

Archaeological Investigations at Broom South Quarry, Bedfordshire Phases I and II

Volume 1: Post Excavation Assessment



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ARCHAEOLOGICAL INVESTIGATIONS AT BROOM SOUTH QUARRY, BEDFORDSHIRE: THE PLANT SITE AND PHASES I AND II

Volume 1: Post Excavation Assessment

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Summary

Archaeological excavations were undertaken by the Cambridge Archaeological Unit (CAU) ahead of plant site/quarry compound construction and gravel extraction at Broom South Quarry, Bedfordshire (approximately centred on NGR TL 175 417). The work was carried out on behalf of Tarmac Ltd. in two phases; Phase 1 took place between April and November 2013 and Phase 2 between August and December 2016. The combined area encompassed some 38.6ha.

The work followed an archaeological evaluation of the area undertaken in 2004, which identified 12 concentrations of archaeology dating from the Neolithic through to the Anglo-Saxon period but with the majority of sites dating to the Iron Age and Roman periods. Of these six fell within the current excavation/strip, map and record area, these comprised: an area of potential Romano-British settlement, which extended beyond the limit of extraction to the south, an Iron Age settlement site and three sites identified respectively by the presence of a Beaker period pit, a potentially Early Bronze Age ring ditch and an Anglo-Saxon Sunken Floored Building (SFB).

Situated on the western flank of the Ivel valley, the 2013 and 2016 excavations revealed both archaeology associated with the sites identified by the evaluation as well as significant remains that had not previously been identified. The earliest evidence comprised an Early Neolithic multiple inhumation associated with Carinated Bowl pottery, whilst two pit clusters associated with Mildenhall type pottery represent slightly later settlement activity. Further Neolithic activity was encountered in the form of a long enclosure and two pits, both associated with Peterborough Ware pottery. Bronze Age activity at the site was evidently more limited with a small cremation cemetery the only notable feature, however, Iron Age settlement remains in the form of roundhouse gullies, enclosures and pits, apparently representing a series of discrete farmsteads, were widespread.

Whilst the Ivel valley is undoubtedly an important Roman landscape – as indicated by previous evaluations and aerial photographs – remains of this period were limited to two trackways marked by parallel ditches, along with associated field system ditches, and part of an enclosure system in the south of the site. As indicated by cropmarks the densest Roman remains clearly occur to the east of the site closer to the River Ivel. Finally, Anglo-Saxon remains comprising a small inhumation cemetery and four SFBs – which are particularly notable for their worked bone assemblages – complete the archaeological record for the site.

The results of the excavations – particularly the Neolithic, Iron Age and Anglo-Saxon remains – are significant and add to a growing corpus of evidence, including previous excavations at Broom Quarry, which will allow landscape scale analysis of the prehistory and early history of the Ivel Valley.

INTRODUCTION

This report details the results of archaeological investigations undertaken ahead of plant site/quarry compound construction and gravel extraction at Broom South Quarry, Bedfordshire (approximately centred on NGR TL 175 417; Figure 1). The work was carried out on behalf of Tarmac Ltd. in two phases; Phase 1 took place between April and November 2013 and Phase 2 between August and December 2016. The combined area encompassed some 38.6ha.

The work followed an archaeological evaluation of the area undertaken in 2004 (Cooper 2005). The evaluation, which comprised aerial photographic survey (Palmer 2004) and trial trenching, identified 12 concentrations of archaeology dating from the Neolithic through to the Anglo-Saxon features but with the majority of sites dating to the Iron Age and Roman periods. Following the results of the evaluation an archaeological management plan was produced by Andrew Josephs Associates (Josephs 2009), which recommended two levels of archaeological investigation: '*strip, map and excavation*' to be undertaken in areas of identified archaeology and '*archaeological monitoring*' to be undertaken in all other areas. Both levels of investigation were undertaken in the Phase 1/Plant Site and Phase 2 areas as shown in Figures 1 and 2¹.

Work was undertaken in accordance with the Archaeological Management Plan prepared by Andrew Josephs (2009) and a project design specification (Gibson 2012) produced by the CAU in response to a brief by Martin Oake of the Archaeology Team of Development Management at Central Bedfordshire Council. The site codes for the excavation were BEDFM2012.59 and BEDFM2016.66.

Location, geology and topography

Broom South Quarry is located in open fields on the western flank of the valley of the River Ivel. The village of Broom lies c.1km to the north (of the Plant Site) whilst Langford and Stanford lie c. 1.5km to the south-east and south-west respectively. The site is situated at a height of between 31.6m and 39.6m OD within a gently undulated landscape, which slopes to the east and south towards the River Ivel and the Ivel Navigation respectively. The underlying geology comprises glacial sands and gravels overlying Oxford Clay (www.bgs.ac.uk/geoindex). Prior to gravel extraction the site comprised arable fields divided by hedgerows and farm tracks and interspersed with small stands of woodland (copses), the latter being preserved *in situ*.

¹ In addition to the main excavation areas, archaeological monitoring was undertaken during access road works between the Plant Site area and the B658 (see Figures 1 and 2). No archaeological features were encountered in these areas.

Archaeological background

Situated on a gravel terrace adjacent to the River Ivel, a tributary of the River Great Ouse, Broom South Quarry lies within a landscape well known for its prehistoric and Roman archaeology particularly, much of which has come to light during previous phases of quarrying at Broom.

At the former Broom Quarry, located to the north of Broom village and extending to within c. 1km of Broom South Quarry, excavations either side of Gypsy Lane undertaken by the CAU between 1995 and 2012 have recorded archaeology ranging in date from the earlier Neolithic through to the Anglo-Saxon period. Amongst the many archaeological sites investigated were three Early Bronze Age monuments (three ring ditches and a C-shaped ditch) alongside dispersed evidence of Neolithic and Bronze Age settlement, the remains of a number of substantial and extensive Iron Age settlements and an Anglo-Saxon cemetery. Details of all of the excavations undertaken between 1995-2005 can be found in the site's publication *Past and Present* (Cooper and Edmonds 2007) whilst the results of the 2007-2012 excavations are detailed and discussed in the site's Post-Excavation Assessment (Tabor 2014).

In addition to the excavated evidence aerial photographs have proved to be an invaluable tool in terms of identifying archaeology within the wider landscape and significant cropmark complexes occur along the western side of the River Ivel, including the area immediately adjacent to Broom South Quarry (see Figure 1). The majority of these are thought to be Iron Age and Roman settlements, connected by a regular network of ditched trackways and boundaries. In addition, the cropmark of a possible hengiform monument is recorded immediately to the east of the quarry.

Regarding the Broom South Quarry area itself, prior to the site's evaluation, only two find spots of note – an Early Bronze Age flint arrowhead and a Roman bow brooch – were known from the immediate area (as listed on the Bedfordshire Historic Environment Record). As shown by the results of the 2004 evaluation (see below), however, a far greater quantity of archaeology than this suggests has since been identified at the site.

The 2004 Evaluation

Archaeological evaluation comprising aerial photographic survey and trial trenching identified 12 concentrations of archaeology within the Broom South Quarry area, with further dense concentrations of archaeology identified from cropmarks just beyond the quarry boundary to the east. Amongst the archaeology identified were two ring ditches (thought to be Early Bronze Age), two Iron Age pit alignments, four Iron Age settlements and two Roman-British settlements alongside evidence of more dispersed Neolithic and Early Bronze Age activity.

Of the archaeological sites/concentrations identified, six fell within the Phase 1/Plant Site and Phase 2 extraction areas, these comprised: *Site 8* an area of Romano-British settlement, which extended beyond the limit of extraction to the south, *Site 5*, an Iron Age settlement site, which extended beyond the Phase 1 extraction limit to the west and three sites identified respectively by the presence of a Beaker period pit, a potentially Early Bronze Age ring ditch and an Anglo-Saxon Sunken Floored Building (SFB).

METHODOLOGY

Both designated strip, map and excavation areas and monitoring areas were stripped of topsoil and sub-soil/overburden using a 360° tracked excavator fitted with a toothless bucket operating under the supervision of an experienced archaeologist. The site was located using an advanced Global Positioning System (GPS) with Ordnance Datum (OD) heights obtained. Potential archaeological features were digitally planned following the stripping of the site using a total station. Potential features were all scanned with a metal detector and subsequently hand excavated. Sampling intervals of excavated slots followed the methodology agreed in the specification (Gibson 2012) and varied from 5% in the case of some linear features to 100% in the case of more significant features such as burials; all excavated slots were digitally planned.

All archaeological finds were retained for analysis and environmental bulk soil samples were taken from selected features. A written record of archaeological features and *in situ* buried deposits was created using the CAU extensive recording system and sections were drawn at an appropriate scale. Finally, a digital photographic record of the excavation was maintained throughout.

RESULTS

Early Neolithic

Archaeological remains dating to the Early Neolithic comprised a broad swathe of features – two pit clusters (1 and 2) and a number of more dispersed pits/tree throws – in the north of the excavation area and located along its eastern boundary, and a multiple inhumation (F.2213) some 200m to the west (see Figure 3).

Multiple Inhumation F.2213

Given its Grimston Ware association a multiple inhumation located in the north of the Phase 1 area, appears to be the earliest recorded feature at the site. **F.2213** comprised a large sub-rectangular pit/grave (L=3.84, W=2m, D=0.9m) containing the remains of four individuals situated in a distinct cut within the pit/grave (L=2, W=0.9m, D=0.2m; see Figure 4). Although poorly

defined in section, the cut – which potentially represents some sort of chamber or cist – was at its base more clearly visible particularly at the north-east end where stones/cobbles had evidently been packed against the base/edge. Although potentially forming some sort of structural function (possibly to support a timber cist-lining) and largely made up of natural unworked flint cobbles; the deposit also contained a fragment of saddle quern and a spherical stone ball, which could potentially be interpreted as grave goods (see Timberlake, below; Figure 4). Further worked stone fragments, which can perhaps be more readily interpreted as grave goods, were also positioned within the potential cist to the north and north-east of the human remains (see below); these comprised three further fragments of saddle quern, an anvil stone and a shipped stone block of unknown function.

The human remains themselves were aligned south-west to north-east and comprised two flexed adult inhumations (Sk.8573, a female and Sk.8574, a male) situated with their heads to the south-west and north-east respectively and with their feet touching (ie. positioned to mirror each other; see Figure 4). In addition, the partial remains of two infants (Sk.8575 and Sk.8576) were situated to the north of Sk.8573. Although only partial (less than 5% complete) it is considered that the remains likely represent formerly complete burials, which have not survived. To all intents and purposes the burials do appear likely to represent a family grouping – a male, a female and two infants – and whilst there is no evidence as to the circumstances of death and burial there does appear to be some ‘sequence’ to their interment. The foot of Sk.8774 was laid over the tibia of Sk.8573 and various disarticulated elements belonging to the skeletons suggest some degree of disturbance. This together with the cist-like character of the internal grave cut, potentially suggests a family tomb, which saw interments over a period of time. With this in mind, a Grimston Ware pot found in the upper fills of the pit/grave F.2213, c. 50% complete and broken *in situ*, potentially represents some sort of closing deposit following the final interment.

A second sub-square pit was located immediately adjacent to F.2213. Measuring 3.2m by 2.1m by 0.7m deep, the sub-oval pit (**F.2210**) was 100% excavate but yielded no finds or evidence of date or function. Whilst this could be interpreted as a potential quarry pit for a mound raised over the grave, no evidence of a barrow – of either turf or gravel construction – was recorded. As such, and despite the evident truncation of the land surface and thus any formerly upstanding elements of the burial site, the burial is considered most likely to be a flat grave/below ground mortuary structure.

Pit Clusters

Situated just over 200m to the east of Grave F.2213, two pit clusters were both associated with Mildenhall-type pottery (Figure 5). As such they appear likely to represent a separate, slightly later phase of Early Neolithic activity dating to the mid 4th millenium BC.

Pit Cluster 1

Comprising a tight cluster of six pits in an L-shaped arrangement, Pit Cluster 1 yielded a small assemblage of Mildenhall-type pottery and worked flint (see Table 1, below; Figures 5 and 6). Although ‘abutting’ each other, no clear stratigraphic relationships survived between pits and as such it was not possible to establish whether they were contemporary or represent a sequence of excavated and subsequently back-filled pits. All of the pits were either sub-circular or sub-oval in shape (diameter: 0.51–0.9m, depth: 0.16–0.28m) and contained one or two fills comprising mid grey brown sandy silts with occasional charcoal flecks.

Feature No.	Pottery	Flint	Bone	Burnt Clay	Burnt Flint	Worked Stone
2101	6 (12g)	3 (4g)	-	-	-	-
2102	5 (9g)	4 (29g)	-	-	-	-
2103	2 (2g)	1 (1g)	-	-	-	-
2104	13 (18g)	44 (203g)	-	-	2 (15g)	-
2105	8 (44g)	21 (65g)	-	-	-	-
2106	10 (27g)	9 (13g)	-	-	-	-

Table 1: Pit Cluster 1 assemblage breakdown

In addition to the main cluster of six pits an ‘outlying’ pit (**F.2100**) was recorded c. 12m to the north, which yielded 16 sherds (56g) of pottery, seven flints (22g) and a single piece of burnt stone.

Pit Cluster 2

Located 35m to the south-west of Pit Cluster 1, Cluster 2 comprised 13 pits. All of the pits were discrete features with the exception of two pits (F.2172 and F.2173), which ‘abutted’ each other – once again, however, a stratigraphic relationship could not be determined. The pit cluster yielded a mid-sized assemblage of Mildenhall-type pottery and worked flint whilst minute fragments of calcined animal bone were also recovered from two pits (see Table 2, below). The only other finds of note were two pieces of ‘worn’ daub from pit F.2166 two pieces of worked stone (one a hammerstone) recovered from F.2173. Once again, all of the pits were either sub-circular or sub-oval in shape (diameter: 0.4–1.53m, depth: 0.07–0.46m) and contained one to three fills comprising mid to dark grey brown sandy silts with rare to moderate charcoal inclusions.

Feature No.	Pottery	Flint	Bone	Burnt Clay	Burnt Flint	Worked Stone
2166	39 (107g)	34 (84g)	2 (1g)	2 (22g)	1 (25g)	-
2167	-	49 (134g)	-	-	-	-
2168	31 (58g)	72 (164g)	-	-	-	-
2170	-	1 (3g)	-	-	-	-
2171	-	-	-	-	-	-
2172	-	2 (6g)	-	-	-	-
2173	6 (11g)	74 (244g)	-	-	6 (2g)	2 (1902g)
2174	1 (1g)	14 (32g)	5 (1g)	-	-	-
2175	-	4 (22g)	-	-	-	-
2176	6 (5g)	8 (9g)	-	-	-	-
2177	3 (8g)	4 (32g)	-	-	-	-
2178	-	-	-	-	-	-
2179	1 (1g)	10 (131g)	-	-	-	-

Table 2: Pit Cluster 2 assemblage breakdown

Once again, in addition to the main cluster, 'outlying' pits that could be considered as part of a larger, more dispersed group of features, yet which were not part of the tightly defined Cluster 2, were recorded in the vicinity. Three pits were located 10m to the north-east of Cluster 2 (**Fs. 2153–55**), of these, F.2154 produced two worked flints, one fragment of burnt flint and a very small fragment of burnt clay (2g); pit F.2153 yielded a single worked flint whilst F.2155 was 'empty'. A single pit (**F.2107**) was also recorded 5m to the north-west of Cluster 2, cut into a pre-existing tree throw the pit yielded an assemblage of 18 sherds (44g) of Mildenhall-type pottery along with 12 worked flints.

'Dispersed' Activity (Pits and Tree Throws)

In addition to the well-defined pit clusters described above, more dispersed activity comprising more isolated pits and 'midden'-type material deposited in tree throws was also recorded in the area immediately to the south of Pit Clusters 1 and 2 (Figure 5).

Only 25m and 35m respectively to the south of Pit Cluster 2, a potentially midden-derived deposit within a tree throw (**F.2116**) and a pit (**F.2109**) were recorded. The pit (diameter:0.85m, depth=0.37m) was sub-circular and contained two fills, which yielded a small finds assemblage comprising four sherds (8g) of Early Neolithic pottery, 17 (90g) worked flints and a single burnt flint. F.2116 was a charcoal-rich deposit contained within tree throw (F.2115) just to the north-east of pit F.2109; it measured 0.98m across and 0.25m deep and yielded 14 sherds (50g) of Early Neolithic pottery and 18 (344g) worked flints as well as a single fragment of burnt stone. A further five features

(**F.2110-2116**) were recorded in the vicinity, two of which contained small quantities of worked flint; all, however, have been interpreted as natural hollows or further tree throws.

Slightly further to the south-east (c. 95m from Pit Cluster 2), a second pit (**F.2133**) again associated with a potentially midden-derived deposit within a tree throw (**F.2135/36**) was recorded. Pit F.2133 (diameter: 0.98m, depth 0.13m) was sub-circular and contained a single fill, which yielded two small fragments (3g) of Early Neolithic pottery and 11 (184g) worked flints. Deposit F.2135/36 (width: c.1.1m, depth: 0.11m), was less charcoal rich than F.2116 but yielded 47 sherds (108g) of pottery and five (32g) worked flints.

An additional five pits contained small quantities of Early Neolithic pottery, of these two (**F.2143** and **F.2296**) contained coherent flint assemblages and can be dated with relative confidence to the Early Neolithic. The remaining three pits (**Fs.2189, 2226** and **2329**) in containing only minimal amounts of pottery and worked flint can only be tentatively associated with this period given that the material could easily be residual.

Finally, further evidence of Neolithic activity is also present as residual material in later features and as stray finds. Residual Early Neolithic pottery was found in ten features including Iron Age, Roman and Saxon features, whilst the standout find was a fine leaf-shaped arrowhead (SF.38) recovered from a tree throw (F.2302).

Middle Neolithic

Enclosure I

In the south-eastern corner of the excavation area the north-eastern end of an elongated rectilinear enclosure ditch (**F.2391**) was exposed having been truncated to the south-west by later quarrying (Figure 7). The enclosure was recorded for a length of 12m (NE–SW) and measured 11.5m wide. An entrance/causeway measuring 1.3m wide was recorded in the north-east end of the enclosure whilst just to the south-east a second ‘gap’ in the ditch coincided with an area of disturbance caused by a later tree throw but could potentially have marked a second causeway (width: c. 1.2m). The ditch itself measured 0.5–1.02m by 0.44–0.76m deep with steep sides and a rounded base; it contained between two and six fills with evidence of at least one re-cut (Figure 8). Finds recovered from the enclosure ditch comprise 21 sherds (83g) of Middle Neolithic Peterborough Ware style pottery, six worked flints (66g) and two fragments (491g) of burnt stone.

Close to the ditch terminus associated with the north-eastern entrance/causeway two postholes were recorded cut into the base of ditch F.2391. **F.2408** and **F.2409** measured 0.24m and 0.3m in diameter respectively and were 0.45m and 0.12m deep; neither yielded any finds. Other features in the potentially associated or in the vicinity of Enclosure I comprised two pits (**F.2403** and **F.2407**), which were cut by the enclosure ditch and four

tree throws of which only one produced any finds (two worked flints). Finally, a segment of a shallow linear ditch (**F.2405**) measuring 4m in length (truncated) and aligned parallel with the Enclosure I was recorded on its interior. The ditch measured 0.85-0.95m wide by 0.3m deep; it yielded no finds or evidence of function.

Pits F.2371 and F. 2516

Some 140m to the south-west of Enclosure I, an isolated pit – possibly a pit-well – represents further potential Neolithic activity (Figure 9). The sub-oval pit (**F.2371**) measured 3.35m in diameter and was found to be at least 2m in depth (having been ‘half-sectioned’ to a depth of 1.5m with further excavation limited to a small sondage); it was steep sided and contained at least nine fills, the lower of which comprised slumped sand and gravel. Finds recovered comprised 26 sherds (66g) of Peterborough Ware style pottery, 13 worked flints (122g) two very small fragments (4g) of unidentifiable animal bone and two small fragments of burnt flint/stone.

Of very different form to F.2371, **F.2516** comprised a small isolated pit recorded in the Phase 2 excavation area to the west of Pit F.2371 and Enclosure I (Figure 9). The pit measured 1.6m wide by 0.17m deep and contained a single fill, which yielded 11 fragments (52g) of Peterborough Ware pottery.

Beaker – Early Bronze Age

Pits

Evidence of Beaker activity was scarce with only two pits producing sherds of Beaker or Collared Urn pottery. Firstly, sub-circular pit **F.2284** (diameter: 1.04m, depth: 0.2m; Figure 3) yielded two small sherds of Beaker pottery together with two worked flints recovered from a single fill; the pit appeared to form part of a small pit cluster together with pits **F.2283** and **F.2287** although neither of the latter produced any finds or dating evidence. Secondly, much larger pit **F.2333** (diameter: 3.04m, depth: 2.44m) yielded a single sherd of Collared Urn pottery and three worked flints. The pit was sub-circular in shape and similar in form and surface dimensions to a pit recorded just to the north-east during the site’s evaluation in 2004, which yielded an impressive finds assemblage including 375 sherds of Beaker pottery and over 100 worked flints (see Cooper 2005, F.37). In reality neither F.2333 or F.2284, can be confidently attributed to the Early Bronze Age given that the small amount of pottery in both could well be residual; F.2333 particularly could well be a later, Iron Age pit-well (see below).

Early Bronze Age Pit Cluster 3/ cremations F.2255 and F.2258

A linear cluster of six pits (**Fs. 2255-2260**) represent the only identified features that confidently dated to the Early Bronze Age (Figure 10). The pit cluster occurred in isolation and comprised pits between 0.48m and 0.62m in diameter and 0.38m and 0.5m in depth. All of the pits were notable for the high frequency of burnt material (charcoal and burnt flint/stone) within their fills, particularly pits F.2255 and F.2258, which yielded small quantities of burnt human bone (a sub-adult? and young infant respectively; see Neil below) and can thus be classified as cremations. Cremation F.2258, along with adjacent pit F.2257 also contained sherds of a small – ‘Collared Urn-associated’ vessel and in some regards the pit cluster is best interpreted as a small Collared Urn period cremation cemetery. A breakdown of the finds assemblage recovered from the cluster is detailed in Table 3.

Feature No.	Pottery	Flint	Burnt bone	Burnt flint/stone
2255	-	-	55 (14g)	8(14g)
2257	27 (91g)	3 (19g)	-	1 (36g)
2258	20 (155g)	-	50 (9g)	25 (215g)
2260	-	-	-	6 (21g)

Table 3: Pit Cluster 3 assemblage breakdown. (F.2256 and F.2259 produced no finds)

Late Bronze Age

A single pit (**F.2196/2198**) can be dated to the Late Bronze Age. The pit (diameter:1.4m, depth:0.25m) was sub-circular in shape and contained an almost complete inverted rim of a Post-Deverel Rimbury vessel, which appears likely to have formerly been complete having been truncated by ploughing (Figures 3 and 6). The pit was located in the east of the Phase 1 area and whilst contemporary remains potentially lie beyond its boundary, F.12196/2198 was the only Late Bronze Age feature within the excavation area.

Early Iron Age

Six pits have been attributed to an Early Iron Age phase, either due to the presence of dateable pottery sherds or by association with other well-dated features; four were large deep pits, whilst two much smaller and shallower. Of the former – the dimensions and finds assemblages of which are detailed in Table 4, below – three were grouped together in the north of the excavation area (**F.2122**, **F.2125** and **F.2126**) whilst one was an isolated feature in the west (**F.2310**).

Feature	Shape in plan	Diameter (m)	Depth (m)	No. of fills	Finds
2122	Sub-circular	2.85	1.2	2	Infant human burial x1, complete pot x1
2125	Sub-circular	3.5	c. 1.2	14	Burnt clay (1 frag.; 3g), flint x1
2126	Sub-circular	2.75	1.48	10	Pottery (3 sherds; 7g), flint x1
2310	Sub-oval	4.1	2.25+	18	Pottery (42 sherds;476g), animal bone (159 frags.; 440g), flint x25

Table 4: Large Early Iron Age pits

Pits F.2122, F.2125 and F.2126 together formed an approximately linear arrangement in an area of the site which was later marked by the presence of two Saxon sunken floored buildings (Figure 5). Of the three features F.2122 was the most significant in that it contained the burial of a human neonate placed together with a complete small Early Iron Age jar on a small ledge (0.2m deep) cut into the side of what was otherwise an unremarkable feature (other finds were limited to five probably residual worked flints). Pits F.2125 and F.2126 were located 8.6m and 22m to the north-east of F.2122 respectively and were similar in form and yielded few finds. In terms of their size it is tempting to interpret these three features as pit-wells, however, given their location on relatively high ground and their comparatively limited depth they are perhaps better interpreted as large storage pits, albeit – given their lack of finds –probably located some distance from contemporary settlement.

By contrast, pit F.2310, which stood in isolation, appears to have been a classic pit-well/watering hole. The feature was found to be at least 2.25m with steep sides and yielded a finds assemblage including Early Iron Age pottery and animal bone including dog, elements of which were still articulated. Although the only F.2310 was the only firmly dated pit-well/watering hole excavated five unphased features (F.2193, F.2294, F.2300, F.2301 and F.2317) located in relatively close proximity, seem likely to have had a similar function and may well be broadly contemporary.

Pits F.2144 and F.2500 were much smaller than the aforementioned pits/watering holes and occurred in isolation. Both are, however, well-dated and F.2500 produced a significant quantity of Early Iron Age pottery.

Pit F.2144 (diameter: 1.03m, depth: 0.35m) was, apart from an undated pit (F.2145) c.10m to the east, an isolated feature. It yielded nine sherds of Early Iron Age pottery (24g) and five worked flints, which were recovered from a single charcoal-rich fill.

Pit F.2500 (diameter: 0.62m, depth: 0.17m) was located in the south of the excavation area, apparently away from any contemporary features. It yielded 140 sherds (1896g) of Early Iron Age pottery and five fragments of burnt stone.

Middle Iron Age

Evidence of Iron Age activity was recorded largely in the south of the excavation area, where it occurred in three main clusters; in the south/south-east of the excavation area two roundhouses and a ring-ditch/enclosure were recorded alongside contemporary pits/pit clusters, whilst in the south-west two roundhouses located c. 170m apart were each associated with enclosures and boundary ditches. In addition numerous scattered pits appear to represent more dispersed activity.

Roundhouse S1, 'Ring-Ditch' F.2352 and Pit Cluster 4

The larger of the two recorded roundhouses in this area (Structure 1) comprised a pennanular gully enclosing an internal area 11.8m in diameter (Figures 9 and 11). The roundhouse had an east-facing entrance some 5.8m wide formed by two gully termini, the northern of which had a relatively deep posthole set into it (**F.2358**, diameter: 0.83m, depth: 0.92m). The roundhouse gully itself (**F.2359**), which is interpreted as an eaves gully rather than a structural gully, had a shallow U-shaped profile (width: 0.42-0.68m, depth: 0.11-0.23m) and contained a single fill. Finds from the gully were surprisingly few and comprised a single sherd of pottery and three worked flints, whilst posthole F.2358 yielded a single worked flint.

Immediately adjacent to roundhouse S1 a more substantial pennanular ditch (**F.2352**) was recorded (Figures 9 and 12. With a west facing entrance (2.5m wide), the 'ring-ditch' had an internal diameter of 17m whilst the ditch profile itself (step-sided with a flat base) measured 1.38-1.9m at the top by 0.68-0.9m in depth. The excavated ditch slots generally contained three fills from which 63 sherds (428g) of Iron Age pottery, 104 fragments (413g) of animal bone, 24 worked flints and four fragments of burnt stone were recovered. Finds including the pottery were recovered from throughout the ditch profile, including from the primary silting layers.

The ring-ditch was interpreted following the 2004 evaluation (Cooper 2005) as an Early Bronze Age funerary monument and the diameter in plan and the size of the ditch profile would support this. However, both its position adjacent to roundhouse S1 as well as the finds assemblage recovered suggest this is not the case and, in also being too substantial to be readily interpreted as a roundhouse gully, it is perhaps best interpreted as a circular enclosure. No clearly associated features were exposed however three pits (F.2354, F.2355 and F.2360, as detailed below) were recorded immediately to the north.

To the south of Roundhouse S1, Pit Cluster 4 comprised nine pits (**Fs. 2361-2367, F.2370 and F.2375**; Figure 11). The pits ranged from 1.4 to 2.1m in diameter by between 0.22 and 1.12m in depth; all were sub-circular with steep sides and flat bases. All can be satisfactorily interpreted as storage pits and seem likely to be associated with Roundhouse S1. The pits each contained between two and seven fills which yielded a varied but surprisingly small finds assemblages (detailed in Table 5 below). Only two of the pits contained

pottery and of these only F.2375 contained quantities of finds – amongst which were large amounts of burnt clay interpreted as a burnt clay lining (see Timberlake, below) – which appears representative of nearby occupation-related activity whilst the worked bone from F.2363 also suggests domestic/craft activities. Finally, the presence of a human burial comprising the skeleton of an adult female placed in a crouched position in the upper fills of pit F.2370 (Figure 13) has clear local parallels at Broom North Grange where burials were also recorded in a settlement context within pits that had probably been previously used for storage (Tabor 2014).

Feature	Pottery	Animal Bone	Flint	Burnt clay	Burnt stone	Other
2363	-	-	-	-	-	1 x worked bone
2365	-	68 (309g)	-	-	-	
2366	4 (30g)	3 (4g)	1 (4g)	-	5 (1349g)	1 x Fe fragment
2367	-	3 (18g)	-	-	-	-
2370	-	4 (90g)	-	-	-	1 x human burial
2375	45 (760g)	216 (1818g)	4 (87g)	100+ (7190g)	4 (2422g)	-

Table 5: Pit Cluster 4 assemblage breakdown (Pits F.2361, F.2362 and F.2364 produced no finds)

Three further pits (**F.2354**, **F.2355** and **F.2360**) were recorded in the immediate vicinity of roundhouse S1 and ring-ditch F.2352, all just the north. Pit F.2360 was sub-circular (diameter: 1.6m, depth: 0.58m) and contained seven fills including a deposit of burnt clay, again interpreted as a redeposited clay-lining of some description (see Timberlake, below; Figure 13). In addition, 61 sherds (685g) of Iron Age pottery were recovered alongside 27 fragments (116g) of animal bone, eight worked flints and two fragments of burnt stone one of which had originally been used as an anvil stone (*ibid.*). Pits F.2354 and F.2355 were on the whole unremarkable and yielded only 69g of burnt/flint stone and ten very small fragments (12g) of pottery respectively.

Roundhouse S2 and associated pits

Some 56m to the south of Roundhouse S1, a second roundhouse (S2) was recorded (Figure 9). The roundhouse had an internal diameter of 9.4m and a south-facing entrance. The roundhouse gully itself (**F.2373**) measured 0.47-1.2m wide by 0.13-0.54m deep and contained up to four fills, which yielded a small finds assemblage comprising 23 sherds (150g) of Iron Age pottery, five worked flints and three fragments of burnt stone. Aside from F.2373 – which was again interpreted as an eaves gully – no further structural features were recorded, however, three pits to the west appear to be associated. The pits (**F.2377**, **F.2381** and **F.2382**) were once again characteristic of Iron Age storage pits in size and form: 1.19-1.6m in width by 0.24m-1.19m deep with steep sides and flat bases, and in the cases of F.2377 and F.2382, complex in-filling sequences of up to 15 fills. Only two of the pits contained finds; pit F.2377 yielded five worked flints whilst F.2382 produced two sherds (14g) of

pottery and 26 small fragments (18g) of animal bone. Overall, the low quantity of finds from both the pits and Roundhouse S1 is surprising and in many ways belies their apparently domestic function.

Enclosure II and Roundhouse S3

Situated in the south-west of the excavation area, and straddling the boundary between Phases 1 and 2 of the quarry area, Enclosure II comprised a sub-rectangular ditched enclosure (overall dimensions 26.5m by 18m) seemingly associated with a roundhouse (Structure 3) located just to the south-east (Figure 14). Having been excavated in two stages, each as part of separate quarry phases three years apart, the enclosure was recorded as two parts; 'north' and 'south'. These two recorded sections of the enclosure were separated by a 4m unexcavated strip through the centre of the enclosure, which at the time of excavation marked the southern boundary of the Phase 1 quarry and was left *in situ*.

To the north of the unexcavated strip (Quarry Phase 1) almost all of the interior of the enclosure had been truncated by later (post-medieval?) quarrying, however, the majority of the enclosure ditch itself survived. Two phases of enclosure ditch were recorded; **F.2321** and **F.2318**. Ditch F.2321 survived to a maximum width of 0.74m width and 0.34m depth and was cut by ditch F.2318, which had a V-shaped profile (width: 1.57-2.27m, depth: 0.9-0.95m) and contained up to seven fills. A finds assemblage comprising pottery, animal bone, burnt stone and worked flint was recovered from F.2318 (see Table 6 below).

To the south of the unexcavated strip three phases of the enclosure ditch were recorded (Figure 15). The earliest of these consisted of an east-west ditch (**F.2602**), appearing in three excavated slots in the south-west corner of the enclosure, terminating to the west. The ditch was recorded for a total length of 8.14m (maximum width: 0.67m, depth: 0.35m) before being truncated by later phases of enclosure ditch; a single fragment of animal bone was recovered from its fill. The second phase of enclosure ditch (**F.2584**) was recorded along the full exposed length of the enclosure in this area (c. 29m). At its widest, it measured 2.51m, with a depth of 0.60m; it produced finds of animal bone, flint, burnt clay, burnt stone, Middle Iron Age pot, and slag and it seems likely that this ditch represented the main phase of construction of the enclosure. Finally, the final phase of enclosure ditch (**F.2583**) comprised a slightly deeper ditch cut (width: 2.3m, depth: 1.75m), which terminated in the south-west corner of the enclosure. The ditch contained a comparatively large quantity of Middle Iron Age pot (51 sherds, 664g) as well as 12.19kg of burnt stone.

Enclosure	Pot	Animal Bone	Flint	Burnt clay	Burnt stone	Other
II (north)	48 (468g)	105 (661g)	2 (31g)	-	8 (1938g)	-
II (south)	198 (1888g)	194 (314g)	3 (38g)	8 (136g)	116 (16338g)	1 (162g)
Total	246 (2356g)	299 (975g)	5 (69g)	8 (136g)	124 (18276g)	1 (162g)

Table 6: Enclosure II assemblage breakdown

Internal features associated with the enclosure were limited to a small area in the south-west of the exposed enclosure and comprised two inter-cutting sub-circular pits (**F.2324** and **F.2325**), two discrete sub-circular pits (**F.2319** and **F.2320**) and a shallow linear gully – east-west aligned (**F.2323**) – cut by three of the aforementioned pits. Four of the features (F.2324, F.2325, F.2320 and F.2323) produced very small fragmented finds assemblages amongst which were Iron Age pottery (59g), animal bone (79g) and burnt clay (9g).

Immediately to the south-east of Enclosure II, two curvilinear gullies (**F.2585** and **F.2586**) forming an incomplete ring appear to represent the site of a roundhouse (Structure 3). Just to the north-east a curvilinear ditch or ‘half-ring’ gully (**F.2588**) could potentially represent the partial remains of a separate phase of building although its function remains unclear.

Structure 3 comprised two gullies, F.2585 & F.2586 each terminating to form two ‘causeways’ to the south-east (4.5m wide) and to the north-west (1.28m wide) respectively. The area within the resulting ring/roundhouse gully measured 8.1m in diameter, whilst the gullies themselves measured 0.33-0.82m wide by 0.06-0.22m deep. The southern terminus of F.2585 [10099] contained 27 Middle Iron Age pot sherds and these seem likely to have been placed into the terminus as a near whole vessel. The ‘half-ring gully’ situated to the north-east (**F.2588**; max. width: 0.5-0.86m, depth: 0.09-0.17m) contained nine sherds (62g) of Middle Iron Age pottery.

Seemingly associated with Roundhouse S3 and located just to the south-east, pits **F.2590** and **F.2591** were both vertically-sided and flat-bottomed. Both pits contained small but cohesive finds assemblages representative of domestic occupation, including Middle Iron Age pottery and burnt clay fragments.

Pit F.2590 (diameter: 1.45m, depth: 0.8m) was sub-circular in shape and contained four fills. Finds recovered include 64 fragments (140g) of burnt clay thought to represent broken up loomweights or potentially broken-up and burnt structural daub. In addition, 34 sherds (218g) of pottery as well as 23 fragments (3640g) of burnt stone were recovered alongside only three fragments (4g) of animal bone.

Pit F.2591 (diameter: 1.88m, depth:1.05m) was again sub-circular in shape and contained six fills. Finds recovered comprise 4088g of burnt clay amongst which were 28 fragments of loomweight of Earl-Middle Iron Age triangular form, as well as 68 sherds (472g) of pottery, 1225 fragments (906g) of animal bone and a single fragment (462g) of burnt stone.

In addition to the pits two small pits or postholes were also recovered in the vicinity. One of the features (**F.2586**) was located just to the east of Roundhouse S4 whilst the other (**F.2587**) cut the terminus of one of the roundhouse gullies; both had sterile fills and produced no finds.

Roundhouse S4 and Enclosures III and IV

To the east of Enclosure II and recorded only in the Phase II excavation area (the area to the north in Phase I having been truncated by post-medieval/modern quarrying), a further two enclosures (III and IV) and a roundhouse (S4) represent further Middle Iron Age activity (Figure 13).

Recorded at the northern boundary of the Phase 2 excavation area but truncated to the north by post-medieval quarrying, Enclosure III comprised a partial, presumably sub-rectangular, ditched enclosure (**F.2580**) measuring 9.5m across. The enclosure ditch (width: 0.66-1.26m, depth: 0.46-0.87m) was single phase and yielded very few finds (see Table 7). Potentially associated features were limited to a single pit (**F.2334**) situated immediately to the north-east. Measuring 1.43m wide by 0.37m wide, it contained just three sherds (3g) of Middle Iron Age pottery alongside a single bone fragment and small quantities of burnt clay and burnt stone; consequently it seems the enclosure is unlikely to be directly associated with occupation and is presumably a paddock/enclosure for livestock

Enclosure	Pot	Animal Bone	Flint	Burnt stone	Other
III	3 (38g)	10 (2g)	13 (96g)	-	-
IV	460 (2572g)*	-	-	4 (732g)	1 (12g)

Table 7: Enclosure III and IV assemblage breakdown (* = largely one vessel)

To the south of Enclosure III and potentially formerly 'connected' by boundary ditch F.2581, a second ditched enclosure (IV) was recorded. The enclosure (**F.2536**) was sub-square in form and measured 12m by 11m in plan. It comprised two lengths of ditch separated by a narrow entrance (0.89m wide) in the south-west corner and a wider entrance (6.5m wide) to the north-east, which effectively made the northern side of the enclosure open-sided. Excavation revealed that the ditch (width: 0.23-0.62m, depth: 0.03-0.26m) had been dug in segments – but which in effect formed a continuous ditch – and contained a single fill. Finds recovered from the ditch comprised 460 sherds (2572g) of Middle Iron Age pottery and four fragments of burnt stone/flint. Although substantial, the pottery assemblage was largely made up of one vessel (438 sherds, 2224g; Figure 16) – found broken *in situ* – and aside from this the finds assemblage was small; as such the enclosure is once again best considered as a paddock/enclosure for livestock.

To the east of Enclosure III, roundhouse Structure 4 (**F.2535**) consisted of a shallow u-shaped pennanular eaves-gully (width: 0.27-0.69m, depth: 0.05-0.29m; Figure 16). With a diameter of up to 6.3m, the gully had a 2.23m wide east-facing entrance and one internal posthole (**F.2549**). The gully contained one single, sterile fill and yielded few finds; only three sherds of Middle Iron Age pot.

Just to the south-west of Structure 4, two sub-circular pits (**F.2534** and **F.2537**) represent typical storage pit-type features and were presumably associated with the roundhouse. Whilst pit F.2534 (diameter: 2.06m, depth: 1.13m) yielded no finds, pit F.2537 (diameter: 2m, depth: 1.2m) produced 15 sherds of Middle Iron Age pottery alongside 2 worked flints and a single fragment of burnt stone. Of more significance, however, was an articulated dog burial placed in a crouched position at the base of the pit alongside a cow skull apparently deliberately placed between its legs (Figures 15 and 16). Such Associated Bone Groups (ABGs) were a feature of the Middle Iron Age site at Broom North Grange.

Field system

A series of ditches in the area around Enclosures II-IV – a number of which extend from, or ‘connect’ the enclosures themselves – appear to represent elements of broadly contemporary field system. The surviving elements were fragmentary and it is possible that the system comprised either shallow ditches which are largely truncated or had additional elements such as hedges no trace of which survives. The field system comprised seven recorded ditches, broadly aligned north-south but appearing very organic in nature (see Figure 14). The ditches are detailed in Table 8, below.

Feature No.	Width (m)	Depth (m)	Description	Finds
2579	0.4-0.45	0.08-0.13	E-W Linear	No finds
2581	0.43-1	0.05-0.22	N-S Linear	No finds
2550	0.26	0.05	E-W Linear	No finds
2560	0.3-0.55	0.04-0.23	N-S Linear	Pottery (9 sherds, 34g), Burnt stone (17 fragments, 2917g)
2565	0.38-0.55	0.06-0.26	NW-SE Linear	No finds
2558	0.4-0.62	0.08-0.17	N-S Linear	No finds
2563	1.2-1.65	0.15-0.67	N-S Linear	No finds
2564	0.43-0.54	0.1-0.19	E-W Linear	No finds
2328	0.3-0.47	0.07-0.1	N-S Linear	No finds

Table 8: Field system ditches

To the north of the above field system further ditched features comprising two double ditches and a further enclosure may also represent part of the same system, however, in having no clear association with the Middle Iron Age occupation remains and no dating evidence they are included and detailed below as *Unphased*.

Dispersed pits

In addition to the well-defined pit clusters and pits clearly associated with roundhouses and enclosures a further 16 pits contained Middle Iron Age pottery. Of these, eight occurred as part of a broad swathe of 16 pits along the edge of the Phase II excavation area and between the two areas of Iron Age occupation marked by Roundhouses S1 and S2 and Roundhouse S4/Enclosure III.

The swathe of pits between Roundhouses S1/S2 and S4 comprised a total of 16 pits of which eight yielded Middle Iron Age pottery (F.2502, F.2503, F.2505, F.2512, F.2513, F.2514, F.2518, F.2520). The remaining eight pits (F.2501, F.2504, F.2508, F.2509, F.2510, F.2511, F.2517, F.2521) either produced no finds or small quantities of undated/non diagnostic material (flint and burnt stone), however, there is a relatively high potential that they also date to the Middle Iron Age. The pit dimensions ranged from 0.54m to 2.10m in width by 0.14m to 1.29m in depth. The average pit width and depth was 1.2m and 0.46m respectively and the majority seem likely to have been storage pits associated with the nearby areas of occupation, although one particularly large pit (F.2521) could potentially be a watering hole-type feature. The pits finds assemblages were largely unremarkable although pits F.2518 and F.2512 are worthy of further comment. Pit F.2518 yielded 8 sherds of pottery alongside a quern stone fragment and 39 fragments of burnt stone whilst Pit F.2512 yielded 25 sherds of pottery, 12 fragments of animal bone and 81 fragments of burnt stone (including a fragment of re-used quern).

Within a broad scatter of some 37 pits around Enclosures II-IV and Roundhouses S3 and S4 – the majority of which, although undated, seem likely also to be Iron Age in date – a further four pits produced Iron Age pottery and can be confidently attributed to this phase.

To the north of Enclosure II, and located alongside ditch F.2328, pits **F.2326** and **F.2327** were both sub-circular in shape and measured 1.4m and 1.6m in diameter by 0.65m and 0.97m in depth respectively. Pit F.2326 yielded 14 sherds (84g) of pottery and 94 fragments (160g) of animal bone whilst F.2327 produced three sherds (33g) of pottery.

Located approximately mid-way between Enclosures II and IV and just to the south of Enclosure IV respectively, **F.2593** (diameter: 0.64m, depth: 0.19m) and **F.2538** (diameter: 1.7m, depth: 1.1m) were both sub-circular. Pit F.2593 yielded 18 sherds (192g) of pottery, six worked flints and a single fragment of burnt stone whilst pit F.2538 yielded just two sherds (10g) of pottery alongside 13 fragments (3200g) of burnt stone.

Finally, to the east, in the far south-eastern corner of the excavation area, a further seven pits (**F.2337-2340**, **F.2342-2343** and **F.2347**), of which two contained small quantities of Iron Age pottery, were associated with a multi-phase ditched boundary – or part of an enclosure – cut by Roman Trackway A

(see below). Together, the features appear to represent a discrete area of Iron Age activity, which in all likelihood extends beyond the edge of excavation, certainly to the north and east and possibly to the south.

Romano-British

Trackways

The site plan (Figure 17) is dominated by two trackways (A and B) – each defined by parallel ditches – which extended beyond the edge of excavation to the north, south, east and west and intersected at a crossroads in the east of the excavation area. The trackways were clearly visible as cropmarks on aerial photographs (see Figure 1) and appear to have formed part of a network of trackways and boundaries connecting a series of settlements (also visible as cropmarks), which occur along this stretch of the River Ivel and are thought to be broadly Roman in date.

Trackway A

Formed by two parallel ditches 8.5-18.5m apart – except in the far north of the excavation area where the western ditch was absent, presumably truncated – Trackway A was aligned south-east to north-west, curving towards the north-east in the far north of the excavation area. Multiple cuts evident at various locations along the ditches length suggest elements of the trackway ditch, if not the whole ditch, had been re-cut at least twice. Aside from in the far south-east of the excavation area – discussed below – the eastern and western ditches had shallow rounded profiles; the western ditch measured 0.27-2.75m wide by 0.05-0.4m deep whilst the eastern ditch measured 0.23-0.99m wide by 0.05-0.25m deep (the maximum width in both cases represents multiple cuts).

Trackway B

Again formed by two parallel ditches 5.5-20.5m apart, Trackway B was aligned approximately east to west. Like Trackway A, both the trackway ditches had a shallow rounded profile and multiple cuts at various locations suggest it had been re-cut at least twice. Of the two ditches the northern ditch measured 0.3-1.7m wide by 0.09-0.56m deep whilst the southern ditch measured 0.4-1.55m wide by 0.12-0.56m deep.

The two trackways were clearly contemporary, in fact at the intersection of the trackways or ‘crossroads’ it was clear that the ditches of Trackway A ‘turned’ to form the boundaries of Trackway B and vice versa; in effect the two trackways were one landscape feature and one which the number of ditch re-cuts (at least two) suggest was relatively long-lived. With the exception of a short length of ditch in the south of excavation area – F.2341, which contained an apparent dump of Anglo-Saxon midden material in its upper fills and is discussed further below – few finds were recovered from the ditches and these parts of the trackway system were clearly located some distance from contemporary settlement. Excluding F.2341, pottery was limited to 27 sherds (103g; all small and abraded sherds) whilst just 13 fragments (46g) of animal bone were recovered alongside small quantities of residual worked flint, fired clay, slag and two iron nails.

In addition to the above a third possible Trackway (C) was recorded in the south-west of the Phase II excavation area. Although the feature did not produce any dateable finds, its location and alignment suggest that it is part of the regularly spaced network of Romano-British trackways recorded as cropmarks and archaeological features in this part of the Ivel valley.

Enclosures V-VII

Whilst the excavation area was clearly part of a widely settled Romano-British landscape, evidence of occupation during this period was confined to the far south of the excavation area where a sequence of enclosures (V-VII) was partially exposed (Figure 9). All three enclosures, of which only the northern corners fell within the excavation area, were aligned NE-SW by NW-SE and appear likely to have been sub-square/sub-rectangular in form. Pottery (79 sherds) from the ditches comprises forms/fabrics dating largely to the 1st-2nd centuries AD (see Mazzilli, below). A relatively clear chronological sequence was recorded:

Phase RB 1: Enclosure V

The earliest enclosure (V) comprised two phases of ditch recorded for a total length of 74m. The earlier ditch (**F.2379**) measured a maximum of 1.94m wide by up to 0.74m deep and was truncated by ditch **F.2380**, which measured a maximum of 1.85m wide by up to 0.7m deep; each had a rounded V-shaped profile. Finds recovered were limited to 54 fragments (78g) of animal bone, two worked flints and seven sherds of pottery. Of the latter one sherd has been dated to the 2nd-3rd century AD whilst the remaining six sherds are Iron Age sherds and could either be residual and derived from the activity immediately to the north (Roundhouse S2) or indicate a late Iron Age origin for the enclosure.

Phase RB 2: Enclosure VI and ditch F.2353

Enclosure VI comprised three phases of ditch (**F.2394-5** and **F.2406**) recorded for a total length 21m on a north-west to south-east alignment, turning to the south-west shortly before being truncated by Enclosure VI's ditch. The dimensions and limited finds assemblages from each ditch are detailed in Table 9, below.

Feature	Profile	Width (m)	Depth (m)	Finds recovered
F.2394	Rounded V-shaped	0.55	0.45	None
F.2395	Rounded V-shaped	0.8	1.35	Pottery (x2), animal bone (x26), flint (x1), slag (x1), oyster (x1)
F.2406	Rounded (truncated)	1.2	0.82	Flint (x2)

Table 9: Enclosure VI assemblage breakdown

Apparently related to Enclosure VI was ditch **F.2353**; the ditch was positioned just to the north-east and parallel with Enclosure VI's north-eastern side – potentially forming a trackway extending beyond the edge of excavation to the south-east – before turning to the north-east where it truncated Enclosure V's ditch. The ditch was then recorded for a distance of 143m on a NE-SW alignment before terminating just to the north of earlier ring-ditch F.2352 (on which it appears to have been aligned; see Figure 9).

Phase RB 3: Enclosure VII

The final phase comprised ditch **F.2369**, which was recorded for a length of 46m. Measuring a maximum of 2.85m wide by up to 1.2m deep, and with a rounded V-shaped profile, the ditch cut both Enclosure VI and ditch F.2353 and once again formed the northern corner of an enclosure (VII) extending to the south-east. One potential re-cut (**F.2368**; width: 1.6m, depth: 0.62m) was recorded in the upper profile of the ditch. A comparatively large finds assemblage was recovered from the pit comprising 70 sherds (956g) of pottery and 91 fragments (1231g) of animal bone as well as three – presumably residual – worked flint and four fragments of oyster shell.

Given the sequence and the pottery spot dates it seems likely that the enclosures represent a relatively limited period of activity broadly dating to the 2nd century AD. Considering their respective finds assemblages only Enclosure VII, with 70 sherds of pottery, has any evidence of potential nearby occupation, with the earlier Enclosures V and VI more likely to represent paddocks or small fields not in the immediate vicinity of a settlement site.

Fieldsystem

Elements of a Romano-British fieldsystem(s) are undoubtedly present within the excavation area, however, given the fragmentary nature of the surviving boundary ditches – combined with a lack of dateable finds – it is difficult to confidently attribute many of them to period. Having said that a number of the recorded ditches have a relatively clear relationship with either the trackway or the settlement enclosures described above (Figure 17).

The ditches are detailed in Table 10 and comprise ditch **F.2353** (previously discussed above in relation to Enclosure VI) and a series of boundaries in the north of the excavation area. The latter comprised four boundaries (**F.2117/2187**, **F.2202/2204/2205** and **F.2134**) aligned broadly east-west and parallel to Trackway B, whilst also appearing to terminate at or 'join' Trackway A. Finds recovered were few and the majority, if not all, were residual.

Feature Nos.	Width (m)	Depth (m)	Description	Finds
2117, F.2187	0.54-1.05	0.08-0.31	E-W linear	2 x flint (50g)
2134	0.5-0.83	0.1-0.22	WNW-ESE linear	1 x pottery (5g)
2202,2204, 2205	0.4-1.2	0.12-0.5	E-W curvilinear	16 x bone (33g)

Table 10: Romano-British fieldsystem ditches

Anglo-Saxon

Evidence of Anglo-Saxon activity was concentrated in the east and particularly the north-east of the excavation area, where three Sunken Floored Buildings (SFBs), and a small cemetery were encountered. In addition, two features, a deposit of midden material and a pit appear to represent secondary activity associated with Romano-British Trackway A.

Sunken Floored Buildings

The three SFBs (S5, S6 and S7; Figure 5) formed a loose cluster towards the eastern edge of excavation (beyond which cropmarks suggest further such features may exist, see Figure 1). SFBs S5 and S6 were excavated in 0.1m spits with finds also separated by quadrant; SFB7, which was initially recorded during the 2004 evaluation (Cooper 2005) had already been half sectioned and was also found to be badly truncated, as such the remaining fill was removed as one context/layer.

SFB S5

Structure S5 comprised a sub-rectangular 'pit' (**F.2127**) measuring 2.95m by 2.57m by 0.38m deep and aligned approximately east to west (Figure 18). Postholes (**F.2128** and **F.2129**) cut into the base of the feature were located at each end. Within F.2127 itself three fills were recorded, which yielded a large assemblage of finds (detailed in Table 11, below) dominated by pottery and animal bone but also including a number of worked bone artefacts – two pin beaters, a bone pin, a spindle whorl, a decorated disc and a decorated comb – as well an iron awl with an antler handle (see Riddler, below). Finds were distributed throughout the three fills and in all four quadrants, however, the majority of both pottery and animal bone, particularly derived from the upper two thirds of the in-fill and from the western half of the feature.

SFB	Pottery	Animal bone	Worked bone	Metal	Other
S5	145 (2030g)	652 (3946g)	11 (52g)	2 (1g)	Quern (x1), whetstone (x1), tile (x1), oyster shell (x1), worked flint (x2), burnt stone (x6)
S6	289 (2978g)	65 (147g)	-	4 (13g)	Slag (x10), tile (x2), worked flint (x4), burnt stone (x3)
S7	6 (76g) + 28 (713g)*	4 (1g) + 5 (55g)*	-	-	Tile x1 (+ tile x2*), worked flint (x3)*, burnt stone (x4)*

Table 11: Sunken Floored Buildings S5-S7, assemblage breakdown. * = Resulting from partial excavation of the feature during the 2004 evaluation (Cooper 2005)

SFB S6

Structure S6 comprised a sub-rectangular 'pit' (**F.2132**) measuring 3.38m by 2.72m by 0.38m deep and aligned approximately north-west by south-east. Postholes (**F.2412** and **F.2413**) cut into the base of the feature were located at each end. Within F.2132, two fills were recorded; once again, large quantities of pottery were recovered – indeed S6 contained almost twice as much by sherd count than S5 – however, markedly lower quantities of animal bone were recovered and S6 contained none of the fine worked bone artefacts/tools found in S5. Finds (see Table 11, above) were distributed fairly evenly throughout the fills and across all four quadrants.

SFB S7

Structure S7 had previously been partially excavated during the site's evaluation phase in 2004 (Cooper 2005) and upon exposure during the Plant Site/Phase I stripping less than half of the feature was found to survive in a very truncated state. The feature (**F.2180**) – as recorded in 2004 (*ibid.*) – was a sub-oval 'pit' and measured 3.75m by 3.25m by 0.45m deep. Its finds assemblage (2004 evaluation and Plant Site/Phase I combined) was noticeably smaller than both SFBs S5 and S6 (see Table 11). Furthermore, no postholes were recorded and this, the sub-oval shape, and the limited finds assemblage must cast some doubt on the feature's assignation as an SFB.

The Inhumation Cemetery

Some 150m to the north-west of SFB S6 a small cemetery comprising three individual graves has also been preliminarily attributed to the Saxon period although there were no grave goods or associated finds to confirm this (finds being limited to a single sherd of prehistoric pottery and a worked flint, both of which were clearly residual). Of the three graves F.2206, F.2211, F.2212 – each of which contained a single inhumation in an extended supine position – two were simple sub-rectangular features while the third (F.2206) was surrounded by a small ring ditch (Figure 19).

F.2206: A north-east to south-west aligned grave (L:2.52m, W: 1.17m, D: 0.36m) containing the skeleton of an adult female laid in an extended supine position with the head to the south-west. The grave was surrounded by a sub-oval ring ditch (F.2221) measuring 4.11m (NE-SW) by 3.53m (NW-SE) across; the ditch had a shallow rounded profile (W:0.4-0.7m, D:0.1-0.28m) and contained up to two fills, which yielded no finds.

F.2211: A north to south aligned grave (L:2.2m, W:1.09m, D:0.45m) containing the skeleton of an adult male laid in an extended supine position with the head to the north. Surrounding the skeleton soil stains clearly marked the position of an elongated rectangular coffin..

F.2212: A north-east to south west aligned grave (L:2.13m, W:0.9m, D:0.35m) containing the skeleton of an adult male laid in an extended supine position with the head to the south-west. Once again, soil stains clearly marked the position of an elongated rectangular coffin..

The cemetery was located immediately to the south of an undated north-east to south-west aligned ditch (F.2217); whilst it is tempting that to suggest that this feature marks a boundary against which the cemetery was located there is no clear evidence of this and it seems just as likely that the location of the cemetery could have been determined by the (presumably now truncated) western boundary of Trackway A. Furthermore, the ditch appears to be a continuation of a ditch (F.2137) cut by SFB S5, which if the latter is interpreted as contemporary with the cemetery, suggests the ditch was potentially not extant during this period.

Trackway-associated features

In the south-east corner of the excavation area, a pit (**F.2250**) and evidence of Anglo-Saxon activity in the top of Trackway A's western ditch (**F.2341**) indicate that the Romano-British trackway was at least still a landscape feature and potentially still functioning during this period. F.2341 comprised a dump of probable midden-derived material contained 22 sherds of Anglo-Saxon pottery and F.2250 comprised a pit from which an iron spearhead and a fragment of an iron knife were recovered.

Ditch F.2341 measured 1.6-2.2m wide by 0.51-0.95m deep; however, the Anglo-Saxon component of the feature comprised a clearly defined charcoal rich deposit within the top of the ditch (Context 9180), which was a maximum of 0.2m deep and extended for 18m north to south along the ditch line (Figure 7). The deposit yielded 22 sherds (290g) of pottery dating broadly to the 6th century AD, 227 fragments (723g) of animal bone, three iron nails/pins, 55 fragments (6602g) of burnt stone and a single worked flint.

Pit F.2250 measured 2.5m by 1.4m wide and 0.6m deep and was sub-oval to sub-rectangular in form (Figure 20). It contained four fills, which yielded an iron spearhead and a fragment from an iron knife, both of 6th century date (see Lucy, below). The metalwork appeared to have been deliberately placed within the pit – the spearhead at the northern end and the knife fairly centrally – and a slightly scorched/reddened patch of soil in the pit's north-east corner potentially represents further deliberate activity.

The location of pit F.2250 at the crossroads of Trackways A and B is surely significant and both the iron spearhead and knife are typical of grave goods of the period; both are comparable to grave goods recovered from Broom Quarry's King's Hill Anglo-Saxon cemetery c.2km to the north of Broom South Quarry (Cooper and Edmonds 2007). Indeed pit F.2250 bears remarkable similarity to Grave 5 within that cemetery; a 'grave' containing no surviving bone but which was clearly part of the cemetery. Similar in dimensions and form to F.2250, Grave 5 also produced a Swanton type C2 spearhead – although this time dated to the 7th century – and an iron knife/seax blade (*ibid.*), which, like F.2250, were positioned at one end of the grave and in the approximate centre respectively. This suggests there is a possibility that F.2250 is – although isolated from other funerary features – a 'grave'. The reason for the complete absence of bone is unclear and whilst non-survival is a possibility, this would be to some extent surprising given the survival of bone within other inhumations at the site.

Post-Medieval

Extensive quarrying was recorded in four locations across the excavation area. Comprising extensive areas of disturbed ground back-filled with silty gravel the large amorphous features appear to represent multiple episodes of ad hoc quarrying. Few finds were recovered from the quarries, however, given their stratigraphic relationship with other archaeological features they are certainly post-Roman in date and probably post-medieval. One ditch (**F.2165**) cut one area of quarrying and must therefore also be assumed to be post-medieval.

Unphased

A total of 125 features remain unphased; these features contained no dateable pottery/finds – or else pottery in such small quantities that it was most likely residual – and were not clearly associated with any well-dated features. Of the unphased features, 96 were pits or hollows (including probable tree throws) and 28 were ditches. Of the former many – such as the 33 pits located in the broad vicinity of Enclosures II-IV – seem likely to be related to Middle Iron Age occupation of the site, whilst many of the small, more isolated pits seem more likely to be Neolithic or Early Bronze Age.

Amongst the undated pits were a number, which were notable for their size and depth. Scattered across the north and west of the excavation area five of the pits (**F.2193**, **F.2294**, **F.2300**, **F.2301** and **F.2193**) are best described as 'pit-wells' or 'shafts' and ranged in size from 2.15 to 3.2m in diameter and 1.58 to 2.9m in depth. One further large pit (**F.2203**) was more characteristic of a watering hole-type feature measuring 8.62m across by 1.6m deep. None of the pits produced finds in quantities that would provide reliable dating and indeed there is a high chance that any finds – which included small numbers of abraded pottery sherds, flint and animal bone – were residual. It seems most likely, however – given parallels both at the current site and locally – that

the features were prehistoric. They are for example, comparable to Early Iron Age pits at Broom (cf. F.2310 etc. above) as well as features recorded at the Biddenham Loop, where numerous large pits or 'shafts' across the landscape, have been dated to the later Neolithic – Early Bronze Age (Luke 2016).

In terms of the undated ditches, elements of further fieldsystems are clearly present within the excavation area although none can be satisfactorily attributed to an individual phase. Most notable amongst these was a series of three double ditch boundaries, one of which was cut by Trackway B and which evidently represents part of a pre-Roman boundary system. Of these – all of which were aligned broadly north-east to south-west – two comprised double ditch lines each with a causeway or entrance (**F.2305-2306/2285-2286** and **F.2311-2314**). Ditch dimensions ranged from 0.25-1.03m in width by 0.11-0.56m in depth and none of the ditches produced any finds. Of slightly different character, a double ditch line slightly to the east comprised multiple segments of ditch with an adjoining enclosure (Enclosure VIII; **Fs. 2149-51, 2156-57, 2160, 2162-63, 2276-78** and **2336**). The sub-rectangular 'enclosure' was open-sided to the north and measured c.50m by 30m. It yielded few finds, none of which provided convincing evidence of date or function (six sherds of Early Neolithic pottery almost certainly being residual material).

Whilst clearly pre-dating Roman Trackway B, otherwise it is difficult to date the double ditch system with any certainty. On the one hand the double ditch lines and segmented ditch associated with Enclosure VIII particularly resemble features of Middle Bronze Age date previously recorded at Broom (Hill Lane and Moat Field respectively; Cooper and Edmonds 2007). Equally, however, the alignment of the ditches as well as that of ditch **F.2303** to the west would also 'fit' with the Iron Age system associated with Enclosures II-IV just to the south.

Finally, **F.2235** comprised a deposit of cremated bone (a probable adult) within a hollow or tree throw. Despite having no clearly defined cut the feature appears most likely to be a cremation pit. Whilst the feature could be contemporary with the Collared Urn cremations at the site, it was isolated (located just over 150m to the north of aforementioned) and no dating evidence was recovered; it is consequently undated.

DISCUSSION

Neolithic

The Neolithic remains recorded during the Phase 1 excavations not only contribute to the growing body of evidence for this period within the Broom/Ivel valley landscape but also, in the case of multiple inhumation **F.2213** are certainly of at least regional significance. The interred remains – an adult male, an adult female and two juveniles – are suggestive of a family grouping and the burial is of a type rarely encountered, the majority of recorded Early Neolithic burials in the region being interred within barrows.

Having said that, there are a number of striking parallels in the wider region and many aspects of the burial are characteristic of the period.

The two most striking parallels to the Broom burial, have been recorded to the east in Cambridgeshire at Fengate, Peterborough and Hinxton. The burial at the former site contained the remains of an adult male, adult female and two infants/children. The adult male was placed in a crouched position and was complete, as was one of the infants, whilst the female and second infant skeletons were disarticulated (Pryor 1976). Dated to the Early Neolithic by the presence of a leaf-shaped arrowhead located between the ribs of the adult male, the burial is a close parallel to the Broom burial and once again, located within a fenland setting where upstanding features did elsewhere survive, the absence of a mound is notable. More recent excavations at the Hinxton Genome Campus in Cambridgeshire recorded an Early Neolithic double inhumation radiocarbon dated to 3767-3646 Cal BC (95% probability; Bultz *et al.* 2015). No further details are currently available, however, the date of the burial would appear make it broadly contemporary with the Broom burial.

Further parallels include a *linear mortuary structure* housed within a large trench or pit recorded at the Neolithic to Early Bronze Age linear barrow cemetery at Barrow Hills, Radley, Oxfordshire (Barclay and Halpin 1998). Significantly the burial was not associated with a ring ditch – as all of the recorded barrow interments at the site were – and it was evidently never marked by a mound. The remains of three individuals, both articulated and disarticulated, were present within the structure, which radiocarbon dating suggests dated to the second half of the 4th millennium BC. The central inhumation of an Early Neolithic oval barrow at the same site – with its symmetrical arrangement of two crouched skeletons mirroring each other – is also reminiscent of the Broom burial (*ibid.*).

The presence of Neolithic saddlequern and the spherical hammerstone or 'stone ball' within the pit/grave is also itself significant. It is interesting to note that at the Barrow Hills mortuary enclosure (Barclay and Halpin 1998) gravel conglomerate blocks believed to have been placed in order to support a 'coffin', were found to line the grave in a similar way to the worked stone and flint cobbles placed around the Broom inhumations, which may have served a similar function in supporting a timber cist-lining. Regardless, the quern and 'stone ball' must surely also be considered as grave goods of some description – objects imbued with deeper meaning – whilst their recovery from a secure Early Neolithic context is on its own significant in terms of the study of Neolithic querns and the Early Neolithic economy (see Timberlake, below). Finally, the Carinated Bowl vessel recovered from F.2213's upper fills is itself comparable to a vessel recovered from the broadly contemporary Haddenham Long Barrow in Cambridgeshire (Evans and Hodder 2006).

The dispersed Early Neolithic evidence, particularly the two pit clusters, is also important, albeit to a lesser degree. When combined with that recorded during previous phases of Broom (Cooper and Edmonds 2007; Tabor 2014) it provides important insight into the character of occupation, land use and economy within the Ivel landscape. Indeed, considering the evidence at a

landscape scale rather than necessarily trying to make it fit with broader, more generic settlement models is particularly important in this regard (see eg. Thomas 2004; Tabor 2016). As such, further interrogation of the Broom evidence generally – particularly the artefact assemblages – could potentially contribute to the wider debate.

Finally, the Middle Neolithic, Peterborough Ware associated features offer a mere glimpse in to what is potentially a monumental landscape along the course of the River Ivel. Enclosure I, although heavily truncated by post-medieval quarrying, is comparable to a number of long enclosure monuments recorded along the Ouse and Nene valleys (eg. the enclosure at West Cotton, Raunds; Harding and Healy 2011, 96) whilst also being reminiscent of cursus monuments such as those recently excavated at Wolverton, Milton Keynes (Hogan 2013, Wright 2017). Added to the potential Neolithic enclosure identified 'beneath' the medieval ringwork and bailey just to the north of Broom (HER 468) and a possible cursus to the north of Biggleswade (HER 644 and 10138), the enclosure suggests a ceremonial aspect to the Neolithic activity within the landscape, the majority of which is perhaps focussed closer to the valley bottom/river course.

Bronze Age

Bronze Age remains were, like the Neolithic, dispersed in character albeit apparently on a much lesser scale. Perhaps surprisingly, given the large assemblage of Beaker pottery recovered from pit F.37 during the 2004 evaluation, only a single pit can be dated to the Beaker period. Consequently, whilst F.37 suggests activity was not insignificant it appears that little direct trace remains, the reason for this most likely being truncation by extensive post-medieval quarrying in the area.

Collared urn associated features were largely limited to two cremations occurring in Pit Cluster 3. Whether the cluster of six pits can be classified as a cremation cemetery is debatable; all contained burnt fills but only two contained human remains. It is equally possible that the remaining four pits are perhaps postholes relating to some form of monument marking the burial site. What is, however, unambiguous is the Collared Urn association (sherds having been recovered from one of the cremations and one of the pits/postholes). Whilst Collared Urn/Early Bronze age cremations are most commonly found in a barrow context (no trace of which was encountered at Pit Cluster 3) parallels are recorded in the wider region. A number of isolated cremations (ie. not directly associated with a ring ditch) have been recorded at the Biddenham Loop, including two within Collared Urns (Luke 2016) whilst a linear cremation cemetery was also recorded at Barrow Hills, Radley (Barclay and Halpin 1998). The latter comprised a line of five pits running parallel to the alignment of a major Barrow cemetery, four of which contained cremations, one in a Collared Urn.

Finally, the only evidence of later Bronze Age activity comprised pit F.2196/2198, which contained an almost complete inverted rim of a Post-

Deverel Rimbury pot, which may well have formerly been a complete vessel before plough-truncation. Although only a single feature, this is once again characteristic of the dispersed activity recorded across the pre-Iron Age Broom landscape.

Iron Age

As discussed in the Broom North Grange post-excavation assessment (Tabor 2014), the large scale archaeological investigations undertaken at Broom over the last 20 years afford a rare opportunity to understand Early-Middle Iron Age settlement within the context of a well-documented prehistoric landscape. Added to published Early-Middle Iron Age sites at Hill Lane and Gypsy Lane, for example (Cooper and Edmonds 2007) and the more recently excavated large agglomerated settlement at Broom North Grange (Tabor 2014) the latest excavations at Broom South only add to the significance and potential of the Ivel Valley's Iron Age landscape.

Three relatively discrete areas of Iron Age settlement can be identified at Broom South; i) Roundhouse S1, S2, Ring ditch/Enclosure F.2352, ii) Roundhouse S3 and Enclosure II and iii) Roundhouse S4 and Enclosure III and IV. Each is clearly much smaller in scale than both Gypsy Lane and particularly Broom North Grange and appears to represent a small scale farmstead of limited duration. Indeed, Roundhouses S3 and S4 appear to be individual households comprising a single phase associated with one or two enclosures and a small number of pits. Likewise, if Roundhouse S2 is seen as a smaller ancillary building and 'ring ditch' F.2352 a circular enclosure, then Roundhouse S1 can be interpreted similarly. As such the settlement sites provide an interesting comparison to the settlements at Broom North Grange, Gypsy Lane and Hill Lane. In many respects all of the sites have common traits; the pottery assemblages and features such as the ABG in pit F.2537 and the crouched inhumation in pit F.2370, are reminiscent of Broom North Grange and Hill Lane particularly, and the main difference between Broom's various settlement sites is potentially one of scale and duration. More closely defining the character of these various settlements and the dynamics of Iron Age occupation in the Ivel Valley should, therefore, be a major future research objective. Is there, for example a chronological/evolutionary aspect to the settlement at Broom, which increases in scale and becomes more agglomerated over time resulting in the abandonment of small farmsteads or could the varying settlement forms reflect a degree of specialism (presumably relating to agriculture)?

Beyond the immediate Broom landscape Middle Iron Age farmsteads of similar character to those at Broom South have been recorded widely during large scale excavations at the Biddenham Loop to the west of Bedford (Luke 2008, 2016). Located on the flanks of the River Great Ouse, isolated roundhouses associated with pit clusters and in some cases small enclosures are clearly reminiscent of Roundhouses S1-S4 and associated features and are likewise interpreted as small scale, discrete farmsteads. Broadly contemporary settlements are also recorded across the region at sites

including Stotfold (eg. Webley *et al* 2007; Gibson and Powell 2017), Pennylands and Hartigan (Williams 1993), Norse Road Bedford (Edgworth 2001) and Flitwick (Luke 1999). All are characterised by enclosures of similar form to those at the various Broom sites and once again as at Broom, the scale of settlement varies from small farmstead to much larger agglomerated settlement.

Romano-British

Whilst the Romano-British remains are in many respects of limited potential – the finds assemblage being particularly small – the excavation of such a large area of what cropmarks show to be a densely settled Roman landscape does in itself have some value in terms of our understanding of the Ivel valley during this period. Cropmarks suggest a relatively regular pattern of settlement, which is largely located beyond the quarry boundary (both in the case of Broom North Grange and Broom South) and closer to the River Ivel. The settlements appear to be regularly spaced and connected by trackways and fieldsystems, which occupy the slightly higher ground which lies within the quarry boundary(s). Excavations at both Broom North Grange and Broom South have confirmed this scenario whilst also indicating that the settlements are well-defined and do not appear to extend ‘up-slope’ into what can be regarded as an agricultural hinterland. Most notably, no Roman activity extending along any of the excavated trackways was recorded, as marked by extremely low densities of finds. As for the enclosures (V-VII), whilst containing slightly higher quantities of pottery particularly from Enclosure VII, and apparently broadly dating to the 2nd century AD, they to appear more likely to be ‘edge of settlement’ features rather than settlement enclosures.

Anglo-Saxon

As with the Romano-British settlement, previous investigations at Broom have suggested that although certainly present, most of the Anglo-Saxon activity was focussed more towards the River Ivel on the slightly lower-lying areas. An Anglo-Saxon SFB encountered during evaluation of Broom North Grange (Knight and Cooper 2004) was located amongst a series of cropmarks and geophysical anomalies, which suggests a cluster of further SFBs amongst earlier Romano-British enclosures. The site was, in the event, excluded from the quarry area and still remains *in situ*, however, excavations immediately to the west in 2007/8 recorded an SFB, which presumably represents an outlier to the main cluster (Tabor 2014). It seems likely that the SFBs recorded at Broom South are part of a similar cluster – again visible on aerial photographs – although evidently slightly more of the ‘site’ fell within the quarry boundary during this phase.

The SFBs are typical of Early Saxon settlement in the region and can be dated with relative confidence (given the presence of an assemblage of fine worked bone objects) to around the year 500AD. Relatively substantial finds assemblages from SFB S5 and S6 – which are of differing character and

potentially represent specialised functions – mean that they are an important contribution to Anglo-Saxon studies in the region and this only increases when the site is considered alongside other Anglo-Saxon sites in the Ivel Valley and beyond. Foremost amongst these is Stratton on the eastern edge of Biggleswade and only c. 3km to the north-east of Broom South. At least ten SFBs dating to the period 400-600 AD were excavated, which were the earliest features of dense settlement remains that extended into the post-medieval period (Ingham *pers comm.*). The early settlement was, like the Broom sites unenclosed, however, this changed during the Middle Saxon period with the development of a rectilinear fieldsystem which framed further SFBs alongside post-built houses (*ibid*). Slightly to the north of Biggleswade, a further cluster of five SFBs dated broadly to the 5th-8th centuries AD has been excavated at Ivel Farm (Albion Archaeology 2010). The evidence from Stratton and Ivel Farm, together with the two Broom sites, suggests a dispersed pattern of relatively small hamlets or farmsteads along the Ivel Valley during the Early Saxon period, the majority of which appear to have been comparatively short-lived (Stratton being the exception). A similar pattern of settlement, none of which endured beyond the 7th century AD has also been recorded at the Biddenham Loop on the River Great Ouse, another site that bears comparison with Broom South (Luke 2016).

Turning to the small cemetery of three individuals at Broom South, including one situated within a ring ditch, the burials are assumed to be broadly contemporary with the SFBs to the east. Having said that, no grave goods or dating evidence to confirm a 6th century date was present within the graves and radiocarbon dating remains the only option for dating the burials. The small cemetery appears to be on a similar scale to the cemetery of five graves recorded at King's Hill, Broom (Lucy in Cooper and Edmonds 2007) although the latter site is of seventh century date. It is certainly on a much smaller scale to major Early Saxon cemeteries at sites such as Kempston, Bedford (c. 16km to the west) and Barrington, Cambridgeshire (c. 21km to the east). As such, the cemetery would appear to belong to a small community – possibly a family – and to have been used for a limited period of time; if contemporary with the SFBs to the east then it potentially reflects the scale of the settlement, whilst also being a relatively rare example of a cemetery found associated with a settlement.

The one other potential grave recorded at Broom South comprises pit F.2250. In terms of its 'grave goods' – a spearhead and knife blade – the feature is comparable to Grave 5 at King's Hill whilst both features also contained no trace of a burial. This would suggest that F.2250 could be considered as a burial although its 'grave goods' indicate it is sixth century not seventh century like the King's Hill Grave 5. The absence of a burial is intriguing given that the other Anglo-Saxon skeletons survived relatively well; regardless, as an additional potential burial and alongside the Anglo-Saxon midden deposit in Romano-British Trackway A, it indicates further widespread activity in this part of the valley.

CONCLUSION

Broom South has provided the opportunity to investigate a substantial part of a multi-period landscape situated within the Ivel Valley and has revealed archaeological remains, certainly of regional significance. The Early Neolithic, Middle Iron Age and Anglo-Saxon remains particularly add to a growing corpus of evidence, including previous excavations at Broom Quarry, which will allow landscape scale analysis of the prehistory and early history of the Ivel Valley. The finds assemblages, particularly the prehistoric pottery and worked flint, the Neolithic worked stone, the Anglo-Saxon artefacts and the human remains are themselves significant (see Specialist Studies, below) although the environmental assemblages appear to hold little potential for further analysis (see Simmons, below).

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SPECIALIST STUDIES

Worked Flint – Emma Beadsmoore

A total of 854 ($\geq 5230\text{g}$) flints were recovered from the site; 759 ($\geq 4818\text{g}$) were unburnt and worked, 59 ($\geq 186\text{g}$) burnt and worked, whilst 36 ($\geq 226\text{g}$) were just burnt. The flints are listed by type and feature in Appendix 1 (Tables A1 & A4)

Neolithic

The earliest features identified on the site were pits – some of which were in clusters – that contained Mildenhall type pottery and earlier Neolithic flint (listed in Table A1). The pits in Cluster 1 (F. 2101 - 2106) and the outlier F. 2100, yielded assemblages ranging in size from 1-46 flints, largely comprising the by-products of systematic flake production/core reduction where predominantly narrow flakes and blades were struck from the prepared platforms of methodically reduced cores. A neat core rejuvenation flake from F. 2106 provides further evidence for systematic and controlled flake reduction. A number of utilised flints were also recovered; a serrated flake from F. 2100 and a serrated blade from F. 2104, whilst F. 2104 also yielded a leaf shaped arrowhead and retouched flake, all of which are common components of earlier Neolithic assemblages.

A second cluster of pits (Pit Cluster 2; Fs.2166-2168, 2170-2179) also yielded Mildenhall type pottery as well as assemblages of between 1 and 89 flints, largely working waste, comparable to material derived from systematic earlier Neolithic flake production/core reduction strategies. The pits also yielded tools, including end and side scrapers, edge used, retouched and serrated flakes and blades, which are again regularly found in Early Neolithic assemblages. Two outlying, potentially Neolithic pits, F. 153 and F.154, yielded chronologically non-diagnostic worked flints.

A number of dispersed pits and tree throws also yielded flint and/or earlier Neolithic pottery. Pits F.2107, F.2109, F.2131, F.2133, F.2143, F.2296, F.2299, F. 2329 and tree throws F.2112, F.2114, F.2116, F.2136 yielded assemblages of between 1 and 69 flint. These were again dominated by the products and by-products of systematic core reduction/flake production focused on narrow flakes and blades prevalent in Early Neolithic assemblages. Tools were also recovered from these outlying pits and tree throws; edge-used, retouched and serrated flakes and blades, end and side scrapers, a leaf shaped arrowhead and, unusually for an Early Neolithic assemblage, a transverse arrowhead. The tool types are all found commonly in Early Neolithic assemblages, with the exception of transverse arrowheads, which are more regularly associated with Peterborough and Grooved Ware pottery in middle and later Neolithic contexts. However, transverse arrowheads have been found in secure contexts in pits with early Neolithic pottery dated to the middle of the third millennium BC, at Hurst Fen (Clark

1960) and Broome Heath (Wainwright 1972), and in pits with Mildenhall pottery at Etton (Middleton 1998).

Flint was also recovered from three features that yielded Peterborough Ware pottery: pit F.2371, enclosure F.2391 and F.2405. Fourteen worked flints were recovered from F.2371 and six from F.2391; these again comprised the products and by-products of systematic flake production/core reduction focused on narrow flakes and blades, comparable to earlier Neolithic assemblages. Peterborough Ware worked flint assemblages are often indistinguishable from those associated with Mildenhall pottery, the difference frequently being just tool types. At Kilverstone, for example, transverse arrowheads were present in Peterborough Ware but not Mildenhall contexts. As detailed above, this is clearly not the case at Broom, however, pit F.2371 and enclosure F.2391 did both contain flake knives, a tool type that is more commonly found in later Neolithic contexts. The two flints from F.2405 were chronologically non-diagnostic.

Beaker/Early Bronze Age

Beaker and Bronze Age features at the site also yielded small assemblages of flint, listed by type and feature in Table A2 All of the material was either expediently manufactured chronologically non-diagnostic waste flakes and a discarded core, or unworked burnt flint chunks, no tools were recovered.

Iron Age

Flint was also recovered from a series of Iron Age features, listed by feature and type in Table A3 The material largely comprised the products and by-products of expediently reduced cores, characteristic of later prehistoric assemblages. However, some earlier residual material was also identifiable in the assemblages. F.2300 yielded a Beaker/Early Bronze Age thumbnail scraper, whilst several retouched flakes, a core rejuvenation flake and a blade were recovered from F.2310; blades recovered from F.2580 and F.2585 and a laurel leaf from F.2580 are more likely to be Neolithic. Further potentially Beaker/Early Bronze Age cores were recovered from F.2353 and F. 2580, whilst later Neolithic flints were recovered from F.2338, F.2342 and F.2352 and F.2324 yielded a Mesolithic microlith.

Residual and undated material

The remaining 129 flints comprised residual material in later Roman and Saxon features, material recovered from undated features and stray surface finds (listed in Table A4 by feature and type). The flints included residual working waste, the products/by-products of systematic manufacture of narrow flakes and blades likely to be earlier Neolithic and the products and by-products of systematic flake production/core reduction focused on the manufacture of broader, thin flakes likely to be later Neolithic. Additional expediently produced material is likely to be later prehistoric. Neolithic tools were also recovered; an earlier Neolithic leaf-shaped arrowhead, a petit tranchet arrowhead likely to be Middle Neolithic and a later Neolithic

transverse arrowhead as well as a later Neolithic bifacially flaked knife and potentially Neolithic and Bronze Age scrapers. A fragment of a Mesolithic tranchet axe was also recovered as a small find.

Summary

The chronologically diverse assemblage provides evidence for flint working and activities involving tool use dating from the Mesolithic through to the Bronze Age, with some potentially expedient flint working and use in the Iron Age. The flints were recovered either from features that they were broadly contemporary with or they were residual in later features.

Earlier Prehistoric Pottery – Mark Knight

The earlier prehistoric pottery assemblage comprised 507 sherds weighing 2215g (MSW 4.36g). The condition of the material was good and included medium to large refitting pieces as well as smaller singular elements. Feature sherds were rare (40 rims and 9 base fragments) and plain sherds dominated the assemblage (49 decorated pieces). The bulk of the pottery was Early Neolithic (89.9% by number and 85.0% by weight) and incorporated Carinated Bowl, Mildenhall and Peterborough Ware forms (Table 12). The remainder of the assemblage was Early Bronze Age and included two small pieces of Beaker and the refitting remains of diminutive urn that has Collared Urn associations.

Period	Type	Quantity	Weight	No. of contexts	MSW	Fabric
<i>Early Neolithic</i>	Carinated Bowl	60 (12.1%)	610g (28.2%)	2	10.2g	5
	Mildenhall	332 (67.0%)	959g (44.4%)	38	2.9g	4 & 5
	Peterborough Ware	53 (10.7%)	313g (14.5%)	7	5.7g	3, 4 & 7
<i>Early Bronze Age</i>	Beaker	3 (0.6%)	13g (0.6%)	2	4.3g	6
	'Collared Urn'	48 (9.7%)	268g (12.4%)	4	5.9g	3
<i>Totals:</i>		<i>507</i>	<i>2215g</i>	<i>53</i>	<i>4.36g</i>	<i>5</i>

Table 12: Composition of assemblage

Five different fabrics were identified and the series included hard, sand and flint-rich types, softer, 'corky' or vacuous types as well as fabrics whose opening materials were made up mostly of grog:

Fabric 3 - Medium with frequent small, medium and large (poorly sorted) GROG and common SAND.

Fabric 4 - Very hard with common SAND and occasional (poorly sorted) small, medium and large burnt FLINT.

Fabric 5 - Medium with abundant small and medium VOIDS (very corky).

Fabric 6 - Hard with common SAND, occasional GROG and rare FLINT.

Fabric 7 - Very hard with abundant SAND and frequent large to very large burnt FLINT inclusions.

The predominant Neolithic type was Mildenhall, especially by number, but also by weight. The Mildenhall component was also the most fragmented (MSW 2.9g) and occurred across the greatest number of contexts/features. By comparison, the earlier, and sizable Carinated Bowl element comprised medium to large fragments (MSW 10.2g) limited to just one feature.

Type	Rim	Base	Dec.
Carinated Bowl	9	0	0
Mildenhall	26	0	16
Peterborough Ware	0	0	29
Beaker	1	0	2
Early Bronze Age	4	9	1
<i>Total</i>	<i>40</i>	<i>9</i>	<i>49</i>

Table 13: Distribution of feature sherds

The largest number of rim fragments belonged to the Mildenhall assemblage whereas the Peterborough Ware assemblage yielded the largest number of decorated pieces (Table 13). In keeping with the prevalence of earlier Neolithic wares, base-angles or flat base fragments were all but absent.

Carinated Bowl

A single feature, F.2213 ([8525]. [8573]), yielded 60 fragments of classic Carinated Bowl (Cleal 2004; Herne 1988). All of the pieces were plain and characteristic sherds included nine rims (everted/tapered with the slightest hint of an external 'hook'; diameter: 0.28m) together with curved neck fragments above low inflections or slight carinations. Combined, the surviving sherds reconstruct a thin-walled, open, hemispherical bowl with a subtle carinated profile. Its corky fabric (Fabric 5) also being consistent with the Early Neolithic tradition. Several refitting sherds were identified and it would appear that the assemblage recovered from F.2213 represents at least half of a single vessel.

Mildenhall

The largest component of the pottery assemblage was Mildenhall (332 sherds weighing 959g). In total, 35 features produced material of this type and, of these, eight features contained more than 50g of pottery (Table 14), whilst a distinct cluster of six pits (Cluster 1) produced a combined total of 112g (Table 15). The pattern of deposition was typified by small amounts of Mildenhall pottery located across multiple features (Table 16).

Feature	Context	Quantity	Weight	MSW	Fabric	Rims	Dec.
2100	8000	16	56g	3.5g	4, 5	0	0
2116	8034, 8035	17	54g	3.2g	4, 5	0	3
2136	8127	63	123g	1.9g	4, 5	5	6
2166	8315, 8448	43	121g	2.8g	4, 5	6	1
2168	8320	31	58g	1.9g	5	7	5
2189	8396	5	57g	11.4g	4	0	0
2257	8754	13	54g	4.1g	3, 4	4	4
2296	8937, 8938	11	103g	9.4g	4, 5	1	1
Totals:	11	199	626g	3.1g	3	23	16

Table 14: Features with >50g of Mildenhall pottery

The assemblage was characterised by twenty-six Mildenhall type rim fragments: simple (4), out-turned (4), externally-thickened (10) and T-shaped (8). Diameters of 11cm, 15cm, 20cm and 28cm were recorded. Recognisable forms included simple, S-shaped and shouldered bowls. Decoration occurred invariably on the shouldered forms and/or on the externally-thickened and T-shaped rims and involved incised herring-bone, rows of impressed dots and incised parallel lines. Fragments of a perforated lug (F.2116) were decorated with incised herring-bone design. Several sherds retained applied slips both internally and externally and the majority of were made of a very hard flint tempered fabric although there were also high numbers of corky or vacuous fabrics (gain these fabrics are typical of Mildenhall assemblages).

Feature	Context	Quantity	Weight	MSW	Fabric	Rims	Dec.
2101	8002	6	12g	2.0g	4, 5	0	0
2102	8004	5	9g	1.8g	4, 5	0	0
2103	8006	2	2g	1.0g	5	0	0
2104	8008	13	18g	1.4g	5	2	0
2105	8010	8	44g	5.5g	4	1	0
2106	8012	10	27g	2.7g	4, 5	1	0
Totals:		44	112g	2.5g	2	4	0

Table 15: Pit cluster 1

The eight features with more than 50g of pottery generated 59.7% of the total quantity, 65.1% of the total weight. Diagnostic pieces or feature sherds were also most prevalent form these contexts (88.5 % of rims and 94.1% of the decorated pieces).

Feature	Context	Quantity	Weight	MSW	Fabric	Rims	Dec.
2107	8015	18	44g	2.4g	5	1	0
2109	8020	4	8g	2.0g	4, 5	0	0
2131	8110	3	8g	2.6g	4	0	0
2133	8115	2	3g	1.5g	5	0	0
2134	8117	1	5g	5.0g	5	0	0
2135	8125	1	27g	27.0g	4	0	0
2139	8172	1	1g	1.0g	4	0	0
2143	8201, 8202	5	11g	2.2g	4	0	0
2147	8751	5	8g	1.6g	5	1	0
2149	8236	6	28g	4.7g	4	0	0
2164	8385	1	2g	2.0g	5	0	0
2173	8333, 8334	6	11g	1.8g	4, 5	0	0
2174	8336	1	1g	1.0g	5	0	0
2176	8342	6	5g	0.8g	5	0	0
2177	8343	3	8g	2.6g	4	0	0
2179	8347	1	1g	1.0g	5	0	0
2206	8523	2	8g	4.0g	4	0	0
2226	8618	3	9g	3.0g	4	0	0
2258	8756	1	3g	3.0g	4	0	0
2329	9123	18	28g	1.5g	4	0	0
2391	9568	1	1g	1.0g	4	0	0
Totals:	23	89	220g	2.5g	2	2	0

Table 16: Features with <50g of Mildenhall pottery

Peterborough Ware

The bulk of the Peterborough Ware assemblage came from F.2371, F.2391 and F.2516 (Table 17). Diagnostic sherds included decorated pieces with impressed dots and incised herring-bone motifs (including whipped-cord or 'maggot' impressions). In comparison with the Mildenhall material the Peterborough Ware sherds were generally heavier/coarser and without obvious applied slips. Similarly, the predominant colour was vivid reddy-orange oxidised exteriors sandwiched with black un-oxidised interiors.

Feature	Context	Quantity	Weight	MSW	Fabric	Rims	Dec.
2252	8723	3	18g	6.0g	7	0	1
2342	9188	3	33g	11.0g	3, 4	0	1
2359	9310	1	5g	5.0g	7	0	0
2371	9374, 9376	26	175g	6.7g	7	0	8
2391	9528	20	82g	4.1g	4, 7	1	11
2516	9760	11	52g	4.7g	7	0	8
Totals:	7	64	365g	5.7g	3	1	29

Table 17: Peterborough Ware pottery by feature

Beaker

The Beaker assemblage comprised a decorated rim (F.2173) and small collection of body sherds of which one was decorated (F.2284). In both cases the decoration involved impressed comb designs. The profile of the rim sherd was simple.

Feature	Context	Quantity	Weight	MSW	Fabric	Rims	Dec.
2173	8334	1	2g	1.0g	6	1	1
2284	8892	2	11g	5.5g	6	0	1
<i>Totals:</i>	2	3	13g	4.3g	6	1	2

Table 18: Beaker pottery by feature

Early Bronze Age

Parts of a diminutive, barrel-shaped urn (diameter: 10cm) from F.2257 and F.2258, as well as an incised sherd from F.2333, and a group of grog-tempered pieces from F.2373, made up the Early Bronze Age assemblage. The small urn fragments refitted and included base and rim (flattened bevelled) components. The appearance and condition of the urn sherds ('dry' and lightweight) suggest that they had been subject to re-firing.

Feature	Context	Quantity	Weight	MSW	Fabric	Rims	Base	Dec.
2257	8754	14	37g	2.6g	3	3	2	0
2258	8756	20	155g	7.7g	3	1	6	0
2333	9131	1	26g	26.0g	3	0	0	1
2373	9417	13	50g	3.8g	3	0	1	0
<i>Totals:</i>	4	48	268g	5.6g	1	4	9	1

Table 19: Early Bronze Age pottery by feature

Discussion

The presence of Carinated Bowl bears a resemblance to an earlier phase of the Broom investigations (Broom North Grange; Knight in Tabor 2014) where a tree-throw feature (F.2019) produced the remains of three separate vessels of the equivalent type (Table 7). The forms were unambiguous and distinct from the thicker 'plain' forms with heavy rims, obvious shoulders and upright profiles characteristic of the slightly later undecorated component of the Mildenhall tradition. So, for example, the plain bowl assemblages from the King's Hill pits and hollows (Knight in Cooper and Edmonds 2007, 234) as well as the adjacent C-ditch (Monument II) were almost certainly Mildenhall, not classic Carinated Bowl.

Site	Feature	Context	Quantity	Weight
Broom North Grange	2019	7765, 7767	77	344g
Broom South	2213	8525, 8573	60	610g

Table 20: 'Classic' Carinated Bowl

As a consequence, the Mildenhall presence at Broom has perhaps been underplayed, and it is only now, with the identification of an unequivocal Mildenhall assemblage (replete with all the obligatory attributes, such as decoration, externally-thickened, expanded and T-shaped rims as well as

neutral and closed forms), that a clear-cut distinction between the earlier (Carinated Bowl) and later (Mildenhall) plain forms can be presented.

The Mildenhall assemblage described here was different from archetypal pit sites such as Hurst Fen (Clark *et al.* 1960) and Kilverstone (Garrow *et al.* 2005), inasmuch as the assemblages were generally small, fragmented and made up of smaller, disparate pieces. The apparent 'formality' of deposition established at Hurst Fen and Kilverstone was not identified in this context.

The small, but impressive, Peterborough Ware collection completed the range of earlier Neolithic series of pottery, and it too demonstrated a extensity of distribution characteristic of early ceramics. The absence of accompanying rims made the attribution of sub-style difficult although it very likely that the forms recorded here match the Mortlake-style fragments excavated at Brooklands Farm (Knight in Cooper and Edmonds 2007, 238).

Aside from the tiny Beaker assemblage, the Early Bronze Age element was represented by the burnt and fragmented remains of a small urn similar in stature and condition (if not form) to a miniature Collared Urn (P9) associated with a cremation inside Monument I at Hill Lane (Knight in Cooper and Edmonds 2007, 234).

Later Prehistoric Pottery – Kate A. Beats

The excavations unearthed a total of 1663 (13,053g) sherds dated to the later prehistoric period, coming from 71 features with a mean sherd weight (MSW) of 7.8g. As well as a relatively low MSW, 78.5% of the sherds were under 4cms in size, and only 2.4% of sherds had refits within the same feature. This suggests considerable post-depositional disturbance. This assemblage is hand-made, dating from the Late Bronze Age/Early Iron Age to the Middle Iron Age (c.1100-200 BC), and will be discussed by pottery phase unless otherwise stated. As the excavation was undertaken in two distinct phases (Phases 1 and 2; BEDFM1012.59 and BEDFM2016.66 respectively), this report will outline the results of each phase separately before discussing their combined potential.

The Iron Age pottery has been analysed following the guidelines produced by Prehistoric Ceramic Research (2010). Each sherd was counted and weighed, and then assigned to a fabric group. Estimated vessel equivalent (EVE) was not attempted due the low quantity of rims. Any refits within the same feature were recorded, and so was the rim diameter when possible. Notes were made on form and classification and any decoration was recorded, as were remnants of any residue. Each sherd was classified in terms of size; sherds under 4cm were categorised as small, sherds between 4–8cm were categorised as medium, and sherds in excess of 8cm were categorised as large.

Points of Particular Interest

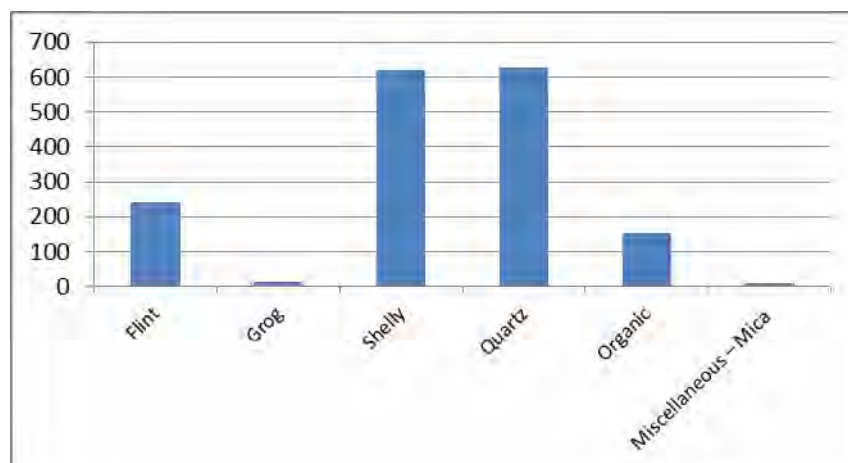
- An insight into the phased development of ceramics from Late Bronze Age to the Iron Age
- Evidence of the type of activity taking place near domestic enclosures
- Evidence of both Plain and Decorated ware

Fabric Series

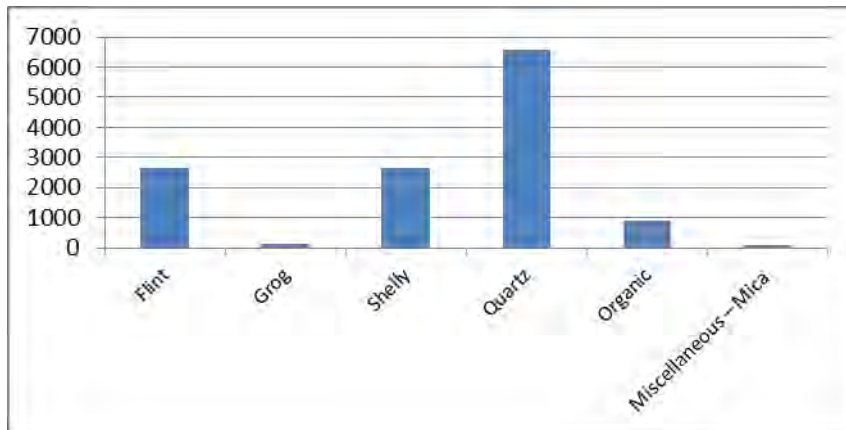
The fabric series created for the excavations at Broom between 1996-2005 was used here and no further fabric types were added (Brudenell 2007). Table 1 shows the fabric breakdown of the Iron Age assemblage. Graph A and B demonstrate how the Iron Age pottery fabric series relates to quantity and weight. Using the Ceramic Phase (CP) developed by Brudenell, flint fabrics denote CPI of the Late Bronze Age and Early Iron Age, shelly fabrics denote CPII of the Late Early Iron and sandy (quartz) fabrics denotes CPIII of the Middle Iron Age. The breakdown by fabrics groups has been included, with the addition of organic, grog and miscellaneous fabrics (Table 21, Graph A and B). The correlation between shelly and quartz fabrics is marked here, but is explained by a large number of shelly sherds coming from one feature. The fabric makeup suggests that the majority of ceramic production and use occurred between CPII of the Late Early Iron Age and CPIII of the Middle Iron Age (Table 22).

Fabric	No. sherds	Total weight	% by count	% by weight
Flint	243	2662	14.6	20.4
Grog	13	137	0.8	1.0
Shelly	618	2665	37.2	20.4
Quartz	628	6572	37.8	50.3
Organic	153	915	9.2	7.0
Miscellaneous – Mica	8	102	0.5	0.8

Table 21: The complete assemblage from phase 1 & 2 by count and weight of fabric form



Graph A: Iron Age fabric from phase 1 & 2 by quantity



Graph B: Iron Age fabric from phase 1 & 2 by weight (grams)

Ceramic Phase	Phase 1 (no. of sherds & weight (g))	Phase 2 (no. of sherds & weight (g))
I – Late Bronze Age/Early Iron Age	60/557g	195/2231g
II – Late Early Iron Age	22/429g	594/2235g
II/III – Late Early Iron Age/Middle Iron Age	108/582g	48/345g
III – Middle Iron Age	213/3210g	415/3362g

Table 22: The complete ceramic phase of the site split by excavation phase 1 & 2

Results: Phase 1

Early Iron Age Pottery (c.800-350 BC)

There were 74 sherds (881g) from CPI and CPII in flint and shelly fabrics. The majority of these came from **F. 2310**, a pit which will be further discussed below. Only seven of these sherds are rims and all are plain, with the exception of one. This sherd appears to come from a weak shouldered jar with a diameter of 15cms, decorated with finger-tip impressions on the top of the rim (<386>, [9259], **F. 2352**). There are only two other decorated rims from the entire assemblage bearing fingernail impressions. One is dated to CPIII due to its sandy fabric, whilst the second has the fabric of CPIII but a form of the Late Early Iron Age. This large rim sherd belongs to the only completely reassembled pot dated to the Iron Age from this assemblage and is worthy of note (<45>,[8065], **F.2122**,). The jar is approximately 11cms in height, with a rim diameter of 12cms. The everted rim is almost as wide as the body, which is rounded out from the shoulder. Decoration to the rim is pinched finger-tip impressions, creating a cabled effect. The base is pinched with a diameter of 8cms. The form finds parallels with the late Early Iron Age pottery of Trumpington Meadows (14, Brudenell, forthcoming) and the earlier excavations at Broom (F.711, Brudenell 2007). This pot came from a pit with a ledge cut into the side, which contained an infant burial.

80% of the flint and sandy sherds are less than 4cm in size. Body sherds display the characteristic round shoulders, typical of Early Iron Age pottery. Twelve of these sherds are burnished, and only in flint fabrics. The Earliest Iron Age (c.800-600) saw a growth in finger impressions to the rim and shoulder, which may explain the low level of decoration on a small number of excavated rims (Brudenell, 2013).

Middle Iron Age Pottery (c. 350 BC-AD 43)

There were 213 sherds (3210g) representing CPIII, with a sandy fabric. **F. 2318** contains the largest quantity of sherds and will be discussed below. **F. 2375** is a pit in the vicinity of the Iron Age enclosure with 29 sherds, including five rims. Four sets of sherds were also refits but most were less than 4cms in size. This pit also contained 530g of thick walled sherds, with wipe marks to the interior and exterior.

With regards to the decoration on the Middle Iron Age pottery in the assemblage, there is relatively little. There are only four Scored Ware sherds in a sandy fabric, which suggests that the assemblage is largely in the Plain Ware tradition. The most notable surface treatment is wiping, which occurs on 29 of the sandy sherds. These wipe marks vary in location, from external to internal, and horizontal to vertical. Establishing whether wiping is a decorative feature or a consequence of production techniques is not straightforward and no doubt varies. Combing is found on nine sandy sherds. Unfortunately, none of these sherds are rims, leaving the form unknown, however, the two ditch features with the majority of combed sherds have signs of Roman activity (**F. 2197**, **F. 2368**). This could be an indication of later Iron Age activity. Only two sherds indicate a Late Iron Age date and both come from ditches associated with Roman activity to the south of the excavation. A burnished wheel-made storage vessel rim of Late Iron Age date was excavated from **F. 2395** and one small sherd in quartz fine ware fabric was excavated from **F. 2380**.

CP II/III, represented by organic fabrics, is present in 108 sherds (582g). Of these, the vast majority are undecorated and only three are feature sherds. However, a third of residues are found on sherds of organic fabrics, suggesting their use for cooking.

Residues

Nine sherds from the later prehistoric material had residues. The majority are on body sherds, with a soot-like substance inside. Two sherds have more of a carbon-like material, which could be food residues and require further analysis.

Individual feature assemblages

Enclosure II (F. 2318)

A total of 38 sherds (422g) with a MSW of 11.1g were recovered from a ditch at Enclosure II (other features from Enclosure II will be discussed under Phase 2). All of the sherds with the exception of one are made from sandy fabrics. Seven sherds are burnished and one sherd is decorated with burnished lines, indicative of later Iron Age pottery. Five of the sherds have evidence of rounding or more significant wearing, characteristic of multi-phased activity. Interestingly, **F. 2318** also had the largest collection of sherds made in the sandy fabric Q4 (14 sherds, weighing 145g), which is an indication of fine ware pottery. Furthermore, four of these are burnished on the exterior and others have thin walls – additional signs of the highest quality fine ware. The sherds from this enclosure ditch display the strongest characteristics of fine ware in the assemblage, deposited alongside coarse ware, both of a Middle Iron Age date.

Pit-well F.2310

A total of 41 sherds (461g) with a MSW of 11.2g were recovered from this well, which has already been mentioned here as containing the largest amount of sherds from CPI and CPII. The feature contains a mixture of sherds in flint, shelly, sandy and grog fabrics. The sherds are undecorated, with the exception of one with incised marks and six sherds with wipe marks. [9011] contained a rim from an ellipsoid jar in a flinty fabric, dated to the Late Early Iron Age (<299>, [9011], **F. 2310**). The sherds from this well suggest sustained use from the Late Bronze Age to the Middle Iron Age.

Pit **F. 2375**

A total of 44 sherds (751g) with a high MSW of 17g were excavated from a pit in the vicinity of two roundhouse structures. In **F. 2375** [9400], six sherds refit to create walls of three different vessels. This is the largest number of refits in one context in this assemblage. The two largest sherds, weighing 204g, come from a storage vessel and all six of the refits are thick walled. Two joining sherds from **F. 2375** [9399] form an approximately 10cms diameter everted rim with rounded lips, rounding out further into a sharply angled body. The sherds from context [9399] are generally smaller and thinner walled, suggestive of a different range of smaller vessels. The fabric is predominately sandy, suggesting a Middle Iron Age date for the pit.

Roundhouse S2 (**F.2373**) and pit **F. 2382**

The Iron Age ring ditch of a roundhouse (**F. 2373**) contained 19 sherds (123g) with a low MSW weight of 6.4g. 13 of these are thought to be from the Early Bronze Age. The majority of sherds from this feature are small and undiagnostic, with indicators of rounded shoulders. [9414] yielded the two largest sherds from the feature, which appear to be from the same vessel - likely to have been a tripartite bowl, characteristic of the Early Iron Age (c.600-350 BC). The pit alongside the ring ditch offered only two sherds, with a total weight of 14g (**F. 2382**). An everted rim sherd with a diameter of approximately 10cms, made of an organic fabric, appears to be from a small tripartite bowl also from the Early Iron Age. It is likely that these two features are contemporary, dating from the Early Bronze Age to the Middle Iron Age.

Phase 2

Early Iron Age Pottery (c.800-350 BC)

There were 787 sherds (4448g) from CPI and CPII in flint and shelly fabrics from phase 2. The majority of CPI flint sherds came from **F. 2500**, a pit at the edge of excavation perimeter. 141 sherds were unearthed from here, representing 73.8% of the Early Iron Assemblage. These all come from the same vessel, which is unfortunately missing its rim and therefore little information can be discovered of its form. A clear curved shoulder is evident and a light wiped surface. Nine other features contain Early Iron Age material. 97.5% of CPII shelly sherds came from **F. 2536**, the north enclosure ditch, which will be discussed below. The remainder of shelly sherds came from two sets of related features.

Of the flint and shelly assemblage, only 25 are feature sherds, leaving form identification limited. Of the 20 rim sherds, 14 come from the same vessel and carry finger-tip impressed decoration. 84.5% of the sherds are less than 4cms in size, representing a fragmentary assemblage. Irregularly incised lines are the most commonly found decoration on shelly sherds, whereas the flint sherds are rarely decorated.

Middle Iron Age Pottery (c. 350 BC-AD 43)

There were 463 sherds (4466g) from CP II/III and CP III excavated during phase 2. The majority of the organic sherds were excavated from **F. 2590**, a pit near the Roundhouse. This includes evidence of at least two vessels. 37.3% of quartz sherds came from **F. 2584**, a ditch associated with Enclosure II, to be discussed further. 24 features have been dated to the late Early Iron Age and the Middle Iron Age

Of the organic and quartz sherds, twelve rim sherds offer parallels with the earlier excavation at Broom (Brudenell 2007). Further work needs to focus on correlations across the site of rim diameter and decorative elements. 26% of sherds from CP II/III and CP III bare decoration – less than Phase 1 and there is no evidence of Scored Ware or combing, as found in Phase 1. Further work needs to determine whether this is an indication of a different ceramic character across the site.

Residues

Only three sherds had residues of soot or carbon-like materials. These occur on the inside of body sherds. This provides very limited insight into the use of these vessels.

Individual feature assemblages

Roundhouse S3 (F. 2585, F. 2586)

The Roundhouse features F. 2585 and F. 2586 offered relatively little in the way of ceramic finds. F.2586 contained four sherds (21g) of an Early and Middle Iron Age date. F.2585 contained 33 sherds in total (120g) with nine sherds coming from the same vessel Middle Iron Age burnished vessel. All the sherds from F. 2585 are of Middle Iron Age date, which suggests a date range for this Roundhouse between c. 350 BC and AD 43. Although 86.5% of the sherds from these features are under 4cms in size – suggestive of extended depositional activity – sherds coming from the same vessel could be an indicative of the use of fine ware ceramics within the Roundhouse. Without features sherds, little more can be said of the form of the vessels.

Enclosure II: F.2583, F.2584

These two features represent the second half of Enclosure II, partly excavated in Phase 1 (Phase 1 F.2318). A total of 206 sherds (1832g) were recovered, with a MSW of 8.9g – 2.2g less than features excavated in Phase 1. The majority of sherds are produced in sandy fabrics, and some have burnished surfaces. Eight rim sherds offer parallels in form with the earlier excavations at Broom (Brudenell 2007), but bare no decorative elements. 15 sherds were found to refit across the two features. Only 3.4% of sherds were produced using the sandy fine ware fabric (Q4) – half that found in Phase 1 – suggesting the possibility of different activity in different areas of the structure. Further work should be done to compare the material from Phase 1 and Phase 2 of Enclosure II.

Enclosure IV: F.2536

This northern Enclosure yielded 47.8% of the entire assemblage, including 477 sherds from a single vessel, which was broken *in situ*. No base remains, but the flat rim, expanded externally, had a diameter of 32cms (<38>, [9847], F.2538). The rim bares finger-tip impressions and the body is decorated with irregular incised lines. The shelly fabric dates the vessel to CP II – the late Early Iron Age to the early Middle Iron Age. A large rim sherd in a quartz fabric (<32>, [9828], F.2536) from a jar has a diameter of 15cms, with a form paralleled in earlier excavations at Broom (F.174, Fig. A3.15, Brudenell 2007,). CP III is also represented in this feature, suggesting a date from the late Early Iron Age to the Middle Iron Age. A minimum of four vessels are present here.

Discussion and Recommendations (Phases 1 & 2)

The excavations at Broom between 1996 and 2005 yielded 9034 sherds of later prehistoric pottery, (75223g), whilst the 2007-1012 excavations produced 10448 sherds (c.155000g). In comparison, the 2012 and 2016 excavations at Broom offered a total of only 1663 sherds of Iron Age date. This report has followed the fabric series and Ceramic Phases of the 2007 publication (Brudenell 2007). Broadly speaking, this assemblage is comparable to the earlier phases of excavation at Broom and presents a largely consistent picture of site with no clear differentiation between Plain and Decorated ware.

There is considerable scope for a further study which would see the material from 2012 and 2016 more closely compared to the material excavated

between 1996 and 2005. The importance of this assemblage lies in the evidence it provides for the relationship between Plain and Decorated ware, which is more entangled than has been traditionally believed (Brudenell, 2007, 264).

- Attempt further refits of sherds across the assemblages
- In-depth further study into comparisons between different phases of excavation at Broom, particularly feature associated with structures
- A further interpretation of deposition across the site, aided by plotting by size of sherds across the site
- Correlations across the site of rim diameter and decorative elements
- Illustration of sherds

Roman Pottery – Francesca Mazzilli

A small-sized assemblage of 61 sherds of Romano-British pottery, weighing 1102g, (mean sherd weight 18g) and representing 1.4EVEs, was recovered from the Phase 1 excavations.

Methodology

All the pottery was examined visually and details of fabric, form, decoration, use-ware and date were then recorded in accordance with the guidelines set out by the Study Group for Roman Pottery (Darling 1994) and the National Roman Fabric Reference Collection (Tomber & Dore 1998) and in accordance with the coding used for recent Cambridge excavations (Anderson, in Cessford & Evans 2014). All the percentage figures used in this report are based upon sherd counts.

Assemblage composition

The assemblage presented a limited variety of fabrics: unsourced local Early Roman and Romano-British coarse, fine and grog-tempered wares, white and coloured-coated wares from Nene Valley, plus imports from Gaul (Samian ware). The dating of the assemblage spans the 1st to 4th centuries. The majority (80%) is from the 2nd to the 4th century AD (Table 23). There is no diagnostic sherd that can be dated to the late 3rd-4th century.

Dating	No. of sherds	Wt.(g)
C1-EC2	14	281
C2	4	52
C2-C3	2	169
C2-C4	41	600
Total	61	1102

Table 23: Breakdown of the Romano-British pottery sherds into phases

Looking in detail at the pottery assemblage, coarse wares dominate (95%), as is typical of Romano-British assemblages in the region (Table 24). These are: coarse and fine sandy micaceous or non-micaceous greywares, grog-tempered wares and white wares. Two unsourced body sherds are decorated: a fine sandy greyware sherd presents a series of dotted parallel lines and a fine sandy micaceous greyware fragment presents incised finger nail patterns.

Nene Valley white ware is the only sourced coarse ware recovered; it comprises a semi-complete vessel broken into 37 body sherds, one complete base and 2 flat handle fragments that present 3 grooves. As there is no rim sherd it is not possible to identify the form of the vessel and to narrow down its dating.

There are hardly fine wares; they comprise a small fragment of Nene Valley coloured coated body sherd, possibly from the 2nd to the 3rd century, and two chips of East and Central Gaulish Samian ware, which can be generically dated from the 1st to the 3rd century.

Fabric	No. of sherds	Wt. (g)
Coarse sandy greyware - unsourced	1	125
Early Roman fine sandy greyware - unsourced	1	13
Early Roman fine sandy micaceous greyware - unsourced	4	24
Early Roman grog-tempered ware	5	114
fine sandy micaceous greyware - unsourced	1	1
Pinkish grog-tempered ware	5	218
Nene Valley coloured coated ware	1	3
Nene Valley white ware	41	600
Samian ware (Central Gaul)	1	2
Samian ware (East Gaul)	1	2
Total	61	1102

Table 24: Romano-British pottery by fabric type

The majority of the assemblage comprises non-diagnostic sherds (95%) (Table 25). The only forms that can be identified are: a lid-seated grog-tempered bowl and an everted beaded storage coarse sandy greyware vessel.

Form	No. of sherds	Wt. (g)
Bowl	1	27
Jar	1	49
Storage vessel	1	125
Unknown	58	901
Total	61	1102

Table 25: Romano-British pottery by form

Discussion

The paucity of Romano-British sherds recovered in this site, together with the almost absence of sourced fine wares and diagnostic sherds is not indicative of major Romano-British settlement in the vicinity.

Saxon Pottery – Paul Blinkhorn

The pottery assemblage comprised 390 sherds with a total weight of 5255g. The estimated vessel equivalent (EVE), by summation of surviving rimsherd circumference was 2.24. Two residual Romano-British sherds aside, it was all early/middle Anglo-Saxon. It was recorded using the conventions of the Bedfordshire County Archaeology Service type-series (eg Baker and Hassall 1977), as follows:

A16: *Mixed Coarse Quartz.* 70 sherds, 1045g, EVE = 0.65.

A18: *Fine Quartz.* 294 sherds, 3544g, EVE = 1.59.

A19: *Quartz and Chaff.* 11 sherds, 458g, EVE = 0.

A24: *Oolitic Limestone.* 13 sherds, 187g, EVE = 0.

The two Romano-British sherds weighed 21g in total. The pottery occurrence by number and weight of sherds per context by fabric type is shown in Appendix A (Table A5). Each date should be regarded as a *terminus post quem*. The range of fabric types is fairly typical of sites of the period in the region.

Chronology

The dating of Early Anglo-Saxon hand-built pottery is mainly reliant on the presence of decorated sherds, which are usually of 5th – 6th century date, as plain wares were largely the norm from the 7th century onwards (Myres 1977, 1). However, it cannot be said with certainty that an assemblage which produced only plain sherds is of 7th century date. Usually, decorated hand-built pottery comprises just 5% or less of domestic assemblages, as was the case at Mucking, Essex (Hamerow 1993, 51). Thus, fairly small assemblages of plain pottery can only usually be given a broad period date of the 5th – 9th century (E/MSAX). The complete absence of dateable middle Saxon pottery such as Maxey-type and Ipswich Wares which occur at a number of sites in the area (Blinkhorn 2012) suggests that activity at the site had ceased by the end of the 7th century, and perhaps even slightly earlier.

The decorated sherds from this site suggest a fairly long period of activity. They include a small fragment of a faceted carinated bowl (BR14), a vessel type which often dates to the earliest part of the Anglo-Saxon period, the early-mid 5th century, a bossed and stamped sherd typical of the late 5th–mid 6th century (BR2), and stamped sherds typical of the 6th and perhaps even the very early 7th century (eg. BR15).

The Pottery

Most of the pottery came from two sunken-featured buildings, Structure S6 (F.2127) and Structure S7 (F2132).

SFB S6

This feature produced 243 sherds of pottery weighing 2940g (EVE = 1.08). A few vessels were well-represented, but none were complete, with the bulk of the assemblage comprising single sherds from individual vessels, suggesting very strongly that all the pottery is a result of secondary deposition as back-fill, and probably originates from a domestic midden or similar. The entire assemblage was checked for cross-fits, but very few were made, which is typical of secondary deposits of refuse. The following were noted:

8112 NW Quad Spit 1 = 8113 SW Quad Spit 3
8112 NW Quad Spit 3 = 8113 SW Quad Spit 3
8112 SE Quad Spit 2 = 8113 SW Quad Spit 3 (Fig. BR4)

The position of the re-fitting sherds shows that the back-fill is probably largely homogenous, and the result of a single deliberate dump of material. Decorated sherds were rare. Four non-joining sherds with linear decoration from the same vessel occurred in SW Quad Spit 2, NW Quad Spits 1 and 3, and NE Quad Spit 1 (eg. BR1). This shows a similar pattern to the cross-fitting sherds. Two fragments of stamped vessels were also present: A sherd with what appears to be a boss flanked by linear decoration and with cross-stamps (BR2) occurred in NW Quad Spit 1. Such pottery is usually of late 5th – early/mid 6th century date. However, not only is the sherd slightly abraded, but a later, better-represented vessel in very fresh condition was also present, in NW Quad Spit 2. The fragment (BR3) consists of most of the lower body and base of a small jar with “hot cross bun” stamps in pendant triangular groups on the waist. Such decoration is generally of sixth-century date. Only a single die was used, and there are no incised lines defining the geometric grouping. A small group of pots with undefined single-die stamping are known from Cambridgeshire, such as that which occurred at Girton in Cambridge, which Myres saw as dating to the late 6th – early 7th century (ibid. 1977, 54). It and all the others have decoration made with a similar die to the example from this site, *ie.* one with a cross motif, although the stamps on the examples from Girton *et al* were made with a die with a square face, whereas that of the one used on this site was round. Given the size and condition of the sherd from this SFB, it seems very likely that the vessel was despotised not long after breakage, and a date of the mid-6th to early 7th century is probably appropriate for the assemblage, although the bossed sherd shows that the source of the back-fill material also contained much older pottery. It is worthy of note that the vessel not only has patches of sooting on the outer surface, but also evidence of abrasion to the inner, with an area of the surface just above the base-pad eroded away. This may have been the result of stirring the contents of the pot while it was on the fire. Internal abrasion of pots of this date have been shown to be indicative of the vessels having been used for brewing (Perry 2011).

The rimsherd assemblage comprised entirely jars (EVE = 0.71) and bowls (EVE = 0.32). A few of the former were represented by relatively large sherds (eg. BR4 and BR5), although the vessels in question were mostly small. Fragments of larger vessels were also noted. A large fragment of a single bowl was also present (BR6).

Recommended Illustrations

BR1: Context 8112, NE Quad, Spit 1, fabric A24. Incised sherd. Dark grey fabric with orange-brown outer surface.

BR2: Context 8113, NW Quadrant, Spit 1, fabric A16. Bossed and stamped sherd. Uniform grey fabric.

BR3: Context 8112, NW Quad, Spit 2, fabric A19. Stamped vessel. Uniform black fabric, sooting on outer surface.

BR4: Context 8112 SE Quad Spit 2 and 8113 SW Quad Spit 3, fabric A18. Large fragment of small jar. Uniform black fabric, burnished surfaces.

BR5: Context 8113, SW Quadrant, Spit 3, fabric A18. Small jar. Uniform dark grey fabric, sooting on outer surface.

BR6: Context 8112 SE Quadrant Spit 2, fabric A16. Bowl rim. Dark brown fabric with dark grey surfaces.

SFB S7

This feature produced 122 sherds of pottery weighing 1996g (EVE = 1.13). The pottery is, physically, very similar to that from SFB 2132, comprising a small number of fairly well represented vessels, along with sherds from individual vessels. Also, a cross-fit was noted suggesting that the pottery is a secondary deposit from a common source, as follows:

8101 NW Quad Spit 1 = NW Quad Spit 2

Non-joining fragments of an incised vessel were noted in NE Quad Spit 2 and SE Quad spit 3. The decorated sherds from this feature suggest a date late in the early Anglo-Saxon period, although possibly earlier material is also present. A single stamped sherd of probable sixth-century date occurred (BR7), but it is small and somewhat damaged, and appears to be residual. Ten sherds with linear decoration were noted, although most of them are too fragmentary to suggest a firm date other than within the broad early Anglo-Saxon period. However, a single sherd with what may be curved lines (BR8) may be closely dateable. Hanging or standing curves are a well-known decorative technique, and Myres (1977, 28 and 57) saw both as being largely of fifth-century date. The sherd from here is not sufficiently complete to say with certainty that this is the case, and if it is, the presence of the stamped sherd suggests that it must be residual, although a fifth-century sherd was noted in F.2341 (see below), indicating that there was activity of this date at the site.

Another possible exception are the non-joining decorated sherds from 8101 NW Quad Spit 1 and NW Quad Spit 2 (BR9). The decoration is somewhat cruder than that on the other incised sherds, and appears to be a series of vertical strokes between (probably) two parallel cordons. While linear decoration was a long-lived technique, the crudeness of the execution suggests that a date in the late sixth or early seventh century is possible. It is also worthy of note that the inner surface of this vessel is somewhat degraded, and the calcareous inclusions leached out, but this is not the case on the outer surface. Such a pattern is typical of vessel used for brewing ale (Perry 2012).

The rimsherd assemblage was dominated by jars (EVE = 0.96), some of which were very well-represented (BR10 and BR11), although a few bowl rims were also noted (EVE = 0.17). Several non-joining sherds from a vessel with a foot-ring base were also noted (BR12). Also present was the base of a Romano-British Greyware cup or beaker which had been deliberately trimmed, presumably to allow it to be used as a gaming counter (BR13).

Recommended Illustrations

BR7: Context 8101, SE Quadrant, Spit 2, fabric A19. Stamped sherd. Orange-brown fabric with dark grey surfaces.

BR8: Context 8101, SW Quad, Spit 2, fabric A18. Incised sherd,. Uniform dark grey fabric.

BR9: Context, 8101 NW Quad Spit 1 and NW Quad Spit 2, fabric A24. Two non-joining sherds from an incised vessel. Dark grey fabric with light brown, partially burnished outer surface.

BR10: Context 8101, SW Quadrant, Spit 1, fabric A18. Large fragment of a jar. Dark grey fabric with burnished outer surface, lower half of outer is light brown.

BR11: Context 8101, NW Quadrant, Spit 1, fabric A18. Jar rim. Uniform grey fabric, burnished outer surface.

BR12: Context 8101, SW Quad, Spit 3, fabric A18. Three non-joining sherds from a foot-ring base. Uniform black fabric with burnished outer surface.

BR13: Context 8101, NE Quadrant, Spit 1, Romano-British Greyware. ?Counter made from worked base-herd. Uniform light grey fabric.

Other Features

Just two other features, F2180 and F2341, produced Anglo-Saxon pottery. In the case of the former, just three sherds in total were present, weighing 29g, whilst the latter, the back-fill of a Roman ditch, yielded an assemblage of 22 sherds weighing 290g (EVE = 0.03). Most of the pottery comprises small, plain sherds, with the exceptions being two decorated sherds. One of these, from context [9180], appears to be of early-mid fifth century date. It is a fragment of a *Schalurne*, or faceted, carinated bowl, which are amongst the earliest Anglo-Saxon pottery types (Myres 1977, 7). The other, from context [9572], appears to be much later, having a number of stamp impressions and linear decoration which is typical of the sixth century. Both sherds occurred in the upper fill of the ditch, and like the back-fill of the SFBs, probably originated from a domestic midden or similar, with the range of decorated pottery showing that it had been in use for a considerable period of time.

Recommended Illustrations

BR14: Context 9180, fabric A18. Decorated sherd from the waist of a carinated bowl. Uniform dark grey fabric.

BR15: Context [9572], fabric A16. Stamped sherd. Uniform black fabric

Metalwork – Sam Lucy

The small assemblage of metalwork recovered consisted of one fragmentary copper alloy item, two possible iron grave-goods, an iron fish-hook and several fragmentary iron nails or pins. The possible grave-goods – a leaf-shaped spearhead and a knife – are probably sixth-century in date, and should be examined for mineral-preserved organic remains (there is certainly wood preserved in the socket of the spearhead), but otherwise, no further work is recommended.

Copper alloy

[No X-rays or further organic analysis recommended]

<520> SF 42 Five fragments of thin copper alloy sheet 0.6mm thick. Largest (L. 36mm) is broken on all sides, and is decorated with three impressed ring and dot designs. Two of the much smaller fragments also have impressed design (smaller dots on one, and an incised panel on another). Probably decorative fixing.

Iron

[MPO analysis of spearhead and knife recommended]

<521> F.2127 SF19 Small complete iron fish-hook. L. 23.8mm.

<522> F.2132 Head and part of shaft of circular-headed square-sectioned iron nail. L. 23.7mm, Head Diam. 14.7mm. Probably Manning type 1B.

<523> F. 2132 Fragment of square-sectioned iron nail. L. 29.9mm, Diam 7mm; broken at both ends.

<524> F.2132 Complete but fragmentary ring-headed iron pin. L. 81.8mm, round-sectioned shaft 4.9mm Diam. If from a grave context, should be examined for MPO. Ross (1991) type XVIII.

<530> F.2148 SF35 Fragment of iron ?pin or ?nail, probably round in section, L. 21mm, broken at both ends

<531> F.2148 SF36 Fragmentary iron nail, square-sectioned shaft (D. 8.5mm) and broken head, probably circular; Diam 16.4mm. Tip broken, current L. 32.4mm. Manning Type 1B.

<525> F.2227 Near-complete iron nail, square-sectioned shaft (D. 8.5mm) and broken head, probably circular; Diam 16.2mm. Tip broken, current L. 63.6mm. Manning Type 1B.

<526> F.2250 SF33 Badly corroded iron spearhead; tip and end of socket both broken off but present. Leaf-shaped blade with lentoid section (Max W. 49mm; Min L. 200mm) tapering gently from open socket with preserved wood remains via a short solid shaft. Minimum overall L. 300mm. Swanton (1973) Type C2, probably 6th century. Possibly MPO on blade as well as in shaft.

<533> F.2250 SF37 Fragmentary iron knife, tip of blade missing. Overall L. 161mm, blade W. 20mm. Top-set tang (L. 60mm), possibly with some MPO from handle adhering, tapering sharply into blade with possible curved back and straight cutting edge (Drinkall and Foreman group D2).

<527> F.2341 Head and part of shaft of circular-headed square-sectioned iron nail. L. 30.8mm, Head Diam. 14.0mm. Probably Manning type 1B.

<528> F.2366 SF45 Fragment of iron ?pin, probably round in section, L. 36.5mm, broken at both ends

<529> F.2446 SF34 Badly corroded iron fragment, possibly a tool point or large nail, square-sectioned, L. 49mm.

Objects of Antler and Bone – Ian Riddler

Introduction

The assemblage of worked antler and bone objects includes seven early Anglo-Saxon objects that came from the fill of a sunken-featured building, as well as a comb of Iron Age date recovered from elsewhere on the site. The seven objects include a single-sided composite comb, an antler spindle whorl, two double pointed pin-beaters, an antler bead, a bone needle and an iron awl with an antler handle. Typological dating for the comb and the antler bead is centred on the late fifth century.

Late Prehistoric Comb

A fragmentary strip of bone, cut from a cattle-sized long bone, is decorated on one side by a series of single ring-and-dot motifs. The object has been cut laterally with a blade at one end and a lateral row of motifs are gathered close to that edge. Well-spaced motifs cover most of the available space but at the fractured lower end it appears that there was originally another lateral row.

The size and shape of the bone, together with the presence of decoration on the upper surface, indicate that it is a fragment of the shaft of a single-sided simple bone comb. Late prehistoric combs were made of antler, bone or whale bone. The majority of them were made of antler and both bone and whale bone examples are comparatively rare. The percentage of bone combs present in large assemblages varies between sites. Only 2 of the 220 combs from the Meare Lake Villages are made of bone (0.91%), as against 8 of the 89 combs from Glastonbury Lake Village (9.0%) and 14 of the 71 combs from Danebury (19.7%) (Tuohy 1999, I, 13; Sellwood 1984, 371; Poole 1991, 354). Bone combs were fashioned from the midshafts of cattle-sized long bones and they would invariably include a portion of the inner bone channel on one side. This side was trimmed to provide a flat surface but, in contrast to the upper surface, it was usually left undecorated. A bone comb from Longbridge Deverill Cow Down provides a good illustration of how they could be produced from cattle metapodia (Hawkes 2012, fig 4.4.3).

At some point during its use the comb fractured along its length on one edge. Three of the ring-and-dot motifs on that side are truncated. The comb continued in use, however: both the upper and lower parts of that edge are polished and worn. Eventually the teeth of the comb fractured, and it was discarded.

The near-horizontal lateral end of the Broom comb corresponds with Tuohy's type C basal ends (Tuohy 1999, fig 7). There may be no particular significance in the choice of this basal end for a bone comb, however, given the limitations of the material, which tend to prevent any enlargement of that end. The decoration is possibly indicative of a date in the middle to late Iron Age, given that at Danebury combs embellished with circular decoration tended to come from the later ceramic phases (Sellwood 1984, 372; Poole 1991, 354). Late prehistoric combs have seldom been found in the county of Bedfordshire. They are much more common in adjacent counties, where summaries and discussion texts on them have also been published (Smedley 1961; Jackson 1975, 86; Tuohy 1999, II, fig 2; Riddler 2016).

Early Anglo-Saxon Comb

The single-sided composite (SF 16) is almost complete and can be identified as an elongated triangular comb. The comb type is defined by the long, shallow connecting plates which, unlike the upright forms, are no longer strictly triangular in shape and have straight, vertical ends. The difference between the two comb types is well illustrated at Spong Hill (Riddler and Trzaska-Nartowski 2013, 115-8). Elongated triangular combs from Spong Hill first occurred in Phase B of the cemetery and continued into Phase C, providing them with an overall date range of c 435-525 (Hakenbeck 2013, 224). This particular example has shallow connecting plates with plain cresting above and a slight sense of dislocation between this part of the comb and the sequence of relatively short teeth below, which stop short before the ends of the connecting plates, leaving large expanses of end segment to either side. The same sense of dislocation can be seen on several comb fragments from the cremation cemetery of Sancton in Yorkshire (Myres and

Southern 1973, fig 17). A further comb fragment from that cemetery includes an end segment that sweeps down in a curve below the connecting plates, broadly resembling the situation here, where the curve is replaced by sinuous lines, however (*ibid*, fig 16). The way in which the lower edges of the end segments curve upwards at their ends is matched by a comb fragment from Spong Hill (Riddler and Trzaska-Nartowski 2013, fig 2.45.1688/2).

SF 16: Near complete antler single-sided composite comb of elongated triangular form. Comb includes two connecting plates of rectangular section, fastened to two end segments and five tooth segments by ten iron rivets. The connecting plates are decorated by single ring-and-dot motifs, arranged in a single horizontal line, with a short vertical line at the centre. They are retained within double framing lines, with bands of vertical lines at either end of each connecting plate. The decoration is the same on both sides. The tooth segments rise above the backs of the connecting plates. The end segments rise up along their lower edges at their ends and have outswept backs, with the upper sections indented with sinuous lines leading up to their upper edges. They are decorated with pairs of single ring-and-dot motifs just below the sinuous lines. Saw marks from the cutting of the teeth can be seen on both sides and are confined by the lower framing lines. The end segments are fastened by iron rivets through their centres and along one edge, whilst the tooth segments are fastened on both edges. The central tooth segment is fastened by two iron rivets along each edge. The comb teeth are rectangular in section and have been neatly rounded, tapering to blunt ends with traces of considerable wear extending across all of them, up to the end segments. The comb teeth do not extend beyond the connecting plates.

The technology of the comb is indicative of a date after c 450 because the tooth segments are entirely fastened along their edges, and not through their centres. The change from centre riveting to edge riveting is thought to have occurred around the middle of the fifth century in Europe, and may have been adopted at around the same time in England (Schach-Döriges 1994, 691-2; Riddler and Trzaska-Nartowski 2013, 110). The riveting has developed a little further with this comb, in the sense that most of the tooth segments are fastened by a single rivet on each edge and only the central tooth segment has paired rivets. In effect, the design of the comb has moved away from the conventional technology for a triangular comb towards the type of riveting that is more redolent of single-sided composite combs. A single-sided composite comb from SFB 43 at West Stow indicates the next stage in the process, under which the connecting plates are even shallower in form and the rivets are set in a single line (West 1985, fig 147.5). With a comb from Great Chesterford the plain cresting has disappeared and only the end segments rise above the line of the back of the comb. The comb includes a similarly sparse decorative design, based on single ring-and-dot motifs (Evison 1994, fig 51.9). With these combs in mind it can be suggested that this example was made c 480-530. It had been heavily used before it was discarded and all of the surviving teeth show considerable wear, probably obtained from a decade or more of use.

Early Anglo-Saxon Antler Bead

One of the more unusual items from the assemblage is a complete antler disc (Sf 14), roughly circular in shape and perforated at the centre. One side is decorated with bands of single and double ring-and-dot motifs, whilst the other side includes cortile tissue from the inner core of the antler. The decoration is incomplete and indicates that the disc has been cut down at some point from a larger object. It can be identified as a bead by comparison with a series of antler and bone beads from Spong Hill (Riddler and Trzaska-Nartowski 2013,

94-8). Its section allows it to be placed in Spong Hill type B, a group consisting largely of undecorated beads of discoidal section with central perforations. A few of the Spong Hill examples are decorated with ring-and-dot motifs (*ibid*, 94 and fig 2.31). At Spong Hill type B beads occurred across Phases A and B, but not in Phase C, suggesting that they belong essentially to the fifth century (*ibid*, Tables 4.10 to 4.14).

SF 14: Complete antler disc, roughly trimmed to shape by knife and perforated at the centre. Decorated by single ring-and-dot motifs set within oval linear frames with two motifs close to the central perforation and eleven motifs (two of which are double ring-and-dot) in a band close to the outer edge. The disc has been cut-down and may originally have been substantially larger. Lightly polished on the upper surface, cortile tissue across the entire lower surface.

Given that the bead has been cut down in size, it could in theory be compared with sequences of decorated antler burr discs. The Continental background to these discs has been provided by Ursula Koch, whilst Bruce Eagles has produced a catalogue and discussion of the Anglo-Saxon series (Koch 2001, 198-202; Eagles 2016). These are much more substantial objects however, with much larger apertures at the centre; and the Anglo-Saxon series is confined to the seventh century. In this case it is clear that the object is not an antler burr disc but is an antler bead that has been reduced in size, but not by a great deal, possibly because its edges had become frayed and damaged.

Early Anglo-Saxon Spindle Whorl

A complete antler spindle whorl (Sf 20) has been produced with some skill on a lathe and is decorated with several concentric circles. It has two flat faces and curved sides, allowing it to be placed in Walton Rogers' type B2 (Walton Rogers 2007, 24-5). Type B2 occurs throughout most of the Anglo-Saxon period but is at its most common in the fifth and sixth centuries. Early Anglo-Saxon antler spindle whorls are usually decorated by sequences of concentric circles, as with those from Mucking and West Stow, for example (Hamerow 1993, figs 90.5 and 154.1; West 1985, figs 42.7, 60.24, 244.12 and 13). With a weight of 28.6g, the spindle whorl conforms with Henry's median group, which extends from 11g to 29g in weight (Henry 1999, 72). This is the most common group for the Middle and Late Saxon periods and defines whorls used to spin wool, rather than linen. As yet, there are no comparable statistics for the early Anglo-Saxon period, but it is likely to be the most common weight group there as well.

SF20: Complete antler spindle whorl, lathe-turned with two flat faces and a central axial perforation. Decorated with concentric circles cut on a lathe. Cortile tissue visible on one side. Polished throughout.

Early Anglo-Saxon Pin-beaters

Two complete pin-beaters (Sf 12 and Sf 15) are both of the double pointed form, which occurs across the early and Middle Saxon periods, and is occasionally found in contexts of a later date. One of the pin-beaters (Sf 12) is cylindrical in form and tapers at either end to sharp points; it is highly polished throughout. It represents a typical pin-beater of the early Anglo-Saxon period. The second pin-beater (Sf 15) is noticeably short, however. Double pointed

pin-beaters of the early Anglo-Saxon period have previously been separated into two size groups on the basis of their lengths (Riddler 1996, 136). With the benefit of the addition of finds from recent excavations, the same separation into two groups is still apparent, although the dividing line between the groups can now be set at around 115-120mm. The shorter Group A pin-beaters extend from 65-120mm in length, and the longer Group B from 121-171mm (Figure 01). An outlier from SFB 18 at Barrow Hills, Radley, Oxfordshire, stands out for its overall length of 207mm and it is possible that it came from a sunken-featured building of seventh-century or later date, given that Middle Saxon double pointed pin-beaters are longer, on average, than their early Anglo-Saxon counterparts (Chambers and McAdam 2007, 132). At the other end of the scale, the Broom Quarry pin-beater (Sf 15) is one of the shortest to have been recorded for the entire Anglo-Saxon period. This is because it represents the central area of a pin-beater that has been cut down and reshaped at both ends, having originally been somewhat longer. Short double pointed pin-beaters tend to come from typologically early contexts.

SF 12: Complete bone double pointed pin-beater, circular in section and cylindrical in form, tapering close to either end to sharp points. Highly polished throughout, no wear traces visible.

SF 15: Complete bone double pointed pin-beater, rectangular in section with rounded edges, tapering close to either end to sharp points. Noticeably short; appears to have been recut and reshaped. Polished throughout, particularly at the pointed terminals.

Double pointed pin-beaters are textile manufacturing implements used on a warp-weighted loom, where their principal function was to separate warp threads, although they were, in effect, multi-purpose tools (Hoffmann 1964, 145; Brown 1990, 226; Walton-Rogers 1997, 1755). Brown (1990, 266) has noted that smoothness is an essential prerequisite of weaving implements and both implements have been smoothed and polished.

Double pointed pin-beaters occur as single finds in seventh-century grave contexts at Castledyke South, Dover Buckland, Ducklington, Finglesham and Wakerley. At Dunstable Marina Drive Grave F2, Exning Grave 8 and Kingston Grave 299 pairs of pin-beaters occur in graves; all three are the burials of young children. They provide the possibility that double pointed pin-beaters were retained and used in sets, rather than as single items. Pairs from the same context, as is the case here, have also been found in settlements at Duxford, Northfleet, West Stow and Pennyland and - in each case - the pairings are of short and long examples (Riddler 1993, 119; Duncan and Riddler 2011, 98-9; Allen 2011, 44). At Collingbourne Ducis three double pointed pin-beaters were recovered from the fill of a sunken-featured building, two of the shorter Group A and one of the longer Group B, and three pin-beaters also came from the backfill of a sunken-featured building at Yarnton (Pine 2001, 109 and fig 9.5-7; Hey 2004, 185).

Early Anglo-Saxon Bone Needle

A fragmentary bone needle (Sf 21) includes a short and stout shaft of circular section. It has fractured across a perforation through the lightly expanded

head. The shaft is highly polished and would have passed easily through coarse woven textile. The majority of bone needles of the early Anglo-Saxon period were made from pig fibulae and examples made from other bones are quite rare, although a bone needle from Building 5 at West Stow was found together with a fragment of waste from the manufacture of bone needles or pins (West 1985, fig 17.6-7).

SF 21: Fragmentary bone needle with a knife-cut, straight shaft of circular section tapering to a sharp, slightly damaged point. Head expands lightly at the opposite end and has fractured across a rivet hole. Shaft is highly polished along its length.

Early Anglo-Saxon Iron Awl

A small iron awl (Sf 13) includes a whittle tang handle cut from an antler tine. The shaft of the awl is circular in section whilst the tang, now largely hidden, is likely to be of square section, by comparison with contemporary iron awls (West 1985, figs 97.2, 111.2 and 176.3). Iron awls are common finds for the period but most of them lack any handles, suggesting that those handles may have been made of wood, which has not survived. A small number of awls include handles made from antler, including a larger implement from West Stow (*ibid*, fig 188.1).

SF 13: Complete iron awl, consisting of a tapering shaft of circular section, the tang set within an undecorated antler handle. The handle is oval in section with cortile tissue visible on one side. It has been shaped by knife to produce a bevelled terminal close to the iron shaft. Lightly polished throughout.

Burnt and worked clay – Simon Timberlake

The burnt and worked clay from the two separate phases of excavation (BEDFM2012.59 and BEDFM2016.66) have thus far been assessed as two separate assemblages and with separate fabric series established for both.

Phase 1 (Table A8)

Some 20.36 kg (1308 pieces) of burnt and worked clay were recovered from the excavation of the Phase 1 area, the majority of this coming from features F.2360 (12.84 kg), F.2375 (7.19 kg) and F.2334 (116g). Just 106g of this burnt clay was composed of worked clay (this consisted of a single loomweight fragment from F.2282), the remainder of this being daub, in particular the well-constructed clay lining for two pits (F.2360 and F.2375); both being made up of a lumpy base daub (Fabric 7) overlain by a layer of clay plaster (Fabric 6). The single loomweight fragment from F.2282, although not particularly diagnostic, seems likely to be of a triangular-rectangular Iron Age-form.

<i>Fabric 1</i>	buff to grey-brown to bright pinkish clay fabric with occasional inclusions of flint grit (<5mm), sand, grog and chalky marl (<4mm)
<i>Fabric 2</i>	grey-brown lightweight porous and de-calcified fabric with burnt-out organic but few other inclusions
<i>Fabric 3</i>	v sandy gritty and friable brick red fabric

<i>Fabric 4</i>	hard light grey brown clay fabric with swirls of lens-like red clay inclusions and occasional grit
<i>Fabric 5</i>	light buff to yellow pink coloured fired clay exterior with unfired brown to grey coloured clay interior with some grit + gravel inclusions
<i>Fabric 6</i>	fine grain pinkish clay with veg temper
<i>Fabric 7</i>	similar colour to Fabric 6 but more lumpy and variegated mix with some small flint grit (<5mm) – associated Fabric 6

Little can be said about the incidence of probable Iron Age loomweight, given that just one fragment was recognised amongst the moderately large volume of burnt clay from this site. However, almost all of the daub came in the form of a waterproofed clay-coated daub lining to two Iron Age pits (F.2360 and F.2375); these presumably intended to act as small tanks, perhaps for the purposes of cooking, or more precisely boiling through the addition of hot stones. There is no certainty that this was their function, however, similar examples of burnt clay-lined pits (F.442 and F.438) were noted from Broom 2007 (Timberlake 2013) and were similarly reported on in Slater 2008.

Little further work seems necessary on this assemblage, although the reconstruction and photography of parts of the clay-lined pit rim(s) would be useful. There is insufficient of the loomweight remaining to enable a reconstruction, although comparison with weights from the other Broom phases may help in estimating shape, size and weight.

Phase 2 (Table A9)

Some 0.584 kg (113 pieces) of burnt and worked clay was recovered from the excavation of the Phase 2 area, at least half of this (256g) consisting of quite fragmentary clay loomweight, which was diagnostic only through the partial survival of the corner-perforated warp thread holes. Given the form of the latter, it seems likely that these are the remnants of large flat equilateral triangular Early-Middle Iron Age loomweights.

Comparable examples of almost complete Iron Age loomweights have recently been recovered from Mitchell Hill (c.180-200mm diameter, c.85mm deep and weighing between 2.36 – 2.65kg – being amongst the largest recorded from any Cambridgeshire site; Tabor 2017), from Wardy Hill (Gdaniec & Lucas in Evans 2003: 194 & fig. 93), with smaller examples from High Cross, West Cambridge (Timberlake 2010), and the NW Cambridge site (see Timberlake in Cessford & Evans 2014).

Intact triangular clay weights would typically have been hung opposite each other upon separate pairs of warp threads with the flat bases pointing downwards, with the two threads of each pair passing through the top perforation from opposing sides, then down along the triangular sides of the weight and back through each of the basal corner perforations, then tied (i.e. knotted together) underneath (Wild 2003).

The remaining burnt clay (328g) recovered from this excavation may derive from completely broken-up loomweight, or else may represent fragments of broken up daub-covered panel walling associated with dwellings, or

alternatively the walling of kilns or ovens. The majority of this material, however, appears to be made of the same clay fabric type as the loomweights (Fabric 1). Three similar fabric types were identified within this assemblage.

Fabric 1 [GVT1] a fine silty pinkish clay with variegated buff-yellow coloured clay patches within swirly lenses, some of these grog-based, alongside moderate numbers of vegetable temper inclusions (<5%), rare reddish small grog particles and rare dark lithic grit (<2mm)

Fabric 2 [SVT] a brick-red coloured silty clay fabric with moderately abundant small vegetable inclusions and mod-occasional quartz grit (<1mm)

Fabric 3 [SCF] a mid brown-grey sandy gritty fabric (BF + quartz) with some larger inclusions (<4mm) of slightly burnt flint and chalk

No future work on this really quite small amount of material is deemed necessary prior to full publication.

Ceramic tile – Simon Timberlake

A total of 1006g of Roman tile (5 fragments), most of which appear to be roof tiles, were recovered from the Phase 1 excavations; the majority were found redeposited within/ or associated with early Anglo-Saxon *Grubenhäuser* (SFBs).

<080> F.2127 [8101] x1 piece of broken *imbrex* roof tile 90mm x 75mm x 15mm (thick); weight 130g. Oxidised red fabric. Redeposited Roman roof tile within Saxon SFB S5 .

<120> F.2132 [8112] NW Quad. x1 piece of broken and weathered (worn) *tegula* roof tile 145mm x 10mm x 23mm (thick); weight 404g. Sandy/ gritty brick-red fabric. Redeposited Roman roof tile within Saxon SFB S6.

<121> F.2132 [81123] SE Quad. x1 piece of broken tile, possibly a waster: 80mm x 25mm x 15mm (thick) weight 50g. Light grey-brown-pink micaceous silty fabric. Redeposited Roman tile within a Saxon SFB S6.

<206> F.2180 [8476] x1 piece of broken and weathered (worn) *imbrex* earthenware roof tile 100mm x 100mm x 14mm (thick); weight 244g. Oxidised red fabric. A redeposited Roman roof tile within Saxon SFB S7.

<501> F.2341 [9574] x1 piece of a slightly worn Roman brick-tile, possibly a *pila*, but perhaps *tegula*: 60mm x 60mm x 45mm (thick); weight 178g. A slightly sandy brick-red fabric. From a Roman ditch.

Worked stone – Simon Timberlake

A total of 16.668 kg of worked stone (consisting of one complete and five fragmentary saddlequerns, two hammerstones, two anvils and a possible whetstone) was recovered from this phase of excavation.

Early Neolithic

The vast majority of this worked stone (15.422 kg) came from two Early Neolithic features (F.2173 and F.2213), but mostly from the latter, a Neolithic grave. From this grave came a large assemblage (13.538 kg) of objects

fashioned from glacial erratic sarsen (quartzitic sandstone) slabs which included several of the fragments derived from an upper (SF <28> + SF <32>) as well as the lower (complete) stone (SF <29>) belonging to a 'rocking type' saddlequern, one fragment from another worn upper quern stone (SF <25>), a finely-worked spherical hammerstone made of granite which was about the size of a cricket-ball (SF <31>), a chipped stone block of uncertain function (SF <26>), and a large fractured cobble used as an anvil stone (SF <27>). All of these examples (alongside 20 other unworked blocks/cobbles of flint and a number of unworked stone cobbles (such as SF <30>)) had been carefully placed around the edge of a possible 'cist' or grave pit accompanying a multiple Early Neolithic burial, and as such were probably deposited here as grave goods, quite possibly as the objects owned or else used by the interred during life.

Meanwhile, from a similarly dated Early Neolithic pit (F.2173) which lay some two hundred metres away from this grave on the eastern half of the site was recovered a small oval-shaped hand-held cobble hammerstone (cat. no.172a); an object that appeared to have been fashioned from a rather similar type of sarsen (sandstone) rock. Found accompanying this tool was a broken small boulder of dolerite, with very slight traces of working upon it (172b).

Iron Age?

A small sandstone saddlequern fragment (cat. no.312) was recovered from amongst a collection of broken burnt stone cobble material found within an undated pit (F.2315) close to the SW corner of the site. Such a random association of small (unfitting) fragment(s) of quern found within the 'cooking stone' assemblages deposited in pits and ditches is quite typical of other Early-Middle Iron Age settlement(s), such as those previously excavated at nearby sites at Broom (e.g. Tabor 2014), at Barleycroft (Evans & Tabor 2012), and also Trumpington Meadows (Patten 2012). Thus whilst it is not diagnostic, the occurrence of this heat-fractured quern within an area similarly typified by pits, ditches and enclosures might suggest an equivalent Iron Age date.

Roman

From the fill of a natural hollow (F.2140) located within the middle of the N-S Roman trackway (F.1238/9) bisecting the site came a small fragment of very weathered/ abraded basaltic lava (cat. no. 139). Whilst this showed no obvious signs of working, an examination of the lithology confirms that it is Niedermendig/ Andernach basalt from the Eifel region of the Rhineland, a rock which could only have come as an import, and as part of a worked rotary quern hand mill, almost certainly post-Roman Conquest. The likely scenario therefore is that this represents a fragment of broken and discarded quern which was re-used as road metal following the burning and breaking-up of larger pieces. Typical of road metalling, the softer porous lava would then quickly have become rounded and abraded.

Early Saxon

Two examples of worked stone came from the excavation of the Early? Saxon SFB (Grubenhäuser) feature F.2127, both of these being fairly typical of the expected simple cultural assemblages that are sometimes found. One of these was a small piece from the edge of a burnt and highly fragmented sandstone saddlequern (cat. no. 092); this being characteristic also of Iron Age assemblages, and which are common to both where such settlements overlap (as at Trumpington Meadows, Cambridge (see Timberlake in Patten 2012)). The other object was a rectangular/ lozenge shaped waterworn cobble of sandstone which has seen just minimal use as a rudimentary whetstone. The faint metallic-black patina from the sharpening of an iron knife blade can be seen upon this in two places where there are traces of slight wear-polish from such use.

Discussion

There seems little doubt that the most interesting aspect of this worked stone assemblage is the group of finds found accompanying the Early Neolithic burial. Not only is it significant that all these 'grave goods' were of stone objects, but it is also interesting how they had been used (even as redistributed fragments) to line the (outside?) of a sort of cist, mixed in with other pieces of stone and flint. Furthermore, some of these objects appear to both 'interesting' and unusual. One example of this was the deposition of the concave-shaped 'rocking type' saddlequern with fragments of its counterpart rubbing stone, given contextually well-dated Neolithic examples of querns are not that common within this region, and are rarer still as grave goods. Yet another example was the inclusion of the spherical hammerstone – an object so carefully 'shaped' that it might be interpreted, somewhat differently, as being a 'stone ball'.

Perfectly spherical hammerstones, such as those made from the working of already rounded flint nodules, have been recorded from Southern England, as can be seen from the Portable Antiquities Scheme finds database (e.g. finds.org.uk/database/artefacts/record/id/593228 and [265733](https://finds.org.uk/database/artefacts/record/id/265733)). However, there does exist a certain resemblance between this carefully pecked and shaped hexahedral – spherical stone ball found with the Broom burial and the much more prestigious Neolithic-period 'carved stone balls' or petrospheres, the majority of which have a Scottish provenance (Marshall 1976). In fact, some 375 of the 411 known examples of these petrospheres are fairly evenly sized at or around 70mm diameter (en.wikipedia.org/wiki/carved_stone_balls). This is exactly the size of the Broom 'hammerstone'. Perhaps also significant here is the rather unusual choice of stone for the latter (a partly greisenized granite). This is striking when one compares it to the sarsen-type sandstones used for most functional objects such as querns and hammerstones. Additionally, the presence of a banded quartz vein through this rock suggests there could have been a decorative intention here, something which may imply a significance beyond its function as a tool. Analysis of its construction indicates there might have been an initial phase of careful polyhedral shaping of this stone, followed by a later cruder modification in the area of the quartz

vein, the latter perhaps representing the use of this as a hammer. Meanwhile, the incidence of 'shaped' rather than 'used' round stones in Neolithic burials is rare, yet is not unknown (NB Bruachaig, Torridon www.torridonmountains.com/bronzecist.html). In the case of the Broom object there is probably little more that we can say; we should thus conclude that it is a finely-shaped tool and/or a decorative object possessing some significance to the burial event or the life of the deceased.

Recommendations

Little in the way of further post-excavation work is required, apart from photography, and in particular the drawing of the saddlequern (<28>, <29> and <32>), stone ball (<31>) and hammerstone (cat.172a) in advance of publication. Some further investigation of the literature looking for other examples of similar burials and grave good associations would be useful.

Burnt stone – Simon Timberlake

The burnt stone from the two separate phases of excavation (BEDFM2012.59 and BEDFM2016.66) have thus far been assessed as two separate assemblages.

Phase 1 (Table A6)

The burnt stone from Phase 1 amounted to 72.332 kg, consisting of 238 fragments or complete burnt cobbles from 26 features, the largest amount coming from an Iron Age pit F.2360 (35.594 kg), an undated (but possibly Iron Age) ditch F.2341 (6.904 kg), and another pit F.2315 (5.436 kg).

Some of the burnt stone (such as from F.2315) is quite fragmentary, and probably represents the debris from the fracture of hot stone in water associated with cooking pits, although none of the features from which this material was recovered seem to have had this primary function. Indeed some of the largest assemblages (by weight) consisted of large, burnt but mostly unfractured cobbles (e.g. from F.2360).

Somewhat confusingly this 'prehistoric-type' stone was nevertheless recovered from almost all of the dated features ranging from the Early Neolithic-Early Bronze Age-Late Bronze Age-Iron Age-Roman-Saxon-to Postmedieval periods. Fragmented saddlequern was occasionally recovered from amongst this burnt material – such finds not being at all uncommon within Iron Age and even Saxon features at settlement sites in Cambridgeshire and the Eastern region (see Timberlake in Patten 2012; Evans & Tabor 2012).

Most of the lithologies encountered were quite typical of the erratic rock types chosen for burnt stone mounds and cooking pits, and notable here was the relative absence of burnt flint, a fairly typical choice of later prehistoric burnt stone use (Timberlake 2007). As with the other Broom sites and phases of

work, the stone collected from the local gravels includes a small percentage of locally-derived carstone, but it seems clear that this was usually avoided due to its friability and disaggregation on burning and subsequent immersion in water. Hard sarsen-type quartzitic sandstone and igneous rocks (particularly dolerite) seem to have been chosen in preference in relation to their abundance.

Phase 2 (Table A7)

The burnt stone from Phase 2 amounted to 58.48 kg (309 pieces) coming from 25 different features. The majority of this came from features F.2583 (12.19 kg), F.2512 (10.97 kg), F.2518 (4.7 kg) and F.2591 (3.91 kg).

The size fraction and composition of this burnt stone seems fairly similar to that coming from Phase 1 and other earlier phases of excavation at Broom. Furthermore, the quantities recovered from the former are of a similar order of magnitude (77.33kg) whilst the presence of large and incompletely burnt cobbles is a common feature of both assemblages. However, the Phase 2 assemblage, in contrast to Phase 1, provides no evidence of the locally outcropping carstone or ferruginous Lower Greensand as burnt stone, and virtually no re-cycling of discarded quern stone as burnt stone for the purposes of cooking (see Evans & Tabor 2012). This is somewhat at odds for Early-Middle Iron Age settlements in Eastern England (see Timberlake in Patten 2012), and also not that typical of other areas of the Broom landscape. We can only presume therefore that the area of current excavation lies outside of the main area of settlement, and also outside of the area of domestic contexts associated with grain milling and processing.

As with the other areas of Broom, the original context for this now dispersed assemblage of stone most probably lies with individual cooking pits associated with dwellings (Timberlake in Slater 2008).

Slag – Simon Timberlake

A total of 86g of iron smithing slag (present as slag lumps rather than as an identifiable smithing hearth base (SHB)) was recovered from a single feature in the Phase 1 excavation area, an early Anglo-Saxon *Grubenhau* (F.2132; SFB S6). Whilst this could have been re-deposited Roman slag, it seems more likely that it is in fact Saxon, such *Grubenhau* settlements often being associated with iron smithing activity and such debris.

<124> F.2132 [8112] x9 small fragments of iron smithing slag (slag lumps), total weight 26g.

<125> F.2132 [8112] x3 fragments of iron smithing slag (with the largest being 55mm diameter (50g)), total weight 60g

Human remains – Ben Neil

Methodology

Sex estimation was accomplished using a multifactoral process of identifying the dimorphic dimensions of the os coxae and the skull (where available) using methods outlined by Buikstra et al. (1994), Bruzek (2002), Phenice (1969), Scheuer (2002), Singh & Potturi (1978), and White et al. (2012). Each individual will be assigned according to the criteria in Table 26.

Term	Read as	Meaning
Female	Female	Analyst has full confidence in the determination of sex for the remains
Male	Male	
(female)	Probably Female	Analyst does not have full confidence in the determination, but feels the remains are probably the stated sex.
(male)	Probably Male	
Female?	Possibly female	Analyst does not have confidence in the determination, but feels the available evidence hints at the stated sex.
Male?	Possibly male	
Indet.	Sex indeterminate	The remains have been analysed, but are lacking sufficient diagnostic morphology for a determination of sex

Table 26: Sex estimation criteria

Age at death estimation was preferably based on data sets derived from British populations using methods based on changes in the auricular surface (Buckberry & Chamberlain 2002), the acetabulum (Calce, 2012) and molar attrition (Brothwell, 1981). Where applicable, the degree of dental development and epiphyseal union was used to estimate age and recorded following criteria outlined by Ubelaker (1999) and Buikstra et al. (1994) respectively. Assessment of prenatal through to sub-adult development was based on methods and data outlined by Scheuer & Black (2000) and Schaefer et al. (2009). Isolated fragmented bone will often have ambiguous or unobtainable morphological information thus age is indeterminate; however, where these fragments exhibited developmental, degenerative and dimensional characteristics that were clearly not neonate, infant or juvenile, the inference was adult. Each individual was assigned according the criteria in Table 27.

Neonate	Infant	Juvenile	Sub-adult	Adult	Young adult	Middle adult	Mature adult
<6months	0-4 years	5-12 years	13-18 years	18+ years	19-25 years	26-44 years	45+ years

Table 27: Age at death estimation criteria

Isolated fragmented bone was recorded according to zonation criteria set out by Knüsel & Outram (2004). Weathering is defined by stages after Behrensmeyer (1978) and categorised by the following: minor (stages 0-1) moderate (stages 2-3) and acute (stages 4-5). The overall completeness of a skeleton was calculated according to the percentage of elements present, using data outlined by Rowbotham et al. (2017). This was estimated by the amount of material representing different areas of the body. A complete skeleton comprises of: Skull = 12% Torso = 36% Arms= 16% Legs = 36%.

Cremations were recorded following criteria set out by McKinley (2004).

Results: Inhumations

The site's inhumations are summarised in Tables 28-30, below and range in date from the Early Neolithic to the Anglo-Saxon period. The following four inhumations [8573] – [8576] were excavated from a single Early Neolithic pit/grave. The disarticulated remains from grave fill [8577] represent in situ fragmentation and/or disturbance of these four inhumations.

Context	Age	Sex	Compl.	Stature	Notes	Taphonomy
8573	Mature Adult	Female	c.30%	155.86cm 5'1"	<ul style="list-style-type: none"> • Acromial end of right clavicle has a marked trapezoid line, conoid tubercle and deltoideus rugosity • Right femoral neck needs further morphometric analysis. 	Fragmented with localised moderate cortex delamination, longitudinal cracking and stepped post mortem fractures. Left scapula coracoid process has post-mortem polish.
8574	Mature Adult	Male?	c.17%	151.85cm 5'	<ul style="list-style-type: none"> • Possible slipped/healed left femoral head 	Fragmented with localised moderate cortex delamination and longitudinal cracking
5875	Infant	indet	c.5%	N/A	<ul style="list-style-type: none"> • Deciduous teeth were slightly stained a burnt orange colour. • Posterior surface of tibia either has immature disorganised bone or NSPI – differential diagnosis needed 	Fragmented, with localised minor cortex delamination
8576	Infant	indet	<5%	N/A	<ul style="list-style-type: none"> • Deciduous teeth were stained a burnt orange colour. 	Fragmented
8577			Bag			Association
	Adult	Indet.	01		One occipital bone fragment (zone 5)	Possibly associated with sk. [8574]
	Infant	Indet.	02 'C'		<ul style="list-style-type: none"> • Three skull fragments • Seventeen vertebral fragments (zones 2, 3 &4) • Three possible clavicle fragments (zone 3) • Ten rib fragments (zone 3) 	Possibly associated with sk. [8575] (no duplication present)
	Indet.	Indet.			6g of fine cortex and delaminated cortex fragments	
	Adult	Female?	03		Near complete humeral head (zone 2)	Possibly part of the left humerus of sk. [8573]
	Adult?	Indet.	04		<ul style="list-style-type: none"> • A lumbar vertebral inferior articular facet • A petrous bone fragment 	
	Infant	Indet.			A humeral diaphysis fragment (zone 11)	Possibly associated with sk. [8575] or sk. [8576]
	Indet.	Indet.			26g of fine cortex and delaminated cortex fragments	

Table 28: F.2213 Neolithic Inhumations

Two Iron Age inhumations were excavated; one, a Neonate, dates to the Early Iron Age and a second, an adult female dates to the Middle Iron Age. Both were found within storage-type pits.

Feature	Context	Age	Sex	Compl.	Stature	Notes	Taphonomy
2122	8066	Neonate	indet	c.18%	N/A		Fragmented
2370	9370	Middle Adult	Female	c.70%	147.46cm 4'8"	<p>Dental disease to include:</p> <ul style="list-style-type: none"> • Peridental abscesses, Caries, Dental calculus • Unusual dental morphology for RI₂ <p>pinpoint porosity noted on:</p> <ul style="list-style-type: none"> • lumbar bodies, left humerus head, left patella, left tibia medial condyle <p>Activity markers include:</p> <ul style="list-style-type: none"> • Marked depressed costoclavicular ligament attachment • notable expression of left and right lip of the intertubercular groove (insertion of pectoralis major) 	Fragmented with minor cortical flaking.

Table 29: Iron Age Inhumations

An (presumed) Anglo-Saxon cemetery comprised three separate inhumations, one of which (F.2206) was surrounded by a ring ditch.

Feature	Context	Age	Sex	Compl.	Stature	Notes	Taphonomy
2206	8539	Mature Adult	Female	c.40%	160.31cm 5'25"	<ul style="list-style-type: none"> • Metopic suture offset to the right of the sagittal suture. • Notable pectoralis major rugosity on the right clavicle • Eburnation noted with modified topography on a left inferior articular facet of a lumbar vertebra. 	Fragmented with localised cortex roughness and moderate to considerable delamination.
2211	8527	Adult	(Male)	c.28%	N/A	<ul style="list-style-type: none"> • Eburnation on the right superior articular facet • OA: marginal lipping between right facets of C2 & C3 vertebrae 	Fragmented and friable with a powdery texture and marks of root action.
2212	8537	Adult	(Male)	c.50%	166.13cm 5'45"	<ul style="list-style-type: none"> • Slight eburnation on right talus head with indications of marginal lipping (OA) • Eburnation on left and right inferior articular facets of L5 vertebra 	Fragmented and friable with localised moderate to considerable cortex delamination; the diploe of the skull is significantly eroded; longitudinal cracking and splintering is evident as is black mottling over the anterior surfaces of the upper limbs.

Table 30: Anglo-Saxon Inhumations

Disarticulated remains were recovered from two features (see Table 31). Disarticulated remains mean those skeletal elements and fragments distinguished by separate context from non-inhumation contexts that were disorganised and/or comingled with other material culture.

Feature	Context	Bag	Age	Sex	Notes
2369	9404	n/a	Adult	Indet.	A left radius diaphysis fragment (zones 6,7 & 8) found in RB ditch
2370	9371	n/a	Adult		An ischiopubic ramus fragment from sk. [9372]

Table 31: Disarticulated Remains

Results: Cremations

Three cremations were excavated, one (F.2235) was a relatively isolated feature whilst two were part of Pit Cluster 3, a possible cremation cemetery and were Collared-Urn associated (Table 32).

Feature	Context	Phase	Weight (grams)	Age	Notes
2235	8657	N/A	68	Adult?	The bone characterised near uniform oxidisation where it is predominantly hued white; the bone was highly fragmented and ranges within 5-15mm. Bone classification was predominantly to type with a range of flat, irregular, diaphseal, cortex and trabecular fragments; no skull was noted. Identified elements include two possible fragments of radius/ulna, one mid shaft clavicle fragment, one hamate fragment, two rib fragments, two tooth root fragments, one possible vertebral tubercle fragment and a possible mandibular notch fragment.
2255	8739	EBA	39	Sub-Adult?	The bone characterised with uniform oxidisation where it is predominantly hued white; the bone was highly fragmented and ranges within 5-15mm. Bone classification was to type with a range of cortex and diaphseal fragments; elements identified include thirteen skull fragments, two rib fragments, and a possible metacarpal diaphysis fragment.
2258	8756	EBA	8	Young Infant	The bone characterised with uniform oxidisation where it is hued white; the bone was highly fragmented and ranges within 5-15mm. Bone classification was to type with a range of flat, irregular, cortex and diaphseal fragments; elements identified include cranial fragments and a developing permanent LM, crown.

Table 32: Cremations

In addition a diminutive sample of calcined bone was excavated during the Phase 2 excavations (F.2592; see Table 33). It was not possible to classify the material as human or otherwise; no further work is required.

Feature	Context	Weight (grams)	Age	Notes
2592	10145	3	N/A	The bone characterised with uniform oxidisation where it is hued white; the bone was highly fragmented and ranges within 1-8mm. Bone was classified entirely as cortex fragments; no elements were identified.

Table 33: Calcined bone from F.2592.

Discussion

Neolithic inhumations

Grave F.2213 was aligned southwest-northeast and is remarkable for the four early Neolithic burials within it. Sk.8573, a flexed adult female, lies on its left side to face north. Sk.8574, a flexed adult male horizontally reflects sk.8573 and lies on its right side. It was noted that the left foot of sk.8574 rested over the right tibia of sk.8573, thus inferring a sequence of internment. Two infants (sk.8575 and sk.8576) were interred to the north of sk.8573; their diminutive remains complicate an interpretation but it appears that sk.8575 was in geometric translation to sk.8574 whereby the skulls were similarly orientated. The skull of sk.8576 was in horizontal reflection to sk.8575, thus it seems the infants' mirrored the adults' configuration. There are few examples that comparatively illustrate this type of Neolithic inhumation in the region, but one such multiple burial at Fengate appears in part to replicate this model. This grave was likewise aligned on the same axis, contained a flexed adult male and the disarticulated remains of an adult female, infant and a juvenile. The adult male lay on its right side; the adult female and juvenile were comingled in horizontal reflection to the male with the infant remains lay between them, (Pryor 1976). The similarities are palpable and may warrant further analysis.

Iron-Age

The two Iron Age burials are spatially and temporally distinct. It is likely that F.2122 contained a complete Early Iron Age neonate inhumation, where the remaining skeletal elements were seen in approximate anatomical position. F.2370, contained a Middle Iron Age adult female inhumation and formed part of a nine-pit cluster.

Anglo-Saxon inhumations

F.2206 contained an extended, supine adult female, encircled by a ring gully and was flanked by two extended, supine adult males (F.2211 and F.2212) to the northeast and southwest respectively. The northeast-southwest arrangement of these inhumations are comparable to three similarly arranged Anglo-Saxon inhumations (graves' 3, 4 & 5) at Kings Hill, which respected a late Neolithic/Bronze Age ring ditch. However, none of these inhumations were encircled; (F.403) did not contain any human remains and the two flanking inhumations (F.412 to the west-southwest and F.410 to the east-northeast) contained a flexed juvenile and infant remains respectively. Cooper & Edmonds (2007) suggest the association with the ring ditch leaves little doubt that they were placed to appropriate the monument for its prominence, proximity to settlement and its significance in association with a boundary or route-way. The three Anglo-Saxon inhumations reported here apparently respected an undated northeast-southwest curvilinear feature; whether this feature was appropriated as an existing boundary is unsubstantiated, but warrants consideration.

Cremations

That the remains appear so efficiently cremated informs on technique and a familiarity of pyre technology. This in turn may reflect on wider cultural notions of hygiene and inertness. Depending on the age and sex of the individuals, the average weight of bone of British adult burials ranges within 600–900g, (around 38–50% of the average expected from a full adult cremation) (McKinley 2013). That these three cremations have significantly lower weights may indicate selection criteria that relates to a notion of transportability and symbolic memento, for example, a keepsake that becomes spatially and temporally removed from the original cremation. The final interment of these cremains may represent memorialisation, especially for F.2255 and F.2258, which were situated within an Early Bronze Age linear cluster.

Statement of Potential

Neolithic inhumations

The suggestion that this group may be familial is strong, thus knowing the genetic kinship would give important insights into the function of these graves and wider social structures. Although the condition of the bone is poor, recovering viable DNA has potential by targeting strongly delimited skeletal elements such as the teeth and petrous bones. The stained deciduous teeth of the infants may have multiple causes, ranging from chromogenic compounds (from foods and liquids) to poor oral hygiene; further analysis may resolve this cause. The possible slipped/healed left femoral head requires definitive diagnosis, where the condition is seen to be more prevalent in males (Bloomberg et al. 1978). The expressions on the right clavicle of sk.8573 may indicate a habitual activity.

Iron Age inhumations

That sk.9370 suffered with poor oral hygiene may have been a contributing factor in cause of death. Before the introduction of antibiotics, dental abscesses were a leading cause of death (Clarke 1999; Robertson & Smith 2009) where severe sepsis could for example, find a route to the base of the brain or cause Ludwig's Angina. Analysis of the dental calculus observed in sk.2370 should be considered. It is a good source of DNA, bio-molecules and microfossils and can inform on disease and systemic health. Pinpoint bone porosity over articulating surfaces may indicate an early onset degenerative condition.

Cremations

Although this assessment found no obvious duplication of element, the fraction size and preservation of the material precluded a systematic appraisal for this data; further analysis may warrant the collection of this information but it is unlikely to change the existing result.

Anglo-Saxon inhumations

All three individuals exhibited markers of degenerative joint disease with eburnation evident in the lower back; this may indicate a habitual activity and warrants further investigation. Similarly, the expression on the right clavicle of sk.8539 may indicate a habitual activity. The poor preservation of these skeletons attests to aggressive taphonomic process that might inform on agents responsible for the transitional condition of the bone. Examination of fragmentation and mottling will offer a better understanding of the environment and landscape the individuals were buried in over time; for example, is the black mottling seen on the bone attributable to manganese oxide staining (Marin Arroyo et al. 2008) or a result of manganese-oxidizing bacteria (López-González et al. 2006)? The former infers a wet environment the latter has dissolutive implications for bone (Northup & Lavoie 2001).

Shell – Simon Timberlake

Some 26g of oyster shell (*Ostrea edulis*) was recovered from two features during the Phase 1 excavations; one was a Roman ditch (F.2396) and the other a Saxon SFB (F.2127). It is possible that all five abraded oyster shells come from the Roman levels. It seems possible that these were cultivated oysters, as was typical in Roman Britain, and were either riverine or estuarine in origin.

Faunal Remains – Vida Rajkovača

Introduction

Although recovered from two distinct areas over two different seasons (Phases 1 [BEDFM2012.59] and 2 [BEDFM2016.66], see Table 34), the faunal assemblage effectively represents a single site assemblage. Of the raw count of 3907 fragments (weighing 15824g), some 766 assessable specimens were recorded with only 313 identified to species level.

	Raw count	Weight (g)	Number of assessable specimens	ID to species
Phase 1	2839	12514	643	284
Phase 2	1068	3310	123	29
Total	3907	15824	766	313

Table 34: Breakdown of quantities of animal bone (weight and count) for the two areas.

For the purposes of this assessment, the two phases' sub-sets were quantified independently although they are discussed as a single site assemblage. Based on the chronology of the material, period sub-sets were also created in order to study the site. Bone came from features dated to the Early and Middle Neolithic; Iron Age pits and enclosure ditches; Romano-

British ditches and Saxon SFBs, with Iron Age and Saxon material making up almost 90% of the site assemblage. The assessment aims to quantify, characterise the assemblage and assess its potential for future study and to address the project-specific objectives.

Methods: quantification and identification

The zooarchaeological investigation followed the system implemented by Bournemouth University with all identifiable elements recorded (NISP: Number of Identifiable Specimens) and diagnostic zoning (amended from Dobney & Reilly 1988) used to calculate MNE (Minimum Number of Elements) from which MNI (Minimum Number of Individuals) was derived. Identification of the assemblage was undertaken with the aid of Schmid (1972), Hillson (1999) and reference material from the Cambridge Archaeological Unit, Grahame Clark Zooarchaeology Laboratory at the Department of Archaeology in Cambridge. Ageing of the assemblage employed both mandibular tooth wear (following Payne (1973) for ovicapra and Grant (1982) for cattle and pigs and fusion of proximal and distal epiphyses (Silver 1969). Where possible, measurements were taken following Von den Driesch (1976). Gnawing marks made by carnivores and rodents will be differentiated and signs of partial digestion will also be recorded. Descriptions about the forms and locations of pathological conditions and non-metrical traits will be recorded where possible.

Preservation, fragmentation and taphonomy

With an overall moderate level of preservation, the assemblage was made up of two halves: the 2013 material showed somewhat better preservation than the 2016 material. Weathering and surface erosion were recorded throughout and the degree of fragmentation was considerable. The only elements recorded as complete were phalanges, astragali, calcanei, tarsals and carpals; with long bones, mandibles and skull being fragmentary. Gnawing was recorded on c.5% and butchery on c.4% of the assemblage. Burning was also remarkably rare, observed on just 3% of the bone.

Phase 1 Results (BEDFM2012.59)

The more substantial of the two sub-sets, the material excavated during the 2013 season was also more varied in terms of species representation. Earlier material was sparse, with cow and red deer being the only identified species (Table 2?). Bone recovered from Iron Age contexts was more abundant, dominated by the remains of the two main 'food species': cattle and ovicapra. Pig and horse were under-represented with five and three specimens each, and dog was positively identified based on 18 specimens and the presence of canine gnawing marks. A single red deer specimen was also recorded. Romano-British material was characterised by the remains of cattle, sheep/goat and horse and a higher proportion of cattle-sized elements.

Although with a limited range of species, quantitatively more significant was the Anglo-Saxon material, characterised by unusually high numbers of pig (c.44% of the identified species count) and sheep/pig-sized elements. The remainder of the Anglo-Saxon sub-set fits well with known period patterns of prevalence of domestic sources of food.

Taxon	NISP						Total NISP
	Early Neolithic	Middle Neolithic	Iron Age	Roman	Saxon	Undated	
Cow	1	.	60	16	48	1	126
Sheep/ goat	.	.	30	7	13	.	50
Sheep	.	.	.	1	.	.	1
Pig	.	.	5	.	53	1	59
Horse	.	.	3	3	1	.	7
Dog	.	.	18	.	.	.	18
Dog/ fox	.	.	10	.	.	.	10
Fox	.	.	4	.	.	.	4
Red deer	1	.	1	.	.	2	4
Chicken	.	.	.	.	2	.	2
Frog/ toad	.	.	.	.	3	.	3
Sub-total to species	2	.	131	27	120	4	284
Cattle-sized	.	.	81	20	59	2	162
Sheep-sized	2	1	52	2	136	1	194
Bird n.f.i.	.	.	.	.	3	.	3
Total	4	1	264	49	318	7	643

Table 35 Phase 1 - Number of Identified Specimens for all species – breakdown by phase; the abbreviation n.f.i. denotes that the specimen could not be further identified.

Only two mandibles were available for ageing: a sheep/ goat mandible from an Iron Age well F.2310, killed in its 4th year; and a piglet mandible from Saxon SFB F.2127, aged between two and three weeks. Epiphyseal fusion data showed presence of older individuals, as well as some slaughtered as juveniles.

As for the butchering practices, fine knife marks as part of the preparation for disarticulation were observed, but crude chop marks were more prevalent. Cow maxilla fragment exhibited fine cuts above the tooth row, for example, suggestive of skinning. Red deer antler from an undated pit F.2343 was sawn off the skull.

The only complete burial from this sub-set was an almost complete pig skeleton, excavated from an undated pit F.2393 ([9537]), well-preserved and aged to 7-12 months.

Phase 2 Results (BEDFM2016.66)

Bone from the 2016 season was recovered from Middle Iron Age and Romano-British contexts, with the earlier material being somewhat more abundant. Poor preservation affected the percentage of identified species and of the sub-set's 115 specimens, only 29 (25%) were possible to assign to species level (Table 3?). Though based on small numbers, the overall prevalence of domestic sources of food, especially cattle, is in keeping with findings from the area and it fits with period patterns.

There was no ageing or biometrical data available from the sub-set, preventing any discussions on the character of animal use. With an exception of a single sheep/goat distal tibia fragment, which was chopped axially, it was not possible to observe any butchery marks. A near complete dog skeleton came from the Middle Iron Age pit F.2537, measuring c.55cm at shoulder.

Taxon	NISP			Total NISP
	Middle Iron Age	Roman	Undated	
Cow	16	2	1	19
Sheep/ goat	6	1	.	7
Sheep	1	.	.	1
Horse	1	.	.	1
Dog	1	.	.	1
Sub-total to species	25	3	1	29
Cattle-sized	9	14	.	23
Sheep-sized	25	.	.	25
Mammal n.f.i.	30	8	.	38
Total	89	25	1	115

Table 36: Phase 2 - Number of Identified Specimens for all species – Breakdown by phase; the abbreviation n.f.i. denotes that the specimen could not be further identified.

Discussion

Two chronologically disparate sub-sets, Iron Age and Anglo-Saxon, sit at the centre of this assessment. The Iron Age material, though collectively quantified and largely Middle Iron Age, did have an earlier component identified based on six pits. Only one of these pits (F.2310) contained animal bone (NISP=55, 440g). Of note is that almost the entire canid cohort came from this pit (NISP for dog=17 and NISP for dog/ fox=10), though it was not possible to observe any articulation.

Middle Iron Age enclosure ditches contained small quantities of poorly preserved bone and contemporary roundhouses were devoid of any animal bone. Dominated by cattle, the pit-derived material made up the remainder of the Middle Iron Age cohort. As for the Romano-British material, beyond stating the range of species it is difficult to discuss it any further.

Quantitatively the most important sub-set came from Saxon contexts. Characterised by an unusually high percentage of pig, closely followed by cattle and a small percentage of ovicapra, the assemblage's faunal signature does not fit with known period patterns. While Crabtree's summary of the Saxon animal husbandry practices in East Anglia (2012) shows very variable figures from across the region, only one major site has a dominant pig cohort (Wicken Bonhunt). When plotted on the tripolar graph amongst other Early and Middle Anglo-Saxon sites in East Anglia (Crabtree 2012, 15, Fig.3.2), the small Broom sub-set falls outside the main cluster made up by sites with high

cattle and sheep and low pig numbers. The Broom sub-set also sits away from the two outliers, Wicken Bonhunt and St. Alban's Abbey, both with high pig and low numbers for cattle and ovicapra. Though this dominance of pig (NISP=47%) over cattle (NISP=42%) is marginal, the combination of these two food species could potentially be significant and may point to an environmental niche particularly suited for these two animals. If we look at the economic data, the skeletal element count and the wide-ranging ageing data seem to demonstrate a level of economic self-sufficiency, but by no means an economic isolation from other centres in the area.

The assemblage has potential to contribute to our understanding of landscape use and economy during the Iron Age and the Early Saxon period, especially if findings are viewed against the similarly dated sites from the area.

Assessment of charred plant macrofossils and wood charcoal – Ellen Simmons

Introduction

Archaeobotanical sampling was implemented during the Phase 1 and 2 excavations (BEDFM2012.59/BEDFM 2016.66). A total of 41 bulk sieving samples, representing 507 litres of soil, were selected for assessment in order to determine the concentration, diversity, state of preservation and suitability for use in radiocarbon dating, of any archaeobotanical material present. A further aim of this assessment was to evaluate the potential of any archaeobotanical material present to provide evidence for the function of the contexts, the economy of the site or for the nature of the local environment.

Recovery, processing and laboratory methods

The flotation samples were processed for the recovery of charred plant remains and wood charcoal by the CAU using a water separation machine. Floating material was collected in a 300µm mesh, and the remaining heavy residue retained in a 1mm mesh. The flots and heavy residues were air dried.

The samples were assessed in accordance with English Heritage guidelines for environmental archaeology assessments (Jones, 2011). A preliminary assessment of the samples was made by scanning using a stereo-binocular microscope (x10 - x65) and recording the abundance of the main classes of material present. Charred plant material was quantified using a scale of abundance (- = < 5 items, + = > 5 items, ++ = > 10 items, +++ = > 30 items, ++++ = > 50 items, +++++ = > 100 items). Wood charcoal fragments greater than 2mm in size were counted except where more than 500 fragments were present.

Identification of plant material was carried out by comparison with material in the reference collections at the Department of Archaeology, University of Sheffield and various reference works (e.g. Cappers *et al*, 2006). Cereal identifications and nomenclature follow Jacomet (2006). Other plant

nomenclature follows Stace (2010). The composition of the samples is recorded Appendix 1, Tables A10-15. The seed, in the broadest sense, of the plant is always referred to in the table unless stated otherwise. The abbreviation *cf.* means 'compares with' and denotes that a specimen most closely resembles that particular taxa more than any other.

Preservation

The preservation of the charred cereal grains present in the samples was generally poor with the majority of grains being distorted, lacking epidermis and identifiable by gross morphology only.

The wood charcoal fragments present in the samples were generally well preserved, with minimal evidence of vitrification or mineralisation. The density of wood charcoal in the samples was however generally low.

A relatively low proportion of intrusive roots were present in the majority of samples indicating a reduced likelihood that any charred material will be intrusive.

Charred plant macrofossils

A low density of charred plant macrofossils which included cereal grain, wild or weed plant seeds and hazel nutshell were present in a small number of the sampled contexts.

Early Neolithic

No charred cereal grain was present in the samples from contexts dated to the Early Neolithic period. Just over ten charred fragments of hazel nutshell (*Corylus avellana*) greater than 2mm in size were present in sample 25 from pit F.2104 fill [8008]. A tuber / rhizome was present in sample 70 from burial F.2213 fill [8577]. An indeterminate cereal grain, a seed of sheep's sorrel (*Rumex acetosella*) and a <2mm culm node / monocot stem fragment were present in sample 95 from possible Neolithic pit F.2296 fill [8937].

Early Bronze Age

No charred cereal grain was present in the samples from contexts dated to the Early Bronze Age period. Two seeds of blinks (*Montia fontana* ssp. *chondrosperma*) and an elder seed (*Sambucus nigra*) were present in sample 81 from cremation F.2255 deposit [8739]. A seed of nipplewort (*Lapsana communis*) and an onion couch grass tuber (*Arrhenatherum elatius* var. *bulbosum*) were present in sample 83 from Collared Urn cremation F.2258 fill [8756].

Late Bronze Age

A glume wheat glume base (*Triticum dicoccum* / *spelta*), a pea family seed (Fabaceae), a sedge seed (*Carex* spp.), between five and ten goosefoot seeds (*Chenopodium* spp.) and a <2mm culm node / monocot stem fragment were present in sample 61 from F.2198 context [8450], which was material from the interior of a pot.

Early Iron Age

Between ten and thirty indeterminate barley grains (*Hordeum* sp.) were present sample 150 from pit F.2500 fill [9701] along with between five and ten goosefoot seeds and less than five seeds of heath grass (*Danthonia decumbens*), brome / rye grass seeds (*Bromus* spp. / *Lolium* spp.) and small seeded grass seeds (<2mm Poaceae). A seed of sheep's sorrel was present

in sample 98 from pit F.2310 fill [9014].

Middle Iron Age

One indeterminate cereal grain was present in sample 190 from enclosure ditch F.2583 fill [10083] along with a seed of blinks. A seed of curled / clustered / broad-leaved dock (*Rumex crispus / conglomeratus / obtusifolius*) was present in sample 153 from pit F.2512 fill [9736]. Three seeds of knotgrass (*Polygonum aviculare*), a goosefoot seed, a bedstraw seed (*Galium* spp.) and a dead nettle family seed (Lamiaceae) were present in sample 174 from pit F.2537 fill [9819].

A glume wheat glume base was present in sample 114 from round house gully F.2359 fill [9306]. A corn spurrey seed (*Spergula arvensis*) was present in sample 103 from enclosure ditch F.2318 fill [9040]. A medick / clover seed (*Medicago* spp. / *Trifolium* spp.) and two goosefoot seeds were present in sample 100 from pit F.2320 fill [9048].

Roman

No charred plant macrofossils were present in the samples from contexts dated to the Roman period.

Saxon

Less than five free threshing wheat and probable free threshing wheat grains were present in sample 29 from SFB S5 F.2127 context [8101] along with fragments of Celtic/horse bean (*Vicia faba*).

Undated features

A spelt wheat grain (*Triticum spelta*) and an indeterminate cereal grain were present in possible cremation F.2235 deposit [8657] along with seeds of blinks (*Montia fontana* ssp. *chondrosperma*) and between five and ten <2mm culm nodes / monocot stem fragments. An indeterminate wheat grain was present in sample 185 from possible cremation F.2592 deposit [10145].

A small assemblage of uncharred wild or weed plant seeds, which are likely to represent plant material preserved by anoxic waterlogging, were present in samples 194 and 193 from ditch terminus F.2596/2597 contexts [10184] and [10188]. The taxa represented included meadow / creeping / bulbous buttercup (*Ranunculus acris / repens / bulbosus*), birch (*Betula* sp.), goosefoots, thistles (*Carduus* sp. / *Cirsium* sp.) and sedges. Stonewort (Charophyte) oospores were also present.

A free threshing wheat rachis node (*Triticum nudum*) and an indeterminate cereal grain were present in sample 104 from enclosure ditch F.2276 fill [9136].

Wood charcoal

The majority of the sampled contexts contained less than five charcoal fragments greater than 2mm in size, which is an insufficient number of fragments to provide a representative sample of the woody taxa utilised as fuel.

Neolithic

A small assemblage of twenty one charcoal fragments greater than 2mm in size was present in sample 95 from pit fill 8937. Both ring porous and diffuse porous taxa were present.

Early Bronze Age

Rich assemblages of over one hundred wood charcoal fragments greater than 2mm in size were present in sample 81 from cremation F.2255 deposit [8739], sample 82 from Collard Urn cremation F.2257 deposit [8754], which is possibly cremation related, and sample 83 from pit

fill 8756. The charcoal assemblage present in pit F.2257 fill [8754] was predominantly of ring porous taxa, much of which was morphologically similar to oak (cf. *Quercus* sp.). Both ring porous and diffuse porous taxa were present in cremation F.2255 deposit [8739] and cremation F.2258 deposit [8756], with charcoal fragments morphologically similar to oak also present. A number of the probable oak charcoal fragments were also noted to have very closely spaced annual growth rings. Rich assemblages of over one hundred wood charcoal fragments greater than 2mm in size were also present in undated possible cremation deposits F.2235 [8657] and F.2592 [10145].

Saxon

A small assemblage of nineteen wood charcoal fragments greater than 2mm in size were present in sample 29 from SFB S5 F.2127 context [8101]. The fragments were all of diffuse porous taxa.

Radiocarbon dating

Material suitable for use in radiocarbon dating was present in sample 25 from pit F.2104 fill [8008] in the form of charred hazel nutshell, as well as in sample 29 from sunken feature building F.2127 context [8101], sample 79 from possible cremation F.2235 deposit [8657], sample 150 from pit F.2500 fill [9701] and sample 185 from possible cremation F.2592 deposit [10145], in the form of charred cereal grains.

Discussion

Very little evidence for crop cultivation was present in the samples selected for assessment. The charred hazel nutshell (*Corylus avellana*) in Early Neolithic pit fill 8008 indicates the utilisation of wild food resources, which is a common feature of Neolithic archaeobotanical assemblages (Moffett *et al* 1989). The elder seed (*Sambucus nigra*) which was present in Early Bronze Age cremation F.2255 deposit [8739] may also be representative of food remains, but may also have been burnt accidentally along with pyre fuel. Glume wheat (*Triticum dicoccum* / *spelta*) chaff was present in Late Bronze Age and Iron Age contexts and barley grain (*Hordeum* sp.) was present in Early Iron Age pit F.2500 fill [9701]. Free threshing wheat grain (*Triticum nudum*) and Celtic bean (*Vicia faba*) were also present in Saxon sunken feature building F.2127 context [8101]. Glume wheats and barley are both typical crops of the Late Bronze Age and Iron Age periods in the East of England (Murphy 1997). Free threshing wheat appears to have replaced spelt wheat, probably during the Middle Saxon period, as the principle wheat type cultivated and Celtic bean is also relatively frequently represented in Saxon archaeobotanical assemblages from the East of England (Murphy 1997). The low density of charred plant macrofossils may be due to poor conditions for preservation but may also indicate that cereal processing was not carried out to any great extent at the site. It is also possible however that crop processing bi-products were used for other purposes such as fodder and temper rather than being burnt.

The small assemblage of charred wild or weed plant seeds provides some limited information regarding the local environment. Sheep's sorrel (*Rumex acetosella*), which was present in possible Neolithic pit F.2297 fill [8937] and prehistoric pit F.2310 fill [9014], is commonly associated with acid sandy soils, as is the typical crop weed corn spurrey (*Spergula arvensis*), which was

present in Iron Age enclosure ditch F.2318 fill [9040]. Heath grass (*Danthonia decumbens*), which was present in Early Iron Age pit F.2500 fill [9701], is also commonly associated with grassland and heaths on sandy or peaty soils and is frequently present in association with spelt wheat in archaeobotanical assemblages of Iron Age date (Hillman 1981; van der Veen 1992). It is possible, therefore that some cultivation was being carried out on acid sandy soils although these seeds may also have originated in material collected for fodder, tinder, roofing or flooring material. A range of other taxa which are commonly associated with fertile disturbed soils and cultivation such as goosefoots (*Chenopodium* spp.), knotgrass (*Polygonum aviculare*), bedstraw (*Galium* sp.) and brome / rye grass (*Bromus* spp. / *Lolium* spp.) were present in Late Bronze Age and Iron Age contexts and are likely to represent crop weeds. Nipplewort (*Lapsana communis*) and onion couch grass (*Arrhenatherum elatius* var. *bulbosum*), which were present in Early Bronze Age cremation F.2258 fill [8756], are representative of waste ground and grassland, possibly originating in material collected for use as tinder. Blinks (*Montia fontana* ssp. *chondrosperma*), which was present in Early Bronze Age cremation F.2255 deposit [8739], is representative of seasonally damp soils.

The small assemblage of wild or weed plant seeds likely to have been preserved by anoxic waterlogging, which were present in ditch terminus F.2596/2597 contexts [10184] and [10188], also include taxa commonly associated with fertile disturbed soils such as goosefoots and thistles (*Carduus* sp. / *Cirsium* sp.). Grassland is indicated by meadow / creeping / bulbous buttercup (*Ranunculus acris* / *repens* / *bulbosus*), scrub is indicated by seeds of birch (*Betula* sp.) and damp soils are indicated by sedges. The presence of water in ditch terminus F.2596 context [10188] is indicated by stonewort (Charophyte) oospores.

Preliminary examination of the wood charcoal assemblage present in the samples using low power microscopy indicated that both ring porous and diffuse porous taxa were present, suggesting the likely use of a mix of woody taxa as fuel. Ring porous taxa which are frequently present in archaeological charcoal assemblages include oak (*Quercus* sp.), ash (*Fraxinus excelsior*) and elm (*Ulmus* sp.). Frequently present diffuse porous taxa include willow / poplar (*Populus* / *Salix*), birch (*Betula* sp.), alder (*Alnus glutinosa*), hazel (*Corylus avellana*), blackthorn (*Prunus spinosa*) the hawthorn / sorbus group (Pomoideae) and cherry (*Prunus padus* / *avium*). Identification of the wood charcoal assemblage using high power microscopy would however be necessary, in order to confirm the full range of taxa present.

The presence of predominantly ring porous taxa, much of which was morphologically similar to oak, in the rich charcoal assemblage from Early Bronze Age cremation F.2258 fill [8756], indicates a potentially more selective use of fuel in this deposit. The presence of closely spaced annual growth rings on the probable oak charcoal fragments in sample 81 from cremation F.2255 deposit [8739], samples 82 and 83 from Collard Urn pit F.2257 and cremation F.2258 contexts [8754] and [8756], indicates the use of wood from slow grown trees, either as a result of poor growing conditions or trees growing in relatively well established closed woodland. Oak is the predominant taxon

present in other Early Bronze Age cremation deposits from the Midlands and East of England (Murphy 2001), which is likely to be related in part to the excellent properties of oak as a fuel wood (Webster 1919). At some fen edge sites however a range of other taxa are present in cremation deposits, indicating that both fuel wood suitability, availability and cultural considerations are all likely to have been involved in the selection of wood for cremation pyres (Murphy 2001). Analysis of the wood charcoal assemblage from the cremation deposits at Broom South Quarry would therefore provide additional evidence for the selection of pyre fuel wood during the Early Bronze Age in the region.

Recommendations for further work

No further sorting and analysis of the samples for charred plant macrofossils would be recommended as it is unlikely that significant additional evidence for crop cultivation or the local environment would be recovered.

The wood charcoal assemblage present in sample 81 from probable Early Bronze Age cremation deposit 8739, sample 82 from probable Early Bronze Age collard urn pit F.2257 fill 8754 and sample 83 from probable Early Bronze Age cremation fill 8756 would be suitable for full identification and analysis. Identification of one hundred wood charcoal fragments greater than 2mm in size from these deposits would be expected to provide a representative sample of the woody taxa utilised as fuel. Potential evidence for the type of wood utilised (small or large diameter) and the condition of the wood prior to burning (decaying, freshly cut or well-seasoned) may also be recovered during identification. The wood charcoal assemblage present in sample 185 from undated possible cremation deposit F.2592 [10145] and sample 79 from undated possible cremation F.2235 deposit [8657] would also be suitable for full identification and analysis although dating evidence would need to be obtained for these deposits.

Identification of the small wood charcoal assemblage present in sample 95 from probable Neolithic pit F.2296 fill [8937] and sample 29 from Saxon SFB S5 F.2127 context [8101] would also provide some limited information concerning fuel wood availability and selection which could be compared with the evidence from the Early Bronze Age contexts.

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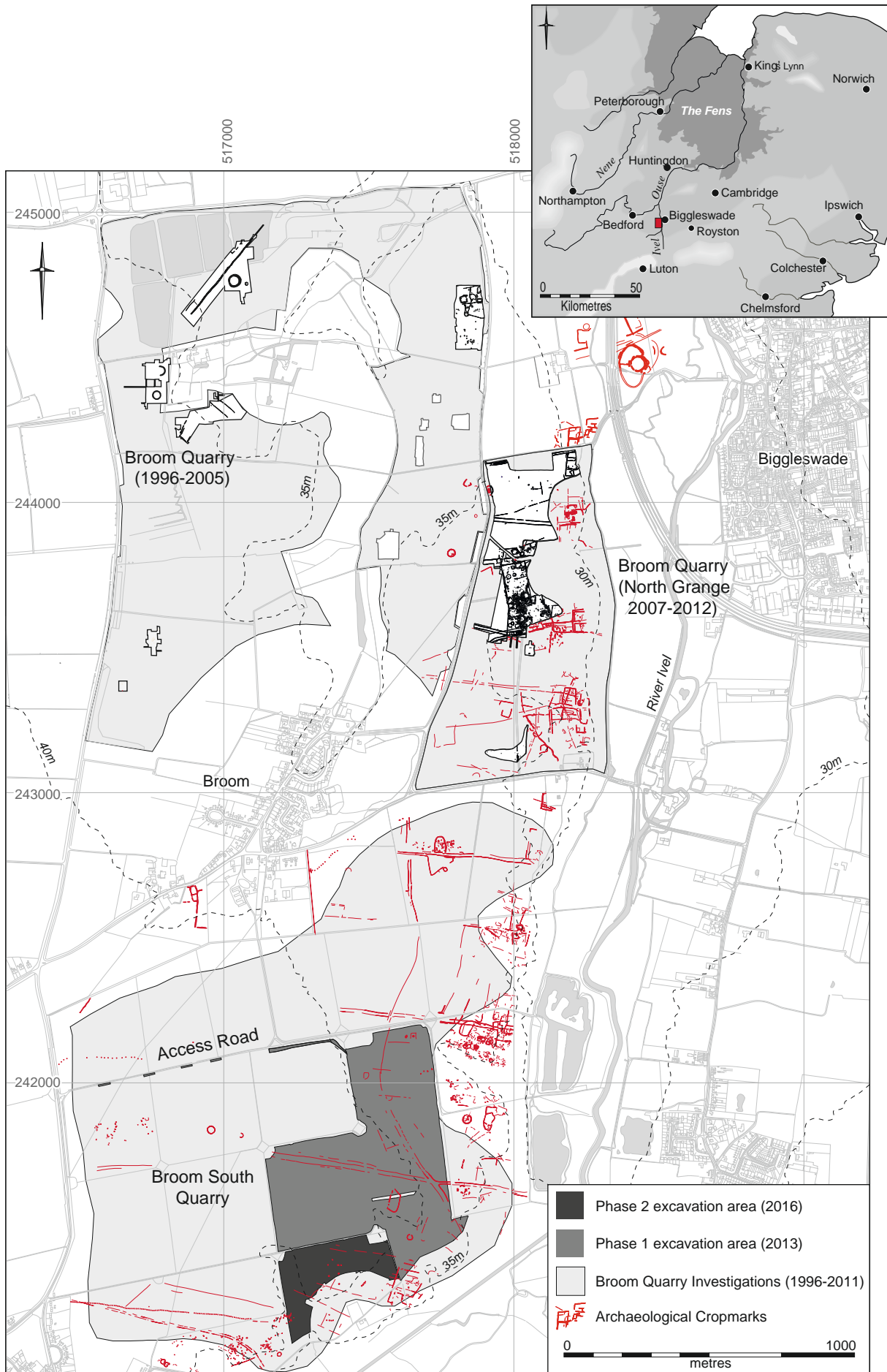


Figure 1. Location map

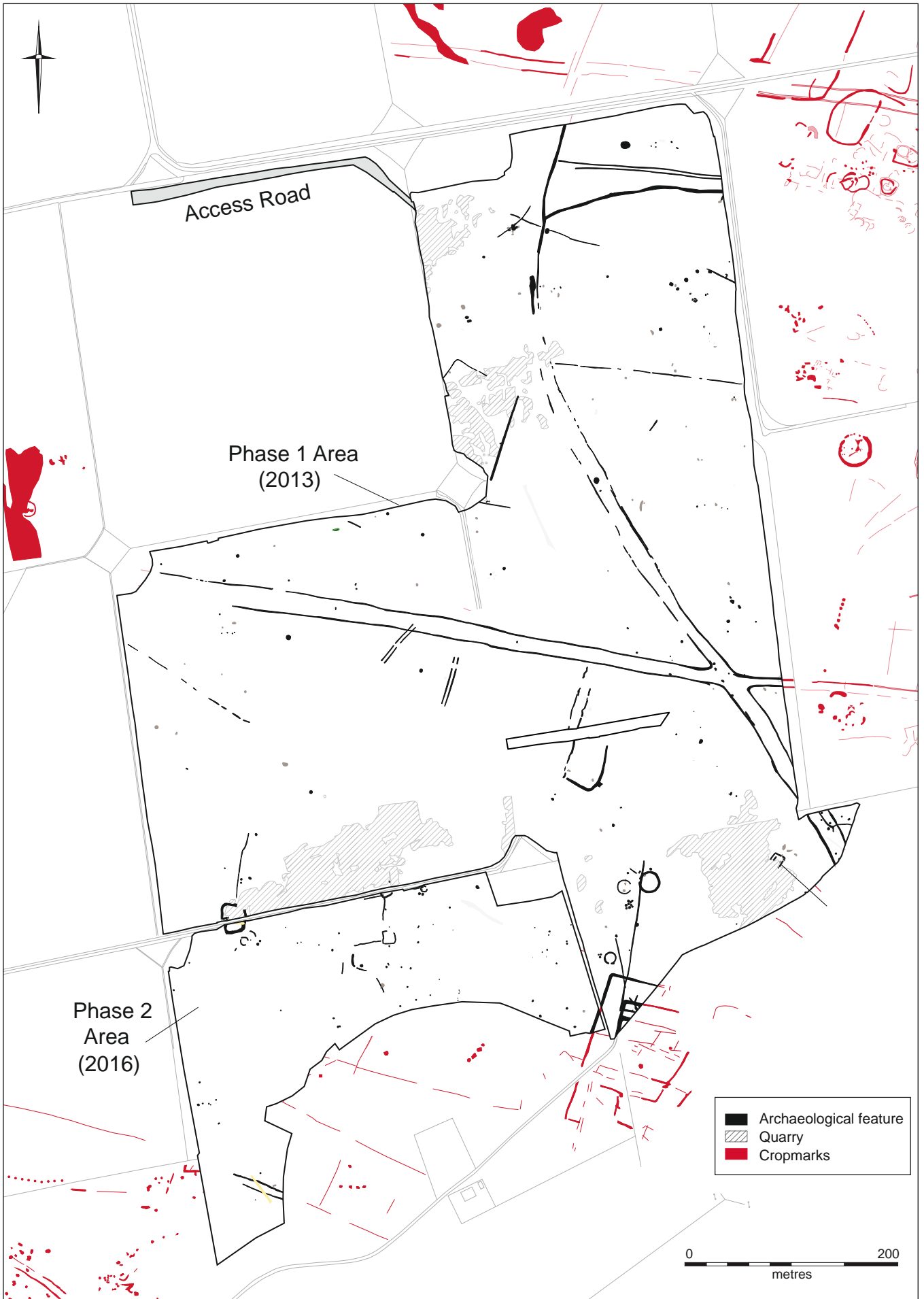


Figure 2. Excavation Area and cropmarks.

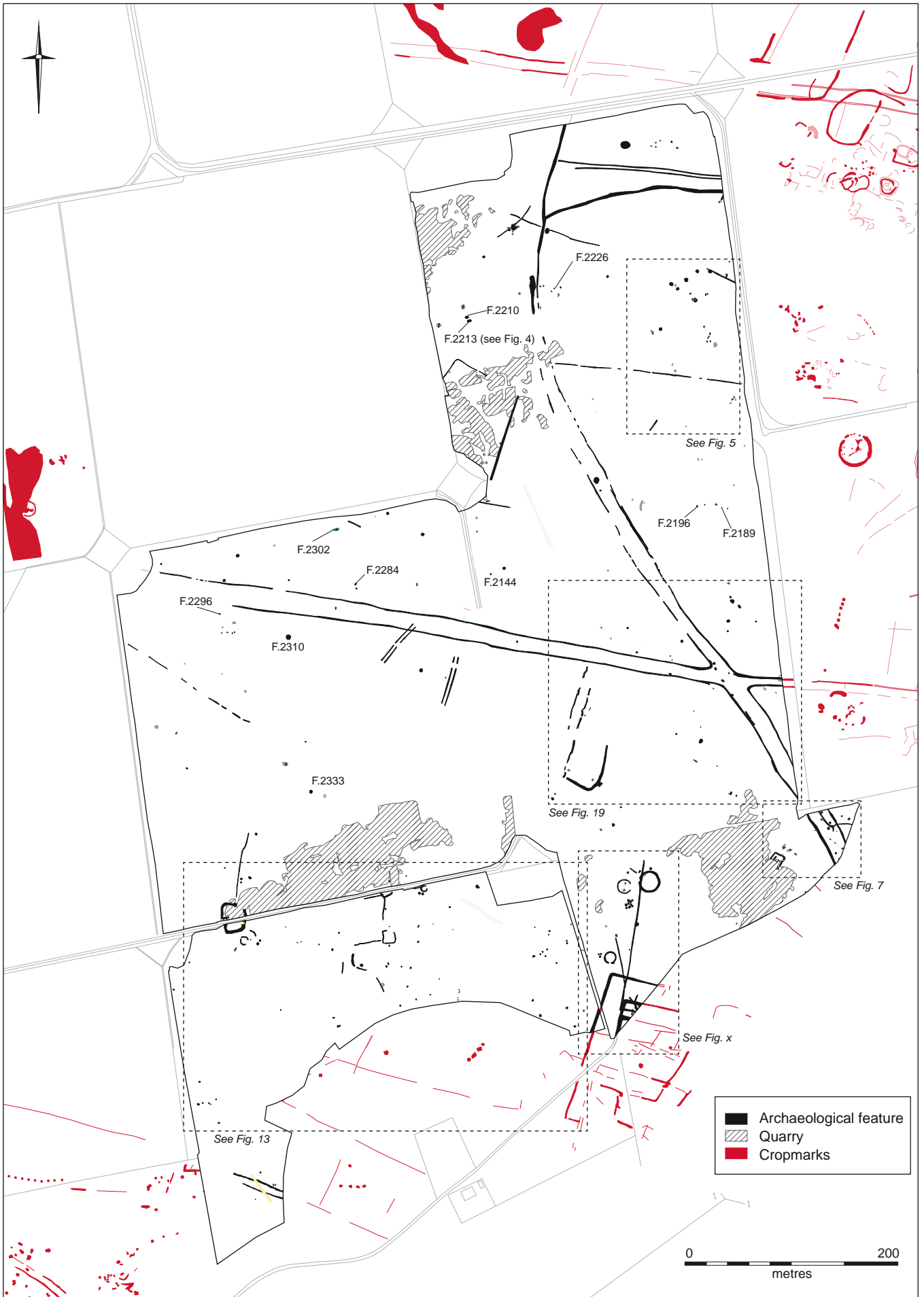


Figure 3. Inset locations and isolated features mentioned in the main text

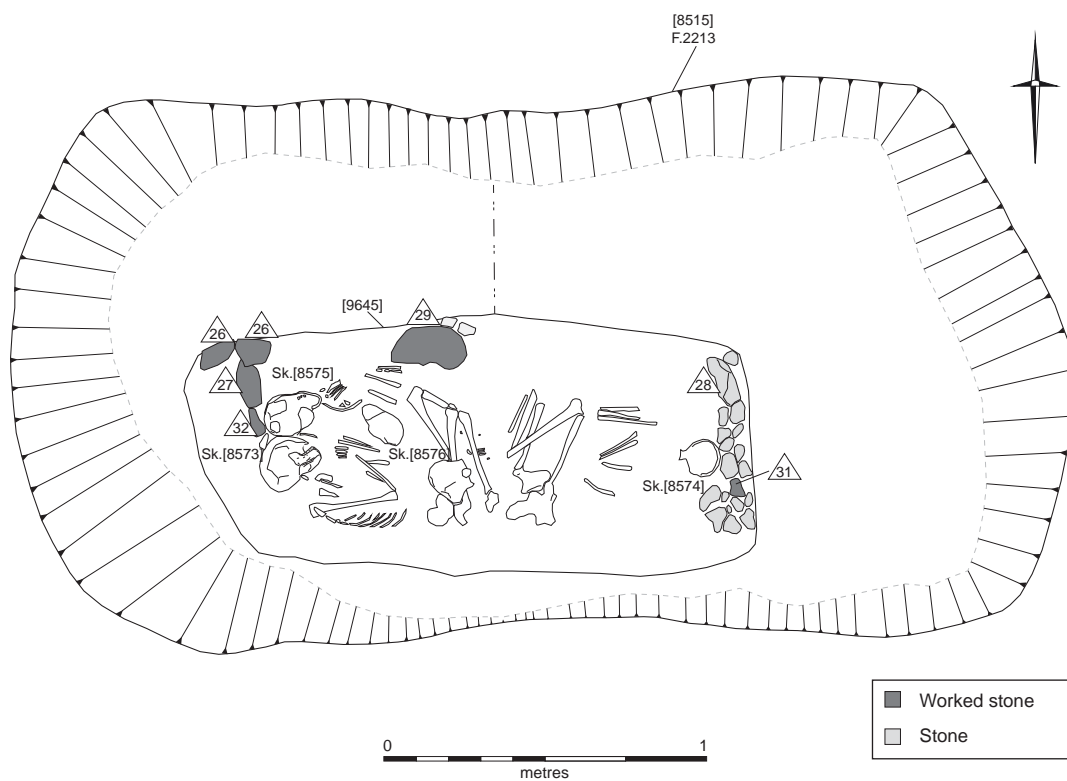


Figure 4. Early Neolithic burial F.2213

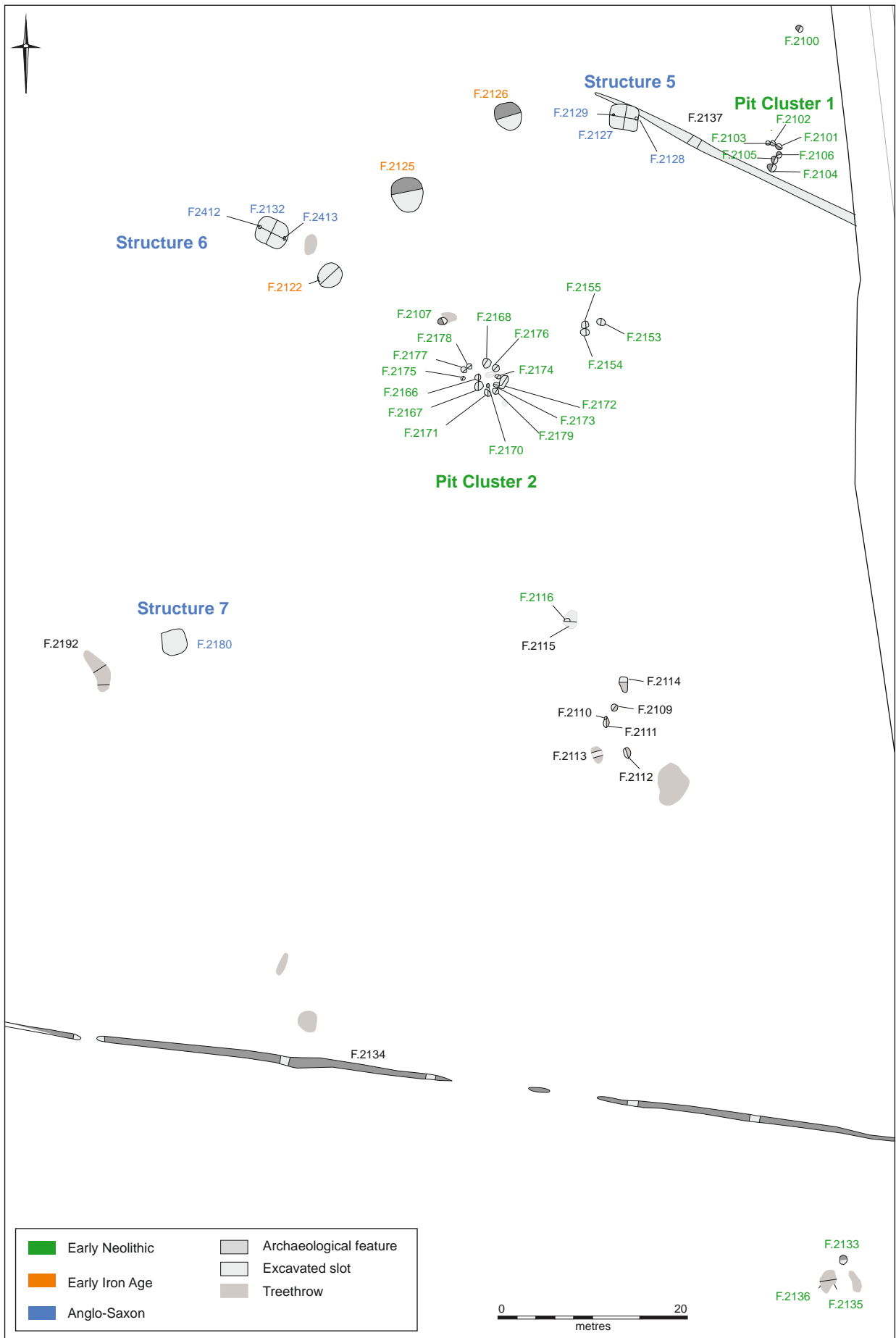


Figure 5. Feature Plan : Early Neolithic pit clusters and Anglo-Saxon SFB's



Figure 6. Pit Cluster 1 (top) and Late Bronze Age pit F.2196 (bottom)

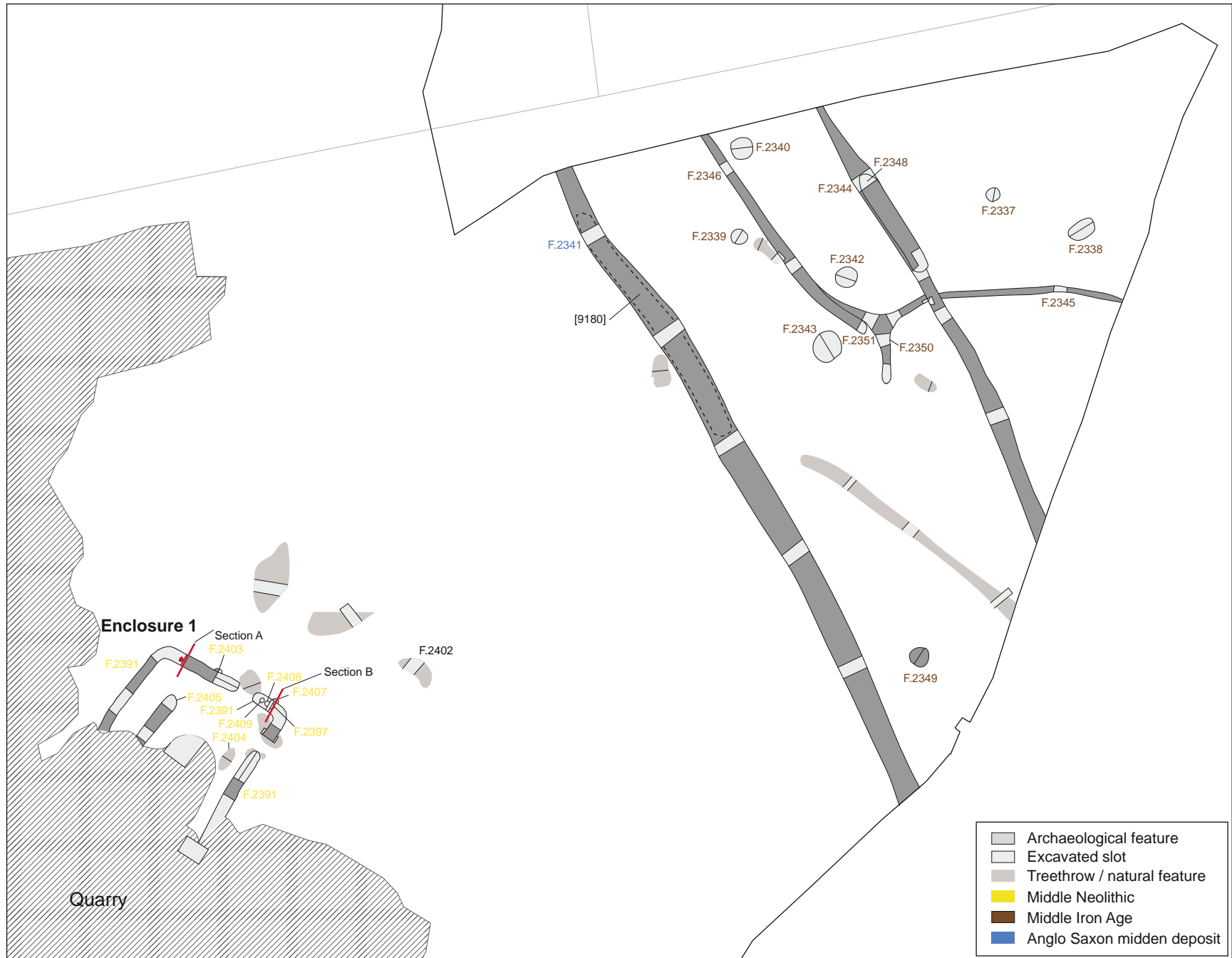


Figure 7. Feature plan : Enclosure 1 and Romano - British Trackway



Section A

Section B

NE

SW

NW

SE

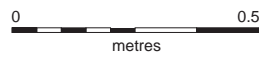
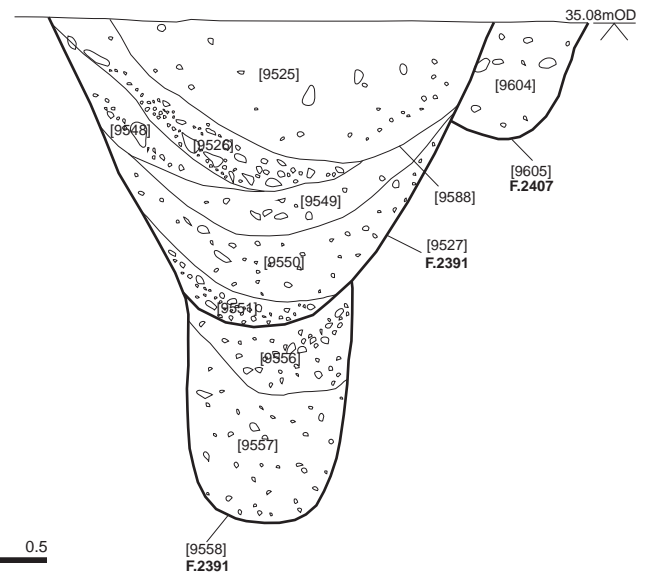
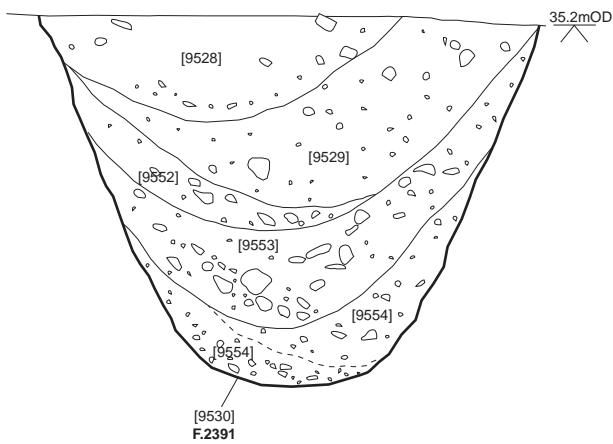


Figure 8. Middle-Neolithic Enclosure 1 (F.2391) : photograph looking west and ditch sections

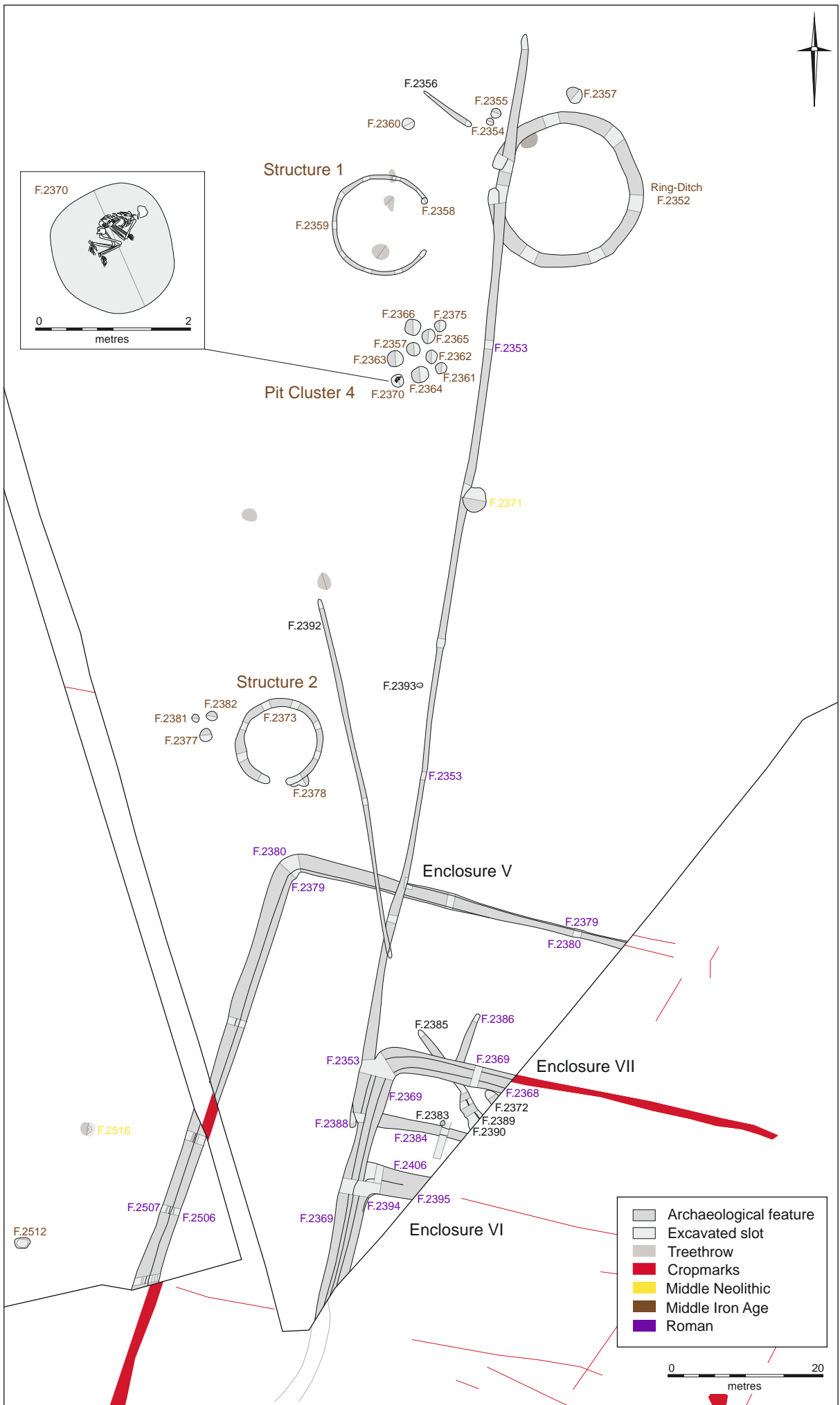


Figure 9. Feature plan of Middle Iron Age and Romano-British settlement features

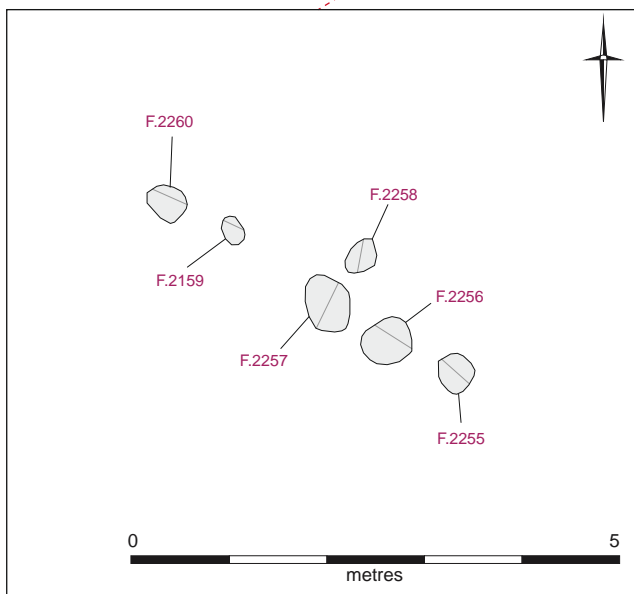
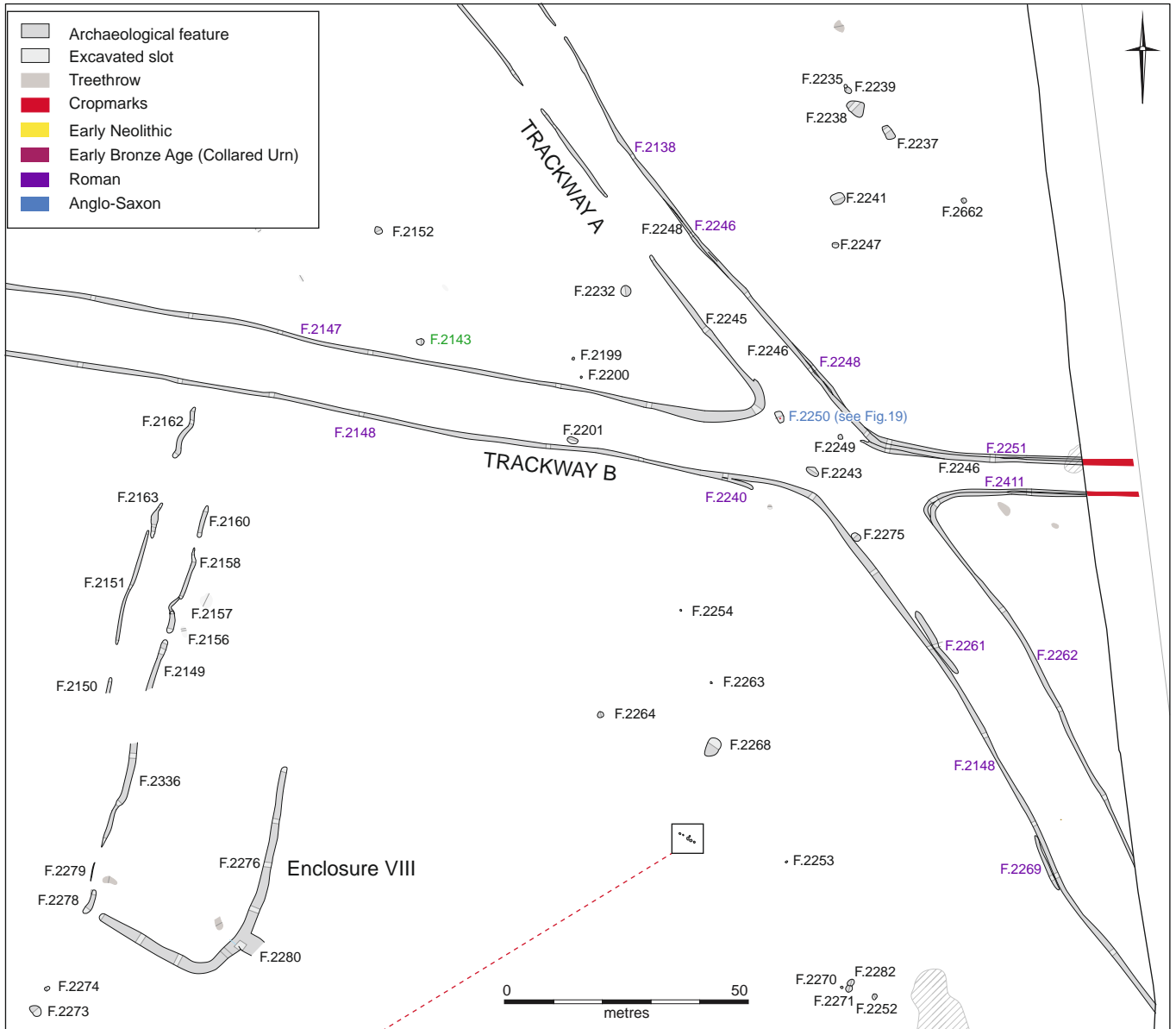


Figure 10. Early Bronze Age cremations, Enclosure VIII and Romano-British trackway



Figure 11. Middle Iron Age Roundhouse Structure 1 and Pit Cluster 4

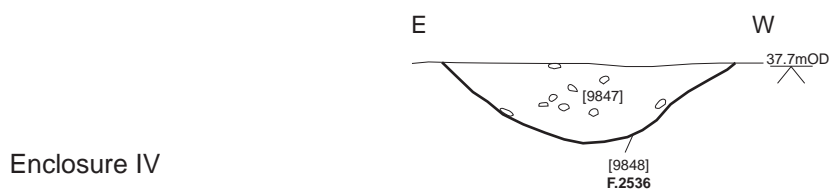
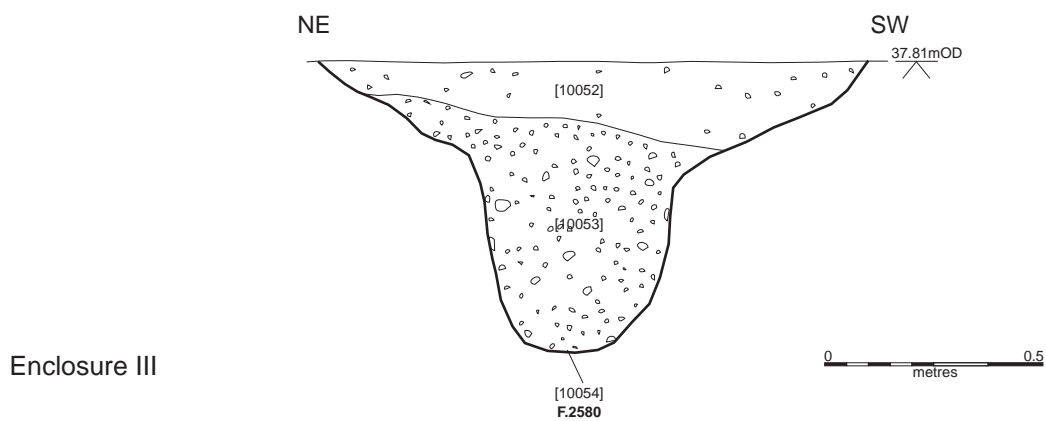
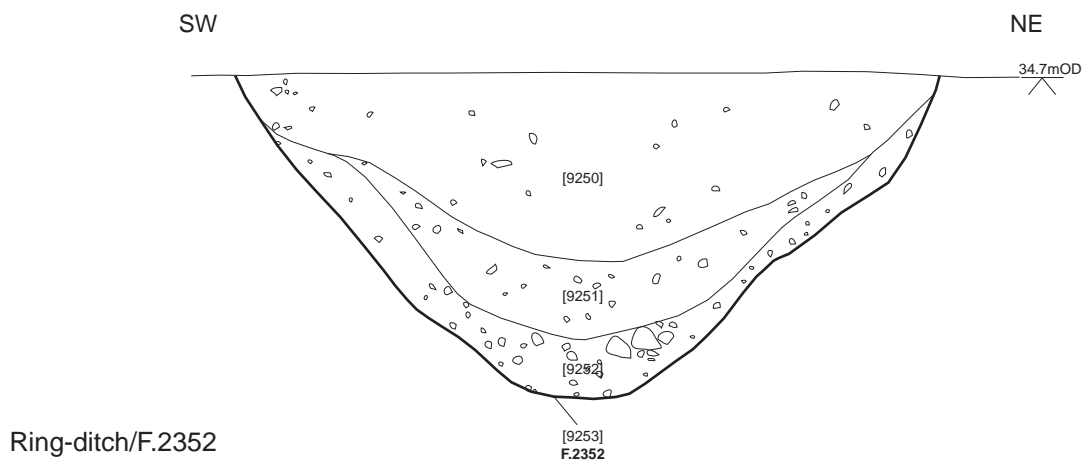
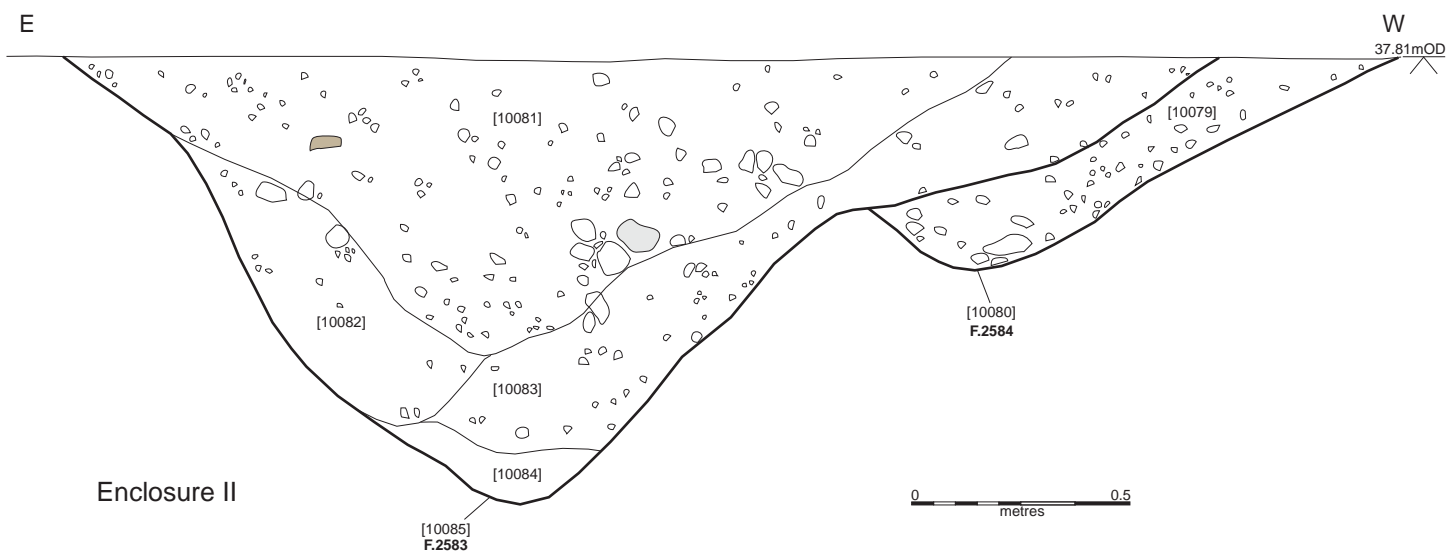


Figure 12. Enclosure ditch sections



Figure 13. Middle Iron Age pits : F.2360 (top) and F.2370 (bottom)



Figure 15. Middle Iron Age Enclosure II and dog skeleton in Pit F.2537



Figure 16. Middle Iron Age pit F.2537 and Structure 4. (top) ; pottery deposit in Enclosure IV's ditch (bottom)

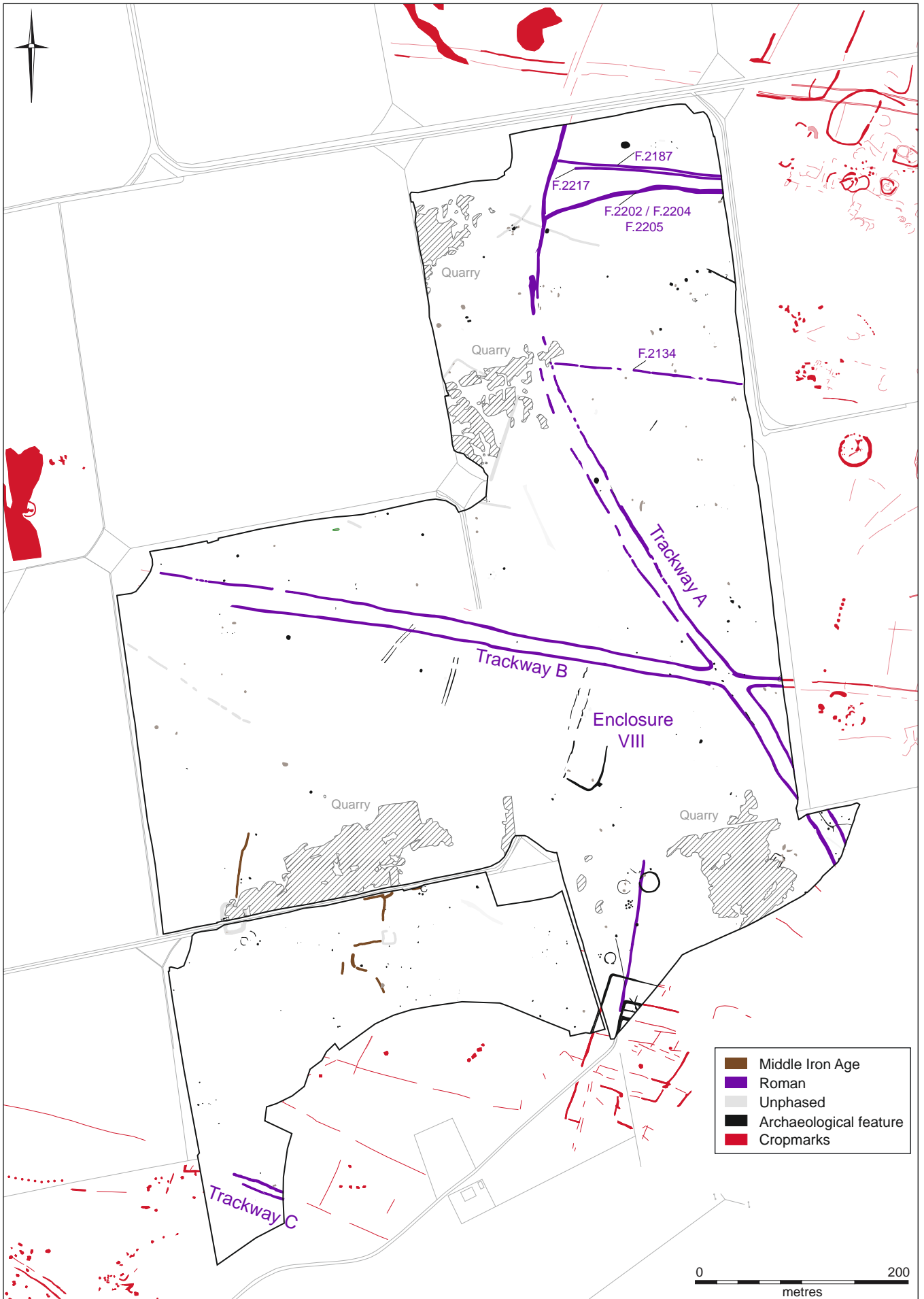


Figure 17. Fieldsystems and trackways

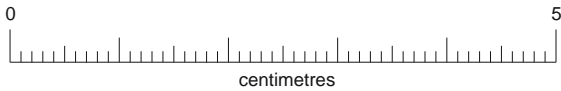


Figure 18. Anglo-Saxon Structure 5 and worked bone artefacts

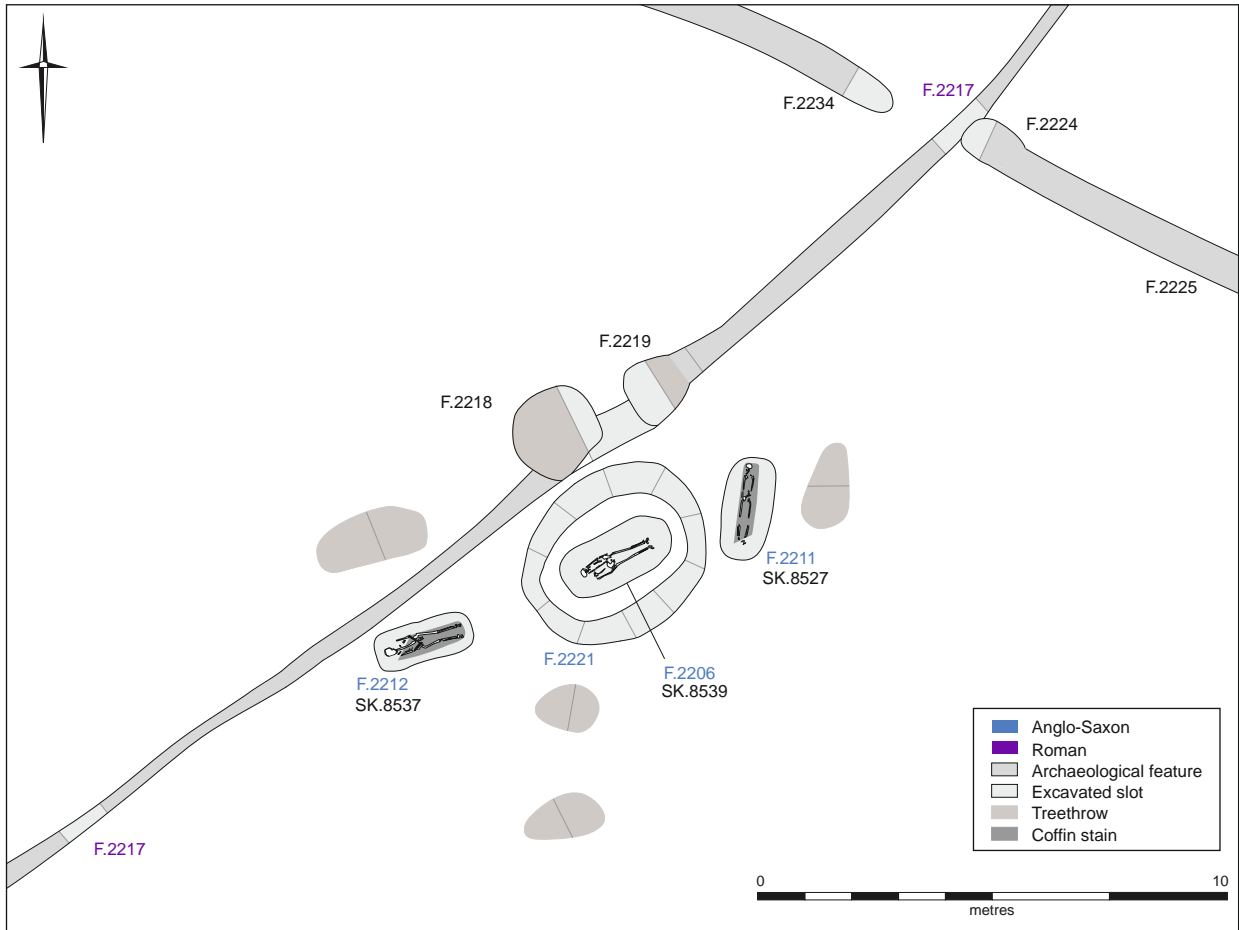


Figure 19. Anglo-Saxon inhumation cemetery

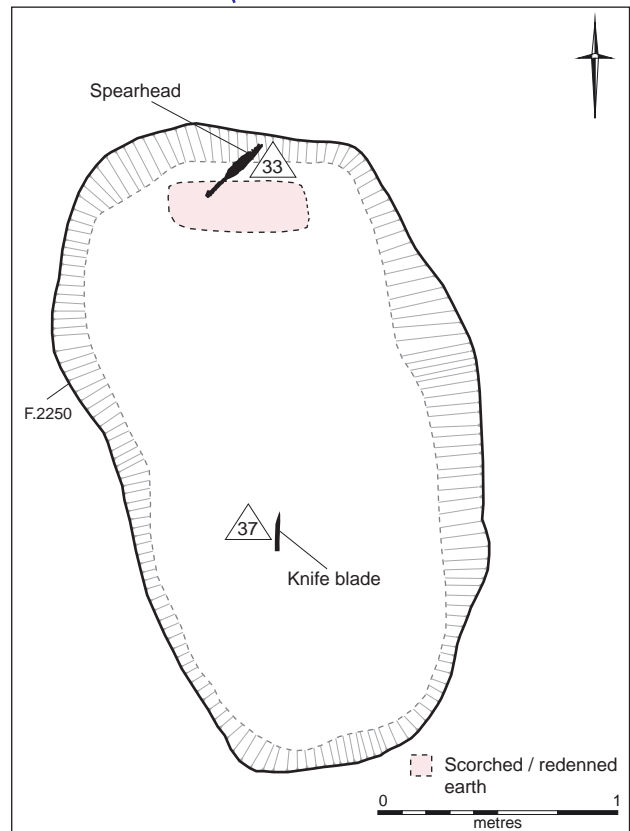
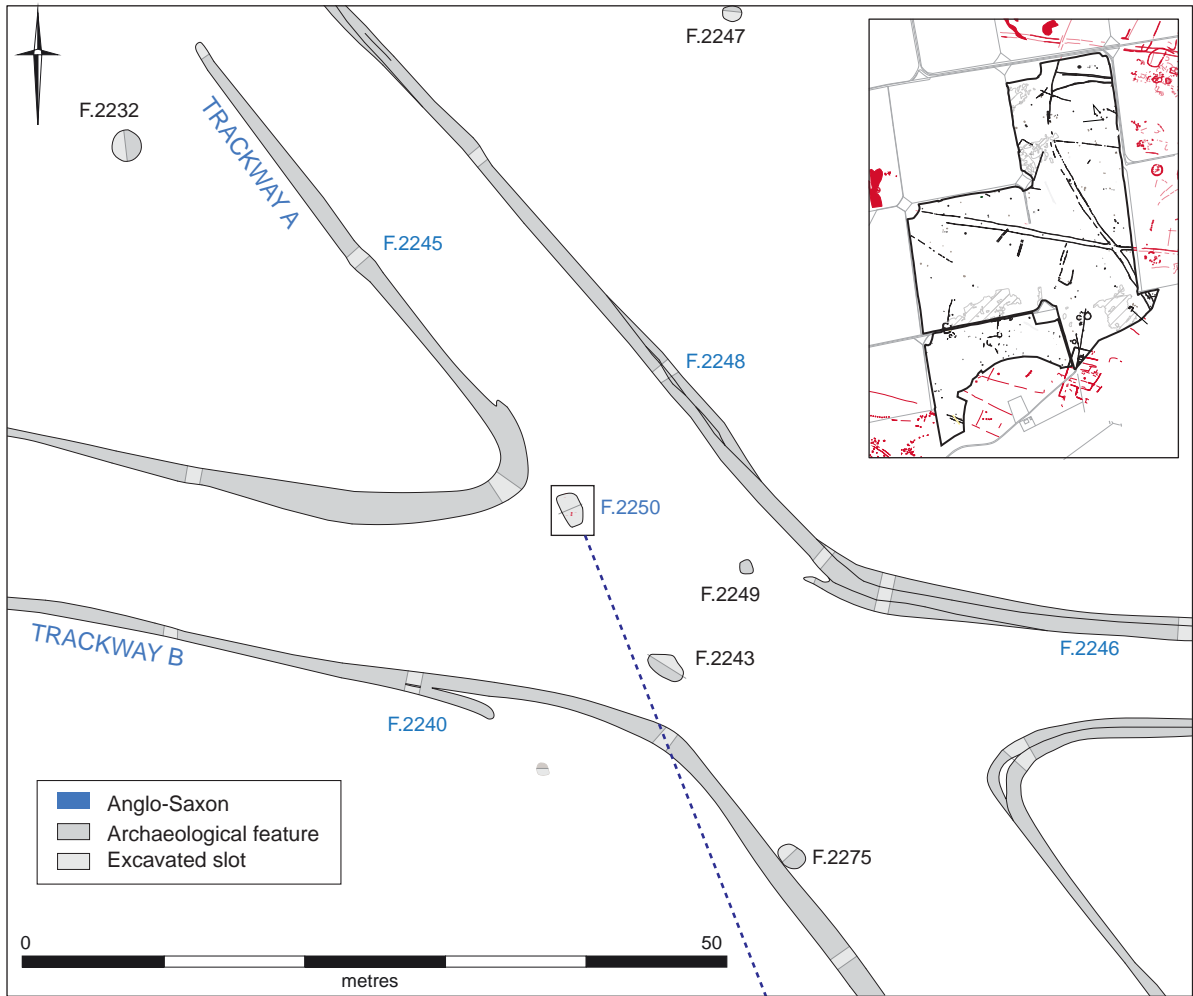


Figure 20. Anglo-Saxon “grave” F.2250

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OASIS ID: cambridg3-312763

Project details

Project name	Archaeological Investigations at Broom South Quarry
Short description of the project	Archaeological excavations were undertaken by the Cambridge Archaeological Unit (CAU) ahead of plant site/quarry compound construction and gravel extraction at Broom South Quarry, Bedfordshire (approximately centred on NGR TL 175 417). The work was carried out in two phases in 2013 and 2016. The work followed an archaeological evaluation of the area undertaken in 2004, which identified 12 concentrations of archaeology dating from the Neolithic through to the Anglo-Saxon period but with the majority of sites dating to the Iron Age and Roman periods. Of these six fell within the current excavation/watching brief area. Situated on the western flank of the Ivel valley, the 2013 and 2016 excavations revealed both archaeology associated with the sites identified by the evaluation as well as significant remains that had not previously been identified. The earliest evidence comprised an Early Neolithic multiple inhumation associated with Carinated Bowl pottery, whilst two pit clusters associated with Mildenhall type pottery represent slightly later settlement activity. Further Neolithic activity was encountered in the form of a long enclosure and two pits, both associated with Peterborough Ware pottery. Bronze Age activity at the site was evidently more limited with a small cremation cemetery the only notable feature, however, Iron Age settlement remains in the form of roundhouse gullies, enclosures and pits, apparently representing a series of discrete farmsteads, were widespread. Roman remains were limited to two trackways marked by parallel ditches, along with associated field system ditches, and part of an enclosure system in the south of the site. As indicated by cropmarks the densest Roman remains clearly occur to the east of the site closer to the River Ivel. Finally, Anglo-Saxon remains comprising a small inhumation cemetery and four SFBs - which are particularly notable for their worked bone assemblages - complete the archaeological record for the site.
Project dates	Start: 01-08-2013 End: 01-12-2016
Previous/future work	Yes / Yes
Any associated project reference codes	BEDFM2012.59 - Sitecode
Any associated project reference codes	BEDFM2016.66 - Sitecode
Type of project	Recording project
Site status	None
Current Land use	Cultivated Land 3 - Operations to a depth more than 0.25m
Monument type	INHUMATION Neolithic

Monument type	INHUMATION Middle Iron Age
Monument type	INHUMATION Early Medieval
Monument type	PIT Neolithic
Monument type	PIT Middle Iron Age
Monument type	CREMATION Early Bronze Age
Monument type	STRUCTURE Middle Iron Age
Monument type	STRUCTURE Early Medieval
Monument type	ENCLOSURE Middle Neolithic
Monument type	PIT Middle Neolithic
Monument type	TRACKWAY Roman
Monument type	ENCLOSURE Roman
Significant Finds	POTTERY Neolithic
Significant Finds	FLINT Neolithic
Significant Finds	POTTERY Bronze Age
Significant Finds	POTTERY Iron Age
Significant Finds	POTTERY Roman
Significant Finds	POTTERY Early Medieval
Significant Finds	BONE COMB Early Medieval
Significant Finds	SPINDLE WHORL Early Medieval
Significant Finds	SPEARHEAD Early Medieval
Investigation type	""Full excavation"", ""Watching Brief""
Prompt	Direction from Local Planning Authority - PPG16

Project location

Country	England
Site location	BEDFORDSHIRE MID BEDFORDSHIRE SOUTHILL Broom South Quarry
Postcode	SG18 9JH
Study area	38.6 Hectares
Site coordinates	TL 175 417 52.060772678862 -0.285883557153 52 03 38 N 000 17 09 W Point
Height OD / Depth	Min: 31.6m Max: 39.6m

Project creators

Name of Organisation	Cambridge Archaeological Unit
Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project design originator	David Gibson
Project director/manager	David Gibson
Project supervisor	Jonathan Tabor

Project supervisor Lizzy Middleton
 Type of sponsor/funding body Developer
 Name of sponsor/funding body Tarmac Ltd.

Project archives

Physical Archive recipient Cambridge Archaeological Unit
 Physical Archive ID BEDFM2012.59/BEDFM2016.66
 Physical Contents "Animal Bones","Ceramics","Environmental","Human Bones","Metal","Worked bone","Worked stone/lithics"
 Digital Archive recipient Cambridge Archaeological Unit
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 Paper Media available "Context sheet","Drawing","Plan","Report","Section","Unpublished Text"

Project bibliography 1

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Entered by Jonathan Tabor (jlt42@cam.ac.uk)
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OASIS:

Please e-mail [Historic England](#) for OASIS help and advice

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