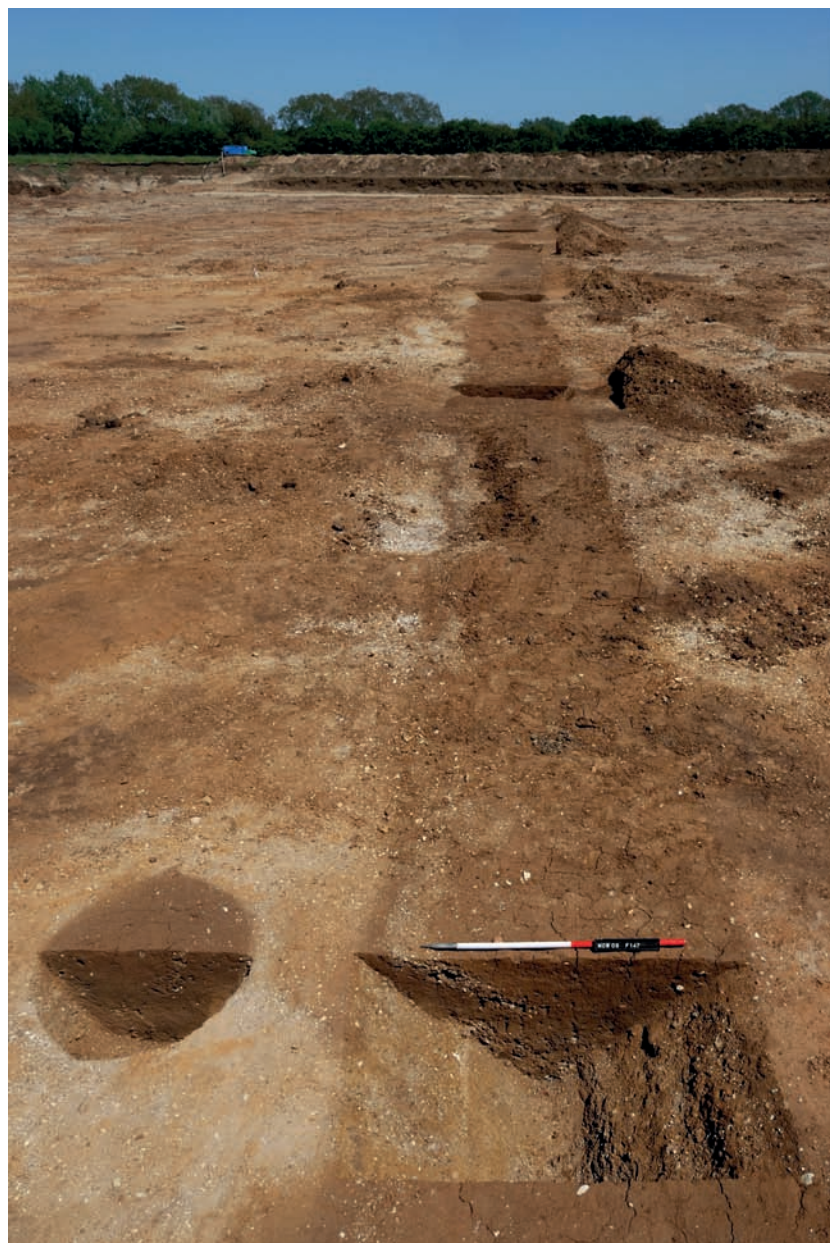


Manor Farm, Old Wolverton, Milton Keynes, Buckinghamshire

2008-2010 Excavation Report



Shannon Hogan



PHOENIX CONSULTING Archaeology Limited

CAMBRIDGE ARCHAEOLOGICAL UNIT
UNIVERSITY OF CAMBRIDGE



**Manor Farm, Old Wolverton, Milton Keynes,
Buckinghamshire:
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Shannon Hogan

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Summary

Between 2007 and 2011, the Cambridge Archaeological Unit (CAU) undertook a series of strip, map and sample exercises at Manor Farm, Old Wolverton, Milton Keynes. During this time, an impressive prehistoric monument complex was uncovered, comprising three Neolithic cursus and a complete Late Neolithic hengiform. This monumental activity is bracketed by earlier in situ Upper Palaeolithic and Late Mesolithic flint scatters found in association with preserved buried soil horizons, and later Bronze Age occupation, consisting of coaxial field system ditches, a partial ring gully, burnt stone pits and isolated cremation deposits. Two Roman trackways and several probable Roman quarry pits and ditches were also revealed. Beneath the alluvial overburden, substantial networks of braided palaeochannel systems had carved the gravel terraces into 'islands', across which the prehistoric activity was located. The Roman features were cut from within the alluvial overburden, whilst post-Medieval trackways were recorded in the uppermost alluvial and topsoil layers.

1.0 INTRODUCTION

Between 2007 and 2011, a series of ‘strip, map and sample’ excavations were undertaken by the CAU at the Manor Farm quarry site, Old Wolverton, Milton Keynes, centred on NGR SP 808 422 (Figure 1). The program of work was commissioned by Phoenix Consulting on behalf of Hanson Aggregates. The project specification (Beadsmoore 2007) was established in response to a brief set out by Phoenix Consulting (Richmond 2006). The project will eventually encompass an area of approximately 50 ha, 30 ha of which will be worked for mineral. To date, excavations have been undertaken ahead of four phases of extraction; Phase 1 was stripped and excavated in 2007, Phase 3 in 2008-2009, Phase 4 in 2010 and Phase 5 in 2011. The archaeological excavations were identified by the site code MOW.

This report details the results from the excavations of Phases 3 and 4 (Figure 2), conducted between 2008 and 2010. The results of Phase 1 are contained in a previous report (Grant 2008), and relevant information has been referenced here. The results of Phase 5, completed in 2011, will be detailed in a separate report (Hogan, *forthcoming*), although pertinent information from this latest phase of work has also been cited here.

1.1 Geology and Topography

The site occupies the southern floodplain of the River Great Ouse and comprises four pasture fields situated at a height of between 61m and 62m AOD. The extraction area is bordered by the Great Ouse River to the north and by Back Brook to the south. Beyond the brook, the land rises to a prominent limestone scarp, upon which Manor Farm is located.

A geoarchaeological investigation was undertaken in 2007 by the University of Wales Lampeter Archaeological Services (UWLAS), and included an EM31 geophysical survey of the extraction area (UWLAS 2007). The results showed superficial alluvial clays occupying the valley floor, overlying presumed late Pleistocene 2nd terrace sands and gravels. The survey revealed considerable variation in the topography underlying the alluvial deposits, highlighting the network of palaeochannels amid higher sand and gravel ‘islands’. The depth of alluvial clays varied across the site from 1m to 2.6m.

1.2 Archaeological Background

The archaeological background of the immediate area is detailed in both the desk-based assessment and the written scheme of investigation (Richmond 2002; 2006). For the purposes of this report the most pertinent sites and finds are summarised below.

1.2.1 Mesolithic

In the 1970s, Mesolithic flints were recovered during excavations at Warren Farm, and a larger assemblage was generated during surface collections at the nearby Little Pond Ground site. Both sites lie approximately 1km south-southwest of the Manor Farm quarry within the vicinity of Wolverton Mill.

1.2.2 *Neolithic*

Numerous Neolithic monument and settlement sites are known along the Great Ouse corridor (Dawson 2000; Mills 2005). Within the general vicinity of the site, sporadic finds of flints and Late Neolithic pottery have been recovered from Warren Farm, with a higher concentration of flints found at Little Pond Ground. Also from this area, flints and pottery were found during construction of the Wolverton Mill Centre in the 1990s. Isolated finds have also been recovered from Wolverton Station and Stratford Road, whilst excavations at Cosgrove Roman villa northwest of the quarry produced Late Neolithic pottery and flints. Finally, Early Neolithic Grimston Style pottery and Late Neolithic Grooved Ware was recovered from excavated pits and tree-throws at Stacey Bushes approximately 3km southeast of the quarry (Green & Sofranofi 1985) further attesting to Neolithic settlement activity in the surrounding area.

1.2.3 *Bronze Age*

Bronze Age activity is also well represented in the immediate area and along the Ouse valley. Just west of the Phase 3 area, a possible Bronze Age limestone and timber trackway, sealed beneath 2m of alluvium was investigated in the 1950s during gravel workings at Cosgrove Lodge Park, Northamptonshire (Green & Maynard 1972). The *precise* location of this trackway is uncertain owing to two contradictory entries in the Historic Environment Record (HER), however a spearhead found in this vicinity attests to Bronze Age activity at Cosgrove Lodge Park.

A number of ploughed-out round barrows are known in the Milton Keynes area, with excavated examples at Warren Farm, Little Pond Ground and east of the River Tove. Cropmarks of barrows have also been identified in fields immediately north of the quarry area, and close to Wolverton Mill and at Bancroft Villa field to the south and east of the site respectively.

1.2.4 *Iron Age*

To the southeast of the site, an Iron Age settlement has been excavated at Bancroft. The site comprises 15 circular buildings, representative of several phases of activity. Additional Iron Age remains, including a burial and a ring-ditch, have also been excavated at Warren Farm and Bushfields Middle School respectively.

1.2.5 *Roman*

Immediately northwest of the Manor Farm quarry area, a villa complex has been excavated at Cosgrove, and a geophysical survey of the area shows an extensive network of remains associated with this settlement. The site at Bancroft has also yielded the remains of a villa and a mausoleum, whilst an additional settlement is believed to have existed between Wolverton Station and Stonebridge Farm. At Manor Cottages (adjacent to the extant Manor Farm) a stone wall, pits, ditches along with a large assemblage of Roman pottery and finds were revealed during groundworks. The presence of flue tile fragments in the finds assemblage has led to the suggestion of yet another villa site. Isolated finds from around Wolverton indicate the possible presence of further settlement in the vicinity. Less than 2km east of the site, another Roman settlement is known to the south of Haversham village.

The ancient routeway of Watling Street, which in the Roman period connected important towns at Canterbury, London and St. Albans, runs west of Old Wolverton, through Old Stratford (the modern A5). The number of villa sites and Roman settlements in the vicinity is thus not surprising.

1.2.6 Saxon and Medieval

A Saxon settlement is known to have developed at Wolverton, and is later referenced in a number of early Medieval documents. A number of excavations and stray finds recovered from an area to the south of the site have confirmed the location of this Saxon settlement as within 200m of the quarry boundary.

In the Medieval period, Wolverton developed into a more substantial settlement, with a motte and bailey castle at its centre, again, located a few hundred meters to the south. Immediately south of the extraction area are the remains of a Gilbertine monastery, represented by a series of earthworks. The extant 19th century buildings of Manor Farm are presumed to directly overlie much of the monastic grange. The location of the grange is attested to by name of *Grange Field* (the field forming the southern boundary for the extraction area). The whole area comprising the Medieval motte and bailey, the deserted medieval village and the site of the monastic grange at Manor Farm has been scheduled (SAM 13609/01 and 02).

Within the extraction area itself several probable Medieval fishing weights have been found in Back Brook at the southern limit of the site, whilst 19th century documentary and cartographic sources indicate the presence of structures along the southern side of Back Brook, possibly the remains of a water mill mentioned in a 15th century deed.

1.3 Previous Archaeological Work in the Extraction Area

A report for the 2007 fieldwork at Manor Farm (Phase 1) has already been completed (Grant 2008). The principal finding was an organic-rich palaeochannel, sealed by up to 2m of alluvial deposits and recorded crossing the gravels in a roughly east-west direction. Two large oak logs retrieved from the lower channel deposits were radiocarbon dated to the late Mesolithic and Neolithic period respectively (for radiocarbon dates of **F.12** and **F.13** see Grant 2008), whilst a third post (**F.21**) driven into the gravels through the overlying alluvial layers returned a Saxon date (*ibid.*). Of particular relevance to the 2008-2010 results is a 'pre-alluvial' ditch (**F.20**) found at the southwest corner of Phase 1. Although only a short segment of this feature was exposed, the ditch appears to be very similar in terms of dimensions, fills and orientation to the ditches associated with the newly discovered Cursus 3 (see below). The projected course of the feature suggests it will be exposed in the southern area of Phase 5.

2.0 METHODOLOGY

Using a 360° tracked excavator fitted with a toothless bucket, the topsoil was stripped first and constructed into soil bunds around the extraction area. The alluvial overburden was then stripped under the supervision of an experienced archaeologist. Where archaeological horizons were located within the alluvial layers, blocks of the alluvium were left standing and following investigation, later removed to reveal the underlying sands and gravels, at which level the

majority of archaeology was located. Targeted machine-dug trenches and test pits were utilised to determine the extent of some archaeological and environmental features.

The site was located using an advanced Global Positioning System (GPS) with Ordnance Datum (OD) heights obtained. Archaeological features were digitally planned, and where necessary supplementary plans were drawn at an appropriate scale (1:50 or 1:20). The archaeological features and deposits were then sample excavated or 100% excavated as required. Environmental bulk soil samples and monolith samples were taken from selected features and deposits (buried soil horizons, channel deposits or alluvial layers). A written record of all archaeological and environmental features was created using the CAU recording system (a modification of the MoLAS system). Sections were drawn at an appropriate scale and a photographic record was also kept.

3.0 RESEARCH AIMS

The aim of the 'strip, map and sample' excavations was to define the extent and nature of the archaeological activity at Manor Farm, and to characterise the environment within which that activity was taking place. More broadly, the aims of the excavations were:

- i) To determine the extent, character and date of the archaeological deposits and features throughout the extraction area.
- ii) To determine, as far as possible, the origins, development, function, character and status of the site.
- iii) To establish the stratigraphic sequence of the site, the date of the features and 'occupation' horizons, and the nature of the activities carried out at the site during the phases of activity.
- iv) To place the findings of the above aims in both their regional and national research contexts.

4.0 RESULTS

4.1 Landscape and Environment

Establishing the palaeo-environmental context of the site has been vital in understanding the archaeological remains. First and foremost, the excavations of Phases 3 and 4 have led to the broad distinction between the prehistoric landscape - which developed prior to the deposition of any alluvial overburden - and the Iron Age and later landscape, which developed *during* phases of alluviation. The 2011 excavations in Phase 5 revealed a more complicated stratigraphic sequence, however, where Mesolithic horizons were exposed within early alluvial layers sealing a low-lying gravel island; a complexity arising from the presence of a vast braided channel network spanning much of the Holocene period. Nevertheless, on the higher gravel islands of Phases 3 and 4, the following was seen to be true: pre-alluvial features were of Mesolithic to Bronze Age date and post-alluvial features were Iron Age or later.

Transcending this broad distinction are the palaeochannel systems, some of which originated in the early Holocene, whilst many branches clearly cut through the later alluvial sequence. The impact of channel activity upon the natural and archaeological landscape has manifested itself in several ways; in many cases, rigorous, fast-moving floodwaters have caused severe scouring of

the gravels, resulting in the levelling of upstanding banks and truncation of negative features, whilst more gentle inundations have carefully sealed some archaeological features and deposits.

Buried soil deposits have also been recorded across the site, although the preservation of these deposits is variable. Areas of burning (possibly associated with tree-clearance) within alleviated buried soil horizons were present in Phase 3 and Phase 5, whilst patchy deposits of either very sterile or slightly humic buried soils were noted across Phase 4, often only surviving beneath remnant upcast bank material associated with the monuments.

4.2 The Palaeochannels

Large swathes of palaeochannel networks were revealed between 2007 and 2011 and were mapped topographically. This information corresponded with the results of the UWLAS geophysical and borehole survey (see UWLAS 2007 report). The palaeochannels have been divided into three categories:

4.2.1 The Southern Braided Channel System

This occupied the southern boundary of the extraction area, along the approximate course of the present Back Brook (Figure 2). The northern edge of this system was revealed at the southeast edge of Phase 3 with a greater extent being exposed and investigated in Phase 4. This system was characterised by clearly defined bands of organic-rich silts and clays, (deposited by slow-moving channel phases), interspersed with bands of fine, shell-rich sands and coarse gravel deposits, representative of fast-flowing, dynamic channels. Although pieces of worked wood and animal bone fragments were found within the channel deposits no diagnostic material such as pottery was recovered to date the channel phasing. A presumed Roman trackway (Trackway 2) partially contained within the lowest channel silt deposits, suggested a Roman/post-Roman date for this portion of channel accumulation. Under the guidance of Martin Bates (UWLAS) a series of environmental and OSL (optically-stimulated luminescence) samples were taken from this channel system and the underlying sands and gravels. The analysis of these samples and details of the findings will be contained in a separate report (Allen, forthcoming).

4.2.2 The Northern Braided Channel System

This system occupied the northern edge of the site and was partially exposed in Phase 3 and has been further investigated in Phase 5 (2011). The dating of this channel system is yet to be clarified, although a late glacial/early Holocene date has been suggested for its origins (French 2010 pers.comm; Bates 2011 pers.comm.).

The portion of the channel system exposed in Phase 5 comprised two main branches, forming a low-lying gravel island in between (approximately 7637m² exposed). The northern of these two tracts roughly followed the present course of the Great Ouse River, whilst the second meandered beneath the route of the dried up brook seen to cut across the alluvial surface of Phase 5. The bulk of the channel deposits within both ancient courses comprised coarse gravels and sands, indicating dynamic, fast-flowing channel phases. Less substantial layers of organic-rich silts and clays occasionally interspersed with the gravels were noted sporadically through the channel sequences. The uppermost fills of the latest channels comprised finer silts and clays, deposited by

slow-flowing waters, and contained the remains of several wooden and stone structures (remnants of 'crossing points' or platforms and possible fish weirs).

A large quantity of bone was recovered from the channel deposits, although dateable material from secure contexts was scarce. Investigations of the system under the guidance of Martin Bates suggested that the earliest channels appear to have formed during the early Holocene. Indeed, alluvial deposits pre-dating preserved buried soils associated with Mesolithic flint scatters were recorded in Phase 5 to the north of this channel system. This information, in conjunction with the presence of 11th century AD remains within the upper silt accumulations of the palaeochannel sequence (see Hogan, *forthcoming*), suggest that this system represents approximately 9,000 years of continual or intermittent river activity.

In 2011, two machine slots were excavated through the channel at different points and a series of environmental samples were taken at both points under the guidance and recommendation of Martin Bates. This work was commissioned separately from the program of archaeological work. Again, the results will be included in a future external assessment (Allen, *forthcoming*).

4.2.3 *Minor Channels*

Minor channel avulsions were recorded crossing Phases 3 and 4. Many of these channels were contained within the alluvial layers, although some carved through the surface of the gravels and were sealed by the alluvial overburden. A few channels were partially contained within the alluvial layers, occasionally cutting deeper into the underlying gravels. These channels will be addressed, where necessary, in relation to the archaeology.

5.0 ARCHAEOLOGICAL RESULTS: THE PRE-ALLUVIAL LANDSCAPE

5.1 Terminal Upper Palaeolithic

A discrete assemblage of Upper Palaeolithic flints was found during stripping of the western edge of Phase 3 in 2010 (Figure 3). Several re-fitting blades indicated that the material was an *in situ* deposit, with a total of 63 flints representing a single knapping episode of a pre-prepared imported core (see below, Billington). The lack of diagnostic tools renders the assemblage difficult to characterise accurately although a preliminary assessment has suggested the material as belonging to the Federmesser tradition (c.12,500-10,000 BC) (B.Shaw, pers.comm). Furthermore, the assemblage does not appear to exhibit typical traits of earlier Creswellian technologies (i.e. soft hammer percussion and talon en éperon striking platforms; see Billington, below).

The flints were recovered from a buried soil deposit (**F.276**, Figure 3), situated between the bifurcation of the Great Ouse where the northern and southern channel systems fork. The material and its context were further investigated by A.H.O.B. in April 2011, and the results of this work will be included in a separate report (A.H.O.B. *forthcoming*).

5.2 Late Mesolithic

Of the 647 worked flints recovered during the 2008-2010 fieldwork, the vast majority of the assemblage was in keeping with late Mesolithic/earlier Neolithic blade-based technologies. Of this assemblage, 192 were recovered as surface finds from poorly preserved remnant buried soil deposits overlying the gravels, whilst approximately one third of the assemblage (234 flints) was found in excavated tree-throw hollows, with notably higher concentrations found at the western end of Phase 3 (Figure 2).

5.2.1 Tree Throws

Tree-throws peppered the entire exposed gravel surface, representing a formerly densely wooded landscape. Evidence for burning in or around many of the tree-throws suggests possible small-scale clearance associated with temporary habitation or possible utilisation of the forest for raw materials. Although a few tree-throws did produce later prehistoric material culture (see F.201 below), no diagnostically later prehistoric flintwork was found in the excavated tree-throws suggesting the majority pre-date this period. Furthermore, and indeed significantly, the ditches of all three cursus monuments were consistently seen to cut tree-throw hollows, implying the monuments were situated in a 'cleared' (or at least partially cleared) landscape.

Of the excavated tree throws, **F.23** yielded 133 worked flints, mostly non-diagnostic pieces, although a number of blades, blade cores and a microlith suggest a Late Mesolithic date. Additional burnt flints, burnt animal bone and charcoal fragments were recovered from a bulk environmental sample from this feature (see Ballantyne, below). Close to this, an environmental sample from tree-throw **F.33** yielded a similar assemblage of burnt flints, charcoal and charred hazelnut fragments indicative of hearth waste (Figure 2).

To the west of this, two 'intercutting' tree-throw features (**F.96/F.97** and **F.98**) yielded a comparable assemblage of 52 flints, 37 burnt flints and 112 fragments of animal bone. A total of 12 fragments of bone were identifiable as probable aurochs, red deer and 'cattle-sized' (see Rajkovača below).

The evidence from these features suggests waste material from small-scale Mesolithic hearths and knapping debris associated with seasonal or transient activity disposed of in tree throw hollows.

5.3 Neolithic

The Neolithic activity can be divided into three broad phases; pre-cursus settlement activity (pits), Middle Neolithic cursus construction (with two sub-phases) and Late Neolithic hengiform construction. Although the monumental landscape dominates the Neolithic narrative, evidence of limited settlement activity predating the construction of the monuments was encountered. A 'group' of 12 clearly defined pits were excavated in Phase 3 (Figure 4). With the exception of pit **F.206** which was located approximately 100m east of the group, the 11 remaining pits were all located within 50m of each other (**F.139**, **F.149**, **F.151**, **F.154**, **F.160**, **F.161**, **F.168**, **F.171**, **F.175**, **F.179** and **F.180**). Although two of these pits were heavily truncated (F.160 and F.171), in general they shared sufficient similarities to the other pits to be considered alongside them.

The 12 pits were all sub-circular to oval in shape, with steep sides and flat to concave bases. All were characterised by pale and sterile sandy-silt fills. Two of the pits contained crumbs of non-

diagnostic prehistoric pottery, and two contained burnt and unburnt animal bone fragments, identifiable only as cattle-sized and/or mammalian (Rajkovača, this report). A total of 11 flints were recovered from the pits, which were in keeping with the general assemblage of Late Mesolithic/Earlier Neolithic material from across the site. No diagnostically Early Neolithic (or later) flints were recovered suggesting this material could be a residual component. Although scarce and poorly preserved, the pottery and animal bone fragments are indicative of general domestic waste (Table 1).

The only pits with stratigraphic relationships were F.168 and F.175, both of which were cut by the southern ditch of Cursus 2 (**F.147**). By association (form, content and relative proximity), it is likely that all 12 pits are broadly contemporary, and thus represent a phase of pre-cursus occupation activity in the landscape. At the base of F.168 were the remains of a large, charred timber, from which a substantial amount of charcoal was recovered, and which may be suitable for radiocarbon dating.

PITS	139	149	151	154	160	161	168	171	175	179	180	206	Totals
Flint Qty. (Wt/g)	1 (1)	-	6 (47)	-	-	-	-	-	1 (18)	1 (4)	2 (4)	-	11 (74)
Pottery Qty. (Wt/g)	-	-	-	-	-	6 (1)	-	-	-	-	2 (1)	-	8 (2)
Animal Bone (Burnt) Qty. (Wt/g)	-	7 (6)	-	-	-	8 (?)	-	-	-	-	-	-	15 (?)
Animal Bone (Unburnt) Qty. (Wt/g)	-	2 (1)	-	-	-	37 (32)	-	-	-	-	-	-	39 (33)

Table 1: Finds totals from the pre-cursus pits.

5.3.1 The Cursus Monuments

To date, the excavations at Manor Farm have revealed four Neolithic monuments across the landscape (Figure 5); Cursus 1 was recorded at the eastern end of Phase 3, Cursus 2 spanning the central portion of Phases 3 and 4, whilst a third, probable earlier cursus (Cursus 3), extended across Phase 4 and the southwest area of Phase 5. A late Neolithic hengiform with associated cremation deposit was also excavated in Phase 4.

The three cursuses (Table 2) appear to represent at least two phases of monument construction; a third phase is represented by the Late Neolithic hengiform (see below). Labelled in order of discovery, Cursuses 1, 2 and 3 form a monument complex along the gravel islands south of the River Great Ouse, although it is likely that Cursus 1 originally continued across the gravel terrace north of the present river. Typically of these enigmatic monuments, dating is problematic and will be discussed later, although the 'skewed' nature of the eastern terminal of Cursus 2 implies an attempt to align the monument to the western terminal of Cursus 3, suggesting the latter predates the former.

Monument	Exposed Length (m)	External Width (m)	Min. Ditch Width (m)	Max. Ditch Width (m)	Min. Ditch Depth (m)	Max. Ditch Depth (m)	No. of exposed Causeways	Orientation
Cursus 1	35	31.2	0.95	1.90	0.12	0.80	0	NNW-SSE
Cursus 2	423	29.9	0.73	3.20	0.30	1.40	3	NE-SW
Cursus 3*	269	40.9	1.60	3.30	0.15	0.70	3	E-W

Table 2: Comparative table showing dimensions, number of causeways and orientation of each cursus monument as exposed during excavations at Manor Farm.

*The information for Cursus 3 includes results from the 2011 excavations at Manor Farm, which exposed additional causeways and the eastern terminal of the monument.

Cursus 1

At the western end of Phase 3, the square-ended southern terminal of a cursus was exposed immediately south of, and perpendicular to, the River Great Ouse (Figure 5). Sealed by the alluvial overburden, and termed Cursus 1, the monument comprised ditches **F.78**, **F.94** and **F.99** and had an external width of 31.2m. The monument was heavily truncated on its western side and the southwest corner was located outside of the stripped area. Only 35m of the cursus was exposed within the extraction area, although there is some indication in the SMR that the monument originally continued into neighbouring fields to the north (see Discussion).

Where the monument had not been significantly truncated (F.78), the ditch had a steep, flat-based 'V' profile (Figure 7); elsewhere, the truncated western arm was a shallow, but steep-sided 'U' shape. At its northernmost exposed extent, the cursus ditches were infilled with a sequence of river-derived, organic-rich silts at the base, followed by a sandy-silt material, and then sealed by a distinctively silty-clay soil. This 'tripartite' sequence of fills is typical of seasonal river inundations, interspersed with periods of more gentle erosion and weathering (Boreham pers.comm. 2009). Investigations in Phase 5 in 2011 revealed that the northern palaeochannel system was active as early as the Mesolithic period and thus the sequence of flood deposits in Cursus 1 could have resulted from a broadly contemporary channel located in the region of the present river course. This fact has some potentially significant implications for the relationship between the monument and the river.

Although no direct evidence for upstanding internal banks associated with Cursus 1 was found, excavated slots in the eastern arm and the southern terminal displayed episodes of primary weathering, followed by intermittent gravel washes and soil erosion deposits. The gravel was largely concentrated on the interior side of the ditch fill sequence, and is likely to be the remnants of the original bank material. As seen with Cursus 2 (see below), overbank floodwaters are presumably responsible for levelling the banks, and re-depositing some of this material amid episodes of more gentle erosion and gradual backfill accumulation.

Cursus 2

South of Cursus 1 and extending across a higher sand and gravel ridge located along the central area of Phases 3 and 4, a second cursus was exposed beneath the alluvium (Figure 5). The monument was formed by parallel ditches (northern arm **F.48**, **F.80/F.136**, **F.140** and **F.183**; southern arm **F.56**, **F.57**, **F.146**, **F.147** and **F.181**) and measured 29.9m wide externally. It was aligned northeast-southwest, perpendicular to Cursus 1, and roughly parallel to the course of the river. A total of 423m of this monument was uncovered, including its eastern terminal (**F.222**).

The profiles of the cursus ditches were generally similar to that of ditch F.78 of Cursus 1 (Figure 7); a steep, flat-based 'V', although for the majority of its length, the northern arm was notably shallower. The cursus ditches were breached by three causeways, one on its northern arm (between F.136 and F.140), and two on its southern (between F.56 and F.57 and between F.146 and F.147). The similarities between Cursus 1 and Cursus 2 in terms of overall dimensions and ditch profiles, suggests the two features may belong to the same phase of monument construction. It is striking however, that whilst the southern terminal of Cursus 1 is square-ended, the eastern terminal of Cursus 2 is noticeably 'skewed' at an angle seemingly derived to parallel the opposing western terminal of a third, probable earlier enclosure (see below).

Traces of internal banks survived in plan along both the northern and southern arms of Cursus 2, and further evidence of a bank was repeatedly encountered as a slumping deposit on the internal edges of excavated ditch slots, especially along the southern arm. Machined sections through the alluvium sealing the cursus ditches (F.136, F.140, F.146 and F.147) demonstrated a thin trail of upcast gravel bank material overlying a poorly preserved deposit of buried soil.

A significantly higher amount of gravel was also seen in the backfill of the eastern terminal ditch (F.222). This is likely the result of larger amounts of upcast gravel deriving from digging the eastern terminal and its corners; there would have been more material per internal space and subsequently, more material to slump into the open ditch. Broadly speaking, the backfill sequence of the excavated ditch slots demonstrated a pattern of primary weathering and erosion of the gravel edges of the ditch, followed by intermittent episodes of silt accumulations and gravel weathering; alternating episodes of bank slumping and silt accumulations form the upper fills which were then capped by an alluvial deposit.

Dynamic overbank flooding episodes are likely to be responsible for scouring the surface of the gravels, reducing the overall depth of the northern cursus ditch, where no *external* bank existed to serve as a protective barrier. The associated internal bank was subsequently levelled and re-deposited within the internal space of the monument. On the southern arm, these floodwaters evidently collided with the internal bank first and consequently pushed the material into the open ditch, thus filling it but also preserving its overall depth.

Cursus 3

To the east of Cursus 2, the western terminal of a third rectangular enclosure was exposed (Figure 5). The external width of the enclosure measured 40.9m, and a total of 135m of its length was exposed across Phase 4, although in light of recent excavations in Phase 5, the total length of the enclosure is known to be approximately 269m. Aligned east-west, this feature comprised ditches **F.227/F.271** and **F.301** forming its western and northern arms, and **F.236** and **F.300** forming its southern and partial eastern arms.

The ditch profiles differed greatly from those of Cursuses 1 and 2 (Figure 7). Here, the profile was consistently a very wide, but relatively shallow flat-based 'U' shape. Much of the southern arm exposed in 2011 was heavily truncated by the southern braided channel system. In fact, in some portions, the entire backfill sequence comprised organic-rich alluvial clay fills, suggesting that some branches of the channel system are broadly contemporary with the enclosure. A single causeway was excavated on the southern arm in Phase 4 (between F.227 and F.236), whilst two additional causeways were exposed at the eastern end of the monument within Phase 5 in 2011 (Hogan, forthcoming). Unlike Cursus 2, which remained straight along its course, this third enclosure had a distinctive 'kink'; a gentle curve to its form, apparently mirroring the bend of the northern palaeochannel system.

The presence of internal banks was evident along the southern arm and western terminal especially, and was seen occasionally along the northern arm. As with Cursus 2, remnant bank upcast was seen in the overlying alluvium, where it sealed thin deposits of a scoured, inorganic buried soil (see French, below). Slumped bank material was also evident in excavated ditch slots. In general, the backfill sequence was similar to that of Cursus 2; primary weathering deposits followed by intermittent episodes of bank slumping and silt accumulations. Swathes of the enclosure ditches also demonstrated an alluvial capping forming the uppermost fill of the ditch. At its western terminal, the ditch backfill was composed almost entirely of gravel, representing

rapid successions of weathered material from the ditch edges and bank slumping. Similar to the terminal of Cursus 2, very little silt was seen in the western terminal of this enclosure, suggesting at this point, the ditch may not have been open for very long prior to intentional or natural backfilling.

Finds from the Cursus Monuments

Very few finds were retrieved from any of the cursus monuments (Table 3). A total of 130 worked flints were recovered from all three cursuses (approximately 20% of the total assemblage from the 2008-2010 fieldwork). The flint was largely in keeping with the Late Mesolithic/Earlier Neolithic material recovered from tree throws and surface collections, and therefore likely to be residual. However, on three occasions, *in situ* deposits of Late Neolithic/Earlier Bronze Age flints were recovered from the uppermost silty fills of Cursuses 2 and 3 (see Billington, below).

A total of 43 sherds (277g) of prehistoric pottery were recovered from Cursuses 2 and 3 (approximately 7% of the entire site assemblage from the 2008-2010 excavations). The majority of this assemblage comprised a single ‘dump’ of 27 sherds (256g) of Peterborough Ware pottery (3500-3000 BC), which was found in the upper silts of Cursus 2, at its western end (F.183) (see Knight, below). The material was found in a ‘stack’ and is suggestive of an *in situ* dump, rather than material inadvertently incorporated. Peterborough ware is commonly associated with cursus monuments, and it is likely that this material represents activities contemporary with the life of the cursus monuments. The remaining pottery largely comprised undiagnostic ‘crumbs’, the fabric of some of which shared characteristics with Early Neolithic pottery, although the material was too poorly preserved to be of any assessable value.

A total of 76 assessable fragments of animal bone were recovered from all three cursus monuments (Table 3). The material was relatively poorly preserved, although the low number of fragments is in keeping with the flint and pottery assemblages and reflects the typically sterile nature of this monument type. No apparent ‘dumps’ of bone were found in the excavated slots suggesting the scarce material has been inadvertently incorporated.

Monument	Cursus 1	Cursus 2	Cursus 3	
FINDS ASSEMBLAGES				Total
Flints	31	92	7	130
Pottery (of which is diagnostic)	0 (0)	38 (27)	5 (0)	43 (27)
Animal Bone (identifiable fragments)	19	57	0	76

Table 3: Total quantities of recovered flints and pottery in conjunction with total assessable faunal material from excavations of the cursus monuments from 2008-2010.

The quantity of redeposited bank material within the cursus ditches suggests rapid infilling, whilst the presence of Peterborough Ware in the upper silts of Cursus 2 and the *in situ* flints in Cursuses 2 and 3 imply that the monument ditches were almost completely infilled by the Late Neolithic/Early Bronze Age, prior to being sealed by the alluvium. This is likely to be a direct result of persistent and vigorous floodwaters from the northern palaeochannel system. The *in situ* stack of Peterborough Ware sherds places the construction and backfill of the Cursus 2 comfortably in the Middle Neolithic period, and by association, Cursuses 1 and 3 are broadly contemporary. The remaining finds from the cursus monuments appear to represent residually incorporated material, and not intentional deposits. This residual assemblage parallels that recovered from the probable earlier Neolithic pits and it is likely that it derived from either earlier

Neolithic, pre-cursus activities, or broadly contemporary Middle Neolithic activities not directly associated with the cursus use.

Environmental Samples from the Cursus Monuments

A total of 11 bulk environmental samples from all three cursuses have been processed, of which only two contained assessable environmental remains. A rich charcoal deposit was recovered from Cursus 3 (F.227) at the causeway terminal, and appeared to be the remains of a charred timber, similar to one found in pit F.168.

The terminals of the causeway between F.56 and F.57 of Cursus 2 were cut into the edge of a minor pre-alluvial palaeochannel (F.46/F.47) that crossed the gravel island in Phase 3. Environmental samples from the base of F.57 where it cut the channel produced plant remains associated with disturbed soils, possibly indicative of forest clearance activity. Plant remains associated with streams and marshlands were also encountered (see Ballantyne, below), suggesting the cursus ditch was inundated by floodwaters from channel F.46/47 and thus the two are likely to broadly contemporary.

5.3.2 The Hengiform Monument ('pit circle')

A complete Late Neolithic hengiform monument was exposed at the eastern end of Phase 4 which comprised a circle of nine pits (F.242, F.243, F.244, F.245, F.246, F.247, F.248, F.249 and F.250), with an apparent causeway on its northeast side (Figure 5). The monument was sealed by the alluvial overburden and located 'within' Cursus 3. A central posthole (F.251) and three shallow, intercutting pits (F.232, F.233 and F.234) were located on the interior of the hengiform. Externally, the diameter measured approximately 9.6m (6.5m internally). The monument was 100% excavated.

The external pits were oval to sub-rectangular in plan, with steep sides and flat-bases. On average, the pits measured 2.42m long by 1.55m wide by 0.43m deep, although pit F.247 was notably larger, measuring 3m long by approximately 1.95m wide (Table 4). Furthermore, pit F.247 was cut by a later pit (F.262), which was also oval in plan but comprised a distinctly sandy-silt-clay fill, presumably deriving from an early alluviation.

The pits, as exposed, were spaced an average of 0.3m apart from each other, with the exception of pits F.245 and F.246, which were separated by approximately 1.4m. Given the force of ancient overbank flooding from the northern channel system (as demonstrated by the levelling of the cursus banks) and the mobility of the natural sands and gravels through which the pits were cut, the hengiform had undoubtedly been truncated. The proximity of the pits suggests that prior to this truncation they may have formed a continuous 'ring'. However, the space between pits F.245 and F.246 infers the existence of a deliberate causeway, aligned north-northeast, providing potential access and visibility into the monument.

Despite the proximity of the hengiform to Cursus 3, there was no evidence that the hengiform pits had been cut through an upstanding bank associated with the southern arm of the cursus (F.236). The closeness of the two monuments may simply represent a preference for this particular area in the landscape.

PIT (External)	Length (m)	Width (m)	Depth (m)	Pottery Wt(g)	Flint Wt(g)	Bone Wt(g)	Human Bone Wt(g)	Stone Wt(g)
F.242	1.75	1.08	0.24	1 (2)	4 (4)	-	-	-
F.243	2.45	1.55	0.4	28 (60)	-	-	-	-
F.244	2.1	1.5	0.46	-	3 (6)	-	-	-
F.245	2.5	1.5	0.48	98 (103)	3 (20)	-	-	-
F.246	2.4	1.45	0.45	99 (641)	5 (21)	90 (9)	-	-
F.247	3.0	1.95	0.49	6 (32)	1 (15)	11 (124)	-	-
F.248	2.2	1.7	0.5	30 (20)	1 (1)	-	-	-
F.249	2.5	1.6	0.42	-	-	-	-	1 (1268)
F.250	2.65	1.57	0.36	19 (13)	4 (46)	8 (10)	-	-
PIT (Internal)	Length (m)	Width (m)	Depth (m)	Pottery Wt(g)	Flint Wt(g)	Bone Wt(g)	Human Bone Wt(g)	Stone Wt(g)
F.232	0.4	0.4	0.1	-	-	-	369 (87)	-
F.233	0.4	0.4	0.22	-	-	-	2 (1)	-
F.234	0.3	0.3	0.1	-	-	-	59 (33)	-
F.251	0.6	0.6	0.35	-	-	-	-	-

Table 4: Table of dimensions of hengiform features and associated finds assemblages.

Internal Features

The central pit/posthole F.251 was circular in plan, with steep sides and a gently concave base. No material culture was recovered from this feature to infer its function. South of this, to the 'rear' of the internal space were three small, truncated posthole/pit features (F.232, F.233 and F.234). A small amount of cremated human bone was recovered from F.232 and F.234, the former of which cut F.233, which yielded no bone. The level of truncation of the monument suggests that additional material associated with these deposits, or indeed material associated with F.233, has been lost.

Finds from the Hengiform Monument

The hengiform monument yielded a relatively large finds assemblage in comparison to the cursuses. A total of 22 flints were recovered from the external pits. Of the 22 pieces, several flints, including a single oblique arrowhead in pit F.249, were considered to be broadly contemporary with the construction of the monument but may not have been deliberately included in the backfill. The remaining flints represent a residual constituent from Late Mesolithic/Early Neolithic activity in the landscape.

A total of 271 sherds (870g) of pottery were recovered from the external hengiform pits, representing almost 50% of the entire site assemblage from the 2008-2010 excavations.

Approximately one third of this assemblage (99 sherds) was contained in pit F.246. The pottery has been categorised as a coherent assemblage of Durrington Walls sub-style Grooved Ware (2900-2400 BC, Cleal & MacSween 1999), with a minimum of four vessels represented (see Knight, below). The sheer quantity of pottery in the hengiform assemblage compared with that of the three cursuses highlights the different depositional practices associated with the two monument types (Table 5). To the south of the hengiform, an excavated tree throw feature (F.226) also yielded a few abraded sherds of probable Grooved Ware pottery, which is likely to have derived from activities associated with the hengiform.

Monument		Cursus 1	Cursus 2	Cursus 3	Hengiform
Flint	Qty.	17	107	6	18
	Wt. (g)	152	966	71	25
Flint (burnt)	Qty.	0	9	0	0
	Wt. (g)	0	268	0	0
Pottery	Qty.	0	38	5	271
	Wt. (g)	0	271	5	871
Animal Bone (identifiable)	Qty.	19	57	0	32
	Wt. (g)	N/A	N/A	N/A	N/A
Human Bone (Burnt)	Qty.	0	0	0	434
	Wt. (g)	0	0	0	122
Worked Stone	Qty.	0	0	0	1
	Wt. (g)	0	0	0	1268
TOTAL FINDS					
	Qty.	36	211	11	829
	Wt. (g)	152	1505	76	2160*

Table 5: The total finds counts for the two monument groups.

* Total weight excludes the worked stone artefact from the hengiform.

A total of 87g of cremated bone was recovered from F.232 and a further 7g from F.234. This material represented the partial remains of two adult/sub-adult skeletons of indeterminable sex. The fragments of bone were very small and their colouration indicative of complete oxidation on the pyre (see Dodwell, below).

Only three of the hengiform pits contained fragments of animal bone; F.246, F.247 and F.250. The majority of this assemblage comprised undiagnostic fragments, although the material from F.247 was identifiable as fragments of cow bones. It is possible that the fragments from adjacent pits F.246 and F.247 were part of the same depositional act, as they were associated with a charcoal-rich lens present in both pits. The limited assemblage was broadly comparable to that recovered from the Neolithic pits, and similarly, the poor preservation of the material is likely due to the acidic nature of the pre-alluvial sandy soils.

A rudimentary anvil stone fragment was found in F.249 and displayed limited traces of wear, suggesting either a short life-cycle of the artefact, or possibly its use for grinding soft materials (see Timberlake, below).

Environmental Samples from the Hengiform

Six samples were processed from the hengiform monument; three from external pits F.246, F.247 and F.249 and three from the internal postholes F.232, F.233 and F.234. Despite the presence of charcoal-rich lenses, charcoal-rich residues on the deposited Grooved Ware and fragments of burnt animal and cremated human bone in the hengiform features, very few charcoal fragments, and only a single charred seed were recovered from any of the samples.

5.4 Bronze Age

Only a few scattered *features* can be securely dated to the Bronze Age, although many of the post-Neolithic, pre-alluvial features identified across the site are potentially of Middle to Late Bronze Age date (Table 6).

Feature	Context	Feature Type	Beaker Qty (Wt/g)	Deverel Rimbury Qty (Wt/g)	Post-Deverel Rimbury Qty (Wt/g)
89	256	Pit	-	-	1 (4)
140	504	Cursus 2 Ditch	-	-	1 (5)
142	467	Pit	-	82 (169)	-
155	-	Cursus 2 Bank	-	-	8 (29)
201	814	Tree Throw	-	-	156 (222)
258	1435	Burnt Stone Pit	2 (11)	-	-
-	597	Alluvium sealing Cursus 2 bank	-	6 (10)	-
-	-	Surface Collection	-	-	1 (2)
TOTALS	8	-	2 (11)	88 (179)	167 (262)

Table 6: Total quantities and weight of all Beaker, Deverel Rimbury and post-Deverel Rimbury pottery recovered from excavated features and other contexts.

5.4.1 Early Bronze Age

Two fragments of residual Beaker pottery were recovered from a small burnt stone pit (**F.258**) in Phase 4 (Figure 8). In conjunction with the *in situ* later Neolithic/Early Bronze Age flint from the upper cursus fills, this pit highlights the potential for further activity across the landscape during this period.

5.4.2 Middle Bronze Age

A large pit (**F.142**, Figure 9) located toward the centre of Phase 3 contained 82 fragments of Deverel Rimbury pottery (c. 1500-1000 BC). Pit F.142 cut **F.144**, and the similarities between these two pits in terms of form and backfill suggests the latter is also of Middle Bronze Age date. A further six sherds were found in alluvium capping the bank of Cursus 2 ([597]), presumably having been transported by floodwaters.

Coaxial Field Systems

Two ditches forming the partial northern and eastern arms (**F.54** and **F.55** respectively) of a probable field system (field system 'A', Figure 8) were excavated in Phase 3. Although badly truncated, both ditches were sealed by the overlying alluvium and F.54 was seen to cut the northern arm of Cursus 2 (F.48). An opposing system ('B'), also sealed by the alluvium and comprising a western (**F.224**) and a southern (**F.225**) arm was excavated in Phase 4 in 2010. Ditch F.224 directly cut the eastern terminal of Cursus 2 (F.222), whilst F.225 cut through the terminals of the southern causeway of Cursus 3 (F.227 and F.236), terminating approximately 10m west of the hengiform monument. Both partial field systems were aligned northeast-southwest and their stratigraphic relationships with the cursus monuments and overlying alluvium suggests they post-date the final backfill episodes of the cursus monuments (dated to the Early Bronze Age) and are thus likely to date to the Middle Bronze Age.

Features 'Associated' with the Field Systems

A number of features were located in close proximity to the field systems and consequently have been assigned a probable Middle Bronze Age date (Figures 8 and 9). At the east end of Phase 4 a small segment of a pre-alluvial ring gully (**F.260**) was excavated at the eastern end of field system 'B', and was apparently located 'within' its southern arm (F.225). This feature was largely truncated and yielded no finds, however a total of eight burnt stone pits were also excavated in relative proximity to this feature and the field system (**F.221**, **F.230**, **F.255**, **F.256**, **F.257**, **F.258**, **F.259** and **F.272**). F.221 contained burnt cobbles ('pot-boilers') whilst the remaining seven pits contained very few fragments of cobbles, but significant amounts of burnt flint. Two short linear gully segments (**F.263** and **F.277**) were also exposed adjacent to the partial ring gully and were comparable to it in terms of form and backfill, but neither yielded any material culture. The location of the ring gully and gully segments in relation to field system 'B' implies a potential association. Furthermore, the concentration of burnt stone pits and short gully features in this area seems to demonstrate some small-scale, localised settlement activity.

Although burnt stone pit F.258 yielded fragments of abraded Beaker pottery suggesting the potential for some Early Bronze Age activity, several of the 34 burnt stone pits excavated in Phase 5 in 2011 to the north of field system 'B', contained sherds of Deverel-Rimbury (M.Knight pers.comm.). In light of this assumption, it is likely that many of the burnt stone pits excavated across Phase 4 are of plausible Middle Bronze Age origins. Three additional burnt stone pits were also excavated at the very western edge of Phase 3 in 2008 (**F.69**, **F.70** and **F.71**). These pits were distinguishable from the nearby complex of alluvial-filled features by their dry, sandy, pre-alluvial fills. It is possible that these burnt stone pits are associated with field system 'A' to the southeast, although an Early or Late Bronze Age date cannot be ruled out.

5.4.3 Late Bronze Age

Elsewhere along Cursus 2, eight sherds of Late Bronze Age pottery (post-Deverel Rimbury, c. 1000-800 BC) were recovered from the surface of the bank upcast (**F.155**) associated with Cursus 2 ditch F.140. A 'dump' of 156 fragments of post-Deverel Rimbury pottery was recovered from a charcoal-rich deposit in a large tree throw (**F.201**), located at the mid-point between the northern and southern arms of Cursus 2 (F.136 and F.146) (Figure 8). This material might indicate the deposition of Late Bronze Age hearth and cooking debris.

5.5 Undated Pre-Alluvial Features

Without sufficient dating material from the majority of the features on site, many of the outstanding features have simply been categorised as pre- or post-alluvial in date. Although the Neolithic and Bronze Age features excavated in Phases 3 and 4 were consistently sealed by the alluvial overburden, and the Roman Trackway 1 was largely contained within the alluvial layers, beyond this broad distinction, dating the remaining features is extremely difficult.

Cremations

Approximately 30m west of the Deverel Rimbury pits F.142 and F.144, and located immediately north of Cursus 2 (F.140) two small pits (**F.170** and **F.172**) (Figure 8) were excavated, each of which contained the cremated remains of an adult/sub-adult skeleton of indeterminable sex. Of these two, F.170 was a well-defined circular pit, whilst F.172 had been badly truncated. Subsequently, F.170 yielded a total of 616g of burnt human bone, and F.172 only 17g. The bone fragments were very small, and their colouration was indicative of poorly oxidised material, probably resulting from insufficient fuel or curtailment of the cremation process (see Dodwell, below).

A further three pits containing cremated remains were exposed in Phase 4 (**F.228**, **F.269** and **F.270**) (Figure 8). Of these pits, F.269 and F.270 were located 'outside' the Cursus 2 eastern terminal (F.222), but 'internal' to field system 'B' (F.224 and F.225). These shallow pits were similar in form and profile to F.170 and again, each contained the remains of an adult or adult/sub-adults of indeterminable sex. Whilst F.269, contained 628g of cremated bone, and was similar in form and content to F.170, F.270 was badly truncated and subsequently contained significantly less bone (3g). The colouration of the bone was again, similar to that from F.170 and F.172, and suggests the material was poorly fired.

In general, the form of the cremation pits and their proximity to both the Deverel-Rimbury pits and field system 'B' infer an association with the Middle Bronze Age occupation of the site. F.228 differed from the rest of the cremation pits given its location and content. Situated 'inside' the eastern terminal of Cursus 2, at approximately the midpoint between the northern and southern arms, the small pit contained a thin charcoal-rich deposit which yielded the partial remains of a neonate skeleton (11g). Although this feature was located within the enclosed space of the Cursus 2 terminal, it is also 'within' field system 'B'. Its location and content suggests it might have been a special deposit, and could date either to a phase of Neolithic or Bronze Age activity.

Other Features

A machine-dug trench (Trench 1, Figure 5) at the western end of Phase 3 was excavated to determine the potential extent of Cursus 2. Within this trench, a single pit or possible ditch terminus (**F.188**) was exposed. This feature comprised distinctly pre-alluvial sandy-silt fills and furthermore, was apparently sealed by the upcast bank material associated with the southern ditch of Cursus 2 (F.181). It is possible then, that this feature is broadly contemporary with the pre-Cursus Neolithic pits located to the east. Further excavations in Phase 2 to the west of this trench may resolve this issue.

To the west of this trench, a shallow ditch (**F.189**, see Figure 2) yielded a small quantity of Late Mesolithic/Early Neolithic flints, and was distinguishable from other features in the area by its notably dry, sandy fill. Although the flintwork is undoubtedly residual, the ditch appeared to be aligned with the southern arm of Cursus 1. The shared alignment could infer a Neolithic date, and furthermore, could suggest an association with the monumental landscape. However, the proximity of field system 'A' and three burnt stone pits, suggests that the ditch could relate to the Bronze Age occupation.

An additional pre-alluvial feature, to the east of F.189 was also investigated (**F.200**), although it was badly truncated and partially obscured by the network of later, post-alluvial features. The feature did not share an alignment with any of the Neolithic or Bronze Age features on site.

6.0 ARCHAEOLOGICAL RESULTS: THE POST-ALLUVIAL LANDSCAPE

6.1 Roman Features

A number of post-alluvial features have been firmly assigned to the Roman period based on artifactual evidence whilst several additional features across the landscape were dated to this period either by association or by their relationship with alluvial deposits.

Trackway 1

A north-south trackway (**F.186**) with associated flanking ditches was investigated in Phase 3 (Figure 10). Whilst the flanking ditches (east ditch **F.185** and west ditch **F.187**) cut down into the underlying sands and gravels, the trackway surface, comprising small, roughly hewn limestone blocks, was largely located 'midway' through the alluvial sequence. The trackway surface sloped gradually downwards toward the southern edge of the extraction area. Fragments of Roman tile and quern stone within the limestone surface suggest a Roman date.

At its northernmost exposed extent, little trace of the limestone surface was seen, although three postholes, cut from within the alluvial layers and containing large preserved oak posts (**F.107**, **F.108**, **F.110**) were excavated within the course of the flanking ditches. These posts are likely to be structural elements associated with the trackway. The posts displayed tool marks indicative of flat iron axes (see Bamforth, below), and are thus suggestive of an Iron Age or later date.

At its southernmost exposed limit, the flanking ditches were infilled with an organic-rich silt, similar to a number of palaeochannel deposits. Pollen analyses of environmental samples taken from ditch F.185 indicated at least two different environmental signatures; a post-clearance grassland/meadow environment, and a more diverse habitat with arable activity (see Boreham, below). Upon investigation of the trackway surface at this point, evidence for repair was apparent, and in conjunction with the environmental results suggests the track was probably utilised and maintained over a long period.

Trackway 2

A second, northeast-southwest aligned trackway was revealed along the southern edge of Phase 4 (Figure 10). Here, a limestone surface (F.266) was again flanked by two ditches (north ditch **F.281** and south ditch **F.280**). Unlike the straight north-south trackway the width of which remained consistent along its exposed length, this trackway was gently curved, and widened towards the west. At this point, two opposing postholes containing large wooden posts were encountered along the track (**F.267** and **F.289**). The limestone surface tightly abutted these posts suggesting the two were part of the same construction phase. The widening of Trackway 2 at this point, and the presence of large wooden posts, could be indicative of a fording point.

Trackway 2 was not located within the overlying alluvial layers, but rather was beneath the bulk of silt and sand fills of the exposed southern channel system. The backfill of the flanking ditches consisted of organic-rich channel silts, and in places, wooden stakes had been driven into the backfill, or immediately either side of the ditch (**F.275**, **F.282**, **F.283**, **F.283**, **F.285**, **F.286** and **F.287**). As with the posts associated with Trackway 1, the tool marks on these stakes and the larger aforementioned posts were indicative of flat, iron axes facets, which infer an Iron Age or later date (see Bamforth, below).

The presence of these stakes and the quantity of narrow branches of wood found in the channel deposits in this area could imply that a brushwood trackway may have existed possibly in conjunction with the limestone surface; a brushwood surface may have been temporarily implemented here to repair damages to the road caused by channel inundations, before the trackway went completely into disuse. The infilling of the flanking ditches with channel deposits and the lack of any primary weathering at the bases suggests the ditches were flooded soon after they were cut.

At the western end of the trackway the limestone surface directly overlay concreted channel gravels or firm organic silts. Elsewhere however, the surface was poorly preserved, and survived only in patches. The variation in underlying deposits suggests the trackway originally partially overlay a meandering palaeochannel, with the majority of the track constructed on an existing land surface at the channel edge.

The poorly preserved limestone surface, as well as the rapid infilling of the flanking ditches with channel deposits imply that the trackway was not in use for long before it was decimated by an active channel. The similarity between the two trackways in terms of their form and construction suggests they are broadly contemporary.

Probable Roman Features

Also at the western edge of Phase 3, a series of post-alluvial ditches and large pits were investigated (Figure 10). The complex of features cut through a narrow ridge of high ground sandwiched between the northern and southern palaeochannel systems. Here, the surface of the natural gravel substrate was partially obscured by a thin layer of re-deposited washed gravel from dynamic channel activity, through which several of the features were cut.

Five ditches (**F.128**, **F.129**, **F.132**, **F.133** and **F.198**) and four large pits (**F.134**, **F.197**, **F.199** and **F.213**) were exposed in this area. The features were heavily truncated but all appeared to have been cut from within the overlying alluvium and subsequently comprised distinctly alluvial-derived fills, as well as mixed gravels and silts, and occasionally channel-derived organic-rich silts. The network of features appeared to represent a number of quarry pits, possibly for the extraction of gravel, and a series of ditches, probably cut to divert overbank floodwaters.

Two sherds of earlier Roman (mid-late 1st century AD) pottery were recovered from F.129 and a total of 4 assessable animal bone fragments were found in F.128 and identified as cattle-sized. The fact that these features had been cut from within the alluvial layers suggests a broadly contemporary date to Trackway 1, a suggestion supported by the Roman pottery found in F.129. Furthermore, a complete lack of any Iron Age or post-Roman material from these features, or indeed any pre- or post-alluvial features on site, renders a Roman date most plausible. Features 128 and 129 are stratigraphically earlier than Fs. 132, 197, 213, 198 and 133 (the last being the latest in the sequence), and it is likely they represent successive phases of Roman activity.

6.2 Other Undated Post-Alluvial Features

A further two post-alluvial pits were excavated at the eastern end of Phase 3 and Phase 4. F.262, mentioned previously, cut the outer hengiform pit F.247 and was distinguishable by its alluvial-derived sandy-silt-clay fill. A similar alluvial-filled pit (F.203) was seen to cut the southern arm of Cursus 2 (F.146) and was again discernable by its alluvial-derived fill. A third pit (F.279) (Figure 10) exposed close to Trackway 2, was infilled with organic-rich silts resulting from channel inundations, similar to those deposits found in the ditches of Trackway 2. It is likely this pit is thus broadly contemporary with Trackway 2.

7.0 DISCUSSION

The archaeological investigations at Manor Farm have so far identified at least seven broad phases of activity across the landscape; terminal Upper Palaeolithic, late Mesolithic, Earlier Neolithic (pre-cursus), Middle Neolithic, Late Neolithic, Middle Bronze Age and Roman. Activity during the Early and Late Bronze Age is also represented on site, but to a lesser degree. The character of this archaeology is perhaps not surprising given the propensity for extensive prehistoric activity along the Ouse Valley. Without a doubt, the monument complex comprising three Middle Neolithic cursuses and a Late Neolithic hengiform dominates the archaeological activity at Manor Farm. Whilst the general activity pre- and post-dating the monumental landscape is of very low intensity, its regional and national significance should not be undervalued, especially with regards to the Upper Palaeolithic and Mesolithic activity (see also the 2011 excavation results, forthcoming). What is striking about the archaeology at Manor Farm is the modification of the landscape and the longevity and complexity of the monumental landscape versus the relatively short-lived nature of the preceding and following activity.

7.1 Terminal Upper Palaeolithic Activity

Whilst the material from Manor Farm contains no diagnostic tools, a preliminary assessment has noted a lack of characteristics associated with earlier Creswellian industries (see Billington, below) or later long blade traditions. At this stage, based on an early assessment in the field (B. Shaw 2010 pers.comm., see A.H.O.B., forthcoming) and without a more detailed study by a quaternary lithic specialist, the Manor Farm material has been tentatively categorised as representative of the Federmesser industry.

Within the wider region, a substantial number of Palaeolithic flints have been recovered from the gravel terraces of the Ouse and Cam rivers, although there is a dearth of *in situ* assemblages (Dawson 2000). More specifically, to date only 15 open findspots of Federmesser 'sites' are known in Britain alongside a further 22 cave/rockshelter sites (Pettitt & White 2012). There is an apparent 'clustering' around southern Wales, the southern Peak District and the Mendip area of Somerset (*ibid.*), although a substantial re-fitting assemblage was discovered at Rookery Farm, Cambridgeshire. A number of these Federmesser 'sites' have been identified as such by a single find, placing greater emphasis on the significance of the *in situ* assemblages recovered from Manor Farm.

The location of the Manor Farm 'site' appears to fit with an emerging trend of Federmesser sites identified along lowland river valleys in the south and east of England. Furthermore, many of the larger Federmesser assemblage sites attest to longer periods of activity, or seasonal re-occupation, whilst isolated knapping events representative of momentary activity, such as the Manor Farm example, are comparatively rare. The probable Federmesser assemblage from Manor Farm highlights the potential for further 'sites' to be identified along river valleys beneath alluvial/colluvial deposits.

7.2 Mesolithic Activity

The flint assemblage, (totalling 647 flints, excluding the Upper Palaeolithic material) from the Phase 3 and 4 Manor Farm excavations is dominated by Late Mesolithic/earlier Neolithic blade-based flintwork. No diagnostic earlier Neolithic flints were found, suggesting the material pertains to the Late Mesolithic, although a limited amount of later material was recovered from the cursuses and the hengiform. Small flint assemblages and hearth debris were recovered from a few excavated tree-throws, demonstrating the use of tree-throw hollows for the disposal of waste as groups moved through the landscape.

The assemblage of Mesolithic flintwork from the Phase 3 and 4 excavations is not particularly striking, until it is referenced alongside the results of the 2011 fieldwork in Phase 5, where discrete scatters of *in situ* Mesolithic flint knapping waste were found in association with a preserved buried soil deposit (see Hogan, forthcoming). It is likely that had the buried soil deposit survived as well elsewhere on site, the Mesolithic scatters would have been equally abundant across other areas. As it is, the assemblage recovered from Phases 3 and 4 probably represents only a fraction of more intensive activity in the landscape during the late Mesolithic period. Furthermore, the presence of burning evidence and scorch marks within areas of the buried soil associated with flintwork points toward a possible late Mesolithic date for some forest clearance or maintenance.

7.3 Neolithic Activity

7.3.1 Pre-Cursus Earlier Neolithic Activity (c.4000-3000 BC)

A total of 12 pits excavated at Manor Farm have been ascribed to the earlier Neolithic and have been classified as 'pre-cursus' features. Despite being 100% excavated, no diagnostic pottery was recovered to refine the dating; they have been categorised as 'pre-cursus' activity based on the relationship between pits F.168 and F.175 and Cursus 2 (the former being cut by the latter). By association (the similarity in form and dimensions, and the relative proximity of the 12 pits to each other), the remaining 10 pits have been grouped as belonging to the same broad phase of activity. Both Early and Late Neolithic pits have been previously recorded alongside major cursus monuments of the Thames Valley, often appearing as scattered groups, like the Manor Farm examples (Barclay *et al.* 2003).

While poor preservation conditions may have contributed to the general dearth of finds from the prehistoric features, there does appear to be a genuine lack of material culture. Indeed, organic remains and animal bone, (unless burnt), do not survive well in the acidic sandy-silt backfills of pre-alluvial features (see de Vareilles, below). Pottery, when present, does appear to survive well,

as proven by the deposition and subsequent recovery of pottery from later features (notably the Late Neolithic hengiform pits).

A lack of material culture is to be expected of cursuses, which are renowned for yielding very little material culture. However, the lack of deposited material in the probable Neolithic pits could point to two interpretations; first, that the pits represent very low intensity activity, as implied by the scattering of the pits over a 50m area and the relative dearth of finds within them. A second possibility is that waste material was not re-deposited into pit features, but rather incorporated into above-ground middens, the likes of which have since been scoured by dynamic floodwaters and transported elsewhere. Either way, the low number of pre-cursus features suggests the immediate area was relatively 'quiet' prior to the conversion of the landscape into a monument complex during the Middle Neolithic.

7.3.2 Middle Neolithic Activity - The Cursus Monuments (c.3500-3000 BC)

The gravel terraces of the Great Ouse valley are home to a number of prehistoric monument complexes with notable examples at St. Neots, Godmanchester, Brampton, Buckden and Stonea (Dawson 2000; Barclay & Harding 1999). The three cursuses and hengiform monument identified at the Manor Farm quarry are therefore an important addition to the corpus of information on monument complexes associated with this river system. Visually, the Manor Farm cursus 'layout' is perhaps most comparable with the St. Neot's (Eynesbury) complex.

Cursus monuments in southern Britain have generally been assigned to the Middle Neolithic either by radiocarbon dating or by an association with Peterborough Ware pottery (Bradley 2007; Loveday 2006; Barclay *et al.* 2003; Barclay & Harding 1999). As such, the presence of Peterborough Ware pottery (3500-3000 BC) in Cursus 2 corresponds well with the current understanding and dating of these monuments.

The evidence from many cursus sites in southern Britain suggests they are often associated with earlier Neolithic monuments and/or are either still upstanding by the Early Bronze Age, or at least respected by Early Bronze Age features. At Manor Farm, monumental activity post-dating the cursuses clearly occurred in the Late Neolithic period with the construction of the hengiform; however the lack of Early Neolithic monumental activity in the exposed area is perhaps surprising. Based on comparable monument complexes of the Ouse and Thames valleys and the projected route of Cursus 1, the monumental landscape at Manor Farm undoubtedly originally extended beyond the extraction area, into the floodplain fields and the low-lying slopes north and south of the river. Indeed, evidence for a number of monuments in the 'local' area can be found in the Northamptonshire and Milton Keynes HER and on aerial photographs. Traces of an enclosure (possibly the northern terminal of Cursus 1?), parallel ditches to the west of Cursus 2 and a possible enclosure are visible in aerial photographs on the higher ground to the northeast, west and north of the extraction area respectively (see Cambridge University Collection of Aerial Photographs). Furthermore, a partial 'short cursus' and a 'trapezoidal' enclosure have been identified at Cosgrove, on the north side of the River Ouse (Deegan & Foard 2008) and a number of ring-ditches can also be seen on the photographs. Additional round barrows are known to the south of Manor Farm close to Wolverton Mill, Warren Farm, Little Pond Ground and at Bancroft, placing the Manor Farm quarry site at the relative centre of a greater monumental landscape that continued into the Bronze Age.

In terms of cursus development, the Manor Farm examples are suggestive of two phases of activity; the first phase is represented by Cursus 3 and the second by Cursuses 1 and 2. Without

dating evidence, this phasing is inferred by the alignment, 'positioning' and morphology of the three monuments. As discussed earlier, the southern terminal of Cursus 1 is square-ended, whilst the eastern terminal of Cursus 2 appears to be 'skewed' specifically to parallel the western terminal of Cursus 3, suggesting the latter monument existed prior to the construction of Cursus 2. Owing to the similarities between Cursuses 1 and 2 in terms of monument dimensions, form and ditch profiles, it is likely that these two may belong to the same broad phase of construction. Furthermore, according to some theories on the development of cursus forms, the rounded corners of Cursus 3 could suggest it belongs to an earlier trend of rounded-terminal cursuses (Loveday 2006).

In spite of intensive excavation of the cursuses, very little material culture has been recovered. The isolated 'stack' of Peterborough ware in Cursus 2 suggests that pottery, when present, does survive and as with the pre-cursus pits, the limited pottery recovered from the monuments is thus representative of a lack of material deposition and not a result of poor preservation. A dearth of material culture associated with cursus use has become a standard feature of this monument type (Barclay and Harding 1999). The primary concern of cursus monuments seems to have been the enclosing or demarcation of 'special' spaces in the landscape, rather than the collection and interment of objects (Thomas 2004). Conversely, the re-fitting Late Neolithic/Early Bronze Age flints found in Cursuses 2 and 3 are clearly representative of isolated knapping and deposition events. Whether for ceremonial or more mundane reasons and in spite of the superimposition of the field system ditches across the cursus monuments, (showing no respect for the alignment of the monuments), the occurrence of these later finds in the cursus ditches could infer an awareness of their existence.

Cursus monuments are notoriously difficult to date owing to this lack of cultural material. Subsequently, any dating material is of vital importance to further our understanding of these enclosures and the development of cursus monuments across Britain. Although the Peterborough Ware is invaluable as the only evidence for contemporary material culture associated with the monuments, a charred timber deposit from pit F.168 (cut by Cursus 2) and a second from the terminal slot in Cursus 3 (F.227), as well as two bone fragments from lower silty fills of Cursuses 1 and 2 should be considered for radiocarbon dating.

In terms of the relationship between cursus monuments and their contemporary environments, there exists substantial evidence for extensive forest clearance along river valley corridors prior to the construction of these enclosures (Barclay *et al* 2003; French 2003). With only a single exception (F.201), none of the excavated tree-throws at Manor Farm contained diagnostic material of Late Neolithic or later date, and evidence even suggested that many of the tree-throws were probably infilled during the late Mesolithic (F.23 and F.33). Additionally, on no occasion was a tree-throw feature seen to cut a cursus ditch, suggesting the routes of the monuments were cleared prior to their construction. That is not to say that the whole area was completely devoid of trees from the early Neolithic onwards, but it is plausible that an area of cleared space was maintained throughout the middle and Late Neolithic. Similar patterns of clearance predating Neolithic (and Bronze Age) monumental landscapes have been posited for the sites along the Allen valley (French 2003).

7.3.3 Late Neolithic Activity – The Hengiform (c.3000-2400 BC)

Activity during this period is represented by the hengiform exposed in Phase 4. Unlike the cursuses, the hengiform contained a relative wealth of material culture, including 271 sherds of Grooved Ware pottery, fragments of cattle bones and two central cremation deposits. On five

occasions, the pottery and animal bone were associated with a charcoal-rich lens in the external pits, whilst the cremated remains were found with only a few flecks of charcoal, suggesting the bone may have been collected from the pyre and stored prior to its deposition within the monument. The quantity of material from the hengiform highlights the difference in function and depositional practices between the two monument types at Manor Farm.

Although the Manor Farm cursus complex is likely linked to a pattern of monumental features and enclosures emerging along the Ouse corridor, the hengiform monument infers an affiliation with the larger monumental landscapes of the Thames Valley. Grooved Ware pits associated with such landscapes, (and more specifically, henge monuments associated with Grooved Ware), are known throughout the Upper Thames Valley (Thomas 2006; Barclay *et al.* 2003). The Durrington Walls sub-style of Grooved Ware (c. 2900-2400 BC) from the Manor Farm hengiform further strengthens this link to the monumental landscapes of the southern river valleys. A striking visual similarity exists between the Manor Farm hengiform and the Dorchester-on-Thames hengiforms, specifically Dorchester II and IV (Thomas 2006; Cleal & MacSween 1999). The former of these is located immediately adjacent, but *external* to the southern arm of the Dorchester cursus, whilst the latter is located 'within' the cursus ditches, similar to the Manor Farm example.

7.4 Bronze Age Activity

A sparse assemblage of later Neolithic/Early Bronze Age material has been recovered from the excavations of Phase 3 and 4, highlighting the presence of limited activity across the landscape during this time. A larger quantity of Deverel Rimbury and post-Deverel Rimbury pottery was recovered although one of the contexts was an alluvial layer overlying the bank of Cursus 2, suggesting the pottery may have migrated from its original context.

7.4.1 Early Bronze Age Activity (c.2400-1500 BC)

A single burnt stone pit (F.258) containing abraded sherds of Beaker pottery (c.2400-1800) infers the potential for some low-intensity Early Bronze Age activity in the landscape, whilst the *in situ* Late Neolithic/Early Bronze Age flints in Cursuses 2 and 3 suggests an awareness of the monuments. It is unclear if the small flint assemblages represent a preference for 'depositional practices' within the monument ditches, or if their occurrence is merely coincidental; someone may have simply sat on the low-lying bank whilst knapping some flint or utilised the faint depression of the ditch as a dumping area for waste material. These practices would perhaps at least show an awareness of the monuments' existence during the Early Bronze Age. However, it is possible that contemporary flint working debris may have existed across the area which has since been scoured and truncated by vigorous over-bank river flood waters; those small assemblages in the cursus ditches may have remained simply because their location within the depression of the ditches protected them somewhat from the flood waters. Either way, the limited evidence for Early Bronze Age activity within this floodplain landscape is seemingly transient, and may be associated with phases of barrow construction which occurred on the higher ground to the north and south of Manor Farm.

7.4.2 Middle Bronze Age Settlement (c.1500-1000 BC)

Although Milton Keynes has previously been highlighted as an area apparently devoid of coaxial field systems (Yates 2007), there exists extensive evidence for such Bronze Age field systems in

floodplain regions along the Ouse Valley (Yates 2007; Brück 2001). Comparable Middle-Late Bronze Age settlement activity has been investigated in the Lower Ouse corridor at Colne Fen, Earith and Barleycroft Farm/Over Quarry in Cambridgeshire (Evans and Patten 2003; Evans and Knight 2001). Closer to Milton Keynes, excavations adjacent to the Great Ouse at Willington Quarry, Bedfordshire have revealed an extensive Bronze Age landscape including field systems, ring gullies, cremations and burnt stone pits, as well as round barrows and droveways (CAU forthcoming; Murrell 2009; Beadsmoore 2005).

The Manor Farm field systems have been superimposed onto the earlier monumental landscape with no apparent desire to affiliate the former with the latter by adopting the alignment or even incorporating the existing cursus ditches as part of the field systems. Furthermore, the stratigraphic relationship between the field system ditches and Cursus 2, (the former cutting the uppermost deposits of the latter, in which *in situ* Late Neolithic/Early Bronze Age flints were found), infers a post-Early Bronze Age date for the field system ditches. Comparative excavated Bronze Age landscapes in the Ouse valley suggests the origins of the Manor Farm field systems are rooted in the Middle Bronze Age.

Artefactual evidence from a number of burnt stone pits excavated in Phase 5 (Hogan, forthcoming) suggests that many of those excavated across Phases 3 and 4 are of Middle Bronze Age date. The proximity of the burnt stone pits to the field systems (especially Field System 'B') suggests an association between the feature sets, and infers a probable Middle Bronze Age date for much of the settlement activity at Manor Farm.

7.4.3 Cremations

Whilst three of the cremation deposits are located within close proximity to Field System A, the remaining two are located considerably further west of these three. It is worth noting that all five cremation deposits are located relatively close to Cursuses 2 and 3, and on one occasion, actually within the internal space of Cursus 3. It is possible (and perhaps more likely) that the cremations relate to a phase of Middle Bronze Age settlement activity, however an alternative (i.e. Neolithic) date cannot be completely ruled out at this stage. Whilst the field system ditches do not appear to respect the alignment of the cursus ditches, the proximity of the cremations to the monuments could infer at least an awareness of their existence during the Middle Bronze Age, and perhaps even a desire to associate the dead with a former monumental landscape.

7.4.4 Late Bronze Age Activity (c.1000-800 BC)

Five contexts across the site produced post-Deverel Rimbury pottery, although only two yielded a substantial quantity. It is possible that Middle Bronze Age settlement activity extended into the Later Bronze Age, although there is little evidence to suggest intensive activity during either period. The relative scarcity of prehistoric settlement features in general suggests either that activity was short-lived, or that remains have been decimated by vigorous floodwaters, leaving little physical trace.

7.5 Roman Activity

Roman activity is relatively abundant in the wider Milton Keynes area and Great Ouse Valley, and the Cosgrove Villa site located immediately north of the extraction area. The geophysical

survey conducted in the area surrounding the Cosgrove villa complex indicated the presence of substantial settlement remains in the landscape. It seems likely that the complex of ditches and pits investigated at the west end of Phase 3 belong to this general activity.

The extraction area is located in between the substantial villa complex and settlement activity at Cosgrove and a possible secondary villa site at Wolverton. It is therefore plausible that both trackways discovered at Manor Farm quarry are part of a network of roads not only connecting these aforementioned sites to each other, but also possibly linking them to more major routes across Britain such as the nearby Watling Street (the modern A5). The dating evidence from Trackway 1, although limited, does infer a Roman date, whilst the wooden posts associated with the fording point of Trackway 2 display iron axe tool-marks indicative of an Iron Age or later date. The intercutting pits and ditches at the west end of Phase 3 may be perceived as broadly contemporary with the villa complex at Cosgrove owing to their relative proximity, sparse pottery fragments and also by their location within the post-alluvial sequence. The large pits could be indicative of localised gravel quarrying for use in surface constructions, whilst the ditches could represent outlying enclosures, or flood management systems.

8.0 REVISED RESEARCH AIMS

The location of Manor Farm on the floodplain of the Great Ouse in the southern region of England has implications for the research frameworks of both eastern and southern England. The recommended research objectives are as follows:

- To further characterise the Terminal Upper Palaeolithic activity on site and how the site relates to wider Palaeolithic activity across Britain. Further work on this material is to be completed by AHOB.
- To refine the chronology, as far as possible, of the prehistoric monuments and non-monumental activity on the site. A limited series of radiocarbon dates from selected contexts should be considered in accordance with the research (both the archaeological and palaeoenvironmental) priorities. Whilst a brief analysis of the faunal material from the 2008-2010 excavations is provided in the specialist report, it should be noted that firstly, this material has not been assessed for its viability (i.e. the quality of the material for radiocarbon dating is not guaranteed) and secondly, any material selected for dating should only be considered once the remaining phases of excavations at Manor Farm (i.e. Phase 2 and 5) are completed. At this time all dateable material should be assessed for its potential use and viability, and addressed according to the project research agendas. A finite number of dates should then be agreed according to research aims and funding availability.
- To characterise as far as possible the palaeo-environmental setting of the monumental (Neolithic) landscape. This can be achieved by processing a larger percentage of samples taken from Neolithic and Early Bronze Age contexts, including feature and channel fills and buried soil deposits (Allen 2013).
- To further sample any future discoveries of Upper Palaeolithic and Mesolithic contexts, especially where associated with *in situ* material culture. Early Holocene soil formations should be subjected to micromorphological analysis given the rarity of such deposits in

Southern Britain (Allen 2013). This is especially important given the association of such palaeosols with *in situ* Terminal Upper Palaeolithic material and Mesolithic flint scatters found during the 2011 excavations (see Hogan, *forthcoming*).

- Where possible, the palaeo-environment for the later periods should be briefly characterised to provide a comparative framework for different periods of activity within the floodplain landscape.
- To further understand the use and chronology of the trackways identified in the 2008-2010 (and more recently in the 2011) field seasons, and if and how they relate to the palaeochannels, settlement activity and other trackways within the wider vicinity (i.e. the possible Bronze Age trackway at Cosgrove). A series of dendrochronology and radiocarbon dates should be obtained from any suitable wooden posts associated with the trackways to establish broad periods of use, and in turn highlight broad dates for active channels.
- The complete lack of dateable material recovered from the field systems means that should any further field systems containing dateable material be exposed in future phases of the quarry, the material will be of great value in developing the site chronology.
- To place the site in both its regional and national context, and to consider the site alongside contemporary sites and monumental landscapes in the south and east of England, especially those located along the Ouse and Thames corridors.

9.0 STATEMENT OF POTENTIAL

Although precise dating of the archaeology at Manor Farm is problematic given the dearth of material culture and erosive quality of the soils, the site has potential for adding to our understanding of Late Upper Palaeolithic activity in Britain, as well as the development of later prehistoric monumental landscapes and the superimposition of settlement sites upon previously monumental spaces. Situated in between the monumental landscapes of the Ouse Valley to the east and the Thames Valley to the south, the Manor Farm site appears to represent a ‘hybrid’ of monumental traditions associated with these two river corridors. The coaxial field systems are the first of their type in the vicinity of Milton Keynes and are subsequently also of importance in our interpretations of settlement patterns during the Bronze Age. The probable Roman trackways are also potentially useful in our interpretations of the use of floodplain regions during this period. Future analysis of the palaeochannel systems could develop our understanding of the relationship between the archaeological activity at Manor Farm and the changing environment. On a wider scale, this research also has the potential to yield a wealth of information regarding the palaeo-environment of the Upper Ouse Valley during the prehistoric, Roman and later periods.

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11 SPECIALIST REPORTS

11.1 THE UPPER PALAEOLITHIC FLINT *Lawrence Billington*

An assemblage of 63 worked flints was recovered from a surface deposit termed F.276. The presence of several large refitting blades and the highly corticated condition of the flintwork immediately suggested the discovery of an *in situ* Palaeolithic assemblage. This report provides a brief assessment of the material; a more detailed analysis will be undertaken by a quaternary lithics specialist from AHOB.

The assemblage is quantified in Table 7. Over half the assemblage by number is made up of small chips and flake fragments under 20mm in maximum dimensions. The condition of the assemblage is good, edge damage is minimal and ridges and edges are not worn or rolled. All of the flints have been heavily recorticated, modern breaks reveal this to be between one and two mm thick. The raw material seen in these fresh breaks is a dark grey fine grained flint. Differences in cortex on the pieces suggest a minimum of three nodules are represented, although the vast majority of cortical pieces appear to derive from a single nodule, which yielded the refitting blade sequence.

natural? Gravel	2
chips (<10mm)	24
flake fragments (<20mm)	9
flakes (complete)	10
flakes (proximal portions)	5
flakes (mesial portions)	1
flakes (distal portions)	4
blades (complete)	4
blades (proximal portion)	1
blades (distal portion)	1
bladelets (complete)	1
bladelets (distal portion)	1
total (worked)	63

Table 7: The Palaeolithic flint assemblage

Discussion

The assemblage appears to reflect a discreet knapping episode involving the early stages of blade production. The size of the assemblage urges caution in interpretation but based on the recovered pieces it seems that only part of the reduction sequence is represented. Most of the pieces appear to derive from a single large core. The low numbers of cortical flakes suggest this core was at least partially prepared/dressed before being brought to the site. The flakes and blades appear to reflect the early stages of systematic blade production involving the shaping of the core and preparation by partial creasing. There is no clear evidence for the systematic use of opposed platforms although as these pieces reflect the early stages of blade production this may not reflect the technology employed later in the sequence. The relative irregularity of these early blade removals may account for their discard and it seems likely that subsequent regular blade removals were removed from the site. A small area of possible utilisation on one of the refitting blades suggests that it may have been used for a short specific task before its discard.

In terms of dating, the presence of a large blade based technology with the preparation of striking platforms by faceting clearly implies an Upper Palaeolithic date. In the absence of

retouched pieces closer dating must rely purely on technological traits, which in the case of this assemblage may be misleading as only the early stages of blade production are present. Tentatively, however, it seems unlikely that these pieces relate to the late Upper Palaeolithic industry typified by Creswellian assemblages due to the lack of evidence both for ubiquitous soft hammer percussion and for talon en éperon striking platforms (see Barton 1991, Jacobi 2004: 16). The assemblage can perhaps be usefully compared to final and terminal Palaeolithic industries, which share a large blade based technology with the use of platform faceting together with hard hammer and soft stone hammer percussion. Such industries lie either side of the last ‘cold snap’ of the Devensian, the Younger-Dryas or Loch Lomond stadial. Prior to this glacial re-advance are Federmesser industries, relatively poorly known in Britain and characterised technologically by hard hammer blade production (Conneller 2009). Following the Younger Dryas, and technically belonging to the very beginning of the Holocene are the better documented ‘long blade’ assemblages, technologically more diverse but often consisting of a large blade based reduction strategy employing soft stone percussors (Barton 1998, Cooper 2006).

Summary

The lithic assemblage appears to represent a single knapping episode of final/terminal Palaeolithic date involving the reduction of an already partially prepared core for the production of large blades, some of which may have been removed, perhaps along with the core, from the site. The discreet and partial nature of the assemblage reflects the high mobility of late glacial hunter-gatherer groups. As an *in situ* open area site, it is of national significance, and will be put into its wider context by an expert in Palaeolithic archaeology.

11.2 THE FLINT *Lawrence Billington*

A total of 647 worked flints (<3754g) and 350 unworked burnt flints (<2319g) were recovered from the excavation (Table 8). These totals exclude the small Upper Palaeolithic assemblage discussed above. The majority of the assemblage was derived from surface collection and from the excavation of tree throw features. A substantial quantity of flintwork was also recovered from the excavation of the cursus monuments. As a whole the assemblage is dominated by evidence for blade based Mesolithic flintworking. This is seen most clearly in the worked flint recovered from tree throw features and collected as surface finds. The assemblages derived from the Neolithic monuments also contain a substantial residual Mesolithic element. The construction and use of the Neolithic monuments does not appear to have generated significant lithic assemblages, although small quantities of later Neolithic/Early Bronze Age flint were present across the site including several refitting pieces from the upper fills of Cursuses 2 and 3.

The condition of the assemblage is varied. Patination, varying from a light blue ‘clouding’ to a heavy white, is present on 60% of the unburnt worked flints. Patination appears to have some chronological significance; for instance a higher proportion (75%) of blade-based removals (Mesolithic/Earlier Neolithic) were patinated. Raw materials appeared to exclusively derive from secondary deposits, almost certainly from the fluvial gravels. Thermal flaws and fossil inclusions that would have hindered working are common and, judging by the size of cortical flakes and cores, nodules were generally small in size.

	tree throws	surface finds	Cursus 1	Cursus 2	Cursus 3	Hengiform	Other contexts	TOTALS
Chip	12	17	1	19			7	56
sieved chip (>4mm)	85	n/a						85
irregular waste	3	7	1	3		1		15
Flake	86	129	18	45	4	16	44	342
blade/bladelet	25	25	2	11	1	2	10	76
rejuvenation flake	4	1	3	1			1	10
irregular core	2	3	1	5	1		1	13
single platform flake core	1		1	2				4
two platform flake core				1				1
multiple platform flake core	3	3	4	2	1		1	14
single platform blade/narrow flake core	3	1						4
multiple platform blade/narrow flake core	2	1						3
opposed platform core	3	1		1			1	6
core fragment		1		1		1	1	4
tested nodule				1				1
Scraper	1	2					1	4
Microlith	2	1						3
backed bladelet	1							1
leaf arrowhead							1	1
oblique arrowhead						1		1
retouched flake						1	1	2
retouched blade/let	1							1
total worked	234	192	31	92	7	22	69	647
burnt unworked no.	127	7					216	350
burnt unworked g.	558	94					1667	2319

Table 8: The flint assemblage from MOW 08 - MOW 10

Surface Finds

192 worked flints were collected from the gravel surface of the site. Although obviously representing a palimpsest of activity from at least the Mesolithic through to the Bronze Age, the assemblage is clearly dominated by blade based technologies generally thought to date to the Mesolithic and earlier Neolithic. The presence of a narrow blade microlith together with the high percentage of true blades and evidence for use of opposed platform technology suggests that much of this material may be Mesolithic in date. No diagnostically earlier Neolithic pieces were recovered and it is extremely difficult to determine how much, if any, of the assemblage reflects activity at this time. This is a point of some importance in terms of the development of the cursus monuments and will be discussed further below. A smaller amount of flintwork exhibits different technological attributes suggestive of a somewhat later date. These pieces consist of small, often unpatinated, flakes of varied morphology. The majority of these pieces have been hard hammer struck from relatively large unprepared striking platforms. Although not strictly diagnostic this material probably reflects flintworking from the later Neolithic into the Bronze Age. Surface find 29 was recovered very close to the main area of Upper Palaeolithic finds and it seems likely that it belongs to the same scatter. It has been struck from an opposed platform core with a carefully faceted platform.

The low incidence of tools in the assemblage, together with abundant evidence for flintworking in the form of cores and cortical flakes, suggests that the procurement and working of flint may have been more important than activities involving tool use and discard.

Tree Throws

A total of 234 worked flints were recovered from the excavation of 30 tree throw features. The majority of the tree throws contained small assemblages of worked flints which are interpreted as being naturally incorporated into the fills of the features, deriving from the old land surface of the site. Exceptionally, tree throw F.23 produced a large assemblage of 133 worked flints, 98 of which were recovered from a soil sample of just 6 litres in volume. Although most of the assemblage (74%) is made up of undiagnostic chips and flake fragments less than 15mm in size, the presence of blades, blade cores and a microlith of scalene triangle form strongly suggests a late Mesolithic date for the assemblage.

The remainder of the tree throw assemblage also largely reflects blade based material of Mesolithic/earlier Neolithic date and is comparable in technology and composition to the assemblage from surface collection. Several retouched pieces of Mesolithic date were recovered including an obliquely blunted point from tree throw F.25 and a backed bladelet from pit F.98. The frequency of blade cores and blades is significantly greater than the material from the surface finds and perhaps suggests that a smaller amount of later material has been incorporated into these features. This may suggest that relatively few tree throws were 'active' (silting up) in the later Neolithic and Bronze Age and could have implications concerning the timing of woodland clearance on the site.

The Cursus Monuments

Excavation of the three cursus monuments produced a total of 130 worked flints. Generally, only very small amounts of flint were recovered from individual sections and deposits and it appears that the bulk of the assemblage was incidentally incorporated into the features during natural weathering and silting processes. Although blade based flintwork of potentially earlier Neolithic date was recovered from many of the features making up the cursuses, it is comparable to the material from the tree throw features and surface collection and need not be contemporary with the construction and use of the monuments.

Perhaps the most interesting aspect of the flintwork from the cursuses was the presence of three small refitting sequences from the upper fills of the monuments. The largest sequence consisted of at least four refitting flakes (two of which are made up of co-joining fragments) together with several other flakes from the same nodule from deposit [453] from F.140 of Cursus 2. Also from Cursus 2 are two refitting flakes from deposit [541], F.147. Finally, a flake could be refitted to an irregular flake core from deposit [1203] from F.227 of Cursus 3. None of the refitting sequences are strongly diagnostic but all reflect a fairly expedient flake based technology utilising hard hammer percussion and lacking concern with platform preparation or core maintenance. Such technological traits are common in assemblages from the later Neolithic into late prehistory, although the fairly systematic working of cores from one platform and relatively little evidence of knapping errors suggest a later Neolithic/early Bronze Age date is most likely. It seems likely that the earthworks of the monument were still actively infilling during the first half of the third millennium BC and were utilised either for the *in situ* working of cores or for the deposition of knapping waste.

The Hengiform

The complete excavation of the hengiform monument yielded just 22 worked flints, with individual pit segments producing between 1 and 5 flints. In contrast to the deposit of Grooved Ware pottery in F.246, none of the flintwork appeared to be deliberately deposited in

the feature. Several pieces, including several blades and narrow flakes are likely to be residual Mesolithic/earlier Neolithic pieces but some of the flintwork is probably broadly contemporary with the monument itself. Several small hard hammer flakes are consistent with, if not diagnostic of, a later Neolithic date and are in very fresh condition. More significantly are the two retouched pieces, an atypical oblique arrowhead and an invasively retouched flake, both are consistent with a later Neolithic date and the oblique arrowhead in particular has strong associations with Grooved Ware pottery and, in some regions, with henge monuments.

Other Features

A variety of other features including ditches, pits and cremations yielded small assemblages of worked flint.

Ditches F.54, F.100, F.189 and F. 238 produced small amounts of worked flint similar in character to that from the tree throws and surface deposits and incorporating a significant quantity of blade based Mesolithic/earlier Neolithic flintwork. The only retouched pieces were recovered from F.189 and consisted of a retouched flake and an end scraper both on blanks with technological characteristics suggestive of an earlier Neolithic or, more likely, Mesolithic date.

The excavation of nine pit features yielded a total of 19 flints. The small numbers and abraded condition of most of these pieces suggests they may well be residual. F.151 contained six worked flints including two blades, although the assemblage is fairly disparate in terms of condition and raw material these may be broadly contemporary with the pit, in which case an earlier Neolithic date is most likely. An earlier Neolithic date is also probable for a broken leaf shaped arrowhead(?) from F.159. Seven further pits contained quantities of burnt, unworked, flint (Table 9).

burnt stone pits							
features	230	239	255	257	259	272	76
flake					1		
blade/bladelet		1					
total worked		1			1		
burnt unworked no.	122	8	31	14	18	9	8
burnt unworked g.	996	58	218	72	246	42	27

Table 9: Burnt pit flint assemblages

Discussion

The assemblage is dominated by material resulting from specialised blade/narrow flake technologies generally associated with Mesolithic and earlier Neolithic flint working. There are, however, good reasons for regarding the majority of the assemblage as being Mesolithic in date. Firstly, the diagnostic retouched forms recovered are dominated by Mesolithic types, with the exception of the leaf shaped arrowhead from tree throw F.159. Secondly, pieces displaying evidence for a highly controlled core reduction strategy such as opposed platform cores and core rejuvenation flakes are relatively common in the assemblage and are invariably found in greater proportions in Mesolithic assemblages than in the earlier Neolithic. Although a limited amount of the blade based material, together with the leaf shaped arrowhead, probably reflects some activity in the earlier Neolithic, the crucial point is that activities on the site at this time, including the construction and use of the cursus monuments, do not seem to have involved the working and use of flint in any substantial way.

The Mesolithic assemblage contains relatively few retouched tools but all stages of reduction from nodule preparation to the discard of exhausted cores are present. It seems likely that raw

material was being directly obtained from the gravel terraces and worked on the site. It is difficult to characterise the distribution and density of this activity in any detail as the presence of flintwork is generally only the result of its fortuitous incorporation into tree throw fills or later cut features.

Small numbers of probable later Neolithic/Early Bronze Age worked flint was recovered from across the site. Most significant are the few flints probably contemporary with the later Neolithic hengiform monument and the evidence for on site flintworking in the upper fills of the cursus ditches. However, the generally small amounts of material suggests that activities on the site did not generate large amounts of flint work.

11.3 PREHISTORIC POTTERY *Mark Knight*

A total of 580 sherds (weighing 1597g) were recovered during the 2008-2010 excavations at Manor Farm. The material came from 27 separate contexts, including a single surface find. The majority of the material was in poor condition and made up of small fragments and plain body sherds.

Feature sherds from the 2008-2009 assemblage were rare (3 rim and 3 base angles), and decoration almost completely absent. Some variation in fabric existed but all included grog as the principle opening material.

The majority of the 2010 pottery assemblage (287 sherds weighing 896g) was recovered from the hengiform monument; 97.1% by weight and 94.4% by number, whilst pottery from the cursus complex equalled 1.6% of the total weight and 4.2% of the total number. Feature sherds/diagnostic pieces (Grooved Ware) were almost exclusive to the hengiform.

The assemblage can be separated into three main groups: *Middle Neolithic*, Peterborough Ware as characterised impressed cord decoration and ‘corky’ appearance, *Middle Bronze Age*, Deverel-Rimbury as characterised by flattened square profile rims, and *Late Bronze Age*, Post-Deverel-Rimbury (?) as characterised by thin walled pieces and rounded base angles. Whilst the remainder of the assemblage comprised very small crumbs of non-diagnostic prehistoric pottery, a few possible sherds of Early Neolithic and Beaker pottery were also identified.

	Number	Weight	MSW
Tree-throws	158	223g	1.9g
Prehistoric Pits	91	175g	2.7g
Cursus Ditches	43	277g	17.2g
Cursus Banks	8	29g	3.6g
Hengiform	271	870g	3.2g
Burnt stone pit	2	11g	5.5g
Section #79 [597]	6	10g	1.6
Surface	1	2g	1.0
Totals:	580	1597g	36.7g

Table 10: Prehistoric Pottery from the 2008-2010 excavations. Assemblage breakdown by major feature type.

Peterborough Ware

F.183 [691] – Thick-walled (10-14mm), body fragments of medium hard with common medium grog and small rounded sand fabric. Assemblage includes two, possibly three, body fragments with traces of decoration (rows of small twisted-cord knots or maggots bordered by faint incised lines (fingernail?)) and chaotic rows of fingernail impressions. Curvature of sherds suggest large hemispherical bowl-shaped vessel.

Grooved Ware – The Hengiform F.242, F.243, F.245, F.246, F.247, F.248 and F.250

Decorated thick-walled (10-12mm) sherds dominated the assemblage from the hengiform. Rim fragments and base angles were also present and everything shared the same medium hard with frequent medium grog and common small sand fabric that was also typified by pale yellow or reddish pink oxidised exterior and dark grey unoxidised interior. Decoration consisted of either incised grooves or rows of raised finger-tip pinches/crowsfoot impressions. Towards the rim and base of vessels the grooved decoration comprised parallel horizontal lines whilst some body fragments had columns of vertical herring-bone. Rims were simple tapered forms with traces of internal moldings. Pit F.246 produced fragments of a tub-shaped vessel measuring about 20cm tall (rim diameter: 22cm; base diameter: 20cm) that appeared to be decorated with vertical panels of herring-bone and finger pinching. This vessel had charred residue adhering to the inside surface of its base fragments. Raised and incised decoration belonging to different vessels occurred on sherds in pits F.243, F.245, F.256, F.247, F.248 and F.250. As a whole, the assemblage would appear to represent a coherent collection of Durrington Walls sub-style Grooved Ware pottery (as indicated by vertical decoration and grog temper) and perhaps constitutes the fragmented remains of at least four different vessels.

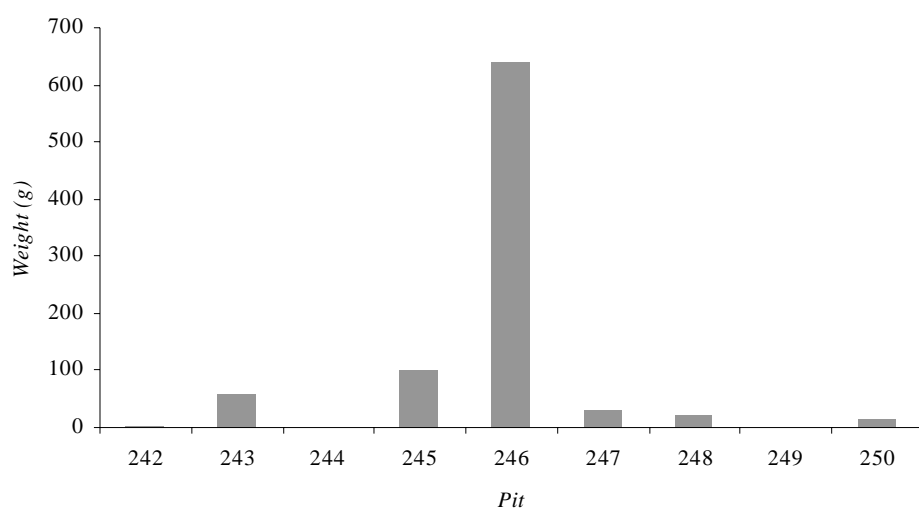


Chart 1: Distribution of Grooved Ware pottery by weight between the different hengiform 'pits'.

Tree-throw F.226 produced two very small fragments of pottery which appeared to represent the internal (oxidised) and external (unoxidised) halves of a single sherd. The external piece retained a single incised grooved decoration. Although small, the fragment also shared the same characteristic grog inclusions as the Grooved Ware sherds from the hengiform monument.

Beaker

Burnt stone pit F.258 yielded a single, very hard burnt flint and grog tempered body sherd decorated with small pointed or triangular punctate impressions stood out as the only other 'feature' sherd outside of the hengiform monument. The presence of grog and its wall thickness (5mm) point towards this piece belonging to the Beaker tradition.

Deverel-Rimbury

S.79 [597] – Large diameter fragments of medium hard with common small-medium grog and occasional quartz fabric. Includes a flattened pinched-out rim.

F.142 [467] – Two flattened rim fragments, pinched out internally and rounded externally belonging to a large diameter vessel. Same fabric as S.79 Fabric type 2.

Post Deverel-Rimbury

F.89 [256] – Single (4g) of medium hard fabric with small grog and small voids (lost shell?), characteristically similar to material recovered from F.201.

F.140 [504] – Plain body sherd of same fabric as F.201.

F.155 – Plain body fragments of same fabric as F.201

F.201 [814] – With the exception of two rounded base angle fragments the collection comprised thin walled (4-6mm) plain body sherds. Consistent medium hard fabric with small grog and small voids (lost shell?).

Surface/Spoil – Plain body fragment of same fabric as F.201.

Non-diagnostic Prehistoric Crumbs

The pottery from the cursus (F.222 and F.271) comprised thin-walled (5-7mm) plain body sherds of a lightweight ‘corky’ appearance. The pieces were soft and characterised by small platelet-shaped voids which presumably represented the former presence of a crushed shell filler. All of the pieces were small and featureless. The corky appearance could be indicative of Early Neolithic pottery but otherwise the best diagnosis from such un-diagnostic material is to describe the sherds as being prehistoric.

Tiny fragments of prehistoric pottery came from F.146, F.148 [818], F.161 [548] and F.180 [675].

Discussion

The stand-out element of the assemblage was the Grooved Ware pottery from the hengiform monument. A relationship between this type of pottery and hengiform sites already exists in the literature at sites such as Dorchester Site II (Barclay 1999) and the Wyke Down Henge, Dorchester (Cleal 1991). Crucially, both of these monuments were also found in close proximity to Cursus monuments.

Future Work

The Grooved Ware assemblage is significant for a number of reasons. Firstly, it represents almost half of the entire pottery assemblage recovered from the 2008-2010 fieldwork. Secondly, as a stand-alone, comprehensive assemblage, it provides information regarding depositional practices associated with a monumental landscape. The assemblage and its associated context allow for further comparable analyses of the Manor Farm landscape against other such ceremonial sites in the south and east of England. And finally, burnt residue was recorded on several sherds and should be considered for radiocarbon dating. With so little dateable material available, these residues in conjunction with the cremated remains found associated with the hengiform, will serve to chronologically contextualise the

hengiform monument, which will, in turn have implications for the phasing of archaeological activity at Manor Farm. Furthermore, accurate dating of a Grooved Ware assemblage is of particular importance in this region, and will aid future assessments of Grooved Ware chronologies.

11.4 ROMAN POTTERY *Katie Anderson*

Two sherds (12g) from a single sandy Roman vessel were recovered from F.129. The sherds were non-diagnostic, however the fabrics suggest an earlier Roman date (mid-late 1st century AD).

11.5 HUMAN BONE *Natasha Dodwell*

Cremated human bone was recovered from six features during excavations in 2009 and 2010. A further four features contained small quantities of calcined bone that could not be positively identified as either as animal or human. On site, all of the features were 100% sampled and the soil was then wet sieved, extraneous material removed/separated from the residues and the bone passed through a series of stacked sieves.

Feature	Age	Largest fragment	Bone >10mm		Bone 5-10mm		Bone <5mm		Total Weight (all bone)
			Weight (g)	%	Weight (g)	%	Weight (g)	%	
F.170	subadult/adult	36mm	203	33%	350	56.8%	63	10.2%	616g
F.172	subadult/adult	33mm	7	41.2%	9	52.9%	1	5.9%	17g
F.228	neonate	9mm	0	-	2	20%	8	80%	10g
F.229	unid	11mm	1	100%	0	-	0	-	1g
F.232	subadult/adult	27mm	58	66.6%	24	27.6%	5	5.8%	87g
F.233	unid	10mm	1	100%	0	-	0	-	1g
F.234	subadult/adult	39mm	2	28.6%	4	57.1%	1	14.3%	7g
F.246	unid.	15mm	1	99%	<1	1%	0	-	1g
F.269*	adult	40mm	207	33%	329	52.4%	92	14.6%	628g
F.270*	unid.	12mm	<1	16.7%	<1	16.7%	2	66.6%	3g

Table 11: the weight of cremated bone from each feature and the degree of fragmentation.

*The 2-5mm residues for F.269 and F.270 have not been completely sorted, the results have been extrapolated from a 25% sorted sample.

Pits F.170, F.172, F.269 and F.270 probably belong to a phase of Bronze Age activity, whilst F.232, F.233, F.234 and F.246 are associated with the Late Neolithic hengiform. F.228 and F.229 are of uncertain date and may pertain to either a phase of Neolithic or Bronze Age occupation.

F.228 contained fragments of a neonate cremation, whilst features F.170, F.172, F.269, F.232 and F.234 contained the partial remains of an adult or adult/sub-adult of unknown sex. The remains in F.229, F.233, F.246 and F.270 were not identifiable human. F.170 and F.269 yielded a large quantity of bone for analysis (616g and 628g respectively), whilst the remaining features contained only small amounts of bone (between 7-87g). In addition, the bones were extremely fragmentary (Table 11), and it is possible in the case of postholes F.232, F.233 and F.234, that the remains of a single adult/sub-adult have been deposited across these three intercutting features.

The bone from F.228, F.232 and F.234 was a buff white/cream colour indicative of complete oxidisation on the pyre. Several of the bone fragments from F.172 were blue/black in colour whilst c.25% of the bone from F.170 and F.269 were grey/blue/black in colour suggesting

poor oxidation perhaps resulting from insufficient fuel, low temperatures or curtailment of the cremation process.

Future Work

Selected fragments of cremated bone from the pit deposits and the hengiform monument will provide useful dating information with implications for the phasing of the archaeological activity across the exposed landscape.

11.6 FAUNAL REMAINS *Vida Rajkovača*

The fieldwork at Manor Farm resulted in the recovery of an assemblage with the raw fragment count of 991 fragments weighing 6609g. Following the faunal analysis, the only 231 assessable specimens were present in the assemblage (refitting fragments counted as one), 48 of which were identified to species (c.20%). The raw fragment count was given to demonstrate the level of fragmentation within the assemblage.

	2008	2009	2010	Total
Fragments	164	525	302	991
Weight (g)	852	967	4790	6609

Table 12: Quantity (raw fragment count prior to analysis) and weight of animal bone by phase

Methodology

Identification of the assemblage was undertaken with the aid of Schmid (1972), Hillson (1999) and reference material from the Cambridge Archaeological Unit, Cambridge. Unidentifiable fragments were assigned to general size categories where possible. The ageing data of Silver (1969) was used to assess epiphyseal fusion of the post-cranial elements. Measurements have been taken following Von den Driesch (1976). Withers height calculations follow the conversion factors of Kiesewalter for horse, Matolsci for cattle and Harcourt for dog (see Von den Driesch and Boessneck 1974). The assessment offers an overview of the state of preservation, the range of species and the potential this assemblage holds for future research. The sub-sets were quantified and considered by phase where possible.

The level of preservation of the faunal material recovered from the 2008-2010 excavations was varied from poor to moderate, and in some cases moderate to good preservation was recorded, however, the majority of the assemblage showed a relatively poor level of preservation and many fragments displayed signs of severe weathering. The assemblage was dominated by cattle, both wild and domestic, followed by ovicaprids, horse and dog. Of the 231 fragments of assessable material, only 20% (40 fragments) was identifiable to species. Despite relatively large quantities of fragments being collected from the Late Mesolithic tree throws and Neolithic monuments, very little of this material proved to be of analytical value given its poor state of preservation. Material recovered from the Romano-British features and palaeochannel deposits was distinctly better preserved.

The earliest evidence came from the Late Mesolithic tree throw F.23 with 34 calcined unidentifiable bone crumbs. Neolithic Cursus 1 yielded four bone fragments, one of which was a near complete aurochs (*Bos primigenius*) first phalanx.

Two tree throws (F.96/97 and F.98) of probable prehistoric date produced fragmentary cattle remains, provisionally identified as aurochs. This is indicative of a date no later than Early Bronze Age, when aurochs became extinct. There is the difficulty that domestic bulls overlap wild cattle in some dimensions, and although complete specimens can be used to distinguish,

the fragmentary remains like the ones recorded here sometimes cannot. In addition, very large cattle bones have previously been recorded from some northern Roman sites, namely Vindolanda, and cases like this warrant further study (Yalden 1999, 105). In other words, the assemblage could benefit from further biometrical analysis on aurochs elements with a view to resolving this issue. This could involve dating some of the Manor Farm faunal material in order to make accurate comparisons with contemporary regional assemblages to refine the interpretation.

Prehistoric tree throws (F.106, F.111, F.112, F.114 and F.131) also yielded a number of cattle-sized limb fragments, probably aurochs. Due to the poor preservation and fragmentation, these were only assigned to a size-category.

The cursuses contained a number of unidentifiable mammal bone fragments no greater than c.5mm in diameter, as well as some cow and aurochs elements. The remainder of the material was weathered with rounded edges and some gnawing marks, although all identifiable to species.

Taxon	Late Mesolithic Tree-throws	Neolithic Pits	Neolithic Cursus 1	Neolithic Cursus 2	Late Neolithic Hengiform Pits	Pits F96, 97 & 98	Ditches F79 & F128	RB Roadside Ditch	Palaeo-channel	Total
Cow	1	.	1	2	4	.	.	14	5	27
Ovicaprid	.	.	.	.	.	.	.	2	3	5
Horse	.	.	.	.	.	.	.	2	4	6
Aurochs	.	.	2	.	.	.	.	.	.	2
? Aurochs	.	.	.	.	.	4	.	.	.	4
Red Deer	1	.	.	.	.	1	.	.	.	2
Dog	.	.	.	.	.	5	.	.	2	7
Total ID to species	2	.	3	2	4	10	.	18	14	
Cattle-sized	6	10	3	7	2	.	4	3	5	47
Sheep n.f.i.	.	.	.	.	1	.	.	.	.	1
Mammal n.f.i.	37	11	14	47	25	.	.	.	.	134
Bird n.f.i.	.	.	.	.	.	.	.	.	1	1
Total	45	21	20	56	32	12	4	21	20	231

Table 13: Number of Identified Specimens (NISP) for all species by feature type and phase; the abbreviation n.f.i. denotes that the specimen could not be further identified

The overall moderate to good level of preservation is reflected in the butchery, biometry and ageing data available from what is a small assemblage. Butchery was recorded on six specimens (c.8% of the sub-set), mostly indicating meat or marrow removal and skinning. Biometrical data was obtained from three complete specimens: horse radius, dog tibia and cow metacarpus. Shoulder height estimates for horse came at 1297mm (13hh), suggesting this was a pony-sized animal. Dog withers height was in the middle of the size range (520mm) which would be big enough to be used as herd dog; however, size is not a reliable guide to function (Harcourt 1974, 171). Cattle metacarpus gave a shoulder height of 1100mm, a size similar to modern Dexter cows. In addition to the biometrical and butchery data, it was possible to age two specimens, both of which were recorded as juvenile (cow and dog).

The total of 14 cow and three cattle-sized elements from Roman ditch F.281 most likely represent part of the same animal. A complete metatarsal recovered from the same feature showed an osteoarthritic change on and around the proximal articulation. Gnawing marks were also noted on cow femur, almost certainly belonging to a large canid.

Discussion

Starting with the earlier phases of occupation, with features confidently dated to the Mesolithic and Neolithic periods, it is clear that the faunal material is sparse and poorly preserved. The late Mesolithic tree throw F.23 with its 34 unidentifiable bone crumbs almost certainly does not hold much potential for future study. The presence of slightly better preserved faunal material across the site from other feature types is suggestive of different depositional practices, rather than unfavourable taphonomic conditions. The Neolithic assemblage showed a prevalence of unidentified mammal bone remains, with cattle and aurochs being positively identified.

Moving onto the discussion of other feature types from later phases of occupation, as well as the undated material from the palaeochannel deposits, the preservation is better and the percentage of elements identified to species is greater. Cattle were the dominant species within the Romano-British material, followed by ovicaprid and horse. Albeit based on small numbers, this is in keeping with the period (King 1999). As for the remainder of the material, it is difficult to comment on particulars of the site's economy in the absence of dating evidence. The presence of aurochs is important, given the small size of the assemblage and the character of the Neolithic activity in this landscape. At least a few contemporaneous assemblages from this region should be compared in order to make any useful comment on the Manor Farm site economy during the Neolithic.

11.7 WORKED STONE *Simon Timberlake*

<037> F.96 (278) *whetstone?* : 62 x 40 x 15mm (60g)

A yellow-brown (iron-stained) quartz-mica schist fragment of a possible broken whetstone. The only possible evidence of use (ground/worn and rounded surface) is along the 15mm-wide flat edge. If this is a whetstone, then it must have broken fairly early in use. The lithology of this rock is what one might expect to find used in Roman and Medieval stones.

<045> F.152 (687) *gritstone rotary quern* : 190 x 180 x 70-55mm (2.64 kg)

Approximately a quarter section of the lower stone of a (originally) 380mm wide hand rotary quernstone. The quern was fashioned from an Old Red Sandstone (Devonian) pebbly gritstone, the source of this was probably South Wales, the Welsh Borders, or the West Country (Shaffrey 2006). The spindle hole in the centre of this stone is missing from this piece, the wear on the upper convex (grinding) surface suggests a fair degree of use. However, the evidence for the last dressing of this grind surface is still visible.

<130> F.249 (1363) *a possible small anvil stone?* 170 x 110 x 50mm (1.27 kg)

A waterworn slab-like cobble of well-laminated poorly micaceous medium-grained quartzitic sandstone, possibly of Jurassic-Cretaceous origin, but probably collected as a glacial erratic washed-into the gravels. The degree of wear or indentation on both (upper and lower) surfaces is extremely slight – this being only just detectable as several very faint hollows. This either reflects very short-term use, or else the crushing (and perhaps grinding) of fairly soft material. The underside (iron-stained surface) shows more evidence, just in one place, of grinding (a ground partly polished surface).

Discussion

Two of the objects described above are of uncertain, but probable identification. The broken fragment of stone described as a possible whetstone is at least credible as such on account of the lithological type (quartz-mica schist) which was certainly sourced as suitable material in the Early Medieval period (Scandinavian schist), but also it seems in the Roman period (see finds.org.uk/database/artefacts). No other information could be gleaned.

The possible stone anvil found in the Late Neolithic hengiform pit (F.246), though apparently little used, has its parallel in a small sandstone anvil recovered from Barrow I of the Low Ground Barrow Cemetery at Over (Evans & Tabor 2010). However, little more can be said about its use or function.

The hand-mill lower quern stone made of Old Red Sandstone gritstone is very typically Roman (1st-2nd century AD) and can be linked to the extraction and production of these in South-West England.

11.8 BURNT STONE *Simon Timberlake*

A total of 25.234 kg of burnt stone was examined from this site. Just a small amount of the burnt stone came from a few features excavated in 2009 (F.140 and F.189), the remainder of this coming from the 2010 excavations, in particular from a Middle Bronze Age (?) burnt stone pit F.221 which produced the vast majority of this (18.359 kg), the other two largest groups of material being that from F.230 (4.3 kg) and from a prehistoric/ ?MBA pit F.272 (6.39 kg). From these latter features the size of the heat-cracked, sooted and broken well-rounded and waterworn cobbles collected was large (60mm – 140mm), almost all of these being of indurate (non-local) quartzitic sandstone, some of them Palaeozoic sandstones and grits, but most being non-local Jurassic-Cretaceous ones. The amount of burnt flint in this assemblage was small (around 3-4%). It seems, therefore, that hard sandstone cobbles were specifically sought for this purpose.

It seems likely that most of the burnt stone collected comes from Middle Bronze Age cooking features (pits). A good example of a possible type of Middle Bronze Age cooking (or boiling) pit was that found at Clay Farm, South Cambridge (Timberlake 2007; F.485 & 486). However, those pits identified with burnt stone on the current site may either have been pits for the disposal or storage of burnt stone for re-use, or else accumulations of ‘pot-boilers’ added individually to a water-filled pit at each cooking (boiling) event). The crazing of the surface of the sandstone cobbles, alongside the part-calcination of the flint added (probably accidentally alongside the stone, attests to their use in boiling. The method of cooking in these *fulacht fiadh* may well have been to tightly wrap joints of food in tied bundles of leaves in order to prevent tainting of this with a suspension of charcoal and grit! (Wood 2006; Kelly 1954).

11.9 ENVIRONMENTAL BULK SAMPLES *Rachel Ballantyne and Anne de Vareilles*

Methodology

A total of 34 samples from the 2008-2010 fieldwork were flotation-sieved using a modified version of the Siraf tank (Williams 1973) at Cambridge Archaeological Unit. The flot from F.57 [151] was already dry when waterlogged remains were noticed. Other flots (300µm) and heavy residues were dried prior to sorting by the authors and F. Cox.

All flots and 1–4mm heavy residues from features F.33, F.41, F.49, F.57 and F.58 were sorted using a low-power binocular microscope (Leica MS5). All >4mm residues were sorted by eye. Identifications of macro-remains were made using the reference collections of the Pitt-Rivers Laboratory for Bioarchaeology, Department of Archaeology, University of Cambridge. Taxonomic references in this report follow Stace (1997) for plants and Beedham (1972) for molluscs. Raw data is presented in Tables 14-17.

Preservation

Very few charred plant remains are present, although their quality is good with limited distortion from charring. Other artefacts include burnt flint, burnt stone, burnt bone, unburnt bone, pot sherds and worked flint. Most of these items occur in very low quantities, often as very small fragments.

In general, good waterlogged remains including insect exoskeletons and leaf fragments, as well as good molluscan remains were not recovered from the 2008-2010 samples. However, such material was recovered from samples taken in 2007 (sample <7> taken from the palaeochannel and sample <8> from a peat deposit associated with a wooden post F.21 [46] at the edge of the palaeochannel). The results of these samples can be found in the report for Phase 1 (CAU report 844, 2008) and where relevant, are referenced in this evaluation.

Untransformed, intrusive roots and seeds are almost ubiquitous in low concentrations. Seeds of silver birch (*Betula pendula*) are light and mobile, and could have entered the contexts during excavation.

Prehistoric tree-throws: F.23 [63], F.33 [85], F.41 [107], F.49 [125], F.58 [154] and F.201 [814]

Charred plant remains include six small water-pepper (*Persicaria minor*) and three hazelnut shell fragments (*Corylus avellana*) although the economic use of the latter cannot be demonstrated from such limited remains. Small water-pepper could have been used as a seasoning. Three of the samples contained relatively high concentrations of charcoal, with fragments that could be identified by an appropriately skilled specialist. Burnt flint was present in most tree-throws, and most abundantly in F.23, which also contained a similar quantity of flint debitage and core fragments. Some of the worked flint was subsequently burnt, thus linking its production locus with the ubiquitous hearth debris. A few pot sherds were recovered from F.201.

Prehistoric and/or Neolithic pits: F.149 [489], F.161 [549] and F.168 [659]

A single tuber of what could be lesser celandine (*Ranunculus ficaria*) was found charred in F.149. Despite not having any other plant macro-remains F.168 contained a rich assemblage of well preserved charcoal and frequent burnt stone fragments.

Neolithic Cursus 1: F.78 [736]; Cursus 2: F.57 [151] & [148], F.222 [939], [1013], [1035] & [1088], F.140 [453] & [456]; and Cursus 3: F.227 [1209] & [1248]

Little other than a fine dusting of fine, comminuted charcoal was found across the cursuses. Two samples did differ, however: F.227 [1248] contained a rich assemblage of well preserved charcoal but no other plant remains, and F.57 [151] had a few waterlogged seeds. Context [151] may have had drying episodes during either formation, or between burial and excavation. Although the seeds did not occur in sufficient quantities to be environmentally meaningful, they would naturally fit into the damp, nutrient-rich lowland described for a sample from F.21 in Phase 1 (see CAU report 844, 2008). No molluscan remains were present which, when also compared to the results from F.21, suggests F.57 lay above the permanent level of the alkaline water-table. Few artefactual items suggestive of human activity were found across the cursuses (*ibid*).

Neolithic Hengiform monument: hengiform pits F.246 [1318], F.247 [1385] & F.249 [1363]; inner post-holes/cremations F.233 [1462], F.232 [1165] & F.234 [1168]

Very few carbonised plant remains were present. A single grass seed was found in F.232 and, apart from F.246 and F.249, only a fine scatter of comminuted charcoal occurred in all samples. The latter two features contained a relatively high concentration of charcoal,

including pieces large enough to be identified. Surprisingly burnt bone was rare. A tiny amount of worked flint and pottery sherds were also found.

Bronze Age and possible Bronze Age pits and cremations: F.142 [467], F.229 [1099], F.228 [1096], F.269 [1542], F.270 [1544] and F.272 [1575]

Plant remains other than charcoal were only found in F.228: two charred wild plant seeds and two charred root nodes or bulbs. These could indicate the burning of turf or land surface associated with the cremation. Fragments of burnt bones were only frequent in F.269, which puts into question the identity of the other possible cremations. Charcoal densities remained low though concentrations were a bit higher in F.229 and F.269. Burnt stone was common in F.228 and prolific in pit F.272 where burning/heating related activities may have occurred nearby.

Probable Roman ditch F.281 [1677] and undated land surface [1641]

Neither sample contained any remains other than a dusting of very fine charcoal.

Discussion

These 34 samples provide very limited evidence for human activities across the spatial and temporal sequence. The charred plant remains, and associated worked flint, burnt flint, pottery sherds, burnt bone and unburnt bone, suggest hearths and the processing of various materials. The charred hazelnut shells might indicate their use for food, as was common throughout Mesolithic and Neolithic Britain (Greig 1991; Jones 2000). However, no other evidence for the collection, processing and consumption of plant foods is present, despite the occasional high density of charcoal. There is therefore very limited potential for investigating subsistence from the charred assemblages.

Recommendations

Little or no useful waterlogged plant remains, entomological or molluscan remains were obtained from processed samples from the 2008-2010 excavation. Waterlogged remains from the palaeochannel sample taken in 2007 would benefit from comparative studies of pollen sequences from excavations in the Upper/Middle Ouse Valley (e.g. Scaife 2000). Future work on entomological remains, such as those found in [46] F.21, (also 2007) would provide much more detailed information about the local ecology, for example whether grazing animals or human settlements were nearby at that time. A well-reconstructed vegetation sequence would complement charcoal analysis by enabling comparison of burnt wood with the range of trees and shrubs once available.

With a dearth of such remains from archaeological features from the 2008-2010 seasons, future work on the palaeochannel samples taken during this time could provide the necessary material for more detailed work on the palaeoenvironment and local ecology.

Radiocarbon dating of the early human activity would be best based upon charred hazelnut shells – for example the two fragments (totalling 20mg) in tree throw F.33. The waterlogged seeds from the palaeochannel and peat deposits from the 2007 season are also suitable for radiocarbon dating, and thus any similar material obtained from palaeochannel samples from the 2008-2010 work could also be dated in the future. Charcoal from a charred timber at the base of pit F.168 and a second from the base of Cursus 3 F.227 could also be submitted for identification and radiocarbon dating.

Sample number	<12>	<17>	<22>	<25>	<29>	<65>	<42>	<48>	<53>
Context	[63]	[85]	[107]	[125]	[154]	[814]	[549]	[489]	[659]
Feature	F.23	F.33	F.41	F.49	F.58	F.201	F.161	F.149	F.168
Feature type	tree throw						pit	pit	pit
Phase/Date	prehistoric						prehistoric/Neolithic?		
Sample volume – litres	6 L.	6 L.	2 L.	1 L.	6 L.	15 L.	12 L.	8 L.	15 L.
Fraction of flot sorted	1	1	1	1	1	1	1	1	1
Fraction size of residue sorted	>1 mm	>1 mm	>1 mm	>1 mm	>1 mm	>4mm	>4mm	>4mm	>4mm
CHARRED PLANT REMAINS									
(Latin)	(English)								
cf. <i>Ranunculus ficaria</i> L.	lesser celandine tuber							1	
<i>Corylus avellana</i> L. nutshell	hazelnut shell fragment	2							
Caryophyllaceae embryo indet.	seed of the Pink family								
<i>Persicaria minor</i> (Hudson) Opiz	small water-pepper					6			
Large, lenticular <i>Carex</i> sp.	Sedge								
Indet. large Poaceae	wild or cultivated grass seed								
Indeterminate seed									
Monocot root node/bulb									
CHARCOAL									
overall volume of charcoal/ ml	< 1 ml.	< 1 ml.	< 1 ml.	50 ml.	4 ml.	5 ml.	<1 ml.	<1 ml.	10 ml.
large charcoal (>4mm)			-	++	+	++			+++
med. charcoal (2-4mm)		-	-	+++	++	++	-		+++
small charcoal (<2mm)	-	+	+	+++	+++	+++	+++	+	+++
INTRUSIVE BIOLOGICAL ITEMS									
<i>Betula pendula</i> Roth	silver birch		-				+++	-	++
<i>Carpinus betulus</i> L.	Hornbeam						-		
intrusive roots		+	+	-	-	-	++	-	+++
OTHER BIOLOGICAL ITEMS									
burnt bone fragments	+						+		
small animal bone							+		
OTHER ARTEFACTUAL ITEMS									
worked flint	+++						-		
burnt flint	+++	+	+++	+	+				
pottery sherd							++		
burnt stone							+		++

Table 14: Macro-fossils from the bulk soil samples from prehistoric pits and tree-throws.

KEY: - 1 or 2, + <10,
 ++ 10-50, +++ >50,
 P Present

Sample number	<62>	<28>	<26>	<76>	<84>	<87>	<88>	<41>	<47>	<106>	<109>
Context	[736]	[151]	[148]	[939]	[1013]	[1035]	[1088]	[456]	[453]	[1209]	[1248]
Feature	F. 78	F.57	F.57	F.222	F.222	F.222	F.222	F.140	F.140	F.227	F.227
Feature type/date	Cursus 1/Neo	Cursus 2/Neo		Cursus 2/Neo				N arm of Csus2/Neo		Cursus 3/Neo	
Sample volume – litres	8 L.	6 L.	6 L.	30 L.	20 L.	28 L.	40 L.	10 L.	15 L.	3 L.	12 ml.
Fraction of flot sorted	1	1	1	1	1	1	1	1	1	1	1
Fraction size of residue sorted	>4mm	>1 mm	>4mm	>4mm	>4mm	>4mm	>4mm	>4mm	>4mm	>4mm	>4mm
CHARRED PLANT REMAINS (Latin)		(English)									
<i>Corylus avellana</i> L. nutshell	hazelnut shell fragment		1								
Indeterminate seed						1					
CHARCOAL											
overall volume of charcoal/millilitres	<1 ml.	1 ml.	<1 ml.	<1 ml.	<1 ml.	<1 ml.	<1 ml.	<1 ml.	<1 ml.	<1 ml.	12 ml.
large charcoal (>4mm)		-									+++
med. charcoal (2-4mm)		+	+		-	-					++
small charcoal (<2mm)	+	++	+++	+	-	+	+	-	++	+	+++
WATERLOGGED PLANT REMAINS											
<i>R. bulbosus/acris/repens</i> L.	bulbous/meadow/creeping buttercup		+								
<i>Potentilla</i> sp.	cinquefoils		-								
<i>Aphanes arvensis</i> L.	parsley-piert		-								
<i>Viola</i> sp.	violets		-								
<i>Stachys</i> sp.	woundworts		-								
<i>Sambucus nigra</i> L.	elder		-								
<i>Cardus/Cirisium</i> sp.	thistles		-								
<i>Carex riparia</i> TYPE	medium-sized trigonous sedge seed		-								
INTRUSIVE BIOLOGICAL ITEMS											
<i>Betula pendula</i> Roth	silver birch	-		-	+	+	++	+	-		+
intrusive roots		-		+	+	++	+	+	+	+	++
OTHER BIOLOGICAL ITEMS											
burnt bone fragments		-						-			-
OTHER ARTEFACTUAL ITEMS											
worked flint		-				+	-	+			
burnt flint			+								
burnt stone		+									

Table 15: Macro-fossils from bulk soil samples from Neolithic and Romano-British features.

KEY: - 1 or 2, + <10,
++ 10-50, +++ >50,
P Present

Sample number	<101>	<116>	<133>	<135>	<136>	<137>	<167>	<196>
Context	[1165]	[1318]	[1363]	[1385]	[1462]	[1168]	[1677]	[1641]
Feature	F.232	F.246	F.249	F.247	F.233	F.234	F.281	-
Feature type	crem	pit	pit	pit	p.hole	p.hole	ditch	surface
Phase/Date	Hengiform, Neolithic						RB?	RB?
Sample volume – litres	5 L.	18 L.	8 L.	14 L.	5 L.	16 L.	11 L.	12 L.
Fraction of flots sorted	1	1	1	1	1	1	1	1
Fraction size of residue sorted	>4mm	>4mm	>4mm	>4mm	>4mm	>4mm	>4mm	>4mm
CHARRED PLANT REMAINS (English)	(Latin)							
<i>Ranunculus ficaria</i> L.	lesser celandine tuber							
<i>Corylus avellana</i> L. nutshell	hazelnut shell fragment							
Caryophyllaceae ebryo indet.	seed of the Pink family							
<i>Persicaria minor</i> (Hudson) Opiz	small water-pepper							
Large, lenticular <i>Carex</i> sp.	Sedge							
Indet. large Poaceae	wild or cultivated grass seed							
Indeterminate seed	1							
Monocot root node/bulb								
CHARCOAL								
overall volume of charcoal/millilitres	<1 ml.	2 ml.	3 ml.	<1 ml.	<1 ml.	<1 ml.	<1 ml.	<1 ml.
large charcoal (>4mm)		+	+++					
med. charcoal (2-4mm)		++	+					
small charcoal (<2mm)	+	+++	+++	+	-	+	++	+
INTRUSIVE BIOLOGICAL ITEMS								
<i>Betula pendula</i> Roth	silver birch							
intrusive roots	+	++	+	+	++	+		
OTHER BIOLOGICAL ITEMS								
burnt bone fragments	-	+			-	+		
OTHER ARTEFACTUAL ITEMS								
worked flint				-		-		
pottery sherd	-	+						

Table 16: Macro-fossils from bulk soil samples from Neolithic and Romano-British features.

KEY: - 1 or 2, + <10,
 ++ 10-50, +++ >50,
 P Present

Sample number	<36>	<93>	<94>	<141>	<142>	<143>	<144>	<146>	
Context	[467]	[1099]	[1096]	[1542]	[1542]	1544S	1544N	[1575]	
Feature	F.142	F.229	F.228	F.269	F.269	F.270	F.270	F.272	
Feature type	pit	crem?	crem.	Cremation		Cremation ?		pit	
Phase/Date	MBA	MBA?	MBA?	MBA?		MBA?		BA?	
Sample volume – litres	18 L.	6 L.	17 L.	6 L.	10 L.	4 L.	8 L.	15 L.	
Fraction of flot sorted	1	1	1	1	1	1	1	1	
Fraction size of residue sorted	>4mm	>4mm	>4mm	>4mm	>4mm	>4mm	>4mm	>4mm	
CHARRED PLANT REMAINS (English)		(Latin)							
<i>Ranunculus ficaria</i> L.	lesser celandine tuber								
<i>Corylus avellana</i> L. nutshell	hazelnut shell fragment								
Caryophyllaceae ebyro indet.			1						
<i>Persicaria minor</i> (Hudson) Opiz.	small water-pepper								
Large, lenticular <i>Carex</i> sp.			1						
Indet. large Poaceae	wild or cultivated grass seed								
Indeterminate seed									
Monocot root node/bulb			2						
CHARCOAL									
overall volume of charcoal/millilitres	<1 ml.	3ml.	1 ml.	<1 ml.	<1 ml.	<1 ml.	<1 ml.	<1 ml.	
large charcoal (>4mm)		+	-		++			-	
med. charcoal (2-4mm)		++	-					-	
small charcoal (<2mm)	+	+++	+++	++	+++	++	+	++	
INTRUSIVE BIOLOGICAL ITEMS									
<i>Betula pendula</i> Roth	silver birch	-	+					+	
<i>Carpinus betulus</i> L.	Hornbeam								
intrusive roots		+	++	+		-	+	+	
OTHER BIOLOGICAL ITEMS									
burnt bone fragments		-	+	+++	+++		+		
OTHER ARTEFACTUAL ITEMS									
pottery sherd	-								
burnt stone		+	++				-	+++	

Table 17: Macro-fossils from bulk soil samples from Bronze Age features.

KEY: - 1 or 2, + <10,
 ++ 10-50, +++ >50,
 P Present

11.10 POLLEN ANALYSIS *Steve Boreham*

This report presents the results of assessment pollen analyses from 10 samples of sediment taken from two features at Manor Farm, Old Wolverton, Milton Keynes in 2009.

Feature 181 was identified as a Neolithic cursus ditch in-filling, comprising both silty and sandy units. It was sampled for pollen analysis in the field by the author (see photo 1). A single pollen sample was taken from the lower silty ditch-fill sediments at 35cm, and two samples were taken from the upper silty ditch-fill sediments at 70cm & 85cm. A further pollen sample was also taken from the overlying upper alluvium at 125cm.

Feature 185 was identified as a Roman road-side ditch at the edge of the floodplain. The sequence comprised basal sand and gravel (0-10cm) overlain grey organic silts (10-50cm), grey silt (context 696 50-65cm) and grey silty clay (context 695 65-80cm). The author sampled the basal part of the eastern sequence (organic silts) at 5cm and 35cm for pollen analysis (see photo 2). In addition, at a different location, two monolith tins were taken from the sequence. The basal monolith (tin 2) sampled the lower 50cm of the sequence and the upper monolith (tin 1) sampled the upper 30cm of the sequence (contexts 696 & 695). Two pollen samples were taken from the lower monolith at 17cm and 40cm. Two samples for pollen analysis were also taken from the upper monolith tin at 10cm (context 696) and 22cm (context 695).

The 10 samples of sediment from the two features were prepared using the standard hydrofluoric acid technique, and counted for pollen at x400 magnification using a high-power stereo microscope. The percentage pollen data from these samples is presented in Table 18.

Pollen Analyses

The pollen concentrations encountered ranged between 21,588 and 44,171 grains per ml. Pollen counting was somewhat hampered by the presence of finely divided organic debris. Preservation of the fossil pollen grains (palynomorphs) was rather variable. Unfortunately, despite careful sample selection, the four samples from the Neolithic cursus ditch <F181> and the two upper samples from the Roman ditch <F185> proved to be barren. Assessment pollen counts were made from a single slide for the four remaining samples from the Roman ditch/pond. The pollen sums achieved ranged between 51 and 102. None of these exceeded the statistically desirable total of 300 pollen grains main sum, and only one exceeded a count of 100 grains. As a consequence caution must be employed during the interpretation of these results.

Feature 185 (Roman ditch)

The basal monolith pollen sample from 17cm was dominated by grass (Poaceae) pollen (39.7%), with a range of herbs including the daisy family (Asteraceae) (together 6.4%), the cabbage family (Brassicaceae) (4.8%), the disturbance indicator strapwort plantain (*Plantago lanceolata*) (6.3%), the cow-parsley family (Apiaceae) (6.3%) and importantly cereal pollen (3.2%). Arboreal taxa included hazel (*Corylus*) (7.9%), oak (*Quercus*) (4.8%), willow (*Salix*) (3.2%) and ash (*Fraxinus*) (1.6%). Lower plants were represented by undifferentiated spores, which accounted for 6.3%.

The sample from 40cm was dominated by grass (Poaceae) pollen (48.0%), with a range of herbs including the daisy family (Asteraceae) (together 15.7%), strapwort plantain (*Plantago lanceolata*) (9.8%), the cow-parsley family (Apiaceae) (6.3%) and cereal pollen (4.9%). Arboreal taxa included hazel (*Corylus*) (3.9%), oak (*Quercus*) (3.9%), alder (*Alnus*) and elm (*Ulmus*) (both 1.0%). Lower plants were represented by undifferentiated spores (2.0%), and aquatic plants were represented by the emergent bur-reed (*Sparganium*) (2.0%). The large

proportion of Asteraceae pollen grains in this sample suggests that it may have been modified by oxidative soil processes, leading to an increase in resistant types. However, the relatively low proportion of resilient pteropsid spores may mean that the Asteraceae pollen may represent a genuine part of the vegetation community.

Taken together, these samples suggest post-clearance grassland and meadow environments with tall-herbs, riparian (bank-side) elements, disturbance indicators and evidence for arable activity. There is a little evidence for fragmentary or distant mixed-oak woodland, which might equally be interpreted as a signal from hedgerow and parkland (scattered trees). Indicators of wet conditions are relatively sparse, suggesting perhaps occasional willow or alder trees, rather than patches of wet woodland (carr).

The two samples taken by the author from the eastern sequence also produced pollen. The lower sample at 5cm was dominated by grass (Poaceae) pollen (67.9%), with a range of herbs including the daisy family (Asteraceae) (together 3.9%), the cabbage family (Brassicaceae) (2.6%), and dock (*Rumex*) (2.6%). Lower plants were represented by mare's tail (*Equisetum*) (1.3%) and undifferentiated fern spores that together accounted for 3.9%. Arboreal taxa included alder (*Alnus*) (3.8%), hazel (*Corylus*) (2.6%), oak (*Quercus*), ash (*Fraxinus*) and willow (*Salix*) (all 1.3%). Aquatic plants are represented by bur-reed (*Sparganium*) (5.1%). The upper pollen sample from 35cm was also dominated by grass (Poaceae) pollen (56.9%), with a range of herbs including the daisy family (Asteraceae) (5.9%), the cabbage family (Brassicaceae) (5.9%), and the cow parsley family (Apiaceae) (3.9%). Arboreal taxa included hazel (*Corylus*) (3.9%), oak (*Quercus*), alder (*Alnus*) and willow (*Salix*) (2.0 1.3%). Undifferentiated fern spores together accounted for 9.8%.

These samples hint at a low-diversity grassland with apparently no disturbance indicators or nearby arable activity. There are a few riparian and tall-herb elements, with a suggestion of hedgerows and scattered alder and willow trees. This pastoral post-clearance signal contrasts with the more diverse habitats and arable activity suggested by the analyses from the monolith samples. It is important to observe that although all four of these samples came from comparable heights in the basal part of the Roman ditch/pond sequence, they must be of different ages, perhaps as a result of re-cutting of the feature.

Discussion

It is unfortunate that no pollen was recovered from the Neolithic cursus ditch feature <F181>. It seems that in its position above the water table, the sequence had become fully oxidised leading to the destruction of palynomorphs. The same appears to be true for the upper part of the Roman pond/ditch <F185>. However, the basal part of this feature yielded two rather different grass-dominated pollen assemblages suggesting that sediments of two different ages must be represented. It is tempting to suggest that the samples apparently without an arable signal taken by the author from the eastern sequence might represent a later abandonment phase, although this is pure conjecture. It is important to realise the limitations of these assessment pollen counts, although many attributes of the landscape can be gleaned from this data.

location	MOW09 <F185> Roman roadside ditch						MOW09 <F181>			
	Tin 2		Tin 1		SB samples		Neolithic Cursus Ditch			
context			696	695						
sample	17cm	40cm	10cm	22cm	5cm	35cm	35cm	70cm	85cm	125cm
<i>Trees & Shrubs</i>										
Ulmus	0.0	1.0			0.0	0.0				
Quercus	4.8	3.9			1.3	0.0				
Alnus	0.0	1.0			3.8	2.0				
Fraxinus	1.6	0.0			1.3	0.0				
Corylus	7.9	3.9			2.6	3.9				
Salix	3.2	0.0			1.3	2.0				
<i>Herbs</i>										
Poaceae	39.7	48.0			67.9	56.9				
Cereals	3.2	4.9			0.0	0.0				
Cyperaceae	1.6	1.0			0.0	0.0				
Asteraceae (Asteroidea/Cardueae) undif.	1.6	14.7			1.3	0.0				
Asteraceae (Lactuceae) undif.	4.8	1.0			2.6	5.9				
Cirsium _type	0.0	0.0			1.3	0.0				
Caryophyllaceae	1.6	1.0			0.0	2.0				
Chenopodiaceae	1.6	0.0			1.3	0.0				
Brassicaceae	4.8	2.0			2.6	5.9				
Fabaceae	1.6	1.0			1.3	0.0				
Filipendula	0.0	0.0			1.3	2.0				
Lamiaceae	0.0	1.0			1.3	2.0				
Plantago lanceolata	6.3	9.8	barren	barren	0.0	0.0	barren	barren	barren	barren
Ranunculus _type	0.0	1.0			0.0	2.0				
Rumex	3.2	1.0			2.6	2.0				
Apiaceae	6.3	2.0			1.3	3.9				
<i>Lower plants</i>										
Equisetum	0.0	0.0			1.3	0.0				
Pteropsida (monolete) undif.	6.3	2.0			2.6	5.9				
Pteropsida (trilete) undif.	0.0	0.0			1.3	3.9				
Sphagnum										
<i>Aquatics</i>										
Sparganium _type	0.0	2.0			5.1	0.0				
Sum trees	6.3	5.9			6.4	2.0				
Sum shrubs	11.1	3.9			3.8	5.9				
Sum herbs	76.2	88.2			84.6	82.4				
Sum spores	6.3	2.0			5.1	9.8				
Main Sum	63	102	-	-	78	51	-	-	-	-
Concentration (grains per ml)	44171	42909	<1052	<1052	21588	31551	<1052	<1052	<1052	<1052

Table 18: Pollen Percentage

11.11 PALAEO-ENVIRONMENT ASSESSMENT *Charles French*

Observations

A brief site visit took place on June 30th 2010 and noted a palaeo-landscape beneath about 1-1.5m of silty clay alluvial overburden.

The whole area being quarried is situated on river gravel terrace deposits, much dissected by silty clay, waterlogged palaeo-channel fills. There appear to be two main channel belts evident, a more major one to the north (beyond the current excavated area) and a more minor one to the south, just within the southern quarry face. These effectively 'sandwich' the zone of prehistoric archaeological features. In terms of date estimation, they are probably of late glacial-early Holocene age, but could have been extant in terms of their infilling time range well into prehistoric times.

In one instance, there is a small, shallow, grey silt filled palaeo-channel, cutting north-south across both the late Neolithic cursus monument and sub-rectangular Bronze Age field system in the current excavation area. Although the channel was not fully exposed in section, it appears to be a shallow creek-like feature that formed within the period of deposition of the silty clay alluvial overburden. I would guess that this creek is of historic date.

Overall, there is little buried soil/old land surface survival on the terrace deposits. But, there is a thin (<12cm) sandy loam B horizon on the northern edge of the north cursus ditch, surviving beneath a small amount of gravel upcast bank material. This gives every indication of being a weakly developed brown earth, with its organic A horizon having been truncated, both by past human activity and the subsequent deposition of silts and clay in seasonal overbank floodwaters, as typically occurs in many lowland English river valleys (French 2003).

Suggestions for further work

As there are only a few good zones of preservation in the area being quarried with which to examine the palaeo-environmental record associated with the earlier prehistoric monuments found to date; it is suggested to:

- section any minor channels associated with the monumental landscape and relate them stratigraphically to the alluvial overburden sequence; any sampling for pollen is dependent on its approximate age and relationship to the alluvial sequence and excavated prehistoric features;
- section the main northern palaeo-channel in the next appropriate phase of archaeological work, and sample the complete profile for pollen to produce a local and sub-regional vegetational sequence for the late glacial-early Holocene; this should be augmented by bulk sampling for insects and macro-botanical remains – subject to preservation, and also sampled for radiocarbon assay if appropriate datable (organic) material is recovered to establish the date range of its fills;
- other dating methods for the archaeological and palaeo-channel features such as OSL might be appropriate, but as there were no evident standstill surfaces in either of these feature types, this would not be appropriate at this stage; nonetheless, it may be a possible method for dating the palaeo-channel and alluvial sequence in future phases of investigation;
- the preservation of any buried soil is as yet too poor to warrant further (micromorphological) analysis, but preservation conditions could change in future phases of work, and then the value of this work could be re-assessed.

11.12 WATERLOGGED WOOD *Michael Bamforth*

This assessment 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.

Feature No.	Context No.	Type	Context/ area of site	Date?	Wood No.
100/128	287	Round wood from bulk collection	Fill of ditch, poss. flood deposit from adjacent channel	Late IA/Roman?	W007
110	310	Timber post	Within' course of Roman roadside ditches of Trackway 1. Driven through lower alluvial layers, through possible buried soil and into gravels.	Roman?	W026
108	303	Timber post	As above	Roman?	W027
110	310	Timber post	As above	Roman?	W028
107	300	Timber post	As above	Roman?	W029
173	635	Timber post	'Within' course of Roman roadside ditches. Base of post only, badly broken, driven through alluvial layers into underlying sand	Roman?	W021
275	[1587]	Timber post	'Within' roadside ditches of Trackway 2	Roman?	W001
SF3	[1467]	Debris	From southern braided channel, above Roman road	Roman/post Roman	W005
	[1464]	Roundwood stake	From southern braided channel	Roman/post Roman	W006
SF6		Artefact	From southern braided channel	Roman/post Roman	W008
279	[1701]	Roundwood and debris	Pit close to southern braided channel	Roman?	W009, W010, W011
284	-	Roundwood stake	Driven into gravels, just north of Trackway 2	Roman?	W013
	[1612]	Artefact	Immediately 'above' trackway in channel fill	Roman/post Roman?	W014
283	-	Unclassified stake	Driven into gravels, just north of Trackway 2	Roman?	W015
286	-	Timber post	Driven into northern ditch of Trackway 1	Roman?	W016
SF10	[1467]	Debris	From southern braided channel, above Roman road	Roman/post Roman?	W017
	[1466]	Roundwood stake	From southern braided channel	Roman/post Roman?	W018
SF12	[1467]	Artefact	From southern braided channel, above Roman road	Roman/post Roman?	W019
	[1465]	Roundwood stake	From southern braided channel	Roman/post Roman?	W020
287	-	Timber post	Driven into gravels, in between ditches of Trackway 2	Roman?	W024
285	-	Timber post	Driven into northern ditch of Trackway 1	Roman?	W025
	[1619]	Timber post	Post opposite post [1503] in surface of Trackway 2	Roman?	W029
267	[1503]	Timber post	Post in Roman(?) road	Roman?	W030

Table 19: All waterlogged wood recovered from the 2008-2010 excavations

During the 2008-2010 excavations, a total of 23 discreet items and a bulk collection consisting of twelve pieces of roundwood were collected and recorded. This assessment has been produced in accordance with English Heritage guidelines for the treatment of waterlogged wood (Bunning 2010) and recommendations made by the Society of Museum Archaeologists (1993) for the retention of waterlogged wood.

Condition of Material

The condition scale developed by the Humber Wetlands Project (Van de Noort *et al.* 1995: Table 16) will be used throughout this report (Table 20). The condition scale is based primarily on the clarity of surface data and the score depends on the types of analysis that can be carried out according to the preservation of the material. This scale does not take into account the suitability of the item for a given process. If preservation varies within a discreet item, the section that is best preserved is considered when assigning the item a condition score:

CONDITION SCORE	FREQUENCY	% OF ASSEMBLAGE
5	0	0.0
4	18	51.4
3	16	45.7
2	0	0.0
1	0	0.0
0	1	2.9
<i>total</i>	<i>35</i>	<i>100.0</i>

Table 20: Condition of material

CONDITION MUSEUM TECHNOLOGY WOODLAND DENDRO-SPECIES SCORE CONSERVATION ANALYSIS MANAGEMENT CHRONOLOGY IDENTIFICATION
5 excellent + + + + 4good -++++ 3 moderate -+/-+ + + 2 poor -+/-+/-+ 1 very poor -----/0 non-viable ----

Using the above condition scale, the majority of the material scores a **3** or above, describing a moderately-preserved assemblage in which woodworking evidence is likely to be visible, but not always clear. The single item that scored **0**, W15, survived only as dust.

Range and Variation

A broad range of material has been recorded from this site, with all basic categories of material represented (Table 21). Half of the assemblage is formed of roundwood. Timber, in the form of large upright posts, comprises the second largest category within the assemblage. Items of debris include woodchips, roundwood debris and timber debris. There are also three items classed as artefacts.

CATEGORY OF MATERIAL	FREQUENCY	% OF ASSEMBLAGE
Artefact	3	8.6
Timber	10	28.6
Roundwood	18	51.4
Debris	3	8.6
Unclassified	1	2.9

Table 21: Category of Material

Artefacts

Artefact W8 SF.6 was recovered from the southern braided channel system. This tangentially aligned piece of oak has been hewn into a small tapered peg. Both ends are cross cut. One edge and the pointed end appear lightly charred. The item measures 85x33x29mm.

Artefact W14 [1612] was recovered from immediately above the level of the Roman trackway in the southern braided channel, from context [1612]. Identified as oak, this item represents a broken portion of an artefact of unknown type. Consisting of heartwood only, this item has a rectangular cross section, measuring 95x19mm. It is rectangular in plan. One end has a

modern break. It had also broken in antiquity along one edge, in line with the grain of the wood. The surviving portion is 95mm long, 91mm wide and 19mm thick. The original edge and the end of one face are bevelled; the obverse face is flat. The modern break across one end has sheared across a broken hole that may originally have been triangular in plan. The item has a well-finished surface that seems lightly worn from use or handling.

Artefact W19 (SF.12) was recovered from the Roman/post Roman levels of the southern braided channel system, and appears to be a peg or wedge. This peg/wedge is fashioned from the heartwood of slow-grown oak heartwood. It has a rectangular cross section that is tangentially aligned, is cross cut, and measures 36x23mm. This peg/wedge is hewn towards a point at one end, maintaining the rectangular cross section. The pointed end is broken, measuring 25x16mm.

Timber

Three driven posts (W26 F.110, W27 F.108 and W28 F.107) are aligned east-west between the roadside ditches of the Roman Trackway 1, at the northern extent of the site. All three posts remain unidentified to species, but appear to be fashioned from the same material:

Post W26 remains unidentified to species, and measures 1140x190mm. Fashioned from heartwood, this item has been trimmed at the bottom end from all directions to a tapering point, which has since been broken. The top end has degraded away. A toolmark measuring 88:1mm was recorded. This toolmark seems to be the same size as that recorded from W27. The tool facets are broad and flat, suggesting an iron tool.

W27 remains unidentified to species, and measures 920x210mm. Fashioned from knotty heartwood, this item has been converted to a boxed heart and has been trimmed at the bottom end from four directions to a tapering point, which has since been broken. The top end has degraded away and has signs of possible wear from flowing water. A toolmark measuring 89:1mm was recorded. This toolmark seems to be the same size as that recorded from W26. The tool facets are broad and flat, suggesting an iron tool.

Post W28 remains unidentified to species, and measures 750x200mm. Fashioned from heartwood, this item has been trimmed at the bottom end from all directions to a tapering, 'pencil' point. The facets are neat, small (c.30mm wide) and concave. This would usually be seen as indicative of a bronze tool (Sands 1997), although this seems unlikely given the post's association with and similarity to W26 and W27. It is possible that the shape of the facets is the result of an individual woodworker's style. The top end was broken during excavation.

Post W21 F.173 was also recovered Trackway 1, between the roadside ditches, in the central area of the site. This post has broken into three large fragments. Formed of fast growing oak heartwood, with a twisted grain, the fragments seem to form a boxed heart post, the centre of which has rotted away in antiquity. One end, presumably the base, has been cross cut. This suggests the post may have been set in a posthole, rather than driven. A section measuring 390x220x210mm has survived. The cross cut end seems water worn. This suggests that either the post was exposed for some time before being utilised, or possibly that the cross cut end in fact represents the top, as opposed to the bottom of the post.

Posts W29 [1619] and W30 F.267 lie either side of the Roman(?) Trackway 2 at a possible fording point, where the trackway widens and passes through a wet zone, marked by an increased presence of limestone forming the road's surface.

W29 is a driven oak post measuring 710x130x120mm. This timber has been split into a radial 1/8 and modified to have a roughly square cross section. The top has degraded away and the base has been trimmed from all directions into a tapered point. The facets are large and flat,

suggesting the use of an iron tool (Sands 1997). A single toolmark measuring 57:4mm was recorded.

W30 is a driven oak post measuring 970x180x160mm. This timber has been split into a radial 1/8 and modified into a roughly square shape. The top has degraded away and the base has been trimmed from all directions into a tapered point, the tip of which displays a modern break. The facets are large and flat, suggesting the use of an iron tool.

Posts W25 F.285 and W16 F.286 were driven into the northern roadside ditch of the Trackway 2:

W25 is a driven oak post measuring 270x120x110mm. This timber has been split into a boxed heart. The top has degraded away and the base has been trimmed from all directions into a tapered point.

W16 is a driven post measuring 122x85x69mm. This item is the broken tip of a larger post and has been trimmed from all directions into a tapered point. A single, partial toolmark measuring 42:1mm was recorded.

Posts W1 F.275 and W24 F.287 were recovered from between the roadside ditches of the east-west Roman trackway.

W1 is a driven oak post measuring 205x65x30mm. This half split timber has degraded away at the top, which appears to be water worn. The base was not recovered.

W24 consists of six fragments that previously formed a truncated and degraded tangentially split oak post.

Roundwood

A bulk collection of twelve pieces of roundwood (W07) was recovered from the fill of ditch F.100/128 in the north-west corner of the site. The items were sub-samples, and as such were all less than 100mm in length. Diameters ranged from 10-20mm. No woodworking evidence was seen.

Two pieces of roundwood were recovered from pit F.279, lying just to the north of the Trackway 2. W09 measured 85x27mm and had been trimmed at the proximal end from one direction. The facets are flat, suggesting the use of an iron tool (Sands 1997). W10 measured 65x19mm and had also been trimmed at one end, from one direction. The facet was again suggestive of the use of an iron tool.

Three items were recovered from within the southern braided channel system. W6 has modern breaks at both ends and measured 200x50mm. The off-centre pith suggests this item was a limb or branch. No woodworking evidence was seen. Stake W18 measures 230x34mm and has a modern break at one end. The other proximal end has been trimmed from one direction. The item is straight and even with a central pith, suggesting it may have been derived from coppicing. Stake W20 has a modern break at one end and measures 420x25mm. The other end has been trimmed from one direction.

Stake W13 was driven into gravel, just north of the northern roadside ditch of the east-west trackway. Both ends have modern breaks, with the item measuring 225x45mm. There are tool facets at one end, presumably related to a pointed end that is now broken.

Debris

W17 SF.10 is a woodchip, recovered from the southern braided channel system. Measuring 85x49x11mm, this item is radially aligned and has been cross cut at one end.

W5 SF.3 is an oak item, possibly a woodchip, recovered from the southern braided channel system and measures 100x45x2mm. It is radially aligned and may represent woodworking debris. However, it may also represent a natural delamination.

W11 was recovered from pit F.279. This half split piece of roundwood measured 95x36x20mm. It is unclear whether this item was converted by natural or human agency.

Unclassified

W15 survived only as dust, and as such has not been assigned to a category of material. It is originally recorded as a stake, driven into gravel, just north of the northern roadside ditch of the east-west trackway.

Discussion

Woodworking Technology

The woodworking technology seen within this assemblage is typical of the suggested dates for the material (Late Iron Age / Roman / Post Roman). Several items have been reduced via simple splits and many items show tool faceting. In some cases, the tool facets are relatively large and flat, suggesting the use of iron tools (Sands 1997). The limited size of the assemblage leaves little scope for further analysis in this area. The exceptions are the three artefacts, which are of interest in themselves.

Woodland Reconstruction

The restricted size of the assemblage limits the possibility of further analysis in this area. The large posts are of good quality timber, having straight grains and few side branches. Considered alongside the central pith noted in all cases, it seems likely that these items are fashioned from the butt end of the trunks of medium sized trees, probably growing in nearby woodland. Where identified, the items are oak, a common, tall woodland tree, generally found growing in mixed deciduous woodland and used for a wide range of functions throughout the archaeological record (Gale and Cutler 2000). Although several items in the roundwood assemblage have morphological features associated with coppicing – a common practice in the periods covered by this material – there is no scope to address this issue in greater detail.

Decay Analysis, Species Identification and Dendrochronology

Decay analysis is not advised as the material has been stored for some time post excavation, which will have affected its condition. Also, the author is not aware of any ongoing discussion regarding burial environments in the area of the investigations. There is not sufficient material to add to any questions of woodland management practices. However, some species identification should be carried out to form a complete archive. In order to be considered for dendrochronology an item should be oak, have sapwood present and have more than 50 years of growth. The only item to fit these criteria is W30 F.267, which appears to have just over 50 rings.

None of the items are of sufficient interest at this stage to warrant conservation and retention.

Recommendations

It is suggested that in order to form a complete archive, artefacts W8, W14 and W19 together with posts W26 and W29 are photographed and illustrated at an appropriate scale. It is suggested that the four timbers not currently identified as oak (W16, W26, W27 and W28) are identified to species by microscopic analysis. The three artefacts should be compared with items in the published literature, with the aim of identifying their original function. The posts and stakes within the Roman trackways, associated with possible fording points and repairs, are of interest and should be compared to examples in the published literature.

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<http://www.english-heritage.org.uk/publications/revised-framework-east-of-england/>

Solent Thames Research Framework – Oxford Archaeology
http://thehumanjourney.net/index.php?option=com_content&task=view&id=553&Itemid=277

Other Resources:

Cambridge University Collection of Aerial Photographs (CUCAP)

APPENDICES

APPENDIX 1: ALL FEATURES FROM THE 2008 EXCAVATIONS

Feature No.	Feature Type	Context No.	Context Type	Length (m)	Width (m)	Depth (m)	Comments
23	Tree throw	63	Fill				Prehistoric
		64	Cut	1.1	0.7	0.16	
24	Tree throw	65	Fill				Prehistoric
		66	Cut	1.45	0.75	0.27	
25	Tree throw	67	Fill				Prehistoric
		68	Cut	2.5	0.16	0.29	
26	Tree throw	69	Fill				Prehistoric
		70	Cut	2.2	0.65	0.22	
27	Tree throw	71	Fill				Prehistoric
		72	Cut	0.55	0.36	0.13	
28	Tree throw	73	Fill				Prehistoric
		74	Cut	2.5	0.81	0.29	
29	Tree throw	75	Fill				Prehistoric
		76	Fill				
		77	Cut	1.35	0.94	0.33	
30	Tree throw	78	Fill				Prehistoric
		79	Cut		0.57	0.22	
31	Tree throw	80	Fill				Prehistoric
		81	Cut		0.56	0.15	
32	Tree throw	82	Fill				Prehistoric
		83	Fill				
		84	Cut	2.5	2.5	0.33	
33	Tree throw	85	Fill				Prehistoric
		86	Cut	-	-	-	
34	Tree throw	87	Fill				Prehistoric
		88	Cut	-	-	-	
35	Tree throw	89	Fill				Prehistoric
		90	Cut	-	-	-	
36	Tree throw	91	Fill				Prehistoric
		92	Cut	-	-	-	
37	Tree throw	93	Fill				Prehistoric
		94	Cut	-	-	-	
38	Tree throw	95	Fill				Prehistoric
		96	Cut	-	-	-	
39	Tree throw	97	Fill				Prehistoric
		98	Cut	-	-	-	
40	Tree throw	99	Fill				Prehistoric
		100	Cut	-	-	-	
41	Tree throw	101	Fill				Prehistoric
		102	Cut	-	-	-	
42	Tree throw	108	Cut	2.5	2	0.18	Prehistoric
		109	Fill				
43	Tree throw	110	Cut	4.6	0.8	0.12	Prehistoric

		111	Fill				
44	Tree throw	112	Cut	2.25	2.3	0.35	Prehistoric
		113	Fill				
45	Tree throw	114	Cut	0.7	0.4	0.23	Prehistoric?
		115	Fill				
		116	'Cut'	N/A	4.3	.35	
		118	Fill				
		119	Fill				
47	Palaeochannel	117	'Cut'	-	-	-	Prehistoric?
48	Ditch (Cursus 2)	120	Cut		1.7	1	Neolithic
		121	Fill				
		122	Fill				
		135	Fill				
		136	Cut		1.5		
		141	Fill				
		142	Cut		0.73	0.3	
		143	Fill				
49	Tree throw	123	Cut	1.48	1.54	0.32	Prehistoric
		124	Fill				
		125	Fill				
		126	Fill				
50	Tree throw	127	Cut	3.6		0.26	Prehistoric
		128	Fill				
51	Tree throw	129	Cut	-	-	-	Prehistoric
		130	Fill				
52	Tree throw	131	Cut	-	-	-	Prehistoric
		132	Fill				
53	Tree throw	133	Cut	-	-	-	Prehistoric
		134	Fill				
54	Ditch (Field system A)	137	Fill				MBA?
		138	Cut		1	0.42	
		176	Fill				
		177	Fill				
		178	Cut		1.4	0.5	
55	Ditch (Field system A)	139	Fill				MBA?
		140	Cut		0.5	0.16	
56	Ditch (Cursus 2)	145	Fill				Neolithic
		146	Cut		1.3	0.39	
57	Ditch (Cursus 2)	147	Cut		1.25	0.46	Neolithic
		148	Fill				
		149	Fill				
		150	Cut		1.6	.65	
		151	Fill				
		152	Fill				
		173	Fill				
		174	Fill				
58	Tree throw	153	Cut	0.98	1.1	0.43	Prehistoric
		154	Fill				

		155	Fill				
59	Tree throw	156	Cut	6	0.8	0.2	Prehistoric
		157	Fill				
		158	Cut	6	0.8	0.2	
		159	Fill				
60	Tree throw	160	Cut	-	-	-	Prehistoric
		161	Fill				
61	Tree throw	162	Cut	-	-	-	Prehistoric
		163	Fill				
62	Tree throw	164	Cut	-	-	-	Prehistoric
		165	Fill				
63	Tree throw	166	Cut	-	-	-	Prehistoric
		167	Fill				
64	Tree throw	168	Cut	-	-	-	Prehistoric
		169	Fill				
65	Palaeochannel	170	Cut		7.6	1.7	Prehistoric?
		171	Fill				
		172	Fill				
66	Tree throw	179	Fill				Prehistoric
		180	Cut	-	-	-	
67	Ditch	183	Cut		1.4	0.49	Roman?
		184	Fill				
		185	Fill				
		186	Fill				
		187	Fill				
68	Posthole	188	Cut		0.22	0.67	Roman?
		189	Fill				
69	Pit (burnt stone)	194	Cut	0.78	0.71	0.19	Prehistoric
		195	Fill				
		196	Fill				
70	Pit (burnt stone)	197	Cut	0.39	0.36	0.08	Prehistoric
		198	Fill				
71	Pit (burnt stone)	199	Cut	0.35	0.32	0.1	Prehistoric
		200	Fill				
72	Ditch (same as F78) (Cursus 1)	318	Fill				Neolithic
		319	Fill				
		320	Fill				
		321	Cut		1	0.45	
73	Pit?	207	Fill				Prehistoric?
		208	Cut	0.8	0.55	0.25	
74	Tree throw	209	Fill				Prehistoric
		210	Fill				
		211	Fill				
		212	Cut	2.5	0.85	0.5	
75	Tree throw	213	Fill				Prehistoric
		214	Fill				
		215	Cut	1.9	0.8	0.2	
76	Pit?	216	Fill				Prehistoric
		217	Cut	0.75	0.65	0.07	

77	Tree throw	218	Fill				Prehistoric
		219	Cut	2	0.85	0.25	
78	Ditch (Cursus 1)	201	Fill				Neolithic
		202	Fill				
		203	Fill				
		204	Fill				
		205	Fill				
		206	Cut		1	0.5	
		220	Fill				
		221	Cut		1.27	0.19	
		346	Fill				
		347	Cut		1.3	0.26	
		367	Fill				
		718	Fill				
		719	Fill				
		720	Fill				
		721	Fill				
		722	Fill				
		723	Cut		1.9	0.8	
		730	Fill				
		731	Fill				
		732	Fill				
		733	Fill				
		734	Fill				
		735	Fill				
		736	Fill				
		737	Fill				
		738	Fill				
739	Fill						
740	Cut		2	0.8			
79	Ditch	224	Fill				Alluvial ditch. Date unknown
		226	Fill				
		227	Fill				
		228	Cut		1.07	0.4	
		246	Cut		0.83	0.31	
		247	Fill				
80	Ditch (Cursus 2)	222	Fill				Neolithic
		223	Fill				
		225	Cut		1.52	0.77	
		267	Fill				
		268	Fill				
		269	Fill				
		270	Cut		2.1	0.6	
81	Tree throw	229	Cut		0.5	0.18	Prehistoric
		230	Fill				
82	Pit?	231	Fill				Prehistoric?
		232	Cut		0.4	0.13	
83	Tree throw	233	Fill				Prehistoric
		234	Cut		0.55	0.1	
84	Tree throw/Pit?	235	Fill				Prehistoric

		236	Cut		0.7	0.3	
85	Tree throw?	237	Fill				Prehistoric?
		238	Cut		0.87	0.23	
86	Tree throw	239	Fill				Prehistoric
		240	Fill				
		241	Cut		0.5	0.25	
87	Tree throw	242	Fill				Prehistoric
		243	Cut		0.9	0.2	
88	Tree throw	244	Fill				Prehistoric
		245	Cut		0.5	0.13	
89	Pit?	256	Fill				Prehistoric
		257	Fill				
		258	Cut	0.9	0.9	0.28	
90	Tree throw?	259	Fill				Prehistoric?
		260	Cut			0.12	
91	Tree throw	261	Fill				Prehistoric
		262	Cut		0.7	0.2	
92	Tree throw	263	Fill				Prehistoric
		264	Cut		1.08	0.22	
93	Tree throw	265	Fill				Prehistoric
		266	Cut		0.45	0.12	
94	Ditch (Cursus 1)	271	Fill				Neolithic
		272	Cut		0.95	0.12	
		755	Fill				
		756	Fill				
		757	Fill				
		758	Fill				
		759	Fill				
		760	Fill				
95	Tree throw	273	Fill				Prehistoric?
		274	Fill				
		275	Fill				
		276	Cut	1.2	0.7	0.5	
96	Pit	277	Fill				Prehistoric
		278	Fill				
		279	Cut	3	1.4	0.5	
97	Pit	280	Fill				Prehistoric
		281	Fill				
		282	Fill				
		283	Cut	4	1.2	0.6	
98	Tree throw?	284	Fill				Prehistoric
		285	Cut	2.2	2.4	0.45	
99	Ditch (Cursus 1)	249	Fill				Neolithic
		250	Fill				
		251	Fill				
		252	Cut		1.13	0.19	
		253	Fill				
		254	Fill				

		255	Cut		1.25	0.25	
		766	Fill				
		767	Fill				
		768	Fill				
		769	Cut			0.45	
100	Ditch (same as F128)	286	Fill				
		287	Fill				
		288	Cut		1.2	0.33	Roman?
101	Tree throw	322	Fill				
		323	Cut		1	0.2	Prehistoric?
102	Tree throw	324	Fill				
		325	Fill				
		326	Cut	-	-	-	Prehistoric?
103	Tree throw	N/A	-	-	-	-	Prehistoric?
104	Tree throw?	289	Fill				
		290	Fill				
		291	Fill				
		292	Fill				
		293	Fill				
		294	Fill				
		295	Cut		1.25	0.44	Prehistoric?
105	Tree throw	296	Fill				
		297	Cut	1.2	0.8	0.13	Prehistoric?
106	Tree throw	298	Fill				
		299	Cut	2	1.2	0.25	Prehistoric?
107	Wooden post in posthole	300	Post				
		301	Fill				
		302	Cut		0.4	0.73	Roman?
108	Wooden post in posthole	303	Post				
		304	Fill				
		305	Cut		0.45	0.75	Roman?
109	Tree throw	306	Fill				
		307	Fill				
		308	Fill				
		309	Cut	2.33	0.6	0.4	Prehistoric
110	Wooden post in posthole	310	Post				
		311	Fill				
		312	Cut		0.35	0.6	Roman?
111	Tree throw	313	Fill				
		314	Cut	3.4	1.9	0.47	Prehistoric
112	Tree throw	315	Fill				
		316	Fill				
		317	Cut	4.7	2.1	0.4	Prehistoric
113	Ditch Trackway 1	327	Fill				
		328	Cut		0.45	0.08	Roman?
114	Tree throw	329	Fill				
		330	Fill				
		331	Cut	4.5	2.2	0.3	Prehistoric
115	Tree throw	332	Fill				
		333	Fill				

		334	Fill				
		335	Cut	5	4	0.55	
116	Tree throw	336	Fill				Prehistoric
		337	Cut	2.5	0.82	0.25	
117	Tree throw	338	Fill				Prehistoric
		339	Fill				
		340	Cut	3.5	2.5	0.37	
118	Tree throw	348	Fill				Prehistoric
		349	Fill				
		350	Cut			0.22	
119	Tree throw	342	Fill				Prehistoric
		343	Fill				
		344	Fill				
		345	Cut	4.7	4.7	0.5	
120	Tree throw	351	Fill				Prehistoric
		352	Fill				
		353	Cut	-	-	-	
121	Tree throw	353	Fill				Prehistoric
		354	Cut		0.6	0.2	
122	Tree throw	356	Fill			0.12	Prehistoric
		357	Cut				
123	Tree throw	358	Fill			0.12	Prehistoric
		359	Cut				
124	Tree throw	360	Fill				Prehistoric
		361	Cut	-	-	-	
125	Tree throw	362	Fill				Prehistoric
		363	Fill				
		364	Cut	1.9	0.8	0.3	
126	Tree throw	365	Fill				Prehistoric
		366	Cut	1.7	0.7	0.17	
127	Tree throw	368	Fill				Prehistoric
		369	Fill				
		370	Cut	-	-	-	
128	Ditch	371	Fill				Roman?
		372	Cut		1.35	0.4	
129	Ditch	373	Fill				Roman?
		374	Cut		-	-	
		380	Cut		1.65	0.62	
		381	Fill				
		382	Fill				
		383	Fill				
		384	Fill				
		385	Fill				
		386	Fill				
		389	Cut		1.98	0.83	
		390	Fill				
		391	Fill				
		392	Fill				
		393	Fill				

		394	Fill				
		395	Fill				
		400	Cut				
		401	Fill				
		402	Fill				
		403	Fill				
		404	Fill				
		407	Fill				
		408	Fill				
		409	Fill				
		410	Fill				
		411	Cut				
		412	Cut				
		420	Cut		1.7	0.3	
		421	Fill				
		422	Fill				
		423	Fill				
		424	Fill				
		774	fill				
		775	Cut		2	0.5	
		878	Fill				
		879	Fill				
130	Ditch	375	Fill				
		376	Cut		0.95	0.21	
		377	Fill				
		378	Cut		1.72	0.41	Roman?
131	Tree throw	387	Fill				
		388	Cut				Prehistoric
132	Pit	396	Cut	Void	Void	Void	
		397	Fill				
		398	Fill				
		399	Fill				
		425	Cut		1.4	>1	
		426	Fill				
		427	Fill				Roman?
133	Ditch	417	Fill				
		418	Fill				
		419	Cut		1.7	0.43	
		428	Cut		0.9	0.3	
		429	Fill				
		430	Fill				
		431	Fill				
		707	Fill				
		708	Cut		0.9	0.23	
		771	Fill				
		772	Fill				
		773	Cut		1.4	0.3	
		786	Fill				
		787	Cut		1.8	0.15	Roman?

		413	Fill				
		414	Fill				
		415	Fill				
		416	Cut		1.35	0.62	
		776	Fill				
		777	Fill				
		778	Fill				
		779	Fill				
		780	Fill				
		781	Fill				
		782	Cut			0.6	
134	Pit						Roman?
		106	Cut	3.8	0.8	0.28	
135	Tree throw	107	Fill				Prehistoric

APPENDIX 2: ALL FEATURES FROM THE 2009 EXCAVATIONS

Feature No.	Feature Type	Context No.	Context Type	Length (m)	Width (m)	Depth (m)	Comments
136	Ditch (Cursus 2)	432	Fill				Neolithic
		433	Fill				
		434	Fill				
		435	Fill				
		436	Fill				
		437	Fill				
		438	Fill				
		439	Cut		1.65	0.75	
		440	Fill				
		441	Fill				
		442	Fill				
		443	Fill				
		444	Fill				
		445	Fill				
		446	Cut		1.5	0.6	
		520	Fill				
		521	Fill				
		522	Fill				
		523	Fill				
		524	Fill				
525	Fill						
136	Ditch (Cursus 2)	526	Cut		2.2	0.7	Neolithic
137	Tree-throw?	447	Fill				Prehistoric
		448	Cut				
138	Tree-throw	449	Fill				Prehistoric
		450	Cut	0.75	0.6	0.08	
139	Pit	451	Fill				Neolithic
		452	Cut	0.9	0.6	0.45	
140	Ditch (Cursus 2)	453	Fill				Neolithic
		454	Fill				
		455	Fill				
		456	Fill				
		457	Fill				
		458	Cut		1.6	0.6	
		461	Fill				
		462	Fill				
		463	Fill				
		464	Fill				
		465	Fill				
		466	Cut				
		504	Fill				
		505	Fill				
		506	Cut		1.2	0.47	
		510	Fill				
		511	Cut		1.32	0.4	
		638	Fill				
		639	Fill				
		640	Fill				

		641	Fill				
		642	Fill				
		643	Fill				
		644	Fill				
		645	Cut		1.6	0.55	
141	Tree-throw?	459	Fill				Prehistoric
		460	Cut		1.6	0.16	
142	Pit	467	Fill				MBA
		468	Fill				
		469	Fill				
		470	Fill				
		471	Cut	2	1.4	0.3	
143	Tree-throw	479	Fill				Prehistoric
		480	Cut	-	-	-	
144	Pit	484	Fill				MBA
		485	Fill				
		486	Fill				
		487	Cut	1	1	0.25	
145	Bank (Cursus 2	476	Other				Neolithic
		477	Other				
146	Ditch (Cursus 2)	527	Fill				Neolithic
		528	Fill				
		529	Fill				
		530	Fill				
		531	Fill				
		532	Cut		1.3	0.6	
		533	Fill				
		534	Fill				
		535	Fill				
		536	Fill				
		537	Fill				
		538	Fill				
		539	Fill				
		540	Cut		1.8	0.65	
		885	Fill				
		886	Fill				
		887	Fill				
		888	Fill				
		889	Cut		2.3	0.85	
		890	Fill				
		891	Fill				
		892	Fill				
		893	Fill				
		894	Fill				
		895	Fill				
		896	Fill				
		897	Fill				
		898	Fill				
		899	Fill				
		900	Cut		2.2	0.85	

		541	Fill				
		542	Fill				
		543	Fill				
		544	Fill				
		545	Fill				
		546	Fill				
		547	Cut	1.7	0.7		
		584	Fill				
		554	Fill				
		555	Fill				
		556	Fill				
		557	Fill				
		558	Fill				
		559	Fill				
		560	Fill				
		561	Fill				
		562	Fill				
		563	Fill				
		564	Fill				
		565	Cut	1.7	0.75		
		566	Fill				
		567	Fill				
		568	Fill				
		569	Fill				
		570	Cut	1.7	0.65		
		573	Fill				
		574	Fill				
		575	Fill				
		576	Fill				
		577	Fill				
		578	Fill				
		579	Fill				
		580	Fill				
		581	Fill				
		582	Fill				
		583	Cut	1.7	0.8		
		818	Fill				
		819	Fill				
		820	Fill				
		821	Fill				
		822	Fill				
		823	Fill				
147	Ditch (Cursus 2)	824	Cut	1.7	0.75		Neolithic
148	Bank (Cursus 2)	617	Other				Neolithic
149	Pit	488	Fill				Neolithic
		489	Fill				
		490	Cut	1.05	0.85	0.5	
150	Tree-throw	491	Fill				Prehistoric

		492	Fill				
		493	Fill				
		494	Cut	1.2	0.9	0.25	
		512	Fill				
		513	Fill				
		514	Cut	1.2	1.05	0.3	
151	Pit	495	Fill				Neolithic
		496	Fill				
		497	Fill				
		498	Fill				
		499	Cut	0.8	0.65	0.6	
152	Trackway 1	N/A	Surface	-	-	-	Roman
153	Ditch (Trackway 1)	825	Fill				Roman
		826	Fill				
		827	Cut		1.3	0.35	
		828	Fill				
		829	Fill				
		830	Cut		1.1	0.1	
154	Pit	500	Fill				Neolithic
		501	Fill				
		502	Fill				
		503	Cut	0.7	0.6	0.3	
155	Bank (Cursus 2)	609	Other				Neolithic
		610	Other				
		611	Other	-	-	-	
156	Bank (Cursus 2)	648	Other	-	-	-	Neolithic
157	Tree-throw	507	Fill				Prehistoric
		508	Fill				
		509	Cut	1	0.8	0.2	
158	Tree-throw	515	Fill				Prehistoric
		516	Cut	1.2	0.6	0.2	
159	Tree-throw	656	Fill				Prehistoric
		657	Cut	4	1.4	0.4	
		667	Fill				
		668	Cut	4	1.4	0.4	
160	Pit?	517	Fill				
		518	Fill				
		519	Cut	1.15	0.95	0.3	
161	Pit	548	Fill				Neolithic
		549	Fill				
		550	Fill				
		551	Fill				
		552	Fill				
		553	Cut	0.95	0.95	0.5	
162	Bank (Cursus 2)	600	Other				Neolithic
		601	Other	-	-	-	
163	Tree-throw	581	Fill				Neolithic
		582	Cut	1.1	0.8	0.2	

164	Tree-throw	571	Fill				
		572	Cut	1.4	0.7	0.2	
165	Pit?	585	Fill				Prehistoric?
		586	Fill				
		587	Fill				
		588	Cut	0.6	0.5	0.2	
166	Tree-throw	589	Fill				Prehistoric
		590	Cut	1.5	1	0.2	
167	Tree-throw	591	Fill				Prehistoric
		592	Cut	0.9	0.6	0.3	
168	Pit	658	Fill				Neolithic
		659	Fill				
		660	Cut		1.3	0.65	
169	Bank (Cursus 2)	630	Other	-	-	-	Neolithic
170	Cremation	650	Fill				BA?
		651	Fill				
		652	Fill				
		653	Cut	0.65	0.65	0.25	
171	Pit?	593	Fill				Neolithic
		594	Cut	0.8	0.8	0.1	
172	Cremation	654	Fill				BA?
		655	Cut	0.65	0.4	0.1	
173	Posthole	635	Other				Roman?
		636	Fill				
		637	Cut	0.4	0.3	0.25	
174	Ditch	N/A	-	-	-	-	? Alluvial ditch
175	Pit	661	Fill				Neolithic
		662	Fill				
		663	Cut		1.2	0.5	
176	Posthole?	664	Fill				Roman?
		665	Cut	0.3	0.25	0.1	
177	Pit?	669	Fill				Prehistoric?
		670	Cut	0.7	0.6	0.2	
178	Pit?	671	Fill				Prehistoric?
		672	Cut		0.6	0.3	
179	Pit	673	Fill				Neolithic
		674	Cut	0.6	0.6	0.2	
180	Pit	675	Fill				Neolithic
		676	Fill				
		677	Fill				
		678	Cut	1.2	0.9	0.45	
181	Ditch (Cursus 2)	679	Fill				Neolithic
		680	Fill				
		681	Fill				
		682	Fill				
		683	Fill				
		684	Fill				
		685	Cut		2.3	1	

		751	Fill				
182	Bank (Cursus 2)	N/A	-	-	-	-	Neolithic
		688	Cut		2	0.7	
		689	Fill				
		690	Fill				
		691	Fill				
		727	Fill				
183	Ditch Cursus 2	728	Fill				Neolithic
184	Bank (Cursus 2)	N/A	-	-	-	-	Neolithic
185	Ditch (Trackway 1)	695	Fill				Roman (Same as F.153)
		696	Fill				
		697	Fill				
		698	Cut			0.5	
186	Trackway 1	702	Layer				Roman. Same as F.152
		703	Layer				
		704	Layer				
		705	Layer				
		706	Layer				
187	Ditch (Trackway 1)	699	Fill				Roman
		700	Fill				
		701	Cut			0.5	
188	Pit/ ditch terminal	692	Cut			0.72	Neolithic?
		693	Fill				
		694	Fill				
189	Gully	709	Fill				Prehistoric
		710	Fill				
		711	Cut		0.8	0.15	
		712	Fill				
		713	Fill				
		714	Fill				
		715	Cut		0.95	0.4	
190	Pit?	716	Fill				Prehistoric
		717	Cut	0.7	0.7	0.15	
191	Pit?	762	Fill				Roman?
		763	Fill				
		764	Fill				
		765	Cut		0.9	0.4	
192	Tree-throw	N/A	-	-	-	-	Prehistoric
193	Tree-throw	N/A	-	-	-	-	Prehistoric
194	Tree-throw	N/A	-	-	-	-	Prehistoric
195	Tree-throw	N/A	-	-	-	-	Prehistoric
196	Tree-throw	N/A	-	-	-	-	Prehistoric
197	Pit	788	Fill				Roman?
		789	Fill				
		790	Fill				
		791	Fill				
		792	Fill				
		793	Fill				
		794	Fill				

		795	Fill				
		796	Fill				
		797	Fill				
		798	Fill				
		799	Cut		4.5	0	
198	Ditch	800	Fill				
		801	Fill				
		802	Fill				
		803	Cut		2.3	0.4	Roman?
200	Ditch?	783	Fill				
		784	Fill				
		785	Cut		1.4	0.3	Roman?
201	Tree-throw	814	Fill				
		815	Fill				
		816	Fill				
		817	Cut				LBA
202	Tree-throw	N/A	-	-	-	-	Prehistoric
203	Pit	913	Fill				
		914	Fill				
		915	Fill				
		916	Fill				
		917	Fill				
		918	Cut	1.5		0.65	
		919	Fill				Roman?
204	Ditch	880	Fill				
		881	Fill				
		882	Fill				
		883	Fill				
		884	Cut		2	0.45	?
205	Tree-throw	838	Fill				
		839	Cut			0.2	Prehistoric
206	Pit	868	Fill				
		869	Fill				
		870	Fill				
		871	Cut	0.9	0.75	0.3	Neolithic
207	Tree-throw	866	Fill				
		867	Cut	2		0.4	Prehistoric
208	Tree-throw	864	Fill				
		865	Cut		1	0.15	Prehistoric
209	Palaeochannel	N/A	-	-	-	-	?
210	Palaeochannel	N/A	-	-	-	-	?
211	Ditch	911	Fill				? Alluvial ditch
		912	Cut		0.9	0.1	
212	Trackway 1	N/A	-	-	-	-	Group number
213	Pit	804	Fill				Quarry pit? Roman?
		805	Fill				
		806	Fill				
		807	Fill				

		808	Fill				
		809	Fill				
		810	Fill				
		811	Cut		4	1	
214	Pit?	N/A	-	-	-	-	Not excavated

APPENDIX 3: ALL FEATURES FROM THE 2010 EXCAVATIONS

Feature No.	Feature Type	Context No.	Context Type	Length (m)	Width (m)	Depth (m)	Comments
220	Tree throw	930	Fill				Prehistoric
		931	Fill				
		932	Cut	4	1.8	0.15	
221	Pit	933	Fill				BS pit. BA?
		934	Cut	0.9	0.6	0.2	
222	Ditch (Cursus 2)	935	Fill				Neolithic
		936	Fill				
		937	Fill				
		938	Fill				
		939	Fill				
		940	Cut		2.3	0.85	
		1173	Fill				
		1174	Fill				
		1175	Fill				
		1176	Fill				
		1177	Fill				
		941	Fill				
		942	Fill				
		943	Fill				
		944	Fill				
		945	Fill				
		946	Cut		2.2	0.9	
		979	Fill				
		980	Fill				
		981	Fill				
		982	Fill				
		1172	Fill				
		947	Cut		1.7	0.6	
		948	Fill				
		949	Fill				
		950	Fill				
		1178	Fill				
		1179	Fill				
		1180	Fill				
		1181	Fill				
		955	Fill				
		956	Fill				
		957	Fill				
958	Fill						
959	Cut		N/A	N/A			
960	Fill						
961	Fill						
962	Fill						
963	Fill						
964	Fill						
965	Cut		2.4	1			
1182	Fill						
1183	Fill						

1184	Fill			
1185	Fill			
1186	Fill			
1187	Fill			
1188	Fill			
1189	Fill			
970	Cut		2.95	1.2
1149	Fill			
1150	Fill			
1151	Fill			
1152	Fill			
1153	Fill			
1154	Fill			
1155	Fill			
1156	Fill			
1157	Fill			
1158	Fill			
1159	Fill			
1160	Fill			
971	Cut		2.7	1.2
974	Fill			
975	Fill			
1108	Fill			
1109	Fill			
1110	Fill			
1111	Fill			
1112	Fill			
1113	Fill			
1114	Fill			
976	Cut		2.3	1.2
1031	Fill			
1032	Fill			
1033	Fill			
1034	Fill			
1035	Fill			
1036	Fill			
1037	Fill			
1038	Fill			
1039	Fill			
1040	Fill			
1041	Fill			
1042	Fill			
1043	Fill			
1167	Fill			
977	Cut		2.8	1.25
1047	Fill			
1048	Fill			
1049	Fill			
1050	Fill			
1051	Fill			
1052	Fill			
1053	Fill			

1054	Fill			
1055	Fill			
1056	Fill			
1057	Fill			
1058	Fill			
1059	Fill			
1060	Fill			
1061	Fill			
1062	Fill			
1064	Fill			
1065	Fill			
1066	Fill			
1067	Fill			
1068	Fill			
1069	Fill			
1070	Fill			
1071	Fill			
1072	Fill			
1073	Fill			
1074	Fill			
1075	Fill			
1076	Fill			
977	Cut		2.8	1.25
1120	Fill			
1121	Fill			
1122	Fill			
1123	Fill			
1124	Fill			
1125	Fill			
1126	Fill			
1127	Fill			
1128	Fill			
1129	Fill			
1130	Fill			
1131	Fill			
1132	Fill			
1133	Fill			
1134	Fill			
1135	Fill			
1136	Fill			
1137	Fill			
1138	Fill			
1139	Fill			
1140	Fill			
1141	Fill			
1142	Fill			
1143	Fill			
1144	Fill			
983	Cut		2.5	1.1
985	Fill			
986	Fill			
987	Fill			

988	Fill			
989	Fill			
990	Fill			
991	Fill			
992	Fill			
993	Fill			
994	Fill			
995	Fill			
996	Fill			
997	Fill			
998	Fill			
999	Fill			
1000	Fill			
1001	Fill			
984	Cut		3.1	1.2
1002	Fill			
1003	Fill			
1004	Fill			
1005	Fill			
1006	Fill			
1007	Fill			
1008	Fill			
1009	Fill			
1010	Fill			
1011	Fill			
1012	Fill			
1013	Fill			
1014	Fill			
1015	Fill			
1016	Fill			
1017	Fill			
1018	Fill			
1019	Fill			
1020	Fill			
1021	Fill			
1022	Fill			
1023	Fill			
1024	Fill			
1025	Fill			
1026	Fill			
1027	Fill			
1028	Fill			
1029	Fill			
1030	Fill			
1077	Fill			
1078	Fill			
1079	Fill			
1080	Fill			
1081	Fill			
1082	Fill			
1083	Cut		3.2	1.4
1084	Fill			

		1085	Fill				
		1086	Fill				
		1087	Fill				
		1088	Fill				
		1089	Fill				
		1090	Fill				
		1091	Fill				
223	VOID	N/A	N/A				N/A
		951	Fill				
		952	Cut		0.75	0.2	
		953	Fill				
		954	Cut				
		972	Fill				
		973	Cut		0.7	0.3	
		1582	Fill				
		1583	Fill				
		1584	Fill				
224	Ditch (Field system B)	1585	Cut		1	0.5	BA?
		1102	Fill				
		1103	Cut		0.45	0.21	
		1104	Fill				
		1105	Fill				
		1106	Fill				
		1107	Cut		0.6	0.3	
		1115	Fill				
		1116	Fill				
		1117	Fill				
		1118	Fill				
		1119	Cut		0.7	0.3	
		1233	Cut		0.78	0.3	
		1234	Fill				
		1235	Cut		1.18	0.48	
		1236	Fill				
		1237	Fill				
		1238	Fill				
		1239	Fill				
		1288	Fill				
		1289	Fill				
		1290	Fill				
		1291	Fill				
		1292	Cut		1.04	0.53	
		1300	Fill				
		1301	Fill				
		1302	Fill				
		1303	Fill				
225	Ditch (Field system B)	1304	Cut		0.7	0.55	BA?
		1093	Fill				
		1094	Fill				
226	Tree throw	1095	Cut	2.15	1.05	0.18	Prehistoric
227	Ditch (Cursus 3)	1164	Cut		2.2	0.4	Neolithic

1261	Fill			
1262	Fill			
1263	Fill			
1264	Fill			
1265	Fill			
1266	Fill			
1267	Fill			
1268	Fill			
1269	Fill			
1270	Fill			
1271	Fill			
1272	Fill			
1273	Fill			
1274	Fill			
1275	Fill			
1276	Fill			
1191	Cut		2.8	0.7
1194	Fill			
1195	Fill			
1196	Fill			
1197	Fill			
1198	Fill			
1199	Fill			
1200	Fill			
1505	Fill			
1506	Fill			
1507	Fill			
1508	Fill			
1509	Fill			
1510	Fill			
1511	Fill			
1512	Fill			
1513	Fill			
1514	Fill			
1192	Cut		2.3	0.5
1201	Fill			
1202	Fill			
1203	Fill			
1204	Fill			
1205	Fill			
1206	Fill			
1207	Fill			
1208	Fill			
1209	Fill			
1210	Fill			
1211	Fill			
1212	Fill			
1213	Fill			
1214	Fill			
1215	Fill			

		1246	Fill				
		1221	Cut		1.8	0.55	
		1222	Fill				
		1223	Fill				
		1224	Fill				
		1225	Fill				
		1226	Fill				
		1227	Fill				
		1228	Fill				
		1229	Fill				
		1231	Cut		2.2	0.5	
		1293	Fill				
		1294	Fill				
		1295	Fill				
		1296	Fill				
		1297	Fill				
		1298	Fill				
		1299	Fill				
		1232	Cut		2.8	0.6	
		1247	Fill				
		1248	Fill				
		1249	Fill				
		1250	Fill				
		1251	Fill				
		1252	Fill				
		1253	Fill				
		1254	Fill				
		1255	Fill				
		1256	Fill				
		1257	Fill				
		1258	Fill				
		1259	Fill				
		1260	Fill				
228	Pit	1096	Fill				Cremation. BA?
		1097	Fill				
		1098	Cut	0.72	0.46	0.44	
229	Pit	1099	Fill				Cremation. BA?
		1100	Fill				
		1101	Cut	0.65	0.65	0.23	
230	Pit	1147	Fill				BS pit. BA?
		1148	Cut	1.14	1.05	0.21	
232	Pit/posthole (hengiform)	1165	Fill				Neolithic
		1166	Cut	0.4	0.4	0.1	
233	Pit/posthole (hengiform)	1462	Fill				Neolithic
		1463	Cut	0.35	0.35	0.1	
234	Pit/posthole (hengiform)	1168	Fill				Neolithic
		1169	Cut	0.4	0.4	0.22	
235	Posthole	1170	Fill				Prehistoric
		1171	Cut	0.3	0.24	0.12	
236	Ditch (Cursus 3)	1240	Cut		3.2	0.35	Neolithic

		1241	Fill				
		1242	Fill				
		1243	Fill				
		1244	Fill				
		1245	Fill				
		1305	Fill				
		1306	Fill				
		1307	Fill				
		1308	Fill				
		1309	Fill				
		1310	Fill				
		1311	Fill				
		1312	Fill				
		1313	Fill				
		1314	Fill				
		1315	Fill				
		1316	Cut		3.15	0.45	
		1390	Cut		2.35	0.45	
		1406	Fill				
		1407	Fill				
		1408	Fill				
		1409	Fill				
		1410	Fill				
		1411	Fill				
		1412	Fill				
		1413	Fill				
		1414	Fill				
		1394	Fill				
		1395	Fill				
		1396	Fill				
		1397	Fill				
		1398	Fill				
		1399	Fill				
		1400	Fill				
		1401	Fill				
		1402	Fill				
		1403	Cut		2.5	0.5	
		1453	Fill				
		1454	Fill				
		1455	Fill				
		1456	Cut		2.2	0.4	
237	VOID	N/A	N/A				N/A
		1277	Fill				
		1278	Fill				
		1279	Fill				
		1280	Fill				
		1281	Fill				
		1282	Fill				
238	Ditch	1283	Cut		1.6	0.35	? Alluvial ditch
239	Posthole	1284	Fill				Prehistoric?
		1285	Fill				

		1286	Fill				
		1287	Cut	0.45	0.45	0.21	
240	Palaeochannel						?
241	Pit?	N/A	N/A				Prehistoric?
242	Pit (Hengiform)	1369	Fill				Neolithic
		1370	Fill				
		1371	Fill				
		1372	Cut	1.75	1.68	0.24	
243	Pit (Hengiform)	1356	Fill				Neolithic
		1357	Fill				
		1358	Fill				
		1359	Fill				
		1360	Cut	2.45	1.55	0.4	
244	Pit (Hengiform)	1339	Fill				Neolithic
		1340	Fill				
		1341	Fill				
		1342	Fill				
		1343	Fill				
		1344	Cut	2.1	1.5	0.43	
		1388	Fill				
		1389	Fill				
245	Pit (Hengiform)	1345	Fill				Neolithic
		1346	Fill				
		1347	Fill				
		1348	Fill				
		1349	Cut	2.5	1.5	0.48	
		1387	Fill				
246	Pit (Hengiform)	1318	Fill				Neolithic
		1351	Fill				
		1352	Fill				
		1353	Cut	2.6		0.45	
		1391	Fill				
		1392	Fill				
		1393	Fill				
247	Pit (Hengiform)	1378	Fill				Neolithic
		1379	Fill				
		1380	Fill				
		1381	Fill				
		1382	Fill				
		1383	Fill				
		1384	Fill				
		1385	Fill				
		1386	Cut	3		0.49	
248	Pit (Hengiform)	1366	Fill				Neolithic
		1367	Fill				
		1368	Cut	2.2	1.7	0.5	
249	Pit (Hengiform)	1361	Fill				Neolithic
		1362	Fill				
		1363	Fill				

		1364	Fill				
		1365	Cut	2.5	1.6	0.42	
250	Pit (Hengiform)	1373	Fill				Neolithic
		1374	Fill				
		1375	Fill				
		1376	Fill				
		1377	Cut	2.65	1.57	0.36	
251	Pit (Hengiform)	1355	Fill				Neolithic
		1356	Cut	0.6	0.6	0.35	
252	PalaeoPalaeochannel						?
253	Pit/Posthole?	1331	Fill				Prehistoric
		1332	Cut	0.35	0.3	0.8	
254	Pit/Posthole?	1333	Fill				Prehistoric
		1334	Fill				
		1335	Fill				
		1336	Cut	0.4	0.3	0.13	
255	Pit	1415	Fill				Prehistoric
		1416	Fill				
		1417	Fill				
		1418	Fill				
		1419	Fill				
		1420	Fill				
		1421	Fill				
1422	Cut	0.75	0.6	0.3			
256	Posthole	1423	Fill				Prehistoric
		1424	Fill				
		1425	Cut	0.4	0.22	0.16	
257	Posthole	1426	Layer				Prehistoric
		1427	Layer				
		1428	Layer				
		1429	Layer				
		1430	Layer				
		1431	Fill				
		1432	Fill				
		1433	Fill				
		1434	Cut	0.8		0.3	
258	Tree throw	1435	Fill				Prehistoric
		1436	Cut	0.5	0.3	0.05	
259	Pit	1437	Fill				Prehistoric
		1438	Fill				
		1439	Cut	0.9	0.65	0.15	
260	Gully	1441	Fill				BA?
		1442	Fill				
		1443	Cut		0.3	0.2	
		1444	Fill				
		1445	Fill				
		1446	Fill				
1447	Cut		0.45	0.25			

		1448	Fill				
		1449	Fill				
		1450	Cut		0.3	0.12	
		1451	Fill				
		1452	Cut		0.25	0.07	
261	Pit	1404	Fill				Prehistoric
		1405	Cut			0.25	
262	Pit?	1459	Fill				Prehistoric?
		1460	Fill				
		1461	Cut		1.2	0.5	
263	Gully	1490	Fill				BA?
		1491	Cut				
		1492	Fill				
		1493	Cut				
		1494	Fill				
		1495	Fill				
		1496	Fill				
		1497	Cut				
		1502	Fill				
		1498	Fill				
		1499	Cut				
		1500	Fill				
		1501	Cut				
		1504	Fill				
264	Posthole	1515	Fill				Prehistoric
		1516	Cut	0.5	0.45	0.4	
265	Ditch (Trackway 2)	1576	Fill				Roman?
		1577	Fill				
		1578	Cut		0.75	0.27	
266	Trackway 2	1526	Layer				Limestone surface
267	Posthole	1503	Other				Wooden post. Roman?
		1536	Fill				
		1537	Cut		0.3	1	
268	Palaeochannel	1517	Layer				?
		1518	Layer				
		1519	Layer				
		1520	Layer				
		1521	Layer				
		1522	Layer				
		1523	Layer				
		1524	Layer				
		1525	Layer				
		1527	Layer				
		1528	Layer				
		1529	Layer				
		1530	Layer				
		1531	Layer				
		1532	Layer				
		1533	Layer				
		1534	Layer				

		1535	Layer				
269	Pit	1542	Fill				Cremation. BA?
		1543	Cut	0.39	0.35	0.14	
270	Pit	1544	Fill				Cremation. BA?
		1545	Cut	0.44	0.39	0.1	
271	Ditch (Cursus 3) Same as F227	1546	Fill				Neolithic
		1547	Fill				
		1548	Fill				
		1549	Cut		1.9	0.55	
		1601	Fill				
		1602	Fill				
		1603	Fill				
		1604	Fill				
		1553	Fill				
		1554	Fill				
		1555	Fill				
		1556	Cut		1.77	0.29	
		1557	Fill				
		1558	Fill				
		1559	Fill				
		1560	Fill				
		1561	Fill				
		1562	Fill				
		1563	Cut		2.17	0.49	
		1564	Fill				
1565	Fill						
1566	Fill						
1567	Cut		2.02	0.44			
1568	Fill						
1569	Fill						
1570	Cut		1.78	0.3			
272	Pit	1571	Fill				BS pit. BA?
		1572	Fill				
		1573	Cut				
273	Ditch (Trackway 2)	1570	Fill				Roman?
		1580	Fill				
		1581	Cut		1.07	0.33	
274	Trackway	N/A	-	-	-	-	Post Med track
275	Posthole	1586	Fill				Wooden post. Roman?
		1587	Other				
		1588	Cut	0.15	0.15	0.4	
276	Buried soil	N/A	-	-	-	-	UP Flints
277	Gully	1589	Fill				BA?
		1590	Fill				
		1591	Fill				
		1592	Cut		0.4	0.1	
278	Trackway	N/A	-	-	-	-	Post Med track
279	Pit	1699	Fill				Roman?

		1700	Fill				
		1701	Fill				
		1702	Fill				
		1703	Cut		1	0.7	
280	Ditch (Trackway 2)	1671	Fill				Roman?
		1672	Fill				
		1673	Cut		0.85	0.15	
		1674	Fill				
		1675	Fill				
		1676	Cut		1.15	0.3	
		1683	Fill				
		1684	Cut			0.3	
		1693	Fill				
		1694	Cut				
281	Ditch (Trackway 2)	1677	Fill				Roman?
		1678	Cut		0.9	0.15	
		1679	Fill				
		1680	Cut		0.85	0.15	
		1681	Fill				
		1682	Cut		0.6	0.15	
		1685	Fill				
		1686	Fill				
		1687	Cut		0.9	0.2	
		1695	Fill				
		1696	Fill				
		1697	Fill				
		1698	Cut		0.8	0.25	Roman?
282	Stake	N/A	N/A	-	-	-	Roman?
283	Stake	N/A	N/A	-	-	-	Roman?
284	Stake	N/A	N/A	-	-	-	Roman?
285	Stake	N/A	N/A	-	-	-	Roman?
286	Stake	N/A	N/A	-	-	-	Roman?
287	Stake	N/A	N/A	-	-	-	Roman?
288	Trackway 2	N/A	N/A	-	-	-	Roman?
289	Post	N/A	N/A	-	-	-	Roman?
290	Palaeochannel	N/A	N/A	-	-	-	?
291	Palaeochannel	N/A	N/A	-	-	-	?



Figure 1. Site Location



Figure 2. Plan of archaeological features

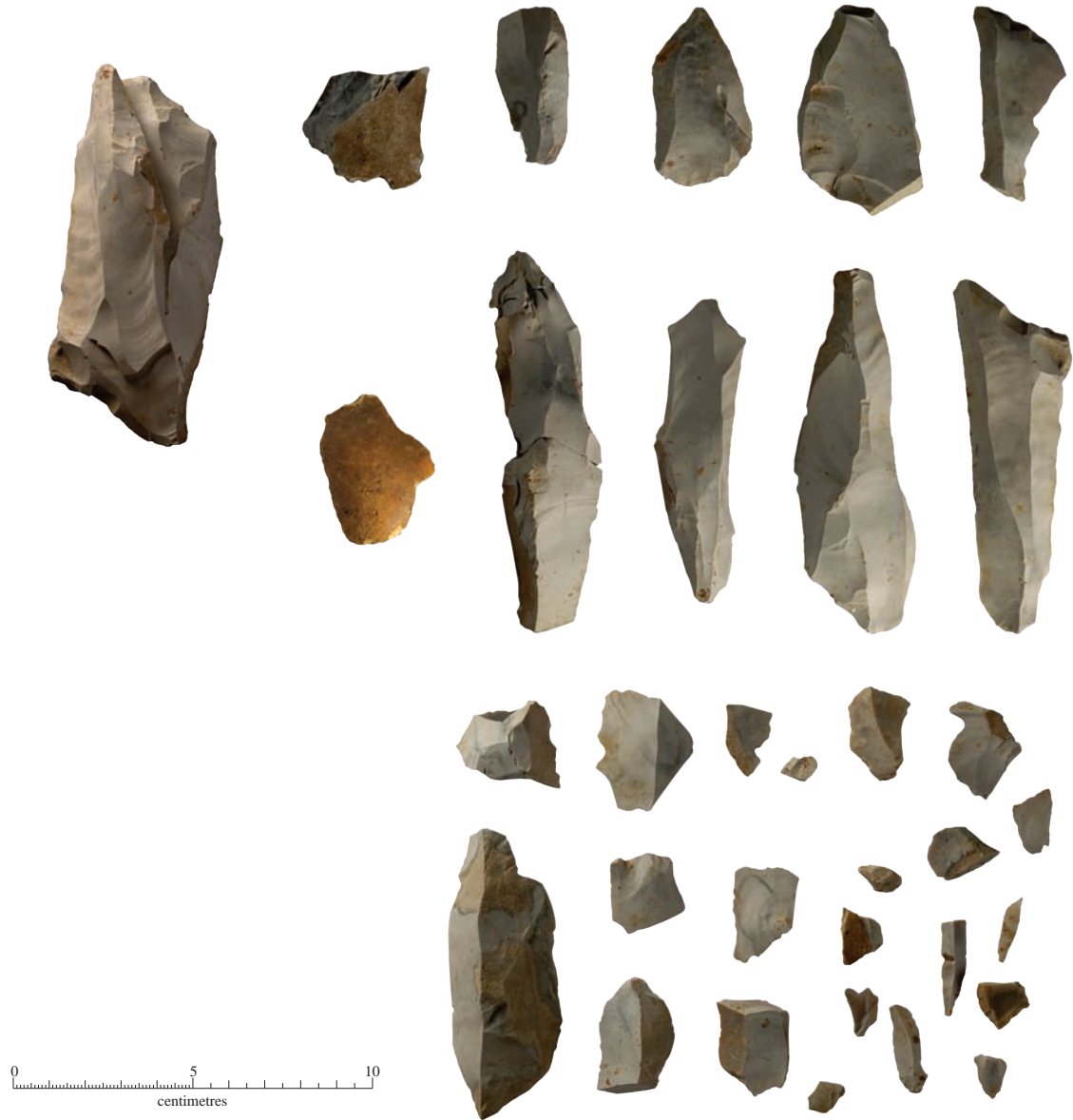
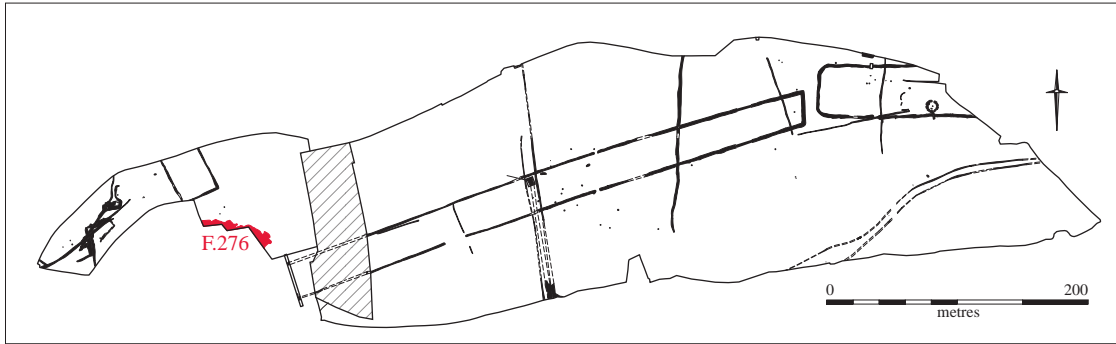


Figure 3. Palaeolithic flint

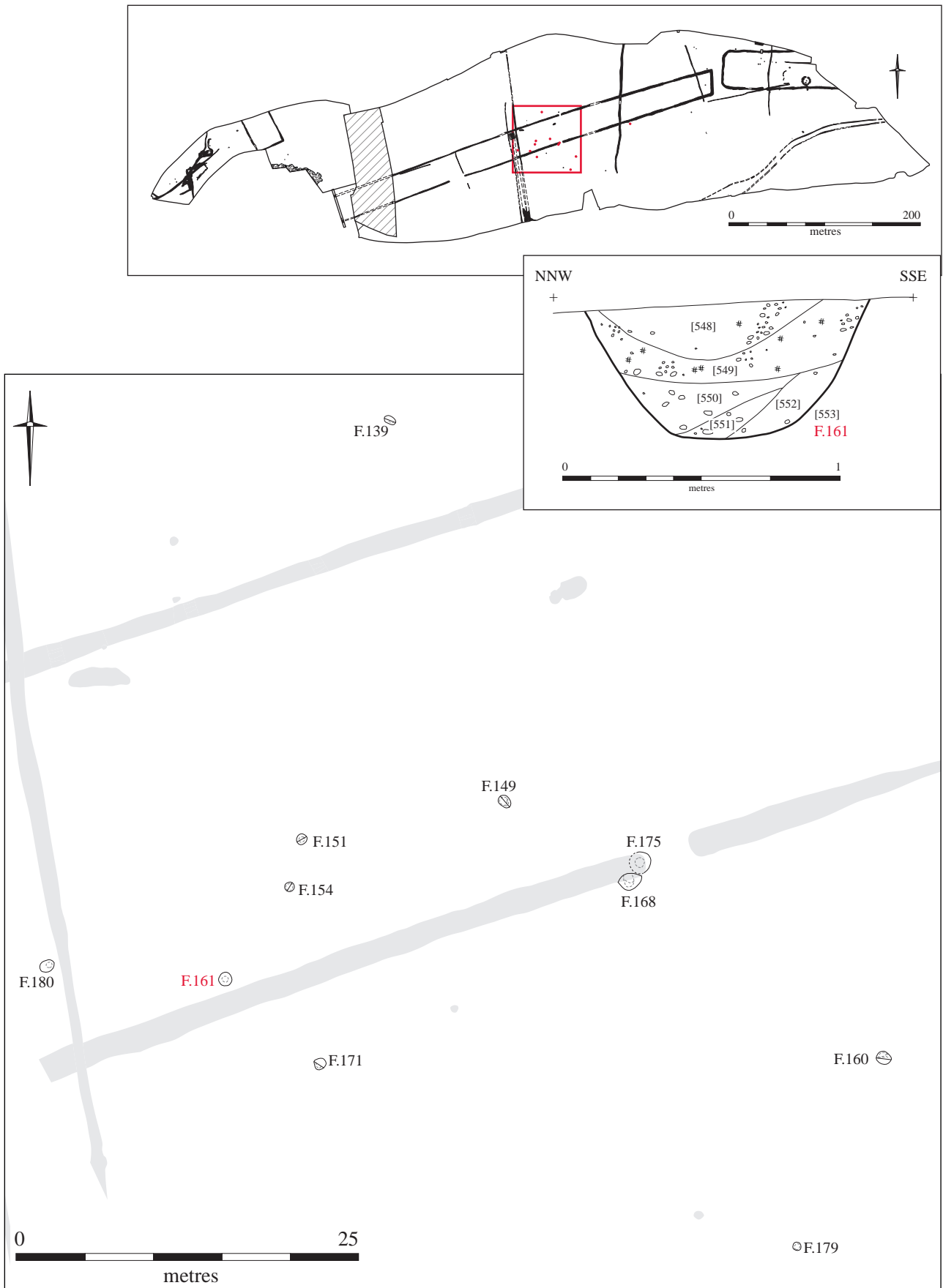


Figure 4. Plan of Neolithic pit group

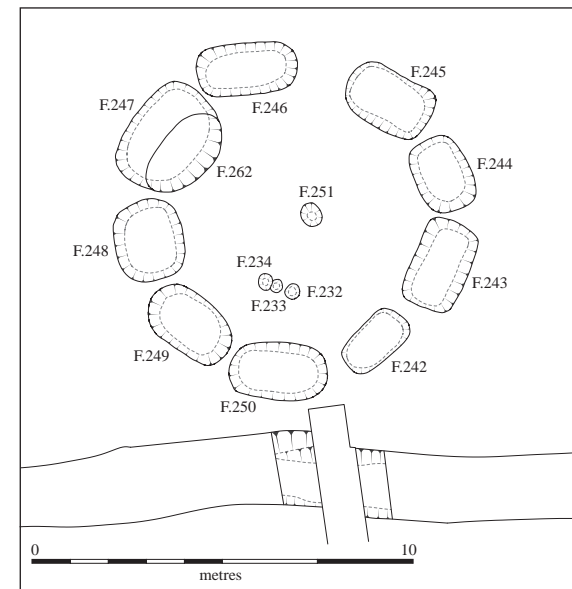
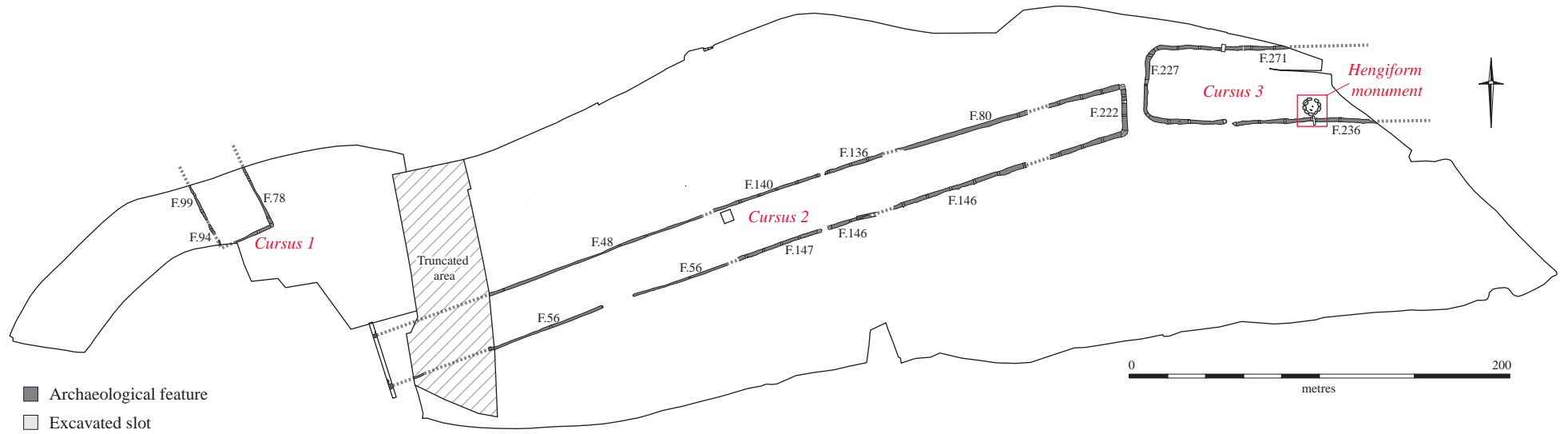


Figure 5. Monumental landscape: Plan of Neolithic monuments (top) and photograph (left) and plan (right) of Late Neolithic Hengiform



Figure 6. Top left: Cursus 2, facing west. Top right: Terminus of Cursus 2. Bottom left: Corner of Cursus 2 terminus. Bottom right: Cursus 1 looking north east, and Neolithic pit F.161

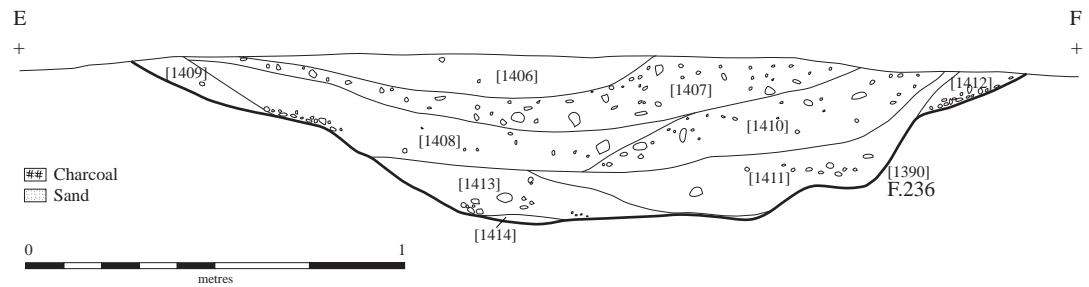
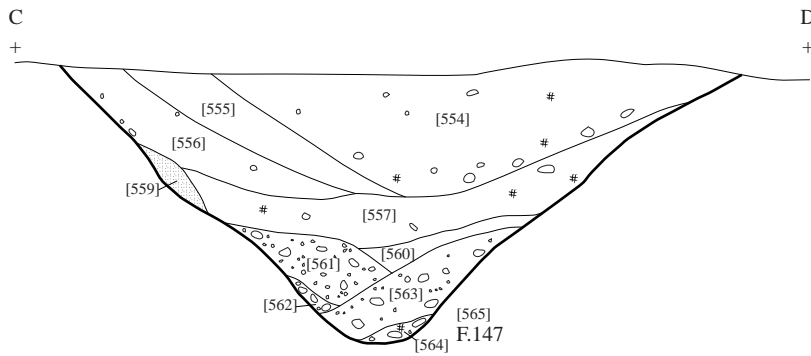
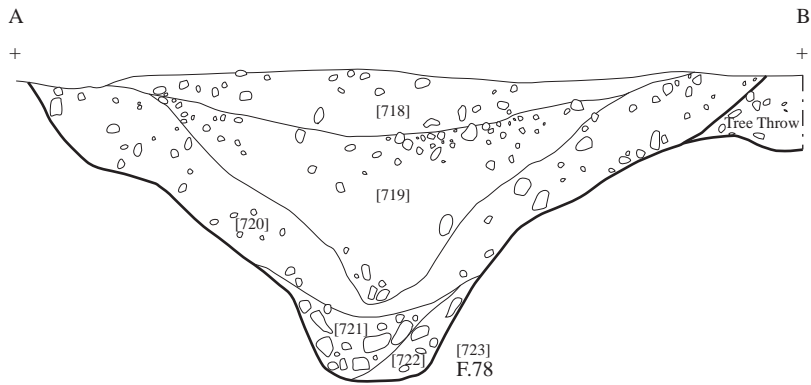
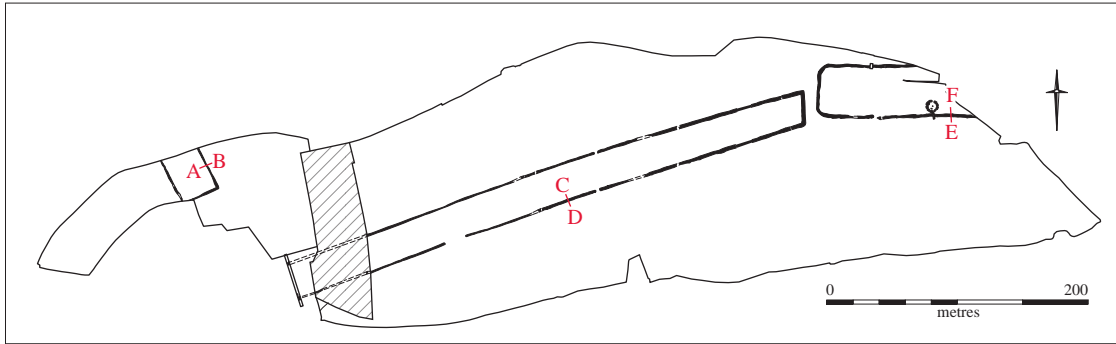


Figure 7. Cursus ditch sections

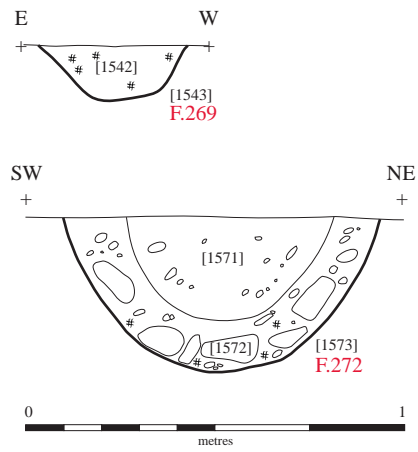
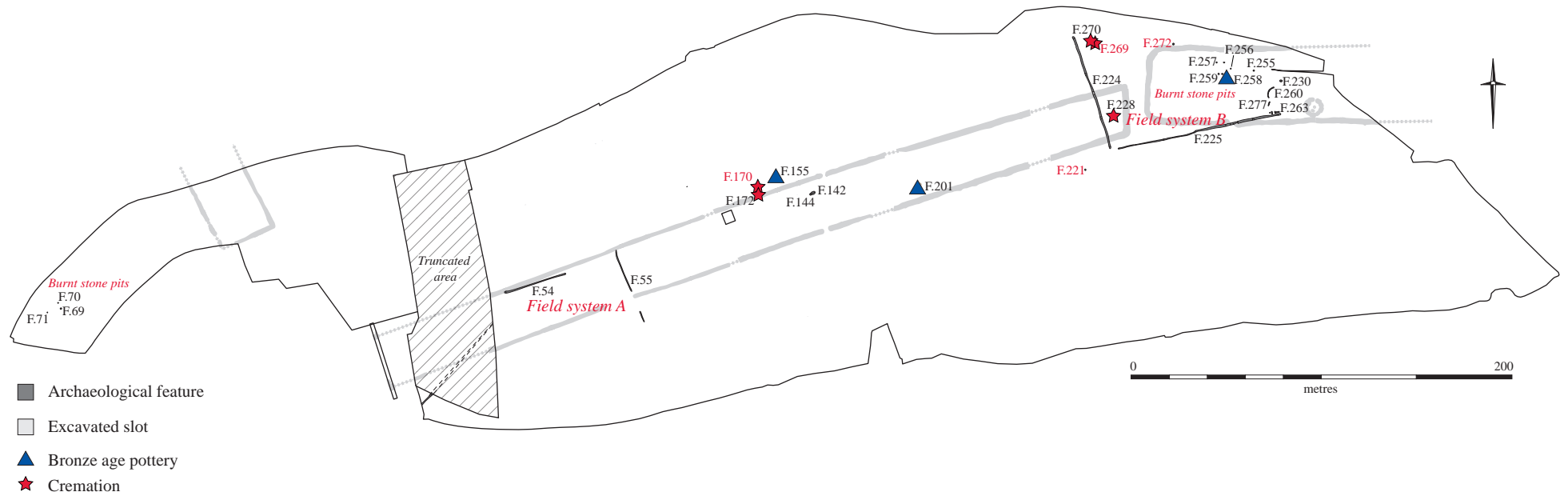


Figure 8. Field systems and settlement

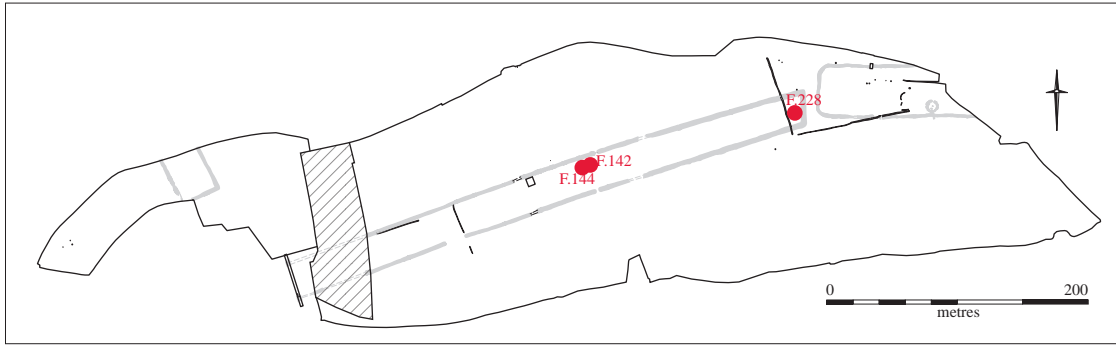


Figure 9. Pits F.142 and F.144 (top) and cremation F.228 (bottom)

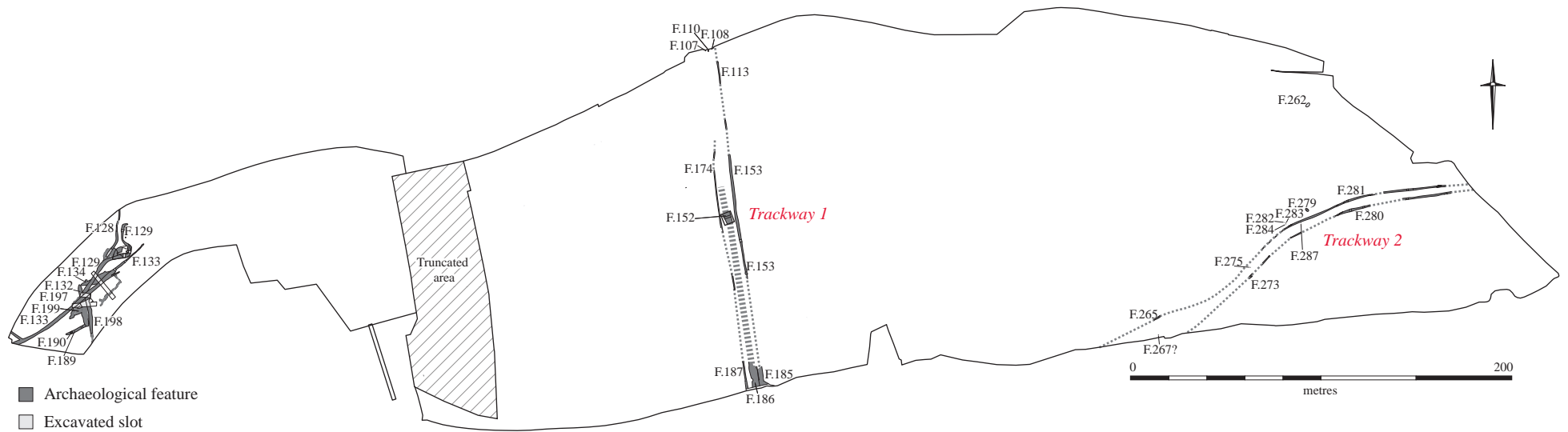


Figure 10. Roman and other post alluvial features

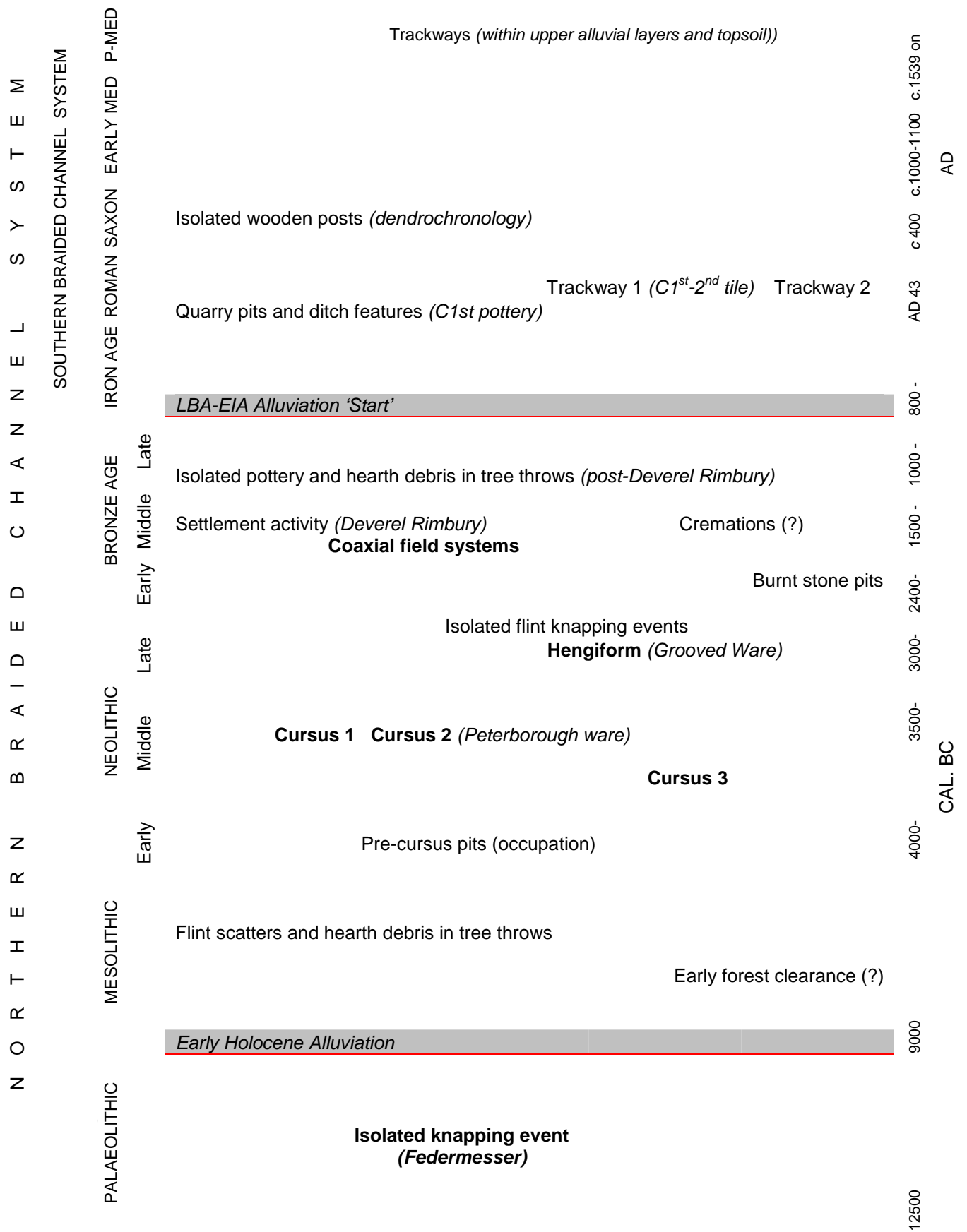


Figure 11: The Manor Farm 2007-2010 'Chronology'

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Project details

Project name	Manor Farm, Old Wolverton, Milton Keynes. 2008-2010 Excavation Report
Short description of the project	Between 2007 and 2011, the Cambridge Archaeological Unit (CAU) undertook a series of strip, map and sample exercises at Manor Farm, Old Wolverton, Milton Keynes. During this time, an impressive prehistoric monument complex was uncovered, comprising three Neolithic cursuses and a complete Late Neolithic hengiform. This ceremonial activity is bracketed by earlier in situ Upper Palaeolithic and Late Mesolithic flint scatters found in association with preserved buried soil horizons, and later Bronze Age occupation, consisting of coaxial field system ditches, a partial ring gully, burnt stone pits and isolated cremation deposits. Two Roman trackways and several probable Roman quarry pits and ditches were also revealed. Beneath the alluvial overburden, substantial networks of braided palaeochannel systems had carved the gravel terraces into 'islands', across which the prehistoric activity was located. The Roman features were cut from within the alluvial overburden, whilst post-Medieval trackways were recorded in the uppermost alluvial and topsoil layers.
Project dates	Start: 01-06-2008 End: 12-12-2010
Previous/future work	Yes / Yes
Type of project	Field evaluation
Site status	None
Current Land use	Other 7 - Mineral extraction
Monument type	FLINT SCATTER Upper Palaeolithic
Monument type	FLINT SCATTERS Late Mesolithic
Monument type	CURSUSES Middle Neolithic
Monument type	HENGIFORM Late Neolithic
Monument type	FIELD SYSTEMS AND SETTLEMENT Bronze Age
Monument type	PIT ALIGNMENTS Iron Age
Monument type	TRACKWAYS Roman

Significant Finds	FLINTS Upper Palaeolithic
Significant Finds	FLINTS Late Mesolithic
Methods & techniques	"Augering","Environmental Sampling","Survey/Recording Of Fabric/Structure","Test Pits"
Development type	Mineral extraction (e.g. sand, gravel, stone, coal, ore, etc.)
Prompt	National Planning Policy Framework - NPPF
Position in the planning process	After full determination (eg. As a condition)

Project location

Country	England
Site location	BUCKINGHAMSHIRE MILTON KEYNES WOLVERTON Manor Farm, Old Wolverton, Milton Keynes
Study area	30.00 Hectares
Site coordinates	SP 808 422 52 0 52 04 18 N 000 49 15 W Point
Lat/Long Datum	Unknown
Height OD / Depth	Min: 60.00m Max: 62.00m

Project creators

Name of Organisation	Cambridge Archaeological Unit
Project brief originator	Consultant
Project design originator	Emma Beadsmoore
Project director/ manager	Emma Beadsmoore
Project supervisor	Shannon Hogan
Type of sponsor/ funding body	Developer
Name of sponsor/ funding body	Hanson Aggregates

Project archives

Physical Archive recipient	Milton Keynes Council
Physical Archive ID	MOW 08-10
Physical Contents	"Animal Bones","Ceramics","Environmental","Human Bones","Metal","Wood","Worked stone/lithics"
Physical Archive notes	CAU report number 1180

Digital Archive recipient	Milton Keynes Council
Digital Archive ID	MOW 08-10
Digital Contents	"Animal Bones","Ceramics","Environmental","Human Bones","Metal","Survey","Wood","Worked stone/lithics"
Digital Media available	"Survey","Text"
Digital Archive notes	CAU report number 1180
Paper Archive recipient	Milton Keynes Council
Paper Archive ID	MOW 08-10
Paper Contents	"Animal Bones","Ceramics","Environmental","Human Bones","Metal","Survey","Wood","Worked stone/lithics"
Paper Media available	"Context sheet","Drawing","Photograph","Plan","Report","Section","Survey","Unpublished Text"
Paper Archive notes	CAU report number 1180

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	Manor Farm, Old Wolverton, Milton Keynes, Buckinghamshire: 2008-2010 Excavation Report
Author(s)/Editor(s)	Hogan, S.
Other bibliographic details	Report number 1180
Date	2013
Issuer or publisher	Cambridge Archaeological Unit
Place of issue or publication	Cambridge
Description	Report number 1180. A4 bound report, approximately 60 pages, 10 of which are graphics.

Entered by	Shannon Hogan (sh568@cam.ac.uk)
Entered on	9 July 2013

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