Post-Excavation Assessment

The New Park and Ride site, Land off Butt Lane, Milton, Cambridgeshire

Post-Excavation Assessment

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The New Park and Ride site, Land off Butt Lane, Milton, Cambridgeshire.

Post-excavation Assessment and Updated Project Design

By Dan Hounsell

With contributions by Val Fryer BA, FSA MIFA, Steve Boreham BSc. PhD., Sarah Percival BA MA, Alice Lyons BA MIFA, Ian Baxter BA MIFA, Nina Crummy BA FSA, Carole Fletcher BA AIFA, Rachel Fosberry

Editors: Elizabeth Popescu PhD BA MIFA

Stephen Macaulay MPhil BA MIFA

Illustrator: Crane Begg BSc

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Oxford Archaeology East,
15 Trafalgar Way,
Bar Hill,
Cambridge,
CB23 8SQ

t: 01223 850500
f: 01223 850599
e: oaeast@thehumanjourney.net
w: http://thehumanjourney.net/oaeast

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Summary

In April 2007 CAMARC (now OA East) undertook a Trial trench evaluation at Land off Butt Lane, Milton, Cambridgeshire (TL 469 630) in advance of this land being redeveloped into the new park and ride site. This evaluation, which was preceded by fieldwalking and geophysical survey, opened 18 trial trenches, to a total of 1500m^2 (5% of the development area). This work demonstrated that the bulk of the proposed development site was dominated by post-medieval agricultural activity (ridge and furrow). However, one area - the northern eastern quadrant of the site, did reveal earlier remains dating predominately to the Iron Age and Roman periods. On the basis of this initial evaluation of the site, Cambridgeshire Archaeology, Planning and Countryside Advice (CAPCA) requested a full investigation (preservation by record) of a limited area within the larger site, which took in this north east quadrant. With the agreement of CAPCA and the client this excavation work proceeded directly on from the evaluation, and took place over July and August 2007.

This excavation identified the southern edge of a substantial, multi phase, Iron Age rural settlement, the agricultural land surrounding this settlement and the transitional zone between these different areas of use. The settlement itself was characterised by large rectangular enclosure with a smaller, internal sub enclosures, the remains of structures ("4 post" structures and roundhouses) and ancillary features associated with settlement, and the disposal of waste (rubbish pits). The associated agricultural areas contained 3 large water hole, as well as a number of smaller pits. The fill of one of the water pits contained a log ladder and a large number of associated working wood chips.

The site continued to be occupied into the Roman period. This use of the site, while still settlement related, appeared to be much less intense and took place at a time when the previous Iron Age settlement had faded from the landscape and when the nucleus of the settlement had either moved north or, shrunk in size. The Roman remains consisted of a single moderately sized enclosure as well as a further large watering pit. Both located toward the south eastern corner of the site.

The medieval activity on the site was restricted to a single, albeit substantial, structure – a windmill. The presence of lava stone in direct association with the windmill was interesting as such was believed to have been common use as a grinding stone at a much earlier period.

1 INTRODUCTION

1.1 Project Background

1.1.1 This archaeological excavation was undertaken in accordance with a Brief issued by Andy Thomas of the Cambridgeshire Archaeology, Planning and Countryside Advice team (CAPCA), supplemented by a Specification prepared by CAM ARC (now OA East), on behalf of the Property and Design Team, all sections of Cambridgeshire County Council.

1.1.2 The work was designed to assist in defining the character and extent of any archaeological remains within the proposed redevelopment area, in accordance with the guidelines set out in *Planning and Policy Guidance 16 - Archaeology and Planning* (Department of the Environment 1990). Prior to the site being redeveloped into a new Park and Ride site. The results will enable decisions to be made by CAPCA, on behalf of the Local Planning Authority, with regard to the treatment of any archaeological remains found.

1.1.3 In December 2006 CAM ARC undertook field walking at Land of Butt Lane, Milton, this was followed a Desk-Based Assessment and geophysical survey (CHER ECB 2453). As a result of these initial investigations CAM ARC undertook a trial trench evaluation (CHER ECB 3122) in April 2007, which opened 18 trial trenches across the site, to a total of 1500m^2 (5% of the development area). This work demonstrated that the bulk of the site was dominated by post medieval ridge and furrow activity. However, one area - the northern eastern quadrant of the site, did reveal earlier archaeological remains. On the basis of this work CAPCA decided to fully investigate a limited area within the larger site, which took in this north east quadrant. With the agreement of CAPCA and the client this excavation work rolled straight on from the evaluation, and took place over July and August 2007.

1.1.4 The site archive is currently held by CAM ARC and will be deposited with the appropriate county stores in due course.

1.2 Geology and Topography

1.2.1 The site overlies Gault formation with sporadic capping of Quaternary third terrace gravel and sand deposits of the River Cam (Worssam & Taylor 1969, BGS sheet 188).

1.2.2 The modern village of Milton is located less than 5km to the northeast of Cambridge and stretches along both sides of the High Street (Cambridge – Ely road) which was turnpiked in 1763 and later diverted to isolate Milton Hall in 1975. In relation to the nucleated village, the proposed development site lies to the south of the Butt Lane, west of the A10 Milton By-pass. This site was currently under use as arable agricultural land and was fairly flat, lying at a typical height of 11.5m OD

1.3 Archaeological and Historical Background

1.3.1 Text The bulk of this section is based on the Desk Based Assessment prepared for this site (Casa Hatton, 2006).

Prehistoric

1.3.2 Until recently prehistoric activity within the parish was virtually unknown, the distribution of finds, including stray artefacts and cropmark features visible on aerial photographs, showing a bias towards the higher and better-drained gravel terraces to the north, east

and south. In addition, traditional non-intrusive surveys, including fieldwalking, aerial photographic reconnaissance and geophysical perspectives, had failed to produce significant results.

1.3.3 However, recent archaeological investigations at the former Milton Landfill Site immediately to the south and west of the proposed development Site 4 have revealed dense prehistoric activity. Residual struck and burnt flint dating to the Late Mesolithic-Early Neolithic period pointed to the presence of temporary campsites and associated activities (e.g. cooking) peripheral to possible areas of more intense occupation. There was also evidence for ritual activity, as indicated by the presence of at least one cremation burial. The area was settled from the Middle Bronze Age, reaching its peak of intensity during the Middle to Late Iron Age when evidence was uncovered for a farming settlement and associated field systems, as well as funerary activity, on the gravel outcrops.

1.3.4 Other archaeological investigations in the Milton area have confirmed prehistoric occupation on the gravel terraces, as at Arbury, to the south of the proposed development sites, where recent work has been conducted at the site of the well-known defensive Late Iron Age ringwork at Arbury Camp (Evans 1991a; 1991b), and where evidence of Iron Age field systems pre-dating phases of villa building has been uncovered, as at Kings Hedges School, Cameron Road (Lisboa 1995/CHER 05421b). At Coles Lane, at less than 1km to the east of the proposed development Site 4, excavations have uncovered Bronze Age remains spanning the 2nd millennium BC (Lucas 1998) (CHER CB14682). At Limes Farm, Landbeach, at approximately 1.5km to the north-east of the proposed development Site 6, investigations in an area of dense cropmarks have indicated that occupation here had begun at least in the Middle Iron Age period, with more marginal activity continuing throughout the Late Iron Age and beyond (Connor 1999).

Roman

1.3.5 The Roman remains in the area to the north of Cambridge are relatively well documented. As with the previous period, until recently activity appeared to be largely confined to the gravel terraces. The main feature of the Roman landscape is represented by the stretch of Akeman Street between Cambridge and Littleport to the north (Margary Route 23b), also called Mere Way along the boundary between the parishes of Milton and Impington to the west. Recent work within the parish has offered the opportunity to excavate segments along its route (Ozanne 1991/CHER 07610; Evans 1991b/CHER 10087). Six 1st-2nd century cremations have also been found adjacent to the road during work at Kings Hedges Farm (Ette 1991/CHER CB15697). Occupation off the Roman Road has long been known, with particular reference to Arbury, to the south of the proposed development sites, where villa buildings and other remains have been the subject of investigations since the 1950s (Friend 1955; Alexander *et al.* 1967). More recent interventions in the same area (Kings Hedges School, Cameron Road) have revealed two phases of the Roman villa dating to the later 4th century and associated features (Lisboa 1995/CHER 05421b; Clarke 2005/MCB16897). Trial trenching carried out on the site of the proposed Rowing Lake, some 1.5km to the east of Site 4, has revealed two Romano-British inhumation cemeteries, a Horningsea Ware pottery production site and evidence for cereal processing and animal husbandry in association with a cropmark settlement (Robinson & Guttmann 1996). Later investigations have revealed pits on the edge of the first gravel terrace and linear drainage ditches across the floodplain. The evidence has also

suggested that here during or after the Roman period fen conditions developed (Simmonds 2003).

1.3.6 Recent excavations at the former Milton Landfill Site have offered the opportunity to explore the heavier Gault area to the west of Milton. Here, a large Roman site, including remains of a farming landscape, settlement (a possible villa), industrial and religious activity and a Romano-British burial mound, have been discovered to the south of the proposed development Site 4 (Reynolds 1994/CHER11669 and 11669A; 1995; 1997/CHER 11669, CB15701, CB15712). Further to the west, Roman activity was represented by gravel extraction, possibly associated with the construction of Akeman Street/Mere Way, and by a series of parallel ditches which may have represented the maintenance of an earlier, Iron Age trackway (Connor 1998/CHER CB15707). To the north a significant spread of Roman artefacts across an area of over 10ha located between the proposed development Site 6 and Akeman Street/Mere Way to the west include Roman Samian and Horningsea ware (CHER 05273A), a Roman bronze jug handle, Late Iron Age and Roman coins, two bow brooches and a finger ring (CHER 08778, 8779, MCB16262 and MCB16263). It is possible that these finds were originally associated with the postulated villa site uncovered further to the south (Reynolds 1994).

1.3.7 With reference to the study areas, a scatter of Roman pottery was found during field walking in 1970 near the northern edge of Site 6 (CHER 05538). These finds are also likely to belong to the Roman 'villa' to the south.

Saxon and Medieval

1.3.8 Saxon Milton remains elusive and very few artefacts of this period are known in the area. A bronze wrist clasp generically assigned to the Saxon period was found during recording at the former Milton Landfill Site immediately to the south of the proposed development Site 4 (Connor 1999). Further to the south, at Kings Hedges School, Cameron Road, Arbury, a recent investigation has revealed few Saxon features and medieval destruction layers (Lisboa 1995/CHER 05421b). More significantly, test pitting on the site of the proposed Rowing Lake, some 1.5km to the east of Site 4, has revealed two scatters of Early Saxon artefacts consistent with domestic activity. One of these scatters was found in association with post-built structures, the other with a possible sunken-featured building and ditches which represented re-cuts of former Romano-British linear features (Robinson & Guttmann 1996).

1.3.9 A possible Saxon origin for Milton is suggested by toponomastic evidence. The place is first recorded in *c.* 975 as *Middletune* meaning 'the middle farm', possibly due to its location between Impington and Fen Ditton. The current topographic name has been established since the late 13th century (Reaney 1943, 182).

1.3.10 Historic sources recounts that the manor of Milton originally belonged to the canons of St Paul's London (AD 971) and, later to Ely Abbey (AD 984). It was seized by Picot the sheriff after the Norman Conquest, although the abbey's rights were soon recognized again. The manor was subsequently held at a knight's fee of the Bishop of Ely whose successors remained the chief tenants into the 17th century. Remains of a moat (The Hall) possibly associated with the early manor house still survived north of Fen End (formerly Hall End) in the 20th century. Presently, the site is only visible as a soil discolouration on aerial photographs (CHER 05865). The manorial site was transferred close to the church probably in the middle of the 16th century by William Cook and refurbished by Samuel Knight in the 1770s. The extant Milton Hall (LB 50662, Grade II) was built by his son in 1794 (Wright & Lewis 1989, 179 ff.).

1.3.11 Documentary sources attest the existence of a church at Milton by the 12th century. The extant parish church of All Saints (LB 50663, Grade II*) retains medieval features in the Norman chancel arch and east nave wall. Repair work and rebuilding were carried out during the 19th century. A recent evaluation in the church nave has revealed a series of medieval features, as well as building debris, nails, tiles and occasional fragments of bone. A subsequent watching brief during the replacement of the floor has exposed a silty levelling. The flooring base contained fragments of dressed stone discarded during renovation work in the 19th century. In the south aisle two partly legible and truncated 18th century ledger stones were found which overlay a shallow burial. Next to them was a vaulted chamber with six stone coffins (Prosser 1999; Prosser & Hattersley 2001/CHER 05460).

1.3.12 During the medieval period the proposed development Site 4 to the south of Butt Lane was nominally part of the 'South Field' whereas Site 6 to the north was located in the 'Middle Field', two of the three open fields of the parish. Butt Lane probably followed the alignment of an established medieval boundary or headland which would have originally separated the two fields. Remains of medieval cultivation within both sites are known from aerial photography (Palmer 1997). Excavations at the former Milton Landfill Site to the south and west of Site 4 have also confirmed the presence of ridge and furrow (Connor 1998/CHER CB1570; 1999/CHERCB15708). Scatters of pottery to the north of Site 6 (CHER 05273B) and to the south of Site 4 (former Milton Landfill Site, Oetgen 1990/CHER 10211 and 10211A-D), respectively, are consistent with manuring, indicating that the land was probably under cultivation and lay some distance away from any settlement.

Post Medieval and Modern

1.3.13 The more recent history of the study area can be reconstructed from cartographic evidence. The Enclosure Map of 1802 shows the present route of Butt Lane that was created at this time by extending the original village lane westwards, towards Impington (Fig. 4). It has been suggested that Butt Lane was probably superimposed over an established medieval boundary or headland, which would have originally separated the 'Middle Field' to the north and the 'South Field' to the south. In fact, the proposed development Site 4 to the south of Butt Lane is depicted as enclosing a series of allotments (159, 160 and the western parts of 151-153 and 158) still described as being located in the 'South Field'. Similarly, Site 6 to the north of Butt Lane encompasses parts of two large allotments (9 and 10) located in the 'Middle Field' Finally, the Enclosure Map shows the former boundary with the parish of Chesterton marking the southern side of the proposed development Site 4.

1.3.14 By the time of the first edition of the Ordnance Survey (OS Map of 1887-1889) the former allotments 159 (Site 4) and 9-10 (Site 6) were subdivided into series of smaller plots. Based on cartographic evidence, no major changes are apparent until the beginning of the 20th century, when Milton acquired land from Chesterton and the parish boundary was moved further south. Until recently former arable in the northern half of the old Enclosure plot 159 (Site 4) was used as allotment gardens, reflecting the progressive growth of market garden produce in the Milton area throughout the 20th century. Substantial alterations to the field layouts and boundaries were caused by the construction of the A10 Milton by-pass in the later part of the 1970s, with the western stretch of Butt Lane being bisected and cut-off from the village.

1.3.15 The proposed development areas (Sites 4 and 6) are currently under cultivation.

1.4 Acknowledgements

1.4.1 The author would like to thank Cambridge County Council Office of Environment and Community Services who commissioned and funded the archaeological works. The project was managed by Stephen Macaulay, Dan Hounsell directed the field work with the assistance of Glenn Bailey (supervisor), Tom Eley, Tom Lyons, Chris Faine, Dave Brown, James Fairbairn, Nick Gilmour, Ross Lilly, Dave Lamb, Steve Graham and Susan Turnbull. A number of specialists contributed to this report; Alice Lyons, Sarah Percival, Carole Fletcher, Val Fryer, Steve Boreham, Ian Baxter, Rachel Fosberry and Nina Crummy. The illustrations were done by Cane Begg and Andy Corrigan.

2 Aims and Objectives

2.1 Aims

2.1.1 The original aims of the work, as laid out in the specification (Murray, 2007). Were;

> "To establish the character, date, state of preservation and extent of any archaeological remains within the proposed development area".
>
> And
>
> "The evaluation will seek to consider appropriate methodologies and suitable resourcing levels for excavation".

2.1.2 These aims were specific to the evaluation stage of the works. The excavation rolled straight on from the evaluation without further documentation being produced. As a result the national, regional and local research aims that this site may contribute toward will be discussed, retrospectively, toward the end of this document.

2.2 Methodology

2.2.1 The initial phase of works at this site was a trial trench evaluation that opened 18 trial trenches across the site, a total of 1500m^2 (5% of the development area). This work demonstrated that the bulk of the site was dominated by post medieval ridge and furrow activity with a concentration of, potentially more interesting archaeological remains, in the northern eastern quadrant of the site. On the basis of this work CAPCA decided to more fully investigate a limited area within the larger site, which took in this north east quadrant. With the agreement of CAPCA and the client excavation works rolled straight on from the evaluation.

2.2.2 The Brief required that the area subject to full archaeological investigation was excavated under constant archaeological supervision with a tracked 360° type excavator using a toothless ditching bucket. It was also agreed that should significant archaeological features be seen to run beyond the agreed limits of the excavation area the area could be expanded to chase these features, in order to more fully understand them.

2.2.3 Spoil, exposed surfaces and features were scanned with a metal detector. All metal-detected and hand-collected finds were retained for inspection, other than those which were obviously modern.

2.2.4 All archaeological features and deposits were recorded using CAM ARC's *pro-forma* sheets. Trench locations, plans and sections were recorded at appropriate scales and colour and monochrome photographs were taken of all relevant features and deposits.

2.2.5 Environmental samples were taken from features as deemed necessary, to be processed in house.

2.2.6 The water table on site was very high (despite the investigation taking place in July and August) and this resulted in many of the features, (and indeed on occasion the whole site), being water logged and flooded. However proper management of the works and allocation of necessary resources, such as pumps, meant that this did not result in undue hindrance of the work, nor prevent the recognition of archaeological remains.

3 Summary of Results

3.1.1 The work at this site revealed three principal periods of use and occupation, Iron Age, Roman and Medieval.

3.1.2 The largest phase of activity is in the Iron Age, the southern part of a large settlement was identified, the rest of which must lie under Butt Lane itself and run into the filed immediately north. This prehistoric settlement contained the remains of large enclosure ditches, roundhouses, watering holes, pits and post hole structures. The later Roman activity on the site was on a much smaller scale with only a single large enclosure and watering holes being seen, while the Medieval use of the site was restricted to a single structure. The Roman activity does however indicate some continuity of occupation.

3.2 Period 1: Iron Age (Figure 3)

Phase 0

3.2.1 Text This phase consists of a number of relatively minor pit and ditch feature. The function of many of these are unclear and most all are truncated by later phase features. These features typically contained single, naturally derived and deposited, very leeched fills. Some contained datable ceramic material but many contained no artefacts at all and thus are of uncertain date, and may be earlier.

3.2.2 The most substantial, surviving, of these features was ditch **1325**. This north south aligned ditch ran for *c.* 47m across the site, running from under the southern baulk of the site at one end and being truncated by a later medieval ditch at the other. This feature was typically around 0.75, wide and 0.34m deep with an open, steeply bowled profile. The single silty fill did not contain any artefacts.

3.2.3 An further, L, shaped ditch, **1768**, was located toward the eastern edge of the site. This ditch was 25.75m long in total length (the E-W leg was 14m, the N-S leg 11.75m) roughly 0.48m wide and 0.19m deep with an irregular bowled profile. The single leeched, silty fill of this feature also did not contain any material.

3.2.4 These two ditches appeared to be the partially seen and understood, remnants of an early field boundary system, rather than being directly associated with early settlement.

3.2.5 A further early ditch, **1891**, was seen in the centre of the site, running roughly NW-SE this 15m long linear ditch feature was truncated at its south eastern end by the south west corner of a later settlement enclosure feature (see phase 1), and by an even later, medieval, windmill ditch feature at its north western end. This ditch was typically 1.85m wide and 0.70m deep, with a step, open, bowled profile. This feature contained a number of naturally derived and deposited fills. These contained small amounts of pottery sherds, animal bone, shell, burnt stone and some evidence for the past environment in, preserved microflora and fauna. The impression given by this ditch is of some sort of land boundary and / or drainage feature. This ditch appears to overly, and largely re-cut an even earlier ditch feature **1897**.

3.2.6 One of the most substantial features of this phase was a semi circular ditch, located toward the eastern end of the excavation area, against the northern L.O.E. This feature had a rough diameter of 13m and had clearly been maintained over a number of years being cleared out and re-cut a number of times. The two major re-cuts moving ‘off line’ slightly and so slightly expanding the diameter of the feature. This large circular ditch

probably represented some sort of early settlement enclosure. However, as the majority of the interior space defined by the ditch existed beyond the L.O.E. is was impossible to be certain what the ditch enclosed. The various fills of these ditches were largely naturally derived and deposited although there were small amounts of deliberately dumped material mixed in with this material.

3.2.7 The data on the various incarnations of this ditch is tabulated below, presented in stratigraphic order, latest first.

Context	Width	Depth	Fills	Artefacts
1732	1.70	0.64	1729 1730 1731	Animal bone, ceramic, enviro Animal bone, ceramic, enviro Environmental remains
1736	0.90	0.50	1733 1734 1735	Environmental remains Animal bone, ceramic Environmental remains
1739	1.00	0.32	1737 1738 1751 1752 1750	- Animal bone, ceramic, enviro - - -

Table 1: Data from Iron Age Enclosure Ditch (Phase 0)

3.2.8 In addition to these main features, a number of small linear ditches, elongated oval pits and discrete sub circular pits have also been placed into this phase on the basis of their stratigraphic relationship with other elements of the site. Non of these features appeared to be, spatially, related to any other and the exact function of most of them is unclear. It is likely that they represented a combination of land boundary, drainage and rubbish disposal functions, although the fills are largely naturally derived and deposited. They are tabulated below.

Context	Length	Width	Depth	Type	Orientation	Fills	Artefacts
1993	9.50m	1.30	0.50	Linear ditch	NNE-SSW	1589 1992	- Ceramic
1875	>7.50m	1.05	0.50	Linear ditch	NW-SE	1877 1876	- -
1500	>14m	0.95	0.24	Linear ditch	NE-SW	1435 1501	Animal bone, ceramic, stone
1495	10m	0.95	0.31	Curvilinear ditch	NW-SE	1496 1497	- Animal bone
1005	1.20	0.55	0.20	Sub oval pit	-	1004	Ceramic, flint
1039	0.77	1.05	0.15	Sub oval pit	-	1040	-
1395	0.10m	0.10	0.08	Sub oval pit	-	1395	-
1376	4m	0.63	0.35	Oval pit	NE-SW	1377	-
1374	1.10m	0.70	0.43	Sub oval pit	-	1375	-
1372	1.50m	0.48	0.39	Sub oval pit	-	1373	-
1368	3.05m	2.40	1.04	Sub oval pit	-	1369	-
1329	0.50	0.60	0.25	Sub oval pit	-	1328	-

Context	Length	Width	Depth	Type	Orientation	Fills	Artefacts
1327	0.60	0.20	0.14	Sub oval pit	-	1326	Ceramic
1070	2.00	1.50	0.54	Sub circular pit	-	1069 1068	- -
1122	0.87	0.78	0.12	Sub oval pit	-	1121	Ceramic
1124	2.75	0.65	0.33	Linear ditch	NW-SE	1125	-
1128	1.50	0.72	0.35	Elongated oval	-	1129 1130	-
1131	0.90	0.45	0.24	Sub - circular	-	1132	-
1204	>5	0.76	0.29	Curvilinear ditch	NE-SW	1202	Animal bone, ceramic
1206	>5	1.40	0.35	Curvilinear ditch	NE-SW	1205	Animal bone, ceramic

Table 2: Data from other Phase 0 Iron Age Features

3.2.9 Curvilinear ditch **1794** has been placed into this phase. This semicircular ditch loops out, in a southward direction, from under the north west corner of a series of later, large, settlement enclosure ditches (see phases 1 and 2) all of which appeared to truncate this feature. This curvilinear ditch was 6.20m long and would have described a circle roughly 5m in diameter. The ditch was 0.42m wide, 0.32m deep with a bowled profile, and contained a single naturally derived and deposited fill which revealed some animal bone (cattle) and ceramic remains.

3.2.10 A precursor of the afore mentioned settlement enclosure ditch may be seen in ditch **1991**. This ditch was only very partially seen as it lay directly under the north west corner of the later settlement enclosure ditch feature. While it may have partially defined the later route of the enclosure ditch it could not have defined the whole route as it was seen to terminate just to the south (7m) of the later NW corner. How far this ditch extended to the east was not clear as 2m beyond this corner the feature was entirely lost to truncation by the later ditches. At its terminal end, the width of this ditch was 0.32m and it was 0.28m deep. A little animal bone and ceramic material was recovered from the naturally derived fills of this ditch.

Phase 2

3.2.11 This phase is characterised by the creation of the bulk of the Iron Age settlement elements.

3.2.12 These features tended to be concentrated in the north east quadrant of the site. With the archaeological presence dropping off quite rapidly outside of this area.

3.2.13 Within this more intensively used area the dominant feature was a large, probably roughly rectangular enclosure ditch. This early feature enclosed an area of roughly 85m E-W x 23.5m This early ditch ran in from beyond the eastern edge of site and ran for around 95m in a roughly WNW direction before turning through 90°, to the north. It then ran for a further 23.5m before turning through a further 90° to the east and running for another 46m, ending in a rounded terminus. This substantial enclosure underwent periodic, substantial, renewal. This is demonstrated by the fact that this feature is represented by three ditches all of which followed the same route and each of which sat partially over the early one. Excavation also indicated that each of these ditches was maintained and at least partially cleared through its life, before being completely re-cut In chronological order (earliest to latest) these three ditches were;

Context	Width	Depth	Contains	Finds
1540	1m	0.50	1847	-
			1541	Bone (cattle) and slag
1530	0.80m	0.60	2036	-
			2035	-
			2034	Animal bone and slag
1972	2.20	0.75	1536	-
			1537	-
			1538	Ceramic material
			1535	Animal bone & ceramic
			1534	Animal bone, ceramic & slag
			1526	Animal bone & ceramic

Table 3: Data from Iron Age Enclosure Ditch (Phase 1)

3.2.14 At some point the enclosure was completely re-modelled and re-cut in a slightly different manner (see phase 2) this major re-modelling partially overlay the earlier line of the enclosure but truncated many of the earlier ditches. As a result the evidence for these earlier ditches is restricted to section where the later ditch moves partially off alignment partially, and the very south western extent of the ditches, which was not truncated by the later re-modelling.

3.2.15 Within this larger enclosure, there appeared to be a number of associated, settlement type features.

3.2.16 Toward the southern edge of the enclosure were a number of discrete, circular features. The arrangement of postholes **1296**, **1292**, **1004** and **1006**, at the corners of a square, approximately 2m x 2.5m in size suggested a classic 4 post structure. Unfortunately little is understood about the superstructure of such buildings. The pits were all sub circular, roughly 0.35m in diameter and 0.20m deep with steep, deeply bowled profiles. Each contained pale, silty, naturally derived fills that did not show any evidence for a post pipe, the post itself or any finds.

3.2.17 Just to the east of this structure was a larger circular pit, **1307**. This feature was 1.50m in diameter and 0.39m deep with a wide, shallow, flat based profile. Again the single fill was naturally derived and did not contain any artefactual material.

3.2.18 Initially, the sub circular pits **1949**, **1951**, **1953** and **1955**, located on the western edge of the enclosed area, were thought to be cremation features due to their dark, burnt fills, however excavation did not yield any burnt bone. They therefore may have been dump or rubbish features associated with settlement in or around the enclosure.

3.2.19 Pit **1969** on the other hand *did* contain a small quantity of what appeared to be burnt bone, which may be human – indicating a cremation (this needs further analysis). This cremation was located *just* beyond the settlement, on the very western edge, of the western N-S arm of the settlement enclosure ditch.

3.2.20 This cremation appeared to exist in isolation and was heavily truncated both by the enclosure ditch and by subsequent landscape activity. As a result very little of the feature survives.

3.2.21 A number of other pits, of less certain function were also located within the bounds of enclosure ditches **1540** etc. These features are tabulated below;

Context	Diameter/ length	Width	Depth	Fills	Contains
1949	0.80		0.60	1948 1947 1956	Environmental remains Animal bone, ceramic, lava stone, Enviro -
1951	0.35		0.25	1950	Animal bone & ceramic
1953	0.40		0.32	1952	-
1955	0.60		0.15	1954	Environmental remains
1969	0.60		0.08	1968	Burnt bone, Enviro
1510	1.20	0.20	0.12	1509	Bone, ceramic, enviro
1512	0.80	0.40	0.50	1511	Bone, ceramic, enviro
1621	0.30		0.10	1620	
1655	0.30		0.30	1654	Environmental remains
1656	0.60	0.40	0.15	1657	
1674	0.57		0.07	1673	Environmental remains
1714	1.80	1.00	0.48	1713	Environmental remains
1801	1.50	0.40	0.38	1800	
1911	0.78		0.50	1910 1909	Bone, ceramic, enviro

Table 4: Iron Age Pits (Phase 1)

3.2.22 The other interesting features within this area of the site were two curvilinear ditches **1469** and **1494**, each *c.* 0.80m wide by 12m long and 0.40m deep. These appeared to form the drip gully of a large roughly circular feature, a classic Iron Age round house roughly 10m in diameter. There were a number of pits scattered around this feature. However, they appeared to form another 4 post structure, part of which truncated a later Roman Ditch. As a result these features will be discussed later.

3.2.23 The potential roundhouse lay just to the west of north eastern terminal end of ditch **1540** and probably lay near the entrance way into this enclosure. The single, naturally derived and deposited, fills of these ditches contained a little animal bone and ceramic sherds.

3.2.24 The extent of the settlement area, within which enclosures **1540** etc. sat, appeared to be delineated by a series of smaller ditches which appeared to define both a western and a southern boundary to the settlement area. These seemed to separate the settlement quarter of the site from what was probably surrounding agricultural land.

3.2.25 To the west a long N-S aligned ditch, **1610**, emerged from the southern L.O.E and ran for *c.* 40m before the northern end of the feature was truncated by a later medieval ditch. This ditch was *c.* 1m wide and 1.05m deep with a steep and deeply concave U shaped profile. Running across this linear ditch was another, E-W aligned linear ditch, **1031**. This feature emerged from the western edge of site and ran for 0.85m before interfacing with **1610**. This point of interface between the two ditches was masked by later, Iron age, water and quarry pit features (see phase 2). It appears that the E-W boundary feature may have continued beyond these pits (running further to the east) as slightly curvilinear ditch **1303**. This ended in a rounded terminus *c.* 20m to the north east – overlapping an area of ditch **1500**.

3.2.26 To the far east of the site another linear ditch feature (0.15m deep, 1m wide) was noted. Only *c.* 15m of the length of this ditch was seen – emerging from, and vanishing under, baulks of the site. The location, and E-W alignment of this ditch indicated that it

may - if the line of the feature was extended – have interacted with ditch **1303** at the point where it ran over **1500**, so forming a complete southern boundary. However, ditch **1929** was not seen to emerge from the baulk further to the west but, this area is heavily truncated and it is possible that this ditch has been lost.

3.2.27 These ditches contained a number of fills. These were a mix of small amounts of re-deposited / dumped material and naturally derived and deposited material.

Context	Fill	Contents
1610	1614 1613 1612 1611	Animal bone, burnt stone, enviro Animal bone, ceramic, enviro Environmental data Environmental data
1031	1032 1066	Animal bone, ceramic, burnt stone -
1303	1301 1302	Ceramic -
1929	1928	-

Table 5: Iron Age Boundary Ditches (Phase 1).

3.2.28 Between them these features appeared to divide the area revealed by the archaeological investigation into quadrants. The main area of occupation, and area of intense archaeological presence, being the north east of these quadrants.

3.2.29 Within the other areas, and principally the north western quadrant, the surviving archaeology was dominated by a number of fairly small and irregular pits. Some of these features were identifiable as rubbish pits, cooking pits and structural features, and may also have included quarry features. In addition there were a few small linear ditch features which may have been remnants of boundary / field enclosure systems. Some of these features may also have been natural features (animal burrows, tree throws, ancient hedgerows etc.). These features are tabulated below.

Context	Length	Width	Depth	Type	Fill	Artefacts
1011		0.66	0.21	Rubbish pit	1010	Animal bone Ceramic, enviro, burnt stone
1015		1.40	0.20	Sub circular pit	1014	Animal bone, ceramic, flint
1017	0.90	0.80	0.15	Sub circular pit	1016	
1020	0.75	0.70	0.45	Sub circular pit	1018 1019	 Animal bone
1022		1.00	0.20	Rubbish pit	1021	Animal bone Ceramic, enviro,
1024		0.55	0.30	Rubbish pit	1023	Animal bone Ceramic, enviro, burnt stone
1026	1.10	0.50	0.07	Prob. natural / furrow	1025	
1028	2.20	0.35	0.13	Prob. natural / furrow	1027	
1029	1.90	1.40	0.29	Sub circular pit	1030	

Context	Length	Width	Depth	Type	Fill	Artefacts
1050		1.60	0.23	Sub circular pit	1048 1049	Animal bone, ceramic, burnt stone, enviro
1060		0.30	0.21	Circular post hole	1059	
1073	1.07	0.70	0.28	Sub circular pit	1072	
1075	0.85	0.65	0.14	Sub oval pit	1075	
1079	1.05	1.10	0.25	Sub oval pit	1078	Animal bone, ceramic, burnt stone, enviro
1081	0.93	0.88	0.20	Sub oval pit	1080	Environmental data
1083	0.55	0.68	0.15	Sub circular pit	1082	
1085	0.50	0.40	0.12	Sub circular pit	1084	
1088	1.00	1.40	0.23	Sub oval pit	1086 1087	Ceramic, enviro Animal bone, ceramic, enviro
1111		1.50	0.15	Sub circular pit	1110	
1113		0.26	0.25	Circular post hole	1112	
1115		0.45	0.10	Poss. Circular post hole	1114	
1117		0.47	0.05	Poss. Circular post hole	1116	
1120	1.60	1.68	0.58	Sub circular pit	1118 1119	Animal bone, ceramic, enviro
1156	0.30	0.28	0.12	Poss. Circular post hole	1155	
1158	0.35	0.35	0.11	Poss. Circular post hole	1157	Ceramic
1160	0.28	0.26	0.05	Sub circular pit	1159	
1163	0.43	0.46	0.23	Poss. Circular post hole	1161 1162	Animal bone, ceramic, enviro
1166	0.36	0.30	0.30	Poss. Circular post hole	1164 1165	Environmental data
1185	1.60	1.27	0.40	Sub circular pit	1186	Animal bone, ceramic
1212		0.75	0.14	Sub circular pit	1211	Environmental data
1217		1.52	0.81	Sub oval pit	1215 1216 1223	Animal bone Animal bone
1219		0.95	0.30	Sub circular pit	1218	Environmental data
1225	0.29	0.30	0.11	Poss. Circular post hole	1224	Ceramic
1228	0.43	0.55	0.43	Poss. Circular post hole	1226 1227	Animal bone, ceramic, enviro Environmental data
1235	1.50	0.80	0.30	Poss, drainage Ditch	1234	
1247	>0.60	1.75	0.80	Poss. Rubbish pit	1244 1245 1246	
1249	1.40	1.22	0.27	Sub circular pit	1248	Animal bone, ceramic, burnt stone, enviro
1253	1.60	1.70	0.90	Sub circular pit	1266 1252	 Animal bone, ceramic, enviro
1267	1.36	1.38	0.36	Sub circular pit	1250	Animal bone, ceramic, Fe object

Context	Length	Width	Depth	Type	Fill	Artefacts
					1251	Animal bone, ceramic
1291	0.45	0.40	0.35	Circular post hole	1289 1290	Ceramic, enviro
1309	0.50	0.52	0.17	Circular post hole	1308	Ceramic
1314	0.70	0.80	0.13	Sub oval pit	1313	
1549		1.20	0.14	Sub oval pit	1548	
1592		1.30	0.42	Sub circular pit	1591	
1704		0.90	0.39	Poss. Hearth / dump	1703 1710 1711 1712	Environmental data Animal bone Mortar, burnt stone,enviro
1743	1.00	1.50	0.52	Linear ditch	1740 1741 1742	
1748	1.00	1.55	0.48	Linear ditch	1746 1747	
1870	>0.95	0.80	0.50	Rectangular pit	1869	Ceramic
1872	0.58	0.60	0.27	Oval pit	1871	
1932	1.10	0.80	0.35	Sub rectangular pit	1930 1931	Ceramic, slag
1983		1.20	0.80	Rounded ditch terminal / oval pit	1987 1981 1980 1982	 Animal bone, ceramic, lava stone Animal bone, ceramic, lava stone
2009		0.65	0.11	Circular pit, probable dump	2010	Burnt stone
2051		0.45	0.18	Circular post hole	2050	
2057		0.40	0.24	Circular post hole	2056	
2063	0.70	0.40	0.12	Irregular ditch, nat?	2059	

Table 6: Miscellaneous Iron Age Features (Phase 1).

3.2.30 As mentioned, some of these features were a little more identifiable Features **1011**, **1022** and **1024** contained quantities of burnt bone, principally cattle, but also sheep. There was no evidence for in-*situ* heating in these pits and, they probably represented rubbish pits where waste material from hearths and cooking pits were disposed. All were heavily truncated.

3.2.31 Pit **1704** may have been one of these cooking pits. This large, moderately deep, steep, straight sided pit contained, at its base, a layer of organised, deliberately laid, burnt stones. The material filling this feature contained a little cattle bone and a small quantity or charcoal but was principally naturally derived. This would seem to indicate that this feature was cleaned out (possibly filling on of the afore mentioned dump features) prior to it falling out of use.

3.2.32 In addition to this a number of the pit features appeared structural in nature. Features **1156**, **1158**, **1163**, **1160**, **1225**, **1309**, **1228**, **1291**and **1166** represented a cluster of such features in the north west quadrant of the site, that may have been representative of one, or a series, of structures. Indeed, features **1309**, **1228**, **1291** and **1166** appeared to form another 'four poster' structure.

3.2.33 In addition to these features there was one very large pit, **2011**. This feature was located toward the north east corner of the north western 'field'. This sub circular pit

was roughly 6.50m in diameter and 1.50m deep with steep, slightly concave sides and a flat base. This feature contained a number of fills that consisted of slumped in material, alluvial material and, deliberately dumped in deposits. These layers contained some Iron Age pot as well as animal bone. This feature may have represented some sort of water access feature was as watering hole or open well or, possibly a gravel quarry feature.

Phase 2

3.2.34 During this phase the form of the rectangular settlement enclosure ditch, located in the north eastern quadrant of the site, was altered slightly. This later re-cut, **1598** appeared to reduce the size of the enclosed area by introducing a new, eastern, north-south aligned arm, to created an new enclosed area of *c.* 46.5m (E-W) x 23.5m (N-S) which took in the western part of the earlier larger enclosure. The rest of this later re-cut followed the line of the earlier enclosure ditch and terminated in the same place. The rounded, northern terminus of the new arm was placed *c.* 2.50 to the south of this pre-existing terminal point and so appeared to create a new entrance way into the, now smaller, enclosed space. This new enclosed space took in a number of the earlier pits, including the four post structure to the south west of the enclosed space, but excluded the round house. This ditch was a substantial feature which largely truncated the earlier ditch where it overlay it. It was typically 1.30m wide and around 1m deep with a wide, open, steep, and slightly convex profile. This ditch contained a number of fills which included a number of slumped in, and alluvially deposited fills with some deliberately dumped in material mixed in with this. The finds from these fills (listed in stratigraphic order) are tabulated below.

Fill (of 1598)	Artefacts
1596	Lava quern stone, animal bone, ceramic, environmental remains
1462	-
1567	Ceramic, burnt stone, lava quern stone, animal bone, shale, environmental remains
1569	animal bone, ceramic, environmental remains
1568	-

*Table 7: Artefacts recovered from fills of **1598**.*

3.2.35 The only feature within this new enclosure was a 12m long, 0.70m wide and 0.30m deep, E-W aligned linear ditch, **1745**. At its western end this feature ended in a rounded terminus while the eastern end was truncated by a later N-S aligned ditch. Quite what the function of **1745** was is not clear. It probably represented the remains of some sort of division of space within the larger enclosure. No artefacts were recovered from the single, naturally deposited, fill of this ditch.

3.2.36 The principal features of this phase lay within the within the agricultural land surrounding the settlement enclosure The main elements within these fields were three large, roughly oval, pits each around 4m in diameter and 2m deep. Excavation of pits **1276**, **1071** and **1367** revealed them to be substantial watering pits, placed within the fields for the animals kept by the settlement. All produced substantial amounts of pottery as well as animal bone (principally cattle, sheep and horse) as well as smaller

amounts of burnt stone and shell. In addition pit **1071**, produced a log ladder and a large number of associated wood working chips.

3.2.37 This ladder, which was made from oak, was firmly associated with Iron Age pottery, and, subsequent AMS dating of the wood has given us a date of 2235BP +/- 35. The presence of so many working chippings suggest that this ladder was made on site, possibly for use in the excavation of the pit and, that it broke during this work and was discarded into the feature. This is quite a rare find, particularly for this date as most of the log ladders we have from this area date to the Bronze age.

3.2.38 It is interesting to note that these features are placed fairly evenly across the site. Pit **1276** was located 95m to the east of **1071** and **1376** was 82m to the east of **1276**. This might suggest a landscape with a fairly intensive arable regime.

3.2.39 Other features within this agricultural hinterland consisted of a number of small gully type features and a variety of small to moderately sized pits and postholes. The pits may have been waste pits in some instances and possible gravel extraction pits in the case of a few of the larger ones. Some were, and others may have been, structural (postholes) - indicative of ephemeral or temporary features within the agricultural land. These more minor features are tabulated below;

Context	Length	Width	Depth	Type	Fills	Artefacts
1043	0.85	0.95	0.74	Sub circular pit	1044	Animal bone
1137	-	1.25	0.56	Sub oval pit	1138 1139	- Animal bone, ceramic, charcoal
1140	-	0.76	0.21	Sub oval pit	1141	Animal bone, ceramic
1143	1.60	0.65	0.12	Sub oval pit	1142	-
1148	1.18	1.10	0.23	Sub oval pit	1146 1147	- -
1151	-	0.38	0.23	Poss circular post hole	1152 1153	- -
1168	-	1.40	0.36	Sub oval pit	1167	Animal bone
1193	2.70	1.70	0.20	Sub oval pit	1192	-
1213	1.05	>0.50	0.12	Sub circular pit	1214	-
1233	1.50	1.60	0.33	Sub oval pit	1232	Ceramic
1269	1.40	1.00	0.30	Sub circular pit	1268	-
1275	1.40	2.10	0.40	Sub circular pit	1261 1260	Animal bone -
1490	1.00	1.70	1.54	Sub oval pit	1487 1488 1489	- Animal bone, ceramic -
1888	0.70	2.2	0.85	Ditch terminal, SW – NE aligned	1885 1886 1887	Animal bone, ceramic, charcoal burnt stone -
2026	1.5	0.5	0.44	Sub oval pit	2025	Ceramic
2028	1.00	2.30	0.40	Sub oval pit	2027	Ceramic

Table 8: Iron Age Features (Phase 2).

Phase 3

3.2.40 This phase of activity is fairly limited, to just five features, one ditch and four pits.

3.2.41 The most important and substantial of these was ditch **1678**. This 1.20m wide and 0.45m deep ditch created a rounded cornered, roughly squared enclosure *c.*9.85m N-S

x 13m E-W. This was positioned so that the north west corner of this enclosure was located directly over the north west corner of the earlier large settlement area enclosure (ditch **1598**). There was no obvious entrance way into this enclosed area and there was no obvious feature within the enclosed space. The dark, silty, fills of this feature contained quantities of animal bone (small amounts of horse, cattle and ovricaprid), ceramic material and weed seeds. The fact that this smaller enclosure sits on top of the backfill of the earlier enclosure (**1598**) indicated that this earlier, larger, enclosure had, at least, partially fallen out of use by this time.

3.2.42 Of the pits 3 were of a small to moderate size and located in the south east quadrant of the site. These features, **1825**, **1911**and **1714** were all roughly oval in plan and varied between 0.50m – 1.00m in diameter, and 0.45m – 0.50m in depth all with bowled profiles. The single fills both **1825** and **1911** contained both a little animal bone (principally cattle) and some ceramic material, while **1911** also contained a little charcoal. Pit **1504** was larger and more centrally located, truncating earlier water pit feature **1276**. Feature **1504** was sub circular in plan, 4.35m long by 3m wide and 1.12m deep. Fills of this feature were a mix of naturally derived and deposited material and, deliberately dumped/deposited material. The artefacts recovered from these are tabulated below.

Context	Artefacts
1505	-
1506	-
1507	Animal bone (horse and cattle)
1508	Animal bone (horse and cattle), ceramic, burnt stone, chaff and charcoal

*Table 9: Fills of pit **1504**.*

3.2.43 In summary then, the Iron age use of this site focuses around the north east quadrant of the site, which includes a number of large, regularly maintained and renewed settlement enclosures, although is also appears that only one of these was active at any given time. Within and around these settlement enclosures we have evidence for four poster type structures, a roundhouse and rubbish pits. There was no evidence for cremations or burials.

3.2.44 This settlement area is set within a larger agricultural landscape, which appears to be divided up into a number of large fields by a series of boundary ditches. The presence of large watering holes within all of these fields suggests that pastoral agriculture was the primary use of these fields. The remains of cattle, sheep, goat and horse within the various features of this site at this period suggests that these were the principal animals reared. The scarcity of cereal grains (spelt wheat) suggests a generally low, background presence of arable agriculture in the general vicinity of the site but not, on, the site. The pollen assemblages were suggestive of a damp grassland environment surrounding the site.

3.2.45 The majority of the pottery discovered from this period dates to the late Iron age and later pre - Roman Iron Age. Most of the vessels were various jars and were mixture of handmade and wheel made items.

3.3 Roman Period (Figure 4)

3.3.1 The Roman presence on this site was defined by only a few features. These consisted of a small enclosure ditch type feature, what is probably another watering hole and a number of small post, organised post holes probably indicative of a structure.

3.3.2 The Roman enclosure, **1594** was located on the very eastern edge of the site. The central point of the E-W aligned arm of this enclosure ran through the entrance way in the phase 2 Iron age settlement enclosure ditch **1598**. This Roman enclosure was relatively small at approximately 20m by 20m with the ditch defining the enclosure *c.* 0.70m wide and around 0.40m deep. A small portion of the enclosure has been lost along the southern end of the western leg, as the ditch seemed to shallow out and became lost in the subsoil. However, the eastern leg was more complete and appeared to indicate that the entrance into the enclosure would have been in the south east corner of the enclosure. Unlike the earlier, larger, Iron Age enclosure, this Roman enclosure was not associated with any other structural element, such as postholes.

3.3.3 The Roman enclosure did not respect any of the earlier features in this area, cutting across the Iron Age Roundhouse and enclosure ditch, at an unrelated angle. This would seem to indicate that this feature was excavated a time when the earlier Iron age features had completely fallen out of use and become backfilled. Indeed, the pottery recovered suggests a gap of around 200 years between the Iron age and Roman use of the site. In addition to pottery, the single fill of this feature also contained a small quantity of animal bone.

3.3.4 Within and around this enclosure were a number of small pits (9). Of these eight appeared to be post holes. The alignment and position of six of these features would seem to indicate the presence of a single, long rectangular building, 3m long (east to west) and 2.20m wide (north to south), which partially sat on the southern edge of the northern, east – west aligned leg of ditch **1594**. Indicating that this structure was erected once this enclosure ditch had, partially, filled up. The nature of these features is tabulated below

Context	Diameter	Depth	Fills	Finds
1423	0.40	0.30	1421 1422	- -
1425	0.40	0.25	1424	-
1427	0.30	0.28	1426	-
1434	0.30	0.17	1433	-
1472	0.35	0.47	1471	-
1474	0.33	0.39	1473	-

3.3.5 Just 0.30m to the west of the rectangular structures were two more postholes **1920** and **1918**, placed opposite each other, 1m apart and aligned north to south. These two postholes do not align well with the above six, however, they may have represented some sort of ancillary structure attached to the western edge of the larger structure, such as some sort of porch or entrance structure. At some later point there two postholes were truncated by short, dark, oval pit, **1916** which has an uncertain function. These features are summarised below;

Context	Size	Depth	Fills	Finds
1916	1.50m x 0.40m	0.20m	1917	-
1918	0.27m dia	0.30	1919	-
1920	0.25m dia	0.20	1921	-

3.3.6 Roman pit **1519** was probably also a watering hole, located in front of (*c.* 4m to the south of) the Roman enclosure and near to (4.50m to the west of) one of the earlier Iron Age watering pit (pit **1367**). This feature was, in plan a little bigger than the Iron Age ones at roughly 5m in diameter but a little shallower at just over a metre in depth (however today at least, plenty of water still got in at this depth). The organic nature of some of the fills of this feature, along with the quantity of animal bone and pottery recovered indicated that once it had fallen out of use this pit was used for rubbish disposal. Environmental evidence revealed some charcoal, some cereal (wheat) and weed seed. This appeared to indicate that the surrounding environment had changed little since the Iron Age occupation.

3.3.7 The Roman use of this site was very restricted. This would indicate that the either the settlement had shrunk by this period or that it had moved. The nucleus of the settlement possible moving further north meaning that we really were on the very southern most tip of the settlement – more so than in the LIA. Metal detecting of the site produced couple of 3rd century AD Roman coins.

3.4 Medieval Period (Figure 5)

3.4.1 The Medieval period on the site was characterised by a windmill. This single structure generated a number of archaeological features. In addition there were a number of later medieval pits associated with the various elements of this structure. In addition a single N-S aligned boundary ditch was also present, that did not appear to be associated with the windmill and a re-cut, small, irregular feature of uncertain function.

3.4.2 The windmill consisted of X shaped foundation slots (with each 'quarter' leg of the cross being *c.*3m long) in which the crossed beam foundations of the mill would have been set. At the centre of this cross was a circular, pit (**1809**, 0.60m in diameter and 0.30m deep) that would have supported a substantial, vertically set, post - around which the mill would have pivoted, allowing it to catch the wind. The cross beam foundation cuts showed that the mill underwent two phases of construction, the later (**1778**, 1m wide and 0.75m deep) structure occupying exactly the same location as the earlier one (**1776**, 1.5m wide and 0.40m deep) and on almost exactly the same alignment. This seemed to imply that at some point the early mill fell out of use and / or into disrepair and so needed re-building.

3.4.3 This central foundation feature was set in the middle of an area defined by a large circular ditch (**1557**). This feature was up to 3m wide and, in places over 2m deep. This ditch probably served two functions, firstly excavation of the feature would have provided material to create a central mound which would have sat on top of the foundation beams and around the central pivot post – supporting and stabilising both. As well as providing a base for the body of the mill – raising it in the landscape and allowing it to catch the wind better. Secondly the ditch would have acted as a sump – pulling the high ground water away from the foundations of the mill. This ditch appeared to have been, at least partially, re-cut a number of times (2-4 in places) – these re-cuts probably represented partial maintenance clearance cuts as well as a complete clearance cut – probably associated with the re-building of the mill.

3.4.4 Material recovered from the ditch included large quantities of pottery – giving a rough date range of 11th – 13th century for the life of the mill. Along with animal bone – cattle and sheep and, large quantities of larva stone – this stone (firmly dated to the period of the mill) appears to have been used as a millstone – some fragments showing patterns of wear, a central hole for the stone and an outer curve to the stone giving a diameter of around half a metre. This ditch feature, in all of its incarnations, produced very little organic, environmental, material. Some weeds and legumes (sainfoin) were recovered. These, again, are suggestive of a continuity in the general environment.

3.4.5 It is interesting that there is no evidence for a windmill on this site from other sources, there is no documentary evidence, and it is not seen on any early maps.

3.4.6 Following the abandonment of the windmill the site seems to have been turned over to arable agriculture and has remained as such ever since. It is also unfortunate that the repeated ploughing of the land over this long period of time has removed almost all trace of the mill mound.

3.4.7 The scar in the landscape made by the construction of the windmill must have been visible for some time and acted as a magnet for the cutting of later medieval waste disposal pits, including pit **1859**. This was a fairly large (3.5m x 4m by 1.90m deep), roughly circular feature that partially truncated the medieval windmill ditch. This pit contained animal bone (cattle, horse and sheep), ceramic material, lava quern stone, shell and burnt stone as well as grassland weed seeds. This large pit was partially re-cut by a smaller pit, **2022**. This feature was roughly circular in plan *c.* 1.95m in diameter and 0.85m deep. This pit contained animal bone (cattle), ceramic sherds, fragments of lava quern stone, burnt stone and oyster shell and was probably another rubbish disposal feature.

3.4.8 Twenty five metres to the east of the semi circular windmill ditch lay linear ditch **1688**. This N-S aligned ditch emerged from the southern baulk of the site and ran for 40m before vanishing under the northern baulk of the site and in doing so truncated both the northern and southern legs of earlier Iron Age ditch **1598**. This feature was typically 1.5m wide and 0.50m deep with an deep, steep and slightly concave profile and probably acted as some sort of land boundary. The fills of this feature contained a little ceramic material and some charcoal. How contemporary this ditch and the windmill were was unclear.

3.4.9 Feature **1979** was a roughly linear, slightly irregular in plan, ditch which emerged from the northern side of windmill ditch **1557** (toward its western half) and in a north easterly direction for *c.* 2m before being truncated by the southern end of the southern leg of the cross shaped windmill foundations. This feature was typically 0.70m with irregular and concave side. The naturally derived and deposited fill did not contain any finds. This feature was re cut as **1977**. This ditch followed the same line and alignment of the earlier ditch, sitting just a little so the north of it and mostly truncating it. It had a similar shape in plan and profile and contained two archaeologically sterile naturally derived and deposited fills. The function of this short and irregular ditch is not clear.

4 Factual Data and Assessment of Archaeological Potential

4.1 Excavation Summary

4.1.1 This excavation has identified what appeared to be the southern edge of a substantial, multi phase, Iron Age settlement, the agricultural land surrounding this settlement and, the transitional zone between these different areas of use. To be able to see how these different areas of use operated and interacted, on one site, is rare and important. The settlement itself was characterised by large and small enclosures as well as the remains of structures (4 post structures and roundhouses) and ancillary features associated with settlement and the disposal of waste (rubbish pits). The associated agricultural area contained 3 very large water hole features as well as a number of smaller discrete pit features with less obvious functions.

4.1.2 That the site continued to be used into the Roman period was also interesting. The Roman use of the site, while still settlement related, appeared to be much less intense and took place at a time when the previous Iron Age settlement had faded from the landscape and when the nucleus of the settlement had either moved north or, shrunk in size. This change in the pattern and location of use over time was a further important aspect of the archaeology of this site. The Roman remains consisted of a single moderately sized enclosure as well as a further large watering pit. Both located toward the south eastern corner of the site.

4.1.3 These remains directly relate to the known archaeology of the immediate vicinity and contribute to our understanding of the development of Iron Age and then Roman settlement in the area. A large Iron Age settlement is known to lie within 500m, to the west, at Milton Landfill site and this develops into a high status site, perhaps Villa type estate, in the Roman period (Reynolds 1994, 1995 & 1997). More recent investigations in 2007-8 have revealed more of this settlement which will enhance our understanding of the sites (Phillips in prep). To the north of the site lies the extensive Iron Age and later Roman rural settlement at Limes Farm, Landbeach (Connor 2000).

4.1.4 The focus of later Roman settlement in the Milton area lies to the west (towards Milton Landfill) and east (towards the River Cam) of the Milton Park and Ride site. Recent investigations at Milton Hall (Rees 2008) and local community work at Hall Close, as well as the known Roman settlement to the north at Waterbeach and the Car Dyke, indicate no Iron Age precursors and suggest that the focus of late Iron Age settlement in the area was around Milton Park and Ride and to its west.

4.1.5 The medieval use of the site was restricted to a single, albeit substantial, structure – a windmill. This is important as again it shows a change in use of the landscape which was hitherto unknown, as well as providing information on how windmills in the region were constructed. Furthermore, the presence of lava stone in direct association with the windmill is also interesting as such was believed to have been common use as a grinding stone at a much earlier period.

4.1.6 The survival of archaeological features on the site was, on the whole good. Although there had been some horizontal truncation as a result of medieval, post medieval and modern ploughing. There had also been some, limited, animal disturbance.

4.1.7 Across the site as a whole, deposits were mainly confined to feature fills. Most of the features contained naturally derived and deposited silty clay fills and / or slumped in gravely clay fills. In some instances darker, more organic, silty clays were also noted. This appeared to indicate the presence of some backfilling of the feature, which had

mixed material from another location with the naturally derived material building up in the feature and had often introduced archaeological material into the fill, typically pottery and animal bone.

4.1.8 An alluvial subsoil was present across all of the site and was typically 0.10m – 0.50m thick, on top of which there sat a modern topsoil (0.20 – 0.50m thick).

Statement of potential

4.1.9 The written and drawn elements of the contextual record form the main components of the excavation data and are sufficient to form the basis of the site narrative. The main phases of activity on the site span the middle Iron Age through to the mid Romano-British period, with limited use of the site continuing through to the medieval and modern periods.

4.1.10 Whilst all of these periods will be addressed later by the aims and objectives identified and discussed in the post-excavation analysis report the main areas of research will focus on the nature of, and changes in, the land use of this area.

4.2 Stratigraphic and Structural Data

The Excavation Record

Type	MILPAR06 evaluation	MILPAR07 excavation
Context register	0	26
Context numbers	294	1021
Context records	81	
Trench record sheets	18	974
Contexts not used		47
Level record sheets	7	8
Plan registers		1
Plans at 1:50	17	59
Plans at 1:10		1
Plans at 1:20		
Total station survey	Point data on network	Point data on network
Section register	3	7
Sections at 1:10	73	199
Sections at 1:20	17	37
Sections at 1:50		
Sample register sheets	2	36
Photo register sheets		18
Black and White films		10
Colour slide		8
Digital photographs	55	595

Type	MILPAR06 evaluation	MILPAR07 excavation
Small/spot finds register sheets		

Table 10: Quantification of Written and Drawn Record

Environmental Quantification

Environmental samples	MILPAR06 evaluation	MILPAR07 excavation
Baulk samples	13	174
Pollen samples		53
Monolith samples		12

Table 11: Environmental Sample

Finds Quantification

Site/Area Type	MILPAR06 Evaluation (kg)	MILPAR Excavation (kg)
Animal Bone	2.44	34.72
Ceramic	7.81	30.47
Chalk	0.38	
Cinder	0.01	0.002
Flint	0.20	0.16
Glass	0.04	
Lava Stone	0.04	6.57
Mortar		0.14
Shale		0.13
Shell	0.62	0.33
Slag	0.41	0.31
Stone	2.13	32.21

Table 12: Principal assemblages

Range and Variety

4.2.1 Text and tables The cut features comprised ditches (boundary and enclosure), pits (rubbish, quarry, water and of uncertain function), post-holes and other structural features such as beam slots, as well as modern features such as furrows and plough scars and naturally derived features such as gullies, 'tree throws' and animal burrows.

4.2.2 The majority of the features discovered dated to the Iron Age – this period containing the full range of features. The Roman and Medieval presence were much more limited – an enclosure ditch and water pit during the Roman period and in the Medieval period, structural features relating to the construction of a windmill (foundation slots and enclosure ditch) with a additional single boundary ditch and later rubbish pit.

4.2.3 Deposits mostly comprised feature fills, although a typically 0.30m thick layer of alluvium overlay the entire site. The feature fills varied between dark, organic silty soils, more leeched and lighter silts and heavy clays (mainly at the base of the deeper Iron age and Medieval enclosure ditches). The smaller pits typically contained single, often

light, silty fills while the more substantial features of contained a number of fills, some of which were slumped in or otherwise naturally derived and deposited and others more deliberately dumped.

4.2.4 Relatively little complex stratigraphy was encountered within the excavation area.

4.2.5 The below table summaries the features type, by period, for the excavation. Note that and modern features such as furrows and plough scars have been excluded.

Period	**Iron Age**				**Roman**	**Medieval**
Phase	**0**	**1**	**2**	**3**		
Pit (uncertain)	13	42	14	3		
Poss Cremation		1				
Poss. Rubbish pit		9				2
Water pit			3		1	
Post hole		18	1			1
Enclosure ditch	4	3	1	1	1	
Boundary ditch	3	4	1			7
Roundhouse ditch		2				
Ditch (uncertain)	4	6	1			
Beam slot						2

Table 13: Variety of Feature Types by Phase

Condition

4.2.6 The survival of Archaeological features on the site was, on the whole reasonable. Modern agricultural activity had resulted in some horizontal truncation, but this is not thought to have been so sever to have entirely removed features or to have drastically altered the nature of surviving features.

Condition of the Primary Excavation Sources and Documents

4.2.7 The records are complete and have been checked for internal accuracy. Written and drawn records have been completed on archival quality paper and are indexed. All paper archives have been digitised into the individual site Access Database. Site drawings have been digitised in AutoCAD. A complete site matrix has been created and entered into an Excel spreadsheet. All primary records are retained at the offices of CAM ARC in Bar Hill. The site codes, MIL PAR 06 and MIL PAR 07 are allocated and all paper and digital records, finds and environmental remains are stored under these codes.

4.2.8 The site data is of sufficient quality to address all of the project's Research Objectives and form the basis of further analysis and targeted publication of the key features, finds and environmental assemblages.

Survey Data

4.2.9 All of the excavated areas were located onto the Ordnance Survey with the aid of a Leica TCR705 Total Station Theodolite. All survey data is stored in digital format with the archive.

4.3 Artefact Summaries

4.3.1 A large number of artefacts were collected during the excavation which have the potential to tell us much about the nature of the use and occupation of this site. These assemblages fell into the following main categories;

- Pottery and ceramic items,
- Animal bone (waste),
- Small finds (metal work and worked bone)
- Worked stone
- Environmental remains.
- The Log ladder (requiring individual assessment and dating)

4.3.2 The quantification of these different assemblage types is detailed in appendixes 1-12. The following section comprises summaries of the reports contained within the appendices.

Small Finds (including Metal objects)- Appendix 7

Summary

4.3.3 In total 64 objects were examined. Apart from a very few Roman and earlier pieces, the assemblage dates to the late post-medieval or modern period.

The early items consist of:

- a fragment of a 3rd century Roman coin,
- the upper end of a Bronze Age palstave,
- a bone plaque (possible element of horse tack) of probable Iron Age date,
- a biconical weight dating to either the Roman or medieval periods,
- a small glass bead, probably Roman,
- a shale armlet fragment of Roman or earlier date.

4.3.4 The iron objects consist mainly of iron nails or fragments of nails, with most of the remaining objects also only represented by small fragments. Many of the nails have the small heads indicative of late date and at least one modern wire nail is present. A fragmentary knife with flat tang has hollow copper-rivets, typically used to attach a two-plate wooden or bone handle in the post-medieval period. A complete bill-hook is not of an early form and is little corroded. It was probably lost or abandoned by a hedger in the late post-medieval or modern period.

Statement of Potential

4.3.5 No further detailed analysis of the metalwork is required. A report on, particularly the coins, should form part of the published site report, providing references to comparable items and assemblages where appropriate. Such a report should focus of the Roman remains and only briefly catalogue the later items.

4.3.6 These finds, integrated with the results of other artefacts and the stratigraphic data from the excavations has some potential to contribute to understanding the nature and function of the archaeology at this site.

Prehistoric Pottery (Appendix 3)

Summary

4.3.7 Two thousand one hundred and sixty-four sherds of prehistoric pottery weighing 21,256g were recovered from 102 excavated features from the excavation, 34 contexts from the evaluation phase and two unstratified contexts. The pottery is predominantly of later Iron Age (*c.*300BC – 60BC) date with smaller quantities of Later Pre-Roman Iron

Age (LPRIA) pottery (100 BC–AD 100). No complete vessels were found. The assemblage was highly fragmentary and was poorly to moderately preserved. Some of the sherds had encrusted surfaces characteristic of exposure in waterlogged conditions.

4.3.8 The Late Iron Age assemblage contains four main fabric groups, with most sherds being made of sandy, quartz-rich fabrics (74%, 15,752g). Smaller numbers of flint-, grog- and shell-tempered sherds are also present. A minimum of ninety-six vessels of later Iron Age date were recovered. The majority of these are jar forms (84 examples) including slack-shouldered jars typical of middle to later Iron Age assemblages in Cambridgeshire and some more rounded or globular forms. The assemblage also includes four bowl forms and eight large coarse storage jars. The majority (89%) of this assemblage was recovered from pits.

4.3.9 The LPRIA contexts contained a mix of handmade and wheel made forms or very early Romanised forms. The handmade fabrics were dominated by quartz-sand-tempered wares. The majority of the assemblage was recovered from two pits, 1367 and 1522, which contained 80% of the LPRIA pottery (1349g).

Statement of Potential

4.3.10 Detailed analysis will comprise a short publication text, including full fabric and form descriptions and a discussion of dating and regional affinities.

4.3.11 Further analysis of the prehistoric pottery, and research into comparative assemblages, has good potential to contribute to our understanding of the dating and phasing of the site, activities undertaken on and around the site and local, regional and national trade networks into which the site was linked.

Romano-British Pottery (Appendix 4)

Summary

4.3.12 A total of twenty-two sherds of Romano-British pottery weighing 308g were recovered from eight excavated features, mostly ditches, also a pit and beamslot. No complete vessels were found. The assemblage is highly fragmentary and is poorly preserved with an average sherd weight of 14g (or *c*. 8g if the large mortarium sherd is not included in the calculation). The small average sherd size and high level of abrasion is consistent with residual material, or pottery that is not in its primary place of deposition. Some of the sherds have encrusted surfaces characteristic of exposure in waterlogged conditions.

4.3.13 Four fabrics were identified. Nearly half the assemblage by weight consists of a large Verulamiun-region white ware (Tomber and Dore 1998, 154) bead and flange mortarium, typical of production between the 2nd and 4th century. The majority of the assemblage by sherd count and the second most common by weight, however, are unsourced sandy grey coarse ware jar fragments. These range in colour from grey, blue-grey to almost orange; some are sooted. At least one pottery production kiln is known at Milton (CHER 05679) and it is possible that this material originated from this, or another similar, local kiln. The remainder of the assemblage consists of small amounts of regionally traded finewares including the late Roman Oxfordshire red colour coated ware (*ibid*, 176) found in the form of body and base sherds from more than one deep bowl. Also found were two Nene Valley coloured beaker sherds (*ibid*, 118) imported from the large industrial complex around modern day Peterborough.

4.3.14 This is a small, abraded assemblage that may be residual or not recovered from its primary site of deposition. Although the largest amount of pottery by sherd count consists of locally produced sandy grey wares, the other pottery found has been traded from large production centres in Cambridgeshire (the Nene Valley), Oxfordshire and Hertfordshire (Verulamium) indicating this material was associated with a community with enough surplus wealth to trade for good quality ceramic goods. The assemblage is consistent with a date in the later Roman period as early finewares (such as Samian) are not present and later Nene Valley and Oxfordshire products were noted.

Statement of Potential

4.3.15 Detailed analysis will comprise a short publication text, including full fabric and form descriptions and a discussion of dating and regional affinities.

4.3.16 No further work is required for this pottery. This data within this report can be incorporated into any future publication.

Post-Roman Pottery (Appendix 5)

Summary

4.3.17 Field walking in 2006 at the proposed Park and Ride Site at Milton, Cambridgeshire, produced a small post-Roman assemblage of 20 sherds weighing 0.436kg, comprised mainly of post-medieval red wares and plant pot fragments. Four earlier sherds were recovered: a single medieval Ely ware sherd, a single medieval micaceous sandy ware sherd, a small fragment from a later medieval Tudor green glazed lobed cup or bowl and a sherd from a Bourn D vessel. This assemblage gave little indication of medieval activity on the site, the distribution sherds recovered having resulted mainly from post-medieval manuring.

4.3.18 Excavation in 2007 on what was primarily thought to be a Romano-British site revealed the presence of a medieval windmill, the circular ditch and internal features of which produced a small assemblage, 314 sherds weighing 3.045kg, of mainly 13th to mid 14th century. The pottery recovered from this industrial site is domestic in nature and includes a large number of jugs in local and non-local fabrics.

Statement of Potential

4.3.19 Detailed analysis will comprise a short publication text, including full fabric and form descriptions and a discussion of dating and regional affinities.

4.3.20 Future work should entail the identification and quantification of stratified pottery from the excavation only. Recording all fields associated with fabric, form, decoration, technology and use.

Worked Stone (Appendix 8)

Summary

4.3.21 A single worked fragment of Millstone Grit was recovered from the fill of Iron Age pit 1504 (1508). This is certainly from a rotary quern or millstone but it is too small to determine which.

4.3.22 Over 6 kg of Lava fragments was recovered from a total of 43 contexts; these were all associated with the medieval windmill. The fragmentary state of the assemblage means

it is not possible to determine the original number of querns or millstones. Few sizeable examples survived but one has an inner rim of 220mm and could either be from a large millstone or from the rim of a pot quern (1791, fill of foundation trench 1792). A second Lava fragment has a diameter of approximately 490mm. This should be identified as a rotary quern. The site lay well within the known distribution of Lava querns. It also sat at the conjunction of three areas dominated by millstones from different sources notably German Lava (to the east), native Millstone Grit (to the north) and French Burr stones (to the south) so that millstones from all three sources are found in the area. The site also falls chronologically before native stones began to dominate in the 14th century. If any of the fragments do represent millstones, they are indicative of a moderately wealthy site

4.3.23 Fragments from two primary whetstones were recovered from ditch fills 1350 (1357) and 1853. One of these is a typical rectilinear whetstone of micaceous sandstone. The other is made of pale cream coloured mica-schist, which is weathered and seems most likely to be Norwegian Ragstone. Both are commonly occurring medieval whetstone lithologies

Statement of Potential

4.3.24 No further recommendations have been made for this assemblage.

4.3.25 A report on the stone which integrates this material into the final phasing of the site, should form part of the published site report, providing references to comparable items and assemblages where appropriate. Such a report should focus on the Medieval remains and catalogue the earlier items. A full reporting of this material will integrate these remains into the final phasing of the site. These results have the potential to important evidence for farming and craft working activities throughout Medieval period of occupation on the site, as well as how this site fitted into national and international trade routes during this period.

The Log Ladder (Appendix 12)

Summary

4.3.26 This ladder, which was made from oak, was firmly associated with Iron Age pottery, and, subsequent AMS dating of the wood has given us a date of 2235BP +/- 35.

Statement of Potential

4.3.27 No further recommendations have been made for this artefact. The results of the assessment of the ladder have been entered on to the access database and will be integrated into the final publication report.

4.4 Environmental Summaries

Faunal Remains (Appendix 6)

Summary

4.4.1 A total of 264 “countable” animal bones were recovered, largely from the sealed fills of features across the site, from features of all date ranges. The condition of the bone was, as a whole, relatively good due largely to environmental factors. The assemblage was dominated by domestic mammals, with cattle being the most prevalent, followed by

a smaller presence of sheep, pig and horse. The majority of the bones came from Iron age contexts, and also included dog and chicken bones. Only a single ovricaprid (sheep/goat) came from a Roman context. The medieval remains consisted of a few cattle bones as well as a small number of horse, dog and goose bones.

Statement of Potential

4.4.2 This is a relatively small assemblage of animal bones. However, it is of interest for containing two types of cattle and a relatively high proportion of horse remains which include both young and elderly animals. The assemblage from Milton can be usefully compared with those from other Iron Age sites in Cambridgeshire.

4.4.3 A full reporting of this material will integrate these remains into the phasing of the site. These results, integrated with the stratigraphic phasing and other ecofactual and artefactual data, will be included in the publication report, as they provide important evidence for farming and craft working activities throughout the main periods of occupation on the site, as well as providing information on diet and environment.

Environmental Remains (appendix 9-12)

Summary

4.4.4 Text After an initial appraisal by CAMARC (Appendix 9) of all of the environmental material sampled during the excavation, eight of the samples were submitted for assessment (Appendix 10).

4.4.5 The composition of all eight assemblages indicates that damp grassland conditions were locally prevalent. In most instances, this grassland appears to have been reasonably well managed with few, if any, incursions of colonising shrubs, although occasional patches of nettles and ruderal weeds are suggested. The abundance of sandwort seeds within pit [1605] may suggest that areas of bare earth, possibly caused by animal activity, were also present. Nearby agricultural activity is indicated within both the Iron Age and medieval assemblages, although it is doubtful whether this impacted the site directly. One point of particular note within the assemblages from 4 of the samples is the presence of seeds of water cress and water crowfoot. Both species, favour moving, shallow, marginal water within streams and brooks, possibly indicating that elements within these assemblages were deposited during flood episodes and may not be directly indicative of the local flora.

4.4.6 Pollen samples (Appendix 11) were also taken the assemblages revealed were all rather similar, with grass-dominated spectra, and low frequencies of arboreal pollen strongly suggesting a post-clearance environment.

4.4.7 The pollen samples from the Iron Age Pit (Cut 1071) could be interpreted as showing a potentially deep pool with water-lilies and fringing emergent vegetation, surrounded by damp meadow, riparian (bank-side), arable fields and grazing land

Statement of Potential

4.4.8 No further recommendations have been made for the environmental assemblages due to the paucity of useful material. The assemblage has been fully recorded and entered on to an Access database. The results, integrated with the final stratigraphic phasing and other ecofactual and artefactual data, will be included in the publication report. This

environmental data has the potential to contribute toward our understanding of the land use of the area of the site, and its surroundings, as well as toward our understanding of the diet of occupants of the site.

5 Updated Research Aims and Objectives

5.1.1 Completion of the post excavation assessment has shown that the original general aims and objectives of the excavation can be enhanced, and that the results of the excavation and analysis of the excavated material can be used to examine specific national, regional and local research aims and objectives.

5.2 National Research Objectives

5.2.1 The evaluation and excavation has shown that the area of the proposed park and ride scheme had been used or occupied by people in the prehistoric, Roman and Medieval period for settlement and agricultural activities. It was thought that the results of the excavation had the potential to make a meaningful contribution towards a number of national research aims.

1) *Contribution toward an understanding in the transition from the pre -Roman (Briton) to Roman period*

5.2.2 The excavation identified a landscape that appeared to have showed a continuity in use between the Late Iron Age and Romano British periods. Understanding the transition between these periods, with particular reference to settlement, social and economic organisation had been identified as a high research priority.

2) *Contribute toward and understanding of Iron Age landscapes*

5.2.3 The excavation of this site, in conjunction with the results from excavations of sites in the vicinity suggest that these landscapes saw some low level Bronze Age use, which became intensified during the Iron Age. How these landscapes and the use of the landscapes continued / changed between these periods has been identified as a research priority.

3) *Contribution toward and understanding of settlement hierarchies and interaction*

5.2.4 The collection of artefacts, ecofacts and structural evidence from sites with well understood depositional processes and with good and consistent sampling techniques has been identified as a critical factor in the study of settlement hierarchies and interaction. This project presented the opportunity to collect data from more than one activity site which may be temporarily associated, and therefore provide the potential to contribute toward this research aim

4) *Contribute towards understanding of rural settlement patterns*

5.2.5 Settlement patterns have been identified as being key to the understanding of the economic, social and political structures of rural England. This project has the potential to contribute towards identifying settlement patterns for the prehistoric and historic period – with particular reference Iron age, Romano – British and Medieval periods.

5) *Contribute towards an understanding of patterns of agriculture*

5.2.6 Research into past agriculture has often been ignored and has therefore been highlighted as a key national research priority. Work at the Milton park and ride site has the potential to contribute to the study of past agriculture and its relationship to settlement in the prehistoric period. There is also potential to investigate patterns of agriculture in the historic period with particular reference to the Romano - British and Medieval periods.

5.3 Regional Research Objectives

5.3.1 The Milton Park and Ride project has the potential to contribute towards several of the research priorities highlighted in the framework for a regional research agenda and strategy for the Eastern Counties (Brown and Glazebrook 2000).

6) Contribute toward a better understanding of Iron Age chronology

5.3.2 The regional research agenda has cited chronology as a gap in knowledge for the region during the Iron Age and has recommended that several techniques should be applied in order to establish a chronology. These include scientific dating techniques, and the investigation of pottery sequences and datable pottery assemblages. This project provides the potential for recovering a well preserved and stratified Late Iron Age pottery assemblage, which along with other datable artefacts, such as the log ladder may contribute to research into the chronological sequence for this period.

7) *Contribute towards and understanding of the development of the Agrarian economy in the Iron Age and Roman periods*

5.3.3 The increase in agricultural production has been identified as being the most important development in the Iron Age of the region. Evidence for the nature of the Iron Age agrarian economy had been cited as very high priority. At an individual site level this excavation has the potential to increase current understanding of the pattern of exploitation and settlement of the landscapes of southern Cambridgeshire gravels and clays in these periods. In addition, this work may contribute to the understanding of how the landscape changed to accommodate the expanding agricultural economy. Particularly valuable data can be gathered from the collection of charred grain deposits and animal bones from datable deposits.

8) *Contribute toward an understanding of the process of economic / social change and development during the Late Iron Age / Roman transitional period*

5.3.4 The evaluation has shown that this site was in use from the prehistoric through to the medieval period, and that in particular it may have been settled during the Iron Age and Romano - British periods. As a result it has potential to throw light on how the transition between these periods affected rural settlements.

9) *Contribute toward an understanding of the inter-relationships between the urban and rural landscapes – there is even a lack of field classification systems for settlements*

5.3.5 This excavation revealed a significant Iron Age system that lay just outside of an identifiable, associated, settlement. The occupants of which would have farmed the

land. Thus, the excavation has the potential to contribute toward this area of understanding.

10) *Contribute towards an understanding of rural settlement layout and economy in the Roman period*

5.3.6 It has been recognised that evidence for rural settlement layout rarely extends beyond ground plan, in the case of villas, and settlement enclosure on other sites. This excavation did reveal what appeared to be the edge of a Roman settlement set within associated agricultural land and so had the potential to look at both the layout of a rural settlement and its associated agricultural hinterland.

5.4 Local Research Objectives

5.4.1 The Milton Park and Ride project provided an opportunity to study a strip of land set within a well known archaeological landscape in south central Cambridgeshire, potentially contributing to the following research aims:

11) *Investigate the character and morphology of Late Iron Age and Romano - British activity in the area, including evidence for settlement, industry and agriculture. The main feature of the Roman landscape in the locality is represented by Akeman Street with small settlements and farmsteads sitting just off its course. This site appears to contain one such settlement – located near, if not on, the major route way. It also demonstrates continuity of settlement in this area from the Iron age through to the Medieval period.*

12) *Examine evidence for the impact of the Roman occupation of the region, with particular regard to the impact of Akeman Street and the development of the major urban centre at Godmanchester to the north west*

13) The information gained from this site has the potential to work toward completing the picture of the occupation and use of this area of southern Cambridgeshire (an area where the heavy Gault clays meet gravel terraces). The picture of the occupation of this land, from the Bronze age through to the Medieval period, has begun to be built up with recent excavations at Milton Landfill, Arbury etc. This site has the potential of compliment this data and increase our understanding of the archaeology of the local area.

14) The site has the potential to increase our understanding of the local area during the Medieval period. The available historic evidence does not record the presence of a windmill within the vicinity of Milton. However, the archaeological record clear demonstrates the presence of one and so has the potential to increase our knowledge of the Medieval use of the area.

6 METHODS STATEMENTS

6.1.1 The assessment and updated research objectives have identified the key areas for future analysis and wider dissemination through publication. This further work will aim to present a synthesis of the project results, concentrating on the Iron Age and Romano British land use and field systems.

6.1.2 The following section summarises which elements have been identified for full, partial or no further analysis in order to meet the potential of the excavated data and the Updated Research Aims of the project. Detailed task lists are presented in Section 10. The Project team members (and initials) are outlined in table 14.

6.2 Stratigraphic Analysis (tasks 1-16)

6.2.1 Text Full but selective further stratigraphic analysis, concentrating on the following key sequences and areas (to address Research Objectives 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14).

- Finalise site groups and phasing, with particular emphasis on the Iron Age / Roman settlement features (DDUH).
- Full integration of the artefact dating and phasing (DDUH)
- Compilation of text sections for all features, ordered by phase, and group to enable interpretation and discussion and to provide information for key specialists (DDUH).
- Compilation of group, phase and site narrative (DDUH), and site phase/group plans drawn to illustrate the development of the site (ILL)

6.3 Documentary Research (task 8)

6.3.1 Research into documentary and cartographic evidence, in addition to other sources such as aerial photographic surveys, will be undertaken to place the site within its wider context. This will focus on exploring the evidence for earlier prehistoric ceremonial and monumental features along the valley, contemporary Iron Age activity and the location of Roman settlements, villas, field systems and routeways as well as looking at the medieval presence in the area. (DDUH) (1, 2, 4, 5, 8, 11, 12, 13 and 14).

6.4 Artefactual Analysis (tasks 24-26)

Pottery

6.4.1 Full cataloguing (fabric identification) and analysis of the stratified, pottery assemblages including dating, examinations of comparative assemblages and a discussion of and regional affinities to address Research Objectives 1, 6, 7, 8, 10, 11, 13 and 14 (AL / SP and CF)

Animal Bone

6.4.2 Full cataloguing, identification and analysis of the animal bone and comparison with assemblages from similar site types and times. Integration of these results into the final phasing of the site. To address Research Objectives 1, 2, 4, 5, 7, 9, 10, 11,12 and 13 (IB)

Little/ No further Analysis (tasks 28-30)

6.4.3 No further work is recommended for a number of the finds assemblages, other than integration of the results during analysis, adding final phasing. These assemblages are generally either small, poorly preserved and / or represent an assemblage where an appropriate levels of analysis has already been undertaken as part of the assessment process, which will only require a small amount of work for publication. All of these assemblages have potential to address the research objectives (in brackets), and as such will provide the basis for summaries for inclusion in the publication

- Metal objects: summary report on the stratified Roman objects, with a brief catalogue of the later items that have been selected for illustration, and discussion of comparable objects (NC/ ILL / DDUH) (1, 3, 6, 7, 8, 11, 12 ,13 and 14).
- Plant macrofossils. Integration of final phasing; summary report and catalogue (RF/VF/SB/DDUH) (1, 2, 4, 5, 6, 7, 11, 12,13 and 14).
- Worked stone / quern stones. Integration of final phasing; summary report and catalogue (RS / DDUH) (1 and 7)
- Worked wood. Integration of final phasing; summary report and catalogue (MB / DDUH) (1, 2, 4 and 5)
- Miscellaneous finds (brick/tile, fired clay, burnt stone): Integration of final phasing; summary report and catalogue (CF / DDUH) (1, 4, 11, 13 and 14).

7 Report Writing, Archiving and Publication

7.1 Report Writing

Tasks associated with report writing and illustrations are identified in Table 18 below. An Archive Report for Milton Park & Ride Excavations will be produced.

7.2 Archiving

7.2.1 Excavated material and records will be deposited with, and curated by, Cambridgeshire County Council (CCC) in appropriate county stores under the Site Codes MIL PAR 06 (evaluation) and MIL PAR 07 (excavation) and the county HER codes ECB 2453, 3122, 3123. . A digital archive will be deposited with ADS. CCC requires transfer of ownership prior to deposition. During analysis and report preparation CAM ARC will hold all material and reserves the right to send material for specialist analysis.

7.2.2 The archive will be prepared in accordance with current CAM ARC guidelines, which are based on current national guidelines.

7.3 Publication

7.3.1 It is proposed that the results of the project should be published initially as a note in The Proceedings of the Cambridge Antiquarian Society (PCAS). A joint publication, which will include other nearby and related archaeological sites at Milton Landfill, is envisaged and will be a standalone monograph of the Iron Age and early Roman periods in this part of Milton.

8 Resources and Programming

8.1.1 In order to realise the site's full potential, to meet the original project aims and revised research aims, as well as to contribute to broader research topics, the following resources and programming are required to complete the analysis and report writing phases.

8.2 Staffing and Equipment

Name	Initials	Project Role	Establishment	No. of Days	Day rate/ cost
Dan Hounsell	DDUH	Project Officer	CAM ARC	15	
Stephen Macaulay	SPM	Project Manager	CAM ARC	5	
Elizabeth Popescu	EP	Editor/publications management	CAM ARC	8	
Crane Begg	CB	Report illustration	CAM ARC	12	
Sarah Percival	SP	Prehistoric pottery	NAU	0.5	£107.50
Alice Lyons	AL	Roman-British and early Saxon pottery	CAM ARC	0.5	£107.50
Carole Fletcher	CF	Medieval Pottery	CAM ARC	2	
Ian Baxter	CF	Animal Bone	Freelance	0.5	£82.50
Nina Crummy	NC	Metal objects	Freelance	0.5	£89
Illustrator	ILL	Digitise selected sections. Small finds, and pottery	CAM ARC	12	
Assistant	ASST	Archiving	CAM ARC	2	

Table 14: Project Team

8.3 Task Identification

Task No.	Task	Staff	No of Days
Stratigraphic analysis and report preparation			
1	Finalise site phasing of key groups	DDUH	2
2	Disseminate final phasing to relevant specialists	DDUH	1
3	Write Period/Group text	DDUH	10
4	Compile archive report for archaeological sequence	DDUH	5

5	Review and collate results of specialist analysis	DDUH	4
6	Project management and liaison with specialists	DDUH	3
7	Collate and review background evidence/research into comparative sites	DDUH	4
8	Write background text	DDUH	3
9	Write discussion and conclusions	DDUH	3
10	Collate/edit captions, bibliography, appendices etc. for publication (etc.)	DDUH	2
11	Internal edit	EP/SM	3
12	Incorporate internal edits	DDUH	2
13	Final edit	EP/SM	2
14	Produce HER summary	DDUH	1
15	Submit to PCAS/journal	DDUH	1
16	Archiving	DDUH /Site Assistant	2
Total			48
Illustration tasks			
17	Compile list of illustrations/liaison with illustrators	DDUH	4
18	Produce plans/sections/location drawings	ILL	10
19	Publication figure preparation	ILL	5
20	Finds illustration (pottery, metal finds, flint)	ILL	3
21	Finds photography (Roman pottery)	RF	1
22	Select and check finds illustrations	DDUH	2
23	Project Management	SM/DDUH	3
Finds Analysis			
24	Prehistoric pottery: scan, full identification/catalogue/analysis of Grooved ware pits and MIA assemblage, study of comparative groups, preparation of report	SP	0.5
25	Roman pottery: full identification/catalogue/analysis, research into comparative assemblages, preparation of report	AL	0.5
26	Medieval Pottery: full identification/catalogue/analysis, research into comparative assemblages, preparation of report:	CF	2
27	Animal Bone	NC	0.5
28	Metal Objects	IB	0.5
29	Environmental Remains	VF / RF	0.5
30	Integration of other finds material (wood, stone etc.)	DDUH	1
Meetings			
31	Post excavation Meetings	DDUH / SM / EP	3

Table 15: Task list

Appendix 1. Finds Summary

Context	Bone	c	Ceramic	Cinder	Flint	Glass	Lava	Mortar	Organic	Shale	Shell	Slag	Stone
0													
1000	0.043		0.202										0.007
1002			0.031									0.03	
1002											0.003		
1004					0.002								
1004			0.026										
1006	0.234		0.004										
1008	0.011		0.014										
1010	0.039												
1010	0.049												
1010													0.43
1010			0.265										
1012	0.017												
1014	0.301		0.108		0.002								
1014			0.011										
1019	0.01												
1021	0.08		0.107										
1021	0.01												
1023	0.118		0.204										0.033
1023	0.047												
1023										0.002			
1023													0.286
1023										0.004			
1029	0.134												

Context	Bone	c	Ceramic	Cinder	Flint	Glass	Lava	Mortar	Organic	Shale	Shell	Slag	Stone
1038	0.022		0.02										
1042	0.378												
1044	0.022												
1044													0.223
1048	1.278		0.247										
1048													0.06
1048			0.199										
1078	0.084												
1078										0.001			
1078													0.008
1078			0.083										
1086			0.1										
1087	0.095		0.053										
1090	0.196		0.054										
1091			0.076										
1092	0.071		0.077										
1094	0.515		0.036										
1095	0.084												
1096	0.01		0.011										
1096			0.075										
1097	0.007		0.069										
1097			0.006										
1100	0.545										0.002		
1100	0.855												
1100			0.181										
1101	0.486		0.717										0.753
1101			0.113										

Context	Bone	c	Ceramic	Cinder	Flint	Glass	Lava	Mortar	Organic	Shale	Shell	Slag	Stone
1102	0.068		0.505										
1103	0.43												
1104	0.313		0.115					0.002					
1105	1.025		0.087										
1107	0.102												
1108	0.492		0.185										
1118	0.058		0.02										
1121			0.004										
1139	0.019		0.547										0.135
1141	0.021		0.078										
1154	1.484		0.329										
1157			0.003										
1161	0.085		0.015										
1167	0.021												
1171	0.073												
1173	0.396		0.018										0.051
1173													0.623
1174	0.231												
1176	0.037												
1176			0.004										
1178			0.025										
1180	0.203		0.005										
1182	0.002		0.217										
1183					0.112								
1184	0.104												
1184			0.057										
1186	0.167		0.021										

Context	Bone	c	Ceramic	Cinder	Flint	Glass	Lava	Mortar	Organic	Shale	Shell	Slag	Stone
1199	0.134												
1203	0.225												
1215	0.179		0.105										
1215			0.084										
1216	0.028												
1224			0.001										
1226	0.028		0.074										
1229	0.033		0.013										
1230	0.019		0.014										
1232			0.018										
1241	0.387												
1241			0.052										
1248	0.067		0.057	0.002									
1248													0.358
1250	0.245		0.307										
1250													0.223
1251	0.126		0.055										
1251											0.002		
1252	0.071		0.007										
1261	0.049												
1264	1.138		0.332										
1264													0.059
1270	0.275												0.025
1271	0.139		0.102										
1277	0.189		0.019										0.009
1278	1.52		0.174										
1279	0.005		0.037										

Context	Bone	c	Ceramic	Cinder	Flint	Glass	Lava	Mortar	Organic	Shale	Shell	Slag	Stone
1280	0.029												
1282	0.67												
1283	0.077		0.036										
1283													0.031
1284	1.118		0.24										
1284													0.01
1284			0.31										
1284			0.008										
1288	0.616		0.157										
1289			0.001										
1297			0.001										
1304			0.081										
1306	0.293		0.002										
1306		0.183											
1308			0.004										
1315			0.02										
1326			0.06										
1333	0.016		0.079										
1339			0.018										
1343	0.001		0.042										
1345	0.348												
1350			0.116				0.457						
1350									0.003				
1350													0.116
1354			0.003										
1356	0.083		0.138										
1356							0.006						

Context	Bone	c	Ceramic	Cinder	Flint	Glass	Lava	Mortar	Organic	Shale	Shell	Slag	Stone
1363	0.008		0.148										
1365			0.007										
1378	0.372		0.319										
1378			0.146										
1378			0.189										
1379			0.077										
1381			0.455										
1382	0.061		0.213										
1384			0.137										
1385			0.07										
1386	0.019		0.033										
1387	0.213		0.234										
1392											0.014		
1400	0.215		0.3					0.136					0.017
1400													0.087
1400							0.002						
1401	0.16		0.027										
1401							0.002						
1406	0.49		0.345								0.007		
1406													0.038
1406							0.315						
1406										0.116			
1410	0.06						0.019						
1415			0.061										
1415							0.329						
1416	0.011		0.098				0.477				0.002		
1416											0.023		

Context	Bone	c	Ceramic	Cinder	Flint	Glass	Lava	Mortar	Organic	Shale	Shell	Slag	Stone
1417	0.007		0.037										
1417													0.015
1421			0.043										
1426	0.021		0.015										
1428			0.011										
1429	0.112		0.089										
1430	0.172		0.016										
1432	0.153												
1440			0.065										
1444	0.005												
1450	0.098		0.096										
1457	0.044		0.002										
1459	0.019		0.056										
1465	0.174		0.079										
1466	0.171		0.022										
1468	0.035		0.018										
1475	0.042		0.137										
1475											0.003		
1475							0.205						
1478	0.185		0.187				0.332				0.003		
1488	0.026		0.081				0.285						
1497	0.018												
1499			0.109										
1501			0.014										
1507	0.007												
1508	0.001		0.065										1.332
1508													0.281

Context	Bone	c	Ceramic	Cinder	Flint	Glass	Lava	Mortar	Organic	Shale	Shell	Slag	Stone
1509	0.047		0.173										
1511	0.475		0.144										
1513			0.03										
1515	0.189		0.016										
1523	0.002		4.92				0.001						0.215
1524	0.118		1.676										
1524			0.284										
1529			0.046										
1532	0.125												
1534	0.166		0.02										
1541	0.005												
1558	0.011		0.081										
1558													0.034
1558											0.028		
1558							0.145						
1560	0.466		0.128										
1564	0.001		0.042										
1566	0.025		0.124										
1567			0.092										
1567													0.013
1569	0.012		0.076										
1573			0.005										
1574	0.026		0.009										
1574					0.009								
1575			0.002										
1579	0.033												
1593			0.107										

Context	Bone	c	Ceramic	Cinder	Flint	Glass	Lava	Mortar	Organic	Shale	Shell	Slag	Stone
1595			0.027										
1597							0.027						
1600	0.045		0.01										
1600			0.035										
1604			0.03										
1605	0.093												
1605			0.052										
1609											0.009		0.078
1613	0.003		0.016										
1613			0.007										
1615	0.047												
1616			0.085										
1619			0.104										
1622	0.065												
1640	0.017		0.024										
1641			0.08										
1653	0.034											0.027	
1664	0.015												
1665	0.171		0.259										
1665													0.286
1665			1.11										
1665			0.043										
1666			0.08										
1685	0.014												
1692	0.003		0.049										
1694	0.047		0.008										
1694													0.064

Context	Bone	c	Ceramic	Cinder	Flint	Glass	Lava	Mortar	Organic	Shale	Shell	Slag	Stone
1695												0.053	
1699	0.088		0.058										
1701	0.03		0.039										
1701										0.003			
1708	0.021		0.005										
1710	0.025												
1712													3.386
1712													4.46
1712								0.004					
1717	0.022		0.011										
1721	0.167												
1729	0.085		0.007										
1730	0.809		0.078										
1734	0.007		0.007										
1738	0.055		0.014										
1749	0.005		0.027										
1753	0.028		0.008				0.213						
1753											0.01		
1759			0.004										
1761	0.003		0.06										
1761							0.336						
1761											0.006		
1761													0.006
1763			0.016										
1763							0.064						
1765	0.087		0.084										
1769	0.042		0.005				0.136				0.001		

Context	Bone	c	Ceramic	Cinder	Flint	Glass	Lava	Mortar	Organic	Shale	Shell	Slag	Stone
1771			0.013										
1773			0.052				0.046						0.15
1775	0.015		0.015										
1775							0.08						
1775											0.002		
1779	0.001		0.004				0.022						
1779											0.001		
1781	0.049		0.039				0.082						
1781											0.002		
1785			0.018										
1787			0.007				0.144						
1789			0.035										
1791			0.079				0.288						
1793	0.042		0.043										
1805	0.007		0.02										0.006
1805											0.008		
1805													0.008
1805							0.089						
1807	0.091		0.225										
1810	0.077		0.02				0.01						
1812	0.017		0.012				0.108						0.117
1814	0.572		0.144		0.002					0.003		0.123	
1814													0.09
1814							0.333						
1814											0.001		
1814											0.011		
1814							0.373						

Context	Bone	c	Ceramic	Cinder	Flint	Glass	Lava	Mortar	Organic	Shale	Shell	Slag	Stone
1815	1.617		0.276		0.023		0.231						
1815							0.12						
1815											0.08		
1815											0.018		
1815			0.219										
1816	0.001		0.02				0.094						
1816							0.047						
1816											0.032		
1824	0.065		0.016										
1824			0.122										
1826	0.036		0.911										
1832			0.116										
1834	0.486		0.043										
1839	0.048												
1853			0.023		0.012								
1853													0.052
1854	0.005		0.01										
1854											0.043		
1857	0.223		0.008				0.145						
1857											0.002		
1857							0.349						
1869			0.035										
1873			0.013										
1885	0.32		0.003										
1885													0.298
1889	0.011		0.005										
1896	0.27		0.03										

Context	Bone	c	Ceramic	Cinder	Flint	Glass	Lava	Mortar	Organic	Shale	Shell	Slag	Stone
1900	0.136		0.053										
1910	0.289		0.235										
1914	0.185		0.593										0.003
1914													5.2
1917	0.033												
1917			0.464										
1928			0.483										
1930												0.05	
1930			0.002										
1937													1.186
1941	0.134												
1946	0.08		0.279										
1946													0.027
1946													0.007
1947	0.57		0.242				0.019						
1948	0.098		0.126										
1950	0.024		0.024										
1954						0							
1958			0.002										
1961	0.103		0.098										
1961													0.44
1962	0.385		0.052										
1962													0.183
1963	0.02		0.168									0.023	
1963													0.466
1963			0.037										
1964	0.034												

Context	Bone	c	Ceramic	Cinder	Flint	Glass	Lava	Mortar	Organic	Shale	Shell	Slag	Stone
1966			0.035										
1972			0.026										
1975	0.021		0.351		0.002		0.063						
1976	0.058		0.41										
1980	0.017		0.067				0.013						
1982			0.12				0.356						
1988			0.052										
1990	0.006		0.019										
1992			0.002										
1994	0.007		0.233				0.142						
2010													5.1
2014	0.104												
2023			0.026										
2023											0.015		
2025			0.003										
2027			0.002										
2040	0.743		0.114										4.686
2041	0.793		0.305										
2041													0.44
2048	0.162												
2441	0.669												
99999	0.285		0.458				0.061						
99999											0.029		

Table 16: Finds Quantification

Appendix 2. Context Summary with Provisional Phasing

Context	Cut	Category	Feature Type
1000	1001	fill	ditch
1001	0	cut	ditch
1002	1003	fill	ditch
1003	0	cut	ditch
1004	1005	fill	pit
1005	0	cut	pit
1006	1007	fill	ditch
1007	0	cut	ditch
1008	1009	fill	ditch
1009	0	cut	ditch
1010	1011	fill	pit
1011	0	cut	pit
1012	1013	fill	pit
1013	0	cut	pit
1014	1015	fill	pit
1015	0	cut	pit
1016	1017	fill	pit
1017	0	cut	pit
1018	1020	fill	pit
1019	1020	fill	pit
1020	0	cut	pit
1021	1022	fill	pit
1022	0	cut	pit
1023	1024	fill	pit
1024	0	cut	pit
1025	1026	fill	pit
1026	0	cut	pit
1027	1028	fill	pit
1028	0	cut	pit
1029	1030	fill	pit
1030	0	cut	pit
1031	0	cut	ditch
1032	1031	fill	ditch
1033	0	cut	ditch
1034	1033	fill	ditch
1035	0	cut	ditch
1036	1035	fill	ditch
1037	0	cut	ditch
1038	1037	fill	ditch
1039	0	cut	pit

Context	Cut	Category	Feature Type
1040	1039	fill	pit
1041	0	cut	ditch
1042	1041	fill	ditch
1043	0	cut	pit
1044	10430	fill	pit
1048	0	fill	pit
1049	1050	fill	pit
1050	0	cut	pit
1051	1052	fill	ditch
1052	0	cut	ditch
1053	1054	fill	ditch
1054	0	cut	ditch
1055	1056	fill	ditch
1056	0	cut	ditch
1057	1058	fill	ditch
1058	0	cut	ditch
1059	1060	fill	pit
1060	0	cut	post hole
1061	1062	fill	ditch
1062	0	cut	ditch
1063	1064	fill	ditch
1064	0	cut	ditch
1065	1067	fill	ditch
1066	1067	fill	ditch
1067	0	cut	ditch
1068	1070	fill	pit
1069	1070	fill	pit
1070	0	cut	pit
1071	0	cut	pit
1072	1073	fill	pit
1073	0	cut	pit
1074	1075	fill	pit
1075	0	cut	pit
1076	1077	fill	pit
1077	0	cut	pit
1078	1079	fill	pit
1079	0	cut	pit
1080	1081	fill	pit
1081	0	cut	pit
1082	1083	fill	pit
1083	0	cut	pit
1084	1085	fill	pit

Context	Cut	Category	Feature Type
1085	0	cut	pit
1086	1088	fill	pit
1087	1088	fill	pit
1088	0	cut	pit
1089	0	cut	pit
1090	1071	fill	pit
1091	1071	fill	pit
1092	1071	fill	pit
1093	1071	fill	pit
1094	1089	fill	pit
1095	1089	fill	pit
1096	1071	fill	pit
1097	1071	fill	pit
1098	1071	fill	pit
1100	1071	fill	pit
1101	1071	fill	pit
1102	1071	fill	pit
1103	0	fill	pit
1104	1089	fill	pit
1105	1089	fill	pit
1106	1089	fill	pit
1107	1089	fill	pit
1108	1089	fill	pit
1109	1089	fill	pit
1110	1111	fill	pit
1111	0	cut	pit
1112	1113	fill	post hole
1113	0	cut	post hole
1114	1115	fill	post hole
1115	0	cut	post hole
1116	1117	fill	post hole
1117	0	cut	post hole
1118	1120	fill	pit
1119	1120	fill	pit
1120	0	cut	pit
1121	1122	fill	pit
1122	0	cut	pit
1123	0		
1124	0	cut	ditch
1125	1124	fill	ditch
1126	0	cut	pit
1127	1126	fill	pit
1128	0	cut	ditch

Context	Cut	Category	Feature Type
1129	1128	fill	ditch
1130	1128	fill	ditch
1131	0	cut	post hole
1132	1131	fill	post hole
1133	0	cut	ditch
1134	1133	fill	ditch
1135	0	cut	ditch
1136	1135	fill	ditch
1137	0	cut	pit
1138	1137	fill	pit
1139	0	fill	pit
1140	0	cut	pit
1141	1140	fill	pit
1142	1143	fill	pit
1143	0	cut	pit
1144	0	fill	post hole
1145	0	cut	post hole
1146	1148	fill	pit
1147	1148	layer	floor
1148	0	cut	ditch
1149	1149	fill	pit
1150	0	cut	ditch
1151	0	cut	post hole
1152	1151	fill	post hole
1153	1151	fill	post hole
1154	1071	fill	pit
1155	1156	fill	post hole
1156	0	cut	post hole
1157	1158	fill	post hole
1158	0	cut	post hole
1159	1160	fill	post hole
1160	0	cut	post hole
1161	1163	fill	post hole
1162	1163	fill	post hole
1163	0	cut	post hole
1164	1166	fill	post hole
1165	1166	fill	post hole
1166	0	cut	post hole
1167	1168	fill	pit
1168	0	cut	pit
1169	1071	fill	pit
1170	1071	fill	pit
1171	1071	fill	pit

Context	Cut	Category	Feature Type
1172	1071	fill	pit
1173	1072	fill	pit
1174	1071	fill	pit
1175	1071	fill	pit
1176	1071	fill	pit
1177	1071	fill	pit
1178	1071	fill	pit
1179	1071	fill	pit
1180	1071	fill	pit
1181	0	cut	pit
1182	0	fill	pit
1183	1181	fill	pit
1184	1181	fill	pit
1185	0	cut	pit
1186	1185	fill	pit
1187	1071	fill	pit
1188	0	cut	ditch
1189	1188	fill	ditch
1190	1188	fill	ditch
1191	1188	fill	ditch
1192	1193	fill	pit
1193	0	cut	pit
1194	1181	fill	pit
1195	0	cut	ditch
1196	0	cut	ditch
1197	0	cut	ditch
1198	1195	fill	ditch
1199	1197	fill	ditch
1200	1196	fill	ditch
1201	0	fill	pit
1202	1204	fill	ditch
1203	0	layer	natural
1204	0	cut	ditch
1205	1206	fill	ditch
1206	0	cut	ditch
1207	1210	fill	ditch
1208	1210	fill	ditch
1209	1210	fill	ditch
1210	0	cut	ditch
1211	1212	fill	pit
1212	0	cut	pit
1213	0	cut	pit
1214	1213	fill	pit

Context	Cut	Category	Feature Type
1215	1217	fill	pit
1216	1217	fill	pit
1217	0	cut	pit
1218	1219	fill	pit
1219	0	cut	pit
1220	1210	fill	ditch
1221	0	fill	ditch
1222	0	cut	ditch
1223	1217	fill	pit
1224	1225	fill	post hole
1225	0	cut	post hole
1226	1228	fill	post hole
1227	1228	fill	post hole
1228	0	cut	post hole
1229	1231	fill	pit
1230	1231	fill	pit
1231	0	cut	pit
1232	1233	fill	pit
1233	0	cut	pit
1234	1235	fill	ditch
1235	0	cut	ditch
1236	1237	fill	ditch
1237	0	cut	ditch
1238	0	cut	pit
1239	1238	fill	pit
1240	0	cut	ditch
1241	1240	fill	ditch
1242	1238	fill	pit
1244	1247	fill	pit
1245	1247	fill	pit
1246	1247	fill	pit
1247	0	cut	pit
1248	1249	fill	pit
1249	0	cut	pit
1250	1253	fill	pit
1251	1267	fill	pit
1252	1253	fill	pit
1253	0	cut	pit
1254	1256	fill	ditch
1255	1257	fill	ditch
1256	0	cut	ditch
1257	0	cut	ditch
1258	1259	fill	ditch

Context	Cut	Category	Feature Type
1259	0	cut	ditch
1260	1275	fill	pit
1261	1275	fill	pit
1264	1265	fill	pit
1265	0	cut	pit
1266	1253	fill	pit
1267	0	cut	pit
1268	1269	fill	pit
1269	0	cut	pit
1270	1272	fill	ditch
1271	1272	fill	ditch
1272	0	cut	ditch
1274	1222	fill	ditch
1275	0	cut	pit
1276	0	cut	pit
1277	1276	fill	pit
1278	1278	fill	pit
1279	1276	fill	pit
1280	1276	fill	pit
1281	1276	fill	pit
1282	1276	fill	pit
1283	1276	fill	pit
1284	1276	fill	pit
1285	1286	fill	pit
1286	0	cut	pit
1287	1288	fill	pit
1288	0	cut	pit
1289	1291	fill	post hole
1290	1291	fill	post hole
1291	0	cut	post hole
1292	1294	fill	post hole
1293	1294	fill	post hole
1294	0	cut	post hole
1295	0	cut	post hole
1296	1295	fill	post hole
1297	0		
1298	0		
1299	1300	fill	furrow
1300	0	cut	furrow
1301	1303	fill	ditch
1302	1303	fill	ditch
1303	0	cut	ditch
1304	1305	fill	furrow

Context	Cut	Category	Feature Type
1305	0	cut	furrow
1306	1307	fill	pit
1307	0	cut	pit
1308	1309	fill	post hole
1310	0	cut	ditch
1311	1310	fill	ditch
1312	1310	fill	ditch
1313	1314	fill	pit
1314	0	cut	pit
1315	1316	fill	ditch
1316	0	cut	ditch
1317	1310	fill	ditch
1318	1319	fill	ditch
1319	0	cut	ditch
1320	12321	fill	ditch
1321	0	cut	ditch
1322	1323	fill	ditch
1323	0	cut	ditch
1324	1325	fill	ditch
1325	0	cut	ditch
1326	1327	fill	ditch
1327	0	cut	ditch
1328	1329	fill	pit
1329	0	cut	pit
1330	1331	fill	ditch
1331	0	cut	ditch
1332	1335	fill	ditch
1333	1335	fill	ditch
1334	1335	fill	ditch
1335	0	cut	ditch
1336	1342	fill	ditch
1337	1338	fill	ditch
1338	0	cut	ditch
1339	1340	fill	ditch
1340	0	cut	ditch
1341	1342	fill	ditch
1342	0	cut	ditch
1343	0		
1344	0	fill	ditch
1345	1346	fill	ditch
1346	0	cut	ditch
1347	1348	fill	ditch
1348	0	cut	ditch

Context	Cut	Category	Feature Type
1349	1342	fill	ditch
1350	1357	fill	ditch
1351	0	cut	ditch
1352	1353	fill	ditch
1353	0	cut	ditch
1354	1355	fill	ditch
1355	0	cut	ditch
1356	0	fill	ditch
1357	0	cut	ditch
1358	1351	fill	ditch
1359	1351	layer	ditch
1360	1351	fill	ditch
1361	1351	layer	ditch
1362	1351	fill	ditch
1363	1364	fill	ditch
1364	0	cut	ditch
1365	1366	fill	ditch
1366	0	cut	ditch
1367	0	cut	pit
1368	0	cut	pit
1369	1368	fill	pit
1370	0	cut	ditch
1372	0	cut	pit
1373	1372	fill	pit
1374	0	cut	pit
1375	1374	fill	pit
1376	0	cut	gully
1377	1376	fill	gully
1378	1367	fill	pit
1379	1367	fill	pit
1380	1367	fill	pit
1381	1367	fill	pit
1382	1367	fill	pit
1383	1367	fill	pit
1384	1367	fill	pit
1385	1367	fill	pit
1386	1367	fill	pit
1387	1367	fill	pit
1388	1389	fill	ditch
1389	0	cut	ditch
1390	1391	fill	ditch
1391	0	cut	ditch
1392	1393	fill	ditch

Context	Cut	Category	Feature Type
1393	0	cut	ditch
1394	1395	fill	pit
1395	0	cut	pit
1398	1399	fill	ditch
1399	0	cut	ditch
1400	1403	fill	ditch
1401	1403	fill	ditch
1402	1403	fill	ditch
1403	0	cut	ditch
1404	1405	fill	pit
1405	0	cut	pit
1406	1408	fill	ditch
1407	1408	fill	ditch
1408	0	cut	ditch
1409	1391	fill	ditch
1410	1391	fill	ditch
1411	1391	fill	ditch
1412	1391	fill	ditch
1413	1391	fill	ditch
1414	0	cut	pit
1415	1414	fill	pit
1416	1414	fill	pit
1417	1418	fill	ditch
1418	0	cut	ditch
1419	1420	fill	ditch
1420	0	cut	ditch
1421	1420	fill	ditch
1422	1423	fill	pit
1423	0	cut	post hole
1424	1425	fill	pit
1425	0	cut	post hole
1426	1427	fill	post hole
1427	0	cut	post hole
1428	0	cut	ditch
1429	1428	fill	ditch
1430	1428	fill	ditch
1431	1432	fill	ditch
1432	0	cut	ditch
1433	1434	fill	pit
1434	0	cut	pit
1435	1418	fill	ditch
1436	1439	fill	ditch
1437	1439	fill	ditch

Context	Cut	Category	Feature Type
1438	1439	fill	ditch
1439	0	cut	ditch
1440	1443	fill	ditch
1441	1443	fill	ditch
1442	1442	fill	ditch
1443	0	cut	ditch
1444	1447	fill	ditch
1445	1447	fill	ditch
1446	1447	fill	ditch
1447	0	cut	ditch
1448	0		
1449	1452	fill	ditch
1450	1452	fill	ditch
1451	1452	fill	ditch
1452	0	cut	ditch
1453	1456	fill	ditch
1454	1456	fill	ditch
1455	1456	fill	ditch
1456	0	cut	ditch
1459	1460	fill	ditch
1460	0	cut	ditch
1461	1463	fill	ditch
1462	1463	fill	ditch
1464	1467	fill	ditch
1465	1467	fill	ditch
1466	1467	fill	ditch
1467	0	cut	ditch
1468	1469	fill	ditch
1469	0	cut	ditch
1471	1472	fill	post hole
1472	0	cut	post hole
1473	1474	fill	post hole
1474	0	cut	post hole
1475	1477	fill	ditch
1476	0	fill	ditch
1477	0	cut	ditch
1478	1481	fill	pit
1479	1481	fill	pit
1480	1481	fill	pit
1481	0	cut	pit
1482	0	fill	ditch
1483	0	fill	ditch
1484	1486	fill	ditch

Context	Cut	Category	Feature Type
1485	1486	fill	ditch
1486	0	cut	ditch
1487	1490	fill	ditch
1488	1490	fill	pit
1489	1490	fill	pit
1490	0	cut	pit
1491	1492	fill	ditch
1492	0	cut	ditch
1493	1494	fill	ditch
1494	0	cut	ditch
1495	0	cut	ditch
1496	1495	fill	ditch
1497	1495	fill	ditch
1498	0	cut	ditch
1499	1498	fill	ditch
1500	0	cut	ditch
1501	1500	fill	ditch
1502	0	cut	ditch
1503	1502	fill	furrow
1504	0	cut	pit
1505	1504	fill	pit
1506	1504	fill	pit
1507	1504	fill	pit
1508	1504	fill	pit
1509	1510	fill	pit
1510	0	cut	pit
1511	1512	fill	pit
1512	0	cut	pit
1513	1516	fill	ditch
1514	1516	fill	ditch
1515	1516	fill	ditch
1516	0	cut	ditch
1517	1518	fill	ditch
1518	0	cut	ditch
1519	0	cut	pit
1520	1519	fill	pit
1521	1519	fill	pit
1522	0	cut	pit
1523	1522	fill	pit
1524	1522	fill	pit
1525	0	cut	ditch
1526	1525	fill	ditch
1527	1525	fill	ditch

Context	Cut	Category	Feature Type
1528	1525	fill	ditch
1529	1525	fill	ditch
1530	0	cut	ditch
1531	0	cut	ditch
1532	1531	fill	ditch
1533	0	cut	ditch
1534	1533	fill	ditch
1535	1533	fill	ditch
1536	1533	fill	ditch
1537	1533	fill	ditch
1538	1533	fill	ditch
1539	0	cut	ditch
1540	0	cut	ditch
1541	1539	fill	ditch
1542	1544	fill	pit
1543	1544	fill	pit
1544	0	cut	pit
1545	1547	fill	ditch
1546	1547	fill	ditch
1547	0	cut	ditch
1548	1549	fill	pit
1549	0	cut	pit
1550	1552	fill	ditch
1551	1552	fill	ditch
1552	0	cut	ditch
1553	1554	fill	ditch
1554	0	cut	ditch
1555	0	fill	ditch
1556	0	fill	ditch
1557	0	cut	ditch
1558	1559	fill	ditch
1559	0	cut	ditch
1560	1563	fill	ditch
1561	1563	fill	ditch
1562	1563	fill	ditch
1563	0	cut	ditch
1564	1565	fill	ditch
1565	0	cut	ditch
1566	1570	fill	ditch
1567	1570	fill	ditch
1568	1570	fill	ditch
1569	1570	fill	ditch
1570	0	cut	ditch

Context	Cut	Category	Feature Type
1571	0	fill	pit
1572	1559	fill	ditch
1573	1559	fill	ditch
1574	1559	fill	ditch
1575	1559	fill	ditch
1576	1559	fill	ditch
1577	1559	cut	ditch
1578	0	cut	pit
1579	1578	fill	pit
1580	1581	fill	ditch
1581	0	cut	ditch
1582	1583	fill	ditch
1583	0	cut	ditch
1584	1456	fill	ditch
1586	1456	fill	ditch
1588	0	fill	ditch
1589	1590	fill	ditch
1590	0	cut	ditch
1591	0	fill	pit
1592	0	cut	pit
1593	1594	fill	ditch
1594	0	cut	ditch
1595	1596	fill	ditch
1596	0	cut	ditch
1597	1598	fill	ditch
1598	0	cut	ditch
1599	1623	fill	ditch
1600	1623	fill	ditch
1601	1602	fill	ditch
1602	0	cut	ditch
1604	1367	fill	pit
1605	1367	fill	pit
1606	0	cut	ditch
1607	1606	fill	ditch
1608	1606	fill	ditch
1609	1606	fill	ditch
1610	0	cut	ditch
1611	1610	fill	ditch
1612	1610	fill	ditch
1613	1610	fill	ditch
1614	1610	fill	ditch
1615	1610	fill	ditch
1616	1617	fill	ditch

Context	Cut	Category	Feature Type
1617	0	cut	ditch
1618	1619	fill	ditch
1619	0	cut	ditch
1620	1621	fill	pit
1621	0	cut	pit
1622	1623	fill	ditch
1623	0	cut	ditch
1624	1628	fill	ditch
1625	1628	fill	ditch
1626	1628	fill	ditch
1627	1628	fill	ditch
1628	0	cut	ditch
1629	1630	fill	ditch
1630	0	cut	ditch
1631	1634	fill	ditch
1632	1634	fill	ditch
1633	1634	fill	ditch
1634	0	cut	ditch
1635	1637	fill	ditch
1636	1637	fill	ditch
1637	0	cut	ditch
1638	1639	fill	ditch
1639	0	cut	ditch
1640	1642	fill	ditch
1641	1642	fill	ditch
1642	0	cut	ditch
1643	1645	fill	ditch
1644	1645	fill	ditch
1645	0	cut	ditch
1646	1367	fill	ditch
1647	1367	fill	pit
1648	1367	fill	pit
1649	0	cut	ditch
1650	0	cut	ditch
1651	0	cut	ditch
1653	0	fill	ditch
1654	1655	fill	pit
1655	0	cut	pit
1656	1657	fill	pit
1657	0	cut	pit
1658	0	cut	ditch
1659	0	cut	ditch
1661	1659	fill	pit

Context	Cut	Category	Feature Type
1662	1663	fill	ditch
1663	0	cut	ditch
1664	1678	fill	ditch
1665	1667	fill	ditch
1666	1667	fill	ditch
1667	0	cut	ditch
1668	1670	fill	ditch
1669	1670	fill	ditch
1670	0	cut	ditch
1671	1672	fill	ditch
1672	0	cut	ditch
1673	0	cut	hearth
1674	1673	fill	hearth
1675	1673	fill	hearth
1676	1670	fill	ditch
1677	1670	fill	ditch
1678	0	cut	ditch
1679	1637	fill	ditch
1680	0	cut	ditch
1681	1680	fill	ditch
1682	1680	fill	ditch
1683	0	cut	ditch
1684	1683	fill	ditch
1685	1686	fill	pit
1686	0	cut	pit
1687	1688	fill	ditch
1688	0	cut	ditch
1689	1690	fill	ditch
1690	0	cut	ditch
1692	1693	fill	ditch
1693	0	cut	ditch
1694	1696	fill	ditch
1695	1696	fill	ditch
1696	0	cut	ditch
1697	1698	fill	ditch
1698	0	cut	ditch
1699	1702	fill	ditch
1701	1702	fill	ditch
1702	0	cut	ditch
1703	1704	fill	pit
1704	0	cut	pit
1705	1709	fill	ditch
1706	1709	fill	ditch

Context	Cut	Category	Feature Type
1707	1709	fill	ditch
1708	1709	fill	ditch
1709	0	cut	ditch
1710	1704	fill	pit
1711	1704	fill	pit
1712	1704	fill	pit
1713	1719	fill	pit
1714	0	cut	pit
1715	1716	fill	ditch
1716	0	cut	ditch
1717	1718	fill	ditch
1718	0	cut	ditch
1719	1720	fill	ditch
1720	0	cut	ditch
1721	1722	fill	ditch
1722	0	cut	ditch
1723	1724	fill	ditch
1724	0	cut	ditch
1725	0		
1726	0		
1727	0		
1729	1732	fill	ditch
1730	1732	fill	ditch
1731	1732	fill	ditch
1732	0	cut	ditch
1733	1736	fill	ditch
1734	1736	fill	ditch
1735	1736	fill	ditch
1736	0	cut	ditch
1737	1739	fill	ditch
1738	1739	fill	ditch
1739	0	cut	ditch
1740	1743	fill	ditch
1741	1743	fill	ditch
1742	1743	fill	ditch
1743	0	cut	ditch
1744	1745	fill	ditch
1745	0	cut	ditch
1746	1748	fill	ditch
1747	1748	fill	ditch
1748	0	cut	ditch
1749	1709	fill	ditch
1750	1709	fill	ditch

Context	Cut	Category	Feature Type
1751	1709	fill	ditch
1752	1709	fill	ditch
1753	1756	fill	foundation trench
1754	1756	fill	foundation trench
1755	756	fill	foundation trench
1756	0	cut	foundation trench
1757	1758	fill	foundation trench
1758	0	cut	beam slot
1759	1760	fill	foundation trench
1760	0	cut	foundation trench
1761	1762	fill	foundation trench
1762	0	cut	foundation trench
1763	1764	fill	foundation trench
1764	0	cut	foundation trench
1765	1766	fill	ditch
1766	0	cut	ditch
1767	1768	fill	ditch
1768	0	cut	ditch
1769	1770	fill	foundation trench
1770	0	cut	foundation trench
1771	1772	fill	foundation trench
1772	0	cut	foundation trench
1773	1774	fill	beam slot
1774	0	cut	beam slot
1775	1776	fill	foundation trench
1776	0	cut	foundation trench
1777	1778	fill	foundation trench
1778	0	cut	foundation trench
1779	1780	fill	beam slot

Context	Cut	Category	Feature Type
1780	0	cut	beam slot
1781	1782	fill	foundation trench
1782	0	cut	foundation trench
1783	1784	fill	beam slot
1784	0	cut	beam slot
1785	1786	fill	foundation trench
1786	0	cut	foundation trench
1787	1788	fill	foundation trench
1788	0	cut	foundation trench
1789	1790	fill	foundation trench
1790	0	cut	beam slot
1791	1792	fill	foundation trench
1792	0	cut	foundation trench
1793	1794	fill	ditch
1794	0	cut	ditch
1795	1788	fill	foundation trench
1796	1797	fill	post hole
1797	0	cut	post hole
1798	1799	fill	pit
1799	0	cut	pit
1800	1801	fill	ditch
1801	0	cut	ditch
1802	1803	fill	pit
1803	0	cut	pit
1805	1806	fill	foundation trench
1806	0	cut	foundation trench
1807	1809	fill	post hole
1808	1809	fill	post hole
1809	0	cut	post hole
1810	1811	fill	post hole
1811	0	cut	post hole
1812	1813	fill	foundation trench
1813	0	cut	foundation trench

Context	Cut	Category	Feature Type
1814	1859	fill	pit
1815	1859	fill	pit
1824	1833	fill	ditch
1825	0	cut	pit
1826	1825	fill	pit
1827	0	cut	ditch
1828	1827	fill	ditch
1829	1827	fill	ditch
1830	1827	fill	ditch
1831	0	cut	ditch
1832	1831	fill	ditch
1833	0	cut	ditch
1834	1833	fill	ditch
1835	1833	fill	ditch
1837	1833	fill	ditch
1838	1840	fill	ditch
1839	1840	fill	ditch
1840	0	cut	ditch
1841	1842	fill	ditch
1842	0	cut	ditch
1843	1845	fill	ditch
1844	1845	fill	ditch
1845	0	cut	ditch
1846	1848	fill	ditch
1847	1848	fill	ditch
1848	0	cut	ditch
1849	1852	fill	ditch
1850	1852	fill	ditch
1851	1852	fill	ditch
1852	0	cut	ditch
1853	0	fill	ditch
1854	1856	fill	ditch
1855	1856	fill	ditch
1856	0	cut	ditch
1857	1859	fill	pit
1858	1859	fill	pit
1859	0	cut	pit
1869	1870	fill	pit
1870	0	cut	pit
1871	1872	fill	pit
1872		cut	pit
1873	1522	fill	pit
1874	1522	fill	pit

Context	Cut	Category	Feature Type
1875	0	cut	ditch
1876	1875	fill	ditch
1877	1875	fill	ditch
1878	1522	fill	pit
1879	1882	fill	ditch
1880	1882	fill	ditch
1881	1882	fill	ditch
1882	0	cut	ditch
1883	1884	fill	beam slot
1884	0	cut	beam slot
1885	1888	fill	ditch
1886	1888	fill	ditch
1887	1888	fill	ditch
1888	0	cut	ditch
1889	1890	fill	pit
1890	0	cut	pit
1891	0	cut	ditch
1892	1891	fill	ditch
1893	1891	fill	ditch
1894	1891	fill	ditch
1895	1891	fill	ditch
1896	1891	fill	ditch
1897	0	cut	ditch
1898	1897	fill	ditch
1899	0	fill	ditch
1900	1904	fill	ditch
1901	1904	fill	ditch
1902	1904	fill	ditch
1903	1904	fill	ditch
1904	0	cut	ditch
1905	1908	fill	pit
1906	1908	fill	ditch
1907	1908	fill	ditch
1908	0	cut	pit
1909	1911	fill	ditch
1910	1911	fill	ditch
1911	0	cut	pit
1912	1915	fill	ditch
1914	1915	fill	ditch
1915	0	cut	ditch
1916	0	cut	gully
1917	1916	fill	gully
1918	0	cut	post hole

Context	Cut	Category	Feature Type
1919	1918	fill	post hole
1920	0	cut	post hole
1921	1920	fill	post hole
1922	1923	fill	ditch
1923	0	cut	ditch
1924	1925	fill	furrow
1925	0	cut	furrow
1926	11927	fill	post hole
1927	0	cut	post hole
1928	1929	fill	furrow
1929	0	cut	furrow
1930	1932	fill	pit
1931	1932	fill	pit
1932	0	cut	pit
1933	1891	fill	ditch
1934	1935	fill	ditch
1935	0	cut	ditch
1937	0	cut	ditch
1938	0	cut	ditch
1939	0	cut	pit
1940	1939	fill	pit
1941	1945	fill	ditch
1942	1945	fill	ditch
1943	1945	fill	ditch
1944	0		
1945	0	cut	ditch
1946	1938	fill	ditch
1947	1949	fill	pit
1948	1949	fill	pit
1949	0	cut	pit
1950	1951	fill	pit
1951	0	cut	pit
1952	1953	fill	pit
1953	0	cut	pit
1954	1955	fill	pit
1955	0	cut	pit
1956	1949	fill	pit
1957	1959	fill	ditch
1958	1959	fill	ditch
1959	0	cut	ditch
1960	1938	fill	ditch
1961	1965	fill	ditch
1962	1965	fill	ditch

Context	Cut	Category	Feature Type
1963	1965	fill	ditch
1964	1965	fill	ditch
1965	0	cut	ditch
1966	1967	fill	ditch
1967	0	cut	ditch
1968	1969	fill	pit
1969	0	cut	pit
1970	1971	fill	ditch
1971	0	cut	ditch
1972	1973	fill	ditch
1973	0	cut	ditch
1974	0	fill	ditch
1975	1977	fill	pit
1976	1977	fill	pit
1977	0	cut	pit
1978	1979	fill	ditch
1979	0	cut	ditch
1980	1983	fill	ditch
1981	1983	fill	ditch
1982	1983	fill	ditch
1983	0	cut	ditch
1984	1986	fill	ditch
1985	1986	fill	ditch
1986	0	cut	ditch
1987	1983	fill	ditch
1988	1989	fill	ditch
1989	0	cut	ditch
1990	1991	fill	ditch
1991	0	cut	ditch
1992	1993	fill	ditch
1993	0	cut	ditch
1994	1997	fill	pit
1995	1997	fill	pit
1996	1997	fill	pit
1997	0	cut	pit
1998	1999	fill	ditch
1999	0	cut	ditch
2000	2003	fill	ditch
2001	2003	fill	ditch
2002	2003	fill	ditch
2003	0	cut	ditch
2004	0	fill	ditch
2005	1856	fill	ditch

Context	Cut	Category	Feature Type
2006	1937	fill	ditch
2009	0	cut	pit
2010	2009	fill	pit
2011	0	cut	pit
2012	0	cut	ditch
2014	0	layer	natural
2021	1859	fill	pit
2022	0	cut	pit
2023	2024	fill	pit
2024	0	cut	pit
2025	2026	fill	pit
2026	0	cut	pit
2027	2028	fill	pit
2028	0	cut	pit
2029	2012	fill	ditch
2030	2033	fill	ditch
2031	2033	fill	ditch
2032	2033	fill	ditch
2033	0	cut	ditch
2034	2037	fill	ditch
2035	2037	fill	ditch
2036	2037	fill	ditch
2037	0	cut	ditch
2038	2039	fill	ditch
2039	0	cut	ditch
2040	2011	fill	pit
2041	2011	fill	pit
2042	2011	fill	pit
2043	2011	fill	pit
2044	2011	fill	pit
2045	2011	fill	pit
2046	2011	fill	pit
2047	2011	fill	pit
2048	2011	fill	pit
2049	0	fill	natural
2050	2051	fill	post hole
2051	0	cut	post hole
2052	2053	fill	ditch
2053	0	cut	ditch
2054	2055	fill	ditch
2055	0	cut	ditch
2056	2057	fill	post hole
2057	0	cut	post hole

Context	Cut	Category	Feature Type
2058	2059	fill	ditch
2059	0	cut	ditch
2060	2061	fill	ditch
2061	0	cut	ditch
2062	2063	fill	ditch
2063	2062	cut	ditch

Table 17: Summary of Archaeological Context

Appendix 3. Prehistoric Pottery

By Sarah Percival

3.1 Introduction

3.1.1 Two thousand one hundred and sixty-four sherds of prehistoric pottery weighing 21,256g were recovered from 102 excavated features from the excavation, 34 contexts from the evaluation phase and two unstratified contexts. The pottery is predominantly of later Iron Age date with smaller quantities of Later Pre-Roman Iron Age (LPRIA) pottery (Table 1). No complete vessels were found. The assemblage is highly fragmentary and is poorly to moderately preserved. Some of the sherds have encrusted surfaces characteristic of exposure in waterlogged conditions.

3.1.2

Spot date	Quantity	% quantity	Weight (g)	% weight
Later Iron Age	2104	95.7%	19550	92.0%
Later Pre Roman Iron Age	94	4.3%	1706	8.0%
Total	2198	100.0%	21256	100.0%

Table 18. Quantity and weight of pottery by pottery spot date

3.2 Methodology

3.2.1 The assemblage was analysed using the pottery recording system described in the Norfolk Archaeological Unit Pottery Recording Manual and in accordance with the Guidelines for analysis and publication laid down by the Prehistoric Ceramic Research Group (PCRG 1992; 1997). The total assemblage was studied and a full catalogue was prepared. The sherds were examined using a binocular microscope (x10 magnification) and were divided into fabric groups defined on the basis of inclusion types present. Fabric codes were prefixed by a letter code representing the main inclusion: F representing flint, G grog and Q quartz. Vessel form was also recorded: R representing rim sherds, B base sherds, D decorated sherds and U undecorated body sherds. The sherds were counted and weighed to the nearest whole gram. Decoration and abrasion were also noted. The pottery and archive are curated by CAM ARC.

3.3 Later Iron Age

3.3.1 The assemblage has been provisionally dated to the later Iron Age, (300–60 BC). The assemblage contains four main fabric groups, with most sherds being made of sandy, quartz-rich fabrics (74%, 15,752g). Smaller numbers of flint-, grog- and shell-tempered sherds are also present. A minimum of ninety-six vessels of later Iron Age date were recovered. The majority of these are jar forms (84 examples) including slack-shouldered jars typical of middle to later Iron Age assemblages in Cambridgeshire and some more rounded or globular forms. The assemblage also includes four bowl forms and eight large coarse storage jars.

3.3.2 The pottery is largely undecorated, with decoration or surface treatment only appearing on 11% of the later Iron Age vessels (239 sherds). Fingertip-impressed and fingernail-impressed decoration to the rim top of the vessels is found on six examples. This type of decoration is more commonly associated with mid- to late Iron Age pottery and may suggest some earlier activity at the site. One hundred and twenty-five sherds of scored ware are present, distinguished by scored or slashed surface treatment. This type of

pottery appears to have been current in Cambridgeshire from the mid-3rd century BC (Hill and Braddock forthcoming). Combed decoration is also common (74 examples) and may be rough sweeps or arcs and eighteen sherds are from vessels with cordons marking the neck or waist, a characteristic especially associated with later Iron Age pottery (Thompson 1982) and found in late 1st-century contexts at Wardy Hill (Hill and Horne 2003, 177).

3.3.3 Most Iron Age pottery was recovered from the fills of pits (89%, 14,571g) and ditches (19%, 4,105g). Small quantities were also found in gullies, postholes and a foundation trench. Less than 1% of the assemblage is unstratified (0.5%, 97g).

3.3.4 The assemblage suggests medium-density settlement at the site in the later Iron Age with some possible earlier activity. The assemblage is typical of many contemporary assemblages being composed chiefly of plain wares with a small number of decorated sherds and scored wares which may represent imports to the site (Hill and Braddock forthcoming). Contemporary sites include Wardy Hill (Hill and Horne 2003) and other sites clustered around Ely which contain a similar range of forms in predominantly sandy fabrics.

Further Work

3.3.5 The Iron Age assemblage adds to a growing number of contemporary sites in the region. A short publication text is required including full fabric and form descriptions and a discussion of dating and regional affinities. Detailed analysis will include an examination of the pit fills, postholes and ditches and include integration of any revised phasing and the selection of a maximum of 20 sherds for illustration with full catalogue for publication. This will take 2 days.

3.4 LPRIA

3.4.1 A LPRIA date (100 BC–AD 100) was assigned to contexts that contained a mix of handmade and wheelmade forms or very early Romanised forms. The handmade fabrics are dominated by quartz-sand-tempered wares, which are characterised by a high mica content. The range of fabrics expands to include grog-tempered wares, proto sandy greywares (PGW), sandy whitewares or parchment wares (WW) and more rarely sandy oxidised wares (SOW). The forms are sinuous and often have bead rims and cordons on the neck or body. The majority of the assemblage was recovered from two pits, 1367 and 1522, which contained 80% of the LPRIA pottery (1349g). The remainder of the assemblage occurred in small quantities in a range of pits, ditches and other features including a foundation trench.

Further Work

3.4.2 A short publication text is required including full fabric and form descriptions and a discussion of dating and regional affinities. Detailed analysis will include an examination of the pit fills, postholes and ditches and include integration of any revised phasing and the selection of a maximum of five sherds for illustration with full catalogue for publication. This will take half a day.

3.5 Bibliography

Hill J.D. and Braddock, P. forthcoming 'The Iron Age pottery from Haddenham V' in Evans, C. and Hodder, I. *The Haddenham Project: Vol. 2 Iron Age and Roman Fenland Landscapes.* MacDonald Institute, Cambridge.

Hill, J.D. and Horne, L. 2003 'Iron Age and Early Roman pottery' in *Power and Island Communities: Excavations at the Wardy Hill Ringwork, Coveney, Ely*. East Anglian Archaeology 103, 145–84.

Prehistoric Ceramic Research Group 1997 *The Study of Later Prehistoric Pottery: General Policies and Guidelines for analysis and Publication.* Occasional Paper Nos 1 and 2.

APPENDIX 4. ROMANO-BRITISH POTTERY

By Alice Lyons

4.1 Introduction

4.1.1 A total of twenty-two sherds of Romano-British pottery weighing 308g were recovered from eight excavated features, mostly ditches, also a pit and beamslot (Appendix 1). No complete vessels were found. The assemblage is highly fragmentary and is poorly preserved with an average sherd weight of 14g (or *c.* 8g if the large mortarium sherd is not included in the calculation). The small average sherd size and high level of abrasion is consistent with residual material, or pottery that is not in its primary place of deposition. Some of the sherds have encrusted surfaces characteristic of exposure in waterlogged conditions.

4.2 Methodology

4.2.1 The assemblage was analysed in accordance with the guidelines laid down by the Study Group for Roman Pottery (Webster 1976; Darling 1994; Willis 2004). The total assemblage was studied and a catalogue prepared.

4.2.2 The sherds were examined using a hand lens (x20 magnification) and were divided into fabric groups defined on the basis of inclusion types present. The sherds were counted and weighed to the nearest whole gram. Decoration and abrasion were also noted.

4.3 The Pottery

4.3.1 Four fabrics were identified (Table 1). Nearly half the assemblage by weight consists of a large Verulamiun-region white ware (Tomber and Dore 1998, 154) bead and flange mortarium, typical of production between the 2nd and 4th century. The majority of the assemblage by sherd count and the second most common by weight, however, are unsourced sandy grey coarse ware jar fragments. These range in colour from grey, blue-grey to almost orange; some are sooted. At least one pottery production kiln is known at Milton (CHER 05679) and it is possible that this material originated from this, or another similar, local kiln. The remainder of the assemblage consists of small amounts of regionally traded finewares including the late Roman Oxfordshire red colour coated ware (*ibid*, 176) found in the form of body and base sherds from more than one deep bowl. Also found were two Nene Valley coloured beaker sherds (*ibid*, 118) imported from the large industrial complex around modern day Peterborough.

Fabric	Form	Sherd count	Sherd weight
Verulamiun oxidised ware	Mortarium	1	145
Sandy grey ware	Jar and flagon	16	78
Oxfordshire red colour coat	Jar/bowl	3	47
Nene Valley colour coat	Beaker	2	38
Total		22	308

Table 1. Quantity and weight of pottery by pottery spot date

4.4 Summary

4.4.1 This is a small, abraded assemblage that may be residual or not recovered from its primary site of deposition. Although the largest amount of pottery by sherd count consists of locally produced sandy grey wares, the other pottery found has been traded from large production centres in Cambridgeshire (the Nene Valley), Oxfordshire and Hertfordshire (Verulamium) indicating this material was associated with a community with enough surplus wealth to trade for good quality ceramic goods. The assemblage is consistent with a date in the later Roman period as early finewares (such as samian) are not present and later Nene Valley and Oxfordshire products were noted.

4.5 Further Work

4.5.1 No further work is required for this pottery. This data within this report can be incorporated into any future publication.

4.6 Bibliography

Darling, M. J.,	1994	'*Guidelines for the Archiving of Roman Pottery*'. Study Group of Roman Pottery, http://www.sgrp.org/guidelines
Tomber, R. and Dore, J.,	1998	*The National Roman Fabric Reference Collection. A Handbook*, MoLAS Monogr. 2
Webster, G., (Ed)	1976	*Romano-British coarse pottery: a student's guide*. CBA Research Report No. 6
Willis, S.,	2004	The Study Group For Roman Pottery Research Framework Document for the Study of Roman Pottery in Britain, 2003. *Journal of Roman Pottery Studies Vol 11*

Appendix 1. The Romano-British pottery catalogue

Key: C=Century, M=mid, L=Late, B=base, U=undecorated body sherd, D=decorated body sherd, R=rim, H=Handle, u/s=unstratified,

Context	Cut	Feature type	Fabric	Dsc	Form	Sherd Count	Weight (g)	Abrasion	Soot	Spot date
1815	1859	Pit	Nene Valley colour coat	B	DISH	1	33	Severe		C3-C4
1815	1859	Pit	Sandy grey ware	UH	FLAG	2	44	Severe		C2-C4
1779	1780	Beamslot	Sandy grey ware	U	JAR	3	3	Severe		MC1-C2
1593	1594	Ditch	Oxfordshire red colour coat	B	DISH/BOWL	1	26	Severe		MC3-EC5
1816	?	?	Sandy grey ware	UB	JAR	4	8	Severe	ON BASE	MC1-C4
1816	?	?	Oxfordshire red colour coat	U	JAR/BOWL	1	1	Severe		MC3-EC5
99999	u/s	u/s	Verulamiun region white ware	R	MORT	1	145	Severe		C2-C4
99999	u/s	u/s	Sandy grey ware	U	JAR	2	12	Severe		MC1-C4
1363	1364	Ditch	Oxfordshire red colour coat	U	JAR/BOWL	1	20	Severe	ON BASE	MC3-EC5
1574	1559	Ditch	Sandy grey ware	U	JAR/BOWL	3	7	Severe		LC1-C4
1410	1391	Ditch	Sandy grey ware	U	JAR	1	1	Severe		LC1-C4
1400	1403	Ditch	Sandy grey ware	U	JAR	1	3	Severe		C1-C4
1400	1403	Ditch	Nene Valley colour coat	D	BEAK	1	5	Severe		MC2-C4

APPENDIX 5. POST-ROMAN POTTERY

By Carole Fletcher BA AIFA

5.1 Summary

5.1.1 Field walking in 2006 at the proposed Park and Ride Site at Milton, Cambridgeshire, produced a small post-Roman assemblage of 20 sherds weighing 0.436kg, comprised mainly of post-medieval red wares and plant pot fragments. Four earlier sherds were recovered: a single medieval Ely ware sherd, a single medieval micaceous sandy ware sherd, a small fragment from a later medieval Tudor green glazed lobed cup or bowl and a sherd from a Bourn D vessel. This assemblage gave little indication of medieval activity on the site, the distribution sherds recovered having resulted mainly from post-medieval manuring.

5.1.2 Excavation in 2007 on what was primarily thought to be a Romano-British and Iron Age site revealed the presence of a medieval windmill, the circular ditch and internal features of which produced a small assemblage, 314 sherds weighing 3.045kg, of mainly 13th to mid 14th century. The pottery recovered from this industrial site is domestic in nature and includes a large number of jugs in local and non-local fabrics.

5.2 Introduction

5.2.1 This assessment considers the pottery from the 2006 field walking and subsequent excavation of the Park and Ride Site at Milton Cambridgeshire in 2007. The field walking results are summarised in an appendix attached to this report are discussed only briefly as they add little to the overall discussion of the pottery associated with the medieval windmill. The excavation of features associated with the medieval windmill produced a small assemblage of 314 sherds weighing 3.045kg from X contexts including unstratified material. The material recovered is mainly 13th to mid 14th century with some sherds earlier or later than this period. The pre 13th century sherds are early medieval fabrics, there are no late Saxon sherds in the assemblage and the later material consists of an intrusive sherd of BOND, a PMR bowl rim and a small RFWE blue transfer printed sherd. The overall condition of the assemblage is moderately abraded and the average sherd weight is moderate at approximately 11g.

5.2.2 Ceramic fabric abbreviations used in the following text are:

BONDT	Bourne D type ware
BRILL	Brill-Borstal ware
EAR	East Anglian redwares
EMEMS	Early medieval Essex micaceous sandy ware
EMW	Earl medieval ware
GRIM	Grimston
HEDI	Sible Hedingham ware
MEL/MELT	Medieval Ely/medieval Ely type ware
MEMS	Medieval Essex micaceous sandy ware
MGF	Mill Green fineware
MODR	Modern redware
PMR	Post-medieval redware
RFWE	Refined white earthenwares
SHW	Shelly ware
TUDG	Tudor Green

5.3 Methodology

5.3.1 The basic guidance in the Management of Archaeological Projects (MAP2) has been adhered to (English Heritage 1991). In addition the Medieval Pottery Research Group (MPRG) documents Guidance for the processing and publication of medieval pottery from excavations (Blake and Davey, 1983), A guide to the classification of medieval ceramic forms (MPRG, 1998) and Minimum Standards for the Processing, Recording, Analysis and Publication of Post-Roman Ceramics (MPRG, 2001) act as a standard.

5.3.2 Dating was carried out using OA East's in-house system based on that previously used at the Museum of London. Fabric classification has been carried out for all previously described types. All sherds have been counted, classified and weighed. All the pottery has been spot dated on a context-by-context basis.

5.3.3 The pottery and archive are curated by OA East until formal deposition.

5.4 Assemblage

Field walking

5.4.1 The field walking assemblage is mainly post medieval material in the form of PMR sherds and fragments of plant pot, only four earlier sherds were identified a sherd of MEL, one of MEMS a fragment from a TUDG lobed cup or bowl and a sherd of BOND. The assemblage does not not warrant further analysis or discussion beyond noting the lack of 18th and 19th century material. This absence is perhaps due to the site being under pasture from the 17th century or due to bias during the initial field walking.

Excavation

5.4.2 The excavation generated 292 sherds weighing 2.837kg of stratified material and 14 sherds (0.208kg) of unstratified material. The majority of the material dates to the 13th to mid 14th century, 248 sherds weighing 2.41kg. There are also 52 sherds (0.426kg) of 11th-12th century date and a further 11 sherds (0.72kg) where it is unclear if these are 12th or 13th century. The post medieval material is only three sherds weighing 0.137 kg. All the pottery recovered was domestic in nature despite the non-domestic nature of the site.

5.5 Fabrics

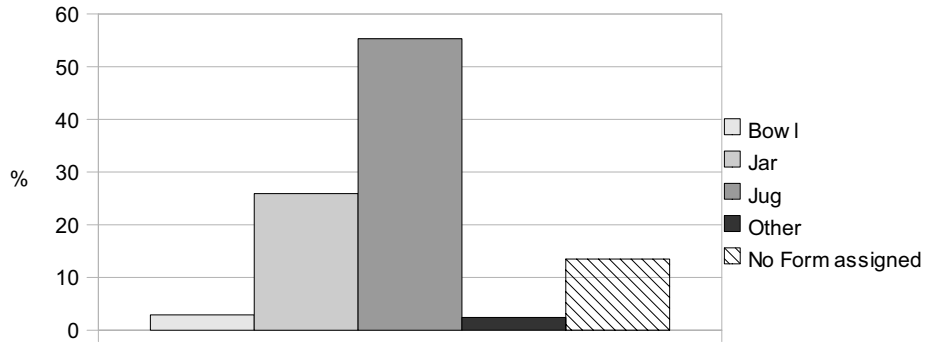
5.5.1 Of the fabrics present MEL/MELT is the most common by number of sherds and weight making up 46.4% of the stratified assemblage, from a mix of glazed and unglazed vessels. HEDI is the next largest group by weight at 13.3%, 56 sherds all from glazed vessels. The other medieval glazed wares present BRILL, EAR, GRIM and MGF make up 7.7% of the assemblage.

5.5.2 Aside from MEL/MELT other unglazed coarse wares are also an important element in the assemblage with early medieval EMEMS at at 8.4%and medieval MEMS at 9.6%, in addition SHW and SW make up 7.9% of the stratified assemblage.

5.6 Forms

5.6.1 The vessels present in the assemblage are all domestic in nature comprising of mainly jugs and jars, bowls were only present in post medieval fabrics PMR and RFWE. Jugs are the most common form identified forming more than 55% of the assemblage, this total includes both glazed and unglazed examples,early medieval and high medieval.

Graph 1 shows the breakdown of vessel types present, only 13.5% of the assemblage could not be assigned a form.



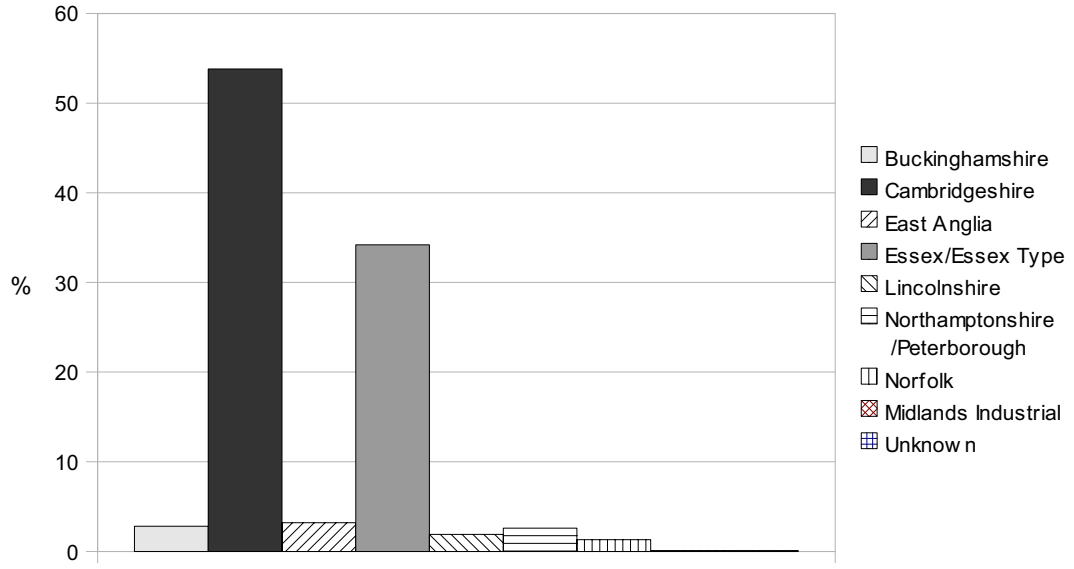
Graph1: Vessel Type as Percentage of Stratified Assemblage (by weight kg)

5.6.2 The jars present are mainly MEL, 32 sherds weighing 0.333kg make up more than 11% of the assemblage by comparison MEL jugs make up 25% of the assemblage. A small numbers of other jars were recognised in fabrics including EMEMS and MEMS. Jugs are also present in several other fabrics including HEDI, where sherds from several vessels, including possible early rounded jug and stamped strip jug make up 13% of the assemblage.

5.6.3 The early medieval element of the assemblage is mainly jars however two sherds from and EMEMS jug were identified. The high medieval element by comparison is dominated by jugs. The fabrics present, both glazed and unglazed sherds, indicate that a minimum of eight jugs can be identified in the high medieval assemblage. For a small assemblage the number of jugs present appears relatively high for what is a rural assemblage.

5.7 Provenance

5.7.1 Fabrics present are a mixture of wares of local and non local origin. Graph 2 shows that the majority of the assemblage is comprised of locally produced wares from the Cambridgeshire region namely Ely. Essex fabrics make up the second largest group and include early medieval EMEMS and MEMS both fabrics originating in Essex possibly on as yet unidentified sites close to the border of modern Cambridgeshire. Both fabrics are commonly found on early medieval and high medieval sites along the south Cambridgeshire border (authors own observations). The glazed wares HEDI and MGF are also part of the Essex group of fabrics.



Graph 2: Provenance as Percentage of Stratified Assemblage (by weight kg)

5.7.2 The small group of fabrics given the provenance of East Anglia equates to redwares produced throughout East Anglia including Essex "many of which are slip painted and generally similar in appearance" (Cotter 2000 p109) and also include what has tentatively been identified as a fragment of Harlow ware. Due to the similar nature of many of these redware fabrics the author has grouped these wares together for the purposes of this assessment.

5.7.3 Pottery from Buckinghamshire (BRILL) and Norfolk (GRIM) are also present in the high medieval assemblage. in addition SHW from Northamptonshire or the Peterborough area is also present. It is unclear from which location these SHWs originate, coming from the same parent clay which outcrops in both locations (Alan Vince pers. comm) The absence of other Northamptonshire products such as Lyveden-Stanion wares may indicate that these SHW originate in Cambridgeshire.

5.8 Sampling Bias

5.8.1 The open area excavation was carried out by hand and selection made through standard sampling strategies on a feature by feature basis. There are not expected to be any inherent biases. Where bulk samples have been processed for environmental remains, there has also been some recovery of pottery. These are small quantities of abraded sherds and have not been quantified, and serious bias is likely to result.

5.9 Statement of Research Potential

5.9.1 The assemblage has the limited potential to aid local, regional and national priorities given its small size. However the lack of published groups from sites of medieval industrial activity of this kind within Cambridgeshire requires that the excavation assemblage be fully recorded to provide period based data and to inform and update the medieval type series for the county.

5.10 Further Work and Methods Statement

5.10.1 Stratified pottery from the field walking and excavation described here has been quantified to a basic level. Future work should entail the identification and quantification

of stratified pottery from the excavation only. Recording all fields associated with fabric, form, decoration, technology and use.

5.10.2 The excavation of a windmill is uncommon in Cambridgeshire and the assemblage should be looked at in relation to similar sites. Excavations at Isaacson Road, Burwell, Cambridgeshire produced evidence of a windmill of similar date (Muldowney 2007) The pottery from Milton should be considered in reference to the Burwell assemblage which is similar in date and fabrics present. There are however differences and Blinkhorn notes that for Burwell that "medieval glazed wares are fairly scarce, perhaps due to the largely industrial nature of the site" (Blinkhorn in Muldowney 2007) This is not the case at Milton where glazed wares would appear to be dominant, a fact as yet unexplained. It is proposed that further work on the Milton Park and Ride assemblage should include:

Analysis of the assemblage on various field criteria, based on major stratigraphic units (Time Required 1/2 day)

Macroscopic inspection (based on x20 magnification) and description of all new fabric types if required (Time Required 1/2 day)

Tabular statistics of fabric and vessel data (Time Required 1/2 day)

A textural Report on the results of the above if required (1 day)

5.10.3 Illustration of new forms and traits especially relating to local fabric types which are otherwise unpublished to date. The MEL jug from context 1406 should be drawn as it appears to be a baluster type (Type G) in Fabric A. The examples illustrated in Ely ware volume (Spoerry 2008 p63-64 fig 26) are LMEL or are not standard Ely ware.

5.11 Bibliography

Blake, H and Davey, P.	1983	Guidelines for the Processing and Publications of Medieval Pottery from Excavations. Directorate of Ancient Monuments and Historic Buildings Occasional Paper 5
Cotter, J.P.	2000	Post-Roman Pottery from Excavations in Colchester 1971-85 Colchester Archaeological Report 7
English Heritage	1991	MAP2
Medieval Pottery Research Group	1998	A Guide to the Classification of Medieval Ceramic Forms. Medieval Pottery Research Group Occasional Paper I
Muldowney, M.	2007	Iron Age Structures, An Early-medieval Windmill, Limekilns and Chalk Quarry Pits on Land South of Isaacson Road, Burwell, Cambridgeshire. CAM ARC Report Number 951 (forthcoming)
Spoerry, P.	2008	Ely Wares. EAA Report No 122

5.12 Dating Table

Field Walking 2006 Post Roman Sherds

Context	Total Station Plot number	Fabric	Basic Form	Sherd Count	Weight in Kg	Context Date Range
1	4	BOND		1	0.013	16th-17th century
1	11	MODR	Plant Pot	1	0.049	19th-20th century
1	88	MODR	Plant Pot	1	0.002	119th-20th century
1	134	MODR	Plant Pot	1	0.012	19th-20th century
		PMR	Pipkin	1	0.057	
1	200	MEMS	Jar	1	0.015	14th-15th century
1	201	MODR	Plant Pot	1	0.006	19th-20th century
1	206	PMR	Bowl	1	0.037	16th-late 181th Century
1	208	PMR		1	0.019	16th-late 181th Century
1	209	PMR	Bowl	1	0.016	16th-late 181th Century
1	211	PMR	Jar	1	0.057	16th-late 181th Century
1	217	MODR	Plant Pot	1	0.013	1800-1900
1	218	PMR		1	0.043	1600-1800
1	219	PMR	Jar	1	0.025	16th-late 181th Century
1	400	PMR		1	0.011	116th-late 181th Century
1	401	PMR	Bowl	1	0.014	16th-late 181th Century
1	406	PMR		1	0.019	16th-late 181th Century
1	407	PMR		1	0.009	16th-late 181th Century
1	421	TUDG	Lobed Bowl or Cup	1	0.007	Late 14th-mid 16th century
1	425	MEL		1	0.012	13th-14th century

Excavation 2007

Context	Fabric	Basic Form	Sherd Count	Weight in Kg	Context Date Range
1085	EMEMS	Jar	2	0.004	13th-mid 14th century
	MEL		2	0.002	
	MEL	Jug	1	0.004	
	MEMS		2	0.005	
	SHW		1	0.005	
1175	EMEMS	Jar	3	0.008	13th-mid 14th century
	MEMS	Jar	2	0.002	
	MEL	Jug	1	0.005	
1224	RFWEW	Bowl	1	0.001	19TH CENTURY
1304	PMR	Bowl	1	0.081	16th-17th century
1350	BRIL	Jug	3	0.029	13th-mid 14th century
	EMEMS	Jar	6	0.025	
	MGF	Jug	1	0.007	
	HEDI	Jug	2	0.008	
	MEL	Jug	3	0.034	
	MEMS	Jar	3	0.013	
1356	EMEMS/MEMS	Jar	7	0.048	13th-mid 14th century
	HEDI	Jug	1	0.003	
	HEDI	Jug	1	0.025	
	MEL	Jug	3	0.012	
	MEMS	Jug	1	0.039	
1406	EMEMS	Jar	1	0.012	13th-mid 14th century
	GRIM	Jug	4	0.015	
	HEDI	Jug	1	0.001	
	MEL		1	0.001	
	MEL	Jar	2	0.07	
	MEL	Jug	6	0.240	
1415	EMEMS	Jug	1	0.03	Late 113th-late 14th

Context	Fabric	Basic Form	Sherd Count	Weight in Kg	Context Date Range
	EMEMS/MEMS	Jar	2	0.016	
	MEMS	Jar	1	0.015	
1416	EMEMS		3	0.008	13th-mid 14th century
	MEMS		7	0.029	
	EMW	Jar	1	0.003	
	HEDI	Jug	3	0.028	
	MEL		1	0.003	
	MELT		1	0.007	
1475	MEL		1	0.067	13th-mid 14th century
	MEL	Jug	3	0.018	
	MELT		3	0.027	
	SHW		2	0.018	
	SW		2	0.008	
1478	EMEMS	Jar	2	0.017	13th-mid 14th century
	EAR		1	0.01	
	EAR	Jar	1	0.017	
	GRIM	Jug	1	0.005	
	MEMS	Jar	2	0.032	
	SW	Jar	2	0.04	
1488	MEL		1	0.024	13th-mid 14th century
	MEL	Jug	2	0.01	
	SHW		1	0.028	
1558	EMEMS	Jar	1	0.004	13th-mid 14th century
	GRIM	Jug	1	0.009	
	HEDI	Jug	1	0.003	
	MEL		3	0.021	
	MGF	Jug	1	0.001	
1575	MEL	Jug	1	0.002	13th-mid 14th century
1753	EMEMS		1	0.002	13th-mid 14th century
	HEDI	Jug	1	0.003	
	MGF	Jug	1	0.004	
1761	EMEMS	Jar	2	0.017	13th-mid 14th century
	EMEMS	Jug	1	0.028	
	GRIM	Jug	1	0.007	
	HEDI	Jug	1	0.003	
	MEL		1	0.003	
	MEMS		1	0.002	
1763	HEDI	Jug	1	0.003	13th-late 14th century
	COLS	Jug	1	0.013	
1769	MEMS		1	0.005	Late 12th-late14th century
1771	EMEMS/MEMS		1	0.006	Late 12th-late14th century
	MEMS	Jar	1	0.007	
1773	HEDI		1	0.002	13th-mid 14th century
	HEDI	Jug	5	0.044	
	MEL		2	0.007	
1781	BRILL	Jug	1	0.015	13th-mid 14th century
	EMEMS/MEMS		1	0.002	
	MGF	Jug	1	0.001	
	COLS	Jug	1	0.006	
1787	MEMS		1	0.002	Late 12th-mid 13th century
	MEL		1	0.006	
1789	EMEMS		1	0.002	13th-mid 14th century
	EMEMS	Jar	1	0.007	
	MEL	Jar	1	0.007	
	MEL	Jug	1	0.007	
	MELT		3	0.012	
1791	HEDI	Jug	1	0.002	13th-mid 14th century
	MEL	Jar	6	0.019	
	MEL	Jug	1	0.008	
	MELT		9	0.049	

Context	Fabric	Basic Form	Sherd Count	Weight in Kg	Context Date Range
1807	COLS	Jug	1	0.026	13th-mid 14th century
	EMEMS		1	0.004	
1810	COLS	Jug	2	0.015	Mid 13th-mid 14th century
	MEL		1	0.005	
1812	MEL	Jar	1	0.004	Mid 12th-mid 14th century
1814	UNK	Jug	1	0.004	13th-mid 14th century
	MEL		1	0.004	
	MEMS	Jug	1	0.06	
1815	BONDT	Jug	1	0.055	13th-mid 14th century
	BRILL	Jug	2	0.031	
	MEL	Jug	1	0.052	
	SW	Jug	1	0.059	
1816	BRILL	Jug	1	0.005	13th-mid 14th century
	COLS	Jug	1	0.005	
1845	MEMS		1	0.005	13th-mid 14th century
	HEDI	Jug	1	0.005	
1853	MEL	Jug	1	0.023	13th-mid 14th century
1975	EMEMS	Jar	3	0.025	13th-mid 14th century
	HEDI	Jug	13	0.087	
	MEL	Jar	12	0.143	
	MEL	Jug	5	0.115	
1976	HEDI	Jug	21	0.148	13th-mid 14th century
	MEL	Jar	8	0.075	
	MEL	Jug	10	0.141	
	SHW		11	0.022	
1980	HEDI	Jug	1	0.009	13th century
	MEL		1	0.004	13th century
	MEL	Jar	1	0.007	
	MEL	Jug	4	0.014	
	MELT		1	0.011	
	MEMS	Jar	2	0.024	
1982	EMEMS	Jar	2	0.042	13th-mid 14th century
	MEL		1	0.004	13th-mid 14th century
	MEL	Jar	1	0.008	
	MEL	Jug	1	0.04	
	MEMS		1	0.006	
	SW		2	0.02	
2023	HEDI	Jug	1	0.002	13th-mid 14th century
	MEMS	Jar	2	0.023	
2025	EMEMS		1	0.003	Mid 11th-early 13th century
2027	MEMS		1	0.002	Late 12th-late 13th century

APPENDIX 6. ANIMAL BONE ASSESMENT

By Ian L. Baxter

6.1 The Site and its Excavation

6.1.1 The site was excavated by CAM ARC directed by Daniel Hounsell in the summer of 2007 following an evaluation excavation in April of that year. It is located off Butt Road beside the Landfill site in Milton, a suburb of Cambridge.

6.2 The Animal Bone Assemblage

6.2.1 ***Recovery:*** most of the animal bones were hand-collected but there is also a smaller assemblage of material recovered from the environmental samples.

6.2.2 ***Residuality and contamination:*** no information regarding residuality or contamination is available to the author at this time.

6.2.3 ***Context:*** the animal bones are mostly derived from ditches, pits and postholes.

6.2.4 ***Preservation:*** most of the animal bones are in good condition.

6.2.5 ***Storage and quantity:*** the hand collected animal bones are stored in 8 cardboard boxes of the following size: 52x26.5x16.5cm. There is a further box of the same size containing the animal bones recovered from the sifted environmental sample residues. The bones are washed and bagged by context.

6.2.6 This assessment is based on the total assemblage which has been recorded on an Access database.

6.3 Assessment

6.3.1 ***Methods:*** numbers of "countable" bones, ageable mandibles and measurable bones are recorded in Tables 1 and 2. The counting system is based on a modified version of the system suggested by Davis (1992) and used by Albarella and Davis (1994*)*.

6.3.2 ***Variety:*** the hand-collected assemblage is dominated by the main domestic species. Cattle are the main taxon in the late Iron Age and are represented by both small and short horned animals. There is some evidence for the use of cattle for traction. Horse remains are frequent, nearly as common as sheep/goat and much more common than those of pigs. Other species include dog and chicken. Microfauna present in the sample residues include house mouse, water vole, field vole, a passerine between sparrow and thrush size, possibly a wagtail or a large bunting, frogs and toads. A shark tooth fragment found in a sample residue is similar to porbeagle (*Lamna nasus*) but is more probably a fossil Lamniforme species. A Cretaceous echinoid radiole was recovered from another sample. Two herring vertebrae were found in an un-dated sample.

6.4 Potential and recommendations

6.4.1 *Potential:* this is a relatively small assemblage of animal bones. However, it is of interest for containing two types of cattle and a relatively high proportion of horse remains which include both young and elderly animals. The assemblage from Milton can be usefully compared with those from other Iron Age sites in Cambridgeshire.

6.4.2 *Recommendations:* full reporting should await the final phasing of the site. All the animal bones have been recorded and only the analysis remains to be completed.

6.5 Timing and Costing

Data processing: 1 day

Report writing: 1 day

Total: Two days @ £165 per day = £330.

6.6 References

Albarella, U. and Davis, S.J.M. 1994. The Saxon and Medieval animal bones excavated 1985-1989 from West Cotton, Northamptonshire. London: English Heritage AML Report 17/94.

Davis, S.J.M. 1992, A rapid method for recording information about mammal bones from archaeological sites, London: English Heritage AML Report 19/92.

Appendix 7. Assessment Of The Small Finds

By Nina Crummy

7.1 Summary

7.1.1 In total 64 objects were examined. Apart from a very few Roman and earlier pieces, the assemblage dates to the late post-medieval or modern period.

7.1.2 Condition

7.1.3 The objects, both metal and non-metal, are generally in a stable condition. The majority of the copper-alloy objects are only lightly covered by corrosion products, but some are more strongly affected. Similarly, corrosion on the ironwork varies from a slight surface coating to a thick encrustation incorporating soil and flint pebbles. The single shale object has delaminated.

7.1.4 Objects of all materials are packed to a high standard of storage in crystal boxes or polythene bags, supported by pads of foam. The bags and boxes are stored in either larger crystal boxes or airtight Stewart boxes with silica gel.

7.2 The assemblage

7.2.1 Table 1 shows the assemblage divided by material. The total number of objects is a minimum as some small find numbers for nails include more than one item. The high proportion of iron to any other material is typical of rural sites of many periods.

copper-alloy	9
iron	50
lead	2
bone	1
glass	1
shale	1
Total	**64**

Table 19: Material making up small finds assemblage from MILPAR07

7.2.2 The items are briefly listed and, where possible, broadly spot-dated below. They range in date from Bronze Age to modern, but most are of late post-medieval or modern date and many are iron nails. Apart from the single coin, each object has been assigned to one of the functional categories defined in Crummy 1983 and 1988. The functional categories represented in this assemblage are: 1 - dress and dress accessories; 3 - textile manufacture and working; 6 -weighing equipment; 8 - transport; 9 and 10 - tools; 15 - metal-working; and 18 - miscellaneous. There are insufficient objects from the earlier periods to demonstrate a change of function over time.

7.2.3 The early items consist of:

1. a fragment of a 3rd century Roman coin,
2. the upper end of a Bronze Age palstave,

3. a bone plaque of probable Iron Age date,
4. a biconical weight dating to either the Roman or medieval periods,
5. a small glass bead, probably Roman,
6. a shale armlet fragment of Roman or earlier date.

7.2.4 The iron objects consist mainly of iron nails or fragments of nails, with most of the remaining objects also only represented by small fragments. Many of the nails have the small heads indicative of late date and at least one modern wire nail is present. A fragmentary knife with flat tang has hollow copper-rivets, typically used to attach a two-plate wooden or bone handle in the post-medieval period. A complete bill-hook is not of an early form and is little corroded. It was probably lost or abandoned by a hedger in the late post-medieval or modern period.

7.3 Recommendations

1. A report on the six Roman and earlier objects should form part of any published report.
2. Adrian Popescu of the Fitzwilliam Museum should be commissioned to report on the Roman coin.
3. A quotation for a report on the other five Roman and earlier items is appended to this assessment.
4. The palstave and plaque should be illustrated in any published report.
5. The remaining objects should archived unless they are likely to assist the interpretation of stratified contexts.

Coins and jeton

SF	Context	Material	Identification	Conserve	Date
101	1801	cu-al	coin fragment	y	3rd century

Copper-alloy

SF	Context	Identification	Conserve	Illustrate	Category	Date
100	901	palstave tip fragment	-	y	10	Bronze Age
102	901	Floret-shaped fitting	-	-	1	late Post-medieval or modern
103	901	handle	-	-	11	late Post-medieval or modern
62	1853	Tiny fragment	-	-	18	-
14	1350	Small terminal or cap	-	-	18	
47	1975	Folded sheet fitting	-	-	18	-
32	1769	Shaft fragment	-	-	18	-
33	1775	Needle, with short pointed head and round eye	-	y	3	late post-medieval or modern

Iron

SF	Context	Identification	X-ray	Illustrate	Category	Date
24/49	1815	Knife with copper-alloy rivets and fitting from an organic handle	-	-	10	post-medieval
6	1250	nail	-	-	11	-
9	1350	?nail	-	-	11	-
10	1350	nail	-	-	11	-
11	1350	nail	-	-	11	-
12	1350	Strip or shank fragment	-	-	11	-
15	1406	?nail	-	-	11	-
16	1416	nail	-	-	11	-
19	1558	nail	-	-	11	-
20	1558	fragment	-	-	11	-
21	1558	nail	-	-	11	-
22	1478	Buckle loop	-	-	1 or 8	late post-medieval or modern
23	1475	Large-headed stud?	-	-	11	late post-medieval or modern

SF	Context	Identification	X-ray	Illustrate	Category	Date
27	1734	Nail or tool shank fragment	-	-	10 or 11	-
28	1753	Fitting fragment	-	?	11	-
29	1753	8 nails	-	-	11	-
30	1787	2 nails and 1 shank fragment	-	-	11	-
31	1775	6 nails and 1 shank fragment	-	-	11	-
34	1775	Horseshoe branch fragment	-	-	8	medieval+
35	1781	4 nails and 8 nail shank fragments	-	-	11	-
36	1761	Strip or sheet fragment	-	-	18	-
37	1761	Sheet fragment	-	-	18	-
38	1761	2 nails and one shank fragment	-	-	11	-
39	1763	3 nails	-	-	11	-
40	1805	5 nails and 5 shank fragments	-	-	11	-
50	1416	2 nail shank fragments	-	-	11	-
51	1775	Fragment, ?slag	-	-	15?	-
52	1775	slag	-	-	15	-
53	1775	fragment	-	-	18	-
60	1769	3 nail shank fragments	-	-	11	-
61	1769	Nail fragment	-	-	11	-
63	1775	Thin shank fragment	-	-	18	-
65	1226	Tiny fragment	-	-	18	-
66	1488	Nail or hobnail fragment	-	-	1 or 11	-
67	1808	nail	-	-	11	-
104	1801	Nail shank fragment	-	-	11	-
105	901	Strip bent at right angles, ?buckle loop, nail shank or staple fragment	-	-	1 or 11	-
106	901	Knife blade and tang fragment, with bolster	-	-	10	late post-medieval to modern
109	901	Tapering strip fragment	-	-	18	late post-medieval to modern
110	901	Flat ring (washer) fragment	-	-	11	late post-medieval to modern
111	901	Ring or bent shank fragment	-	-	11 or 18	-
112	901	Nail	-	-	18	-
113	901	16 nails and 5 shank fragments	-	-	11	-
114	1001	Wire nail	-	-	11	modern
115	1001	1 nail and 1 shank fragment	-	-	11	-

SF	Context	Identification	X-ray	Illustrate	Category	Date
116	701	Large nail, rectangular head	-	-	11	?late post-medieval to modern
117	701	?square cap or lid fragment	-	-	18	late post-medieval to modern
118	941	7 nails and 1 shank fragment	-	-	11	-
119	941	Plano-convex boss or nail head	-	-	11	-
120	104	billhook	-	-	10	late post-medieval to modern

Lead

SF	Context	Identification	Conserve	Illustrate	Category	Date
107	901	Biconical weight with iron suspension loop	-	-	6	Roman?
108	901	Offcut?	-	-	18	-

Bone

SF	Context	Identification	Conserve	Illustrate	Category	Date
5	-	Fitting, with ring-and-dot decoration	-	y	18	Iron Age

Glass

SF	Context	Identification	Conserve	Illustrate	Category	Date
64	1954	Small cylindrical spacer bead, black/dark blue	-	-	1	Roman?

Shale

SF	Context	Identification	Conserve	Illustrate	Category	Date
56	1701	Armlet fragment, plain	-	-	1	Roman or earlier

Table 20 (a - g) Summary of Small Finds Assemblage

APPENDIX 8. ASSESSMENT OF THE WORKED STONE

By Ruth Shaffrey

8.1 Prehistoric

8.1.1 A single worked fragment of Millstone Grit was recovered from the fill of Iron Age pit 1504 (1508). This is certainly from a rotary quern or millstone but it is too small to determine which.

8.2 Medieval

8.2.1 Over 6 kg of Lava fragments was recovered from a total of 43 contexts; these were all associated with the medieval windmill. The fragmentary state of the assemblage means it is not possible to determine the original number of querns or millstones. Few sizeable examples survived but one has an inner rim of 220mm and could either be from a large millstone or from the rim of a pot quern (1791, fill of foundation trench 1792). A second Lava fragment has a diameter of approximately 490mm. This should be identified as a rotary quern rather than a millstone because early medieval Lava millstones were generally much larger (rotary querns being between 450 and 500mm diameter: Parkhouse 1997, 98). The presence of radial grooving cannot be used in interpretation of function because it occurred on both millstones and rotary querns.

8.2.2 Although it is not logical to interpret either of these fragments as millstones simply because they were found on the site of a windmill, the existence of millstones has not been entirely ruled out. Either way, the occurrence of Lava here is not particularly surprising. The site lay well within the known distribution of Lava querns (Parkhouse 1997, 101). It also sat at the conjunction of three areas dominated by millstones from different sources notably German Lava (to the east), native Millstone Grit (to the north) and French Burr stones (to the south) so that millstones from all three sources are found in the area (Langdon 2004, Fig 4.1). The site also falls chronologically before native stones began to dominate in the 14th century (Langdon 2004, 168). If any of the fragments do represent millstones, they are indicative of a moderately wealthy site; Lava millstones were of medium price, being half or two thirds the price of the composite French stones but more expensive than cheaper British stones (Farmer 1992, 98).

8.2.3 Fragments from two primary whetstones were recovered from ditch fills 1350 (1357) and 1853. One of these is a typical rectilinear whetstone of micaceous sandstone (SF13). The other is made of pale cream coloured mica-schist (SF46), which is weathered and seems most likely to be Norwegian Ragstone. Both are commonly occurring medieval whetstone lithologies. Norwegian Ragstone in particular was frequently used and was a preferred material during the medieval period (Moore 1978, 70).

8.3 Worked stone catalogue

8.3.1 **Primary whetstone.** Schist, probably Norwegian Ragstone. Small elongate tapered whetstone with sub-square section. This is weathered and has broken in two length-wise. Un-perforated. Measures 83mm long x 14-19mm wide x 13-20mm thick. Weighs 52g. SF46. Ctx 1853, fill of medieval ditch 1856

8.3.2 **Primary whetstone fragment.** Fine grained well-sorted micaceous sandstone. Rectilinear with straight flat faces and barely sub-rounded cross section. One end is

missing, the surviving end is rough. Two of the edges are slightly bevelled and all the faces are worn smooth through use. The surviving end has some sharpening grooves running across one of its edges. Measures >58mm x 35-36mm wide x 26mm thick. Weighs 117g. SF13. Ctx 1350, fill of medieval ditch 1357

8.3.3 **Rotary quern fragment.** Millstone Grit. Small damaged edge fragment. Measures 57mm thick (but not max.). Weighs 282g. SF54. Ctx 1508, fill of Iron Age pit 1504

8.3.4 **Four rotary quern or millstone fragments.** Lava. Two of these adjoin. Part of the inner rim survives: it measures 220mm diameter suggesting it is either the inner face of a large millstone with large aperture (upper stone) or small pot quern (lower stone). The outer edge does not survive and no thickness is ascertainable. Very weathered and quite friable. Weighs 293g. Ctx 1791, fill of foundation trench 1792

8.3.5 **Rotary quern or millstone fragment.** Lava. Not large enough to determine whether upper or lower stone although the latter seems more likely. Has a deeply grooved grinding surface (not possible to tell if in harps). Measures approx. 490mm diameter x 36mm thick. Weighs 378g. SF25. Ctx1814, fill of pit 1859

8.3.6 **Rotary quern or millstone fragment.** Lava. With irregular tool marks on the only surviving face. The tooled surface is very slightly convex. 350g. SF44. Ctx1857, fill of pit 1859

8.4 References

Farmer, D L, 1992 Millstones for Medieval Manors. *Agricultural History Review* **40** (II), 97-112

Langdon J. 2004 *Mills in the Medieval Economy. England 1300-1540.* Oxford University Press. Oxford

Parkhouse, J. 1997: 'The Distribution and Exchange of Mayen Lava quernstones in Early Medieval Northwestern Europe' in G. De Boe and F. Verhaeghe (Eds) *Exchange and Trade in Medieval Europe: Papers of the 'Medieval Europe Brugge 1997'* conf. Vol 3, 97-106

APPENDIX 9. ENVIRONMENTAL APPRAISAL

By Rachel Fosberry

9.1 Introduction and Methods

9.1.1 Thirteen bulk samples were taken from features within the evaluated areas of the site in order to assess the quality of preservation of plant remains and their potential to provide useful data as part of further archaeological investigations.

9.1.2 Ten litres of each sample were processed by bucket flotation for the recovery of charred plant remains, dating evidence and any other artefactual evidence that might be present. The flot was collected in a 0.5mm nylon mesh and the residue was washed through a 1mm sieve. Both flot and residue were allowed to air dry. The dried residue was passed through 5mm and 2mm sieves and a magnet was dragged through each resulting fraction prior to sorting for artefacts. Any artefacts present were noted and reintegrated with the hand-excavated finds. The flot was examined under a binocular microscope at x16 magnification.

9.2 Results

9.2.1 Preservation is by charring and is generally poor. Charcoal fragments are present in all of the samples but other charred plant remains are rare. Single specimens of charred cereal grains occur in five of the samples and a single charred seed of *Polygonum avaiculare* (bindweed) is present in sample 7.

9.3 Conclusions and Recommendations

9.3.1 The plant assemblages from this site consist of low densities of plant macrofossils that are probably derived from scattered refuse. The vitrified nature of the charcoal is consistent with high temperature and/or repeated burning.

9.3.2 These samples do not provide any useful interpretive information and no further work is required.

9.3.3 If further excavations are planned for this area, environmental sampling should be included as this assemblage shows that there is potential for the recovery of plant remains. It is recommended that sampling is restricted to specific deposits that are likely to be productive such as primary fills of refuse pits, hearths, middens and any waterlogged features.

Appendix 10. An Assessment Of The Plant Macrofossils And Other Remains From Waterlogged Deposits

By Val Fryer

10.1 Introduction and Method statement

10.1.1 Excavations prior to development at the Milton Park and Ride site, Cambridgeshire, undertaken by CAMARC, revealed pits and ditches of Iron Age to medieval date, a number of which contained waterlogged fills. Samples for the retrieval of the plant macrofossil assemblages were taken, and eight were submitted for assessment after an initial evaluation by CAMARC highlighted their particular potential.

10.1.2 Two litre sub-samples of each sample were processed by manual water flotation/washover, with the flots being collected in a 250 micron mesh sieve. All flots were stored in water prior to sorting. The wet retents were scanned under a binocular microscope at magnifications up to x 16, and the plant macrofossils and other remains noted are listed on Table 1. Nomenclature within the table follows Stace (1997). With the exception of a single cereal grain and charcoal fragments, all plant remains were waterlogged.

10.2 Results

10.2.1 Seeds of dry land herbs, wetland plants and tree/shrub species were present at a moderate to high density in all eight assemblages. Preservation was generally good, although some seeds were crushed and distorted and the root/stem matrix of the assemblages was frequently highly comminuted.

10.2.2 Cereal remains were exceedingly scarce, occurring within only two assemblages. Spelt wheat (*Triticum spelta*) glume bases were recorded from the Iron Age fill of pit [1071] (sample 21) and a single indeterminate charred grain fragment was noted within sample 132, from the fill of medieval pit [1857].

10.2.3 Seeds of common segetal and grassland herbs were present throughout, although rarely at a high density. The taxa noted most frequently included orache (*Atriplex* sp.). fat hen (*Chenopodium album*), thistle (*Cirsium* sp.), mint (*Mentha* sp.), greater plantain (*Plantago major*), small grasses (Poaceae), knotgrass (*Polygonum aviculare*), buttercup (*Ranunculus acris/repens/bulbosus*), dock (*Rumex* sp.), chickweed (*Stellaria media*) and stinging nettles (*Urtica dioica*). Wetland plant macrofossils were also recorded from all eight assemblages, with rush (*Juncus* sp.) fruits occurring at a very high density in all but samples 40 and 63. Other wetland taxa included sedge (*Carex* sp.), water crowfoot (*Ranunculus* subg. *Batrachium*) and water cress (*Rorippa nasturtium-aquaticum*). A single fragment of hazel (*Corylus avellana*) nutshell was noted within sample 21 and bramble (*Rubus* sect. *Glandulosus*) 'pips' were recorded, often as single specimens, from all but samples 21, 63 and 82. Charcoal/charred wood fragments were present throughout. Other plant remains were scarce, but did include wood/twig fragments and *Prunus* type thorns.

10.2.4 Cladoceran ephippia (water fleas) and waterlogged arthropod remains were reasonably common within all but sample 63. A small number of shells of terrestrial and freshwater obligate molluscs were also recorded, with species noted including *Carychium* sp., *Vallonia* sp., *Pisidium* sp. and *Planorbis* sp.. Other remains were virtually absent, with

single fragments of black porous and cokey material occurring within samples 21 and 131.

10.3 Discussion

10.3.1 Although all eight assemblages are essentially similar, there are subtle differences in composition, which may be relevant to the overall interpretation of the site and it's component features. However, at the time of writing, some features remain undated and it is, therefore difficult to ascertain whether temporal trends are indicated.

10.3.2 The composition of all eight assemblages indicates that damp grassland conditions were locally prevalent. In most instances, this grassland appears to have been reasonably well managed with few, if any, incursions of colonising shrubs, although occasional patches of nettles and ruderal weeds (most notably the dead-nettles (*Lamium* sp.) within sample 237) are suggested. The abundance of sandwort (*Arenaria* sp.) seeds within sample 82 (pit [1605]) may suggest that areas of bare earth, possibly caused by animal activity, were also present. Nearby agricultural activity is indicated within both the Iron Age and medieval assemblages, although it is doubtful whether this impacted the site directly. The presence of fragmentary sainfoin (*Onobrychis viciifolia*) seeds with samples 63 and 131 is probably indicative of a medieval date for these assemblages. One point of particular note within the assemblages from samples 63, 82, 131 and 132 is the presence of seeds of water cress and water crowfoot. Both species, and water cress in particular, favour moving, shallow, marginal water within streams and brooks, possibly indicating that elements within these assemblages were deposited during flood episodes and may not be directly indicative of the local flora. It is possibly also of note that the few records of freshwater obligate molluscs also occur within two of these assemblages (samples 131 and 132).

10.4 Conclusions and recommendations for further work

10.4.1 In summary, areas of damp grassland, which were mostly well kept and possibly utilised for grazing or the production of hay, were predominant within this area of Cambridgeshire, apparently from the later prehistoric to the medieval periods. Some land in the near vicinity was probably tilled, although this appeared to have little impact on the grassland areas. The area may have been subject to periodic flooding, particularly during the medieval period. The reason why the pits, from which most of the samples were taken, were dug is not known, although they may have acted as sumps or soak-aways; there does not appear to have been any immediate human intervention after these features were initially excavated.

10.4.2 The recovered assemblages are moderately diverse and provide good indications of the nature of the local environment. However, at present, only four of the features (samples 21, 22, 131 and 132) are securely dated. If, after further post-excavation work, it proves possible to date all the assemblages included within this assessment, further analysis may be worthwhile. Without dating, further work would add little to the data already contained within this assessment. Costs for quantification can be supplied at a later date, if required.

10.5 Reference

Stace, C., 1997, *New Flora of the British Isles*. Second edition. Cambridge University Press

Sample No.	21	22	40	63	82	131	132	237
Context No.	**1154**	**1170**	**1284**	**1576**	**1367**	**1859**	**1857**	**2011**
Feature No.	**1071**	**1071**	**1246**	**1559**	**1605**	**1858**	**1857**	**2048**
Feature type	**Pit**	**Pit**	**Pit**	**Ditch**	**Pit**	**Pit**	**Pit**	**Pit**
Date	**IA**	**IA**				**Med.**	**Med.**	
Cereals								
Triticum spelta L. (glume bases)	x							
Cereal indet. (grain)							xc	
Dry land herbs								
Agrostemma githago L.				xtf		xtf		
Ajuga sp.		x						
Anagallis arvensis L.					x			
Anthemis cotula L.				x				
Aphanes arvensis L.			x		x			
Apiaceae indet.							x	
Arctium lappa L.				x		xcf		
Arenaria sp.					xx			
Asteraceae indet.			x					
Atriplex sp.				x	x	x	x	
Brassica sp.				x	x			
Carduus sp.					x	x		x
Chenopodium album L.	x	x	x		x			x
C. ficifolium Sm.			x					x
C. polyspermum L.		xcf						xcf
C. rubrum/glaucum						x		
Chenopodiaceae indet.	x	x	x		x			x
Cirsium sp.	x		x			x	x	
Epilobium sp.								x
Euphorbia peplus L.							x	
Fumaria officinalis L.	x					x		
Hyoscyamus niger L.							x	
Lamium sp.					x			xx
Lepidium sp.	xcf							x
Mentha sp.	x	x				x	xcf	x
Onobrychis viciifolia Scop.				xfg		xfg		
Persicaria maculosa/lapathifolia			x		x			x
Plantago major L.	x	x	x	x	x	x		x
Papaver argemone L.						x		
P. dubium L.	xcf		xcf					
P. somniferum L.	xcf		xcf					
Small Poaceae indet.	x	x	xx	x	x	x	xx	x
Polygonum aviculare L.	x		x	x	x	x	x	x
Potentilla sp.		xcf			xx		xcf	
Ranunculus acris/repens/bulbosus		x		x	x		x	x
R. parviflorus L.	x							
Rumex sp.	x		x	x	x	xx	x	x
Sinapis sp.						x		
Solanum sp.							x	
S. nigrum L.	x		xcf					x
Sonchus asper (L.)Hill			x					

Sample No.	21	22	40	63	82	131	132	237
Context No.	**1154**	**1170**	**1284**	**1576**	**1367**	**1859**	**1857**	**2011**
Feature No.	**1071**	**1071**	**1246**	**1559**	**1605**	**1858**	**1857**	**2048**
Feature type	**Pit**	**Pit**	**Pit**	**Ditch**	**Pit**	**Pit**	**Pit**	**Pit**
Date	**IA**	**IA**				**Med.**	**Med.**	
Stellaria sp.	xtf		xtf					xtf
S. graminea L.			x					
S. media (L.)Vill	x	x	xx	x	xx	x	x	xx
Thlaspi arvense L.					xx			x
Torilis/Daucus sp.			xcffg					
Torilis japonica (Houtt) DC					xcffg			
Urtica dioca L.	x	xx	xxx		x			x
U. urens L.	x		x					
Wetland plants								
Alisma plantago-aquatica L.							x	
Carex sp.	x	x	x		x			
Eleocharis sp.					x			
Juncus sp.	xxx	xxxx	x	x	xxx	xxx	xx	xx
Ranunculus subg. *Batrachium* (DC)A.Gray				x	x	xxx	xxx	
R. sceleratus L.		x						
Rorippa nasturtium-aquaticum (L.)Hayek	x				x	x	x	
R. palustris (L.)Besser			xcf		xcf			
Sparganium erectum L.							xcf	
Zannichellia palustris L.						x		
Tree/shrub macrofossils								
Corylus avellana L.	x							
Rubus sect. *Glandulosus* Wimmer & Grab		x	x			x	x	x
Other plant macrofossils								
Charcoal <2mm	x	xx	xxx	x	x	x	x	xxx
Charcoal >2mm	x	x	x	x				x
Waterlogged root/stem	xxx	xx	xxx	xx	xxxx	xxxx	xxx	xxxx
Characeae indet.						x		
Indet.moss	x							
Indet.seeds		x	x		x		x	x
Indet.thorns *(Prunus* type)	x	x						
Indet.wood/twigs<5mm	xx		x			xx	x	
Indet.wood/twigs>5mm							x	x

Sample No.	21	22	40	63	82	131	132	237
Context No.	**1154**	**1170**	**1284**	**1576**	**1367**	**1859**	**1857**	**2011**
Feature No.	**1071**	**1071**	**1246**	**1559**	**1605**	**1858**	**1857**	**2048**
Feature type	**Pit**	**Pit**	**Pit**	**Ditch**	**Pit**	**Pit**	**Pit**	**Pit**
Date	**IA**	**IA**				**Med.**	**Med.**	
Animal macrofossils								
Bone		x						
Cladoceran ephippia	x		xxx		x	x	x	x
Small mammal/amphibian bone		x						
Waterlogged arthropods	xx	x	xx	x	xxx	xx	xx	x
Ostracods			xx			x	xx	
Molluscs								
Terrestrial species								
Carychium sp.					x			
Vallonia sp.		x			x			
Freshwater obligate species								
Lymnaea sp.						x		
Pisidium sp.						x	x	
Planorbis sp.							x	
Other remains								
Black porous 'cokey' material	x							
Black tarry material						x		
Sample volume (litres)	**2**	**2**	**2**	**2**	**2**	**2**	**2**	**2**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**0.1**
% flot sorted	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**50%**

Table 21: Macrofossil Data Recovered From Baulk Samples

APPENDIX 11. FURTHER POLLEN ANALYSIS OF SEDIMENTS FROM MILTON PARK RIDE SITE

By Steve Boreham

11.1 Introduction

11.1.1 This report presents the results of assessment pollen analyses from 35 samples of sediment taken from archaeological features at Milton Park & Ride site (MILPAR07).

11.1.2 Amongst the samples presented for pollen analysis were five monoliths from an Iron Age Pit (Cut 1071), a series of samples from an Iron Age Ditch Fill (Cuts 1628, 1598, 1623), a series of samples from a Waterhole (Cut 1276), and miscellaneous samples from a variety of other pits and ditch-fills.

11.1.3 A single sub-sample was taken for pollen analysis from each sample provided, with the exception of the monolith sample 19 from which two sub-samples were taken.

11.1.4 The 35 samples were prepared using the standard hydrofluoric acid technique, and counted for pollen using a high-power stereo microscope. The percentage pollen data from these samples is presented in the table below.

11.2 Pollen Analyses

11.2.1 Pollen concentrations varied widely between <1068 and 20,290 grains per ml. Preservation of the fossil pollen grains (palynomorphs) was extremely variable. Many samples were barren or nearly so, with pollen and spores corroded and degraded beyond recognition. In other samples, pollen preservation was better, but counting was made more difficult by the presence of abundant micro-charcoal and finely divided organic debris. Seventeen samples (almost half of those prepared) were entirely barren, and pollen concentrations were generally so low that none of the remaining samples had single slide assessment counts that exceeded a main sum of 100 grains, let alone the statistically desirable total of 300 pollen grains. As a consequence, a fair amount of caution should be exercised in the interpretation of these pollen assessment results.

11.2.2 It is worth mentioning at this point, in the face of such a low 'success rate' for pollen samples, that the author was not involved in the sample selection process. When this happens, samples that are clearly oxidised or have a high clastic (sand and gravel) content are generally not selected because experience shows that they are almost always barren or nearly so. However, it could also be that the geology of the Milton Park & Ride site (gravel overlying bedrock Gault Clay) is responsible for the poor preservation of pollen in these samples, since it tends to produce a fluctuating water table leading to the periodic ingress of atmospheric oxygen to considerable depths.

Iron Age Pit (Cut 1071)

11.2.3 Six pollen sub-samples from five separate monolith samples (14, 15, 16, 19, 20) were taken from this feature. Two sub-samples (19 40cm & 20 20cm), presumably from the upper contexts of this pit, proved to be barren. The remaining four sub-samples (14 10cm, 15 8cm, 16 22cm, 19 10cm) all had broadly similar pollen spectra dominated by grass (Poaceae) (30-50%), with elevated amounts of lettuce family (Asteraceae (Lactuceae)) pollen (10-15%) and fern spores (together 11-23%). These samples also had a consistent presence of the disturbed ground indicator strapwort plantain (*Plantago lanceolata*) (1-6%), hazel (2-7%) and the emergent aquatic bur-reed

(*Sparganium*) (4-7%). In general, the samples showed a range of herbs from damp meadow, riparian (bank-side), arable weed and grassland communities. Apart from hazel, arboreal taxa were a relatively minor component, but included birch (*Betula*), pine (*Pinus*), oak (*Quercus*), alder (*Alnus*), juniper (*Juniperus*) and honeysuckle (*Lonicera*). There were also some clear differences between the samples. For example, the sample from 15 8cm had 17% box (Buxus) pollen, whilst the three basal samples (14 10cm, 15 8cm, 16 22cm) contained cereal pollen (1-2%) and sedge (Cyperaceae) (c.2%) pollen. An interesting additional story is provided by the aquatics, which show that both white water-lily (Nymphaea) and yellow water-lily (Nuphar) were associated with this pit (or deep water nearby). The over-representation of Asteraceae (Lactuceae) pollen and large proportion of fern spores in these samples is an indicator of post-depositional oxidation and modification of the pollen signal, since both types are resistant to oxidation.

Pit (Cut 1276)

11.2.4 The single sub-sample from this feature (context 1284) produced a pollen count dominated by grass (Poaceae) (42.2%), with elevated amounts of lettuce family (Asteraceae (Lactuceae) pollen (10.9%) and fern spores (together 17.2%). The sample also contained a range of herbs including the cabbage family (Brassicaceae) (4.7%), the dead-nettle family (Lamiaceae) (3.1%), the goosefoot family (Chenopodiaceae) (3.1%), the pink family (Caryophyllaceae) (5.9%) and the disturbed ground indicator strapwort plantain (Plantago lanceolata) (3.1%). Arboreal pollen was restricted to birch (Betula), and the sample also contained cereal pollen (3.1%).

Waterhole (Cut 1367)

11.2.5 A single pollen sub-sample (31cm) from this monolith sample (47) unfortunately proved to be barren.

Ditch (Cut 1559)

11.2.6 The two pollen sub-samples (context 1575 & 1576) from samples 69 & 70 were barren.

Iron Age Ditch Fill (Cuts 1628, 1598 & 1623)

11.2.7 The four pollen sub-samples (context 1624, 1625, 1626, 1627) from samples (88, 89, 90 & 91 – Cut 1628), and the sub-sample from context 1622 (sample 95 – Cut 1623) were all barren1600 (sample 94 – Cut 1623) gave a higher main sum (57), the spectrum was again dominated by grass (Poaceae), (Asteraceae (Lactuceae) and spores, with only alder (Alnus) (1.8%) and the goosefoot family (Chenopodiaceae) (3.5%) making an appearance. The dominance of Asteraceae (Lactuceae) pollen and fern spores, and virtual lack of other taxa in these samples is an indicator of severe post-depositional oxidation and modification of the pollen signal. . The sub-sample from context 1597 (sample 92 – Cut 1598) was almost barren and produced only 8 pollen grains; grass (Poaceae) and (Asteraceae (Lactuceae). Unfortunately, the same was true for the sub-sample from context 1599 (sample 93 – Cut 1623), which yielded a main sum of only 17; grass (Poaceae), (Asteraceae (Lactuceae) and spores. Although the remaining sub-sample from context.

Ditch and Pit samples (Cuts 1698, 1702, 1696, 1610, 1490, 1481, 1477)

11.2.8 The three pollen sub-samples (context 1699, 1612 & 1615) from samples 104, 119 & 121 were barren. The remaining seven sub-samples (102, 106, 118, 120, 122, 124, 126) all had broadly similar pollen spectra dominated by grass (Poaceae) (24-46%),

with elevated amounts of lettuce family (Asteraceae (Lactuceae) pollen (13-44%) and fern spores (together 15-30%). Sample 102 had herbs including strapwort plantain (*Plantago lanceolata*) (9.1%), dock (*Rumex*) (4.5%), cow-parsley family (Apiaceae) (4.5%), the emergent aquatic bur-reed (*Sparganium*) (8.3%) and arboreal taxa such as pine (*Pinus*) and privet (*Ligustrum*). Sample 106 included sedges (Cyperaceae) (2.7%), mallow (*Malva*) (2.7%) and bur-reed (*Sparganium*) (7.5%) pollen. Sample 118 contained pollen of the goosefoot family (Chenopodiaceae) (4.0%), the pink family (Caryophyllaceae) (4.0%) and spores of the adder's tongue fern (*Ophioglossum*). Sample 120 included pollen of the cabbage family (Brassicaceae) (4.3%), strapwort plantain (*Plantago lanceolata*) (4.3%), sedges (Cyperaceae) (8.7%), and of the arboreal taxa hazel (*Corylus*) and juniper (*Juniperus*). This sample also contained spores of the polypody fern (*Polypodium*), which is often associated with mature woodland. Sample 122 was notable in that it contained cereal pollen at 5.1%. Samples 124 and 126 also contained cereal pollen (2.0 and 2.6% respectively), with pine (Pinus) (2-5%), sedges (Cyperaceae) (2-3%) and a range of herbs including the lily family (Liliaceae) (4-5%), the goosefoot family (Chenopodiaceae) (2-3%). Since the main sums counted for these samples did not exceed 50 grains, and they all show dominance of Asteraceae (Lactuceae) pollen and fern spores, it is likely that post-depositional oxidation has altered the pollen signal in these samples.

Iron Age Ditch and Ring Ditch (Cuts 1915 & 1959)

11.2.9 The two pollen sub-samples (context 1914 & 1958) from both these features (samples 172 & 189) were barren.

Waterhole (Cut 1276)

11.2.10 The two pollen sub-samples (context 1284 & 1278) from samples (215 & 223) were barren. The sub-sample from context 1277 (sample 221) was almost barren and produced only 7 pollen grains; grass (Poaceae) and (Asteraceae (Lactuceae). The remaining two sub-samples (context 1288 & 1283) from samples 212 & 214 were dominated by grass (Poaceae) (37-49%), with elevated amounts of lettuce family (Asteraceae (Lactuceae) pollen (15-20%) and fern spores (together 5-11%). Sample 212 contained pollen of hazel (*Corylus*) (8.6%), sedges (Cyperaceae) (8.6%), thistle (*Cirsium*) (5.7%) and strapwort plantain (*Plantago lanceolata*) (5.7%). Sample 214 also had strapwort plantain (*Plantago lanceolata*) (8.8%), with cereal (4.4%), the cabbage family (Brassicaceae) (4.4%), bur-reed (*Sparganium*) (4.2%) and a range of other minor constituents including sedges (Cyperaceae), the pink family (Caryophyllaceae), birch (*Betula*) and alder (*Alnus*).

11.2.11 The sample from 35cm (context 3551) was dominated by grass (57.1%), with Asteraceae (Lactuceae) (7.1%), and a variety of herbs. Cereals were present at 8.9% and arboreal taxa were rather sparse and represented by pine (1.8%). Fern spores reached 16.1% in this sample. The sample from 49cm (context 3545) was very similar to the previous sample, being dominated by grass (73.1%) with Asteraceae (Lactuceae) (7.5%), and a variety of herbs. However, cereal pollen only reached 1.5%, and fern spores together accounted for 9%.

11.3 Discussion & Conclusions

11.3.1 These sparse pollen assemblages are all rather similar, with grass-dominated spectra, and low frequencies of arboreal pollen strongly suggesting a post-clearance environment. Almost all the samples contained large proportions of Asteraceae (Lactuceae) pollen and fern spores, which are taken as indicators of post-depositional

oxidation and modification of the pollen signal. Many samples contained the disturbed ground indicator strapwort plantain (*Plantago lanceolata*), and nine contained cereal pollen.

11.3.2 The pollen samples from the Iron Age Pit (Cut 1071) could be interpreted as showing a potentially deep pool with water-lilies and fringing emergent vegetation, surrounded by damp meadow, riparian (bank-side), arable fields and grazing land. There was clearly some hazel-box-juniper scrub nearby, but no continuous woodland. The pollen from the Pit (Cut 1276) could be interpreted in a very similar way, but without the deep pool element.

11.3.3 Very little can be said about the Iron Age Ditch Fill (Cuts 1628, 1598 &1623), expect that the surrounding environment was probably grassland. The miscellaneous Ditch and Pit samples (Cuts 1698, 1702, 1696, 1610, 1490, 1481, 1477) also contained pollen that could be interpreted as meadow, bank-side, arable and pastoral environments. Sample 120 was alone in having a hint of some slightly more extensive hazel-juniper scrub in an otherwise tree-less environment.

11.3.4 The Waterhole (Cut 1276) also produced pollen that could be interpreted as coming from open tall-herb meadowland, arable and pastoral fields. Disturbance seems to have been a relatively important theme at this site, and again there is the hint of hazel scrub nearby.

11.3.5 In general, the attempt at gleaning environmental information from the 35 samples presented from MILPAR07 through pollen analysis has not been very successful, largely in part to the oxidised and relatively unsuitable nature of the material. Very little detailed local environmental information can be gathered from these assessment counts, mostly due to the poor preservation of palynomorphs. The author has attempted some palaeoenvironmental reconstructions for several of the features, but care must be taken not to over-interpret these assessment pollen counts.

Sample	14	15	16	19	19	20	40	47
Label	10cm	8cm	22cm	10cm	40cm	20cm	1	31cm
Cut	1071						1276	1367
Context							1284	
Trees & Shrubs	Iron Age Pit						Pit	Waterhole
Betula	0.0	0.0	2.4	0.0			1.6	
Pinus	0.0	0.0	1.2	0.0			0.0	
Quercus	0.0	0.0	0.0	1.7			0.0	
Alnus	2.2	0.0	1.2	0.0			0.0	
Corylus	2.2	6.4	7.3	3.4			0.0	
Ligustrum	0.0	0.0	0.0	0.0			0.0	
Juniperus	0.0	0.0	0.0	1.7			0.0	
Lonicera	0.0	0.0	1.2	0.0			0.0	
Buxus	0.0	17.0	0.0	0.0			0.0	
Herbs								
Poaceae	55.1	29.8	32.9	50.0			42.2	
Cereals	2.2	2.1	1.2	0.0			3.1	
Cyperaceae	2.2	2.1	2.4	0.0			0.0	
Asteraceae (Asteroidea/Cardueae) undif.	0.0	2.1	1.2	5.2			3.1	
Centauea nigra type	0.0	0.0	0.0	1.7			0.0	
Asteraceae (Lactuceae) undif.	12.4	10.6	14.6	8.6			10.9	
Caryophyllaceae	1.1	0.0	2.4	0.0			3.1	
Chenopodiaceae	0.0	0.0	3.7	3.4			3.1	
Cirsium	1.1	0.0	0.0	0.0			0.0	
Brassicaceae	0.0	0.0	3.7	0.0			4.7	
Helianthemum	0.0	0.0	0.0	0.0	barren	barren	1.6	barren
Lamiaceae	0.0	0.0	0.0	0.0			3.1	
Fabaceae	0.0	2.1	2.4	0.0			0.0	
Plantago lanceolata type	1.1	2.1	6.1	1.7			3.1	
Ranunculus type	1.1	0.0	0.0	0.0			0.0	
Rosaceae	0.0	0.0	0.0	0.0			1.6	
Rumex	2.2	0.0	1.2	0.0			0.0	
Apiaceae (Umbelliferae)	0.0	0.0	0.0	0.0			0.0	
Liliaceae	0.0	0.0	0.0	0.0			0.0	
Veronica	0.0	0.0	2.4	1.7			0.0	
Malva type	0.0	0.0	0.0	0.0			0.0	
Symphytum	1.1	0.0	0.0	0.0			1.6	
Myosotis	0.0	0.0	1.2	0.0			0.0	
Pinguicula	0.0	0.0	0.0	1.7			0.0	
Lower plants								
Ophioglossum	0.0	2.1	0.0	0.0			0.0	
Polypodium	0.0	0.0	0.0	0.0			0.0	
Pteropsida (monolete) undif. Filicales	13.5	17.0	6.1	17.2			10.9	
Pteropsida (trilete) undif.	2.2	6.4	4.9	1.7			6.3	
Aquatics								
Nuphar	0.0	2.0	0.0	1.6			0.0	
Sparganium type	5.3	3.9	6.7	4.8			3.0	
Nymphaea	0.0	0.0	1.1	0.0			0.0	
Typha latifolia	0.0	2.0	0.0	0.0			0.0	

Sample	14	15	16	19	19	20	40	47
Label	10cm	8cm	22cm	10cm	40cm	20cm	1	31cm
Cut	1071						1276	1367
Context							1284	
Aquatics cont..	Iron Age Pit						Pit	Waterhole
Sum trees	2.2	0.0	4.9	1.7			1.6	
Sum shrubs	2.2	6.4	7.3	5.2			0.0	
Sum herbs	78.7	51.1	74.4	72.4			79.7	
Sum spores	15.7	23.4	11.0	19.0			17.2	
Main Sum	89	47	82	58			64	
Concentration (grains per ml)	11734	14340	19902	12145	<1068	<1068	16273	<1068

Sample	69	70	88	89	90	91	92	93	94	95
Label	1575	1576	1	2	3	4	5	6	7	8
Cut	1559	1559	1628	1628	1628	1628	1598	1623	1623	1623
Context	1575	1576	1624	1625	1626	1627	1597	1599	1600	1622
Trees & Shrubs	Ditch	Ditch	Iron Age Ditch Fill							
Betula							0.0	0.0	0.0	
Pinus							0.0	0.0	0.0	
Quercus							0.0	0.0	0.0	
Alnus							0.0	0.0	1.8	
Corylus							0.0	0.0	0.0	
Ligustrum							0.0	0.0	0.0	
Juniperus							0.0	0.0	0.0	
Lonicera							0.0	0.0	0.0	
Buxus							0.0	0.0	0.0	
Herbs										
Poaceae							37.5	29.4	29.8	
Cereals							0.0	0.0	0.0	
Cyperaceae							0.0	0.0	0.0	
Asteraceae (Asteroidea/Cardueae) undif.							0.0	0.0	1.8	
Centauea nigra type							0.0	0.0	0.0	
Asteraceae (Lactuceae) undif.							62.5	64.7	52.6	
Caryophyllaceae							0.0	0.0	0.0	
Chenopodiaceae							0.0	0.0	3.5	
Cirsium							0.0	0.0	0.0	
Brassicaceae							0.0	0.0	0.0	
Helianthemum	barren	barren	barren	barren	barren	barren	0.0	0.0	0.0	barren
Lamiaceae							0.0	0.0	0.0	
Fabaceae							0.0	0.0	0.0	
Plantago lanceolata type							0.0	0.0	0.0	

Sample	69	70	88	89	90	91	92	93	94	95
Label	1575	1576	1	2	3	4	5	6	7	8
Cut	1559	1559	1628	1628	1628	1628	1598	1623	1623	1623
Context	1575	1576	1624	1625	1626	1627	1597	1599	1600	1622
Herbs cont..	Ditch	Ditch	Iron Age Ditch Fill							
Ranunculus type							0.0	0.0	0.0	
Rosaceae							0.0	0.0	0.0	
Rumex							0.0	0.0	0.0	
Apiaceae (Umbelliferae)							0.0	0.0	0.0	
Liliaceae							0.0	0.0	0.0	
Veronica							0.0	0.0	0.0	
Malva type							0.0	0.0	0.0	
Symphytum							0.0	0.0	0.0	
Myosotis							0.0	0.0	0.0	
Pinguicula							0.0	0.0	0.0	
Lower plants										
Ophioglossum							0.0	0.0	0.0	
Polypodium							0.0	0.0	0.0	
Pteropsida (monolete) undif. Filicales							0.0	5.9	8.8	
Pteropsida (trilete) undif.							0.0	0.0	1.8	
Aquatics										
Nuphar							0.0	0.0	0.0	
Sparganium type							0.0	0.0	0.0	
Nymphaea							0.0	0.0	0.0	
Typha latifolia							0.0	0.0	0.0	
Sum trees							0.0	0.0	1.8	
Sum shrubs							0.0	0.0	0.0	
Sum herbs							100.0	94.1	87.7	

Sample	69	70	88	89	90	91	92	93	94	95
Label	1575	1576	1	2	3	4	5	6	7	8
Cut	1559	1559	1628	1628	1628	1628	1598	1623	1623	1623
Context	1575	1576	1624	1625	1626	1627	1597	1599	1600	1622
	Ditch	Ditch	Iron Age Ditch Fill							
Sum spores							0.0	5.9	10.5	
Main Sum							8	17	57	
Concentration (grains per ml)	<1068	<1068	<1068	<1068	<1068	<1068	3286	5856	20290	<1068

Sample	102	104	106	118	119	120	121	122	124	126
Label	1697	1699	1694	1611	1612	1613	615	1488	1479	1476
Cut	1698	1702	1696	1610	1610	1610	1610	1490	1481	1477
Context	1697	1699	1694	1611	1612	1613	1615	1488	1479	1476
Trees & Shrubs	Ditch	Ditch	Ditch	Ditch				Pit	Pit	Pit
Betula	0.0		0.0	0.0		0.0		0.0	0.0	0.0
Pinus	4.5		0.0	0.0		0.0		0.0	2.0	5.1
Quercus	0.0		0.0	0.0		0.0		0.0	0.0	0.0
Alnus	0.0		0.0	0.0		0.0		0.0	0.0	0.0
Corylus	0.0		0.0	0.0		4.3		0.0	0.0	0.0
Ligustrum	4.5		0.0	0.0		0.0		0.0	2.0	0.0
Juniperus	0.0		0.0	0.0		4.3		2.6	0.0	2.6
Lonicera	0.0		0.0	0.0		0.0		0.0	0.0	0.0
Buxus	0.0		0.0	0.0		0.0		0.0	0.0	0.0
Herbs										
Poaceae	36.4		43.2	24.0		34.8		41.0	46.0	38.5
Cereals	0.0		0.0	0.0		0.0		5.1	2.0	2.6
Cyperaceae	0.0		2.7	0.0		8.7		2.6	2.0	2.6
Asteraceae (Asteroidea/Cardueae) undif.	0.0		0.0	0.0		0.0		5.1	0.0	0.0
Centauea nigra type	0.0		0.0	0.0		0.0		0.0	0.0	0.0
Asteraceae (Lactuceae) undif.	13.6		21.6	44.0		13.0		23.1	14.0	20.5
Caryophyllaceae	0.0		0.0	4.0		0.0		0.0	0.0	0.0
Chenopodiaceae	0.0		0.0	4.0		0.0		0.0	2.0	2.6
Cirsium	0.0		0.0	0.0		0.0		0.0	4.0	0.0
Brassicaceae	0.0		0.0	0.0		4.3		0.0	0.0	5.1
Helianthemum	0.0	barren	0.0	0.0	barren	0.0	barren	0.0	0.0	0.0
Lamiaceae	0.0		0.0	0.0		0.0		0.0	0.0	0.0
Fabaceae	0.0		0.0	0.0		0.0		0.0	0.0	0.0
Plantago lanceolata type	9.1		0.0	0.0		4.3		0.0	2.0	0.0

Sample	102	104	106	118	119	120	121	122	124	126
Label	1697	1699	1694	1611	1612	1613	615	1488	1479	1476
Cut	1698	1702	1696	1610	1610	1610	1610	1490	1481	1477
Context	1697	1699	1694	1611	1612	1613	1615	1488	1479	1476
Herbs cont..	Ditch	Ditch	Ditch	Ditch				Pit	Pit	Pit
Ranunculus type	0.0		0.0	0.0		0.0		0.0	0.0	0.0
Rosaceae	0.0		0.0	0.0		0.0		0.0	2.0	0.0
Rumex	4.5		0.0	0.0		0.0		2.6	0.0	0.0
Apiaceae (Umbelliferae)	4.5		0.0	0.0		0.0		0.0	0.0	0.0
Liliaceae	0.0		0.0	0.0		0.0		0.0	4.0	5.1
Veronica	0.0		0.0	0.0		0.0		0.0	0.0	0.0
Malva type	0.0		2.7	0.0		0.0		0.0	0.0	0.0
Symphytum	0.0		0.0	0.0		0.0		0.0	0.0	0.0
Myosotis	0.0		0.0	0.0		0.0		0.0	0.0	0.0
Pinguicula	0.0		0.0	0.0		0.0		0.0	0.0	0.0
Lower plants										
Ophioglossum	0.0		0.0	4.0		0.0		0.0	0.0	0.0
Polypodium	0.0		0.0	0.0		4.3		0.0	0.0	0.0
Pteropsida (monolete) undif. Filicales	18.2		21.6	12.0		4.3		15.4	10.0	12.8
Pteropsida (trilete) undif.	4.5		8.1	8.0		17.4		2.6	6.0	2.6
Aquatics										
Nuphar	0.0		0.0	0.0		0.0		0.0	0.0	0.0
Sparganium type	8.3		7.5	3.8		4.0		9.3	7.4	0.0
Nymphaea	0.0		0.0	0.0		0.0		0.0	0.0	0.0
Typha latifolia	0.0		0.0	0.0		4.0		0.0	0.0	0.0
Sum trees	4.5		0.0	0.0		0.0		0.0	2.0	5.1
Sum shrubs	4.5		0.0	0.0		8.7		2.6	2.0	2.6
Sum herbs	68.2		67.6	76.0		65.2		79.5	80.0	76.9

Sample	102	104	106	118	119	120	121	122	124	126
Label	1697	1699	1694	1611	1612	1613	615	1488	1479	1476
Cut	1698	1702	1696	1610	1610	1610	1610	1490	1481	1477
Context	1697	1699	1694	1611	1612	1613	1615	1488	1479	1476
	Ditch	Ditch	Ditch	Ditch				Pit	Pit	Pit
Sum spores	22.7		29.7	20.0		26.1		17.9	16.0	15.4
Main Sum	22		37	25		23		39	50	39
Concentration (grains per ml)	3405	<1068	9637	4045	<1068	5458	<1068	6216	10679	8677

Sample	172	189	212	214	215	221	223
Label	2	3	4	5	6	7	8
Cut	1915	1959	1276	1276	1276	1276	1276
Context	1914	1958	1288	1283	1284	1277	1278
Trees & Shrubs	IA Ditch	Ring Ditch	Waterhole				
Betula			0.0	1.5		0.0	
Pinus			0.0	0.0		0.0	
Quercus			0.0	0.0		0.0	
Alnus			0.0	1.5		0.0	
Corylus			8.6	0.0		0.0	
Ligustrum			0.0	0.0		0.0	
Juniperus			0.0	0.0		0.0	
Lonicera			0.0	0.0		0.0	
Buxus			0.0	0.0		0.0	
Herbs							
Poaceae			37.1	48.5		85.7	
Cereals			0.0	4.4		0.0	
Cyperaceae			8.6	2.9		0.0	
Asteraceae (Asteroidea/Cardueae) undif.			0.0	1.5		0.0	
Centauea nigra type			0.0	0.0		0.0	
Asteraceae (Lactuceae) undif.			20.0	14.7		0.0	
Caryophyllaceae			0.0	2.9		0.0	
Chenopodiaceae			2.9	0.0		0.0	
Cirsium			5.7	0.0		0.0	
Brassicaceae			0.0	4.4		0.0	
Helianthemum	barren	barren	0.0	0.0	barren	0.0	barren
Lamiaceae			0.0	0.0		0.0	
Fabaceae			0.0	0.0		0.0	
Plantago lanceolata type			5.7	8.8		0.0	

Sample	172	189	212	214	215	221	223
Label	2	3	4	5	6	7	8
Cut	1915	1959	1276	1276	1276	1276	1276
Context	1914	1958	1288	1283	1284	1277	1278
Herbs cont..	IA Ditch	Ring Ditch	Waterhole				
Ranunculus type			0.0	1.5		0.0	
Rosaceae			0.0	1.5		0.0	
Rumex			0.0	0.0		0.0	
Apiaceae (Umbelliferae)			0.0	1.5		0.0	
Liliaceae			0.0	0.0		0.0	
Veronica			0.0	0.0		0.0	
Malva type			0.0	0.0		0.0	
Symphytum			0.0	0.0		0.0	
Myosotis			0.0	0.0		0.0	
Pinguicula			0.0	0.0		0.0	
Lower plants							
Ophioglossum			0.0	0.0		0.0	
Polypodium			0.0	0.0		0.0	
Pteropsida (monolete) undif. Filicales			5.7	2.9		14.3	
Pteropsida (trilete) undif.			5.7	1.5		0.0	
Aquatics							
Nuphar			0.0	0.0		0.0	
Sparganium type			0.0	4.2		0.0	
Nymphaea			0.0	0.0		0.0	
Typha latifolia			0.0	0.0		0.0	
Sum trees			0.0	2.9		0.0	
Sum shrubs			8.6	0.0		0.0	
Sum herbs			80.0	92.6		85.7	

Sample	172	189	212	214	215	221	223
Label	2	3	4	5	6	7	8
Cut	1915	1959	1276	1276	1276	1276	1276
Context	1914	1958	1288	1283	1284	1277	1278
	IA Ditch	Ring Ditch	Waterhole				
Sum spores			11.4	4.4		14.3	
Main Sum			35	68		7	
Concentration (grains per ml)	<1068	<1068	8306	17712	<1068	1699	<1068

Table22 (a-d): Pollen data from MILPAR07 Samples

APPENDIX 12. WATERLOGGED WOOD ASSESSMENT REPORT

By Mike Bamforth

12.1 Introduction

12.1.1 This report has been compiled by Michael Bamforth of L - P : Archaeology on behalf of CAM ARC.

12.1.2 This document aims to assess the potential of the waterlogged wood assemblage in terms of woodworking technology, woodland reconstruction, decay analysis, species identification, dendrochronology and conservation and retention.

12.1.3 A total of 24 discreet items and an assemblage of around 100 pieces of natural roundwood were submitted for analysis. A single fragment of hazelnut was also recovered.

12.2 Provenance

12.2.1 The material was recovered during excavations carried out by CAM ARC at Milton Park & Ride, Cambridge in 2007.

12.2.2 The waterlogged wood was derived from two discreet sources, a field boundary ditch thought to be of Medieval date, and from the lower fills of a large pit dated to the Iron Age.

12.2.3 The material from the ditch was recovered from fills (1575) and (1576).

12.2.4 The material from pit [1071] was recovered from deposit (1154), towards the base of the feature.

12.2.5 All waterlogged wood encountered during excavation was retained for analysis.

12.3 Methodology

12.3.1 This document has been produced in accordance with English Heritage guidelines for the treatment of waterlogged wood (BRUNNING 1996) and recommendations made by the SOCIETY OF MUSEUM ARCHAEOLOGISTS (1993) for the retention of waterlogged wood.

12.3.2 All discreetly numbered items and those displaying evidence of modification or woodland management were recorded individually using the pro forma 'wood recording sheet' developed by Fenland Archaeological Trust for the post excavation recording of waterlogged wood. All records were then entered into a database.

12.3.3 Bulk collections or samples of natural wood were assessed as a whole.

12.3.4 Every effort was made to refit broken or fragmented items. However, due to the nature of the material, the possibility remains that some discreet yet broken items may have been processed as their constituent parts as opposed to as a whole.

12.3.5 The metric measurements were taken with hand tools including rulers and tapes, the toolmarks were measured using a profile gauge.

12.3.6 The system of categorisation and interrogation developed by Taylor (1998 & 2001) has been adopted within this report.

12.3.7 Items identifiable to species by morphological traits visible with the naked eye (oak and ash) were noted. Other items were sub-sampled and identified to genus via microscopic identification as necessary.

12.3.8 The microscopic species identification was carried out by M. Taylor.

12.4 Range and Variation

12.4.1 In addition to the above listed items, an assemblage of around 100 items of natural roundwood and a single hazel nut fragment were also recovered from environmental sample <17>.

12.4.2 The log ladder (small find 8) and a wooden peg (small find 17) are both classed as artefacts.

12.4.3 Woodchips represent the largest single category making up 70.8% of the assemblage. There is a notable lack of timber debris.

12.5 Condition of material

12.5.1 If preservation varies within a discreet item, the section that is best preserved is scored for condition. Items that were set vertically in the ground often display relatively better preservation lower down and a relatively poorer preservation higher up.

12.5.2 The condition scale used in this report is that developed by the Humber Wetlands Project (Van De Noort, Ellis, Taylor and Weir 1995 – below table) will be used throughout this report.

	MUSEUM CONSERVATION	TECHNLOGY ANALYSIS	WOODLAND MANAGEMENT	DENDROCHRONOLOGY	SPECIES IDENTIFICAT ION
5	+	+	+	+	+
4	-	+	+	+	+
3	-	+/-	+	+	+
2	-	+/-	+/-	+/-	+
1	-	-	-	-	+/-
0	-	-	-	-	

Table 23: Condition Scale

12.5.3 The condition scale is based primarily on the clarity of surface data. Material is allocated a score dependent on the types of analysis that can be carried out, given the state of preservation. The condition score reflects the possibility of a given type of analysis but does not take in to account the suitability of the item for a given process.

12.5.4 Using the above condition scale, the majority of the material scored a 4.

Condition	Frequency	% of Assemblage
0	0	0
1	0	0
2	0	0
3	0	0
4	22	91.7
5	2	8.3

Table 24: Condition of Wooden Remains

12.5.5 This condition score reflects a well preserved assemblage. Technological analysis, an assessment of possible woodland management practices and species identification is possible throughout the assemblage.

12.5.6 Although the condition of the material would be suitable for dendrochronological analysis, none of the items display enough growth rings to be suitable for this process.

12.6 Species Identification

12.6.1 A full description of all the items recorded can be found in the catalogue at the end of this document.

Species	Frequency	% of Assemblage
Acer campestre (Field Maple)	6	24.9
Quercus sp. (Oak)	4	16.7
Bark	4	16.7
Unknown	8	33.3
Unprocessed	2	8.3

Table 25: Species Identification Table

12.6.2 Items assigned as oak (Quercus sp.) were identified in the field, relying on gross morphology visible to the naked eye. All other items were identified from a sub-sample using a microscope. The bark was not identified to species.

12.6.3 Of the approximately 100 items of natural roundwood recovered from [1071], ten were submitted for species identification. These were all identified as probably oak, although compression and mineralisation precluded a positive identification.

12.7 ARTEFACTS

12.7.1 The Medieval field boundary ditch produced small find 17. This small, well preserved oak item fits the description of both a peg and a tree-nail. (Corkhill 979: 395 & 594). Although broken at the tip, the butt end has clearly been finished flat. Light tool faceting is clearly visible down the flanks of the item, describing a relatively flat bladed tool.

12.7.2 The Iron Age pit [1071] produced an oak, log ladder (small find 8). The ladder was standing partially upright, leaning against the side of the pit. The ladder remained in the round, with the bark intact. Two steps were present in the surviving length and the upper end of the ladder had decayed away, suggesting the item was originally longer. No work had been carried out to 'finish' this item, all the woodworking is purely functional. The morphology of the item suggests it may be derived from coppice.

12.8 WOODCHIPS

12.8.1 The Medieval field boundary ditch produced five tangentially aligned woodchips, including small find 18. Four were unidentifiable, small find 18 was identified as oak. These small, relatively fine woodships represent light woodworking in the vicinity. It is unclear whether the woodchips are primary or secondary deposits.

12.8.2 Sample <17> from Iron Age pit [1071] produced six radially aligned woodchips (four of which were possibly derived from root) and six tangentially aligned woodchips, all of

which are probably field maple. These small, relatively fine woodchips represent light woodworking in the vicinity. It is unclear whether the woodchips are primary or secondary deposits.

12.9 ROUNDWOOD

12.9.1 Iron Age pit [1071] continued a single roundwood, oak stake that displayed the slight curve and flair associated with a coppice heel.

12.9.2 Morphological traits associated with coppicing include:

- *Straight items*. An unusually straight item with no side branches or knots can often be indicative of coppiced wood.
- *Even items*. displaying no variation along the length can also be indicative of coppiced material.
- *Curve*. Where a coppice rod emerges horizontally from the coppice stool, a pronounced and distinct curve is often present where the rod has changed trajectory through ninety degrees to grow approximately vertically.
- *Flare*. Where a coppice rod displays a curve at its junction with the stool, a pronounced flare will often also be present.

12.9.3 Sample <17> from Iron Age pit [1071] produced an assemblage of around 100 short lengths of natural roundwood, none of which displayed any evidence of conversion or woodland management. A 10% subsample were all identified as probably oak. These items are all likely to have built up naturally within the feature.

12.10 BARK

12.10.1 Sample <17> from Iron Age pit [1071] produced four small pieces of bark, none of which displayed any form of modification. Although it is likely that these items are naturally derived, it remains possible that they may have become detached as part of a woodworking process.

12.11 HAZEL NUT

12.11.1 Sample <17> from Iron Age pit [1071] also produced a single fragment of hazel nut. This could be natural debris, although it is worth noting that hazel nuts are a source of both food and oil (USHER 1974: 178).

12.12 TOOLMARKS

12.12.1 Small find 7, a stake from Iron Age pit [1071] had two partial toolmarks. One was 23mm wide and 1.5mm deep, the other 22mm wide and 2.5mm deep. These marks are similar enough to be derived from the same tool.

12.12.2 Small find 8, a log ladder from Iron Age pit [1071] had a single partial toolmark on the first step, measuring 39mm wide and 2mm deep.

12.12.3 .Both items have been worked with relatively flat, metal blades, typical of Iron Age axes.

12.13 Discussion

12.13.1 This is a small yet well preserved assemblage of material with woodworking and tool-faceting clearly visible.

12.13.2 A limited range of species are represented in this assemblage, all of which could be expected to be found locally.

12.13.3 One of the first log ladders to be recorded in England was recovered from Fengate (Pryor 1978). Until recently, this remained an almost unique item. However, over recent years a relatively large number of log ladders have been recovered, often from gravel sites within or bordering the Cambridgeshire fens, but also in the Thames valley.

12.13.4 These ladders seem to be used to provide access to deep pits, possibly watering holes. The ladders themselves are normally fashioned from oak or alder and appear both in the round and as half split timbers. The form of the log ladder discussed herein is fairly standard. The lack of finishing is not unusual and neither is the evidence for coppicing. The closest parallel is a Bronze Age example excavated in 2005 from Bradley Fen, Cambridgeshire (Taylor 2005). Unfortunately, none of the log ladders excavated to date (other than the Fengate ladder) have been published.

12.13.5 Although the majority of log ladders excavated to date are thought to date to the Bronze Age, there are several other examples assigned to the Iron Age.

12.13.6 The roundwood, woodchip, bark and toolmark assemblages are all too small to allow a detailed discussion.

12.14 Recommendations

12.14.1 The assemblage is too small to allow any further analysis of woodworking technology or woodland reconstruction.

12.14.2 The material has been visually assessed for condition. Further scientific decay analysis is not required.

12.14.3 The modified wood has all been processed for species identification. No further work is required in this area.

12.14.4 None of the material displays a sufficient number of rings for dendrochronology.

12.14.5 None of the material is of sufficient interest to warrant conservation and retention.

12.14.6 It is recommended that the two artefacts (Small finds 8 & 17) are photographed and illustrated to provide a full record of these items.

12.15 BIBLIOGRAPHY

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12.16 CATALOGUE

MEDIEVAL DITCHES

(1575)

Tangentially aligned woodchip. Heartwood only, condition 4. Species remains unknown. Length: 35mm Max breadth: 10mm Max thickness: 9mm

Tangentially aligned woodchip. Heartwood only, condition 4. Species remains unknown. Length: 28mm Max breadth: 12mm Max thickness: 10mm

Tangentially aligned woodchip. Heartwood only, condition 4. Species remains unknown. Length: 27mm Max breadth: 9mm Max thickness: 9mm

Tangentially aligned woodchip. Heartwood only, condition 4. Species remains unknown. Length: 28mm Max breadth: 24mm Max thickness: 9mm

Small find 18: Tangentially aligned oak woodchip with square cross section. Heartwood only, condition 4. Length: 69mm Max breadth: 12mm Max thickness: 8mm

(1576)

Small find 17:This oak peg had been tangentially split and then trimmed to have a square cross section, thinning towards the broken end. The other end had been trimmed flat. Heartwood only, condition 5 with light tool faceting clearly visible.
Length: 62mm Max breadth: 16mm Max thickness: 14mm
Min breadth: 12mm Min thickness: 9mm

PIT [1071]

(1154)

Small find 7: This oak roundwood stake displayed several traits related to coppiced material; the item was straight and even along its length, displaying the slight curve and flair associated with a coppice heel. The curved end was trimmed from two directions to form a tapered point with a square cross section. The trimmed tip was broken towards the end. This item had a condition score of 4 at the tip. The top end had degraded away and some redial drying cracks were seen along the length of the item. Two tool marks were recorded measuring 23:1.5mm and 22:2.5mm. Length: 682 Diameter: 79

Small find 8: This log ladder, was fashioned from slow grown oak with the bark remaining intact. The morphology of this item, including a bend and flair at the base, raises the possibility that this item is derived from coppicing. This item was vertically set against the side of the feature. The top of the item scored a 3 for condition and the base a 5. The item remained in the round with the

bottom end trimmed from two directions. This ladder had two steps remaining. The bottom step was 560mm from the base of the ladder. The step was 165mm high and 29mm deep. The ladder was broken at the second step, which occurred 115mm above the top of the first. The second step survived for a height of 90mm and was 41mm deep. A single toolmark was recorded on the 1st step, with a ratio of 39:2. Length: 975mm Diameter at base: 95mm Diameter at top: 69mm.

Sample <17>

Radially aligned woodchip. Heartwood only, condition 4. Species unknown, possibly root, very deformed.
Length: 30mm Max breadth: 19mm Max thickness: 5mm

Radially aligned woodchip. Heartwood only, condition 4. Species unknown, possibly root, very deformed.
Length: 32mm Max breadth: 25mm Max thickness: 5mm

Radially aligned woodchip. Heartwood only, condition 4. Species unknown, possibly root, very deformed.
Length: 35mm Max breadth: 14mm Max thickness: 4mm

Radially aligned woodchip. Heartwood only, condition 4. Species unknown, possibly root, very deformed.
Length: 30mm Max breadth: 5mm Max thickness: 2mm

Radially aligned woodchip. Heartwood only, condition 4.
Length: 65mm Max breadth: 19mm Max thickness: 1mm

Radially aligned woodchip. Heartwood only, condition 4.
Length: 43mm Max breadth: 27mm Max thickness: 1mm

Tangentially aligned field maple (probable) woodchip. Heartwood only, condition 4.
Length: 70mm Max breadth: 35mm Max thickness: 15mm

Tangentially aligned field maple (probable) woodchip. Heartwood only, condition 4.
Length: 61mm Max breadth: 15mm Max thickness: 12mm
Tangentially aligned field maple (probable) woodchip. Heartwood only, condition 4.
Length: 29mm Max breadth: 14mm Max thickness: 8mm

Tangentially aligned field maple (probable) woodchip. Heartwood only, condition 4.
Length: 42mm Max breadth: 25mm Max thickness: 10mm

Tangentially aligned field maple (probable) woodchip. Heartwood only, condition 4.
Length: 24mm Max breadth: 19mm Max thickness: 3mm

Tangentially aligned field maple (probable) woodchip. Heartwood only, condition 4.
Length: 23mm Max breadth: 16mm Max thickness: 5mm

Four small pieces of bark were also present. No woodworking evidence was recorded. Condition 4. The largest measured 60mm x 30mm x 7mm.
This sample also contained approximately 100 short lengths (30-240mm) of roundwood. Diameters were between 4-23mm. These items were all natural in appearance, with no evidence

of conversion or woodland management present. A 10% subsample was submitted for identification, all of which were identified as probably oak, although their small size, compression and mineralisation made identification challenging. A hazelnut was also recovered from this sample.

A further 8 Items of waterlogged wood were submitted for study. These were recovered from the following contexts:

(1857): Secondary fill within Medieval pit **[1859].**
(2048): Basal fill of Middle / Late Iron Age large, circular pit **[2011].**

The two oak pegs are surprisingly similar in form to one another, and to Small Find 17

(1576) discussed in the main body of the report. All three pegs had been worked with a straight edged tool and fit the description for either a peg or a tree-nail (Corkhill 1979: 395 & 594). These items are classed as artefacts and as such should be drawn and photographed.

The timber debris Small Find 43 could well represent splitting debris from the cleaving of timbers. The oak wood chips are likely to have been derived from the use of an edged tool such as an adze or axe.

MEDIEVAL PIT [1859]

(1857)
SF.43 Oak timber debris, heartwood only, condition 3. Tangentially split with t square cross section and one end trimmed from one direction.
Length: 106mm Max breadth: 48mm Max thickness: 28mm
Min breadth: 41mm Min thickness: 22mm

Oak peg, tangentially split and then trimmed to have a square cross section. Trimmed to a point from one face. The other end had been trimmed flat. Heartwood only, condition 4 with light tool faceting from a straight bladed implement clearly visible.
Length: 89mm Max breadth: 23mm Max thickness: 23mm

Oak peg, radially split and then trimmed to have a square cross section. Trimmed to a point from one face. The other end is broken. Heartwood only, condition 4 with light tool faceting from a straight bladed implement clearly visible.
Length: 85mm Max breadth: 16mm Max thickness: 12mm

Tangentially aligned oak woodchip. Heartwood only, condition 3. Both ends have been axed.
Length: 42mm Max breadth: 39mm Max thickness: 28mm

Tangentially aligned oak woodchip. Heartwood only, condition 3.
Length: 50mm Max breadth: 29mm Max thickness: 26mm

Tangentially aligned oak woodchip. Heartwood only, condition 3.
Length: 95mm Max breadth: 21mm Max thickness: 8mm

Tangentially aligned oak woodchip. Heartwood only, condition 3.
Length: 95mm Max breadth: 28mm Max thickness: 21mm

IRON AGE PIT [2011]

(2048)

SF.48 This large piece of debris has not been identified to species. This item has bark, sapwood and heartwood and displays a twisted, knotty grain. Most of the outside surface has been tangentially split away and one end has been trimmed flat from multiple directions. One face has been moderately charred to a depth of c.5mm. One end has been sawn away during excavation. Condition 3.

Length: 404mm Max breadth: 285mm Max thickness: 239mm

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APPENDIX 14. OASIS REPORT FORM

All fields are required unless they are not applicable.

Project Details

OASIS Number	oxfordar3-51512		
Project Name	The New Park and Ride Site, Land off Butt Lane, Milton, Cambridgeshire		
Project Dates (fieldwork) Start	01-07-2007	Finish	02-08-2007
Previous Work (by OA East)	Yes	Future Work	No

Project Reference Codes

Site Code	MIL PAR 07	Planning App. No.	N/A
HER No.	ECB 3123	Related HER/OASIS No.	

Type of Project/Techniques Used

Prompt: Direction from Local Planning Authority - PPG16

Please select all techniques used:

☐ Field Observation (periodic visits)	☒ Part Excavation	☐ Salvage Record
☐ Full Excavation (100%)	☒ Part Survey	☐ Systematic Field Walking
☐ Full Survey	☐ Recorded Observation	☐ Systematic Metal Detector Survey
☐ Geophysical Survey	☐ Remote Operated Vehicle Survey	☐ Test Pit Survey
☒ Open-Area Excavation	☐ Salvage Excavation	☐ Watching Brief

Monument Types/Significant Finds & Their Periods

List feature types using the NMR Monument Type Thesaurus and significant finds using the MDA Object type Thesaurus together with their respective periods. If no features/finds were found, please state "none".

Monument	Period	Object	Period
pits	Iron Age -800 to 43	pottery	Iron Age -800 to 43
ditches	Iron Age -800 to 43	bone	Iron Age -800 to 43
pits	Roman 43 to 410	metal	Iron Age -800 to 43
ditches	Roman 43 to 410	pottery	Roman 43 to 410
windmill	Medieval 1066 to 1540	bone	Roman 43 to 410
ditches	Medieval 1066 to 1540	pottery	Select period...
	Select period...	bone	Modern 1901 to Present
	Select period...	stone	Medieval 1066 to 1540

Project Location

County	Cambridgeshire	Site Address (including postcode if possible)	
District	South Cambrideshire	New Park and Ride Site, Butt Lane, Cambridge, CB24 6DG	
Parish	Milton		
HER	Cambridgeshire		
Study Area	0.8 hectares	National Grid Reference	TL 469 630

Project Originators

Organisation	OA EAST
Project Brief Originator	CAPCA
Project Design Originator	Stephen Macaulay
Project Manager	Stephen Macaulay
Supervisor	Dan Hounsell

Project Archives

Physical Archive	Digital Archive	Paper Archive
Cambridgeshire County Store	OA East	Cambridgeshire county store
MIL PAR 07	MIL PAR 07	MIL PAR 07

Archive Contents/Media

	Physical Contents	Digital Contents	Paper Contents
Animal Bones	☒	☒	☒
Ceramics	☒	☒	☒
Environmental	☒	☒	☒
Glass	☐	☐	☐
Human Bones	☐	☐	☐
Industrial	☐	☐	☐
Leather	☐	☐	☐
Metal	☒	☒	☒
Stratigraphic		☒	☒
Survey		☒	☒
Textiles	☐	☐	☐
Wood	☒	☒	☒
Worked Bone	☒	☐	☐
Worked Stone/Lithic	☒	☒	☒
None	☐	☐	☐
Other	☐	☐	☐

Digital Media	Paper Media
☒ Database	☐ Aerial Photos
☒ GIS	☒ Context Sheet
☐ Geophysics	☒ Correspondence
☒ Images	☐ Diary
☒ Illustrations	☒ Drawing
☐ Moving Image	☐ Manuscript
☒ Spreadsheets	☒ Map
☒ Survey	☒ Matrices
☒ Text	☐ Microfilm
☐ Virtual Reality	☐ Misc.
	☐ Research/Notes
	☒ Photos
	☒ Plans
	☒ Report
	☒ Sections
	☐ Survey

Notes:

Figure 1: Location of the excavation area

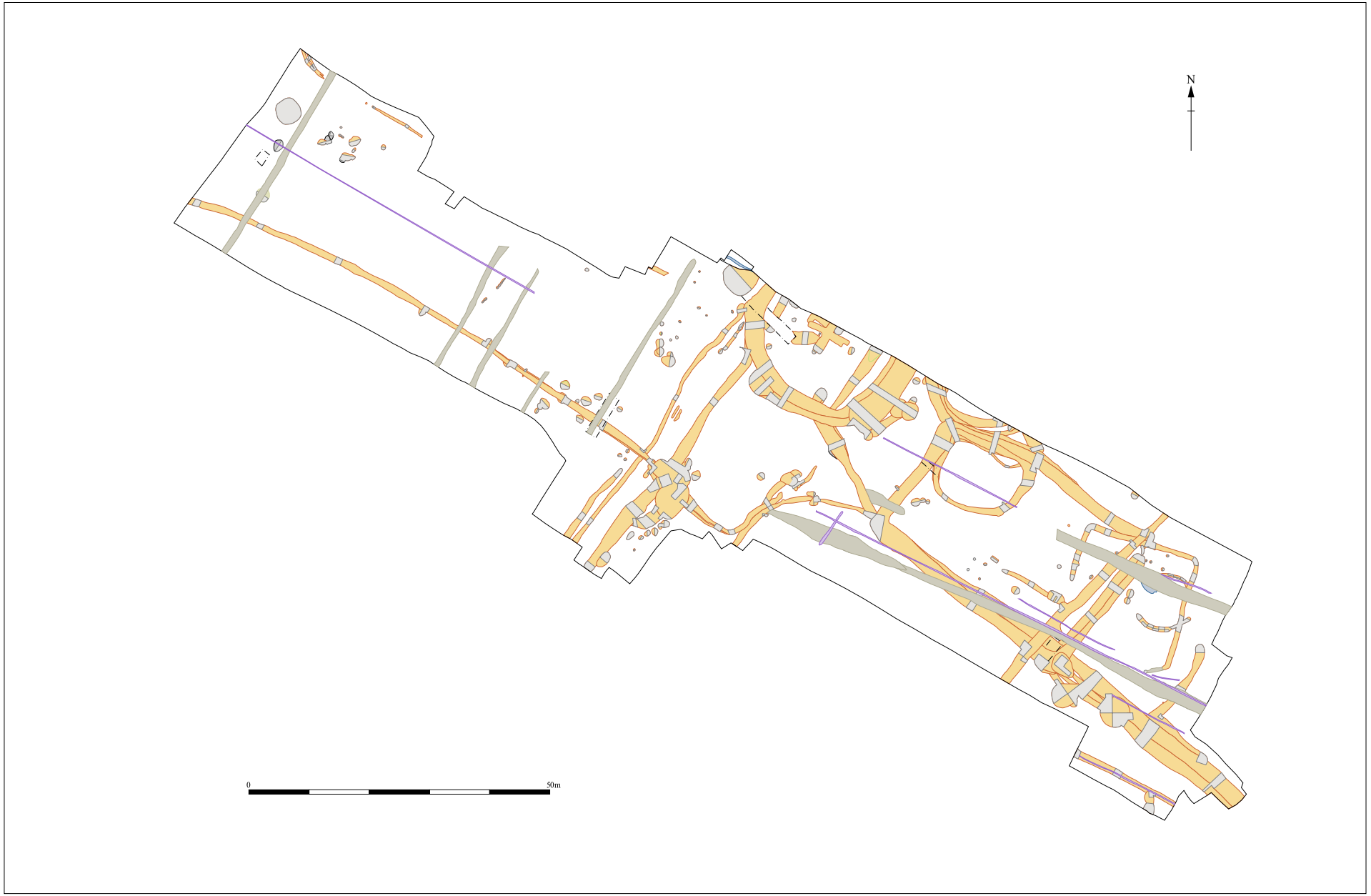

Figure 2: Excavation Plan

Figure 3: Iron Age Phase Plan

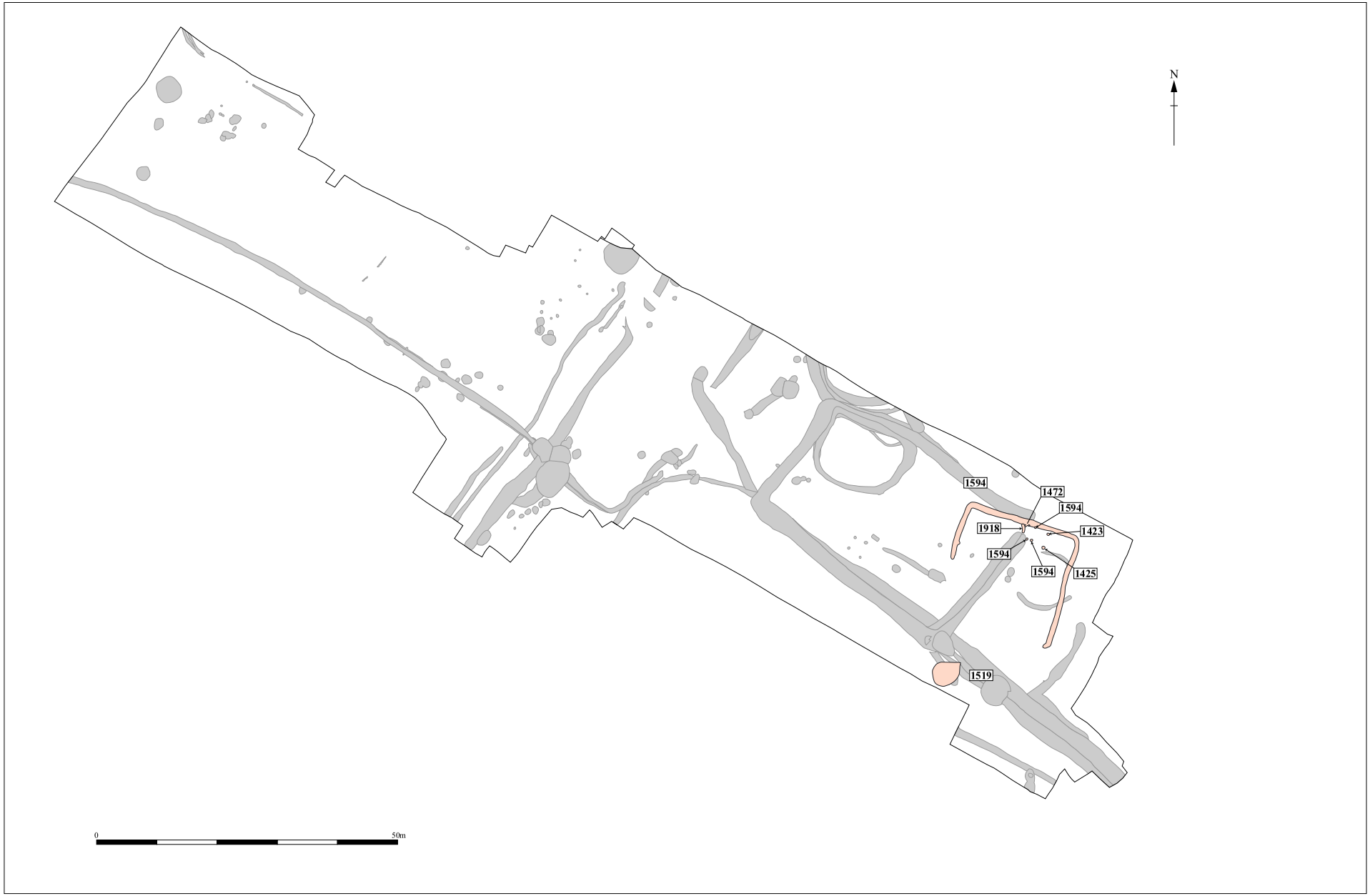

Figure 4: Roman Phase Plan

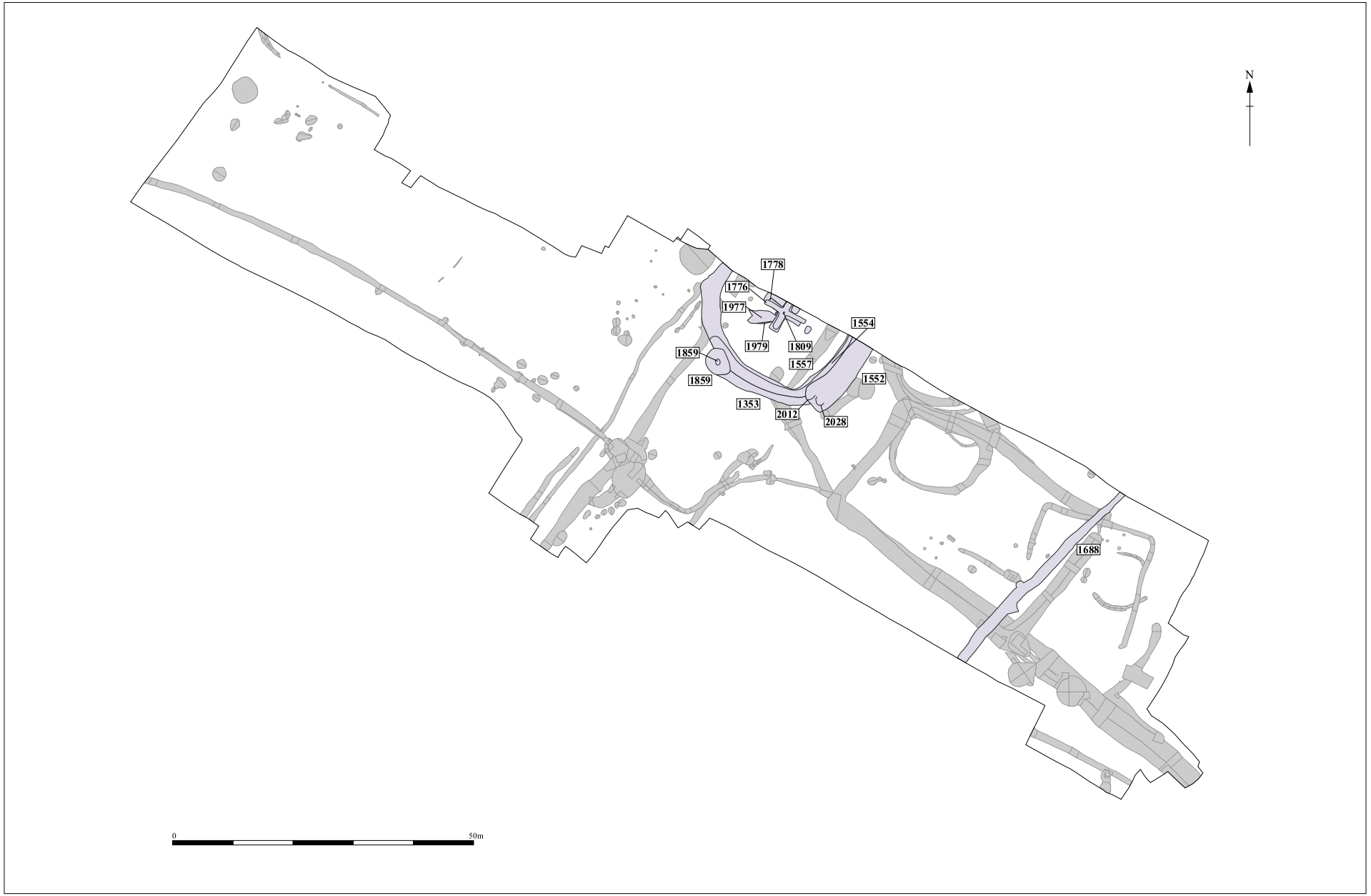

Figure 5: Medieval Phase Plan

Head Office/Registered Office

Janus House
Osney Mead
Oxford OX2 0ES

t: +44 (0) 1865 263 800
f: +44 (0) 1865 793 496
e: info@thehumanjourney.net
w:http://thehumanjourney.net

OA North

Mill 3
Moor Lane
Lancaster LA1 1GF

t: +44 (0) 1524 541 000
f: +44 (0) 1524 848 606
e: oanorth@thehumanjourney.net
w:http://thehumanjourney.net

OA East

15 Trafalgar Way
Bar Hill
Cambridgeshire
CB23 8SQ

t: +44 (0) 1223 850500
f: +44 (0) 1223 850599
e: oaeast@thehumanjourney.net
w:http://thehumanjourney.net/oaeast

OA Méditerranée

115 Rue Merlot
ZAC La Louvade
34 130 Mauguio
France

t: +33 (0) 4.67.57.86.92
f: +33 (0) 4.67.42.65.93
e: oamed@oamed.fr
w: http://oamed.fr/

Director: David Jennings, BA MIFA FSA

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