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Archaeological Excavations at Norwich Road, Kilverstone, Norfolk

Duncan Garrow

with contributions by

Rachel Ballantyne, Adrian Challands, Andy Clarke, Chantal Conneller, Natasha Dodwell, David Hall, Kevin Hayward, Gwladys Monteil, Sarah Percival, Jess Tipper

> Cambridge Archaeological Unit University of Cambridge

> > Report No. 463 February 2002

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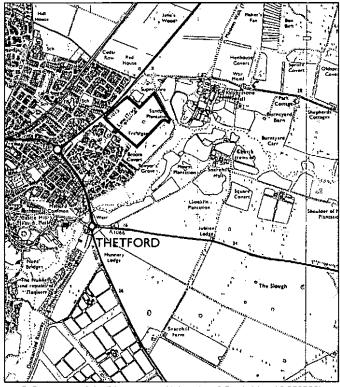
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Summary

This report presents an assessment of the results of an archaeological excavation at Norwich Road, Kilverstone, Thetford, Norfolk undertaken between December 2000 and June 2001 by the Cambridge Archaeological Unit. It also includes recommendations for further work. A separate Updated Project Design with outline timetable for analysis and publication will follow once specialists' work schedules are confirmed. The fieldwork was commissioned by the Ashwell Group Ltd in advance of a housing development.



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Figure 1 - Site location.

The site comprised four separate areas of excavation within two fields on the north-eastern outskirts of Thetford (centred TL 8840 8385). The open area excavations confirmed the results of an earlier trench-based evaluation, producing further evidence of Neolithic and Early Bronze Age pits, a Neolithic flint scatter, a major Late Iron Age/Romano-British settlement and an 18th century brick kiln. In addition, evidence of previously unknown Saxon occupation was recovered.

A group of ninety-six Neolithic and Early Bronze Age (4000-1500 BC) pits was excavated in Area A. Six of these were found to contain cremated human bone (one with two urns); the rest produced quantities of worked and burnt flint, as well as charred hazelnuts and a variety of

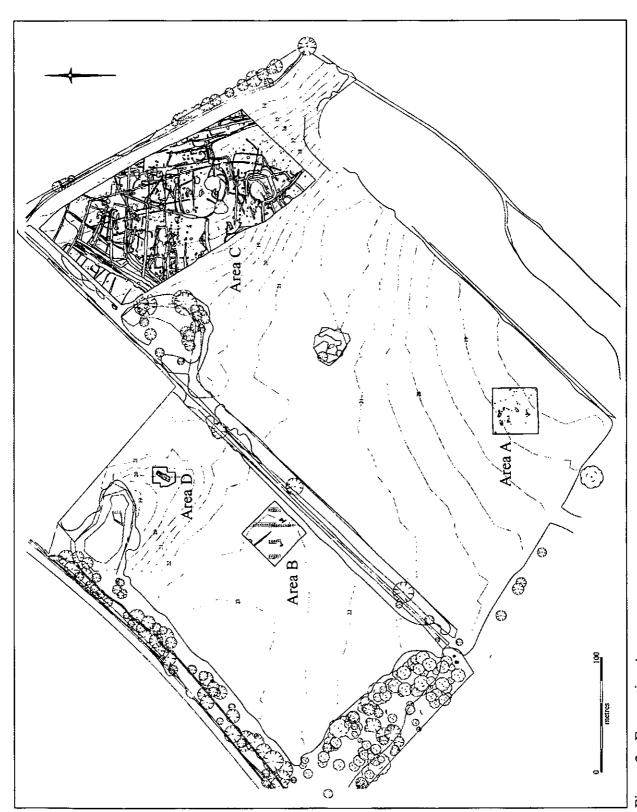


Figure 2 - Excavation Areas

pottery types. Seven pits of similar date and assemblages were uncovered in Area B; these lay underneath a buried soil, which produced large amounts of Neolithic worked flint. A number of prehistoric pits were also revealed in Area C, along with a small Neolithic structure.

A dense and complex concentration of Late Iron Age (100 BC – AD 43) and Romano-British (AD 43 – 410) archaeology was uncovered within Area C. This included the remains of seven structures as well as a complex sequence of field boundary ditches and enclosures. A significant amount of metalwork was recovered, including a 'blacksmith' deposit of pewter plates, hammer, tongs and charred wood. Six burials – three adults and three infants – and an urned cremation were also found.

Ten Saxon 'sunken feature buildings' (SFBs) were recovered in Area C, along with two post-built structures. These dated to between the 5th and 7th centuries AD. Seven rectangular pits containing large amounts of burnt flint were also assigned to this period.

Several parallel ditches and three pits in the south-eastern corner of Area C could represent the periphery of a Medieval settlement (14th century) which lay just beyond the edge of site. One pit in Area B and a number of stray metal detector finds were also found to be Medieval in date.

An 18th century 'Suffolk-type' brick kiln was excavated in Area D, along with its adjacent 'stoking pit'.

Three rather poignant 20th Century features, created when a U.S. aeroplane crashed during the Second World War, were recovered towards the northern corner of Area C.

The results of the excavation are of considerable importance. The number of Neolithic/Early Bronze Age pits uncovered is impressive, placing the site alongside major sites such as Hurst Fen (Clark 1960) and Broome Heath (Wainwright 1972). The Iron Age settlement appears to have been fairly low-key, and provides an important context for other 'high status' sites known in the vicinity. The Roman period settlement underwent several major transformations in its life, from a site with possible 'religious' associations, to a farm, to a metalworking centre. Its complex developmental sequence allows us to gain considerable insight into the processes of change within a single settlement; it also adds to our somewhat scanty knowledge of the Roman period in the area. The Saxon settlement appears to have paid little attention to the remains of earlier occupation, and certainly was not continuous with it; it too enhances our piecemeal knowledge of the Early Saxon period in the area. The Medieval features suggest that a 14th century settlement may have existed to the east of the excavation area. The 18th Century brick kiln was remarkably well-preserved, and allows us to add to the industrial history of Thetford.

Acknowledgements

The work was commissioned by the Ashwell Group Ltd; thanks are due to Tim Bluff and Barry Creamer. David Gurney (Norfolk Landscape Archaeology) oversaw the Development Control side of the excavation; his interest in the site was always encouraging. A large part of the archaeological work was undertaken alongside the Breheney groundworks team, whose cooperation and goodwill were invaluable; thanks especially to Melvyn and John. Derek and Mary Manning and Edwin Rose provided invaluable information about the kiln. Several people (see below) gave their time voluntarily to metal-detect the site; their hard work was very much appreciated. Aaron Bate kept us company on many occasions; his presence on site was always welcome. Anwen Cooper and Mark Knight provided help editing the text. The team responsible for excavating and interpreting the site is detailed in full below.

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Introduction

The Site

The development area comprised 15 hectares of land at Norwich Road, Kilverstone on the north-eastern outskirts of Thetford, Norfolk (centred TL 8840 8385). The site consisted of two fields separated by a track known as Green Lane. These were bounded by a garden centre and a Tesco superstore to the north, Trafalgar Wood to the east, the 'Clover Fields' housing estate to the south and the A1075 to the west. The excavation itself was divided into four separate areas (A-D) totalling 2.35 hectares.

The underlying geology was typical of the Breckland region – sand with patches of drift chalk in places. The site lay between the 14m and 23m contours. Colluvial deposits were found across the lower part of Area C, which sloped gently uphill from north to south. Areas A, B and D were relatively flat and lay between the 18m and 23m contours. Kilverstone lies just north of a sweeping bend in the River Thet, close to several 'ancient' routes including the Icknield Way.

Archaeological Background

Two stages of archaeological work were carried out prior to full excavation at Kilverstone. The initial metal-detecting and fieldwalking survey (Gibson & Garrow 2000) was inconclusive, producing a relatively low-density flint scatter and an assemblage of mostly post-medieval metalwork. The subsequent trench-based evaluation (Garrow 2000) however was more effective, producing the results which led to the excavation detailed in this report.

Although the Neolithic and Early Bronze Age periods are not well documented in the immediate vicinity of Kilverstone, the wider region is very well known. Grimes Graves flint mines are situated within 10 km of the site, and the pit cluster 'type sites' of Mildenhall and Hurst Fen are also relatively near.

Thetford has been described as "a major political and regional focus" (Davies 1996, 80) during the later Iron Age. Kilverstone lies within two kilometres of both the ceremonial complex at Fison Way and the 'hillfort' at Thetford Castle.

The question of continuity across the transition from the Iron Age to Roman period in Thetford is uncertain, and few Romano-British sites have been extensively excavated in the vicinity. One site, a kilometre to the south at Melford Meadows, revealed part of a late Roman settlement and cemetery, providing several interesting points of comparison with Kilverstone.

Despite the importance and scale of Thetford in the Late Saxon period, little is known of Early Saxon sites in the area. Other settlements of that date (e.g. Redcastle Furze and Brandon Road, 1.5 km south-west of Kilverstone) have revealed a number of 'sunken featured buildings' with accompanying pits. The wider region was of course the primary focus for Early Saxon settlement in Britain; the type site at West Stow lies within 15 km.

The site lies several hundred metres outside medieval and early post-medieval Thetford. A 'lost village' – presumably a deserted Medieval settlement – is reputed to have been situated south of Kilverstone Hall (Clover 1975). The development area itself has been under arable cultivation since the earliest detailed map documentation in 1742 (Wright 1742).

Excavation strategy

The excavation at Kilverstone investigated four separate areas. Areas A and B were 40 x 40m boxes around features uncovered during the evaluation. Area C was a parallelogram, approximately 200 x 100m in size, designed to incorporate all of the evaluation trenches containing archaeology at the northern end of the development. Area D was a 15 x 15m box around the kiln, which was extended to the south to include the whole of the stoking pit.

Machining of the topsoil was carried out under archaeological supervision. The site and spoilheap were metal-detected in the wake of machine stripping (and several times after that); the finds produced were three-dimensionally recorded with an EDM. The features were immediately base-planned.

Excavation began once the site plan was completed. The team worked together, moving across the site from north to south in order to facilitate the excavation process and allow the contractors to begin construction on the completed portion. All features were sampled. A minimum of 10% of ditches were excavated (usually in 1m wide slots), with a particular emphasis placed on stratigraphic relationships. A minimum of 50% of isolated features was sampled; where it was considered important to excavate features completely (e.g. prehistoric pits, SFBs, post-holes associated with structures, etc.) the sample was increased to 100%.

All finds were kept, except for large amounts of unworked burnt flint which were weighed on site. The CAU-modified version of the MoLAS recording system was employed throughout: excavated stratigraphic entities (e.g. a cut, a fill) were recorded as individual contexts, with interrelated stratigraphic events (e.g. a ditch cut and its fill) assigned feature numbers. Sections were drawn at 1:10 and occasionally 1:20, baseplans at 1:50 and if necessary 1:20 or 1:10. The photographic archive includes black and white, colour slide and digital images. Bulk environmental samples were taken from a representative cross-section of features across the site.

The SMR number for the larger SE field (Areas A and C) is 34489, that for the smaller NW field (Areas B and D) 25763. In accordance with Norfolk standard practice, context and feature numbers within each of the two fields were taken from separate registers. The CAU site code was KIL 00.

The archive

In total, over 4,500 contexts were excavated and recorded, over 130 environmental samples were taken and over 29,000 finds recovered. The artefacts and accompanying documentary records from the excavation have been compiled into a stable, fully cross-referenced and indexed archive

in accordance with Appendix 6 of MAP2 (English Heritage 1991). The archive is currently stored at the offices of Cambridge Archaeological Unit under the project code KIL 00.

Report Structure

The main descriptive part of this report details the four excavation areas in separate sections; these are sub-divided on a period and phase basis. The specialist reports and recommendations follow.

AREA A

Introduction

Area A was opened to investigate a cluster of Neolithic pits uncovered within a short stretch of one evaluation trench. A 40 x 40m area was opened, which aimed to establish whether any other features were located nearby and to provide direct comparison with the material of similar date from buried soil contexts in Area B. A total of 96 features was uncovered, including 86 pits, 6 cremations and 4 post-holes; all were Neolithic or Early Bronze Age in date.

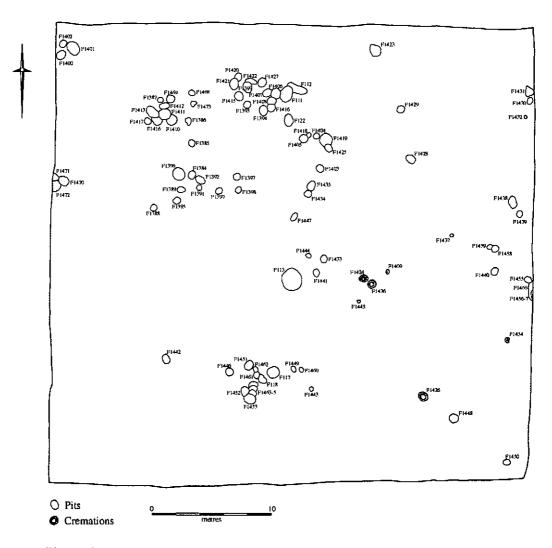


Figure 3 - Area A

Methodology

All the features within Area A were fully excavated, as it was considered important in the context of 'placed deposits' to recover 100% of each assemblage; prior to this they were half-

sectioned and drawn. Where features intercut, section lines were placed strategically to ensure that the sequences in which pits had been dug could be seen and recorded. Environmental samples were taken from a cross-section of pit types and locations.

Pits

The pit group within Area A extended across the whole of the area opened. The limit of excavation did not appear to incorporate the full extent of their spread, and should perhaps be seen more as a 'window' on a wider landscape. Within the pit group, distinct clusters were visible; within these clusters a number of features usually intercut, often in linear 'strands'. The vast majority of pits were similar in size, measuring approximately 0.60m across and 0.20m deep; almost all were roughly circular in plan. It is probable that they had been truncated to a certain degree.

Seventeen pits and four 'post-holes' (possibly heavily truncated pits) contained no finds at all. A large proportion of these were clustered together towards the north-eastern corner of the site. It seems reasonable to assume that they were prehistoric in date; they were certainly indistinguishable from those described below in morphology and fill type. The absence of material culture, however, provides a very clear distinction with the majority of pits recovered, hinting at a different motivation behind their creation, and possibly also reflecting a temporal difference.

The remaining sixty-nine pits contained a variety of materials in different combinations. Flint, burnt flint, pottery and charred hazelnut shells were found in large numbers. Worked flint was found in 96% of the pits, with an average of 25 pieces per pit; burnt flint was found in 90% (average 20 pieces); pottery in 64% (average 14 sherds); hazelnuts in 59% (average 64 shells). Bone was scarce (only four pits contained a few small scraps), although it is possible that this was a consequence of post-depositional conditions. The environmental samples produced occasional cereal gains (barley and wheat) in a very poor state of preservation.

A total of 1830 pieces of flint were recovered. The assemblage was mostly Neolithic in appearance, although a few showed more typically Early Bronze Age characteristics. A broad range of tools was represented, including an oblique arrowhead, burins, knives and scrapers, as well as numerous blades and flakes; a proportion of these had been burnt as well as worked. A certain amount of selective deposition could be discerned, with some pits containing almost exclusively fine flint (e.g. blades) and others mostly large pieces (e.g. cores); a particularly interesting example was F1404, where the flakes seemed to have been chosen for their striped appearance. A total of 808 sherds of pottery were recovered. The majority were plain, carinated bowl forms, typical of East Anglia during the Neolithic. A small quantity of Mildenhall pottery (17 sherds) was also recovered, along with five sherds of Fengate ware (F113). The majority of sherds were small, but in good condition.

A certain amount of depositional patterning was discernable within the pits, although this 'structured deposition' was less overt than on some sites. The composition of material culture within them suggests that a primary emphasis was placed on the selection of flint, rather than

pottery and hazelnuts. Flint and burnt flint were found in nearly every pit; most of the time care had been taken in the selection of each flint assemblage and in some instances workable tools had been-buried-beyond use. It is possible that the material had been specifically selected "from a broader amalgamation of lithic material, such as a midden, rather than representing the residues of more discrete tasks" (Conneller, Flint Report). Pottery and hazelnut shells, however, were found in just over half the pits. The pottery assemblages were often made up of single sherds from a number of vessels and showed few obvious signs of selection. No pits contained pottery without flint, and only one (F1417) contained hazelnuts alone.

WHAT DUE) THIY MEAN?

Hints of patterning within pit *clusters* were also visible. The features in each cluster tended to show a certain amount of internal cohesion in terms of finds, suggesting that the existence of pit 'groups' was meaningful rather than a result of chance: one exceptionally large flint assemblage was found in each main cluster, and certain pottery types and fabrics appeared to be tied to certain locations.

Further, fine-grained analysis (of flint re-fits, pottery fabrics and decoration, the combinations of different artefacts, etc.) is recommended in order to investigate these issues fully (see Prehistoric Pottery and Flint Reports).

Cremations

Six cremations were recovered towards the south-east of Area A. Four of these (Fs 1409, 1424, 1436, 1445) were grouped very closely together, and whilst the other two (Fs 1426 and 1454) were several metres away, no pits separated them. Two were buried with urns (F1424 with two, F1426 with one); interestingly, these were both identified as children whilst those without were adults.

Despite the spatial overlap between pits and cremations, there may not have been a chronological one. Although only two of the cremations contained Collared Urns, it seems reasonable to assume that all were of the same Bronze Age date, as they were very similar in form and clustered together in a discrete group.

Discussion

The number of pits recovered at Kilverstone was impressively large, placing it alongside nationally important sites such as Hurst Fen (Clark 1960) and Broome Heath (Wainwright 1972); the area uncovered does not appear to have revealed the full extent of the pit group, and so could even have been considerably larger (although no features were found in the nearest evaluation trenches).

The pits are in many ways typical of Neolithic occupation, which usually left no trace of any structures. It is likely that they were created during relatively short visits to what was perhaps a well-established stop on a seasonal cycle of movement. The fact that features within pit groups intercut suggests that a certain amount of time must have elapsed between the digging of

individual pits; however, it also implies that a particular point was revisited many times, and therefore that the traces of earlier pits were still visible. The very process of excavating each pit and depositing artefacts within it almost certainly helped attach a sense of place to that particular location (Edmonds 1999).

It is possible that this sense of place persisted through to the point when the six cremations were buried. The fact that children were buried with urns hints at an important social distinction, perhaps tied in to the emotions of those who were burying the dead; it is impossible to establish whether all of them were placed at the same time. These cremations are an isolated group, buried not within a grand funerary monument but perhaps instead in a small clearing which had been established centuries before.

The associations attached to the place caught within Area A changed subtly through time. It started as a point of occasional settlement and deposition, visited for a short while perhaps every year or so. At some point, this pattern of occupation ceased and the nature of the place was transformed. Rather than depositing the stuff of everyday life (tools, pottery, food) in the ground, people chose instead to bury the cremated remains of the dead during their still-occasional visits.



1. Cremation urns within F1424



2. One of the pit clusters fully excavated

AREA B

Introduction

Area B aimed specifically to investigate what appeared to be a buried soil containing a preserved flint scatter, along with any associated features. A 40m x 40m box was opened around the flint density uncovered during evaluation. This aimed to establish the full extent of the scatter and to provide a direct comparison with the material from pit contexts in Area A.

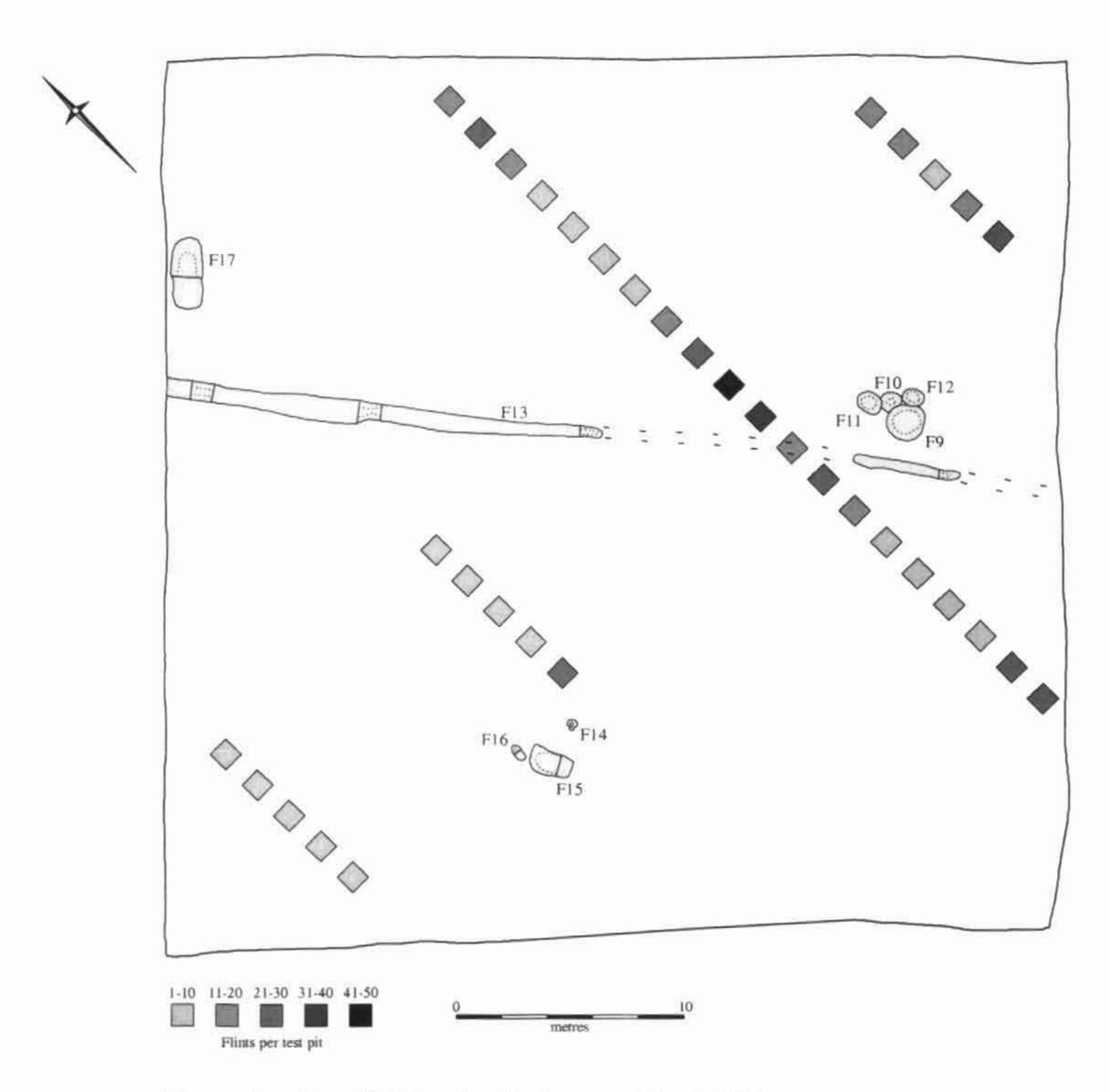


Figure 4 – Area B (showing features and test pits)

Methodology

In the course of machining, it became clear that the buried soil deposit extended over the whole of Area B. Consequently, four baulks were left standing to investigate the deposit. The rest of the

site was machined down to natural to reveal features in the normal way; once the buried soil sampling was completed, the baulks were machined away.

In total, thirty-five 1m squares (2.18% of the total area) were hand-excavated through the deposit, with all of the finds collected and bagged in individual units (contexts 148-182). The longest transect of sample squares was set out parallel to the evaluation trench on the N-S axis. Three shorter ones were set out at regular intervals along the E-W axis.

Buried soil

In total, 655 pieces of flint, 298 pieces of burnt flint and 25 sherds of pottery were recovered within the buried soil. The distribution of these finds across Area B was not even, with greater densities recovered towards the eastern corner, possibly a consequence of the presence of cut features nearby (see Figure 4).

The character of the flint was unusual, and quite specific to this location. The assemblage appeared to be of mixed date: whilst some flakes and blades exhibited finely worked Late Neolithic characteristics, many tools were crude and amorphous, and much of the assemblage seemed to have resulted from the expedient exploitation of small, poor quality raw material (a technological strategy intentionally lacking in finesse, suited to an area with an abundant supply of raw material), attributes which suggest a Bronze Age date. It is likely that this mixed deposit represents an amalgamation of small amounts of pit-derived or residual Late Neolithic/Early Bronze Age material with larger amounts of lower quality Bronze Age material.

Twenty-three small and abraded sherds of Early Bronze Age pottery were also recovered within the deposit, along with a Roman and a Medieval sherd.

Features

Nine features in total were recovered in Area B. A cluster of four intercutting pits (Fs 9-12) was located towards the east; these contained 58 sherds of Beaker pottery, indicating a Late Neolithic/Early Bronze Age date. Amongst the flint, a high proportion of scrapers and retouched flakes had been selected for deposition. The pits also contained varying amounts of bone, burnt flint and burnt stone. Another pit group to the west (Fs 14-16) contained only burnt flint; these were also likely to be prehistoric.

A shallow ditch (F13), which in places had been totally truncated, ran across the centre of the site. No finds were recovered, but it was parallel to a very similar ditch (F6) recovered to the east in the evaluation trench, which was Roman in date.

A sub-rectangular pit (2.70 x 1.40 x 0.58m deep) was excavated towards the north of Area B (F17). This contained 14th century Grimston pottery, along with a piece of burnt limestone, an iron nail, burnt bone, burnt flint, flint, slag and a variety of seafood shells. Surprisingly,

considering the number of finds, the feature appears to have been isolated with no other archaeology of that period in the vicinity.

Discussion

It is still not exactly clear how the buried soil deposit came to be preserved. The facts that small, abraded fragments of later pottery were recovered within it, and that some of the flint showed signs of plough damage and sand polishing, imply that it cannot be a sealed prehistoric soil. Similarly, none of the later features were observed to cut it. However, it did contain tiny fragments of knapping waste (normally an indication that flint is in situ) as well as large quantities of prehistoric flint and pottery. The best explanation is that it was a 'partly preserved' deposit, affected differentially by later ploughing (some patches remained in situ whilst others had clearly been disturbed). It appears that the deposit may have been formed during the later part of the Bronze Age: the majority of the flint within it dated to that period, and the presence of earlier flints and pottery can be explained as a result of the (Medieval?) ploughing-out of artefacts from the pits underneath.

The four pits containing Beaker pottery, which was not present anywhere else across the site, also contained different flint assemblages, with scrapers and retouched flakes selected for deposition rather than the microdenticulates and blades represented in Areas A and C. These features illustrate the fact that while prehistoric activity in general appears to have been spread across the development area, at particular times (in this case during the Late Neolithic/Early Bronze Age) it may have been limited to quite specific and small-scale activities, such as the excavation of four small pits.

The Roman ditches, along with those recovered in Trench 13 of the evaluation, suggest that the field system associated with the settlement in Area C was large, extending for several hundred metres beyond the core. The Medieval pit suggests activity a long distance from the putative settlement of the same date to the east of Area C.



3. Buried soil sampling in progress

AREA C

Introduction

Area C presented a complex sequence of archaeology, the consequence of several thousand years of occupation. The vast majority of features were Roman in date; this period required further sub-division into phases, the details of which are described fully in Section 3. The Neolithic, Iron Age, Saxon and Medieval phases were relatively straightforward, and so could be left within those general period boundaries. In the sections that follow, each period or phase is discussed in turn.

1. NEOLITHIC and EARLY BRONZE AGE

Although only a few features dating to the Neolithic or Bronze Age were found within Area C, the large amount of residual and surface flint across the area testifies to the fact that a considerable degree of prehistoric activity nevertheless took place there. It is probably no coincidence that the features of this date which were recovered mostly lay outside the core of Roman and Saxon settlement, as the dense concentration of later archaeology must have obliterated earlier features.

Structure

A post-built structure (Structure 1) was recovered close to the southern limit of excavation. It was 4.50m square and comprised of twelve circular post-holes (0.25-0.53m wide, 0.05-0.16m deep) arranged at irregular intervals along three sides. A double post-hole completed the fourth, the gaps either side possibly representing entranceways.

Although it is difficult to be certain given the lack of artefacts and absence of stratigraphical relationships, several different factors in combination imply a Neolithic date for Structure 1. The only artefacts found in association with the post-holes were a flint scraper and a very small sherd of Neolithic pottery; it is important to note here that very few diagnostic tools or residual prehistoric sherds were found within Area C as a whole. A pit situated immediately adjacent to the structure (F1305) also contained earlier Neolithic pottery, flint and burnt flint. The building was also very similar in form to structures of that date found elsewhere in Eastern England (e.g. Fengate, Peterborough and Broom, Bedfordshire; Gibson 1998, Mortimer 1999).

Pits

Eight pits could definitely be attributed to the Neolithic, all but one of which were situated towards the western edge of excavation. Four were extremely reminiscent of the pits excavated 250m to the south in Area A (Fs 328-330 and 1246), showing strong similarities in terms of artefactual content, morphology and fill type. F366 contained pottery, flint and bone, F919 only flint, and F1337 only pottery; F1305 is discussed above. F219, a probable tree-throw, contained a

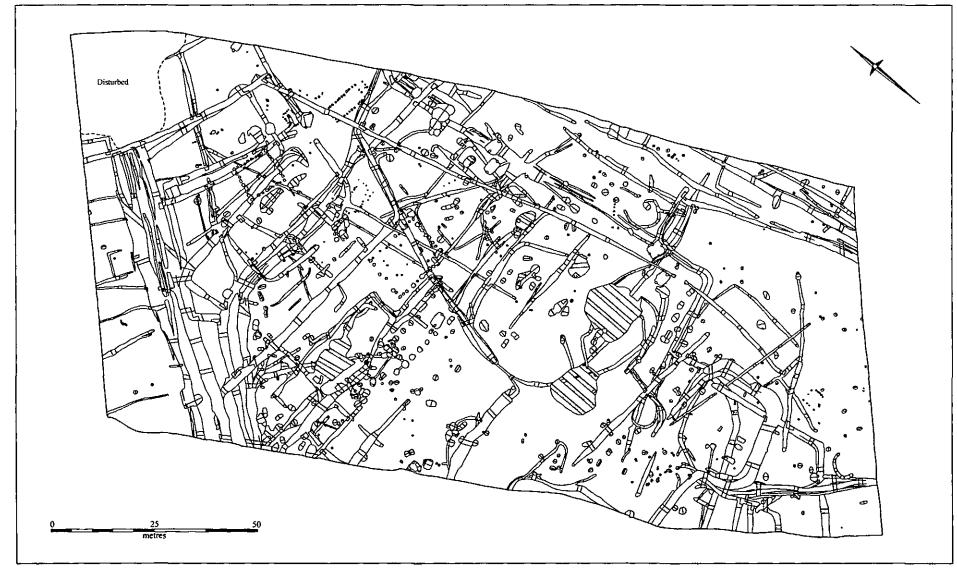


Figure 5 - Area C - all features (with excavated slots)

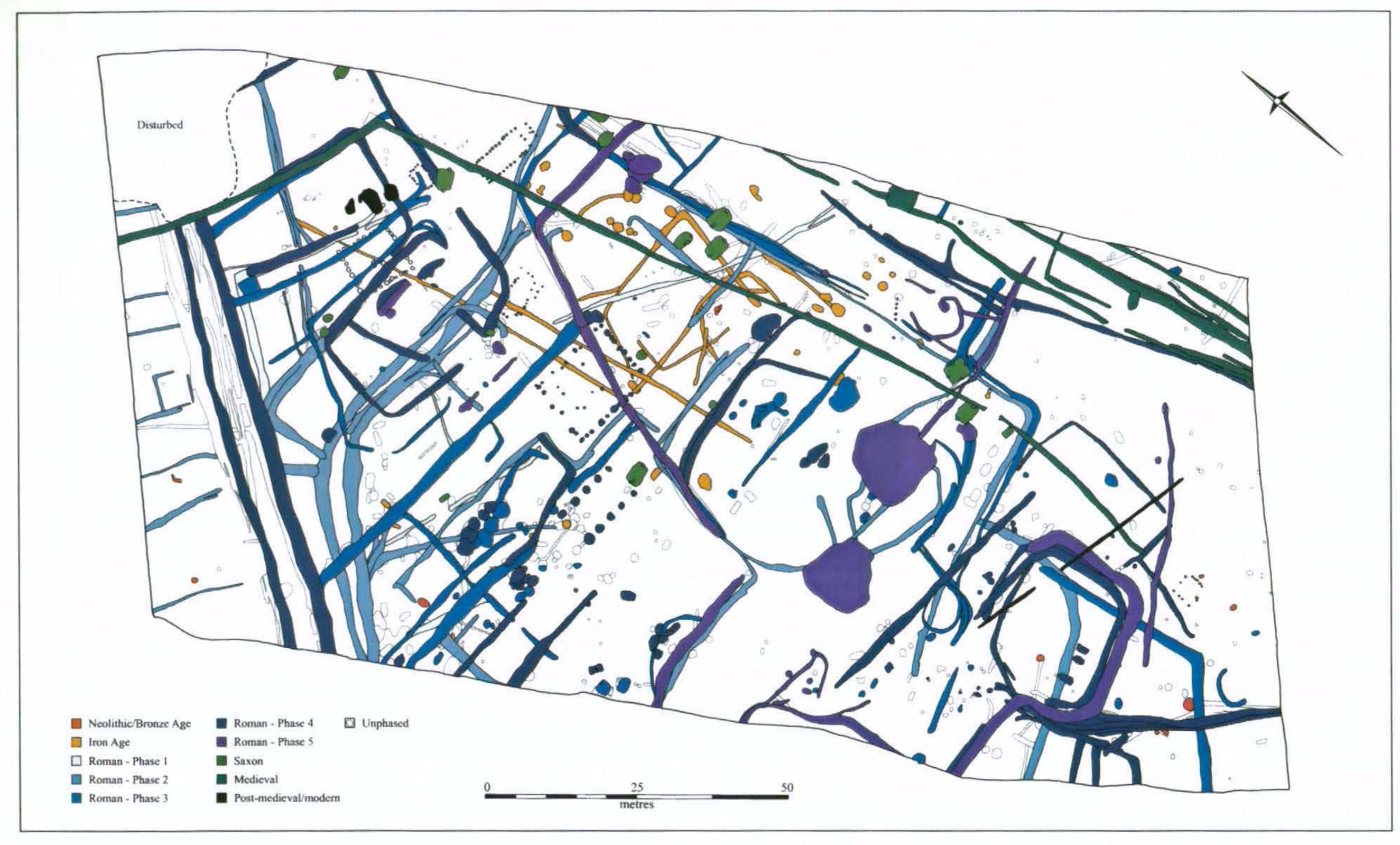


Figure 6 - Area C - all phases

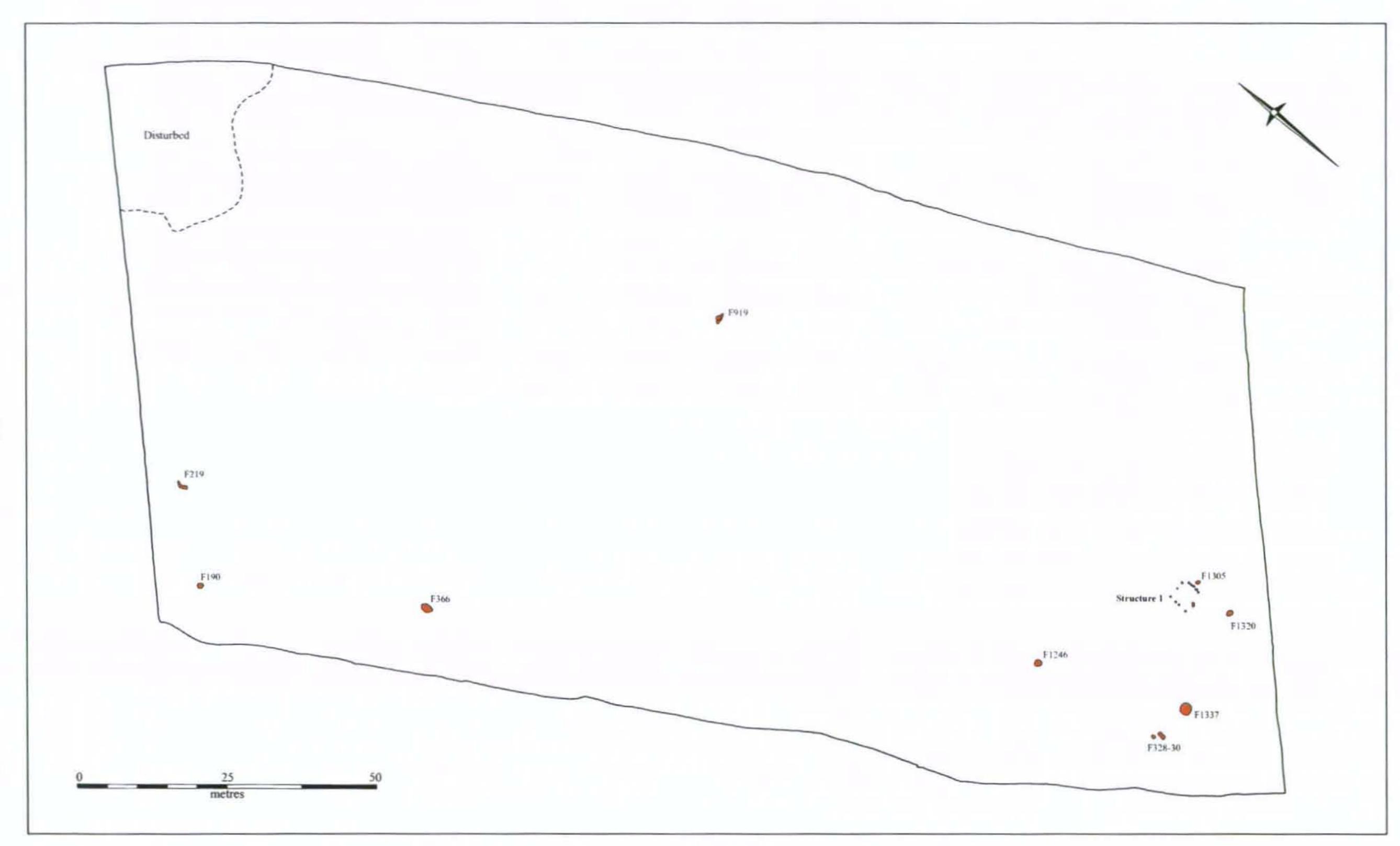


Figure 7 - Neolithic and Bronze Age

number of charred hazelnut shells along with flint and burnt flint, suggesting that it too was Neolithic. The two Bronze Age pits (Fs 190 and 1320) were located at opposite ends of the site, and contained pottery, flint, burnt flint, and in the case of the latter burnt stone and bone as well.

A large number of the pits excavated in Area C contained no dateable material at all. Many were attributed to the Romano-British phases of the sequence, due to stratigraphic relationships or morphological similarities with features which were dateable. A certain number, however, fell into neither category and the possibility that they too were prehistoric – particularly those outside the core of later settlement to the south – must be considered.

Residual flint

A significant proportion of the prehistoric flint from Area C (more than 2000 pieces) consisted of residual material incorporated within Roman or Saxon features. The majority appeared to be Late Neolithic/Early Bronze Age in date, though earlier (including a Paleolithic hand-axe and three microliths) and later pieces were represented. This material is discussed in detail within the Flint Report.

Discussion

The Neolithic and Bronze Age features which survived truncation in Area C, along with the residual flint, play an important role in completing the earlier landscape history of Kilverstone. They suggest that activity was spread right across the area, in some places leaving a strong archaeological trace, in others a more ephemeral one.

The landscape was clearly used in different ways at different times. One 'node' became a long-term focus for occasional occupation, involving the excavation of pits and the deposition of artefacts within them (Area A). In another place (Area C), a small structure – a rare example of a building surviving from that period – was built, suggesting a different mode of occupation. Other places were used primarily for *ad hoc* flint working, leaving numerous artefacts behind but very few features (the 'buried soil' in Area B and parts of Area C). Others still became the focus for isolated visits which may have lasted only a day or two (the pits in Area B and parts of Area C).

This kind of widespread occupation would not have consisted of strictly-defined 'sites'. In this light, the three excavation areas which contained prehistoric archaeology at Kilverstone should perhaps be seen more as 'windows' into a much wider landscape of activity.



4. Pits F328-330 with their finds



5. Structure 1

2. IRON AGE

Introduction

A large proportion of the diagnostically Later Iron Age pottery at Kilverstone was found in association with Roman forms, suggesting a Late Iron Age/Conquest period date for the settlement (c.50 BC-AD 60). The archaeology was not dense, consisting of three parallel ditches (aligned N-S), within which lay a sequence of C- and L-shaped enclosures. Around the edges of this settlement 'core' were a number of oval and sub-rectangular pits.

Linear features

A relatively straightforward developmental sequence, incorporating two main phases, was discernible. The layout for both took the form of several intercutting rectilinear or linear features, bounded by a stretch of ditch to the east and west. The transition between the two phases was marked by a shift in the western boundary, when a new ditch (F807) was constructed four metres to the east of the original boundary (F304), either as a direct replacement for it, or to create a path or trackway in combination with it; the eastern boundary ditch (F938) appears to have remained constant throughout both phases. The internal features fit comfortably into either phase, with the earlier ones (enclosure F663/699 and linear F815) actually cut by the later boundary ditch; F656, a curving gully probably too large to have been associated with a structure, was located to the north of these. The latter phase is represented by enclosures F804 and F881 and linear F865.

It is possible that these enclosures may have been associated with structures of some kind, which have since been lost. Their constant re-shaping illustrates a lack of permanence, suggesting that any structures within them must have been fairly temporary. Truncation, by later Roman features as well as recent ploughing, also appears to have had an effect: very few of the features from this period survived to any substantial depth, indicating that any insubstantial post-holes or other features would almost certainly have been lost.

Pits

The thirty-eight pits assigned to this period almost certainly represent an accumulation which built up gradually throughout both phases of the settlement 'core'. In many ways, the pits were charcterised by their unremarkableness, often containing just a few small scraps of pottery and several fragments of bone, along with varying amounts of flint, burnt flint, baked clay and burnt stone (the average number of sherds in each was 4.05, the average number of bones 3.92). One pit only (F980) produced well-preserved charred cereal remains, including barley and hulled wheat. Many of the pits were a similar shape and size (sub-circular or oval, approximately 1.50m wide and 0.25m deep). Several had relatively dark, charcoal rich fills, similar to the fills of the enclosure ditches. No discrete clusters of pits were discernible, although the vast majority were situated close to the settlement core. Some contained only hand-made pottery, whilst others

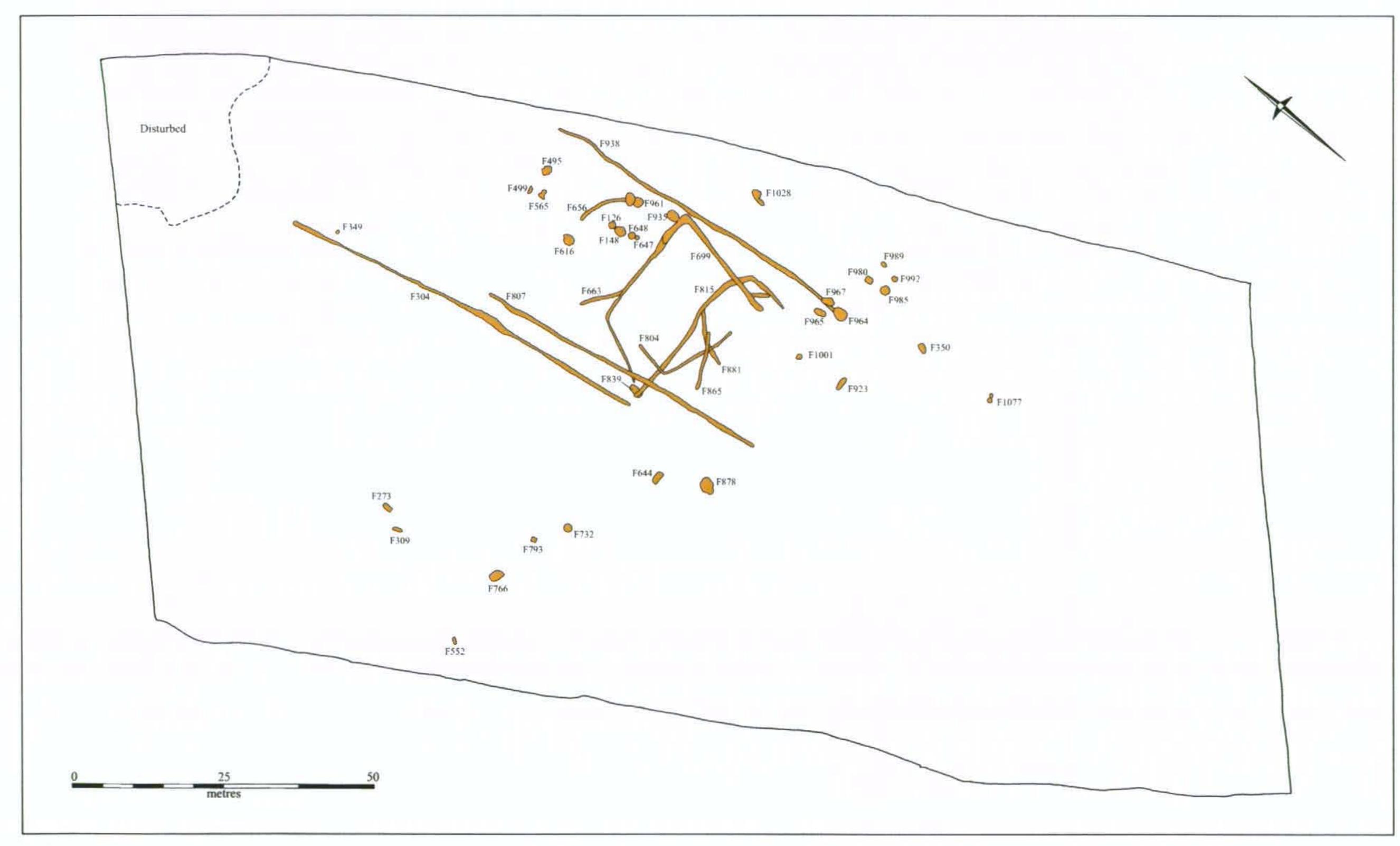


Figure 8 - Iron Age

contained both hand- and wheel-made sherds together; it is possible that this distinction mat represent a temporal difference, the former group being earlier than the latter.

One pit alone (F350) stood out as unusual. Sub-rectangular in plan, it lay 25m south of the settlement area and measured 1.75 x 1.20 x 0.85m deep. Placed at the very base was a curious deposit – a fragment of human skull and a sawn/worked red deer antler. The fragment of skull was the only piece of human bone within the pit; the antler had been sawn off at the tines, with clay moulded carefully where the removed bone had been. This deposit is an example of what has come to be termed 'structured deposition', a common Iron Age practice that has been discussed at length elsewhere (e.g. Hill 1997). 'Burial rites' and the treatment of human remains in the Iron Age are notoriously ephemeral and difficult to understand, with disarticulated bones found in a wide variety of contexts; this example from Kilverstone is no exception.

Discussion

The Iron Age/Conquest period settlement appears to have been small and relatively simple. The presence of a number pits, and of material culture in general, suggests that it was indeed a 'settlement' despite the absence of surviving buildings.

The site, despite its low-key nature, can make an important contribution to our understanding of the Iron Age and Conquest period landscape around Thetford. Firstly, it provides an important contrast with, and context for, sites like the ceremonial centre at Fison Way (Gregory 1991) and the hillfort at Thetford Castle, both of which fall into the 'high status' category of site; few 'low status' settlements have been excavated in the vicinity. At a more localised level, it represents the first time that relatively permanent occupation was established at Kilverstone, creating a place that was to be continually settled for several hundred years to come.

3. ROMANO-BRITISH

The archaeology dating to the Roman period within Area C was complex. In order to make sense of the site's development, it was necessary to filter the large number of superimposed features into different phases, a process that was begun on site using stratigraphic relationships and then completed during post-excavation with the addition of artefactual evidence.

In total, five phases – based on a combination of pottery and stratigraphic evidence – were defined, producing a series of 'snapshots' of the site layout through time: (1) Conquest-AD 70, (2) AD 70-c.100, (3) AD c.100-130, (4) AD 130-200 and (5) AD 200-400. Phases 2 and 3 fell within the same pottery phase, but were separable stratigraphically. It must be recognised that many of the buildings, ditches and pits would have extended beyond the limits of individual phases, and so a more fluid and multi-layered temporality should be understood for the settlement. The aim has been to explain each stage of development, as an entity in itself and in relation to what had gone before.

Phase 1 (Conquest period-AD 70)

The first phase of Romano-British occupation is in many ways an enigmatic one, exhibiting few signs of continuity either with the Iron Age occupation which preceded it or with the Roman occupation that followed. A major double-ditched boundary was constructed towards the northern edge of site, and a simple axial field system laid out perpendicular to this. A very unusual, square post-built structure was then built within this framework.

Boundary ditch and field system

The construction of a double-ditched boundary (Fs 107 and 114) represents a clear departure from the previous phase of occupation, setting up a completely different alignment and creating what must have been a substantial barrier, establishing a far more permanent edge to the site.

The dating of this feature, which appears to have persisted throughout the life of the Roman settlement, proved difficult, as it contained virtually nothing in the way of pottery and was repeatedly re-cut. The fact that, generally, two parallel ditches appear to have been maintained separately suggests that it was double-ditched, with a bank mounded in between. The boundary certainly defines a distinct northern edge to the main density of archaeology throughout its use, with only a few small field ditches appearing to the north of F107. Due to the fact that it was impossible to see archaeological features in the extreme northern corner of site because of an area of very silty subsoil (possibly later disturbance) it must be assumed that the ditches continued north-eastward beyond the edge of excavation.

Set out perpendicular to the main boundary were three field ditches (F266/319, F127/368 and F704), two of which had small entranceways towards the middle of their length. These form a

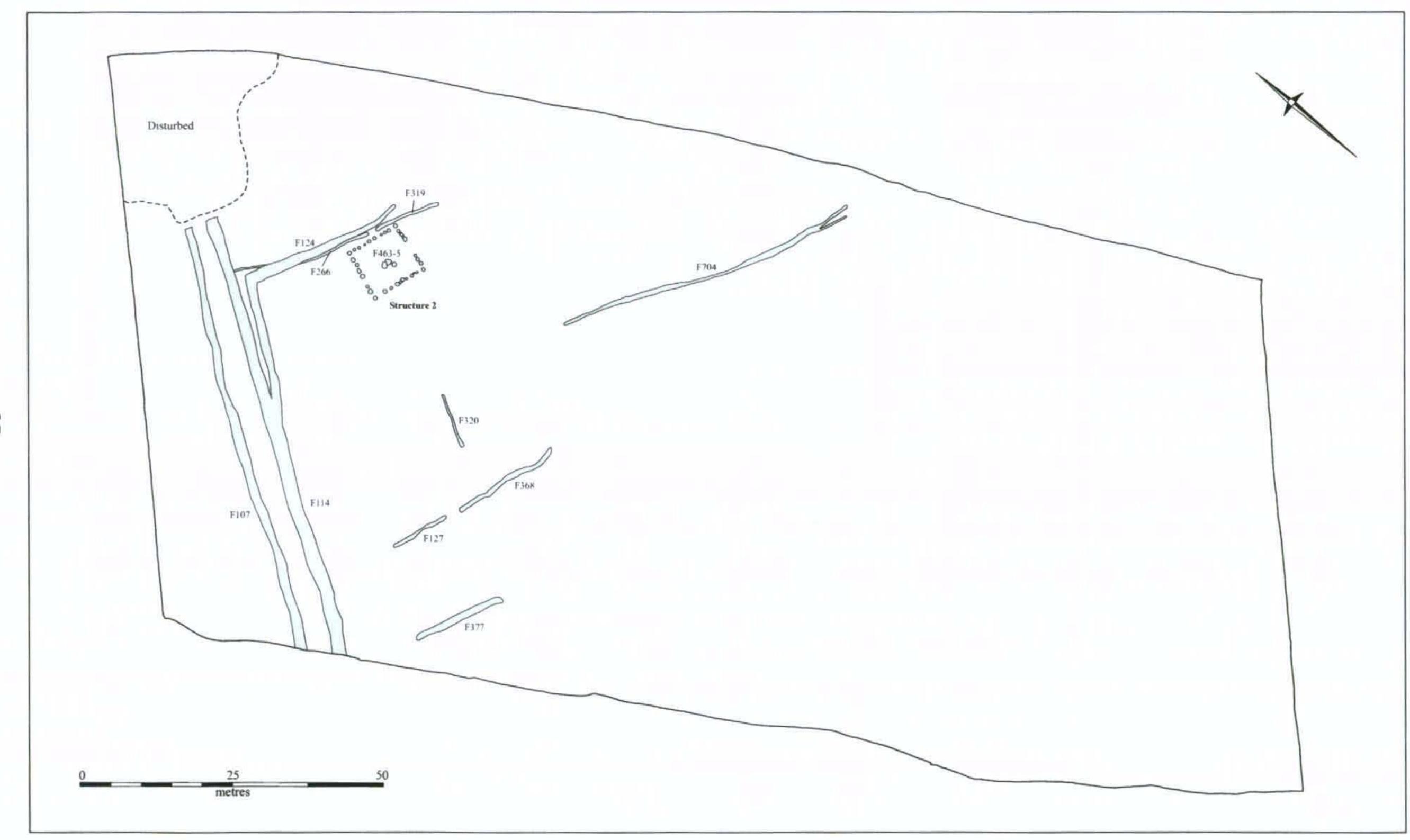


Figure 9 - Roman - Phase 1

coherent pattern, dividing up the area east of the main boundary in an informal but regular way. A further ditch (F377) to the south shares the same alignment, but due to heavy truncation by later Roman features it is difficult to see what form it would originally have taken. A final short stretch of ditch (F320) was aligned perpedicular to these, and may have formed a co-axial part of the same system.

The building

At a certain point during this phase, a large, square structure (Structure 2) was built towards the northern corner of site. This event coincided with a major re-definition of one of the field ditches into a large L-shaped enclosure (F124), which skirted one wall of the building. The structure measured 9.70 x 9.90m and was comprised of 32 regularly spaced post-holes which varied from 0.30-0.80m in diameter and from 0.15-0.65m in depth. Despite its relatively large size, the building does not seem to have had any internal supporting posts for a roof. The doorway was located at the centre of its eastern wall.

It is very difficult to ascertain the exact nature of this structure. Finds from the post-holes suggested nothing about its use, and what remained after truncation of the cluster of three pits located exactly in the centre of the building (F463-5) were totally empty. Its form is extremely unusual, and despite extensive searches it has proved very difficult to find other examples of square buildings in Roman Britain. Intriguingly, the two structures which share the strongest formal similarities both have 'ritual' connotations: the Late Iron Age 'shrine' at Danebury (exactly the same shape and orientation, similar size, but of post-trench construction; Cunliffe 1984, 82), and an enigmatic structure (similar shape, size, orientation and construction, but later in date) placed around an upstanding Bronze Age barrow at Slonk Hill, Sussex (Hartridge 1978).

Summary

The change in ditch alignments between this and the previous phase could well be an indication of discontinuity. The small-scale field system was not entirely dissimilar to what had gone before, but the major boundary ditches and structure were completely different. It is possible that the essentially Iron Age settlement was abandoned, then reinvigorated a few years later in a different form.

The boundary ditches were probably constructed in relation to a landscape feature or system which lay beyond the northern edge of excavation. This edge of site was defined by a Green Lane, which some commentators have suggested was a sub-branch of the Icknield Way. The facts that the early Roman boundary was set out at a different angle to it, and that the field ditches to the north appeared to continue underneath it, contradict this idea, implying that it cannot be a path that has survived from prehistoric times to the present day.

The structure itself was not part of a busy settlement, and appears to have been constructed and used for a couple of decades at the very most, in a relatively empty landscape. This fact, combined with the unusual square shape of the building, could suggest some kind of special

function. Although no 'special deposits' were found in the vicinity, the formal similarities it shares with the structures at Danebury (Cunliffe 1984) and Slonk Hill (Hartridge 1978) add weight to this interpretation. In a landscape which includes the 'ceremonial/ritual' complex at Fison Way, the possibility that this structure may have been a 'shrine' or 'temple' of some kind cannot be discounted.

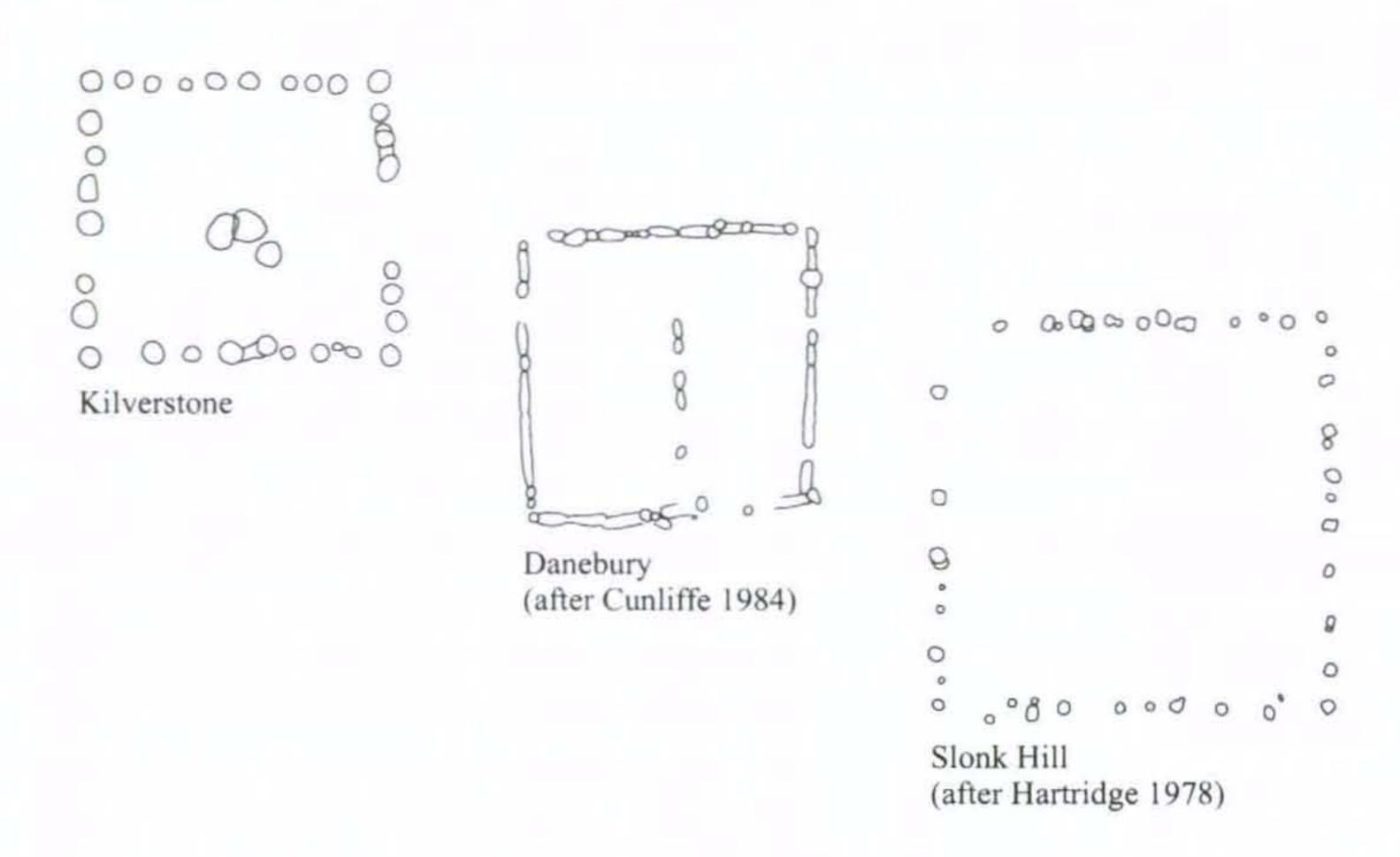


Figure 10. Structure 2 in relation to similar structures (illustrated at same scale)



6. Structure 2 (from the east)

Phase 2 (AD 70-c.100)

This phase of the site's development represented a dramatic change from what had gone before. It saw the establishment of a major settlement, including a large rectangular building and numerous enclosures, which was to evolve along similar lines for over a century. The earlier square structure and its associated land divisions were abandoned.

Ditches and enclosures

Settlement periphery

The western side of the settlement continued to be defined by the double ditches (F107 and F114) and bank; it is probable that at least one episode of their re-cutting took place during this phase of occupation. A number of small ditches and one possible small structure were visible to the north of the double ditches (Fs 170, 172, 184-5, 188-9, 192, 204, 226, 236). Not one of these contained any dateable material, but because they fitted well spatially into this phase they have been included in the Phase 2 plan. The southern and eastern limits of settlement were marked by a pair of L-shaped ditches (F947/1074 and F1185); the overlap between these two features created a small field with an open west side. Access into the settlement is likely to have have been from the east. The northern extent of settlement was not visible within the site boundaries. Any south-western settlement boundary must have been situated only a short distance beyond the edge of excavation, as it was not visible in Trench 8 of the evaluation.

It appears that the settlement, for most of its life in fact, was forced to fit into a roughly triangular space. The confining features, presumably beyond the edge of excavation, were echoed by the NE-SW oriented double-ditched boundary towards the north-west and at times by a sequential series of N-S oriented ditches towards the eastern edge of excavation. The consequences of this layout were important, as it appears to have discouraged the formation of strict rectilinear ditch systems, leading instead to the construction of sinuous boundaries and other irregular enclosure forms.

Interior (north)

The area towards the north was divided initially into a pair of sub-rectangular enclosures (approximately 40 x 12m in size), with open ends towards the east; the northern enclosure was defined by F123/124, the southern by F238 and F337. The latter was subject to a certain amount of re-working, with F238 later totally re-cut a few metres to the south (F263/298). In combination with F394, this later version created a sinuous boundary that extended across the entire width of site, dividing the settlement space in two. A short length of ditch (F393) was cut within this enclosure, presumably in order to sub-divide the space.

The area between these enclosures and the northern edge of site was divided simply into two fields by a boundary which ran roughly parallel to the main double ditch. This was represented



Figure 11 - Roman - Phase 2

by a series of re-cut ditches (F210/279/365 and F217/228/246), all of which maintained the position of a 3m wide entrance.

Interior (south and east)

The space to the south of the settlement was left comparatively empty. A large, square field was set out to the south-west (Fs 364, 365, 487, 621, 908 and 930). Its north-eastern corner was indented in order to accommodate Structure 3 (see below), whilst an entranceway (8m wide) allowed access from the west. This field apparently replaced a shallow ditch (F278) which extended outwards from F263.

Structure 3 was also skirted to the east by three ditches (F655, F823/4 and F895). F655, like F337 opposite it, had a curved butt-end and it is possible that together these features served to emphasise the approach leading up to the building from a possible settlement entrance to the north.

The south-eastern corner of the settlement was dominated by a number of short ditch lengths (Fs 931, 958, 1014, 1080-1, 1106 and 1150). The most likely explanation is that this area was wet during the Roman period, and that these ditches were constructed in order to manage water-flow down the hillslope; this part was certainly affected badly by rainwater damage during excavation. The fact that this area may have been damp could also explain why the locality appears to have become a focus for rubbish dumping throughout the life of the settlement, a practice which began in this phase, and eventually led to the formation of two large 'pond' features (F104 and F1120) overlying the water channelling ditches.

The buildings

Structure 3

The massive post-built structure (Structure 3), located towards the centre of site, appears to have formed the heart of the settlement at Kilverstone for a hundred years or so, throughout Phases 2, 3 and 4. The building was rectangular, and measured a massive 16.00 x 12.50m. A structure of this size would have required internal support for any roof, and accordingly 9 surviving internal post-holes were recorded.

The building was characterised by a certain amount of irregularity. The 34 post-holes of the outer wall varied considerably in terms of size (from 0.40-1.40m across and 0.10-0.60m deep) and shape (circular, oval and square). Whilst the east and south walls were fairly regular in spacing and post-hole size, the north and west walls were irregular; this may partly be a consequence of preservation, with the down-slope post-holes having been cut less deeply into the subsoil in the first place. The internal roof support post-holes were smaller (0.30-0.65m wide, 0.24m max. deep) and more regularly shaped than the outer wall, together forming a roughly rectangular supporting structure for the roof, which measured approximately 9.00 x 5.00m.

Whilst it is always difficult to be sure of the function of buildings of this kind, particularly as those functions may have changed throughout its use-life, it seems reasonable to suggest that this was a domestic structure of some kind. The longevity of its use certainly suggests that it played a very important role within the settlement at Kilverstone.

Structure 4

A small post-built structure was recovered approximately 40m to the north of Structure 3. It was rectangular and measured 4.50 x 3.00m consisting of 16 surviving post-holes; these were fairly uniform in size (0.25-0.40m wide, 0.08-0.24m deep) and shape (sub-circular). This short-lived structure, truncated by ditches during the next phase, was presumably a farm building of some description.

Pit features

All of the pits dated artefactually to Phase 2 or Phase 3 are discussed within Phase 3.

Summary

This phase of occupation is fundamental to any understanding of the site as a whole. It represents a period in which a major Romano-British settlement was established, whose main components – buildings, enclosures, fields, etc. – were modified, but essentially followed the same theme throughout Phases 3 and 4.

Phase 3 (AD c.100-130)

Phase 3 witnessed the continuing evolution of various aspects of the settlement. Whilst the main building (Structure 3) continued in use, two new structures marked by ring-gullies were built towards the south. The field and enclosure layout was modified in various ways. The excavation of what are presumed to have been quarry pits immediately west of Structure 3 began, whilst the dumping of settlement rubbish within the 'pond' area gradually increased.

Ditches and enclosures

Settlement periphery

The western limits of settlement continued to be defined by the double ditches (Fs 107 and 114). The eastern boundary was re-worked slightly, the earlier shallow ditch (F947) being re-cut as F351/987, with an apparent entranceway (8m wide) allowing access from the east. In contrast to the previous phase, at least three ditches (Fs 1015, 1032 and 1339) were situated to the east of this boundary. The southern extent of the site was also subject to slight modification, with F1074 re-cut on the same line as F1075, and F1239 replacing F1185, 20m to the south of the earlier feature. The northern and south-western peripheries remain unknown.

Interior (north)

The sinuous ditch, constructed during the previous phase to divide the settlement space in two from east to west, was re-cut as F250. The space immediately to the north of this was modified significantly. The two rectangular enclosures were replaced by a larger trapezoidal field (Fs 114, 222 and 250), within which was a large, roughly square enclosure (F239/301/459); this had a small ditch arm extending from its NW corner (F200), and may have been truncated towards the south-east.

North of this was a rectangular enclosure (Fs 178 and 222/374), very similar in size to those of the previous phase (40 x 15m); its south-eastern corner was embellished with a post-trench (F384), which in combination with F459 created a funnel effect at the entrance, possibly to facilitate the movement of animals into the interior.

Interior (south)

The field south-west of Structure 3 was compartmentalised into four separate units by two ditches arranged in a cross shape (F115/604 and F316/694); at one stage the E-W ditch was recut as F287, presumably to act in combination with F497 and F650 as a barrier between the building and the massive quarry pits (see below). The south-eastern corner of the earlier field was maintained (re-cut as Fs 849 and 907), with a semi-circular enclosure (F846) constructed adjacent to its southern boundary.

A number of new water channels (Fs 139, 140, 1131-3, 1138-9), which seem to have related closely to the ring-gully structure, were excavated south of the 'ponds', whilst F912 separated

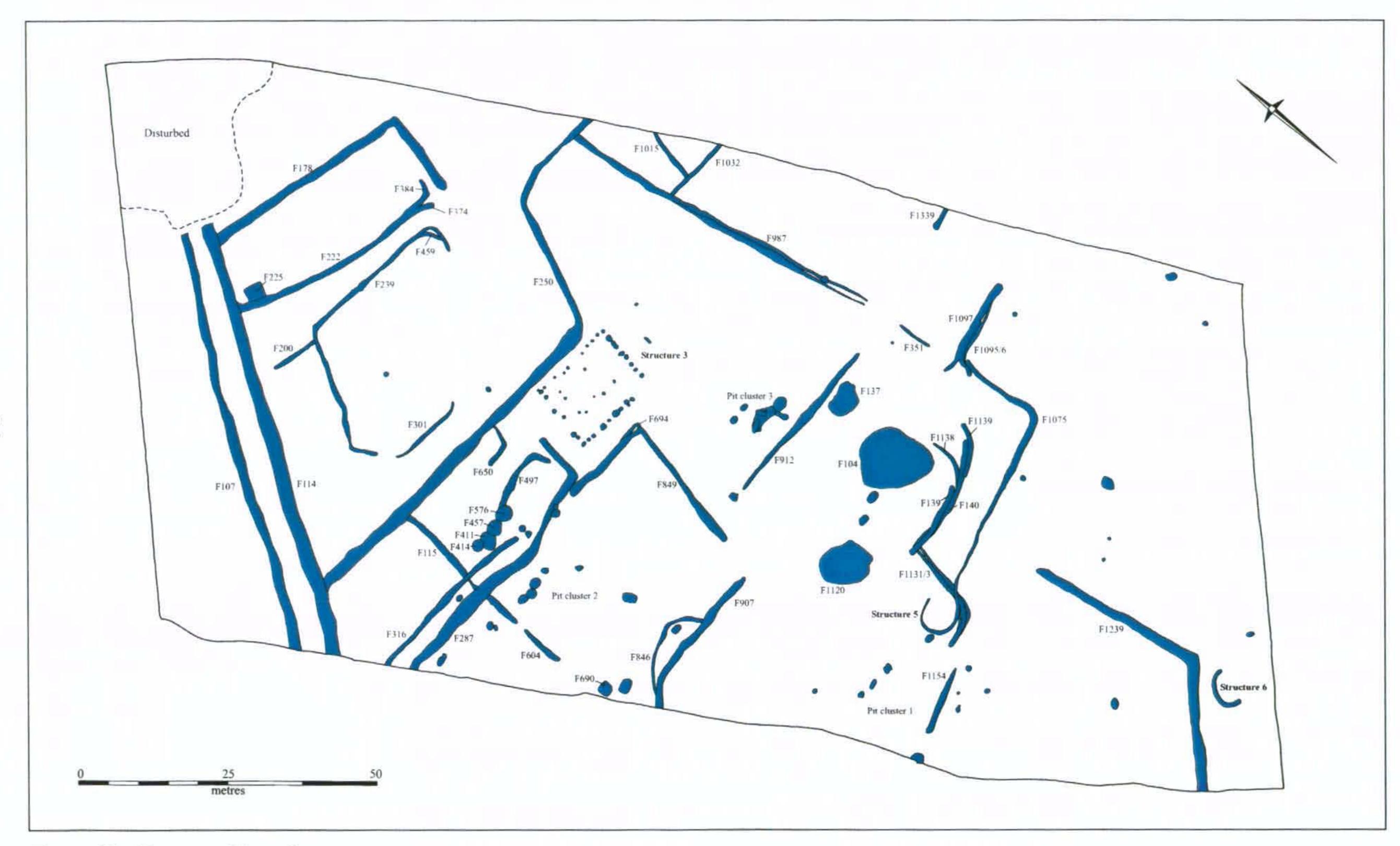


Figure 12 - Roman - Phase 3

them from the settlement space to the north. A short stretch of ditch to the south-west (F1154) marked one side of the large field to the south of the settlement core.

The buildings

Structure 3

Structure 3 continued as the settlement's primary focus. It does not appear to have been modified in terms of its shape at any point, but some repairs may have been carried out to the outer wall line.

Structure 5

Structure 5 was defined by a horseshoe shaped gully (F1149) that would have surrounded a circular structure of some kind, of which no traces remain. The gully measured 6.00m wide and at least 6.00m long in plan; the ditch was steep-sided with a rounded base (0.26-0.50m wide and 0.17-0.24m deep). Initially, the southern arm of the horse-shoe extended directly into a settlement boundary ditch (F1075); later a sequence of ditches was cut on the downslope side which ran from Structure 5 into those dug around the 'pond'. These modifications were presumably designed to facilitate drainage.

Circular drip-gully structures are well documented from the Iron Age and Romano-British periods. Whilst they were associated directly with houses during the earlier period, later on they can be indicative of a wide variety of structures, including hay stacks and small-scale outbuildings.

Structure 6

Structure 6 was fairly similar in form to Structure 5, although it had clearly been cut as a 'C-shape' rather than a 'horseshoe'. The roughly semi-circular ditch measured 6.80 x 3.50m in plan, and had steep sides and a narrow, curved base (0.55-0.90m wide, 0.39-0.52m deep). Its location outside the settlement core suggests that it was an agricultural structure.

Pit features

Due to the fact that many Phase 2/3 pits seemed to fit better in spatial terms into Phase 3, all are discussed in this section. Features which were clearly part of a group are discussed as 'clusters', those which were isolated but of particular interest discussed individually.

Clusters

The most obvious group of pits on site was a sequence of very large, intercutting pits located 20m west of Structure 3. The first two (Fs 411, 414, 457, 576) appear to have been created during this phase, with ditches re-aligned to accommodate them; the rest of the group falls within

Phase 4. The size of these features (up to 4.00m across and 1.05m deep) suggests that they may have been quarry pits.

Three other groups of smaller pits stand out. The first (Cluster 1) was situated immediately to the west of Structure 5, suggesting that they may have been related closely to it. The second (Cluster 2) was situated close to the large quarry pits, at the top edge of the southern pair of fields. A third group (Cluster 3), containing two fairly large but shallow pits along with several others, was situated between Structure 3 and the 'ponds'; these could have been accessed easily from the building which lay 18m to the north-west.

Single pits

Three pits merit individual attention. F137, just to the north of 'pond' F104, contained a relatively large quantity of closely-dateable pottery (894g) within a dark grey silty fill. It is likely that this was a rubbish dump, possibly a single episode, which may have prefigured the larger scale refuse deposition in succeeding phases, seen just to the south within the ponds.

F225 was located towards the north of site, tucked away in the corner of the rectangular enclosure. This feature was fairly large in plan (2.40 x 2.00m) but very shallow (0.12m max.), and contained a dark, extremely charcoal-rich fill. It is possible that this 'pit' represents the remains of a designated sunken area for cooking or burning.

F690 was a sub-rectangular post-hole (0.60 x 0.42m x 0.76m deep) with a very clear post-pipe, cut into the top of a larger pit (F724). The uppermost fill, which lay immediately above the post-pipe, contained part of a neonate skeleton. The combination of a single large post left to rot in situ and a disarticulated baby skeleton is intriguing, hinting at a distinctly unusual way of treating human remains (see Human Bone report for a full discussion).

Phase 4 (AD 130-200)

Phase 4 sees the continued re-working of many familiar aspects of the settlement as well as the addition of certain new features. A large aisled building (Structure 7) was constructed immediately to the south of the main building (Structure 3). The field system was again reformed, with a major sub-rectangular enclosure as well as several other boundaries constructed towards the southern corner of site. Within the new enclosure three adults were buried in rectangular graves. The northern enclosure and several other field ditches were reshaped. The quarry area continued in use and the 'ponds' became the focus for an increasing amount of refuse deposition.

Ditches and enclosures

Settlement periphery

The settlement periphery is somewhat less well-defined during Phase 4. The western limits of settlement continued to be marked by the double ditches (Fs 107 and 114). The eastern boundary, however, maintained the alignment of the previous phase, shifting 20m to the east (Fs 1043 and 1070). The southern corner of site, previously a relatively open area, became much more of a focus for activity. The settlement appears to have spread out to the south, and for this reason it seems that both the south-eastern along with the northern and south-western peripheries lay beyond the limit of excavation.

Interior (north)

The space immediately north of Structure 3 changed significantly, due to the fact that the ditch which had previously divided the site in two from east to west (F250) went out of use. From Phase 4 onwards, the dominant axis dividing the site (now created by Fs 661 and 822) was realigned to run NNE-SSW.

The enclosure immediately north of Structure 3 remained in approximately the same position, but contracted slightly in size (Fs 259, 381, 488); the ditch itself became deeper and wider. The internal space appears to have been used differently, with an internal sub-division added (F311) and two large pits (Fs 454 and 466) dug towards the northern edge.

The rectangular enclosure to the north of this (Fs 114 and 171) was also redefined, made larger and squarer than before and divided in two by a new ditch length (F267). The entrance, which had provided access to the west, was closed off and instead opened into a new field (defined by Fs 209 and 346) to the north. East of these enclosures was an apparently rectangular field (Fs 346, 381, 566, 661).



Figure 13 - Roman - Phase 4

Interior (south)

The layout of the area south-west of Structure 3 remained very similar to the previous phase, despite the addition of a major new building (Structure 7): the ditches forming the south-eastern corner of the field were re-cut (Fs 822 and 874), while the internal sub-divisions were reduced in number and moved further south (Fs 441 and 631); one stretch of ditch (F578) was maintained to separate the buildings from the large quarry pits to the east. The ditch which separated Structure 3 from the 'pond' area was moved sequentially northwards (Fs 851 and 852).

The area to the south of the 'ponds' was altered radically at this stage. The main new feature, a large sub-square enclosure, was re-cut in slightly different positions several times (Fs 1198, 1199, 1211). This appears to have been closely related to a number of constantly re-cut ditches that ran beyond the edge of excavation to the south and west (Fs 1103, 1238, 1249, 1258-61, 1319). The high proportion of chaff found in some contexts inside the enclosure suggests that late-stage crop processing may have been carried out inside (See Plant Remains).

Over the course of the enclosure's use, three people were buried in graves towards its south-western corner (these are discussed in detail below). The ditch is unlikely to have been directly related to the burials (i.e. some kind of 'mortuary enclosure') and perhaps was simply a small, quiet field at the edge of the settlement where it seemed appropriate to bury the dead.

Several other field boundaries divided the space around the square enclosure. F1105 separated it from the ponds to the north, whilst Fs 1083, 1263 and 1312 delineated sub-rectangular open spaces to the east.

The buildings

Structure 3

Structure 3 continued in use at the centre of the settlement. The fact that this building spanned the three main phases of settlement at Kilverstone, lasting several generations, could partly explain its irregularity of form. The functional difficulties of keeping such a large structure standing would have been significant, and it was probably rebuilt and repaired several times, resulting in a wide variety of post-hole shapes and sizes (as mentioned above). At the end of this phase, when the building was abandoned, it seems that at least parts of the building were left to rot in situ, due to the fact that post-pipes were visible in several of the post-hole sections.

Structure 7

Structure 7, an aisled building, was built during this phase. Located just to the south, the new building probably operated in tandem with Structure 3 playing a complementary role in the workings of the settlement.

The aisled construction technique used in Structure 7 shifted the load-bearing function away from the outer walls onto the interior aisle posts. Correspondingly, the post-holes were very

large, varying from 0.80-1.80m wide and from 0.29-0.85m deep; these features were in some respects more pit- than posthole-like, being only moderately steep-sided with rounded bases. In all other aspects, the construction was very uniform, with spacing between posts a regular 3.00m, and between aisles a regular 6.25m. In total, the post-holes covered an area of 12.50 x 8.00m; the building itself would have extended considerably beyond this.

This building is the most typical of the Romano-British structures found at Kilverstone, sharing similarities with many buildings across Britain (see for example Morris 1979, 82). Interestingly, it is also very similar to a 3rd/4th century building found at Melford Meadows, one kilometer to the south (Mudd 1994). In line with interpretations for these parallels, it is likely to have been used as a barn.

Pit features

Clusters

The quarrying activity, begun during the previous phase to the west of Structure 3, continued in Phase 4. Five large pits (Fs 409, 415, 458, 559, 577) were dated to the latter part of the second century, implying a continued need for the sand which was being extracted.

A pair of large (7.50 x 2.50m and 5.30 x 3.00m) but fairly shallow (approximately 0.40m) pits with dark brown-grey fills (Fs 454 and 466) lay towards the northern edge of the northern enclosure. These contained relatively large amounts of pottery (F454 produced over 2kg), a fact which along with the darkness of their fills suggests that they may have been rubbish dumping areas, up against the edge of the enclosure. Two further, relatively dispersed groups of pits were identified to the south-west of Structure 7 (Cluster 4) and to the north of the square enclosure (Cluster 5).

Single pits

Two single pits are worthy of note. F260, located towards the western side of the settlement, was roughly circular in plan (2.60 x 2.45 x 0.25m deep). The lowest fill was a mixture of orange sand and red/black burnt sand which had a distinctive scorched appearance. It is probable that this was a hearth or fire of some sort. F944, east of Structure 3 and adjacent to field ditch F851, was similar in terms of size and fill type to the pair of pits described above (Fs 454 and 466); it may also have been a feature created by the dumping of rubbish.

Graves

Adults

Three graves (Fs 1248, 1250 and 1262) were recovered towards the south of site, up against one edge of the square enclosure. All were aligned north-south and set out close together. The skeletons were extremely poorly-preserved: F1262 contained the skull and abraded leg bones,

whilst F1248 and F1250 produced only the splintered and abraded shafts of the legs (see Human Bone report for a full discussion).

Two of the bodies appear to have been lying in coffins: F1248 contained iron nails around the edge of the cut as well as a latch, F1250 iron nails only. The former was lying solely within one half of the grave cut, suggesting the slight possibility that this was a double burial in which the second body had been totally lost. Both features contained hobnails in the area where the feet would have been. The person in F1250 was also buried with a bronze bracelet

Infants

Two other 'graves' (both shallow scoops) were recovered within Area C, both of which revealed infant skeletons in a good state of preservation. F853, towards the west of site, contained a child aged about nine months. F1228, north-east of the square enclosure, contained two individuals both of whom died around birth.

Neither feature contained any grave goods, or could accurately be dated in any other way. F853 was cut by a Phase 4 ditch but could still belong to an earlier part of the same phase; F1228 was entirely unstratified, but lay just outside the enclosure within which the adult burials were situated. It is quite possible, therefore, that these infants were buried at roughly the same time as the adult graves.

Cremation

Cremated remains were recovered in the very top fill of a Phase 2 ditch (F263), suggesting that they too could be contemporary with the inhumations. The bone had been placed in a pottery vessel, and was derived from two individuals (an adult and a child). These were situated over 100m away from the inhumations, towards the north-west corner of site.



Infant burial (F1228)



8. Inhumation (F1262)



7. Structure 7 - the S. row of aisle posts

Phase 5 (AD 200-400)

Phase 5 represents the final phase of Romano-British occupation at Kilverstone. The essence of the settlement changed completely: although the square enclosure was re-cut and the 'ponds' continued to be the focus of rubbish deposition, all of the main buildings were abandoned along with many of the field ditches, suggesting a fundamental transformation in the site's function. A new structure was built towards the eastern side of site and a series of intriguing metalwork deposits placed nearby; the evidence suggests that this was a metallurgical workshop.

Although the timespan covered by Phase 5 is broad, spanning two centuries, it is likely that the site was used very infrequently after AD 300; most of the features were dated to the 3rd or early 4th centuries, with only five contexts producing distinctly 4th century material.

Several of the ditches assigned to the previous phase may have remained open; consequently, the features from Phase 4 which contained pottery that could also be 3rd century in date have been included in the Phase 5 plan.

Ditches and enclosures

Settlement periphery

The settlement periphery, which had already become less well-defined during the previous phase, cannot be seen in Phase 5 at all. The double ditches to the west may have remained, at least in earthwork form, but none of the other boundaries appear to have survived. It is possible that the settlement was simply unenclosed towards the end of its life.

Settlement 'interior'

The abandonment of Structure 3, and subsequent extension of the ditch which had stopped on either side (F765, added to Fs 661, 822 and 874) completed the re-alignment of the site's central axis to a NNE-SSW direction begun in Phase 4. An entrance was maintained between Fs 822 and 874, enabling movement from east to west.

Towards the north of site the Phase 4 enclosure (Fs 259, 311, 381, 488) appears to have remained in use, with one of the pits at its northern edge re-cut (F455) along with two new pits (Fs 453 and 707). The southern entranceway was re-emphasised by two short lengths of ditch (Fs 433 and 817); these were steep sided and narrow, and may have been post-trenches. F267 to the north may also have remained, and was the focus for the deposition of large quantities of flint-working debris (see Flint Report).

Most of the Phase 5 activity took place within the southern part of site. The square enclosure was re-cut as F1192, the northern side left more open than in previous phases. A sinuous length of ditch (F1254) was cut to the south, dividing the space in that area to a limited extent. A number of bizarrely shaped ditches, whose function is unclear, were dug towards the south-east of site

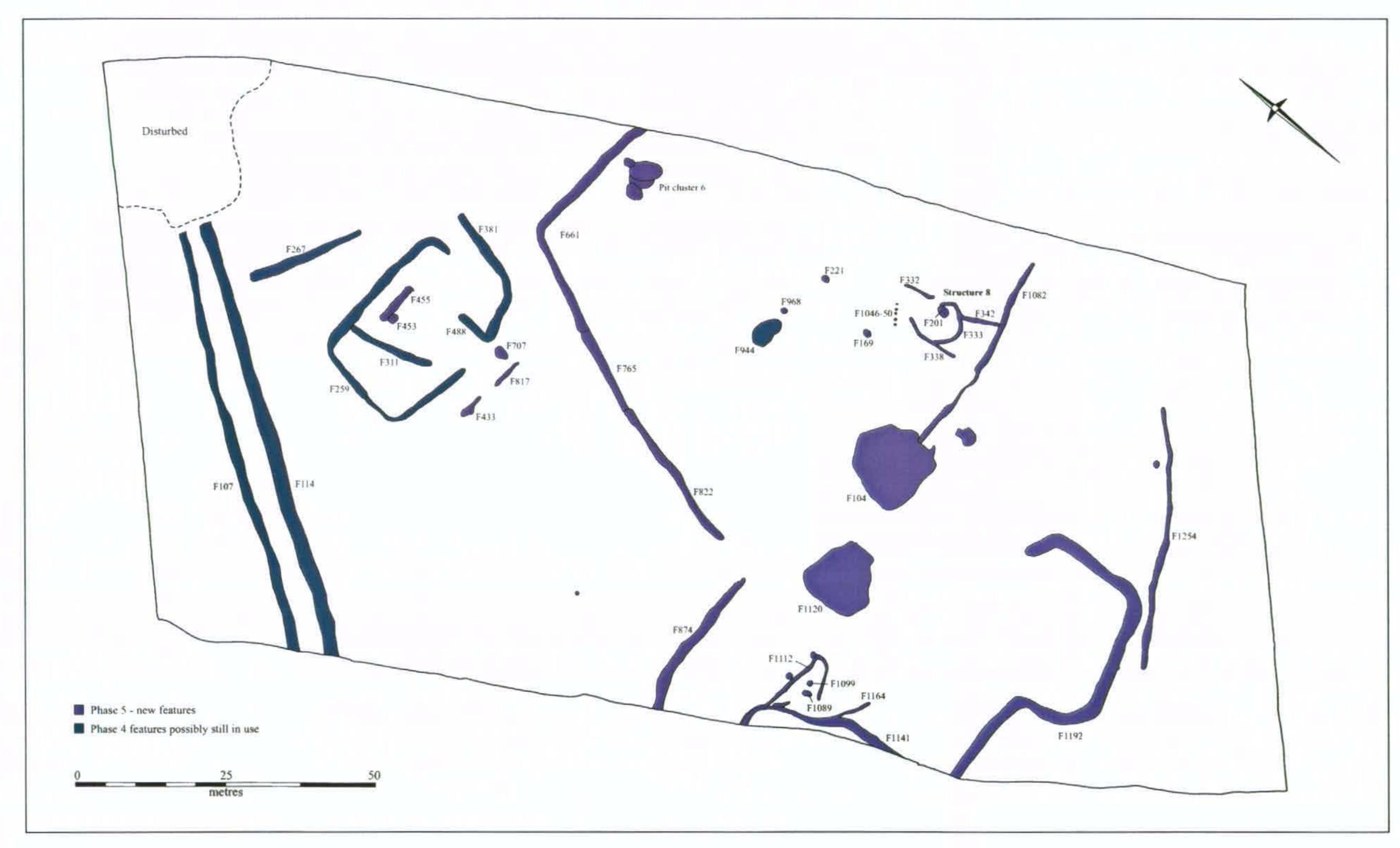


Figure 14 - Roman - Phase 5

(Fs 1112, 1141, 1164). The 'ponds' remained a focus for general rubbish deposition, and a new channel was cut (F1082).

The building

Structure 8 was marked by a number gullies, presumably dug around a circular structure which has since been lost. The main feature (F333) in combination with F338 formed a squared-C shape, 8.00m across; another ditch (F342) extended southwards, presumably to channel water away from the building. Two further features, a line of posts (Fs 1046-50) and a short ditch length (F332), were situated at the front of the building.

Within the interior was a large sub-rectangular pit (F201; 2.20 x 1.50 x 0.44m deep). During excavation, it became clear that a box had sat inside the pit: a darker fill with straight sides could be seen very clearly in section, whilst around the base were a number of iron nails (points still facing upwards) and four angled iron corner brackets. Within the box were two copper and lead 'cup-shaped' items joined by an iron pin, and an iron axe-head. It is probable that the copper/lead/iron artefacts were a non-return valve, which combined with strips of leather and the box would have formed part of a pump that presumably sat inside the pit during use (see Metalwork report for a full description).

This complex feature suggests that Structure 8 had a specialised function, which was perhaps linked to the three metalwork deposits nearby.

Pit features

Metalwork pits

Three pits (Fs 169, 221 and 968), all located less than 30m north of Structure 8, were found to contain a variety of metal artefacts.

The most impressive of the three (F221) is best described as a 'blacksmith's pit'. It contained a stack of several pewter plates, a pair of long-handled tongs and an iron hammer-head, along with a large lump of charred wood. This was clearly an intentionally deposited group of finds, which had been arranged within the pit as a specific deposit. The second pit (F169) contained a pair of shears, the blade of a woodworking plane and three nails. The third (F968) had been truncated by a later ditch, but contained a pair of shears, two knives and a pick-axe head.

It is easy to explain F221 as a 'ritual' deposit, particularly when such care had clearly been taken in the selection and arrangement of artefacts. The blacksmiths references are obvious – the fuel, tools and product of the trade were placed together as a kind of 'tableau' – and may be due to the fact that metalworking was revered as an almost mystical art, associated with the cult of Vulcan (A. Challands, pers. comm.). The other pits (Fs 169 and 918) are in some ways more difficult to explain. The reason why a number of metal artefacts, in apparently good working order, should have been buried within pits is difficult to ascertain. Whilst in the prehistoric periods 'structured'

deposition is now widely-recognised, within the supposedly more rational Roman period it can seem out of place. Features such as these, along with several unusual animal bone deposits within Area C (see Animal Bone Report), suggest that depositional practices in the later period could sometimes be more than simple rubbish deposition.

Other pits

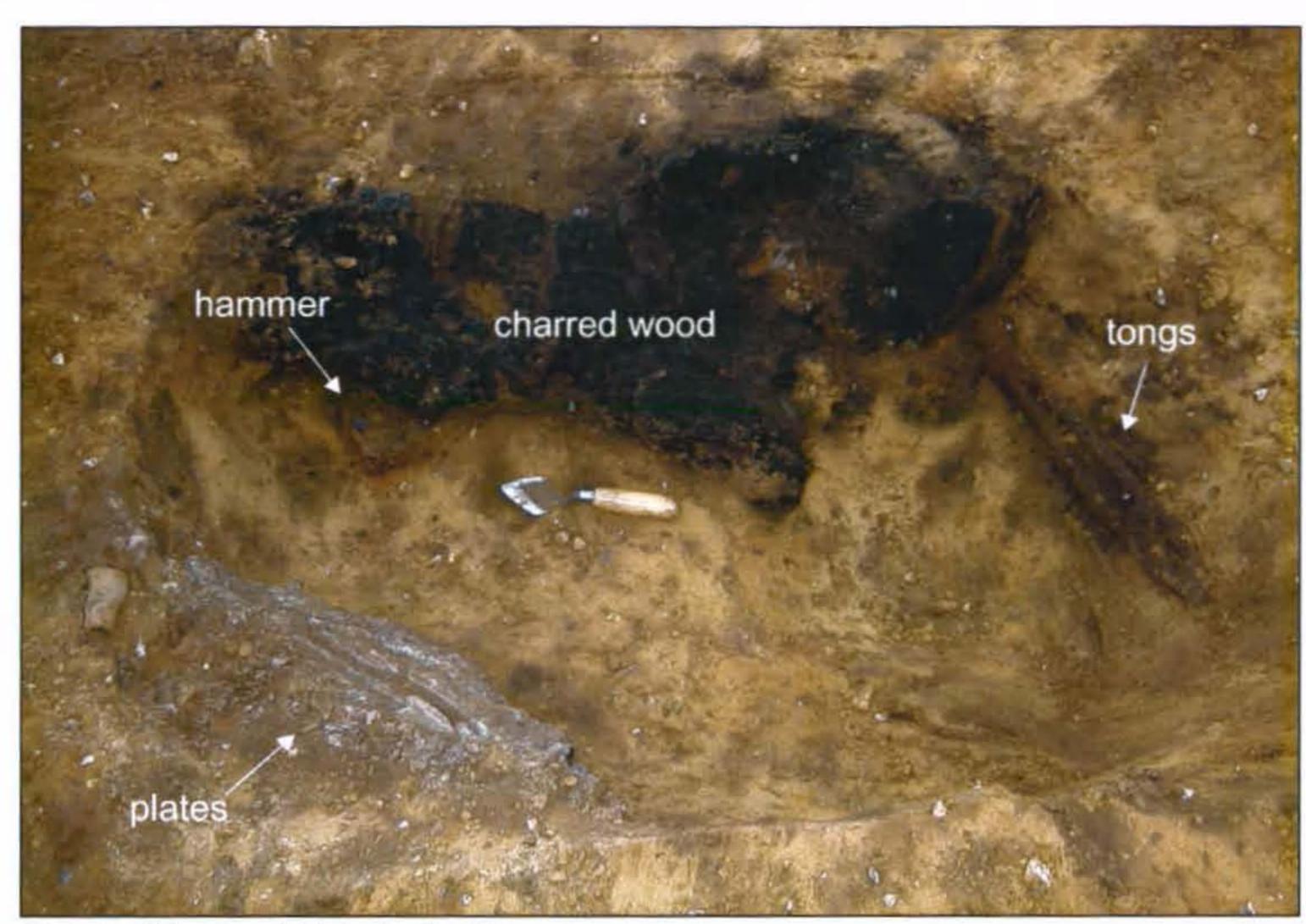
A cluster of very large, but shallow pits (up to 3.30m across, but only 0.30m deep) were grouped together close to the eastern edge of site (Cluster 6); their function is uncertain. Several other individual pits dated to this phase but formed no distinct clusters; the two definitely 4th century ones (Fs 1089 and 1099) were situated close together towards the south-west of site.

Summary

The settlement during Phase 5 was very different in character to any of the preceding phases. Whilst a few of the field ditches and enclosures that had been constructed during the previous phase may have continued in use, the buildings did not. A new drip gully structure became the primary focus of a rather more 'low-key' settlement that was perhaps no longer permanently occupied.

It seems that at this time the site was a metalworking centre of some description. The amount of metalwork deposited, including the very unusual 'blacksmith's pit', is certainly impressive and strongly supports this interpretation. Some of the tools recovered may have been repaired there (mower's anvil, spade tip, plane, etc.), an assertion to which the presence of lead 'repair plugs' adds weight. Other pieces could have been melted down and re-worked (fragments of pewter plates, iron sickles, etc.), an idea supported by the recovery of a possible foot from a casting mould vessel and several pieces of slag. Roman pewter hoards are found almost exclusively within East Anglia and it has been suggested that there was a pewter manufacturing centre in Norfolk (Peal 1967, 21); many similar deposits have been found in the near vicinity (Gurney 1986).

Structure 8 may, therefore, have been a workshop, the row of posts at the front perhaps acting as a form of windbreak. It appears that a variety of metals were dealt with, probably by a general metalworker who repaired broken items and melted down scrap to make new ones. In terms of the site alone, Phase 5 was relatively small in scale. However, when this phase of activity is viewed in terms of its regional and even national context, the importance of this small structure and its associated metal finds becomes apparent.



10. The 'blacksmith's' pit (F221)



11. Detail of pewter plates

Overall summary

Conquest period-AD 70 (Phase 1)

The earliest Roman period occupation at Kilverstone shows little sign of continuity with the Late Iron Age, despite the continuous pottery sequence. A double-ditched boundary was constructed, and several small field boundaries extended perpendicular to it. At some point, a very unusual structure was built within this framework. There are few parallels for square Romano-British buildings, and those that do exist usually have strong 'religious' associations. Whether or not it was used as a 'shrine' or 'temple', the building is certainly distinctive, a fact which probably does indicate an unusual function of some sort. Its architecture doubtless proved a stark contrast to whatever had stood on the site before, marking very clearly the arrival of the Roman period.

AD 70-200 (Phases 2, 3 and 4)

Towards the end of the 1st century AD, the square building was abandoned and a large, probably domestic structure built towards the centre of site. This was surrounded by fields and enclosures, one of which housed a small subsidiary structure, whilst a wet area to the south became the focus for small scale rubbish disposal. The site was essentially a mixed farm.

This basic arrangement, which set the scene for the next 150 years or so, was gradually re-shaped through time, with various new elements added and others changed to suit new needs. Throughout the settlement's life, there appears to have been a trend towards an increasingly rectilinear interior field layout, whilst the periphery became more diffuse. The subsidiary buildings, which were presumably less permanent than the dominant central structure, came and went. Towards the middle of the 2nd century, the smaller, rectangular enclosures with elaborate entrances (continually re-worked during the earliest phase) went out of use, around the same time as an aisled barn was built; this suggests that the site's main function may have changed, with an initial focus on animal husbandry shifting more towards arable farming.

The three major domestic animals were kept, along with horses and dogs. The main cereal crop was spelt wheat, with six-row barley and rye also grown to a limited extent; the presence of coriander hints that occasionally somewhat more exotic plants were eaten. The pottery assemblage indicates a 'low to middle status' settlement, an interpretation which sits comfortably with the other evidence. Interestingly, the presence of two ink-wells and a stylus tip suggests a degree of literacy, which would not necessarily be expected on such a site.

AD 200-400 (Phase 5)

At some point during the earlier part of the 3rd century, this once-flourishing farm was abandoned, and the nature of the site again changed completely. Some of the field boundaries appear to have remained open, but none of the earlier buildings stayed in use. Instead, a small structure was built towards the east of site. This appears to have had a very specialised function associated with metalworking; a large number of metal artefacts, including a very unusual

'blacksmith's' deposit, were placed in the ground at that time. This small-scale occupation did not last long into the 4th century, and although it was still visited sporadically, the site was not occupied on a permanent basis until the advent of the Saxon settlement more than a century later.

Discussion

The site at Kilverstone considerably enhances our knowledge of the Roman period in and around Thetford. The fact that the pottery sequence extends from the Late Iron Age through to the 4th century suggests that even though the settlement itself witnessed changeable amounts of activity, the wider area was occupied throughout. Although a few finds scatters are known, the only other Roman settlement to have been extensively excavated in the vicinity was situated a kilometre to the south at Melford Meadows, Brettenham (Mudd 1994). Interestingly, the main phase of occupation there began in the later 3rd century at about the time when the main phase at Kilverstone ended, a fact which could suggest some link between the two sites.

The settlement also provides useful insight into the Iron Age – Roman period transition. In this case, it seems to have been one of marked discontinuity in terms of the site's use. During the later Iron Age, Thetford was "a major political and regional focus" (Davies 1996, 80), containing sites of major importance such as the ceremonial complex at Fison Way and the 'hillfort' at Thetford Castle. The Roman period, however, appears to have been somewhat lower-key, and there are few known sites in the area. Kilverstone provides an interesting challenge to this established picture: here the Iron Age settlement was relatively ephemeral, whilst the Roman period site made a far greater impact.

At a more detailed level, the site provides considerable insight into the processes of change within a single settlement. The developmental sequence is complex, appearing to be one of both punctuated and gradual evolution. The site had three distinctly different uses over the course of 300 years, as a place with possible 'religious' connotations, a farm, and a specialist metalworking centre. Even within one of these periods of use, when the site functioned as a farm, the dynamics of change are manifest: the layout of the site was altered many times over, and it is possible that its function shifted from a pastoral to an arable focus.

Irrespective of its changing functions, the site's role as a significant *place* within the landscape appears to have persisted throughout the whole of the Roman period.

4. SAXON

The Saxon settlement at Kilverstone consisted of ten 'sunken featured buildings', two post-built structures and seven pits. It was sited in a location that had not been occupied permanently for at least a hundred years, and although earthworks of the Roman settlement almost certainly remained, the Saxon occupants appear to have paid little attention to them.

Sunken featured buildings

Ten 'sunken featured buildings' (SFBs) were identified. These fell almost exclusively within a band running north-south across the eastern half of site; one outlier (F633) was located 40m from its nearest neighbour towards the centre. There was no obvious pattern to their distribution – some were clustered together in small groups, others were set apart. They were aligned eastwest, with only slight variation from this axis.

Excavation Strategy

All of the SFBs were fully excavated (with the exception of F434 and F974 for logistical reasons). Each was divided into quadrants, assigned separate context numbers in order to assess differential finds deposition. Opposing quadrants were excavated first to ensure that sections could be drawn along each axis. Environmental samples were taken from all four quadrants.

Architecture

The group was very standardised in terms of architectural form: the basic SFB was a sub-rectangular pit with a post-hole at each end. Only two did not follow this format: F974 was oval in plan with one post-hole on the southern side rather than at the western end, F1090 was more angular at the corners with two additional post-holes halfway down each side.

| Feature No. | Length | Width | Depth | No. of PHs | Size (m²) |
|-------------|--------|-------|-------|------------|-----------|
| 240 | 4.20 | 2.60 | 0.25 | 2 | 10.92 |
| <i>354</i> | ? | 2.10 | 0.20 | 1 | ? |
| 434 | 3.90 | 2.80 | 0.20 | 2 | 10.92 |
| 633 | 4.00 | 2.75 | 0.45 | 2 | 11.00 |
| 974 | 3.50 | 2.00 | 0.15 | 2 | 7.00 |
| 994 | 2.85 | 2.20 | 0.24 | 2 | 6.27 |
| 997 | 4.20 | 3.25 | 0.25 | 2 | 13.65 |
| 1042 | ? | 3.20 | 0.45 | 1 | ? |
| 1090 | 4.00 | 3.25 | 0.22 | 4 | 13.00 |
| 1091 | 3.65 | 2.80 | 0.35 | 2 | 10.22 |

Table 1. SFB basic dimensions (italicised - not fully visible)



Figure 15 - Saxon

Two SFBs (F354 and F1042) were not fully visible within the edge of excavation but appeared to conform to the standard shape. F633 (the outlier) had a slight indentation which ran around the edges of the pit about halfway down, possibly the trace of a structural element. All appeared to have been somewhat truncated.

Infilling

The way in which an SFB becomes infilled has long been the subject of debate (cf. Tipper 2000, Ch. 5). The buildings at Kilverstone produced relatively small amounts of material. All but one of the SFBs had a single fill type – uniform dark brown/grey silty sand with occasional lenses of charcoal. None of these showed signs of erosion or weathering at the base, and it is likely that they were intentionally backfilled as soon as they had gone out of use. The exception (F633) contained several bands of lighter material within the main dark brown/grey silty sand fill, and had a layer of light yellow silty sand at the base. This sequence suggests that the feature lay open after abandonment, enabling a certain amount of weathering to take place before it filled up gradually.

Layout

The settlement appears to extend beyond at least the eastern edge of excavation. The distribution of SFBs is difficult to categorise. Although nine out of ten were distributed in a band across the east of site, some were in pairs and some isolated; the only group of three included the smaller, unusual structure (F974). It is difficult to be sure if they were contemporary or not, as none of them intercut.

The single outlier (F633) was also distinguished by a different fill sequence; coupled with its physical isolation, this could suggest a different date. However, it is also possible that it simply did not need to be backfilled *because* it occupied a different place within the settlement.

It is likely that some of the Roman features remained as earthworks into the Saxon period. The fact that several SFBs were located within earlier ditch butt-ends and junctions suggests that they may have been intentionally sited within pre-existing hollows.

Post-built structures

Two post-built structures, dated to the Saxon period, were excavated in amongst the SFBs.

Structure 9

Structure 9 was typically Saxon in form. It was comprised of 29 remaining post-holes, which formed a rectangle 10.00 x 4.50m in size; these were very regular in terms of spacing and form (0.25-0.60m diameter, 0.08-0.22m deep). A further line of four post-holes was situated just outside the eastern wall. These were slightly smaller (0.20-0.45m) and shallower (0.04-0.15m) than the main group, possibly representing the remnants of a porch or lean-to outside the entrance. As with the SFBs, this building was aligned E-W.

Structure 10

Structure 10 did not survive in full, presumably as a result of truncation (the post-holes were very shallow); it was also a typical Saxon building form. A total of 23 post-holes remained, which formed a fairly regular rectangle measuring 8.75 x 4.75m; the majority were relatively uniform in shape (sub-circular) and size (approximately 0.30m diameter and 0.15m deep). One contained a small sherd of Saxon pottery. The building was aligned roughly E-W.

Pits

The only other features assigned to the Saxon period were seven pits, all of which contained large amounts of burnt flint (up to 450 kg in each). None contained any dateable material (other than residual Roman pottery). However, all were last in their local stratigraphic sequences, and similar features have been found on other Saxon settlements (including three, dated as Early Saxon, recovered 1.5km away at Redcastle Furze; Andrews 1995).

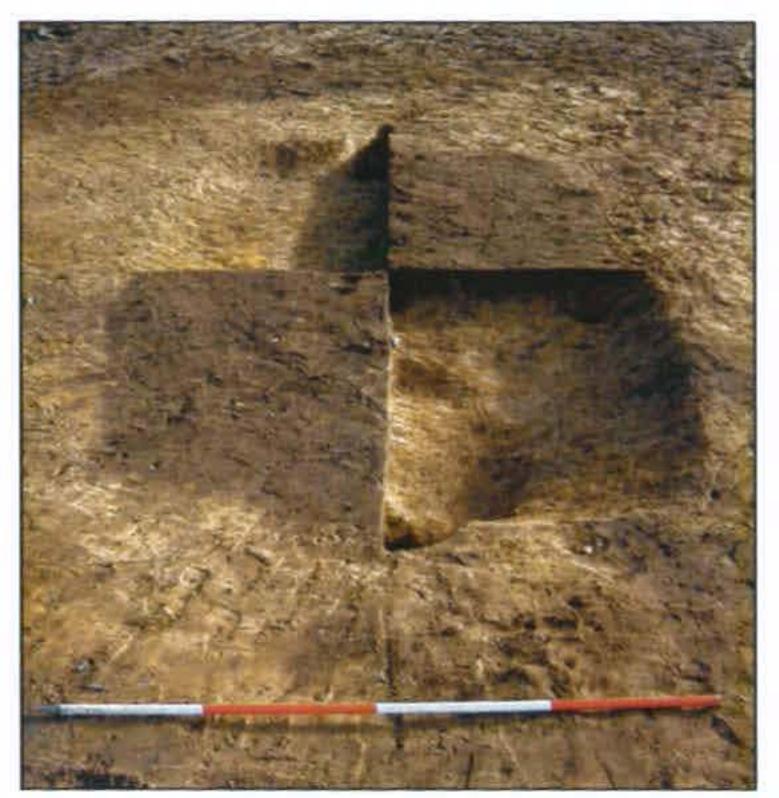
The pits were oval or sub-rectangular with very steep sides and relatively flat bases (average 1.40m wide x 0.50m deep). The majority (Fs 295, 347, 378, 541 and 795) had the same fill sequence – a layer of charcoal at the base, followed by a large deposit of burnt flint mixed with charcoal, capped by a layer of mid brown silty sand. Two (F876 and F1114) had more homogenous fills, the burnt flint and charcoal mixed within a brown/black silty sand matrix. All had scorched subsoil around the edges. No obvious pattern was discernible in their distribution. Whereas at Redcastle Furze they were immediately adjacent to the buildings, the pits at Kilverstone are all situated a respectful distance away (10-43m).

These features are difficult to understand, particularly in the light of the fact that heating flint is a dangerous process (it cracks and explodes). The subsoil around the sides of the pits was scorched, and it seems unlikely that the material was carried over and deposited still hot; similarly, the charcoal layers sit at the base as if in situ. Equally, however, it is not totally clear how a reasonable oxygen supply would have been secured to keep the fire burning at the base of a pit filled with flint. Their function remains unknown. It has been suggested that "they were either used as cooking pits, or contained the debris from hearths or cooking" (ibid., 22), and while a domestic cooking role cannot be ruled out, it somehow seems too simplistic and 'everyday', particularly as throughout the life of the settlement only seven pits were created. Explanations involving some 'industrial' process, or other less common practices, should perhaps be considered as possibilities.

Discussion

There appears to have been no continuity between the Roman and Saxon periods at Kilverstone. While the Roman pottery dates extend right through to the 4th century, such late material is rare, and the site was certainly abandoned long before the Saxon occupants arrived.

The Saxon settlement contains several typical features (including SFBs, post-built structures and burnt flint pits) and was probably unenclosed. Frustratingly, it appears to have extended beyond the eastern edge of excavation, a fact which precludes any certainty when discussing the overall nature of the site. Occupation there does not appear to have been particularly large in scale or long-lived, and did not extend into the late Saxon period. The site nevertheless adds considerably to our somewhat piecemeal, but gradually increasing knowledge of Thetford at that time.



12. SFB F240



14. Structure 9



13. SFBs F1068 and 1090



15. Burnt flint pit (F795) with its contents

5. MEDIEVAL

A number of features at Kilverstone were dated to the Medieval period (late 13th/14th century). With the exception of one ditch (F147), all of these were clustered together in the south-eastern corner of site.

Features

Three ditches (Fs 1045/1056/1345-7, 1357, 1364/6), aligned parallel to each other (N-S), had the appearance of a boundary which had been re-cut several times. In amongst them were three large but shallow pits (Fs 1065, 1073 and 1373) and an L-shaped ditch (F1370); these contained few finds. A fifth ditch (F147) extended across almost the full length of site from north to south, defining a large area of land to the west. All of the ditches followed the line of earlier Roman features in places, suggesting that they may have been set out in relation to upstanding earthworks.

Discussion

It is conceivable that these features represent the periphery of a Medieval settlement which lay just beyond the eastern edge of excavation; the archaeology recovered is certainly consistent with what might be expected on the edge of such a site. The three ditches re-cut on the same alignment could have formed some kind of boundary, perhaps to the settlement itself. The fourth may have defined a large field outside; the entrance towards its southern end, situated opposite a gap in F1056, hints at the trace of a pathway between the two.

It is tempting at this point to mention the 'lost village', reputed to lie south of Kilverstone Hall, or east of the area examined here (Clover 1975). Although the existence of such a 'lost village' (presumably a deserted Medieval village) is at best speculative, its rumoured location and approximate date do fit with what was found. It is, however, impossible to be at all certain when considering such a small area, and this must remain merely a possibility.

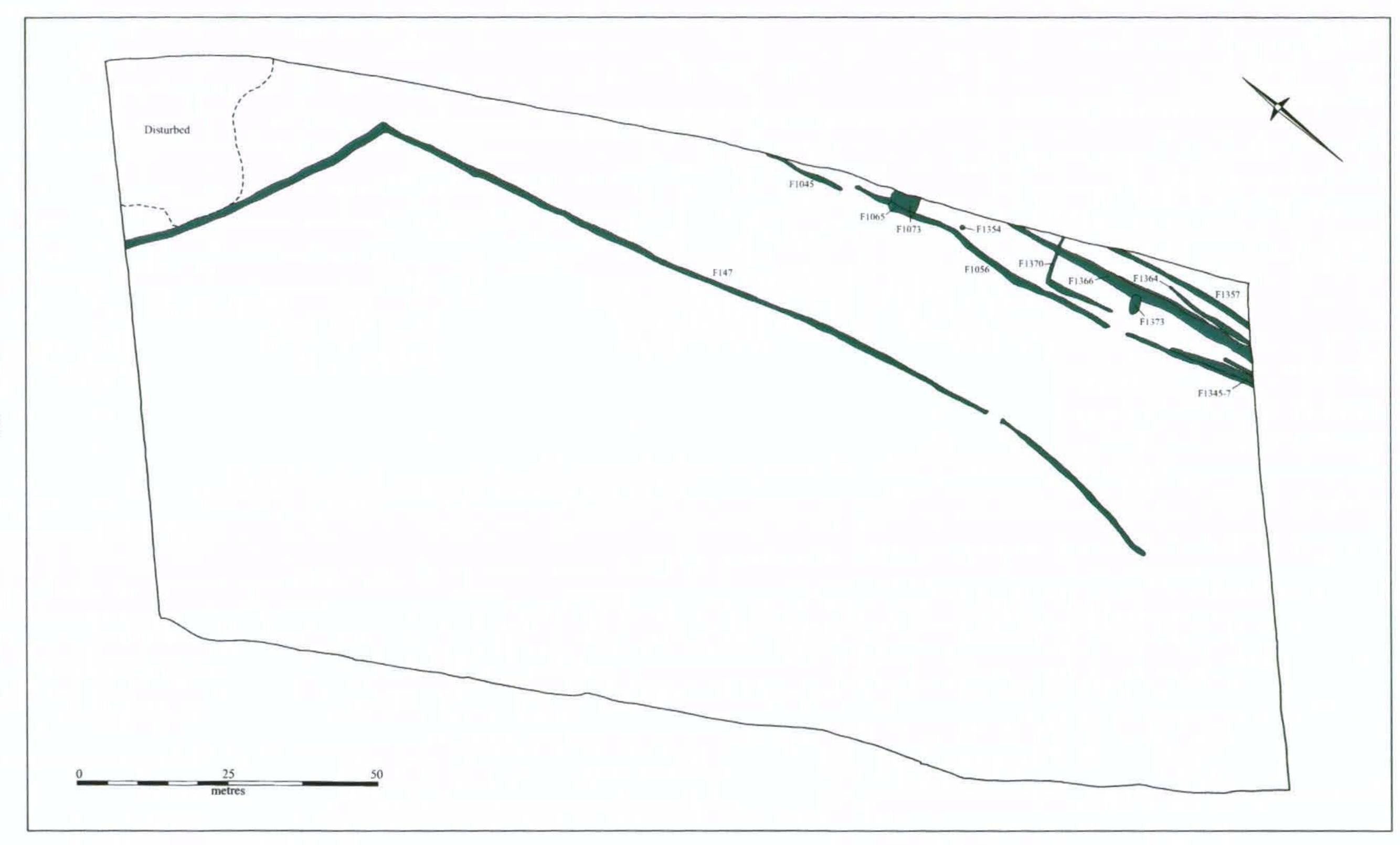


Figure 16 - Medieval

6. POST-MEDIEVAL and MODERN

Towards the southern part of the site, a very straight ditch (F1200) was observed to cut the Medieval boundary (F147). It is likely that this was Late Medieval or Post-Medieval in date.

Three features towards the northern corner of the excavation revealed the site of a crashed World War II aeroplane. The places where the fuselage (F725) and two engines either side (Fs 726 and 729) had broken through the topsoil into the subsoil could be distinguished clearly as features. Part of the undercarriage, pieces of camouflage-painted material, cockpit dials, rounds of ammunition and a large amount of mangled aluminium were found within the shallow features and in the topsoil above them.

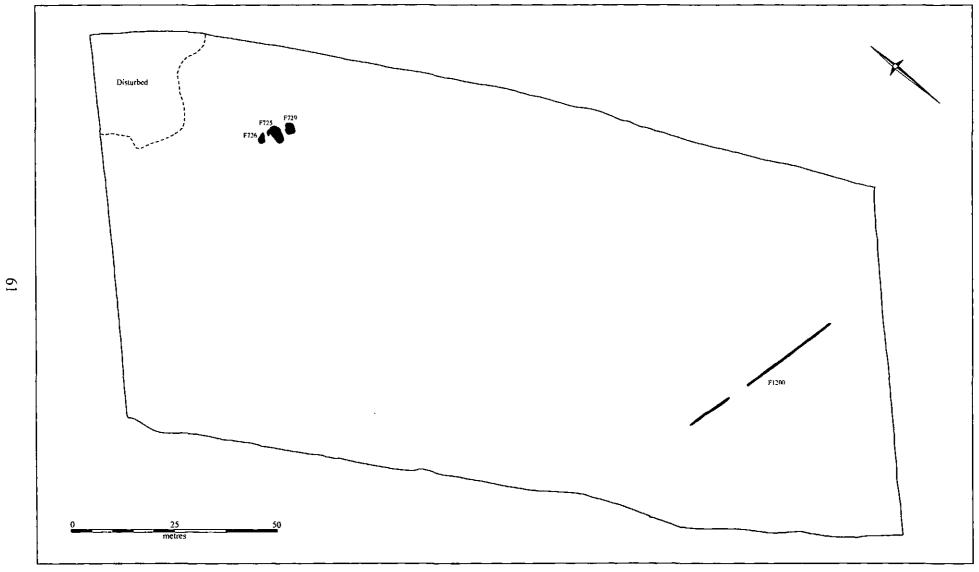


Figure 17 - Post-Medieval and Modern

AREA D

Introduction

Area D was opened to investigate a post-medieval kiln, along with any associated features. The kiln was a 'Suffolk type' dating to c.1700-1780. Constructed out of bricks, it was also used for the manufacture of bricks. The kiln itself was rectangular in shape, with two arched 'firing tubes' extending outwards at the front. The majority of the original structure was set underground and so had survived very well. The superstructure (i.e. the chamber where the bricks were stacked during the firing process) would have stood above ground, and thus no longer survived. Directly in front of the kiln was a large 'stoking pit', where people would have stood to shovel coal into the chamber during firing.

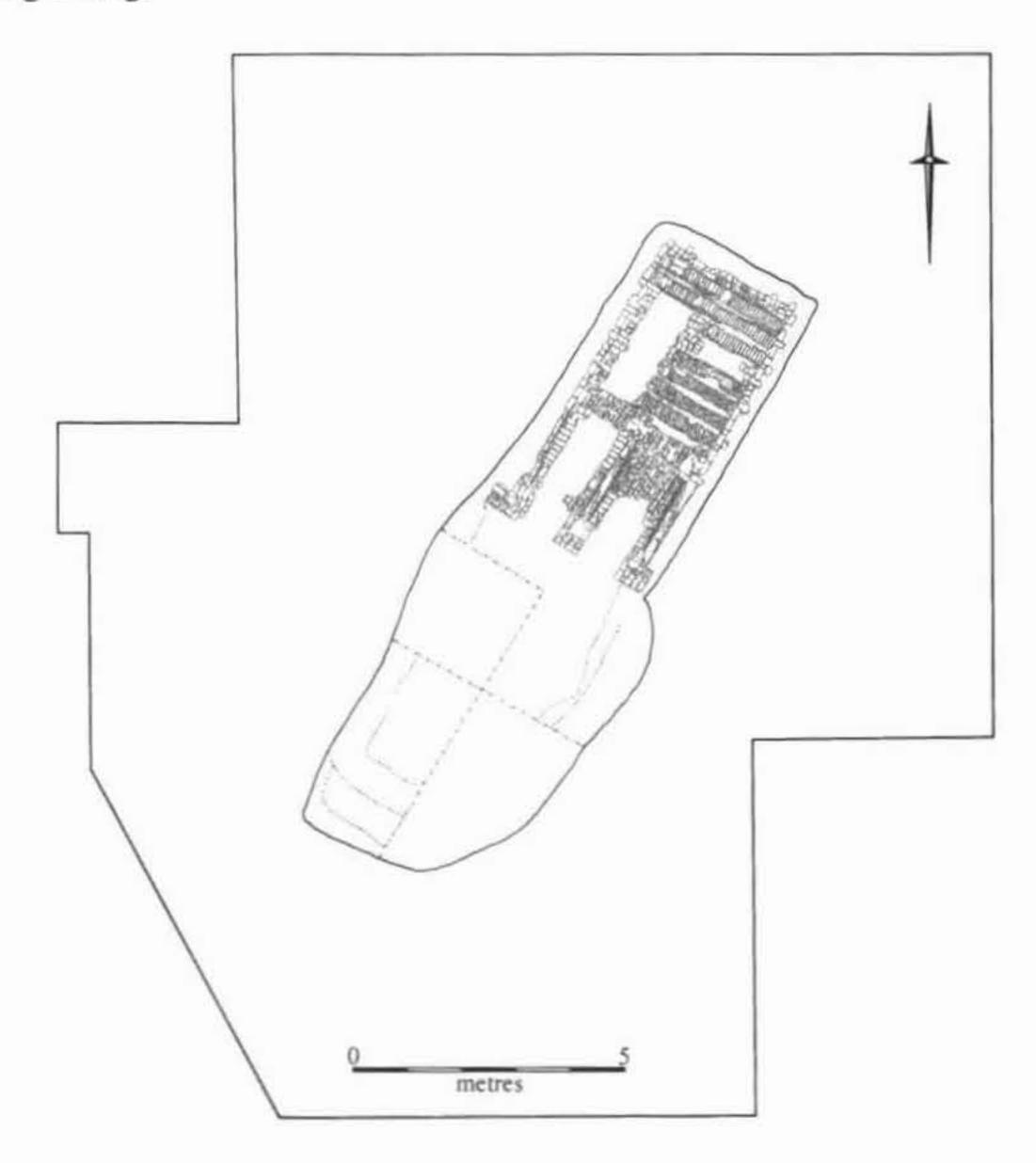


Figure 18 - Area D

An area of 15 x 15m was opened-up; this box was then extended to the south-west in order to expose the full extent of the stoking pit. The excavation process for the kiln was simply a matter of cleaning the surface of topsoil and rubble, and emptying the furnace chamber of its fill. A plan and three elevations were drawn at a scale of 1:10. The stoking pit was excavated in two opposing quadrants to ensure that both sections of the feature could be drawn (again at 1:10); after that, a further slot was excavated to reveal the whole of the front of the kiln.



16. View of the kiln (from south)

The kiln

Furnace

The kiln furnace was situated below ground level. It measured 3.20m long x 2.80m wide x 1.30m deep. The furnace was divided into two chambers along its long axis which were separated by a central supporting wall. Each chamber had a flat floor surface of natural chalk on which the fuel for the firing process would have sat. Arranged along the length of each chamber was a series of eight arches, which supported the cross-beams that simultaneously comprised both the roof of the furnace and the floor of the kiln superstructure. These arches were constructed c. 0.10m apart, the gaps in between allowing heat transfer from the furnace to the bricks stacked above.

Firing tubes

Attached to the front of the furnace were two vaulted 'tubes'. Each measured 2.90m long x 1.30m wide x 1.15m deep, and was paired with one of the chambers described above. The tubes were made mostly of brick, although occasional rows of much thinner yellow tiles had been inserted to facilitate the construction of the arches. The bottom course of bricks within each tube projected out slightly, for a reason that is not immediately clear. The tubes were fronted by three brick pillars; these served functionally to prevent the chalk packing above each tube from slipping into the stoking pit, as well as aesthetically, giving the kiln a distinct air of sturdiness when viewed from the front. The 'firing tubes' also had a dual role: they allowed a throughdraught of air into the furnace (maximised by facing south-west with the prevailing wind), whilst also separating those standing in the stoking pit from the intense heat of the fire.

Superstructure

Due to the fact that the kiln superstructure was constructed above ground, none of it remained in situ. In fact, the layers of brick rubble within the stoking pit were probably the result of its destruction (see below). It may be assumed that the building was a fairly simple rectangular brick structure with a hatch in one side through which the bricks were loaded. Dobson's 1850 treatise on the brick industry describes how "the top of the kiln is covered by a moveable wooden roof, to retain the heat, and to protect the burning bricks from wind and rain" (Dobson 1850, 39).

Stoking pit

The stoking pit was cut into the natural subsoil, and measured 6.75m long x 4.50m wide x 0.95m deep. It was roughly sub-rectangular in plan, with very steep sides and a flat base; steps had been cut at one end to provide easy access from ground level. In this localised area the subsoil was fairly solid chalk, a factor which must have made the original construction process hard work but ensured that the walls could be left as they were and remain stable.

The original kiln construction process entailed the excavation of a much larger pit (13.00m x 4.50m x 1.35m), one end of which housed the kiln itself. This part was cut extremely accurately to the shape of the kiln, with the largest gap left between pit edge and furnace wall only 0.35m wide. The space between the edge of the cut and the kiln wall was packed with chalk rubble.

The sections through the stoking pit presented a very interesting sequence reflecting the kiln's history. Immediately above the floor was a very thin, black, charcoal-rich layer: this represented the residue of the kiln's use, the remnants of the furnace fire which had collected under the feet of those who worked there. Above this lay a series of relatively clean, silty layers: a primary phase of disuse, windblown soils that collected as the pit lay open. Above these came three rubbly layers, situated only at the end of the pit nearest the kiln: primary destruction, or perhaps more likely collapse as the kiln superstructure became less stable. Above these came two more layers of fairly clean material: another 'settling' period. Finally came one layer of fine rubble dust underneath two thick silty layers containing large amounts of broken brick and tile, as well as chalk pieces, flint nodules and slag, most of which tipped downwards away from the kiln: these represent the main destruction phase of the kiln, the point at which the superstructure was finally destroyed and the pit filled in completely.

Condition

Overall, the sub-surface remains of the kiln were in very good condition. Parts of the structure's fabric, however, had been affected during the use-life of the kiln. Almost all of the bricks were cracked, presumably due to the intense heat. The internal surface of the firing tubes was particularly rough, with the brick surfaces deteriorated to a point where it was hard to distinguish individual bricks. The supporting arches for the cross-beams were severely vitrified, also as a result of the heat. During excavation, it was noted that the original cross-beams above the furnace had sagged slightly; this problem had been rectified with a layer of mortar and a new course of larger, different coloured bricks.

Unfortunately, over the course of the excavation parts of the structure were destroyed by vandals (the NW furnace cross-beams and most of both firing tubes) despite protective fencing and informative signs. Although photographs were taken beforehand, this made it impossible to draw fully all of what was originally revealed.

Dating evidence

The construction date of the kiln is likely to have been between 1700 and 1780. The date of the introduction of 'Suffolk type' kilns is uncertain, but probably after 1700. This particular example can be dated to before 1780, due to the fact that structural bricks within the kiln had 'skintlings' (diagonal impressions in the surface of the brick created by a manufacturing process not used after that date; E. Rose, pers. comm.). The two sherds of pottery recovered within the fills of the stoking pit also suggested an 18th century date. The kiln is not depicted on any contemporary maps.

The kiln seems to have been used for a relatively long period. The high levels of vitrification and cracking observed on the internal surfaces, and the fact that a structural repair was carried out on the cross-beams, both suggest a long use-life. It is difficult to say how long the structure stood

after abandonment, although the fill sequence within the stoking pit implies that it was not immediately destroyed and backfilled.

Discussion

In his 1850 Rudimentary Treatise on the Manufacture of Bricks and Tiles, Edward Dobson gives us an insight into the quantities involved in the brick manufacturing process. He describes how:

"in a letter received on the management of the Suffolk kilns, the writer says, 'The usual mode of firing bricks in Suffolk is in a kiln. The one near me, belonging to a friend of mine, is constructed to hold 40,000; it is about 20ft. long and 15ft. broad [i.e. only slightly bigger than the one at Kilverstone], and is built upon two arched furnaces that run through with openings to admit the heat up. The bricks are placed in the usual way for burning, by crossing so as to admit the heat equally through, when the whole mass becomes red hot: the first three or four days, wood is burnt in what is called the process of annealing; with this they do not keep up a fierce fire. After this from 12 to 14 tons of coal are consumed in finishing the burning." (Dobson 1850, 41)

It is a great pity that the pictures which this Suffolk kiln informant sent to Dobson "were committed to the post for transmission, and never reached their destination" (ibid., vi).

The kiln was situated in this particular place for a reason. The large pit which survives to the north-west of the trench (clearly visible in Figure 2) was almost certainly the quarry from which the clay or brick earth used to make the bricks was extracted - such kilns are invariably built next to the raw material source. Features associated with the brickmaking process may have lain beyond the trench, although it is not certain whether other aspects of the brick manufacturing process (moulder's pit, drying racks, settling pond, pug mill, etc.) would all have been needed on this particular site, or would necessarily have been archaeologically visible. The reasons for the construction of the kiln at Kilverstone are unknown. It may simply have been a one-off investment by a local brickmaker, but could equally have been linked to a particular construction event at the nearby Kilverstone Hall.



17. Stoking pit steps



19. Interior of firing chamber



18. Cross beams



20. Supporting arch (showing vitrification)

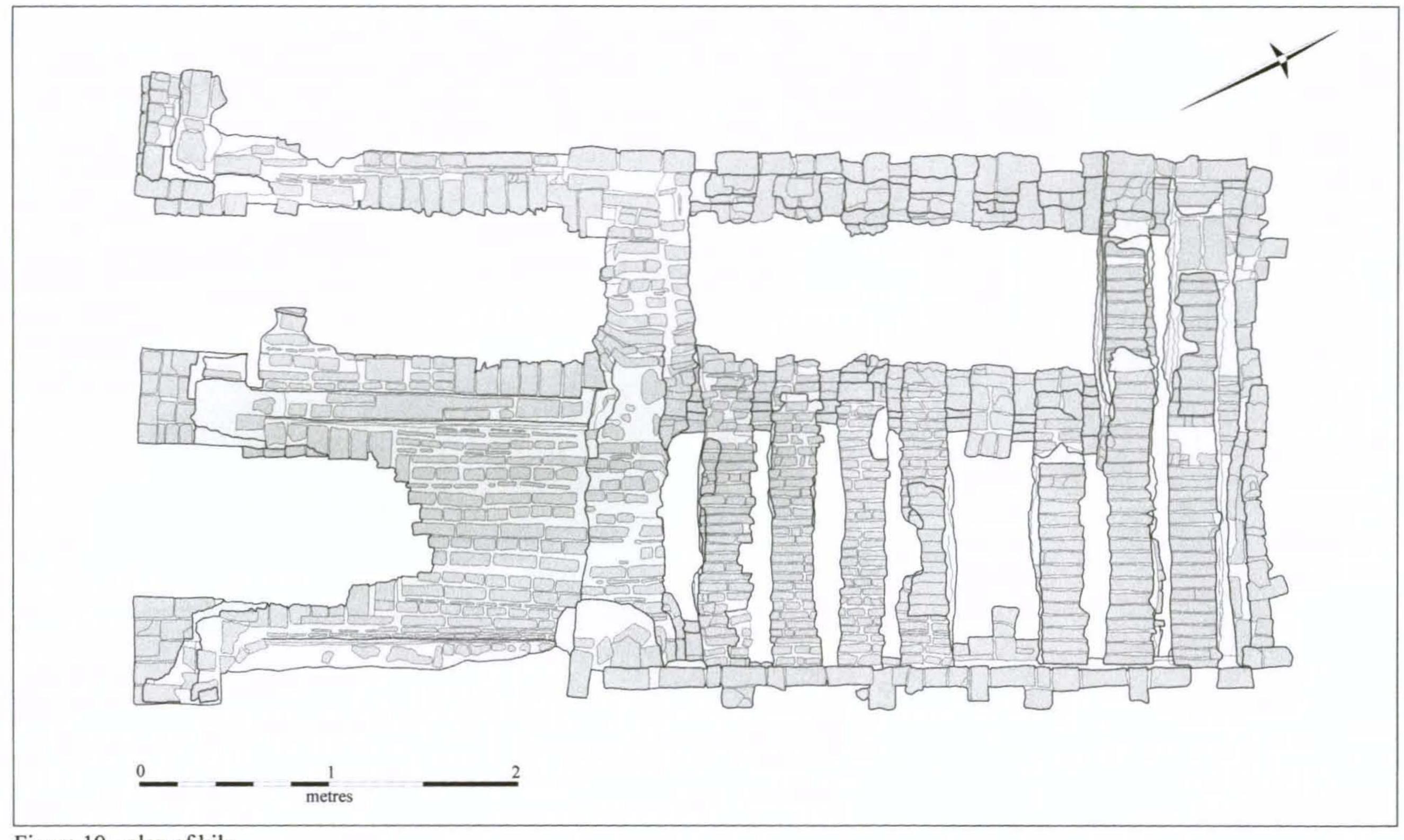


Figure 19 - plan of kiln

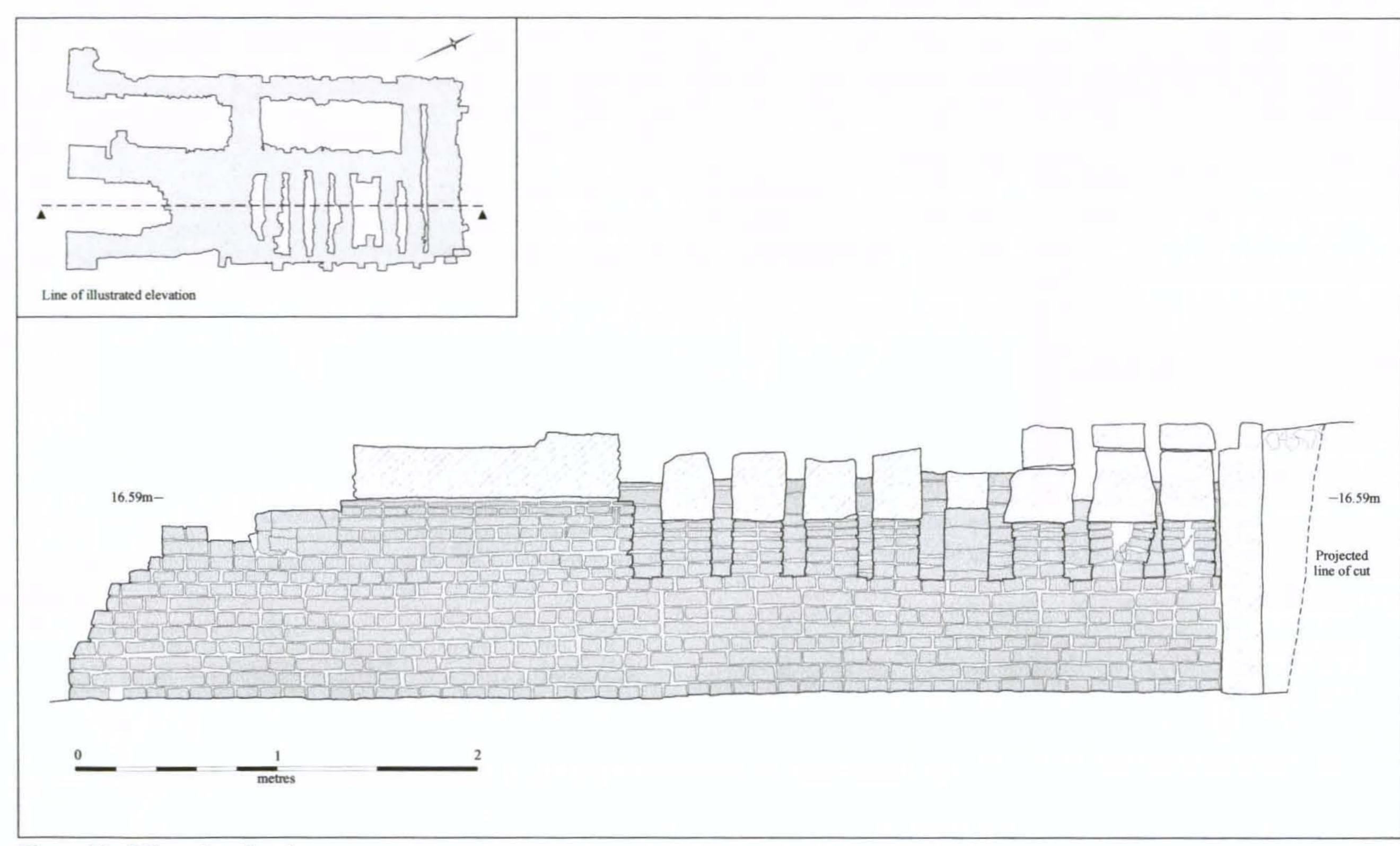


Figure 20 - Kiln - elevation 1

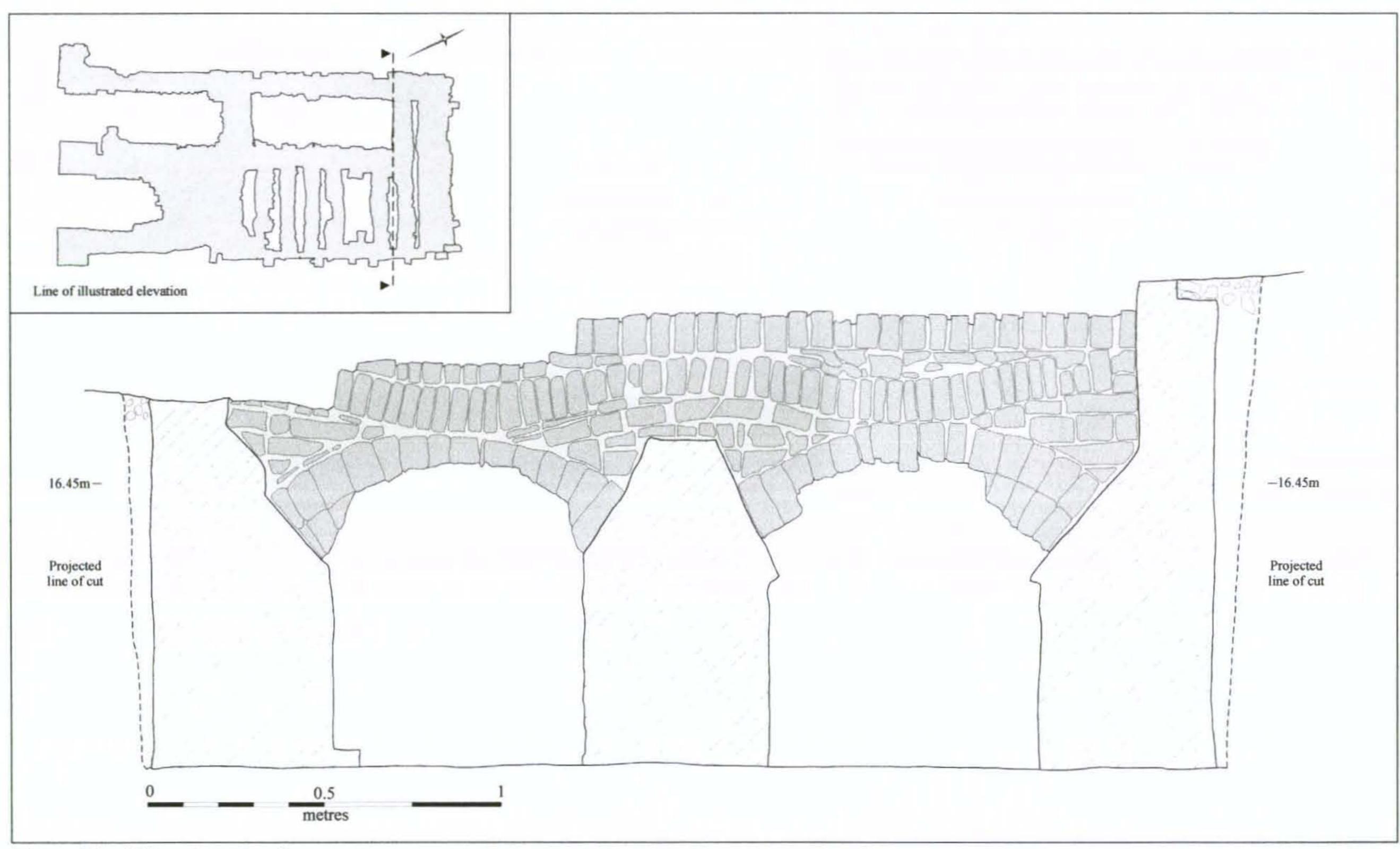


Figure 21 - Kiln - elevation 2

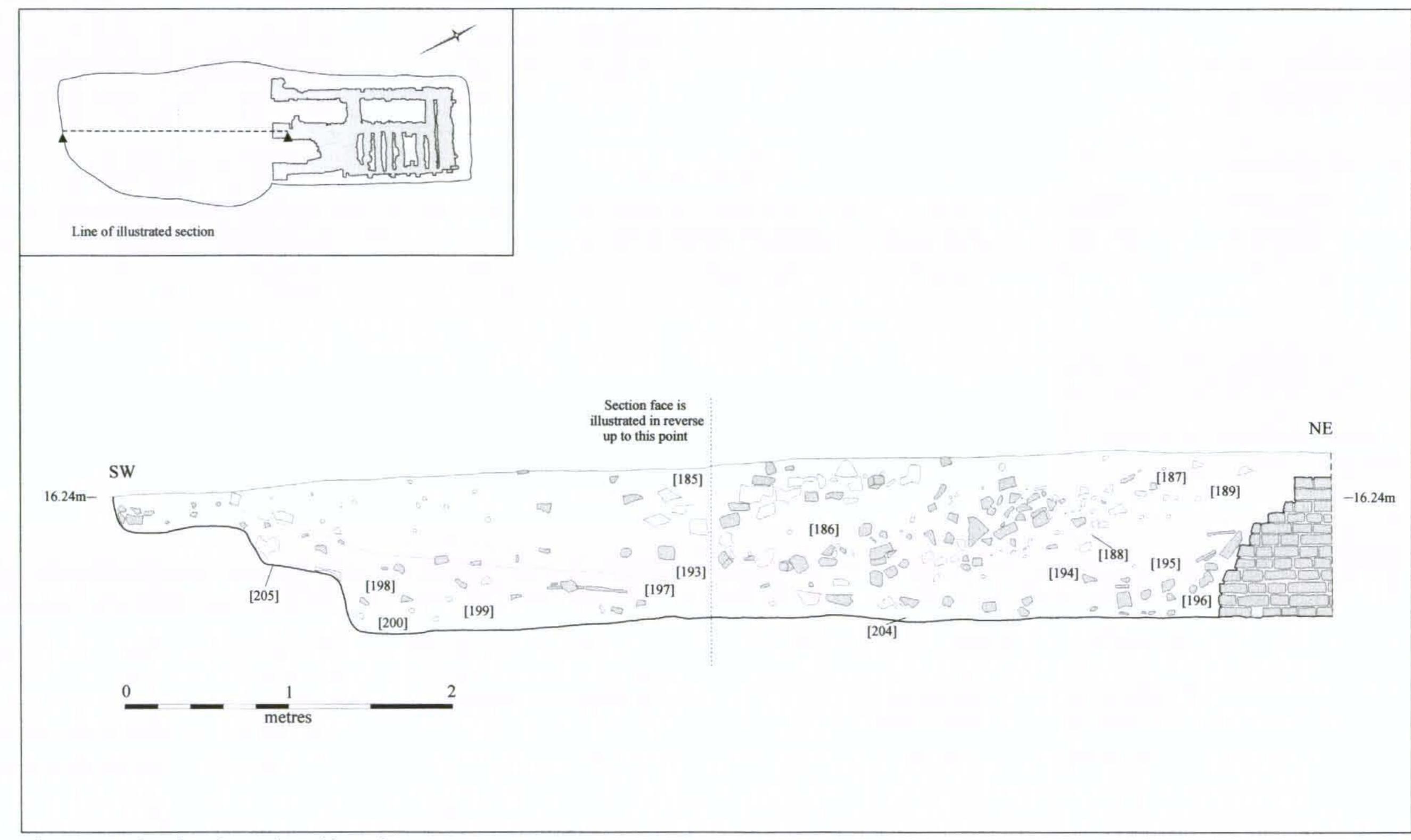


Figure 22 - Section through stoking pit.