3		2	1	2			1			1		13
Sub totals	10	1	4	32	13	3	1	2	3	1	1	1	1	1	52	126

Table 1: Flints recovered from the sites

Layers [03] and [04] from the Soak-away watching brief yielded 24 flints, comprising flint working waste and flake blanks. No clearly chronologically diagnostic flints were recovered from the layers. However, a few of the flakes and a core fragment had traces of systematic flake production/core reduction, characteristics prevalent in Neolithic flint working strategies. Stray finds recovered from near the layers also include material with some traces of systematic flake production/core reduction, particularly a utilised Neolithic flake and core rejuvenation flake. However, the majority of the material was chronologically non-diagnostic, and several of the flints were the products of expedient, potentially later prehistoric flint working.

A further 21 flints were recovered from a Roman floodplain silt [500] sampled in the Bridge Casement 2 watching brief, however the flints from this were all chronologically non-diagnostic, often damaged and/or broken, with 11 (193g) unworked burnt chunks amongst the material.

The remaining 68 flints were all recovered from archaeological features sampled within the Car Park Excavation (F.151-F.170 and F.188–F.215) and Bridge Casement watching briefs (F.175-F.179). A pit (F.155) at the south end of the Car Park yielded two Neolithic products of systematic flake production/core reduction; a flake blank and a multiple platform core. However, all of the remaining material from the above sites were recovered from Romano-British and medieval features. The Romano-British ditches yielded a mixture of expediently and systematically manufactured material. A Late Mesolithic/Early Neolithic burin, and several Neolithic flakes and a blade provide evidence for earlier background activity at the site, residual in later features. Expedient flint working, focused simply on the production of flakes regardless of morphology or the use life of the core, was prevalent from the Middle Bronze Age onwards. Hence the more expediently manufactured material recovered from the Romano-British ditches is potentially later prehistoric. The medieval features yielded limited and chronologically non-diagnostic material, providing further support for background prehistoric activity at the site.

The flint recovered from the sites provides evidence for Neolithic activity; a potentially prehistoric pit and layered deposits both yielded Neolithic material. However more expediently manufactured, potentially later prehistoric flint was also recovered from the layers suggesting that they may have contained chronologically mixed material. Further evidence for background Neolithic activity was provided by residual material inadvertently incorporated in later, Romano-British features. Although, more expediently manufactured material from those features is potentially later prehistoric.

ARES Access Road and Campus Access Road

A total of 33 (<182g) flints were recovered from the site(s), 30 (<157g) were worked, whilst 2 (12g) were worked and burnt and 1 (12g) was unworked but burnt. The flints are listed by feature and type in Table 2

The majority of the flints (25 out of 33) were residual within later Roman and medieval features. These came from the Campus Road excavation to the east of the Car Park (F.68 - F.70 and F.99 - F.100) and from the roadway evaluation trenches to the south of this (F.50 - F.64 and F.74 – F.77). The material comprises flint working waste and five utilised flakes. A few of the waste flakes and blades are the products of systematic flake production/core reduction strategies prevalent during the Neolithic. Further evidence for Neolithic activity was provided by a serrated utilised flake, a type of retouch found in Neolithic assemblages. However, the majority of the material is chronologically non-diagnostic. The remaining eight flints were recovered from a palaeo-channel, and are potentially broadly contemporary with this feature; however all of the material is chronologically non-diagnostic flint working waste.

Feature/ context/ test pit	Type: chip/chunk	tertiary blade	secondary flake	tertiary flake	single platform ccore	retouched flake	edge used flake	serrated flake	flake knife	unworked burnt chunk	Totals
F. 50			1								1
F. 51				1							1
F. 54			1								1
F. 61							1				1
F. 62	1		4	3							8
F. 63	1	1	3	2							7
F. 64			1	1							2
F. 66		1						1			2
F. 68						1					1
F. 69						1					1
F. 70				1							1
F. 74			1								1
F. 77							1			1	2
F. 99					1						1
F. 100	1		1	1							3
Sub totals	3	2	12	9	1	2	2	1	0	1	33

Table 2: Flint types and quantities

The flint provides evidence, albeit limited, for background prehistoric activity at the site, with evidence for Neolithic flintworking amongst it.

Appendix 2: Roman Pottery (Katie Anderson)

ARES Access Road

A total of 610 sherds of pottery, weighing 7779g and representing 11.78 Eves were recovered from the Roadway excavations (RCB05). All of the pottery was examined and details of fabric, form, decoration, Eve and date were recorded. For the purposes of this report, only specific features are discussed in detail

Feature Assemblages

F.15

248 sherds, weighing 3624g and representing 4.06 Eves, were recovered from Feature 15, a large pit. 100 of these were surface finds and included a number of large, unabraded sherds such as two Nene Valley mortaria sherds and one Baetican amphora sherd (2^{nd} -3^{rd} century AD). Context [163] contained 48 sherds (610g), including two Nene Valley wares, one of which was a mortaria (2^{nd} -3^{rd} century AD), although a different vessel from the one recovered from the surface of this feature. The was also one Eastern Gaulish Samian sherd from a Dr33, dating to the early 3^{rd} century AD.

Context [167] contained 100 sherds, weighing 704g, which also dated 2^{nd}- 4^{th} century AD. This included 14 Nene Valley colour-coated sherds, most of which were relatively small, thus no vessel form could be identified. Three Eastern Gaulish Samian sherds were recovered, from a Dr33, although they do not refit with the sherd from [163]. There was also one Colchester Samian sherd, dating to the 2^{nd} - 3^{rd} century AD.

Overall there is no apparent difference in date between the material from the two contexts and the pottery collected from the surface. This therefore implies that the feature was back-filled within a relatively short period of time, or that the sherds may have been redeposited. This interpretation is partly supported by the condition of the sherds, many of which were small and fragmented, however there is also a significant quantity of larger, fresher sherds which are unlikely to be redeposited.

F.22

41 sherds, weighing 221g and representing 0.46 Eves were collected from four different contexts, as well as the surface of Feature 22, a gully. Context [099] dates to the 2^{nd} - 4^{th} century AD, and included five Hadham oxidised wares and two Central Gaulish Samian sherds, although both were non-diagnostic. Context [100] included one Oxfordshire whiteware mortaria, dating to the 3^{rd} - 4^{th} century AD. This highlights the assumption that there is no obvious difference in date between the fills of this feature.

F.30

26 sherds weighing 221g and representing 0.46 Eves were recovered from three different contexts and from the surface of a pit (Feature 30). This included five Hadham oxidised wares from context [099], one of which was a beaded rim, although the exact vessel form could not be determined. However, the sherds themselves can be dated 2^{nd} -4^{th} century AD. Context [100] contained just one sherd, an Oxfordshire whiteware mortaria dating to the 2^{nd} - 4^{th} century AD. Context [101] contained 11 sherds, which included one colour-coat and seven oxidised sandy wares, all of which were non-diagnostic, therefore could not be dated any more specifically than to the 2^{nd} -4^{th} century AD.

F.31

Feature 31, a ditch, contained 30 sherds of pottery weighing 297g and representing 0.38 Eves. Context [086] contained 20 sherds, which included two Hadham oxidised wares (one of which was from a shallow 2nd – 3rd century dish), one Nene Valley colour coat, and four shell-tempered sherds. A further ten sherds were collected from the surface of the feature, including one Pakenham colour-coated sherd with embossed decoration and two Nene Valley colour-coats (2nd -4th century AD).

F.32

14 sherds (332g) were collected from two fill contexts and the surface a ditch (Feature 32). This included sherds from two Hadham oxidised wares, along with three sandy greyware jars. One non-diagnostic Nene Valley colour-coat was also recovered. All of the pottery from this feature is 2nd -4th century AD in date.

F.33

33 sherds weighing 505g and representing 0.63 Eves were recovered from a large pit, Feature 33. Context [051] contained 21 sherds. This included four Nene Valley colour-coated sherds and one red-slipped ware, dating to the 2nd - 4th century AD. Context [052] contained ten sherds, including one rim sherd from a possible butt-beaker dating to the mid-1st century AD. The remaining nine sherds were also early Roman in date (mid-late 1st century AD). This feature is therefore interesting, because it is one of the only features to contain Early Roman pottery, and is also one of the few features on site to show a clear stratigraphical difference between the different contexts.

F.39

Four sherds of pottery weighing 22g were recovered from Feature 39, a posthole. This comprised two oxidised sandy wares and one micaceous reduced ware, all of which are early Roman in date (mid-late 1st century AD). There was also one prehistoric flint tempered sherd, which is likely to be residual.

F.36 & F.40

Two other postholes contained small quantities of early Roman pottery, not unexpected given the nature of the feature. Feature 36 contained one shell-tempered sherd dating to the mid 1st -2nd century AD, while Feature 40 contained one black-slipped body sherd which also dating to the mid 1st -2nd century AD. This feature cuts an earlier posthole, Feature 41.

F.34

98 sherds, weighing 1069g and representing 2.51 Eves, were recovered from five contexts within the ditch, Feature 34. Context [178] contained just one sherd of pottery, dated as Late Iron Age/Early Roman, although it was relatively small and abraded, suggesting that it could be residual. Context [183] contained 14 sherds weighing 145g, which included one beaded-flanged bowl (3rd -4th century AD) and two decorated Nene Valley colour-coated sherds. 41 sherds (459g) were collected from [198], including three Nene Valley colour-coats, five Hadham oxidised wares and one Pakenham colour-coats, all of which dated to the period 2nd - 4th century AD. Contexts [172] and [200] contained similar pottery types which also date to the 2nd - 4th century AD.

This therefore is yet another feature which displays no clear difference in date between the different contexts, implying either rapid deposition or redeposition of material.

F.45

Feature 45, a small pit, contained three sherds of pottery weighing 54g. This consisted of one micaceous reduced ware base sherd and two sandy greywares which were non-diagnostic. The three sherds are all early Roman in date, and although no vessel forms could be identified, the fabrics suggest a mid-late 1st century date.

Most of the pottery recovered from this excavation consisted of small, fragmented moderately abraded sherds. This therefore made vessel form identification problematic. The assemblage was dominated by coarsewares, in particular sandy greywares, representing just under 50% of the whole assemblage. Locally made shell-tempered wares were also relatively common, with 63 sherds in total. This shows that the assemblage is primarily domestic in nature, an interpretation supported by the useware evidence for sooting and burnt residus found on a number of the sherds.

A range of fineware sherds were also present, although collectively these only accounted for 15% of the total assemblage. Nene Valley colour-coats were the most commonly represented forms with 37 sherds, the majority of which were non-diagnostic. 24 Hadham oxidised wares were also recovered (dating 2nd -4th century AD), but only three Colchester sherds, the latter consisting of two colour-coats and one imitation Samian.

Imports were represented by just seven sherds; four East Gaulish Samian sherds (all Dr33), two Central Gaulish Samian sherds and one Baetican amphora sherd.

In terms of fabric and form the pottery is comparable to the material recovered from the RCB05 (ARES site) excavations (Armour et al. 2007). Although the earlier material is virtually absent from this assemblage, the later material shows a continuity of sources.

The bulk of the pottery dates to the mid-late Roman period (2nd -4th century AD), with only 17 sherds that are earlier. Amongst these were fourteen mid-1st to 2nd century AD sherds, one Late Iron Age/Early Roman sherd and two Late Iron Age sherds. This assemblage therefore differs from that of the ARES site, which had a clear Late Iron Age and Early Roman phase of activity.

The small number of pre - 2nd century AD sherds were mostly residual, such as those from Feature 8 which contained two mid-late 1st century AD sherds, alongside 16 sherds dating to the 2nd - 4th century AD. There were also a small number of features which contained just Late Iron Age/early Roman sherds (Features 1, 5 and 6). These features contained just one or two sherds each, therefore it is not conclusive as to whether this pot might be residual or not. However, pottery is still the best dating evidence. It shows that a number of the postholes were early Roman in date (mid 1st - 2nd century AD). Furthermore, since Feature 40 cuts Feature 41, this feature is also likely to be early Roman, or conceivably Late Iron Age/early Roman in origin

The only other features on this site that appear to have been dug in the early Roman period were a number of small pits scattered across the site (Features 5, 6, 33 and 45). The enclosure (field) systems appear to date to the 2nd century AD, at the earliest.

A significant number of features had pottery from different contexts which were indistinguishable in date from one another. There may be a number of explanations for this, including a rapid back-filling process and re-deposition. One reason might be that many of the pottery forms and fabrics were fairly generic, and given that much of the assemblage consists of small, abraded sherds, the ability to date more specifically than the 2nd - 4th century AD is problematic.

The area excavated along the ARES Access Road shows little evidence of activity before the mid 2nd century AD, yet since the two excavated areas lie so close to one another, they should perhaps be considered as one site. However, not many of the features line up with one another, indicating that the two areas show two quite distinct phases of activity, with the roadside investigation centred upon the later period of occupation and the ARES Building (ARES site) excavation centred on the earlier settlement.

Car Park Excavation

The site yielded a total of 327 sherds of Roman pottery, weighing 3340g and representing 2.85 EVEs, from a total of 31 different features. All of the pottery was examined and details of fabric, form, decoration, useware, EVE and date (where possible) were recorded.

Assemblage Composition

Coarsewares dominated the assemblage representing 81% (see Table 3). Of this the majority are likely to have been locally made, although the exact sources of many are unknown. Black-slipped wares, coarse sandy greywares and oxidised sandy wares were the most commonly occurring fabric types in the assemblage. There were also two types of shell-tempered wares identified. Shell-tempered ware 1, with abundant shell, was similar in nature to material recovered from other Babraham assemblages (see Anderson in Armour 2006), as well as a number of other sites in the Cambridgeshire region (e.g. Earith (see Anderson in Evans *forthcoming*). Shell-tempered ware 2, however, is noticeably different from the first fabric, having fewer shell-inclusions (although still common), and much thinner vessel walls. This fabric is also likely to be locally made, although a different source is implied. A small number of late grog-tempered wares were recovered, all of which appear to be handmade.

Sourced coarsewares consisted of two Horningsea greywares, one Swanspool white-slipped ware jar, and one Nene Valley greyware, all ranging in date from the 2nd -4th century AD.

Finewares were limited at the site, with Nene Valley colour-coated wares being the most commonly occurring, with 21 sherds, including four beakers and one dish. These vessels ranged in date from the mid-2nd to 4th century AD, with the majority being 3rd - 4th century AD. From further afield there were two Oxfordshire red-slipped wares, including one sherd from a mortaria. Both date to the 3rd -4th century AD. Hadham red-slipped wares were also relatively well represented, with 18 sherds in total, all dating 3rd - 4th century AD.

The only imported ware consisted of one very small, non-diagnostic sherd from a Central Gaulish Samian vessel, which dates the 2nd century AD. This sherd was found alongside later material (3rd- 4th century AD), thus implying it was residual. The lack of finewares on the one hand is quite surprising, since other Babraham excavations (such as the 2005 ARES Building and Roman cemetery site) have yielded more (Armour et al. 2007; Timberlake & Armour *forthcoming*). However, the date when this site appears to peak (3rd century AD) may go some way to explaining this, since during this period the

number of wares being imported into Britain had began to drop (Tyres 1996). However, it should also be considered that the lack of imports is a reflection of the nature and/or status of the site.

Fabric	No.	Wt(g)
Black slipped ware	52	433
Central Gaulish Samian	1	1
Coarse sandy greyware	47	560
Fine sandy greyware	5	53
Grey-slipped ware	3	23
Grog tempered	3	231
Hadham red slipped	18	165
Horningsea greyware	2	187
Micaceous black-slipped	5	106
Nene Valley greyware	5	106
Nene Valley colour-coat	21	92
Oxfordshire red slipped	2	8
Oxidised sandy ware	56	585
Red-slipped	2	39
Reduced sandy	8	15
Shell-tempered 1	13	128
Shell-tempered 2	11	83

Table 3: All Roman pottery by fabric

Jars dominate the vessel forms, as is typical of rural Roman settlements, representing 83% of all diagnostic sherds. The number of other vessel forms was minimal, although most major types of vessel were present. This comprised of seven beakers, five dishes, three bowls, two mortaria, one flagon and one lid. A number of the sherds did show evidence of interior and/or exterior sooting suggesting that they had been used for cooking.

Feature Analysis

Car Park Excavation

Features 151 and 152 were two roadside ditches, through which several slots were dug. However, the quantity of pottery recovered was very small, with Feature 151 yielding 14 sherds, weighing 67g and Feature 152 containing just four sherds of pottery, weighing 18g. Pottery from Feature 151 included four non-diagnostic Nene Valley colour-coated sherds, dating mid 2nd-4th century AD, one of which had a painted white dot decoration. There was also a hooked rim mortaria dating to the 2nd -4th century AD and two shell-tempered sherds of the same date.

The pottery recovered from Feature 152 also included three Nene Valley colour-coated sherds from a straight-sided dish dating to the 2nd -3rd century AD. In addition, there was also one sherd from a Swanspool white-slipped jar dating to the 3rd -4th century AD. The small quantity of sherds recovered from these two features is quite surprising, given that numerous slots were dug, a greater volume of pottery may be expected.

A number of other features run alongside and/or are cut into or by the two roadside ditches, though only a small number contained pottery.

Ditch Feature 187 contained a relatively large quantity of pottery with 37 sherds, weighing 706g. The bulk of the pottery dates 3rd -4th century AD, although there were a small number of slightly earlier sherds (2nd -3rd century AD) which may be residual, or else may be curated vessels. The material included five Nene Valley colour-coated sherds, of which there were two different beakers, along with

eight Hadham oxidised wares, including two jars. There were also two sherds from a large Horningsea greyware storage jar, as well as one large handmade, grog-tempered sherd.

This ditch appears to be cut by another ditch, Feature 191, which contained five sherds of Roman pottery weighing 55g. This also included one Hadham oxidised ware sherd dating to the 3rd-4th century AD. The remaining four sherds, however, were slightly earlier in date (2nd -3rd century AD), suggesting that the Hadham sherd may have been intrusive.

Feature 199, a ditch/gully, contained two black-slipped body sherds, dating to the 2nd -3rd century AD, suggesting this feature may be earlier than the road. Feature 195 another ditch/gully running towards the road contained one Sandy greyware sherd dating to the 2nd - 4th century AD.

Three sherds of pottery were recovered from Feature 166, a ditch running into Feature 151. The pottery consisted of one sandy ware which could only be dated Romano-British, and two shell-tempered wares which appear to be handmade and are possibly Late Iron Age in date.

Building/ Gully and Pit Cluster

A cluster of several pits and gullies, probably associated with a building (Armour *pers comm*.) were excavated in the southeast corner of the site. However, only four of these contained any pottery.

Feature 156 was the only pit in this group with finds of pottery, comprising of just one red-slipped body sherd, which dates 2nd - 4th century AD. Feature 163, a small gully, also contained a single sherd of pottery, consisting of a non-diagnostic shell-tempered ware which could only be dated 2nd - 4th century AD. Another gully, Feature 164 contained three sherds of Roman pottery, two sherds of Shell-tempered ware 2 and one sherd of Shell-tempered ware 1. All three sherds were non-diagnostic and thus are dated 2nd - 4th century AD. The only feature in this cluster found to contain a larger volume of pottery was Feature 161, another gully, which contained 11 sherds of Roman pottery. This included a handle from an oxidised sandy flagon, two shell-tempered sherds and a micaceous black-slipped ware sherd. The pottery from this feature also broadly dates 2nd - 4th century AD.

Overall the features within this cluster contained only a small quantity of pottery, which is not unusual for features associated with buildings. The pottery could only be dated 2nd -4th century AD, since there were no forms or fabrics which enabled closed dating. However, the pottery from all four features is broadly of the same date, confirming that these features are likely to have been dug and/or backfilled at approximately the same time.

Feature 201

Feature 201, the butt-end of a ditch, stands out in terms of pottery it contained from all the other features on site. Firstly, the quantity of material recovered was large; this consisted of 83 sherds, weighing 924g, thus representing c. 33% of the total site assemblage. Secondly, the date of the pottery it contained was quite specific, this comprised almost entirely of mid 1st century AD material. Although a relatively large number of sherds were present, only seven different vessels were represented. This included one black-slipped lid-seated bowl or dish and one rilled jar which had approximately 75% of the rim present along with 34 body sherds. There was also a wide mouth carinated jar in a micaceous black-slipped fabric, along with a sandy greyware carinated lid, and two black-slipped beaded rim jars. The remaining vessel was an oxidised sandy storage jar. A number of the sherds had sooting evidence, consistent with being placed over a fire.

Since all of the pottery dates to the mid–1stcentury AD (Pre-Flavian), and the sherds are in relatively good condition, the suggestion is that this represents the actual date of the feature, and that none of this was redeposited. The feature was located on the southern edge of the site, with only a small section of it revealed during the excavation. This might help explain its isolation as the only early Roman feature in this area. The lack of other pottery of a similar date, or of material which bridges the gap between this early feature and the predominant 3rd century AD assemblage, suggests that this area was not being utilized during the earlier Roman period. The location of this solitary feature implies that the earlier settlement may be situated to the south of this area.

Middening Layer [571] (covering F.186 – F.191)

72 sherds of pottery, weighing 589g were recovered from the layer [571]. The pottery from the layer was of mixed date, including one Central Gaulish Samian sherd, dating to the 2nd century AD. However, the bulk of the material was later Roman (3rd - 4th century), and included five Nene Valley colour-coated sherds, eleven Hadham red-slipped wares, and one Oxfordshire red-slipped mortaria sherd, all dating to the 3rd -4th century AD. The pottery from this layer was small and much of the material was badly abraded, especially the slightly earlier sherds. This suggests redeposition, or perhaps given the nature of this layer, these sherds may have lain exposed on the surface, hence their abraded state.

The quantity of material recovered, although relatively small, is in keeping with the pottery recovered from previous excavations. Coarseware vessels dominate, and are most likely to have been made locally, suggesting this is a fairly typical rural Roman domestic assemblage.

The size of the sherds was generally small and the level of abrasion was relatively high, indicated by the low EVE count. This raises the possibility that some of the sherds may be residual within later medieval features. However, another explanation is that their condition does suggest that they may have been on the surface for some time before being deposited in the features.

The vast majority of sherds date to the 2nd - 4th century AD, with a definite peak in the 3rd century AD. The exception to this was the pottery recovered from Feature 201, which consisted entirely of early Roman sherds (mid-1st century AD). Although there is evidence for later activity, the pottery suggests that the site had already started to decline by the 4th century. However, this could just have been the result of a shift in settlement focus.

Other work carried out at Babraham has revealed activity from the early to late Roman period (Armour 2006), with a possible decline in terms of pottery supply, coming at the end of the 3rd /early 4th century AD (see Anderson in Armour 2006). This implies that a wide area was being utilized throughout the period of Roman occupation, however the specific area investigated in this report seems to reflect a shorter time span from the mid-2nd through to the late 3rd or early 4th century AD (with the exception of Feature 201).

The roadway is clearly the dominant feature of this area, and the pottery evidence suggests that it was constructed in the late 2nd to early 3rd century AD. There were also two areas of intensive activity in the south-east and north-west corners of the site. Although rich in features, they were not rich in finds and thus accurate dating of these areas is problematic. However, those features which did contain Roman pottery appear to be of the same date as the roadway, being broadly 2nd - 4th century AD, with several being more specifically 3rd -4th century AD. The exact stratigraphic relationships are difficult to determine from the pottery evidence, however, it seems plausible that the main focus of activity within this area took place during the 3rd century AD, with some activity both before and after, though not on the same scale. Given the pottery evidence from other areas it seems probable that occupation was centred elsewhere.

Appendix 3: Roman Tile (Katie Anderson)

ARES Access Road

39 pieces of Roman tile, weighing 6604g were recovered from 13 different features on the site. All of the material was analysed and details of fabric and form were noted, along with any other information deemed significant.

Feature 30 contained six tile pieces (601g), including four *tegula* pieces and one *imbrex*. Twenty-six sherds of Roman pottery were also recovered from this feature, dating 2nd - 4th century AD, suggesting a similar date for the tile. Ten pieces were collected from Feature 31, weighing 1775g. This included two *tegula*, two *imbrex*, three box-flue tiles and one floor tile. This feature also contained 30 sherds of Roman pottery, dating 2nd - 4th century AD, which is a likely date for the tile. A half complete *tegula* was recovered from the surface of Feature 15, weighing 2979g and measuring 150mm wide. This feature, a large pit, also contained 248 sherds of pottery, including 100 sherds on the surface, which dated to the 3rd - 4th century AD, suggesting this is an appropriate date for the tile.

All four major tile forms were represented in this assemblage, in varying quantities (see Table 4). Two of the tiles had sooting on one side, although whether this took place while the tile was *in situ* or after deposition is difficult to assess. There was also one floor tile with a small amount of plaster on one side.

	No.	Wt(g)
Box Flue	3	272
Floor	3	891
Imbrex	4	357
Tegula	15	4324
Unknown	14	760
TOTAL	39	6604

Table 4: All tile by form

Three main fabric groups were identified;

i) A moderately coarse sandy fabric with moderate to common white, calcareous inclusions.
ii) A moderate to coarse sandy fabric with occasional to moderate inclusions of red iron.
iii) A coarse sandy fabric with no other visible inclusions.

There were other fabrics, which were similar in composition to fabric iii, with rare inclusions of small stones, or clay. However, these only accounted for a small number of fragments in the assemblage.

Overall, although the quantity to tile recovered was relatively small, the variety of forms and the large size of many of the pieces indicates at least one building in the vicinity, although the archaeology has yet to find its exact location. Dating the tile is quite problematic, however, its presence alongside 2nd - 4th century AD pottery, suggests that any building is likely to be earlier in this sequence, since its deposition only came after it had ceased to be used on a building.

Appendix 4: Building Stone, Burnt Stone and Worked Stone (Simon Timberlake)

Burnt Stone

ARES Access Road

<229> F.52 [171]

Two irregular lumps of burnt quartzitic sandstone, approximately 100 mm in diameter. One of these is coarser gained and ortho-quartzitic. Apart from fire-reddening, perhaps relating to their incorporation within a hearth surround, there is no particular evidence of use. Possibly sarsen or Kentish Ragstone, perhaps another source from further afield. These may well have been erratic stones collected from the local glacial drift.

<213> F.67 [151]

Two smaller lumps (80 mm diameter approx) of rather similar quartzitic sandstone(s), evidently burnt and cracked fragments of rock. The slightly darker (grey) coloured sandstone-siltstone with micaceous partings along the bedding may be Jurassic or Cretaceous. Once again, not a quarried stone, instead probably collected from the local glacial drift.

<272> F.15 (surface finds)

Four fragments of burnt sandstone, of at least two different types. The reddish slab with soot marks on the underside is of a bedded and moderately well-sorted felspathic sandstone, possibly of New Red or Old Red Sandstone, perhaps from a West Midland or Yorkshire origin, but transported glacially and collected locally. Perhaps associated with a hearth, or else used as for cooking.

<198> F.54 [125]

One large fragment of burnt (and heat fractured) stone; a coarse sandstone grit with a ferruginous and part calcareous cement and minor amounts of mica. Possibly Lower Cretaceous, perhaps Lower Greensand or ‘carstone’. Probably collected from the glacial drift or gravels.

<195> F.57 [120]

Four pieces of burnt and fractured stone, possibly associated with a hearth, perhaps used for cooking. Includes one piece of fire reddened, but already patinated sub-angular flint collected from the local gravels, a split pebble of quartzitic and micaceous flaggy sandstone, a small very weathered pebble of what is probably Millstone Grit (Upper Carboniferous), and a broken clast of quartz-biotite gneiss, the latter probably of Scottish or Scandinavian origin. The three rocks are erratics and will have been derived from the local boulder clays; perhaps collected from amongst the terrace gravels.

<257> F.22 [206]

Two small fragments of burnt sandstone (perhaps Lower Cretaceous).

<187> F.9 [113]
One fragment of burnt stone. A hard indurated and slightly micaceous quartzitic sandstone, possibly a sarsen or else a Lower Cretaceous Ragstone. Part of a weathered slab, probably an erratic.

<172> F.30 [99]

One broken, perhaps burnt fragment of an ex-Bunter (Trias) quartzite pebble; an erratic from the Boulder Clay or river gravels.

A small selection of burnt cobbles composed of rather similar types of quartzitic (hard and well cemented) sandstones which must have originated as erratics, probably collected from the gravel terraces of the River Granta close to Babraham. The similarity of this material, particularly amongst the larger cobbles, suggests that these 'rock types' (as opposed to the ubiquitous flint) may have been collected specifically for use as hearth surrounds or as cooking stones. However, it seems impossible to extrapolate further on this, given both the paucity of burnt stones collected from each individual feature, and also the lack of any *in situ.* contexts. However, the overall amount of burnt flint recovered is small.

Building Stone

<259> F.34 small find no.9

Slab of burnt sandstone (120 x 120 x 45 mm), possibly from the surrounds of a hearth. A very hard flaggy fine grained quartzitic sandstone, slightly banded, with occasional flecks of mica along the bedding planes. Well cemented (silicified). Possibly a sarsen (Lower Eocene) or else Kentish Ragstone (Lower Cretaceous). All the faces on this are rounded and weathered naturally, only the base of this being a split. This may subsequently have been used as a building stone, as there are still some remains of mortar attached to several of the faces.

<264> F.9 (surface find)

One fragment, possibly off the edge of a stone slate, and burnt in one corner. Possibly a coarsely split piece of Collyweston Slate (Lower Lincolnshire Limestone) quarried from around Stamford, Lincolnshire. A small mould of a fossil bivalve is preserved on the split surface. Used as a roofing slate?

<245> F.34 [198]

A small hone stone or sharpening stone, little used. This seems to be part of a broken flat tablet of stone, perhaps originally brought to the site for use as a flooring tile or stone slate, therefore also a building stone. Traces of mortar can still be detected at one end. The rock is of a dense, fine grained sandstone/siltstone with micaceous partings along its bedding, possibly of New or Old Red Sandstone (Triassic or Devonian) from the East Midlands or the North-West. The evidence for its secondary use as a sharpening stone can be seen in the form of straight, shallow grooves, between 5-8 mm wide and 20-40 mm long, perhaps used therefore for sharpening a very narrow blade or point.

There seems to be little evidence for the use of building stone, either local or imported of the site within this, or indeed any part of the Babraham Romano-British settlement. This seems to suggests that wooden and thatch buildings may have predominated; either wooden sill or post-built structures. Mortared stonework and walls may however be associated with some of the foundations. Only one stone with evidence of adhering mortar was found, and this appeared to be a re-used burnt stone, presumably a sandstone cobble recovered from the gravels and originally used as some sort of hearth surround.

One, possibly two broken pieces of coarse (thick) stone roofing slate were recovered; amongst this a single piece of Collyweston Slate (Lincolnshire Limestone) was

recognized. This was quarried near Stamford in Lincolnshire during the Roman period, and is reasonably common as a roofing material associated with slightly better quality and more permanent structures within Cambridgeshire and further north from the 2nd century onwards. However, as a percentage incidence of the building materials then in use at Babraham this is pretty insignificant. Although still small in terms of number of pieces (16) collected, Collyweston Slate and a dark mudstone dominated the building stone assemblage (69%) recovered at Vicars Farm near Cambridge (Hayward in Lucas & Whittaker 2001). Thus this fragment from Babraham may either have been re-used or re-deposited, as suggested by the adherence of mortar and the evidence for burning. Still further evidence for re-use was evident on another sandstone roof slate or floor tile. Apart from adhering mortar, <245> had been also been re-used as a hone or sharpening stone.

The evidence for re-use of materials at this site may provide some clue as to the reason for the absence of building stone. Widespread robbing of stone (as opposed to the excavation of chalk and flint) may have taken place during early medieval times, at that time associated with construction of foundations for wooden houses and the building of St. Peter's Church upon the site of the original medieval village. Further robbing of stone may have been linked to the construction of the post-medieval manor. Extensive stone robbing was also suggested as a reason for the relatively small proportion of building materials surviving at Vicars Farm (Hayward in Lucas & Whittaker 2001)

Worked Stone (quern stones)

<212> F.67 [151] (post-hole)

A small fragment of worked gritstone, probably part of a quern, with one ground surface (stone >60 mm thick). The rock type consists of a layer of coarse felspathic quartzose grit sandwiched in between finer grained grit sandstones along which the faces of the quern were cut. The quartz grains are well rounded, the feldspar angular to rounded, but there are also lithic grains, small spots of hematite and mica with a quartz and felspathic cement. Probably from a fairly coarse band of Millstone Grit (Upper Carboniferous) from which rotary quern stones were quarried and cut in the Pennines of Central/ Northern England. The ground surface of this indicates fairly intensive wear, the quern was probably broken up after having been damaged or worn thin, perhaps burnt to weaken or fracture it, then crushed into many small fragments for use as rubble hardcore, or perhaps in this case as packing round a post-hole.

<176> F.30 [101] (pit) 230 g

A fragment consisting of the outer edge of a thin (2 cm thick) rotary quern stone, which may originally have been up to 300-400 mm diameter with a central axle hole. The upper (?) surface is smooth, possibly ground down, and evidently quite weathered, the lower surface is pitted and slightly ridged, perhaps from the original dressing of the stone. The stone, consisting of a medium-coarse gritstone with a quartz and baritised cement, is probably from the Millstone Grit, and quarried and cut in the Pennines of Central/ Northern England. The stone shows signs of having been burnt, perhaps its re-use as a hearth surround, or perhaps to break it up for use as building rubble after being too worn or damaged for use.

<228> F.52 [171] (ditch) 1032 g

A rim fragment (11 x 14 cm area) of an upper rotary quern stone made of one of the classic Andernach vesicular basaltic lavas imported from the Rhineland, probably Neidermending Lava. The outer rim of the quern has a convex rounded surface and is over 40mm thick, this tapers towards the central axle hole where this it is less than 30 mm. The complete stone may have been 300 mm in diameter, the upper surface of this is fairly neatly dressed, the lower surface is ground flat and well used. The quern stone was probably broken up for use as rubble or building stone after it had been damaged or worn beyond repair. The stone may first have broken in the area of the axle hole. The Neidermending Lava Stone querns were in use from the Conquest Period onwards.

The occurrence and use of imported quern stones at this site has to be looked at in context of the total recovery of either whole, partial or fragmentary querns from the whole of the Babraham Roman settlement. An initial assessment of this suggests that the (whole) site is moderately rich in querns; a significant proportion of these are local beehive-type puddingstone querns from Hertfordshire, but a much higher proportion than expected are of the Millstone Grit rotary querns, with a moderate percentage of the Rhineland Neidermending Lava Stone.

The results of all archaeological work undertaken at Babraham first needs to be fully evaluated before percentages of use of the different imported stones can be properly calculated and compared with both urban and comparable rural sites. However, at first glance it seems that there could be some interesting parallels to be drawn with other Romano-British settlements in South Cambridgeshire such as Vicar's Farm, Cambridge (Hayward in Lucas & Whittaker 2001). Here the high incidence of imported Millstone Grit querns (probably derived from the Southern Pennines) was tentatively linked to the proximity of the Via Devana, and any off-shoots from this, one mile to the north of the site, whilst the presence of German lava stone quern imports, particularly between AD 43-60 , was likewise linked to this road, the stone coming the other direction along it from Camulodunum, one of the centres for its use and distribution within Britain following the long-standing sea trade between here and the continent. Babraham, being so close to the Via Devana and its intersection with the Icknield Way and Worsted Street, both of which pass through, or close-by the settlement would be ideally placed for this trade. Besides, Millstone Grit as well as Hertfordshire pudding-stone querns seem to have pre-Roman origins to their production, as has been noted at Hunsbury hillfort in Central England (Peacock 1987) where utilisation of gritstone querns was significant, whilst Abington Piggotts in Hertfordshire, one of the sources for the beehive pudding-stone querns in the Iron Age, was exploited from the Iron Age onwards (Wilkes & Elrington 1978). This trade may have passed along the Icknield Way; the continuation of a pre-Roman tradition which may still have been commonly adhered to amongst far-flung rural communities. The closest source of Millstone Grit rocks at outcrop was probably around a hundred miles away at Duffield, just north of Derby (Hayward ibid.), whilst Roman-medieval Millstone Grit extraction sites around the edge of the Peak District have been identified at Wharnecliffe Edge and Hathersage (Peacock 1998).

Appendix 5: Slag (Simon Timberlake)

ARES Access Road

<122> F.2 (ditch) layer fill [3] 37g

Small dense fragment of sub-crystalline and slightly vesicular iron slag with slight botryoidal upper surface and uneven lower surface with accreted sand plus iron oxidation products. Slightly magnetic. Possibly associated with a hearth base and a bloom, rather than with a tap slag, thus indicating small-scale production. Possibly not primary smelting. Most probably broken up *in situ.*, or perhaps shortly afterwards (contemporary fractures), then discarded.

<134> F.35 (9) (ditch) layer fill [48] 42 g

Small dense fragment of sub-crystalline and vesicular iron slag with slight ropy botryoidal textured upper surface and uneven lower surface with iron oxidation products. Discrete layer of slag 1 cm thick with gas bubbles on underside (cellular), and some on top. Only very slightly magnetic, upper surface more strongly so, the latter is more weathered and oxidised, underside with precipitation of white salts. Possibly associated with working of an iron bloom. Most probably broken up *in situ.*, or perhaps shortly afterwards (contemporary fractures), then discarded.

<167> F.32 (ditch) upper layer [95] 256 g

A fragment of a small plano-convex hearth bottom (7 x 9 x 5.5 cm (deep)), part of an original perhaps no more than 10 – 12 cm diameter. Consists of a dense, though very poorly magnetic iron slag, with an uneven and ropy skin texture on the upper surface, and a reticulate and very vesicular surface underneath with inclusions of charcoal, the latter now either leached out or replaced with iron oxides/hydroxide. The upper surface of the slag is densest and has a sub-crystalline texture. This represents the melt zone of the furnace beneath the tuyere, the iron-rich slag formed by the accretion of slag drips *in situ.* above the charcoal bed, the upper part of which adheres to the underside of the slag. This slag is probably associated with the production or re-working of an iron bloom; this was broken up and rejected, rather than re-smelted on account of its low iron content. The piece is well weathered and oxidised, and could have been removed some distance from the source of its production.

Little can be said about such a small assemblage. There is no evidence of any associated hearth(s) for this iron bloomery slag, all three pieces were evidently broken up fragments which had been discarded, perhaps moved some distance from source. The fragment of plano-convex hearth provides some idea of the scale of working. This would have been formed at the base of a small shaft furnace set into the ground, one which would probably only have processed <10 kg of metal, perhaps the work of an itinerant metal-worker, or else a small-scale workshop or smithy on the outliers of the settlement. Iron blooms may have been brought to the site for working, rather than any being smelted from ore on the spot.

Appendix 6: Metalwork (David Webb)

ARES Access Road

A total of 21 small finds were catalogued for the ARES Access Road and Car Park excavations, dating from the Roman to medieval period. The majority of the finds were of iron, with one item being a composite of iron and copper-alloy. The ferrous artefacts were highly corroded with surface detail obscured by iron oxide and associated corrosion products and without being subject to X-ray examination the identification of the ferrous artefacts is only provisional. Metal detectors were employed to ensure the recovery of all metal artefacts from contexts and further checks were also carried out on the sub-soil, on spoil from hand excavation and from the backfilling of features.

<298> An iron rod partially encased by copper-alloy sheeting rounded at corners, rod appears to terminate in loops at one end but iron oxide concretions makes this difficult to confirm it may equally be the start of a blade. The form is suggestive of a tool handle, but no parallel could be found for the Roman or later periods. Roman Period, recovered from a large pit (F.15). Dimensions: length 132mm, diameter 10mm. Copper sheet 95mm x 20mm, weight 49g.

<300> A large hook which appears circular in cross-section whilst the shaft is square. The top of shaft is surmounted by an elongated 'D' shape section. The horizontal bar is probably a spindle allowing its use with rope and pulleys for load lifting , most likely in construction work. (Manning 1985, S1 Plate 64). The hook was recovered from the upper silt layers of a large Romano-British boundary ditch F.32. Similar Roman examples have been found at Lakenheath and Hod Hill (Manning 1985, S1and S2). Dimensions: length 215mm, shaft width 12mm, head width 27mm, weight 155g.

<301> An iron nail with flat circular head, square in section tapering to point (Manning 1985, type 1b). Condition complete. Roman Period, recovered from a large pit (F.15). Dimensions: length 55mm, width 5mm, head 15mm, weight 9g.

<302> A flat triangular fragment of iron sheet, possibly a fragment of a blade. Roman, recovered from a large pit (F.15). Dimensions: width 20mm, thickness 1mm, weight 4g.

<303> An iron nail with flat sub-rectangular head, square in cross-section tapering to point (Manning 1985, type 1b). Nail is bent at 90° and the tip is missing. Roman, recovered from a large pit (F.15). Dimensions: length 55mm, width 6mm, head 14x10mm, weight 10g.

<304> A large iron nail, square in cross-section. The head is heavily concreted and the shape is not discernible. Roman Period, recovered from a linear feature (F.31). Dimensions: length 120mm, width 6mm, weight 31g.

<305> An iron nail shank fragment, square in cross-section. Roman, recovered from a linear feature (F.34). Dimensions: length 33mm, width 6mm, weight 6g.

<306> Two iron nails, square in cross-section tapering towards the point (Manning 1985, type 1b). Both nails are missing the tip, one is bent at 90°. Roman Period (F.22). Dimensions: nail (a) length 30mm, width 6mm, head 10mm; nail (b) length 44mm, width 6mm, head 12mm, weight 11g.

<307> Two fragments of a broad iron ferrule or collar (Manning 1985, S54-56). Roman Period, recovered from a linear feature (F.22). Dimensions; diameter 35mm, width 22mm, thickness 4mm, weight 35g.

<308> A fragment of an iron broad backed blade with curved socket, similar to a cleaver from Cricklade (Manning 1985, Q98). Roman Period, recovered from a large pit (F.15). Dimensions: length 82mm, width 33mm, thickness 4mm, weight 41g.

<309> An iron buckle sub-rectangular in shape and circular in cross-section complete with pin (rectangular cross-section). Possibly a belt fitting or harness fitting. Roman Period, recovered from a large pit or well (F.33). Dimensions: buckle 33mm x 27mm, thickness 3mm, pin length 35mm, pin width 5mm, pin thickness 3mm, total weight 12g.

<310> An iron rod fragment sub-circular in cross-section. Roman Period, recovered from a large pit (F.15). Dimensions: length 50mm, diameter 2mm, weight 2g.

<314> A *Pilum* with the shank bent into a hook shape, and with the spear point missing. The shank is square in cross-section continuing to a round socket end. The socket has a deep 'V' shaped gap in the lower section. A concreted lump towards the base may possibly be a rivet head, a semi-circular notch in the edge of the base may also be an indication of further riveting, since the base edge appears to be broken.The socketed *Pilum* is of the 'light' type, a similar example was recovered from a 3rd century AD context at Saalburg (Bishop 2006). Roman Period, recovered from a large pit (F.15). Dimensions: length 550mm, diameter of shaft 6mm. Condition incomplete .

<315> A lead seal sub-rectangular in shape, flat in cross-section. Roman Period, recovered from sub-soil above a large pit (F.15). Dimensions: length 14mm, width 10mm, thickness 2mm.

The assemblage is typical of the sort of debris one might expect to find at a Roman rural settlement. A more specific date range than Roman Period is not possible, as the assemblage is largely of forms which appear throughout the period. The only items that are unusual in the setting of a rural settlement are the pulley hook <300> and the *Pilum* <314>. The pulley hook is indicative of heavy lifting, possibly agricultural, or alternatively construction work, suggesting the presence of a substantial building or structure in the vicinity. The other item, the *Pilum*, is normally associated with military sites. However, the item appears to have been modified into a hook for civil use, rather than having been damaged during military use.

Car Park Excavation

<209> A corroded iron nail, the shank is square in cross-section, flaring slightly towards head which is missing. Roman period, recovered from upper fill silting of a Romano-British ditch (F.151). Dimensions: length 55mm, width 4mm, weight 6g.

<210> A highly corroded fragment of an iron nail shank, rectangular in cross-section, with both the head and tip missing. Roman period, recovered from upper fill silting of a Romano-British boundary ditch (F.179). Dimensions: length 35mm, width 6mm, weight 2g.

<211> A highly corroded large iron nail head. The head is square and flat although slightly irregular due to iron oxide concretions, whilst shank is rectangular in cross-section, broken, and with the tip missing . Unstratified (metal detector survey). Dimensions: head width 40 x 38mm, shank width 16 x 12mm, shank length 16mm.

<212> A corroded fragment of flat iron with chamfered upper edges tapering to a rounded point. One end of the artefact is broken at a point where a circular hole appears. Recovered during metal detector survey from medieval road, possibly a wagon or coach fitting. Dimensions: length 115mm, width 57mm, depth 23mm, weight 316g.

<213> A corroded fragment of large iron nail; the head is square and slightly pyramid shaped, the shank rectangular and tapering with the tip missing . Unstratified, from metal detector survey. Dimensions: head width 54 x 50mm, shank width 12 x 9mm, length of truncated shank 20mm.

<214> A corroded broad-backed knife blade with a short tang tapering towards the end. The back of the blade slopes down from the mid-point of the blade to a sharp point, whilst the lower edge slopes slightly towards the point. Most likely an Anglo-Saxon '*Scramaseax*'; a similar examples have been recovered from Wallingford dating to the 5th - 6th century AD (Leeds 1938-9), and from Cambridge dating to the 7th century AD (Dodwell et al 2004, p.102). Dimensions: overall length 155mm, blade length 125mm tang, length 30mm, depth of blade 18mm, width of blade back 4mm, depth of tang 10mm, weight 39g. Recovered during the course of metal-detecting whilst stripping sub-soil at the south end of the Car Park area.

<215> A corroded large iron nail or spike, square in cross-section. Recovered from the sub-soil overlying Roman features. Dimensions: length 200mm, width 7mm, weight 65g.

Two of the items <209> and <210> were recovered from secure Romano-British contexts and are typical of debris from a Roman period rural settlement. A more specific date range than this is not possible, as the artefacts are of forms which appear throughout the period. The large iron spike <215> recovered from sub-soil overlying Roman features could well be of Roman origin. However, the form is not exclusive to the Roman period, and a date range of Roman to medieval is more appropriate. The same is also true for the two large nail heads <211> and <213>. Although *Scramaseax* are frequently recovered as grave furniture from Anglo-Saxon burials, no other material was recovered that would support this notion, and thus the artefact can only be assumed to be a casual loss.

Appendix 7: Coin Identification (Adrian Challands)

Twelve Roman coins were found from the various sites dating from 253 AD to 375 AD, although these were again dominated by coinage from between 330 - 360 AD, minted at Trier or Lugdunum, and two Barbarous copies. The largest single group was that found during the Soak-away watching brief. This consisted of seven coins, including five of Magnentius and one Chi-rho reverse. Three of these were certainly minted at Trier but each came from a different die. One was minted at Lyons and the last was illegible. This group was recovered by metal detector from machine excavated spoil at the side of the pipe trench, and judging from the adhering soil, were clearly all from the same deposit. This was the lower, and perhaps originally waterlogged, fill of a large ditch approximately six metres wide and two metres deep. The author estimates that the coins were retrieved from a volume of fill measuring far less than one cubic metre, suggesting they do not represent a casual loss.

The coins found at the ARES Access Road and Car Park excavations did, however, appear to be either discarded or lost. They were primarily recovered by metal detector, from the tops of features, or from within middening deposits. This type of loss should be compared to Hollow B from the main ARES excavations where 88 Roman coins were retrieved from an abandonment layer (Armour 2007). The site as a whole produced a large proportion of Fel Temp Reparatio (soldier spearing fallen horseman) types (Constantine III – 350-364 AD), including barbarous copies, minims and a few official issues. The recent excavations at Babraham have shown a slight difference, with a bias towards official issues and only one barbarous copy (<207>). Whether any meaningful zoning of the coin distribution can be identified is yet to be seen, as currently the sample is too small to provide the detail necessary.

Unfortunately the questions posed by the ARES excavation coin assemblage still stand. The site refuses to be satisfactorily placed within the wider statistical ‘landscape’ of coin loss from other settlements (Challands and Reece in Armour 2007). Nevertheless, the results at least provide a picture which is consistent across the settlement as a whole. The comparative influx of late coinage is still running counter to the pottery evidence. The pattern of coin loss suggests a good deal of activity on the site in the late fourth century, even though the pottery assemblage of this date is poorly represented. Clearly, further work is needed, and this must await the final and more representative collection of coins from the settlement. This includes sites that may yet be excavated due to the continuing development of the Babraham Research Campus.

One post-medieval Georgian halfpenny retrieved from a layer of roadway surface material at the car park excavation site, probably represents a casual loss.

Soak-away watching brief

<001> Salonina, wife of Gallienus; AD 253 – 268
(Patinated/slightly worn)
Obv. [CORNELIASO]NINA[AV]G. Draped bust, right.
Rev. [CON]C[ORDEAT]. Concordia standing, left.
Minted AD 253 - 268

<002> Barbarous copy of Fel Temp Reparatio (Soldier spearing fallen horseman) type
(Corroded/patinated/slightly worn)
Obv. Barbarous legend. Draped bust, right.
Rev. Barbarous attempt at Fel Temp. Soldier spearing fallen horseman.
Minted AD 346 – c.361

<003> Magnentius AD 350 – 353
(Patinated/slightly worn)
Obv. [DNMAGNENTIVS]PFAVG. Draped and bareheaded bust, right.
Rev. [SA]LVSDDN[NAUG]ETCAES. Chi-Rho flanked by alpha and omega.
Mint mark TRP Trier. Minted AD 351 – 353

<004> Magnentius AD 350 – 353 or Decentius as Ceasar AD 351 – 353
(Patinated/slightly worn)
Obv. [-----?]NTIV[-----?]. Diademed and draped bust, right.
Rev. SALVSD[DNNNAVGETCAES]. Chi-Rho flanked by alpha and omega.
Mint mark TR[P] Trier. Minted AD 351 – 253

<005> Magnentius AD 350 – 353
(Corroded/slightly worn)
Obv. DNMAGNEN[TIVSPFAVG]. Draped and bareheaded bust, right.
Rev. SAL[VSDDNNAUGETCAES]. Chi-Rho flanked by alpha and omega.
Mint mark LPLG Lugdunum (Lyons). Minted AD 351 – 353

<006> Magnentius AD 350 – 353
(Patinated/slightly worn)
Obv. DNMAGNEN[TIVSPFAVG]. Pearl diademed and draped bust, right.
Rev. SALVSDD[NNAUGETCAES]. Chi-Rho flanked by alpha and omega.
Mint mark illegible. Minted AD 351 – 353

<007> Illegible coin (similar size to <003> - <006>). Very corroded. Probably dated to latter half of 4th century AD.

ARES Access Road

<296> Constantius II AD 337 – 361
(Slightly worn/corroded)
Obv. DNCON[STANTIVS]PF[AUG]. Draped and pearl diademed bust, right.
Rev. [FELTEM]PRE[PERA]TIO. Soldier spearing fallen horseman.
Mint mark illegible. Minted c. AD 353 – 354

<297> Valens AD 364 – 378
(Slightly worn/corroded)
Obv. DN[VALEN]SPFAVG. Draped and pearl diademed bust, right.
Rev. SECVRITASREIPUBLICAE. Victory to left, holding wreath and palm.
Mint mark illegible. [OF I?]I. Minted AD 364 – 375

Car Park excavation

<203> Constans AD 337 – 350
(Slightly worn/very corroded)
Obv. [CONSTANS]PFAUG. Diademed and cuirassed bust, left.
Rev. [VICTORIAE]DDA[VGGQNN]. Two victories facing, each holding wreath.
Mint mark illegible. Minted AD 341 – 346

<206> Constans AD 337 – 350
(Slightly worn/corroded)
Obv. [CONSTANS]PFAUG. Diademed and cuirassed bust, left.
Rev. VICT[ORIA]EDDAVGGQNN. Two victories facing, each holding wreath.
Mint mark TRP M Trier. Minted AD 341 – 346

<207> Barbarous copy of Constantinian II AD 330 – 348
(Very corroded)
Obv. Illegible.
Rev. Traces of two soldiers, one standard type.
Minted after AD 335

<208> George II or III halfpenny
(Very worn and corroded)
Illegible, identification on size basis.
Minted second half of the 18th century AD

Appendix 8: Faunal Remains (C. Swaysland)

This report details the animal bones from two adjacent sites; The ARES Access Road and Car Park Excavations, both at the Babraham Institute. The assemblages were recovered from two open areas.

The animal bones were identified using the reference collection of the Cambridge Archaeological Unit. The assemblage was quantified using a modified version of the methodology of Davis (1992). In brief, all mandibular and maxillary teeth and a predetermined restricted suite of elements, predominantly the distal articulations, are counted. Results are presented by NISP (Number of Identified Specimens). It can be difficult to distinguish between the bones of sheep and goat; certain elements however can be identified (Boessneck 1969, Halstead et al 2002). All caprine bones that could be confidently identified were sheep, therefore it will be assumed that all caprine bones are from sheep. Information on gnawing, butchery and pathology was recorded where present. Butchery was recorded by type (i.e. chop, knife cut, sawn), location and orientation (using standard anatomical terms and orientation). Pathological conditions were categorised where possible and detailed descriptions made as to form and location. The age at death of the major domestic animals was analysed using Halstead (1985) for cattle, Payne (1973) for sheep and Hambleton (1999) for pigs. Measurements were taken following von den Driesch (1976) and withers heights were calculated using the recommendations of von den Driesh and Boessneck (1974).

This report details the faunal remains from two sites. The sites were excavated separately and the assemblages were analysed separately however the as the sites are located adjacent to one another and are parts of the same archaeological site they are discussed collectively.

ARES Access Road

The assemblage had a total count of 665 fragments and a weight of 12271 grams. All bones date to the Romano-British period.

Species	NISP	NISP %
Cattle	27	40.9
Sheep	8	12.1
Pig	3	4.5
Horse	21	31.8
Dog	1	1.5
Red deer	1	1.5
Domestic Fowl	4	6.1
Human	1	1.5

Table 5: Relative species proportions ARES Access Road

Cattle are the predominant species forming 40.9 % of the assemblage, a mixture of meat and non-meat bearing bones are present in the assemblage. An insufficient number of mandibles which could be aged were present to enable a reconstruciuon of husbandry practises. Sheep are represented by 8 bones (12.1 %), pig is of importance (4.5 %). Horse remains constitute 31.8% of the assemblage, an

unusually large proportion (see discussion below). Minor species are represented by dog (1 bone), red deer (one sawn antler) and domestic fowl (4 bones).

The red deer antler was recovered from F.30. Only part of the antler was present; the intersection between the beam and the trez tine. The base of the beam has been carefully sawn, the trez tine has been snapped off in antiquity and the top of the beam has been roughly sawn. It would appear the manufacturer was interested in the other sections of antler that were removed and that this was an off-cut of waste material.

One human bone was recovered from F.32. The bone was a right scapula from a young baby. This feature also contained 'normal' domestic waste so it would appear that this infant was not accorded special treatment in death.

Car Park Excavation

The assemblage had a total count of 416 fragments and a weight of 4287 grams. With the exception of F.159 and F.169 all bones are from features dated to the Romano-British period.

Species	NISP	NISP %
Cattle	13	52
Sheep	7	28
Horse	5	20

Table 6: Romano-British species proportions car park excavation

Clearly this is a small assemblage; the species proportions are however broadly similar to those from RCB 05.

A number of bones were recovered from two rabbit warrens F.159 and F.169. Rabbits are a post-Roman introduction to Britain so the bones from these features will not be considered in this report.

Species	RCB 05	RCB 06 II/CPX	Total	Total %
Cattle	27	13	40	44.0
Sheep	8	7	15	16.5
Pig	3	0	3	3.3
Horse	21	5	26	28.6
Dog	1	0	1	1.1
Red deer	1	0	1	1.1
Domestic Fowl	4	0	4	4.4
Human	1	0	1	1.1

Table 7: Species proportions: Romano-British contexts

These sites were excavated separately; archaeologically however, they are simply different parts of the same site, the assemblages will therefore be discussed together.

Cattle are the predominant species (44%); survival age ranges from foetal to old age. Sheep were present in much lesser amounts, when one also considers the much smaller size of sheep in relation to cattle they contributed much less meat to the diet.

The most striking thing about the assemblage is the large proportion of horse remains. It is tempting to suggest some kind of specialisation such as horse breeding however there is a lack of juvenile bones or shed deciduous teeth to support this theory. A more probable explanation is that the site was a staging post that was heavily reliant upon horse transport. The site is in an excellent position for communications located on the River Granta and just 350m from Worsted Street Roman Road (the modern A1307). The site may have performed the purpose of an intersection between road and river traffic for the transportation of people and goods. There is no evidence to suggest that horses were regularly eaten in the Romano-British period, so the carcasses of dead horses were probably disposed of in close proximity to where they fell. Metric data indicates that horses at the site ranged in size from 125cm to 142cm (12.3 to 14 hands). By modern standards these animals are small and would be considered to be ponies (less than 14 hands) however this small size appears typical of Romano-British horses (Rackham 2004).

In conclusion, the overwhelming majority of the bones from the site are from domestic mammals. The only evidence of the exploitation of wild resources is one bone and one antler from red deer. Birds are represented by small amounts of domestic fowl; despite the riverside location there is no evidence for the exploitation of waterfowl. No fish remains were present in the hand collected sample viewed by the author.

The high proportion of cattle remains is typical for late Romano-British sites (King 1978, 1991) and is indicative of the influence of Roman culture. The very high levels of horse remains seen at this site are unusual, it would appear that the site served as a staging post between river and road transport.

Appendix 9: Feature Descriptions

ARES Access Road (RCB05) (see Figure 3)

F.1 – Ditch: A small shallow NE-SW ditch that crossed the width of site and had a visible length of 11.75m. Two slots were dug and pottery recovered. It truncated linear F.2. 1st slot; Cut [2] NE-SW linear with steep sides and a flat base (width 0.64m; depth 0.20m). Fill [1] pale brown friable sandy silt with occasional chalk nodules. 2nd slot; Cut [10] NE-SW linear with steep sides and a concave base (width 0.76m; depth 0.17m). Fill [9] pale brown sandy silt with occasional rounded and sub angular flint/gravel and rounded chalk nodule inclusions.

F.2 – Ditch: A small, shallow SE-NW ditch. The southeast end went under the baulk, whilst the NW end terminated. Total visible length was 10.0m. Two slots were dug and flint, animal bone, slag and iron was recovered. It was truncated by F.1. 1st slot; Cut [4] SE-NW linear with gradually sloping sides and a rounded base (width 0.69m; depth 0.09m). Fill [3] pale brown silty sand with frequent flint inclusions. 2nd slot; Cut [37] Terminus of linear with very gently sloping sides and a flat base (width 0.52m; depth 0.025m). Fill [36] mid brown fine loose silt.

F.3 – Pit: Cut [6] circular feature with gently sloping sides and a flat base (length 0.60m; width 0.51m; depth 0.02m). Fill [5] baked pinkish red/black chalk. Burnt clay found.

F.4 – Ditch: A small, shallow NE-SW ditch that crossed the site and had a visible length of 7.0m. One slot was dug; Cut [8] NE-SW linear with shallow, slightly concave sides and a concave base (width 0.75m; depth 0.12m). Fill [7] pale brown sandy silt with moderate rounded chalk and occasional sub angular and rounded flint/gravel inclusions.

F.5 – Pit: Cut [12] oval (NW-SE) orientated feature with shallow concave sides and a concave base (length 1.30m; width 0.73m; depth 0.10m). Fill [11] mid brown slightly sandy silt with frequent rounded and sub angular gravel/flint nodule inclusions.

F.6 – Pit: Cut [14] oval (NW-SE) orientated feature with shallow sides and a flat base (width 0.80m; depth 0.10m). Fill [13] mid brown slightly sandy silt with frequent rounded and sub angular flint/gravel inclusions. Pot and animal bone found.

F.7 – Gully: A small, shallow N-S gully. The south end went under the baulk and the north end terminated. Total visible length was 3.50m and one slot was dug at the terminus. Cut [16] N-S linear with moderately sloping sides and a flat base (width 0.70m; depth 0.12m). Fill [15] dark greyish brown sandy silt with occasional fine gravel inclusions and occasional charcoal flecks.

F.8 – Ditch: A wide, shallow NE-SW ditch. The southwest end goes into the baulk and the northeast end is truncated by F.9. Total visible length was 5.0m. Two slots were dug, pottery and animal bone recovered. 1st slot; Cut [106] NE-SW linear with moderately steep sides and a concave base (width 1.34m; depth 0.27m). Fill [105] friable mid – light brown slightly sandy silt mottled with some pale yellow brown sand near base. Occasional sub angular and rounded flint, gravel and chalk nodule inclusions and rare charcoal flecking. 2nd slot; Cut [112] NE-SE linear with moderately steep slightly concave sides and a sloping (to the SW) base (length 0.55m; width 0.30m; depth 0.22m). Fill [111] friable mid to light brown coarse slightly sandy silt mottled with some pale yellow brown sand near the base. Occasional rounded and sub angular flint, gravel and chalk inclusions, with frequent charcoal flecking.

F.9 – Ditch: A quite broad but shallow NW-SE linear. The northwest end either turned 90° to a NE-SW axis and went under the baulk or terminated. The SE end also terminated. Total visible length was 21.0m. Four slots were excavated and pottery, tile, animal bone, slag and worked flint was recovered. This ditch truncated F.8 and F.34, and was truncated by F.34. 1st slot; Cut [50] moderately sloping

irregular sides and an uneven concave base (width 1.30m; depth 0.28m). Fills [48] mid brown firm coarse silt; [49] mid brown silty redeposited chalk. 2nd slot; Cut [110] fairly steep straight sides and a concave base (length 1.20m; width 0.85m; depth 0.18m). Fill [109] soft brown fine slightly sandy silt with occasional sub angular and rounded flint, gravel and chalk inclusions. 3rd slot; Cut [114] moderately sloping straight sides and a concave base (length 1.34m; wide 0.46m; depth 0.25m). Fill [113] soft dark brown fine slightly sandy silt with occasional sub angular and rounded flint, gravel and chalk inclusions. 4th slot; Cut [197] moderate sides and a flat base (width 1.0m, depth 0.29m). Fill [196] dark brown silty sand with occasional charcoal flecks and gravel inclusions.

F.10 – Posthole: Cut [142] oval feature with steep straight sides and a concave base (diameter 0.70m; depth 0.35m). Fills [140] mid grey brown clayey silt with occasional sub angular and rounded flint, gravel and chalk inclusions, occasional charcoal flecking. Pot and animal bone found; [141] mid to pale brown sandy silt with occasional sub angular and rounded flint, gravel and chalk inclusions.

F.11 – Pit: Cut [136] oval feature with moderately steep sides and a concave base (width 0.21m; depth 0.08m). Fill [135] is mid brown slightly sandy silt with occasional sub angular and rounded gravel and chalk inclusions. Roman pottery and possible fragment of ?Roman glass vessel found during surface cleaning.

F.12 Gully:

Cut [68] E-W linear with shallow sides and a concave base (width 0.47m; depth 0.03m). Fill [67] mid grey sandy silt.

Cut [134] NW-SE linear with shallow straight sides and an undulating base (length 1.21m; width 0.40m; depth 0.09m). Fill [133] mid brown slightly sandy silt with occasional rounded and sub angular gravel and chalk inclusions. Roman pottery, *opus signinum* and animal bone found.

Cut [146] NW-SE linear with moderately sloping sides and a concave base (width 0.45m; depth 0.13m). Fill [145] mid brown slightly sandy silt with occasional rounded and sub angular flint, gravel and chalk inclusions. One sherd of 'Roman' pot .

F.13 – Pit: Cut [20] circular pit with steep sides and a concave base (diameter 0.50m; depth 0.13m). Fill [19] mid grey brown silty sand with occasional medium sized gravel inclusions.

F.14 – Posthole: Cut [18] circular feature with steep sides and a flat base (diameter 0.30m; depth 0.12m). Fill [17] mid grey brown sandy silt with rare fine gravel and occasional charcoal inclusions.

F.15 – Pit: Approximately 8.00m long by 4.00m wide, irregular in plan and very shallow. Two slots excavated; 1st slot; Cut [164] circular feature with shallow sides and a flat base (length 1.62m; depth 0.10m). Fill [163] dark brown friable sandy silt with frequent charcoal flecks, flint nodules and occasional redeposited chalk. Pot, animal bone and iron found. 2nd slot; Cut [168] circular feature with shallow sides and a flat base (length 3.1m; depth 0.10m). Fill [167] dark brown friable sandy silt with frequent charcoal flecking, flint nodules and occasional redeposited chalk.

F.16 – Gully: The remains of a small, shallow N-S gully which had been heavily truncated by modern intrusions. The south end went under the baulk and the north end was truncated by a modern foundation. Total remaining length was 5.0m.and one slot was dug. Cut [22] NW-SE linear with steep sides and a concave base (width 0.35m; depth 0.1m). Fill [21] dark brownish grey silty sand with occasional fine gravel inclusions.

F.17 – Posthole: Cut [24] circular feature with steep sides and a concave base (diameter 0.30m; depth 0.10m). Fill [23] mid grey silty sand with common fine gravel inclusions.

F.18 – Ditch: A medium sized E-W linear that has been heavily truncated by modern intrusions. It crossed the width of site and had a visible length of 8.75m. One slot; Cut [160] gently sloping sides and a rounded base (width 1.15m; depth 0.24m). Fill [159] mid brown friable sandy silt with rare charcoal flecks and frequent flint nodules.

F.19 – Gully: A shallow NW-SE gully. The SE end terminated and the NW end was truncated by the terminus of F.9. It truncated gully F.23 and had also been bisected by modern electrical services. Three slots were excavated and some bird egg shell fragments recovered. 1st slot; Cut [30] moderately sloping sides and a flat base (width 0.33m; depth 0.08m). Fill [29] mid brown friable fine sandy silt with occasional angular and sub angular stones. 2nd slot; Cut [116] moderately steep concave sides and a flat base (length 0.49m; width 0.25m; depth 0.21m). Fill [115] light brown sandy silt with patches of yellowish sand. Occasional rounded and sub angular gravel, flint and chalk inclusions. 3rd slot; Cut [35] moderately sloping sides and a flat (although irregular) base (width 0.46m; depth 0.08m). Fills [33] mid brown fine sandy silt. No finds; [34] mottled yellow orange silty sand.

F.20 – Pit: Cut [26] oval feature with steep sides and a flat base (width 0.45m; depth 0.15m). Fill [25] mid brown sandy silt with occasional fine to medium gravel inclusions and occasional charcoal flecks. Animal bone found.

F.21 – Posthole: Cut [28] round feature with steep sides and a concave base (diameter 0.30m; depth 0.12m). Fill [27] light to mid brown sandy silt with occasional fine gravel inclusions. No finds.

F.22 – Gully. A small, shallow NW-SE gully. The southeast end terminated and the northwest end was truncated by a modern drain. It had a surviving length of 9.0m. Two slots were dug and animal bone, tile and a large quantity of pottery was recovered. 1st slot; Cut [195] shallow sides and a concave base (width 0.30m, depth 0.04m). Fill [194] dark brown silt with occasional gravel inclusions. 2nd slot; Cut [208] moderate sides and a concave base (width 0.48m, depth 0.18m). Fills [207] dark brown sandy silt with frequent chalk inclusions; [206] dark brown sandy silt with occasional small gravel and chalk inclusions.

F.23 – Ditch. A small, shallow N-S linear that was truncated by linear F.19 and truncated pit F.29. Total visible length was 8.50m. Two slots were dug into it. 1st slot; Cut [32] moderately sloping sides and a flat base (width 0.60m; depth 0.07m). Fill [31] dark greyish brown firm sandy silt with occasional sub angular stone and frequent loose chalk basal inclusions. 2nd slot; Cut [45] moderately sloping sides and a flat base (width 0.40m; depth 0.15m). Fill [44] mid greyish brown sandy silt with occasional fine to medium sized gravel inclusions.

F.24 Ditch. (See F.19)

F.25 Ditch. (See F.2)

F.26 – Pit: Cut [39] sub circular feature with very gently sloping sides and a slightly concave base (length 0.7m; width 0.85m; depth 0.04m). Fill [38] mid brown fine loose silt. No finds.

F.27 – Posthole: Cut [41] sub circular feature with moderately sloping sides and a concave base (diameter 0.35m; depth 0.08m). Fill [40] light brown very fine sandy silt with basal chalk packing and occasional orange ceramic smear inclusions.

F.28 – Posthole: Cut [43] sub circular feature with moderately sloping sides and a slightly irregular base (diameter 0.30m; depth 0.06m). Fill [42] light brown very fine sandy silt with occasional gravel and small pebble inclusions.

F.29 – Quarry(?) pit: A broad, but quite shallow pit that was truncated by linear F.23. Some pottery was recovered. Cut [47] oval feature with shallow sides and a concave base (diameter 3.0m; depth 0.21m). Fill [46] loose light brown sandy silt with occasional patches of yellow sand. Rare fine gravel inclusions.

F.30 – Pit. Cut [102] circular feature with very steep sides and a rounded base (diameter 2.40m; depth 0.85m). Fills [99] orangey mid brown friable sandy silt with occasional flint nodules, chalk inclusions and charcoal flecks; [100] light brown compact silty sand with frequent chalk inclusions; [101] orangey mid brown friable sandy silt with occasional charcoal flecks and frequent chalk and flint nodule inclusions.

F.31 – Ditch. A small curving ditch whose axis changed from NW-SE to N-S. The north end went under the baulk and the southeast end was truncated by pit F.30. F.31 was also truncated by linear F.42

and in turn truncated F.31, F.32, F.44 and postholes F.55 and F.70. Total visible length was 9.75m. Two slots were excavated and pottery, animal bone, tile, iron and a copper alloy pendant was recovered. 1st slot; cut [87] quite shallow sides and a concave base (width 0.90m; depth 0.22m), fill [86] dark grey, almost black silty sand with occasional fine gravel and chalk inclusions, and frequent charcoal lumps and flecking. 2nd slot; cut [184] moderate sides and a concave base (width 0.98m, depth 0.18m), fill [183] very dark brown silty sand with occasional chalk and gravel inclusions.

F.32 – Ditch. A medium sized slightly curving linear whose axis changes from N-S to NW-SE. F.32 was truncated by linears F.31, F.43, F.44 and F.49 and in turn truncated pit F.47. Total visible length was 6.50m. Two slots were dug and pottery, animal bone, slag and iron was recovered. 1st slot; cut [96] moderately sloping sides and a flat base (width 2.30m; depth 0.97m), fills [94] mid greyish brown silty sand with occasional fine – medium gravel inclusions and charcoal flecks, and [95] pale yellowish brown sandy silt with frequent fine- medium gravel and chalk inclusions and occasional charcoal flecks. 2nd slot; cut [191] moderate sides and a flat base (width 0.90m, depth 0.50m), fills [190] light brown silt with occasional chalk and gravel inclusions; [189] mottled light to medium brown silty sand with chalk inclusions.

F.33 – Pit. Large pit with some pottery and animal bone recovered. Cut [54] circular feature with steep sides and a flat base (diameter 1.50m; depth 1.12m). Fills [51] mid brown sandy silt with frequent fine to medium gravel and chalk inclusions and occasional chalk flecks; [52] light yellowish brown sandy silt with frequent fine to medium gravel and chalk inclusions and occasional charcoal flecks; [53] dark brown sandy silt with common fine gravel and chalk inclusions and occasional charcoal flecks.

F.34 – Ditch. A curving ditch whose axis changed from NW-SE to NE-SW. The northwest end terminated and the northeast end went under the baulk. F.34 truncated F.54 and F.9 and was truncated by a modern service trench. Total visible length was 9.75m. Three slots were excavated and some pottery, animal bone and oyster shell recovered. 1st slot; Cut [174] E-W linear with moderate sides and a concave base (width 1.13m; depth 0.38m). Fills [173] mottled light brown silty sand with occasional chalk and gravel inclusions; [174] mottled mid brown sandy silt with frequent chalk and occasional gravel inclusions. 2nd slot; Cut [179] NE-SW linear with quite steep sides and a concave base (width 0.68m, depth 0.36m). Fills [178] mottled mid yellowish brown sandy silt with occasional small gravel inclusions; [177] mid brown sandy silt with frequent small to medium sized gravel inclusions. 3rd slot; Cut [203] N-S linear with moderate sides and a concave base (width 0.85m, depth 0.26m). Fills [202] mid brown sandy silt; [201] mid brown sandy silt with occasional charcoal flecks and fine gravel inclusions; [200] dark brown sandy silt with frequent charcoal flecks and small chalk and gravel inclusions.

F.36 – Posthole: Cut [56] circular feature with steep sides and an uneven base (diameter 0.30m; depth 0.10m). Fill [55] mid grey sandy silt. Pot and animal bone found.

F.37 – Posthole: Cut [58] circular feature with steep sides and a concave base (diameter 0.39m; depth 0.24m). Fill [57] mid grey sandy silt.

F.38 – Posthole: Cut [60] circular feature with steep sides and a concave base (diameter 0.48m; depth 0.26m). Fill [59] dark grey sandy silt. Animal bone and large burnt stone found.

F.39 – Posthole: Cut [62] circular feature with steep sides and a concave base (diameter 0.32m; depth 0.20m). Fill [61] dark grey sandy silt with occasional chalk inclusions. Pot found.

F.40 – Posthole: Cut [64] circular feature with steep sides and a concave base (diameter 0.42m; depth 0.25m). Fill [63] dark grey sandy silt with moderate gravel and chalk inclusions. Pot found. Cuts F. 41

F.41 – Posthole: Cut [66] circular feature with moderately sloping sides and an uneven base (length 0.1m; width 0.25m; depth 0.05m). Fill [65] mid grey silt. No finds. Cut by F. 40

F.42 – Gully. A small, shallow SE-NW gully. The northwest end went under the baulk and the southeast end terminated. It truncated linears F.31, F.32 and F.44, and in turn was truncated by a modern service trench. Total visible length was 13.0m. Two slots were dug and some pottery and animal bone was recovered. 1st slot of terminus, Cut [70] moderately sloping sides and a concave base

(width 0.36m; depth 0.06m). Fill [69] mid grey sandy silt. 2nd slot; Cut [72] SE-NW linear with moderately sloping sides and a concave base (width 0.56m; depth 0.14m). Fill [71] mid grey sandy silt.

F.43 – Posthole: Cut [74] circular feature with steep sides and a concave base (diameter 0.26m; depth 0.16m). Fill [73] dark grey sandy silt.

F.44 – Ditch. A medium sized N-S ditch that crossed the width of site. It truncated linears F.32 and F.50 and was in turn truncated by F.32, F.42 and F.49. Total visible length was 8.50m. Two slots were dug and some animal bone was recovered. 1st slot; Cut [93] moderately sloping sides and a concave base (width 1.05m; depth 0.45m). Fill [92] dark greyish brown silty sand with occasional fine to medium sized gravel and chalk inclusions. 2nd slot; Cut [188] moderate sides and a concave base (width 0.70m, depth 0.20m). Fill [187] mid brown sandy silt with frequent chalk inclusions.

F.45 – Pit: Cut [76] oval feature with moderately sloping sides and a flat base (diameter 0.80m; depth 0.16m). Fill [75] dark grey brown sandy silt with occasional fine gravel and charcoal flecking inclusions. Pot and animal bone found.

F.46 – Pit: Cut [79] oval feature with steep sides and a concave base (diameter 0.90m; depth 0.46m). Fills [77] dark brownish grey silty sand with occasional chalk, gravel and charcoal fleck inclusions. Animal bone found; [78] very dark grey silt with frequent fine-medium gravel and chalk inclusions. Pot found. Cuts F. 49

F.47 – Pit: Cut [98] heavily truncated feature with moderately sloping sides (dimensions truncated). Fill [97] light grey silt with patches of yellow sand and frequent fine-medium gravel and chalk inclusions and occasional charcoal flecks. No finds. Cut by F. 32

F.48 – Posthole sequence: Cut [176] linear set of postholes with vertical edges and quite irregular bases (length 1.80m, width, 0.25m, depth, 0.32m). Fill [175] mottled mid yellowish brown sandy silt with frequent gravel inclusions. Cut [210] sub circular posthole (length 0.22m, width 0.10m, depth 0.35m). Fill [209] mottled mid yellowish brown with rare small gravel inclusions.

F.49 – Ditch: A small, heavily truncated NW-SE ditch. It truncated F.32, F.44 and F.50 and posthole F.70 and in turn was truncated by ditch F.31 and pits F.30 and F.46. Total visible length was 9.75m. Two slots were excavated; pottery and animal bone recovered. 1st slot; Cut [81] Truncated terminus of NW-SE linear with moderately steep sides, no base was visible. Fill [80] mid grey brown sandy silt with occasional fine gravel and charcoal inclusions. 2nd slot; Cut [89] NW-SE linear with steep sides and a flat base (length 1.2m; width 0.70m; depth 0.26m). Fill [88] mid brownish grey sandy silt with occasional fine gravel and chalk inclusions and occasional charcoal flecks.

F.50 – Ditch: A small N-S ditch. The south end went under the baulk and the northern terminus was truncated by F.49. It was also truncated by ditch F.50. Some pottery and bone was recovered. Cut [91] N-S linear with moderately sloping sides and a flat base (depth 0.40m). Fill [90] reddish brown silty sand with frequent fine – medium sized gravel and chalk inclusions and occasional charcoal flecks.

F.52 – Ditch: A medium sized NW-SE ditch that had been heavily truncated by modern activity at both ends. Total remaining visible length was 3.75m. Some pottery and worked stone was recovered. Cut [162] NW-SE linear with moderately sloping sides and a rounded base (width 1.22m; depth 0.38m). Fills [161] mid greyish brown friable silty sand with occasional charcoal lumps and frequent flint nodules; [171] pale grey brown friable silty sand with occasional charcoal flecks and flint nodules.

F.53 – Burrow: A burrow system that truncated pit F.15. Some pottery and animal bone was recovered. Cut [166] Irregular shaped feature (width 0.85m, depth 0.32m). Fill [165] mid brown mottled with dark brown compact sandy silt with frequent chalk and flint and occasional charcoal flecking. Cut [170] Irregular shaped feature (width 1.61m, depth 0.39m). Fill [169] mid brown silt with frequent chalk and occasional charcoal inclusions.

F.54 – Gully: A small, heavily truncated NE-SW gully. The northeast end went under the baulk and the southwest end was truncated by ditch F.34. It has also been truncated by ditch F.9. Total visible length was 5.75m. Some pottery, animal bone and oyster shell was recovered. Cut [205] moderate sides and a

concave base (width 0.47m, depth 0.12m). Fill [204] mottled light to mid brown sandy silt with occasional chalk inclusions.

F.55 – Pit: Cut [186] Sub circular feature with moderate sides and a concave base (width 0.36m, depth 0.09m). Fill [185] very dark brown silty sand with occasional chalk and gravel inclusions.

F.56 – Tree throw: Cut [104] irregular shaped feature with moderately steep sides and a concave base (length 1.08m; width 1.0m; depth 0.19m). Fill [103] soft mid brown sandy silt with occasional sub angular and rounded gravel and rounded chalk inclusions. Pot, animal bone and oyster shell found.

F.57 – Pit: Cut [121] NW-SE orientated oval feature with mostly vertical sides (stepped on the SE and NE edges) with a flat base (length 1.35m; width 0.46m; depth 0.86m). Fills [117] one chunk of white chalk with some soft pale yellow sandy degraded chalk. No finds; [118] firm pale brown sandy silt with occasional rounded and sub angular flint, gravel and chalk inclusions. Occasional charcoal flecks and small yellow sand patches. Pot, quern stone and shell found; [119] soft yellow sandy degraded chalk with rounded chalk inclusions and patches of pale brown sandy silt. No finds; [120] soft mid brown sandy silt with occasional rounded and sub angular gravel and chalk inclusions. Pot, animal bone and shell found.

F.58 – Gully terminus: The terminus of a small NW-SE gully whose visible length was 2.0m. Cut [108] NW-SE linear with steep sides and a concave base (width 0.42m; depth 0.15m). Fill [107] mid grey brown slightly clayey silt with rare sub angular and rounded flint, gravel and chalk inclusions.

F.59 – Posthole: Cut [126] oval feature with vertical straight sides and a slightly concave base (diameter 0.40m; depth 0.29m). Fill [125] mid brown clayey silt with occasional sub angular and rounded flint, gravel and chalk inclusions. Quern stone found.

F.60 – Posthole or pit: Cut [128] oval feature with steep sides and a flat base (diameter 0.50m; depth 0.19m). Fill [127] mid brown clayey silt with occasional sub angular and rounded flint, gravel and chalk inclusions. Pot found.

F.61 – Posthole: Cut [132] oval feature with steep straight sides and a flat base (diameter 0.62m; depth 0.40m). Fills [129] pale brown slightly clayey silt with occasional rounded and sub angular flint, gravel and chalk inclusions. No finds; [130] pale brown slightly clayey silt with patches of pale yellow degraded chalk in the SW edge. Moderate rounded and sub angular flint, gravel and chalk inclusions. No finds; [131] reddish orange slightly sandy silt with some small patches of pale brown slightly clayey silt. Occasional sub angular and rounded flint, gravel and chalk inclusions.

F.62 – Posthole: Cut [144] oval feature with shallow concave sides and a concave base (diameter 0.40m; depth 0.07m). Fill [143] mid grey brown clayey silt with rare sub angular and rounded gravel and chalk inclusions.

F.63 – Pit: Cut [148] oval feature with moderately steep concave sides and a slightly concave base (length 0.60m; width 0.40m; depth 0.07m). Fill [147] mid brown slightly sandy silt with occasional flint, gravel and chalk inclusions.

F.64 – Pit: Cut [150] oval feature with steep straight sides and a concave base (diameter 0.70m; width 0.27m; depth 0.17m). Fill [149] mid brown slightly sandy silt with occasional sub angular and rounded flint, gravel and chalk inclusions.

F.65 – Posthole: Cut [124] circular feature with near vertical straight sides and a sloping base (to the W) (diameter 0.70m; width 0.40m; depth 0.33m). Fills [122] mid brown slightly sandy silt with occasional sub angular and rounded flint, gravel and chalk inclusions; [123] mid brown sandy silt with large quantities of yellow sand. Occasional sub angular and rounded flint, gravel and moderate chalk inclusions. Pot, animal bone and coin found.

F.66 – Posthole: Cut [139] oval feature with near vertical straight sides and a concave base (diameter 0.60m; depth 0.15m). Fills [137] mid grey clayey silt with rare sub angular and rounded flint and gravel inclusions; [138] mid brown clayey silt with occasional sub angular and rounded gravel and chalk inclusions.

F.67 – Posthole: Cut [152] circular feature with near vertical slightly concave sides and a flat base (diameter 0.50m depth 0.35m). Fill [151] mid brown clayey silt with occasional sub angular flint, gravel and chalk inclusions. Pot, burnt stone and tile found.

F.68 – Gully terminus: The terminus of a small NW-SE gully whose visible length was 1.50m. It was truncated by posthole F.67. Cut [154] NW-SE linear with moderately sloping sides and an irregular base (length 0.40m; depth 0.15m). Fill [153] mid brown clayey silt with occasional sub angular and rounded flint, gravel and chalk inclusions.

F.69 – Posthole: Cut [157] circular feature with steep straight sides and a slightly concave base (diameter 0.48m; depth 0.31m). Fills [155] mid brown clayey silt with occasional flint, gravel and chalk inclusions. Pot found; [156] yellowish sand with moderate quantities of rounded chalk.

F.70 – Posthole: Cut [85] circular feature with near vertical sides and a flat (although uneven) base (diameter 0.74m; depth 0.80m). Fills [82] mid greyish brown sandy silt with occasional fine – medium gravel and chalk inclusions and occasional charcoal flecking; [83] light greyish brown sandy silt with frequent fine – medium gravel and chalk inclusions and occasional charcoal flecking; [84] dark grey silty sand with frequent fine – medium gravel and chalk, occasional large chalk inclusions and frequent charcoal flecking. Cut by F. 31 and F. 49

Campus Road Evaluation – Phase 2

Trench 11 (see Figure 7)

F.68 – Ditch, orientated N-S and measuring 2.3m in length, 0.7m wide and 0.11m deep. Cut [202] straight shallow sides to an irregular base. Fill [174] contained bone.

F.69 – Ditch, orientated E-W and measuring 2.5m in length, 0.85m wide and 0.35m deep. Cut [197] irregular to vertical sides with a slightly rounded, although irregular base. Fill [175] contained shell, bone and 12th century pottery.

F.70 – Irregular pit feature, or possible tree throw. 1.72m in diameter and 0.27m deep. Cut [193] had irregular sides with an irregular base. Fill [176], 13th century pottery recovered.

F.71 – Small pit, circular in plan measuring 0.5m in diameter and 0.12m deep. Cut [196] gently sloping sides to a rounded base. Fill [177] 12th-13th century pottery recovered.

F.72 – Irregular pit feature, slightly oval in plan measuring 0.9m in length, 0.6m in width and 0.36m deep. Cut [204] had near vertical sides to a rounded base. Fill [178] no finds were recovered.

F.73 – Ditch, orientated NE-SW and measuring 2m in length, 0.5m wide and 0.09m deep. Cut [203] gently sloping sides to a rounded base. Fill [179] contained 14th-15th century pottery.

Trench 12 (see Figure 4)

F.61 – Pit, 1.02m in diameter and 0.27m deep. Cut [164] with moderately sloping sides to a flat base. Fill [163] contained bone, three sherds of pottery and residual Neolithic flint.

F.62 – Palaeo-channel, measuring >3.2m in length (section exposed within slot), 0.3m wide and 0.3m deep. Cut [166] steep sides to an irregular base. Fill [165] bone, residual Neolithic flint (1 chunk and 6 flakes) and pottery recovered.

F.63 – Ditch section >2.3m in length, 0.3m wide and 0.3m deep. Cut [168] steep sides to an irregular base. Fill [167] from which bone, residual Neolithic flint (7 pieces including a blade) and pottery was recovered.

F.64 – Ditch terminus, orientated NE-SW, > 0.79m in length, 1.18m wide and 0.39m deep. Cut [170] steep to vertical sides with a rounded base. Fill [169] contained bone, residual Neolithic flint (2 flakes) and pottery.

Trench 13 (see Figure 4)

F.50 – Irregular pit feature, 1.85m in diameter and 0.4m in depth. Cut [151] had steep to concave sides to a rounded, slightly tapered base. Fill [150] bone and 12th century pottery recovered.

F.51 –Pit, 1.7m in diameter and 0.53m deep. Cut [153] oval in plan with moderately concave sides to a flat base. Fill [152] bone and 12th century pottery recovered.

F.52 – Small pit feature, 1.8m diameter and 0.28m in depth. Cut [231] circular in plan with concave sides to a rounded, slightly tapered base. Fill [154] bone only recovered.

F.53 – Quarry pit, circular in plan measuring 1.3m in length, 0.38m in width and 0.57m deep. Cut [229] had irregular to slightly concave sides with an irregular to a slightly tapered base. Fill [155] no finds recovered.

F.54 – Quarry pit, irregular in plan measuring 1.15m in length, 1.4m in width and 0.5m deep. Cut [230] had irregular sides with a tapered base. Fill [156] contained bone and 12th-13th century pottery.

F.55 – Ditch, aligned NW-SE, 2.2m in length, 0.78m in width and 0.2m deep. Cut [194] had moderately concave sides with a rounded base. Fill [157] 13th-14th century pottery recovered.

F.56 – Ditch, aligned NW-SE, 2.7m in length, 0.71m in width and 0.24m deep. Cut [195] had moderately steep concave sides to a flat base. Fill [158] 17th century pottery recovered.

F.57 – Post Hole, sub circular in plan measuring 0.27m in diameter and 0.2m deep. Cut [200] straight vertical sides to a flat base. Fill [159] no finds recovered.

F.59 – Small pit feature, 0.7m in diameter and 0.14m deep. Cut [201] circular in plan with concave sides to a rounded base. Fill [161] no finds recovered.

Trench 16 (see Figure 4)

F.65 – Post Hole, circular in plan, 0.5m in diameter and 0.14m deep. Cut [192] concave sides to a rounded base. Fill [171] contained bone and 12th century pottery.

F.66 – Post Hole, circular in plan, 0.5m in diameter and 0.28m deep. Cut [180] near vertical sides to a rounded base. Fill [172], no finds.

Campus Access Road Watching Brief (see Figure 7)

F.98 – Ditch; 11.40m revealed in watching brief aligned NW-SE, 1.05m wide by 0.22m deep, cut predominantly U-shaped with shallower southern side. Single fill of mid reddish brown silt, Animal bone and CBM found.

F.99 – Ditch; aligned NW-SE 11.60m revealed in watching brief, 1.28m wide and 0.30m deep, cut profile U-shaped, truncates F.108. Single fill of mid greyish brown sandy silt. 2nd to 3rd century pottery, animal bone and flint recovered.

F.100 – Ditch, aligned NW-SE, perhaps defensive? 11.00m revealed by watching brief, 5.40m wide, depth unknown, excavated to 1.30m beneath current land surface. Profile uncertain but tops of sides are straight cut at approximately 45° angles. Three fills identified, mostly mid greyish brown silt with occasional peagrit. Animal bone, burnt clay worked flint and oyster shell found, also five sherds 2nd to 3rd century pottery.

F.101 – Ditch; aligned NW-SE measuring 1.15m wide and 0.25m deep, 11.50m exposed in watching brief area. Cut shallow straight sides leading to a flat base. One fill, a mid brown clayey silt, no finds.

F.102 – Pit? Sub-circular in plan measuring 1.00m by 0.75m. Not excavated but potsherd dated 3rd – 4th centuries recovered from surface.

F.107 – Ditch, truncated by F.100 and F.101. Visible for 5.50m aligned E-W and measured 1.40m wide by 0.20m deep. Cut had shallow concave sides leading to a flat base. Single fill of mottled orange brown clay silt, no finds.

F.108 – Pit? Mostly obscured by baulk, cut by F.99 and F.100. Measured a maximum 1.00m wide by 0.85m deep. Fill was striated lenses of mid yellowish brown sandy silt and reddish brown burnt clay material. No finds.

Car Park Excavation (see Figure 5)

F.151 – Ditch: NE-SE aligned and measuring 30.9m overall. Six slots excavated. 1st slot. 0.65m in width and 0.19m deep. Cut [385] straight steep sides onto a flat base. Fill [384] contained 3rd-4th century pottery and struck flint. 2nd slot. 1m wide and 0.35m deep. Cut [428] moderately steep sides and a stepped base. Fills [426] and [427] contained mid 2nd-4th century pottery and a nail. 3rd slot. 0.44m wide and 0.2m deep. Cut [441] straight moderately steep sides to a rounded base. Fills [439] and [440] no finds recovered. 4th slot. 1m wide and 0.36m deep. Cut [514] steep sides to a rounded base. Fill [513] no finds recovered. 5th slot. 1m wide and 0.38m deep. Cut [554] straight steep sides to a rounded base. Fill [553] contained pottery, bone and worked flint. 6th slot. 0.5m wide and 0.15m deep. Cut [626] moderately steep sides to a rounded base. Fill [625] no finds recovered.

F.152 – Ditch: Five slots excavated. NE-SW aligned and measuring 30.9m in total. 1st slot. 0.58m wide and 0.16m deep. Cut [387] steep sides to a rounded base. Fill [386] contained 3rd-4th century pottery and burnt clay. 2nd slot. 0.45m wide and 0.15m deep. Cut [445] straight vertical to sloping sides and a flat base. Fill [444] contained 3rd-4th century pottery. 3rd slot. 0.8m wide and 0.26m deep. Cut [512] moderately steep sides with a rounded base. Fill [511] contained burnt clay. 4th slot. 1m wide and 0.31m deep. Cut [556] moderately steep sides to a rounded base. Fill [555] no finds recovered. 5th slot. 1.05m wide and 0.63m deep. Cut [643] very steep sides to a rounded base. Fills [639], [640], [641] and [642] contained 3rd-4th century pottery.

F.153 – Modern rectangular pit, 0.9m in length and 0.8m wide. Cut [390] was not excavated. Fills [388] and [389] contained articulated sheep with a bullet.

F.154 – Quarry pit or 'rubbish pit/ cultivation hollow' cutting through medieval quarry fill, 11.9m in total length and orientated NE-SW. Cut [392] gently sloping sides and a flat base. Fill [391] contained residual Romano-British pottery, bone, slag, post-medieval tile, burnt clay and flint.

F.155 – Pit: Oval in plan, measuring 1.3m in length, 1.55m wide and 0.32m deep. Partially truncated by modern gas line. Cut [394] steep sides to a flat base. Fill [393] contained bone and work flint.

F.156 – Pit: Oval in plan, measuring 1.55m in length, 1.5m wide and 0.38m deep. Cut [396] moderately sloping sides to a flat base. Fill [395] contained 3rd-4th century pottery and bone.

F.157 – Quarry pit, c.0.5m in total length and orientated NE-SW. Cut [409] irregular sides to a flattish base. Fills [397], [398], [399], [400], [401] and [402] contained 2nd-4th century pottery and worked flint.

F.158 – Pit, slightly oval in plan measuring 1.1m in length, 1m wide and 0.24m deep. Cut [404] moderately sloping sides to a rounded base. Fill [403] bone only recovered.

F.159 – Possible animal burrowing, very irregular in shape measuring c.4.2m in total. Cut [406] moderately steep and concaves sides to an undulating irregular base. Fill [405] post medieval pottery, flint and bone.

F.160 – Ditch: Three slots excavated. NE-SW aligned and measuring 5.8m in total. 1st slot. 0.52m wide and 0.24m deep. Cut [408] very steep sides to an irregular base. Fill [407] no finds recovered. 2nd slot. 0.6m wide and 0.13m deep. Cut [455] gently sloping sides to a rounded base. Fill [454] no finds recovered. 3rd slot. 0.7m wide and 0.19m deep. Cut [502] steep sides to a flat base. Fill [501] no finds recovered.

F.161 – Ditch: Three slots excavated. Aligned NE-SW and measuring 3.7m in total. 1st slot. 0.66m wide and 0.36m deep. Cut [411] very steep sides to a rounded base. Fill [410] contained 2nd-4th century pottery. 2nd slot. 0.59m wide and 0.34m deep. Cut [497] very steep sides to a rounded base. Fill [496] no finds recovered. 3rd slot. 0.57m wide and 0.21m deep. Cut [499] steep sides to a flat base. Fill [498] no finds recovered.

F.162 – Pit, oval in plan measuring 1.4m in length, 1.2m wide and 0.34m deep. Cut [413] very steep sides to a flat base. Fill [412] bone only recovered.

F.163 – Ditch: Three slots excavated. NE-SW aligned and measuring 4.85m in total. 1st slot. 0.6m wide and 0.28m deep. Cut [415] very steep sides to a rounded base. Fill [414] contained 2nd-4th century pottery. 2nd slot. 0.8m wide and 0.28m deep. Cut [417] steep sides to a rounded base. Fill [416] bone only recovered. 3rd slot. 0.6m wide and 0.18m deep. Cut [419] gently sloping sides to a rounded base. Fill [418] no finds recovered.

F.164 – Ditch: Two slots excavated. NE-SW aligned and measuring 3.5m overall. 1st slot. 0.61m wide and 0.2m deep. Cut [421] steep sides to a rounded base. Fill [420] contained 2nd-4th century pottery, bone and worked flint. 2nd slot. 0.56m wide and 0.15m deep. Cut [423] steep sides to a rounded base. Fill [422] no finds recovered.

F.165 – Tree throw, measuring 0.85m in length, 0.49m wide and 0.17m deep. Cut [425] irregular, but slightly oval in plan. Moderately straight and steep sides to a rounded base. Fill [424] no finds recovered.

F.166 – Ditch: Two slots excavated. Aligned E-W and measuring 5.3m in total. 1st slot. 0.68m wide and 0.19m deep. Cut [430] moderately sloping straight sides to a rounded, slightly undulating base. Fill [429] contained Late Iron Age/Romano-British pottery. 2nd slot. 0.15m wide and 0.13m deep. Cut [443] near vertical straight sides to a slightly sloping base. Fill [442] no finds recovered.

F.167 – Ditch: Two slots excavated. Aligned E-W and measuring 4.3m in total. 1st slot. 0.85m wide and 0.14m deep. Cut [432] moderately sloping sides to a rounded base. Fill [431] contained worked flint. 2nd slot. 0.97m wide and 0.1m deep. Cut [434] gently sloping sides to a flat base. Fill [433] no finds recovered.

F.168 – Pit, circular in plan measuring 1.2m in diameter and 0.15m deep. Cut [413] very steep sides to a flat base. Fill [412] bone only recovered.

F.169 – Burrow, irregular in plan measuring 1.36m in length, 0.38m in width and 0.53m deep. Cut [438] near vertical sides to a slightly rounded base. Fill [437] contained 2nd-4th century pottery.

F.170 – Ditch: Two slots excavated. Aligned E-W and measuring c.13.9m in total. 1st slot; 1.7m wide and 0.75m deep. Cut [447] moderately sloping sides to a flat base. Fill [446] 2nd-4th century pottery and worked flint. 2nd slot; 1.4m wide and 0.24m deep. Cut [449] moderately sloping sides to a rounded base. Fill [448] contained 2nd-4th century pottery and worked flint.

F.171 – Pit, circular in plan measuring 2.35m in diameter and 0.25m deep. Partially truncated by modern gas line. Cut [451] moderately sloping sides to a flat base. Fill [450] no finds recovered.

F.172 – Pit, circular in plan measuring 1.26m in diameter and 0.24m deep. Cut [453] steep sides to a rounded base. Fill [452] no finds recovered.

F.173 – Ditch: Two slots excavated. Aligned E-W and measuring 8.3m in total. 1st slot; 1.39m wide and 0.27m deep. Cut [457] moderately sloping sides to a rounded base. Fill [456] no finds recovered.

2nd slot. 0.76m wide and 0.08m deep. Cut [459] gently sloping sides to a rounded base. Fill [458] no finds recovered.

Bridge Casement Watching Brief (see Figure 8)

F.174 – Palaeo-channel or pond, aligned N-S and measuring 10m in total length, 2m wide and 1.1m deep. Cut [471] near vertical to gently sloping sides and flat base. Fills [460], [461], [462], [463], [464], [465], [466], [467], [468], [469] and [470] contained bone.

F.175 – Ditch butt-end (?), aligned NE-SW and measuring 1.20m in total. 0.68m wide and 0.36m deep. Cut [474] near vertical to very steep sides and a flat base. Fills [472] and [473] contained 2nd-4th century pottery and worked flint.

F.176 – Small pit or post hole, 0.35m in length, 0.22m in width and 0.14m deep. Cut [476] oval in plan with moderately steep sides to a rounded base. Fill [475] no finds recovered.

F.177 – Ditch, aligned NW-SE and measuring 1.50m length as revealed 0.4m wide and 0.14m deep. Cut [478] moderately steep straight sides and an irregular undulating base. Fill [477] no finds recovered.

F.178 – Ditch, linear in plan, aligned NE-SW and measuring 7.00m in total, 0.75m wide and 0.20m deep. Cut [481] was U-shaped in profile. Fills [479], backfill, mid brownish grey silty clay and [480] fine grey alluvial silt with no inclusions. No finds recovered.

F.179 – Ditch, aligned NW-SE and measuring 6.00m in total, 0.7m wide and 0.36m deep. Cut [485] steep and straight sides and a flat base. Fills [482], [483] and [484] contained 3rd-4th century pottery, bone, worked flint and burnt flint.

F.180 – Pit, 0.6m in length, 0.56m in width and 0.13m deep. Cut [487] steep and straight to slightly concave sides with a rounded base. Fill [486] contained burnt flint.

Layer [500] – A fine friable mid grey sandy silt with moderate quantities of small flint and gravel inclusions and moderate amounts of small rounded chalk fragments. Some rare charcoal inclusions. Contained flint flakes, burnt flint, animal bone fragments and potsherds dated to the 2nd to 4th centuries AD. Interpreted as a layer of alluvial silts filling a hollow but having some roman material deposited within it.

Car Park Excavation (resumed) (see Figure 5)

F.181 – Gully: Orientated N-S and curving E-W, then back to N-S. Measuring c.7.7m in total. Three slots excavated. 1st slot. 0.5m wide and 0.06m deep. Cut [489] very gently sloping sides to a rounded base. Fill [488] no finds recovered. 2nd slot. 0.5m wide and 0.18m deep. Cut [491] moderately steep sides to a rounded base. Fill [490] no finds recovered. 3rd slot. 0.4m wide and 0.19m deep. Cut [493] moderately sloping sides to a rounded base. Fill [492] no finds recovered.

F.182 – Gully, orientated E-W and measuring 2.4m in total. 1m wide and 0.21m deep. Cut [495] moderately sloping sides and a rounded base. Fill [494] no finds recovered.

F.184 – Pit, irregular, but slightly oval in shape measuring 1.35m in length, 0.9m in width and 0.12m deep. Cut [504] moderately sloping sides to a flat base. Fill [503] no finds recovered.

F.185 – Posthole, 0.30m in diameter and 0.08m deep. Cut [506] oval in plan with steep sides to a flat base. Fill [505] contained a fragment of quern stone.

F.186 – Ditch or gully: Two slots excavated. Aligned SE-NW and measuring c.6m in total. 1st slot. 0.73m wide and 0.24m deep. Cut [522] moderately sloping straight sides to an irregular undulating

base. Fill [521] contained 2nd-4th century pottery and bone. 2nd slot. 0.25m wide and 0.16m deep. Cut [632] steep sides to a flat base. Fill [631] no finds recovered.

F.187 – Ditch or gully: Two slots excavated. Aligned E-W and measuring 8.8m in total. 1st slot. 0.92m wide and 0.33m deep. Cut [518] steep sides to an irregular undulating base. Fill [517] contained 2nd-4th century pottery, bone and worked flint. 2nd slot. 0.9m wide and 0.21m deep. Cut [628] steep sides to a flat base. Fill [627] contained 2nd-4th century pottery.

F.188 – Ditch or gully, orientated SE-NW and measuring 5.2m in total. 0.62m wide and 0.10m deep. Cut [526] gently sloping sides to a flat base. Fill [525] contained 3rd-4th century pottery.

F.189 – Ditch or gully, orientated SE-NW and measuring 5.5m in total. 0.5m wide and 0.10m deep. Cut [524] gently sloping sides to a flattish base. Fill [523] no finds recovered.

F.190 – Gully: Three slots excavated. Aligned E-W and measuring 9.5m in total. 1st slot. 0.9m wide and 0.2m deep. Cut [528] moderately sloping sides to a flattish base. Fill [527] contained 2nd-4th century pottery and bone. 2nd slot. 0.35m wide and 0.24m deep. Cut [538] moderately sloping sides to a flattish base. Fill [537] contained 2nd-3rd century pottery, bone and worked flint. 3rd slot. 0.33m wide and 0.09m deep. Cut [540] moderately sloping sides to a rounded base. Fill [539] no finds recovered.

F.191 – Ditch or gully: Two slots excavated. Aligned SE-NW and measuring 6.7m in total. 1st slot. 1.1 m wide and 0.49m deep. Cut [520] steep sides to a flattish base. Fill [519] bone only recovered. 2nd slot. 0.9m wide and 0.4m deep. Cut [630] steep sides to a flat base. Fill [629] contained 2nd-4th century pottery, bone, oyster shell and quern stone.

F.192 – Pit, oval in plan, 1.8m in diameter and 0.23m deep. Cut [508] very gently sloping sides to a flat base. Fill [507] contained 2nd-4th century pottery.

F.193 – Shallow pit, 0.6m in length, 0.5m wide and 0.07m deep. Cut [510] oval in plan with gently sloping sides to a flat base. Fill [509] no finds recovered.

F.194 – Ditch or gully: Aligned N-S and measuring 4.15m in total. Two slots excavated. 1st slot. 0.46m wide and 0.16m deep. Cut [516] steep sides to a rounded base. Fill 515] no finds recovered. 2nd slot. 0.47m wide and 0.18m deep. Cut [546] steep sides to a rounded base. Fill [545] contained 2nd-4th century pottery and flint.

F.195 – Ditch, two slots excavated. Aligned SE-NW and measuring 7m in total. 1st slot. 0.83m wide and 0.29m deep. Cut [530] steep sides to a rounded base. Fill [529] contained 2nd-4th century pottery and bone. 2nd slot. 0.95m wide and 0.2m deep. Cut [442] steep sides to a rounded base. Fill [541] no finds recovered.

F.196 – Ditch, two slots excavated. Aligned SE-NW and measuring 7.7m in total. 1st slot. 0.37m wide and 0.1m deep. Cut [532] steep sides to a flat base. Fill [531] no finds recovered. 2nd slot. 0.21m wide and 0.07m deep. Cut [544] steep sides to a flat base. Fill [543] no finds recovered.

F.197 – Ditch, three slots excavated. Aligned N-S and measuring 7.5m in total. 1st slot. 0.48m wide and 0.19m deep. Cut [534] moderately sloping irregular sides to an irregular base. Fill [533] no finds recovered. 2nd slot. 1m wide and 0.37m deep. Cut [564] moderately sloping sides to a rounded base. Fill [563] contains 2nd-4th century pottery. 3rd slot. 0.52m wide and 0.23m deep. Cut [536] moderately sloping sides to a flat base. Fill [535] contained Romano-British pottery, bone and worked stone.

F.200 – Gully, orientated E-W and measuring 1.8m in total. 0.77m wide and 0.15m deep. Cut [548] moderately sloping sides to a flattish base. Fill [547] no finds recovered.

F.201 – Ditch, orientated N-S and measuring 2.55m in total. 0.85m wide and 0.22m deep. Cut [550] moderately steep sides to a rounded base. Fill [549] mid-late 1st century pottery, bone and worked flint recovered.

F.202 – Ditch, orientated N-S and measuring 2.5m in total. 0.7m wide and 0.19m deep. Cut [552] steep sides to a rounded base. Fill [551] no finds recovered.

F.203 – Pit, irregular in plan, measuring 0.58m wide and 0.36m deep. Cut [568] moderately steep sides to a rounded base. Fill [557] contained 2nd-4th century pottery, bone and worked flint.

F.204 – Gully, orientated N-S, dimensions uncertain Cut [560] Fill [559] no finds recovered.

F.205 – Gully, orientated N-S, dimensions uncertain. Cut [562] Fill [561] no finds recovered.

F.207 – Gully, three slots excavated. Aligned NE-SE and measuring 4.7m in total. 1st slot. 0.18m wide and 0.05m deep. Cut [566] gently sloping sides and to a rounded base. Fill [565] no finds recovered. 2nd slot. 0.33m wide and 0.17m deep. Cut [568] steep sides to a flat base. Fill [567] no finds recovered. 3rd slot. 0.58m wide and 0.28m deep. Cut [570] steep sides to a rounded base. Fill [569] no finds recovered.

F.208 – Gully, two slots excavated. Aligned NE-SE and measuring 7.3m in total. 1st slot. 0.34m wide and 0.05m deep. Cut [573] very gently sloping sides and to a rounded base. Fill [572] no finds recovered. 2nd slot. 1.17m wide and 0.43m deep. Cut [575] moderately steep to slightly undercutting sides to a flat base. Fill [574] contained 2nd-4th century pottery and bone.

F.209 – Post Hole, 0.4m in length, 0.32m in width and 0.24m deep. Cut [577] oval in plan with near vertical straight sides to a slightly rounded base. Fill [576] no finds recovered.

F.210 – Post Hole, 0.4m in diameter and 0.1m deep. Cut [579] circular in plan with moderately steep and straight sides to a slightly rounded base. Fill [578] no finds recovered.

F.211 – Ditch, two slots excavated. Aligned NE-SE and measuring 10.8m in total. 1st slot. 0.98m wide and 0.29m deep. Cut [582] steep straight sides and to a rounded base. Fills [580] and [581] contained mid 2nd-4th century pottery. 2nd slot. 1.05m wide and 0.28m deep. Cut [585] steep sides to a rounded base. Fills [583] and [584] no finds recovered.

F.212 – Gully, orientated E-W, measuring 0.4m wide and 0.09m deep. Cut [587] steep near vertical sides with an undulating base. Fill [586] no finds recovered.

F.213 – Gully, orientated NE-SW and measuring c.9.5m in total. 0.4m wide and 0.17m deep. Cut [589] steep and straight sides with an undulating slightly concave base. Fill [588] no finds recovered.

F.214 – Ditch or gully, orientated E-W and measuring 2.6m in total. 0.8m wide and 0.08m deep. Cut [591] steep and slightly stepped sides to a flat base. Fill [590] contained 2nd-4th century pottery.

F.215 – Ditch, orientated E-W and measuring 2.6m in total. 0.75m wide and 0.14m deep. Cut [593] moderately steep concave sides to a rounded base. Fill [592] contained mid 2nd-4th century pottery.

F.216 – Ditch, orientated E-W and measuring 2.2m in total. 0.35m wide and 0.18m deep. Cut [595] gently sloping sides to a flat base. Fill [594] no finds recovered.

F.217 – Truncated ditch; NE-SW, 3.80m length remaining, 0.85m wide and 0.18m deep. Cut [597], U-shaped in profile. Fill [596], light yellowish brown sandy silt. No finds.

F.218 – Truncated ditch; cut [600] steep western side to narrow rounded base, eastern side shallower, becoming steeper towards top. Two fills; [598] and [599]. No finds.

F.219 – Hollow way: Measures at least 2.40m wide and 0.50m deep. Cut [608] had shallow concave sides leading to a rutted and undulating base. Fill [605] a thick layer of coarse metalling material, probably post medieval in date, but may be earlier, no finds. Truncated by F.220.

F.220 – Wheel ruts: orientated NE-SW, measuring 2.90m wide by 0.52m deep. Cut [610] irregular in profile with two steep sided and flat based depressions joined by an inclined and raised spit of earlier material. Filled with five fills; [603], [604], [606], [607] and [609], which were predominantly coarse

metalling deposits in a sand and gravel matrix with frequent chalky inclusions. Finds of crushed post-medieval CBM, abraded 17th and 18th century pottery, Georgian halfpenny and livery button with heraldic 'tyger' motif.

F.221 – Eastern edge of hollow way: Cut [615], a series of scoops cut into the chalk natural, represents multiple activity. Fill [614] post medieval hill wash. No finds

F.222 – Gully; aligned NE-SW, cut [617], u-shaped in plan. Fill [616], no finds.

F.223 – Small ditch: truncated by later activity, 0.60m wide by 0.25m deep, cut [620] had a U-shaped profile. Two fills , [618] and [619], both a mid to dark grey sandy silt, no finds.

F.224 – Ditch: Aligned NE-SW measuring 1.10m wide by 0.38m deep. Cut [624] was U-shaped in profile with steep sides leading to rounded base. Three fills; [621], [622] and [623], all truncated by later burrowing disturbance. A mixture of Romano-British and 12th century potsherds.

F.225 – Wheel rutting in post-medieval trackway. Cuts F.220 coarse metalled surface [606].

F.227 – Gully, orientated E-W and measuring 2.6m in total. 0.3m wide and 0.44m deep. Cut [634] near vertical sides to a rounded base. Fill [633] no finds recovered.

F.228 – Gully, orientated N-S and measuring c.1m in total. 0.62m wide and 0.24m deep. Cut [636] moderately steep sides to a flat base. Fill [635] contained 2nd-4th century pottery.

F.229 – Gully, orientated N-S and measuring c.0.9m in total. 0.26m wide and 0.2m deep. Cut [638] steep sides to a rounded base. Fill [637] contained 2nd-4th century pottery and bone.

F.231 – A large roadside quarry > 34 m long, 12 m wide (6 m wide at its southern end), and > 1.6 m deep at its deepest point; consisting of a worked area of approx. 1000 sq metres. The periglacial and solifluction derived deposits which overly the chalk at this point consist of a chalk breccia which encloses lenses of washed and blown-in sand, and also angular frost-shattered flint. It was largely these layers which had been removed by quarrying, the top of the weathered chalk outcrop beneath having been left, the latter surface marked by the presence of solution cavities. These original chalk, sand and flinty deposits seem to have been removed for the purposes of road metalling, or else for making mortar, or for the construction of stamped floors. The quarry shallowly cuts the roadway planated surface at its western end, thus is evidently later than the earliest use of this road. However, the later inter-cutting road ruts to the east of this suggests that the road continued in use throughout the life of the quarry, influencing both its location, its NNE-SSW orientation, and also the limits to the extension of this feature westwards. Some of the layers of backfill or naturally accumulated infill, such as rock talus, *in situ.* loam, or else washed-in plough soil banking up against the much steeper eastern quarry edge (thus deposited from that side) contain sherds of medieval pottery (13th – 15th century AD). The feature is interpreted as being an Early Medieval roadside quarry, although there may be earlier Roman elements to it. The greater part of the infill of the quarry following abandonment may consist of drifted medieval headland soil, and above this post-medieval plough soil and rubble levelling.

The quarry cut [677] consists of a steep-sided benched quarry face on the eastern side, with a 45° slope to the lower step, cut through a hardened cemented chalk and flint breccia. A sharp change in angle at the base of this forms the level floor of the quarry, corresponding to the flat bedding plane of the chalk. At the west end, this cut rises at a gentle angle to meet the planated surface of what was almost certainly a shallowly cut hollow-way; the edge of the quarry cut turns to the north-east at this point, hence the underlying chalk rises up slightly more steeply on the north side of the 1m wide excavation trench (see Figure 14 a+b; section no. 195, X-Y). No clear evidence of tool-marks could be seen on the surface of the chalk. It seems reasonable to suppose that this quarry edge and floor was cut using iron picks and iron-tipped spades.

The quarry infill layers are described here from top to bottom:

[649] A modern building layer, little more than 150 mm thick and 400 mm in diameter. This consisted of crushed blocks of chalk with an orange-coloured flinty gravel with inclusions of building mortar, concrete and brick. Possibly linked to recent demolition and levelling.

[650] A post-medieval to modern topsoil layer consisting of loam containing flint and chalk clasts within a brown to grey sandy silty loam matrix, up to 300 mm thick and 5 m in extent. Included within this are inclusions of ironwork and fragments of rusty tin sheet. This probably relates to 1950s levelling prior to the construction of the Institute buildings.

[651] A harder and more compact clay-rich loam; light grey with faint chalky streaks and small fragments of chalk and gravel-size angular black flint. Up to 400 mm thick and more than 7 m in extent. In places this is much looser with sandy lenses. A soil composed of re-worked chalk breccia and sand – probably a post-medieval plough soil.

[655] A looser tilth of loamy soil enclosing small well spread-out flint pebbles and with inclusions of carbonaceous and humic material, fragments of crushed chalk, and some broken black flint. 320 mm thick and 4.5 m in extent.

[652] More clay-rich loam layer with a high % of chalk inclusions in the form of laminae with minor flint, also varied dark grey to light cream grey in colour; up to 400 mm thick and 7.5 m in extent. Contains inclusions of some larger flint pebbles.

[667] A buried soil consisting finely worked dark loam, possibly a cultivation soil; up to 230 mm thick and up to 3.5 m in lateral (E-W) extent. The laminae within this includes lenses which are richer in flint. Also some rounded pebbles of chalk and some minor burnt flint. Tree or shrub root holes are present towards the base of this. From this came 13 sherds of slightly abraded Early Medieval pottery, most not from adjoining pieces. Interpreted as a re-deposited medieval cultivation soil, perhaps washed-in from a headland on the edge of fields just to the east of the quarry.

[653] A lens of weathered talus abutting the base of the eastern quarry edge, <100 mm thick, and just over 2 m in lateral extent, its western end lying over the quarry floor. This consisted of layers of a sandy chalk sediment washed off the rock face, and lying at approx 25° from horizontal, and contained a thin layer of loam sandwiched in between. The latter is in the form of a slumped and slightly turbated layer of light grey loam with chalk fragments, and with a coarser and sandier matrix than [667].

[654] A lower layer of dark grey loam /black soil, <150 mm thick and < 1.2 m in lateral extent, with minor inclusions of flint, burnt flint and charcoal.

[655] A lens of coarse chalky sand containing lumps of chalk rock and some flint abutting the base of the eastern quarry edge. Lens is <50 mm thick. Contains laminae of grey loam streaked with chalk just above the rock surface. Talus from weathering.

[656] A lens of weathered chalk (up to 200 mm thick and 2 m in lateral (E-W) extent). This has been eroded from the base of the western edge of the quarry cut and the side of the adjacent hollow-way, but was only visible in the south-facing section.

Up to 20 small solution features were recorded on the upper surface of the chalk beneath the quarried-away layers of chalk breccia, flint and sand. The largest of these solution hollows was approx. 1 m long and up to 150 mm deep. In places these were naturally infilled with waterlain sands. Most of the hollows were floored with the naturally deposited sediment F.

G = a basal dark brown sand containing small angular clasts of flint
F = a light yellow medium-coarse grain sharp sand.

Cleaning down onto rock within (the south) trench **section 195** and the base of the hollow-way to the west of the quarry cut revealed the following contexts, most of these relating to the rutting, the infill of ruts, and the road metalling associated with the early road which ran along its length:

[657] A hard and compact mixed chalky loam with lumps of broken (quarried) chalk within it. Forms the uppermost fill of many of the small solution hollows, evidently a quarry-disturbed/ formed context (typically < 100mm thick).

[658] In places overlying [657] within the top of the solution hollows, this context consists of a thin (<100mm) layer of orange-yellow coloured sub-soil mixed with sand and some yellowish angular flint clasts.

[676] To the west of the roadway, there were further solution features exposed upon the upper weathered surface of the chalk. These were filled with [658], but also in places a thin buried loamy topsoil.

F.232 - The faint outline of a N-S weathered rut gulley [659] up to 400 mm wide, < 150 mm deep and of unknown length cut into the upper weathered surface of the chalk, at the point where this has been furrowed by NE-SW solution hollows. The rut is empty of any metalling infill apart from some isolated fragments of broken flint. Much of the looser metalling appears to have been eroded away. Probably part of the earliest identified use of the roadway

[678] A possible metalled road surface, consisting of 20-100 mm diameter flint pebbles within a matrix of yellow-white chalky sub-soil with some darker yellow sandy patches. Layer 100 mm thick (max), but patchily distributed, visible within an area 1.7 m x 1.5 m, either side of F.232. Quite possibly the eroded (and washed-away) remains of the earliest metalled road surface which (may be) Roman. No pottery or other dateable artefacts were recovered from this.

F.233 - The cut [660] for a relatively early roadway wheel rut (but one which post-dates cut [659]). Up to 500 mm wide (and probably > 150 mm deep). This also cuts the chalk, forming slightly raised ridges either side of it, and is filled with [661]. The feature is cut by another rut (F.234). The rut fill [661] is composed of a sandy buff – light grey coloured loam containing lumps of 'freshly' broken angular black flint (10-30 mm diameter fragments) which forms a hard compressed metalling layer with flint fragments abutting.

F.234 - The cut for a later and distinctly narrower (< 170 mm wide) wheel rut [662] impressed through the compacted metalling of [661], and located within the centre of F.233. This was infilled with [675], a looser and sandier grey-brown coloured loam with inclusions of crushed chalk and tiny (gravel-sized) fragments of flint plus fragmentary 'crumbs' of post-medieval CBM (brick or tile). This suggests a late date for this rutting and metalling, the paired rut for the left-hand cart wheel being F.239. The latter contained exactly the same infill [675], that of a late infill or levelling repair to this most recently formed rutted road surface. Possibly reflects the last use of this roadway/ hollow-way – which probably took place sometime between the late 17th and early 19th century.

F.235 A straight-sided wheel rut [663] cut into the chalk , one that immediately abuts and runs parallel to F.233. This was half- sectioned (I-J), revealing a flat-bottomed U-shaped profile up to 370 mm wide and about 150 mm deep containing a fairly compact and compressed fill of broken fresh-looking angular black flint within a buff-grey sandy loam matrix [661] – exactly the same type and phase of metalling as we find in the adjacent rut F.233. A solution feature and animal hole were noted within the weathered chalk surface underneath.

F.236 - A narrower (<200 mm wide) and shallower-cut wheel rut [664] filled with [664], a slightly more pebbly flint metalling than 661, but within a similar sandy loam matrix.

F.237 - This consists of a large (300-400 mm wide) wheel rut [668] which contains a coarse (30-70 mm diameter) round flint pebble metalling embedded within a compact matrix of broken angular black flint in a sandy grey loam [669].

F.238 - Separated from F.237 by a 200 mm wide ridge of chalk, the cutting for this wheel rut [670] was between 150 – 250 mm wide and infilled with [671], a metalling com posed of broken pebbly black flint with crushed chalk and loam, similar to 669.

F.239 - Abutting F.238 on the west side lies a slightly sharper-defined (<200 mm wide) wheel rut [672] filled with flint metalling in a loamier matrix with inclusions of fragmented brick and tile [675] the same context as we find within rut F.234, representing, possibly, the last post-medieval use of and repair of this roadway.

F.240 - Less than 200 mm to the west, the last identified wheel rut [673] which marks the westernmost edge of the track /hollow-way, is infilled with [674], a metalling of flint pebbles in a matrix of light – dark grey loam and sand.

Soak-away and Pipe Trench Watching Brief

Layer [001]: Natural sand and gravel orange sand and gravel with yellow lenses of fine sand with frequent inclusions of medium sized flint nodules

Layer [002]: Pale yellowish green fine sand and small gravel, occasional flint nodules. Sterile of organic material and artefacts.

Layer [003]: Greyish green fine sand and gravel with approximately 20% silt component and common small fractured flint nodules. Worked flint was recovered from this deposit (see below).

Layer [004]: Mid greenish brown silty sand with common small fractured flint nodules and occasional rounded pebbles. A noticeable organic component to this deposit suggested some form of stabilised buried soil. Worked flint was recovered from this deposit (see below).

Layer [005]: Greyish white pure silt, probably derived from flood alluvial. Very pure, with occasional small rounded pebbles and white grit. Sterile of finds and organics.

Layer [006]: Yellow green/brown with pale brown mottling, silty clay with occasional small flint nodules and small rounded stones or pebbles. Probably derived from waterlogged alluvium and colluvium. Sterile of finds, but a fair organic component noted.

F.1 – Gully/truncated ditch; Cut [017] measured 9.50m long 0.50m wide by 0.07m deep, linear in plan, aligned E-W and of shallow u-shaped profile. Fill [016] consisted of fine grey alluvial silt with no inclusions or finds.

F.2 – Ditch; linear in plan, aligned ENE-WSW, measured 6.70m long by 1.20m wide and 0.50m deep. Cut [012] steep northern side leading to flat inclined base through sharp break of slope, southern side shallower and straight in profile. Four fills, primary fill [011], mid greyish green silty sand and gravel with frequent inclusions of big stones, one Romano-British potsherd. Secondary fill [010] mid grey sandy silt with occasional small angular stones. Tertiary fill [009], yellowish grey silty sand with occasional gravel and small angular stones. Ultimate fill [008], light grey sandy silt alluvium, truncated by **F.3**.

F.3 – Ditch; curvilinear in plan, aligned E-W turning ENE, measured 5.00m long by 0.65m wide and 0.25 deep. Cut [15] U-shape in profile containing two fills: Primary fill [014], light grey sandy silt alluvium beneath secondary fill [013], yellowish grey sandy silt with common small to medium sized rounded and angular stones. No finds.

F.4 – Feature, full extent unknown, greater than 6m by 6m. Cut [019] slopes gently to south. Fill [018], a fine grey alluvial silt with no inclusions or finds. Possibly natural in origin.

F.41 – Defensive (?) large ditch measuring 4.00m wide by 1.30m deep. Full extent unknown. Cut [143] approximately 45° side on southern side dropping to broad rounded base through gradual break of slope. Northern side shallower, leading to base through imperceptible break of slope. Three fills; primary fill [142] a pale greenish grey sandy silt with frequent small chalk fragments and angular stones. Seven R-B coins (mostly of Magnentius, c. AD 350-353 - possibly as a deposition) attributed to this fill (see Appendix 7 <001> - <007>). Secondary fill, [141] light to mid grey sandy silt with common small rounded stones and frequent chalk fragments. No finds. Tertiary deposit layer [140], a yellowish grey-brown sandy silt alluvium; post-Roman flooding deposit which covers river Granta floodplain.