

**An archaeological excavation at
Birch Pit, Stage 4 western extension,
Maldon Road, Colchester, Essex
October-November 2008**

**report prepared by
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**on behalf of
Hanson Aggregates**



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1 Summary

Archaeological recording and excavation were carried out at Birch Pit in 2008, ahead of the expansion of the extraction area on the western side of the quarry-pit. These follow on from excavations carried out between 2004 and 2007. The 2008 excavation was undertaken adjacent to the north and west of the areas excavated in 2007, in two areas (Area F and Area G) which were divided by an extant hedge line. Area G included part of an area showing a surface spread of Roman finds denoting a Roman settlement.

The prehistoric period is represented by finds of ?Mesolithic, Neolithic, Middle Bronze Age and Late Bronze Age date. A few worked flints are of ?Mesolithic and Neolithic date, while a few sherds of pottery from one small pit can be dated as probably Neolithic. The finds of Middle Bronze Age and Late Bronze Age date are more substantial. Primarily of Late Bronze Age date, these finds were associated with a small number of pits and included pottery, a whole drum-shaped loomweight and a complete disc-headed bronze pin.

The northern part of a Late Iron Age and Roman enclosure was located in Area G. In the Late Iron Age there was an entrance here. A driveway was added to the north side of the enclosure in the early Roman period.

Within the enclosure was an oven with a tile-built flue. The oven was situated back from the edge of the enclosure ditch sufficient for an internal bank to have been present. Some probable early Roman sherds are associated with the oven structure while sherds from the abandoned fill can be dated to the mid-late and the late Roman period. The pieces of roof tiles used in its construction indicate a date after the mid 2nd century. Close to the oven was a large pit of late Roman date containing charcoal-rich layers which may be associated with the oven.

There were several field ditches to the north and east of the enclosure, which probably originated in the early Roman period. The field ditches were all aligned approximately north-south, and there were no east-west sub-divisions indicating fields or paddocks.

The most surprising aspect of the excavation was the location of an area of medieval settlement and early post-medieval features in Area F. The existence of the medieval site was not known. The medieval archaeology consists of what are interpreted as two or more small enclosures, defined by shallow ditches and post-holes (some probably representing fencing) on the west side of a ditched driveway. These enclosures probably relate to stock management. Some of the features could represent parts of one or more buildings, but there was no certain evidence for buildings or other structures. Several large medieval pits appear to post-date one of the enclosures. The pottery from the medieval features spans the period of the 11th/12th to 15th centuries, but most is of 12th- and 13th-century date. It is not clear if the quantity of early dated pottery represents a separate or more intensive phase of the settlement.

A small number of pits and ditches of post-medieval date were located in a small part of Area F. Some of these, dated to the 16th-17th/18th centuries, relate to the layout of the medieval features and settlement probably continued here into the early post-medieval period. Some of these ditches join ditches which form part of the modern landscape. A significant change in the landscape took place in the 19th-20th centuries with a division into larger arable fields.

While there is no direct continuity, the overall orientation of the post-Roman and modern field system, as represented by the ditches, is similar to the orientation of the land divisions of the Roman period. There appears to be some continuity between some of the medieval and early post-medieval features, and also with parts of the modern landscape, which is reflected in some of the modern field boundaries.

2 Introduction

This report covers a watching brief and an excavation carried out at Birch Pit on behalf of Hanson Aggregates by the Colchester Archaeological Trust (CAT) between 9th October and 4th November 2008. The requirement for the archaeological work was prompted by an extension to the extraction area on the western side of the existing

quarry-pit. This new extension is referred to as the 'Stage 4 western extension'. Areas investigated by CAT under the Stage 4 extension are centred to the north-east of Palmer's Farm at NGR TL 9240 1941 and north-west of Palmer's Farm at TL 9197 1917. Birch Pit itself is located about 6 km south-west of Colchester (Figs 1-2).

The 2008 archaeological work initially consisted of a watching brief on some 3.4 hectares from which the topsoil was being stripped. All of this land was previously under cultivation as arable farmland, situated on and around the 40 m contour. Previous areas of watching brief and excavation on the quarry western extension have been identified by individual letters and thus the 2008 areas were allocated the letters F, G and H (Fig 2). Area F and Area G were two adjacent areas divided by the line of a modern hedgerow. These areas were known to encompass the site of a small Roman rural settlement, presumably a farm, which was initially identified during a programme of fieldwalking by CAT in 1992 in advance of the anticipated expansion of the quarry (CAT Report 8). They were located adjacent to the north and west of one of the excavation areas (Area D; Fig 2) previously excavated in 2007. Area H was a separate area of about 0.8 hectares located about 300m to the west of Areas F and G.

Archaeological features requiring excavation were only identified in Areas F and G which between them encompassed a total of some 2.6 hectares.

This report mirrors standards and practices contained in the Institute for Archaeologists' *Standard and guidance for archaeological excavation* (IfA 2008a) and *Standard and guidance for the collection, documentation, conservation and research of archaeological materials* (IfA 2008b), and Colchester Borough Council's *Guidelines on standards and practices for archaeological fieldwork in the Borough of Colchester* (CIMS 2008a) and *Guidelines on the preparation and transfer of archaeological archives to Colchester and Ipswich Museums* (CIMS 2008b). Other sources used are *Management of research projects in the historic environment* (MoRPHE) and *Research and archaeology: a framework for the Eastern Counties 1. Resource assessment (EAA 3)*, *Research and archaeology: a framework for the Eastern Counties 2. Research agenda and strategy (EAA 8)*, and *Standards for field archaeology in the East of England (EAA 14)*.

3 Archaeological background

3.1 Archaeology

The archaeological background has been extensively summarised in previous reports (CAT Report 383, section 3; CAT Report 485, section 3.1).

Prior to the 1990s, little was known of the archaeology of the area immediately surrounding Birch Pit. Most of our knowledge of the archaeology of the area has come from work carried out in advance of expansion of the quarry since the early 1990s. The archaeological work follows an environmental impact assessment carried out in 1992, the archaeological component of which was undertaken by CAT (CAT Report 8, appendix).

Aerial photographs show a large number of undated, but pre-modern, cropmarks resulting from activity beyond the north boundary of Birch Pit. Some 0.8 km to the north-west there is an extensive cropmark complex indicating a large sub-rectangular enclosure with associated tracks or droveways and a system of fields (EHER nos 11548, 11577, 11582, 11924). Close to these sites, but within the boundaries of the permissible northern quarrying area, there are several smaller cropmark sites (CAT Report 8, appendix). Neolithic, and early Mesolithic flints had also been recorded about 2 km to the east of the site (Spencer & Dennis 1988).

The most significant archaeology identified during the 1992 assessment was two areas with surface Roman finds located to the north-east of Palmer's Farm (CAT Report 8, appendix). A small quantity of medieval pottery was also recovered. Further work was undertaken by CAT in 1997 on one of the areas of Roman finds (CAT Report 8, 4 and fig 2) and in 1998, geophysical survey and trial-trenching were undertaken by CAT within the same area of Roman finds. This revealed a number of features, surviving below the ploughsoil, which contained finds of Roman date (CAT Report 23).

Other archaeological work has been undertaken by CAT at the quarry in response to the expansion of the extraction area (Fig 1). In 1995, a small oven of Roman date was excavated on the east side of the quarry close to Brake's Farm (NGR TL 9333 2002; CAT excavation 1995 on Fig 1; CAT archive note 6/95b). In 2001, evaluation trenching was undertaken by CAT in advance of a northern extension to the quarry (not shown on Fig 1). This revealed features of Bronze Age and Roman date (CAT Report 141). Excavation on this area in 2003 revealed a Bronze Age cemetery - consisting of three ring-ditches associated with sixteen urned and unurned cremation burials - and part of a Roman field system (CAT excavation 2003 on Fig 1; CAT Report 289). In 2005, excavation at the Birch airfield compost site (at the former Birch airfield) revealed features of Late Iron Age or early Roman, and Roman date (CAT Report 326; CAT excavation 2005 on Fig 1). In 2004, and again in 2005-6 and in 2007, excavation was undertaken by CAT prior to extensions to the western side of the quarry (Fig 2; CAT Report 383; CAT Report 485). This work revealed features of prehistoric, Roman, medieval and post-medieval date. The main period of activity was during the Late Iron Age, Roman, medieval and early post-medieval periods. No clear traces of any buildings were found within the excavated areas, but the remains of ditches revealed enclosures divided by tracks or driveways. A Roman oven was situated within the area of one enclosure, and there was a small number of cremation burials situated to the east of the enclosures. There were a few features dated to the Late Bronze Age, including one large pit which was possibly a waterhole. There were also a few features of post-medieval and modern date.

3.2 Disturbances to the archaeology caused by the construction and demolition of Birch airfield

During previous excavations, disturbance to the archaeology by the construction and subsequent demolition of Birch airfield has been noted. The impact and implications of this have been discussed previously (CAT Report 485, section 3.2).

With reference to the current excavation, almost all of the west and central parts of Area G had been affected by the airfield. There were numerous wheel-ruts, mostly aligned north-west/south-east, which had penetrated into the subsoil. In the central west part of Area G, a large area of laid concrete remained *in situ* (Fig 2a). This is part of the base of one of the former areas of hardstanding around the airfield perimeter but which had not been entirely broken up during the airfield's demolition. It was removed by re-machining the area. Spreads of concrete rubble pieces from the airfield demolition also extended over some parts of Area G (Fig 2a), and individual lumps of broken concrete, some quite large, were found to have been pushed down into the surviving fills of some archaeological features. Also, the fill within many of the archaeological features on Area G was generally very hard and compacted, which is probably a direct result of the passage of heavy machinery over the site. A number of disused buried electricity cables were also encountered cut into the subsoil which almost certainly also relate to the airfield. No spreads of redeposited natural, such as were encountered previously during excavations in Area D, were found to be present (CAT Report 485, section 3.2).

4 Aim

The aim of the archaeological fieldwork was to identify, explore and record any significant archaeological features or remains which were threatened by destruction either from extraction or damage from associated quarry works activities.

5 Methods

The work followed a brief (Connell 2004) originally supplied by P Connell of the Essex County Council (ECC) Historic Environment Management (HEM) team. Adrian Gascoyne of the ECC HEM team monitored the work and made two visits to the site during the excavation. Site work was carried out by professional archaeologists from CAT.

Initially the site was mechanically stripped of topsoil by Hanson Aggregates and the resultant surface was inspected during visits by a CAT archaeologist. During this inspection, significant archaeological features were identified, concentrated in the west part of the Area F and the south-west part of Area G. Both these concentrations and other selected parts of Areas F and G were re-machined, using a mechanical 360° excavator with a toothless ditching bucket, under the supervision and control of a CAT archaeologist.

During the excavation which followed, records of excavated contexts, layers, features or deposits were entered on CAT pro-forma record sheets. All features, layers or other significant deposits were planned and their profiles or sections recorded. The normal scale of site plans was 1:20 and sections 1:10, unless circumstances dictated that other scales were appropriate. The photographic record consists of general site shots, and shots of all archaeological features and deposits. Standard recording shots of contexts were taken with a digital camera using a scale and north arrow. A metal detector was used to retrieve objects from the spoil heaps.

6 Site phasing and results

6.1 Introduction

Previous excavations in the area of the quarry western extension in 2004, 2005-6 and 2007 established a framework of site phasing (CAT Report 485, section 6.1; Table 1 below). The earliest-dated post-Roman features encountered up till 2008 were early post-medieval, although some pottery associated with these was probably residual late medieval. Features dated to the medieval period, encountered during the 2008 excavation, have necessitated a significant revision of the previous phasing. The post-Roman period, previously Period 3, has now been divided into two periods, ie Period 3 (medieval) and Period 4 (post-medieval).

The 2008 excavation recorded 184 separate features, numbered from F267 onwards. These can be divided between four periods. This division is based primarily on the dating of pottery, but also takes into account the physical and spatial relationships between the features and major period divisions.

In terms of the dated features (Table 13, Appendix 1), there appears to be a clear gap in the occupation on the site between Period 1 and Period 2, and between Period 2 and Period 3, so that each of these periods can be treated as independent of one another. However, a small quantity of residual prehistoric pottery sherds, recovered during previous excavations, could indicate some activity on the site between Period 1 and Period 2. There is no clear separation between Period 3 and Period 4.

It should be noted that, while there is no direct continuity, the orientation of the landscape, as represented by the ditches of the enclosures and fields, established in the Late Iron Age and early Roman period was, for the most part, followed in the medieval to post-medieval periods. There appears to be some direct continuity between the ditches and organisation of the medieval and post-medieval landscape, and also between the post-medieval and the modern landscape, reflected in the location of some of the modern field boundaries.

It should be noted that much of the phasing of the site relies on dated pottery recovered from sampled ditch contexts, together with the spatial relation of ditches to each other. While this phasing is considered to be broadly secure, it relies on a certain level of interpretation. The finds sample recovered is a guide to the date of a ditch but not necessarily a direct reflection of its date. Also, the finds from ditch fills do not necessarily date the existence of the boundary marked by the ditch. The boundary could continue almost indefinitely if there was a bank, or a hedge, alongside the ditch.

Period 1: prehistoric

This covers the whole of the prehistoric period up to the Late Iron Age 'Belgic' period. Some of the residual and unstratified worked flints recovered are possibly Mesolithic and some can be dated more certainly Neolithic. A few small decorated sherds from one feature on Area F are probably of later Neolithic date, but this is not certain.

Some pottery of possible Middle Bronze Age date (c 1,500-1,000 BC) was recovered during previous excavations, and now a loomweight dating from the Middle-?early Late Bronze Age has also been recovered. The earliest securely-dated features can be dated to the Late Bronze Age (c 1,000 to 700 BC) as they were associated with pottery and one piece of metalwork of that period. Also some small sherds dated as Middle Iron Age (c 300-50 BC), residual in later-dated features, have previously been recovered (CAT Report 485, section 7.3).

Period 2: Late Iron Age and Roman

Period 2 spans the Late Iron Age 'Belgic' period (c 75/50 BC to AD 43) and the Roman period (AD 43 to c AD 410). For the most part, the Late Iron Age and Roman features identify the separate locations of the Roman and the post-Roman settlements. Dated pottery from the features and the spatial relationships between them have been used as the basis for the division of the Late Iron Age and Roman periods into three phases. There is little other close dating material such as metalwork from the site. Only one Roman coin was recovered and this was an unstratified surface find (section 7.1, SF 69).

Period 2 phases:

Phase 1a – Late Iron Age-early Roman

Phase 1b – early-mid Roman

Phase 2 – mid-late Roman

Period 3: medieval

The features dated as medieval were all located on Area F. They can be divided between two phases based on pottery dating. A large number of the features here contained pottery dated to the 12th and 13th centuries (Period 3, Phase 1). While some of this pottery might be residual and some features did not produce any dating evidence, most of the features at the west end of Area F probably date to this period. A much smaller number of features contained pottery dated to the period of the 13th-14th or 14th-15th centuries. However, it is not clear that this small number of features and smaller quantity of finds represent a separate phase (Period 3, Phase 2), although it can be noted that many sites across England saw either a reduction in occupation or abandonment from the late 14th century (Platt 1978, 129-31). However, the site here was clearly not abandoned at that time, and pottery of 14th- to 15th-century date attests to continued activity here.

Period 3 phases:

Phase 1 – 12th-13th centuries

Phase 2 – 14th-15th centuries

Period 4: post-medieval

A small number of features can be dated to the post-medieval period. These are divided between two phases, based partly on their spatial relation to the medieval features and partly on the presence of quantities of pottery and building materials. This division is not clear, but appears valid in relation to the wider landscape.

The earlier-dated of these features, containing finds dating from the 16th-17th/18th centuries (Period 4, Phase 1), were located in the south-west part of Area F. Several of these contained finds of brick and peg-tiles, as well as pottery. These features appear to relate to the position of the medieval features (Period 3) and appear to represent some continuity in the landscape between these periods.

Only one feature contained pottery dated as 19th-20th centuries (Period 4, Phase 2). However, some features, almost exclusively ditches, appear as extant features on the 1881 edition of the Ordnance Survey (OS) Sheet XXXVI (surveyed from 1874), and some of these were also extant features at the time of excavation (Fig 4). These can be seen to broadly relate to the modern landscape and do not relate to the area of the medieval settlement in Area F. Some features assigned to this phase were not excavated or were machine-sectioned as they were clearly of late post-medieval or modern date. These include a large number of features, mostly wheel-ruts, associated with the building and demolition of the former Birch airfield.

Period 4 phases:
Phase 1 – 16th-17/18th centuries
Phase 2 – 19th-20th centuries

Table 1: concordance of the site phasing of the 2007 and 2008 excavations.

2007 excavation site phasing		2008 excavation site phasing	
Period 1	prehistoric	Period 1	prehistoric
Period 2	Late Iron Age and Roman	Period 2	Late Iron Age and Roman
- Phase 1a	Late Iron Age-early Roman	- Phase 1a	Late Iron Age-early Roman
- Phase 1b	early-mid Roman	- Phase 1b	early-mid Roman
- Phase 2	mid-late Roman	- Phase 2	mid-late Roman
Period 3	post-Roman	Period 3	medieval
		- Phase 1	12th-13th centuries
		- Phase 2	14th-15th centuries
		Period 4	post-medieval to modern
- Phase 1	late medieval/early post-medieval	- Phase 1	16th-17th/18th centuries
- Phase 2	post-medieval to modern	- Phase 2	19th-20th centuries

In this report, former pathways indicated by paired parallel ditches are referred to as 'droveways'. The droveways (DR) discussed in the text are separately numbered (Fig 3). This numbering takes into account the numbers assigned in earlier reports and allows for any similar features to be distinguished in future. Previously numbered droveways are track or droveway 1 (CAT Report 485, fig 4a - right), now numbered DR 1, and track or droveway 2 (CAT Report 485, fig 4b - left), now numbered DR 2. Two other lengths of ditched droveway (CAT Report 383, fig 4a) are now numbered DR 3 (CAT Report 383, fig 4a - north) and DR 4 (CAT Report 383, fig 4a - south). Other pathways which are not ditched, but can be suggested or positively identified where they cross other features or by features aligned with them, are referred to as trackways (TR); these are separately numbered. This numbering takes into account the existence of a trackway located in earlier phases of the excavation (CAT Report 383, fig 4a; CAT Report 485, fig 4a), now numbered TR 1.

The underlying surface geology is primarily clay, with some pale silt overburden and patches. The fill of the archaeological features is consistently stony clay or silt, or various mixtures of these.

6.2 Period 1: prehistoric (Figs 2a, 2b, 2c & Fig 3)

There is a small quantity of residual or unstratified worked flint which can be dated possibly to the Mesolithic and certainly to the Neolithic period (section 7.2). Possibly the earliest feature is a small pit (F285) on the east side of Area F. This contained a few small decorated sherds of prehistoric pottery which probably date to the Middle or Late Neolithic period (see section 7.4). Several features (F286, F289, F290, F291, F292, F293) were located around this pit and were explored, but none contained any finds and several were quite irregular in form. These are interpreted as various features of natural origin.

A small number of pits in Area G and one pit in Area F contained pottery (section 7.4) of Late Bronze Age date and some other finds that can be dated to the Middle-?early Late Bronze Age and to the Late Bronze Age (F335, F340, F360). A small group of sherds, dated as Late Bronze Age, were found on the surface of an area of silt and probably represent another pit (F354) of this date but which could not be identified as a distinct feature during excavation. A bronze disc-headed pin of Late Bronze Age date was recovered from the fill of F340 (SF 68, Fig 15.1), and a whole drum-shaped loomweight (SF 72, Fig 15.2), dated to the Middle-?early Late Bronze Age, together with a piece from a second drum-shaped loomweight (SF 71), was recovered from the fill of F360 (Fig 14). It is possible that a shallow pit in Area F (F436) is also of this period (section 7.4), as it produced four sherds of pottery dated

as Late Bronze Age, but it is assigned to Period 3 as a small sherd of medieval pottery was also associated with it.

6.3 Period 2: Late Iron Age and Roman (Figs 2a, 2b, 2c & Fig 3)

6.3.1 Introduction to the Late Iron Age and Roman settlement

The main area of Late Iron Age and Roman activity excavated in 2008 consisted of the northern part of a ditched enclosure, referred to as Enclosure 1. The southern part of this enclosure had been excavated in previous years (CAT Report 383; CAT Report 485). Within the enclosure, the remains of an oven were located. A number of ditched droeways were associated with the enclosure and a number of field ditches were identified to the north and east of it.

6.3.2 Phase 1a: Late Iron Age-early Roman (Fig 2a)

The principal feature of this phase is a large rectangular ditched enclosure - Enclosure 1 - the northern part of which was located in Area G.

Early Phase 1a

The ditches of the earliest phase of Enclosure 1 were difficult to follow in some places, as they had been partly cut away by ditches from later phases. Only the north ditch (F331) of the enclosure could be certainly identified in this phase. It is possible that ditch F344 is contemporary with F331, forming part of the west side of the enclosure. A ditch belonging to this phase was identified previously on the west side of the enclosure (CAT Report 485, section 6.3.2 & fig 2a). An entrance to the enclosure in this phase, about 4 m wide, was located on the north side where there is a change in the alignment in the enclosure ditch. The pottery associated with the ditch F331 is all Late Iron Age grog-tempered ware and can be dated *c* 50/25 BC-AD 45. Part of an Iron Age triangular loomweight was recovered from the fill of F334 (SF 70, Fig 16.3). No other features were dated to this phase.

Late Phase 1a

The ditch (F331) forming the north side of Enclosure 1 was replaced by a new ditch (F337), cut along the same line. This took place after the first enclosure ditch (F331) had filled to at least the level of the present excavation surface. The new ditch respected the north entrance of the enclosure, which was retained. At this time, the entrance on the west side of the enclosure was put out of use (CAT Report 485, section 6.3.2 & fig 2a). Only a very small quantity of pottery could be certainly associated with ditch F337, and this consists of Late Iron Age grog-tempered ware. While most of the pottery from the equivalent (Phase 1a) ditch on the west side of the enclosure was of Late Iron Age date, some early Roman sherds were also recovered from it (CAT Report 485, section 7.4).

The location of the east ditch of the enclosure in this phase was not located, nor could this ditch be traced at the north-east corner of the enclosure. It is presumed to be the same as the later Phase 1b ditches here (F342, F341) and it has been entirely cut away. However, there was no indication of an earlier ditch in any of the sections cut through F341 (Sx 1, Sx 2) or through the east end of the Phase 1b ditch F324 (Sx 1, Sx 2).

On the east side of the enclosure was a shallow ditch or gully (F347) which may belong to this phase. Two pottery sherds were recovered from F347, one dated as Late Iron Age and the other as early Roman.

On the north side of Enclosure 1, in the eastern half, there is an outer ditch (F330). This, in combination with the ditch of the enclosure, formed a droeway about 4 m across (DR 5; Fig 3). This ditch appeared to respect the east side of the entrance of Enclosure 1. The end of the ditch here appeared to be a terminal. This terminal could mark the (east) side of an entrance through the ditch F330 located here. If ditch F330 continued further to the west, then any western continuation on the other side of this entrance has been entirely ploughed away, as this outer ditch was relatively shallow. The close correspondence of the end of this ditch with the north entrance of Enclosure 1 suggests that it is contemporary with this entrance. This would indicate that it is dated no later than to late Phase 1a, or to Phase 1b. However, the small quantity of pottery recovered from this outer ditch is entirely Roman, with the mostly closely-dated being of 1st- to mid 2nd-century date.

6.3.3 Phase 1b: early-mid Roman (Figs 2a, 2b & Fig 3)

A new ditch was dug for Enclosure 1, replacing the late Phase 1a ditch (F337). For the part of the enclosure in Area G, the new ditch can be recognised along the north and west sides as F324/F333/F341. This is the last in the sequence of ditches forming the enclosure and it was dug after the previous enclosure ditch (F337) had filled to at least the level of the present excavation surface. The new ditch was continuous along the north side of the enclosure, cutting across the north entrance and putting it out of use. The pottery associated with this ditch is Roman and almost entirely of 1st- to early 2nd-century date. The pottery from the lower fill is possibly pre-Flavian and includes a small number of partial pots, one of which is a mould-decorated samian bowl of form Dr 29 (Fig 19).

To the north and east of the enclosure are several ditches (F334, F342, F348, F363) which formed agricultural boundaries. They can all be assigned to this phase as the pottery from them is dated to the early Roman period of the 1st-early 2nd century or 2nd century. Ditch F342 was previously considered to be probably of post-medieval date, based primarily on its spatial relationship to other dated features (CAT Report 485, section 6.4.1), but it can now firmly be dated as Roman. This dating is based on its spatial relationship with, and similarity to, the other Roman ditches, and is supported by the small quantity of pottery recovered from it, the latest of which is dated to the 2nd century.

Three of the ditches (F334, F348, F363) extend beyond the north edge of the excavation on Area G and these are all similarly aligned north-west/south-east. They are not evenly spaced. Two (F348, F363) are close to each other, but not close enough to suggest that they functioned together as part of a droveway, being some 20 m apart. There is then a distance of over 60 m between these two and ditch F334. Ditches F363 and F348 both terminate, at their south ends, on the site. Ditch F334, which could be traced for some 110 m across the site, at its south end joins with the droveway (DR 5) represented by ditch F330. The most closely-dated pottery from F334 is early Roman, dating to the 1st-early 2nd century, but some of it is abraded and could have been deposited in the ditch after that time. The pottery from the droveway ditch F330 is of the same general date range as this material and also the pottery recovered from the other agricultural ditches in this area. This suggests that, if not part of late Phase 1a, then it is part of this phase (Phase 1b). In that case, it may have been added to create a droveway (DR 5) here outside the north-east part of the enclosure after the north entrance had been blocked. There were no indications of any east-west land divisions associated with these ditches. The fourth ditch (F342) is similar to the three ditches above, but extends from south-east/north-west with a terminal at its north end on the site.

A small pit (F373), containing Roman pottery dated as ?1st-2nd century, was located in the west part of Area F, close to the north edge of the site. At the east end of Area F, there was another Roman ditch (F284). Most of the small quantity of pottery from this ditch can be dated to the 1st-2nd/3rd century, with one sherd from the surface which may be of late Roman (4th-century) date. The ditch extended beyond the north edge of the excavation. Any continuation to the south had not been located during previous excavations (Area D & Area C; Fig 2).

Just to the west of this ditch (F284) were the truncated remains of a cremation burial (F267), which had been made in a small pit (Fig 6). Only a small quantity of burnt bone, approximately 63g, was recovered (finds no 511). The bone is very fragmented, with fragment sizes generally of 20 mm or less, with most less than 10 mm. The white buff colour of the fragments indicates the full oxidisation of the bone during cremation. A few scattered pottery sherds from the fill of the pit are of Late Iron Age and early Roman date. A small number of Roman cremation burials, dated to the 1st-2nd century, have been recovered previously just to the south of this feature (CAT Report 383, section 7.3.2), and the amount and condition of the bone recovered from F267 is similar to the bone recovered from those. The quantity of bone from F267 is just below the average recorded from those (CAT Report 383, section 8.7 & table 13), while the high degree of fragmentation and full oxidisation of the bone are also closely comparable (CAT Report 383, section 8.7).

6.3.4 Phase 2: mid-late Roman (Fig 2a & Fig 3)

Two features which can be dated to this phase were located in the north-east part of Enclosure 1. One is an oven (F329) and the other a large pit (F339).

The oven

In the north-east part of the enclosure were the remains of an oven (F329; Fig 5). The upper part of the oven had been entirely removed and what remained consisted of the lower part of a tile-lined flue channel (F329b) which linked two shallow silt-filled features (F329a, F329c). The position of the silt-filled features in relation to the flue leaves no doubt that they and the flue are all part of one structure. Parts of the oven had also been disturbed by several modern agricultural field drains, ie F336, F338 and F371. The oven was located just over 4 m from the surviving internal edge of the Phase 1b enclosure ditch (F324), so there appeared to be sufficient room for an internal bank to have existed between the oven and the ditch. There was no evidence of any building associated with the oven.

The flue channel itself was constructed from broken *tegulae* (Roman flat roof tiles) set in clay on either side of a broad shallow trench. Almost all the tiles had been broken along their length, presumably with the intention of producing two half-tile pieces, each with a flanged edge. However, in the event, all the surviving tiles had broken into more pieces than the intended halves. These tile pieces had been placed along the sides of the trench dug to make the flue with the flanged edge facing inwards, so that the flat edges of these tile flanges formed a neatly-lined channel. Most had been placed with the flange upright. Only one tile had been broken differently; this was a *tegula* broken in half across its width and placed with its front end facing into the flue channel. At no point did the tile-built sides of the flue survive to more than two courses. At some points, the upper surviving tile course overhung the lower course. This appeared to have been caused by upper tiles being pushed slightly into the flue channel after the oven was abandoned, and originally the wall of the flue would have been vertical in these lower courses. The base of the flue channel had been heated sufficiently to bake the soil (L13) a red-brown at the south end of the flue. This petered out towards the north end. L13 was sealed by a black layer of charcoal and silt (L5) which also petered out towards the north end of the flue. The quantity of heat generated in the flue appears to have been modest and there was no indication of any vitrification. Above this (L5), and filling most of the surviving depth of the flue channel, was a deposit of grey silt (L4) containing pieces of tiles. The tile pieces most probably result from either demolition, or from the decay and collapse of upper parts of the flue channel after the end of its period of use.

The smaller of the two silt-filled features (F329a), located at the south end of the flue, was oval in shape. This feature can be identified as the oven stoke-pit because of the baking of the soil in the base of the flue channel showing that it had received the greatest heat at this end. The other silt-filled feature (F329c), at the north end of the flue, was approximately rectangular, measuring about 2 m east-west by 3 m north-south. This represents the base of the oven chamber. The flue channel (F329b) continued into this feature. The surviving west side of the flue channel extended about 0.8 m into the area of the base of the oven chamber and this coincided with the extent of the charcoal and silt fill of the flue (L5). Tiles continuing the line of the west side of the flue extended for about 1.2 m into the base of the oven chamber, almost to the middle of it. There was no indication of a supporting structure - similar to the flue lining - in or around the edges of the base of the oven chamber and, in contrast to the flue channel, only a small quantity of tile pieces were recovered from the fill. This suggests that any structure above the base of the oven chamber had not been constructed with tiles. However, something would be required to span the 2m width of the base of the oven chamber to create an oven floor. Taking into account the probably modest amount of heat reaching the area of the oven chamber, which is indicated by the fading-out of the baked soil toward that end of the flue, this width could allow a timber floor, suggesting that the oven could have been an agricultural dryer.

Environmental samples from the charcoal-rich layer (L5) in the flue (sample 30; Table 17, Appendix 4) contained burnt cereals, mainly Spelt wheat glume bases, but this may represent fuel residue just as much as, or more so than, crops being processed in the oven itself (section 7.10).

Dating the oven is quite difficult. Only a small quantity of pottery was recovered from it during the excavation, and the dating relies heavily on the date assigned to the tiles used in its construction. These finds suggest that the oven dates to after the mid 2nd, and probably at least to the late 2nd/early 3rd century. Circumstantial evidence from two nearby pits (see below) suggest that the oven may have been operating or was broken up in the late 3rd or 4th century.

In terms of the pottery, only one sherd and some sherd fragments can be associated with the period of use of the oven. These came from the lower fill (L5) of the flue channel and are probably of early Roman (1st-century) date. The remainder of the pottery recovered is from the silt filling the stoke-pit, the flue channel and the base of the oven chamber. The latest-dated pottery from this silt consists of three sherds. One sherd, from the base of the oven chamber, can probably be dated as Antonine-4th century; the sherd from the flue channel (L4) probably dates from the early 2nd to mid-late 3rd century; and the sherd from the stoke-pit can be dated to the mid-late 3rd to 4th century.

The tiles from the oven – based on their thickness, the types of upper cut-away present, and the presence of a fixing hole – can probably be dated to at least the mid-late 2nd century (section 7.7). One of the types of upper cut-away present might date from the period of the early-mid 3rd to mid-late 4th century, but this dating is uncertain. As the tiles may have been salvaged and re-used in its construction, this suggests that the oven itself probably dates to at least the late 2nd or early 3rd century.

The large pit F339

Just to the east of the oven was a large pit (F339; Fig 14). The pit was positioned slightly closer to the surviving internal edge of the latest-dated enclosure ditch (F324) than to the oven. The distance between the pit and the internal edge of this ditch was about 3 m, so that there remained sufficient room for an internal bank to the enclosure. The latest-dated pottery recovered from this pit is dated to the late 3rd-4th century but is most probably of 4th-century date. The main mid-lower fill of the pit (L7) was stained black by the large quantity of charcoal it contained and overlay red-burnt sandy clay (L10). It seems probable, given its proximity to the oven (F329), that this charcoal is associated with the oven. Environmental samples from the charcoal fills in the pit did not produce the quantity of material recovered from those taken from the oven flue and could not confirm any link between the two features. However, the samples did include burnt Spelt wheat glume bases, which were also recovered from the oven samples (section 7.10).

It can be noted that a very large pit (F145), dated to the late Roman period, was excavated south of the oven, in Area D, in 2007 (CAT Report 485, fig 2a & fig 11). Like pit F339, pit F145 also contained charcoal-rich layers with burnt material. This included crop-processing debris and a significant amount of tile fragments (CAT Report 485, section 7.8 and section 7.6). As such, it seems possible that the fill of this pit may also be associated with the oven.

Other features

Just north-east of Enclosure 1 was a ditch (F346). This contained pottery that can be dated to the late 3rd-4th century and is probably 4th century in date. Previously (like ditch F342 above), this ditch was considered to be most probably of post-medieval date (Period 3, Phase 2; CAT Report 485, section 6.4.1). This dating was based primarily on its spatial relationship to other dated features as understood at that time. However, based on its relationship to the Roman ditches F330 and F342 and with a larger quantity of finds dating now available, it can be firmly dated as Roman.

Ditch F346 appears to represent a late addition to Enclosure 1 and which formed a small additional enclosed area on the east side of it. The north length of the ditch is aligned with the Phase 1a or Phase 1b ditch F330, but does not join it, leaving a probable entrance of about 4 m-5 m across between the two (the ditch terminal of F346 had been removed here by a modern feature F359). F346 also appears to have been dug for part of its length alongside the Phase 1b ditch F342 to form a driveway (DR 6). At the corner of F346 (F346, Sx 4), the lower to mid fill consisted of compacted gravel which could represent material eroded from a metallised surface on the driveway. However, as this metallising was not encountered in other sections of

this ditch, or in ditch F342, it seems that it was probably put into the ditch at the corner to form a metalled causeway across it.

6.3.5 The surface scatter of ?building stone on the north edge of the excavation

During intensive fieldwalking carried out by CAT in 1992, an isolated surface scatter of stone, mainly septaria, was located (CAT Report 8, fig 2 cluster C). Part of this scatter (as plotted) fell within the area of the current excavation, in the north-east part of Area G (Fig 2 top, just right of centre). Septaria was commonly used as a building material in the Roman period at Colchester, and the septaria pieces recorded here are most likely to indicate a building of Roman date. However, except for a Roman field ditch (F348), no other archaeological features were located within that part of the septaria spread recorded within the current excavation area.

6.4 Period 3: medieval (Fig 2c & Fig 3)

Features dated to the medieval period were confined to Area F and were concentrated in the west part of that area. The features consisted of a number of small ditches, post-holes and pits. The extent of these features is clear on their east and west sides. There is some indication that they may have extended further to the south, as similar shallow ditches were located during earlier excavations in Area A and Area C (CAT Report 383, fig 2a F49 & fig 2c F31). These similar ditches could not be closely dated but were cut by some post-medieval features. However, apart from a group of three pits dating to early in Period 4 (CAT Report 383, fig 2c), there was no density of other archaeological features associated with them. To the north, the medieval features extended beyond the edge of Area F. The closely-dated pottery suggests that the majority of these features date to the 12th-13th centuries (Period 3, Phase 1). There is also small quantity of pottery dating to the 14th-15th centuries from some features (Period 3, Phase 2).

6.4.1 Phase 1: c 12th-13th centuries

The earliest of the Phase 1 features are a number of shallow ditches, short lengths of ditch or slots, and post-holes or small pits. Many of these features produced pottery dating to the 12th-13th centuries. Overall, these features conform approximately to a rectilinear pattern of enclosures defined by ditches. The west side was defined by shallow ditch F312. The east side appeared to be defined by a droveway (DR 7; Fig 3), about 6 m wide and formed by the ditches F420 and F278/F281. At the north end of this droveway, the possible paired ditches F385 and F279/F392 may have defined a continuation of this droveway, or a second separate droveway (not numbered). The ditches F385 and F279/F392 produced few finds, but pottery from F392 is dated as 12th century. The south end of the droveway (DR 7) is partly obscured by a large silt-filled feature (F444), which appeared to be of natural origin. However, the south end of the droveway (DR 7) appeared to open out here into a wider area. The line of the ditch F278 was moved to the east by its continuation F281 and the ditches F438/F450 are located further to the west than the line of the west droveway ditch F420. As ditch F281 cuts ditch F288, this indicates that either the droveway (DR 7) is not a primary feature of this phase, or that ditch F281 was a later extension to the droveway.

The area between the ditch F312 and the edge of the droveway (DR 7) is about 28 m across. This area was divided east-west by small ditches or lengths of shallow trench and by a number of post-holes. Some of these ditches were so shallow that parts of their length have been entirely removed by later activity. This can be clearly seen for the lengths of ditch F302 and F400, which both become so shallow at their surviving eastern extents as to simply fade out and have no proper terminals there. It is, therefore, possible that some small ditches have been removed altogether without leaving any trace. That not all of the divisions were marked by ditches can be seen by the line of post-holes (F327, F414, F415, F416, F421) continuing the line of ditch F306 at its west end as far as boundary ditch F312. Other small independent features are probably post-holes along the side of ditches (F328 and F422, F319, F325 and F426, F425 and F408), possibly representing the lines of wooden fences.

On the north side of Enclosure 4 there were three parallel shallow ditches, all about 2 m apart (F297, F308, F400). Two ditches (F302, F306) separating the areas of Enclosure 4 and Enclosure 5 were also similarly spaced. While these ditches were

not continuous, it seems that they could represent controlled access ways between the enclosures and the driveway (DR 7) or between the enclosures themselves.

A number of the pit-like features (F376, F377, F389, F390, F397) at the north end of this part of Area F contained no finds and it is possible that some, or possibly all of these, are of natural origin. The long silt-filled feature F320 may also be of natural origin.

Within Period 2, a sequence of development can be recognised for some of the ditches. Ditches F281, F298/F315, F317, F307/F309/F402 and F378 and F392 were clearly later additions as they cut earlier existing ditches. Ditches F378 and F392 were in turn cut by the ditch F279. Later F279 and the ditches F307/F309/F402 were cut by ditches F276/F300/F301. There were also several large pits, some quite substantial at over 2 m across (F368, F374, F375/F367, F398, F449). They contained sherds spanning the period of the 12th/13th century, but also the 14th/15th century (see Phase 2 below). Where relationships existed between the large pits and the ditches (pits F374, F375 & F367, F399, F404, F449), the pits were always found to be later.

6.4.2 Phase 2: c 14th-15th centuries

There is little that can be dated to the late medieval period of the 14th-15th centuries. Only two of the features can be confidently assigned to Phase 2. These are the large intercutting pits F375 and F367, the earlier of which contained pottery dated to the 14th-15th century. The large pit F449 may also date to Phase 2 as the latest pottery from this feature is dated as 13th-14th century. However, there are several similar large pits, which may indicate that they are part of a coherent group. Where a relationship existed between these pits and the Phase 1 ditches, the pits were always found to be later, so that they may all belong to Phase 2.

6.5 Period 4: post-medieval to modern (Fig 2c & Fig 3)

There were only a very few features that can be dated to this phase. All were located in the south-east part of Area F.

6.5.1 Phase 1: 16th-17th/18th centuries

The ditch F437 contained pottery dated to the 15th-16th century. The remainder of the features which can be attributed to this phase contained pottery dated to the 17th century or later. It seems probable that the feature F438, which continued the line of the ditch F437, is post-medieval in date. No parts of these ditches were retained as boundaries into the modern landscape. There were also several pits or post-holes (F282, F296, F440, F445, F448). An undated short length of ditch (F451), adjacent to F448, was very similar to it and may also be of post-medieval date.

6.5.2 Phase 2: 19th-20th centuries (Figs 2a, 2b, 2c & Fig 3)

There was a large number of modern features, almost all relating to the building and demolition of the former Birch airfield. Almost all of these were located in Area G and none were archaeologically excavated. Only one archaeologically significant feature contained pottery dated to the 19th-20th centuries. This was the ditch F280 (Fig 2c).

6.6 Features in Area F and Area G which are not dated and not assigned to a phase (Figs 2b, 2c)

A number of small isolated features could not be dated, and most of these will not be discussed individually. However, there was a concentration of small pit- and post-hole-like features located close to the ditch F284 in the east part of Area F which could not be dated. A few natural features were also examined in this area. None of the remaining archaeological features produced any dating evidence apart from one prehistoric pit (F285 above) and an early Roman cremation burial (F267). Two small features (F270, F271), adjacent to each other, contained some burnt material and originally must have had fires or heated material within them as the clay soil into which they had been dug was reddened and discoloured by heat. This was especially so for F270. To the south, a larger pit (F269) contained some whole and crushed oyster shells in its fill.

A few small isolated pits with a silty fill containing some charcoal or with a silty charcoal-rich fill were located (F353, F355, F356, F361). None of these features produced any dating evidence.

The location and shape of a large linear feature (F444), filled with a pale grey silt, suggests that it might have been part of a hollow-way. If so, then it could have linked the medieval droveway (DR 7) with another possibly droveway at its south end (Fig 2c). None of the ditches which extended to its edge could be traced within it, so that it may have cut them. This would date the feature to at least the late medieval and probably to the post-medieval period. The only finds associated with it were a few pieces of ?intrusive 12th- to 13th-century pottery. However, dating this feature is very difficult. It is not unusual for features to not be visible in similar patches of natural silt deposits which occur on the surface of the clays and gravels. This being so, the feature might cut the medieval ditches and be cut by later post-medieval ditches; however, no reliable stratigraphical relationship was visible. Also, the feature itself was quite deep at 0.5 m and only extended for a short distance. No other similar deeply-worn areas of droveways have been encountered, so a natural post-glacial origin is also possible for it.

6.7 Area H (Fig 2)

Area H was the separate stripped area to the west of Areas F and G. Examination of the stripped surface revealed three ditches. All can be assigned to Period 3, Phase 2. No other features of archaeological significance were identified. One of the ditches lay close to the west edge of the site and, despite not appearing on any maps consulted, this was clearly a modern feature. It lay parallel to aircraft runways of the former Birch airfield (Fig 2) and so can probably be associated with the airfield. The other two ditches lay parallel to each other across the centre of the site and were clearly-defined parts of a trackway or green lane. This track appears on the 1881 Ordnance Survey (Fig 4) and was probably destroyed during the construction of Birch airfield in 1943. None of these features was excavated.

7 Finds

Full lists of all recorded finds are included in the site archive.

7.1 The small finds and fired clay

by N Crummy

The assemblage from Phase 4 is presented here by area, with the prehistoric and Roman material from Area G preceding the medieval and later material from Area F.

Area G

A small assemblage ranging in date from Bronze Age to Roman came from Area G. It is described and discussed below in two groups: first, Bronze Age, and second, Late Iron Age to Roman.

Bronze Age

The Bronze Age material came from two pits: a copper-alloy disc-headed head pin from pit F340, and a complete loomweight and fragments of one or two others from pit F360.

The loomweights are of the distinctive drum-shaped form with vertical perforation used on the warp-weighted loom in the Middle Bronze Age and perhaps the early Late Bronze Age (Adkins & Needham 1985, 38; Jones & Bond 1980, 475). They have a wide distribution across southern Britain, stretching from Cornwall to Essex (ApSimon & Greenfield 1972, fig 24A, 1; Barford 1995, 125). Few are complete, and fewer still have their weight recorded, but the diameter of the complete loomweight from this site shows that, at 116 mm across, it falls within what is probably a standard range in terms of size, defined by examples of 110 mm from Winnall Down in Hampshire (Bates & Winham 1985, 90), 114 mm from Kingston Buci in Sussex (Curwen 1931, 208-9), 114 and 116 mm from North Shoebury in Essex (Barford 1995, 125), 121 mm from Brandon in Suffolk (Crummy 2004, 41-2), and 125 mm from Mucking in Essex (Barford 1988, 49).

On some sites, Bronze Age loomweights can occur in considerable numbers, with thirteen coming from Itford Hill and 20 from Bishopstone, both in Sussex (Burstow & Holleyman 1957, 200; Bell 1977, 119), and some have been found in direct association with the looms on which they were used. For example, one was found close to two loom post-holes in a house in Trevisker, Cornwall, and ten were found with a burnt loom frame in a pit at Cock Hill, Sussex (Ratcliffe-Densham & Ratcliffe-Densham 1961, 86, 100-101, pl XIb; ApSimon & Greenfield 1972, 341, 353). The loomweight from the Birch Pit site has been worn down on one face where it has swung on a gathered group of warp threads, and similar, if more concentrated wear, was noted on the weight from Trevisker (*ibid*).

Before commercial textile production during the Roman period severely reduced the amount of home-weaving, all communities would have produced their own cloth. The loomweights from the Birch Pit site, therefore, not only provide evidence for the existence of a building containing a loom in the vicinity, but also for the herding of sheep and/or goats, with several animals allowed to reach maturity to provide wool for cloth, rather than being slaughtered in their first or second year if they were kept for meat and milk production (Payne 1973, 282-4).

The pin has a flat decorated head which places it within a north-west European group dating to the 8th century BC, towards the end of the Late Bronze Age. The main area of distribution for this group is concentrated in Scandinavia and northern Germany, but an example with concentric ring decoration on the head comes from Hagbourne Hill in Berkshire (O'Connor 1980, 203; Harding 1972, pl 77, K). A pin with plain disc-head came from the Breiddin hillfort in Powys, and one found on the timber trackway at Brigg in Lincolnshire was associated with Hallstatt pottery (Coombs 1991, 135, fig 55, 145; Smith 1958, 78, fig 1, trackway inset). Another from the fill of the ditch of Middle Bronze Age barrow 5L at Shrewton, Wiltshire, may be from a contemporary secondary burial, but the context is ambiguous and the pin could be later and part of the Late Bronze Age group (Moore & Rowlands 1972, 50, pl IV, J; O'Connor 1980, 74-5). Other plain examples come from the Heathery Burn cave, the Isleham hoard, Staple Howe and the Thames at Wandsworth and Sion Reach (*Inv Arch*, 9, GB55, 10(8); Coombs 1991, 135). When found in burials, Bronze Age pins are associated with males.

Studies of Bronze Age landscapes have noted the increased use of placed deposits that include personal items and tools such as awls and loomweights, perhaps marking seasonal events or crucial periods in the life of a community (eg Ratcliffe-Densham & Ratcliffe-Densham 1961, 86, 100-101; Moore & Jennings 1992, 93). These formal placements of material culture, together with votive deposits in liminal – often watery – contexts, have been interpreted as an indication of a trend towards fixed settlements with demarcated boundaries and an internal structure with defined zones of specific activity, that is, areas allocated for houses, fields, pits, burials, etc, a more concentrated version of the expansively sited foci of the early 1st millennium BC (Barrett 1980a, 91-5; Bradley *et al* 1980, 65; Ellison 1980; Ellison 1987; Needham & Spence 1996, 246). The pin and the complete loomweight with its associated fragments from this site can thus be seen as resonant with greater significance than the mere disposal of rubbish.

Fig 15.1, SF 68. (600) F340. Late Bronze Age pit. Copper-alloy pin with damaged discoid head and bent shaft. The rim of the disc is slightly raised, there is a small round punchmark in the centre, and slightly large punchmarks close to the rim. Length 101 mm, head diameter 9 mm.

Fig 15.2, SF 72. (657) F360. Late Bronze Age pit. Drum-shaped loomweight with straight-sided perforation expanded slightly around each opening. The fabric is a sandy clay with much large flint grit. The external surface has fired generally to patchy orange-buff, but has one side reduced to grey-black. A marked dip on one side of one round surface appears to be original and was probably caused by use-wear. Diameter 116 mm, height 80 mm. Weight 1.182 kg.

SF 71. (667) F360. Late Bronze Age pit. Fragment of a drum-shaped loomweight, with a small part of the edge of the central perforation surviving. The fabric is a sandy clay with small flint grit, fired uniformly to orange apart

from a patch of dark buff on the external surface. Diameter approximately 160 mm. Weight 321 g.

SF 83. (648), F360. Late Bronze Age pit. One fragment in a sandy clay fired to orange-buff. Weight 15 g.

Late Iron Age-Roman

The Late Iron Age and Roman objects from Area G mainly derive from the early enclosure ditches. The earliest items are some fragments of loomweights from the western ditch, one of which was found in association with a fragment of briquetage, and some further fragments of briquetage from the eastern ditch.

The loomweights are of the Iron Age triangular form found elsewhere at Birch Pit, but the fabric of the Area G fragments, with large as well as small grits, has not previously been recorded here. As with the Bronze Age loomweights, their presence points to a community that was self-sufficient in cloth production, and supplied its own wool from a herd of sheep or goats that had a substantial proportion of mature animals. The triangular loomweight was in use during the Middle and Late Iron Age, with some found in contexts dating to after AD 43 pointing not only to their survival in use for a few decades after the Roman conquest, but also to the survival of the communities that used them. In the Colchester area, home-woven cloth may have been supplanted by commercially-produced fabrics fairly soon after the conquest as part of the process of Romanisation, but it is also possible that many looms were still in use in indigenous communities until at least the time of the Boudican revolt.

The briquetage fragments come from rectangular troughs used in the production of sea-salt at 'red hill' sites on the Essex coast. The reasons for the recovery of the various forms of briquetage on inland sites has been the subject of considerable debate, but the most likely explanation for the recovery of trough fragments is that they were used as storage vessels during the transportation of the commodity to the hinterland. A summary of the other possibilities can be found in Crummy 2007 (376-7). The fragments from the Birch Pit site conform to the Type A vegetable-tempered briquetage fabric found in north-east Essex, with walls usually about 19 mm thick (Rodwell 1979, 149-53; Fawn *et al* 1990, 11). These pieces, being associated with loomweights, are likely to date to the Late Iron Age or early Roman period.

Several other Area G items dating to the Roman period come from enclosure ditch F324. They include some small pieces of fired clay, perhaps deriving from structures such as ovens or kilns. A further two fragments of fired clay came from the mid-late Roman oven F329 and presumably derive from its superstructure. The oven also produced two incomplete iron nails. A very worn unstratified coin of Lucilla (SF 69) dates to the mid 2nd century but may have been lost much later, as the substantial low-denomination coins of this period remained in circulation until the end of the 3rd century. One object is almost certainly late Roman, a fragment from a rotary quern of Millstone Grit from the Pennines. Querns of this stone occur most frequently in Essex in the later Roman period, when they seem to have replaced both Puddingstone querns imported from the Hertfordshire area and those of Mayen lava from Germany.

The early element of this group of material – the triangular loomweights and the briquetage – are typical indicators of indigenous communities in this part of the eastern region. The later material contains too small and too diverse a range of artefact-types to allow for any attempt at characterisation of the assemblage, beyond noting that, in its lack of consumer goods, particularly those of metal, it conforms to the profile of many rural sites in the area, such as the Abbotstone site near Colchester, Chigborough Farm at Little Totham, and Ardleigh, and in this it matches the assemblage found in earlier excavations at the Birch Pit site (Crummy 2005, 52; Wallis & Waughman 1998; Brown 1999).

Fig 16.3, SF 70. (638) F344 Sx 1. Western enclosure ditch. A damaged triangular loomweight, two fitting fragments and two non-fitting fragments. One apex and one perforation remain. The fabric is a hard-fired sandy clay with some flint grit, ranging in size from small to very large. It is reduced internally to grey-black and fired externally to buff. There are a few random impressions from vegetation on one surface. Maximum surviving length 132 mm and width 93 mm; thickness 75 mm. Weight of main fragment 595 g; total weight 651 g.

SF 93. (593) F333 Sx 1. Western enclosure ditch. Two fragments probably from a triangular loomweight in the same fabric as SF 70. Weight 42 g.

SF 80. (639) F333 Sx 1. Western enclosure ditch. a) Two fragments probably from a triangular loomweight in the same fabric as SF 70. Weight 17 g. b) Fragment of salt briquetage from a rectangular trough, probably from the junction of two walls. The fabric has some vegetable tempering and grit. It has fired externally to orange with buff patches, with some internal reduction. 56 by 43 mm, thickness incomplete. Weight 34 g.

(581) F324 Sx 3. Eastern enclosure ditch. Six abraded fragments of salt briquetage, all probably from the same rectangular trough. The fabric is hard and friable, with vegetable tempering and occasional burnt flint grit. The outer surface ranges in colour from dark orange to pinkish-brown, the inner is mainly orange, apart from on one fragment (c) which is scorched. a) 99 by 57 mm, 24 mm thick; b) 72 by 74 mm, 19 mm thick; c) With scorched inner face. 54 by 52 mm, 16 mm thick; d) 43 by 26 mm, 18 mm thick; e) 41 by 39 mm, 19 mm thick; f) 44 by 39 mm, 18 mm thick. Total weight 254 g.

SF 73. (581) F324 Sx 3. Roman enclosure ditch. Narrow copper-alloy shaft with a thickened point at each end. Length (bent) 13 mm.

SF 69. (597). Unstratified coin. Very worn copper-alloy *as/dupondius* of Lucilla, reverse *Spes*, c AD 164-9. Diameter 27 mm; weight 13.75 g.

SF 84. (627) L11/F346 Sx 4. Late Roman ditch. a) Fragment from the lowerstone of a Millstone Grit lava quern, with radial grooving on the grinding surface. Maximum dimensions 102 by 92 mm, 41 mm thick; diameter of hopper approximately 40 mm; b) Fragment of worked gritstone with both surfaces worn smooth; no original edges remain. Maximum dimensions 97 by 94 mm.

(541) F274 Sx 3. ?Roman pit. Iron nail shank fragment. Length 15 mm.

(614) F329. Mid-late Roman oven. Two incomplete iron nails. Lengths 35 and 39 mm.

(650) F334 Sx 7. Late Iron Age-early Roman ditch. Fragment of burnt residue, probably of organic origin (cf Murphy & Fryer 2007, 384). Weight 7 g.

(575) F329. mid-late Roman oven. Two fragments of fired clay in a sandy fabric with pieces of large flint grit and pebbles. The external surface is reduced to black, with a grey margin of variable depth, up to 18 mm. Internally the fabric has fired to buff. Weight 62 g.

(582) F324 Sx 4. Roman enclosure ditch. One fragment of fired clay in a sandy fabric fired to orange with weathered grey curved external surface. Weight 10 g.

SF 75. (585) F324 Sx 2. Roman enclosure ditch. Two fragments of fired clay in a sandy fabric fired orange with a buff external surface. Total weight 9 g.

(595) F324 Sx 6. Roman enclosure ditch. One fragment of fired clay in an orange sandy fabric. Weight 4 g.

Area F

All the objects in the Area F assemblage derive from medieval or later contexts, and many can be dated to the medieval or early post-medieval period. There is only one certain residual Roman object, ie part of a 1st- or 2nd-century Puddingstone quern that was found in a post-medieval context, although some other items, in particular some quernstone fragments and some small pieces of fired clay, may also be residual.

Three of the general small finds are typical artefact-types of the medieval period. An early post-conquest find is a fragment of a horseshoe of the wavy-edged type

used in the late 11th and 12th centuries (Clark 1995, 95-6). A fragment of a mortar made from a shelly limestone, probably from the quarries on the Isle of Purbeck, was found in a post-medieval feature. It has weathered very badly and may have been discarded much earlier. Shelly limestone mortars have been found in contexts dating to the 13th and 14th centuries at Kings Lynn (Dunning 1977, 328). A small schist hone is probably contemporary with the 13th-century pottery from the same context (pit F412). It has split and was found in association with a broken knife blade, both seeming to have failed together and been discarded together. It is of poorer quality than the Norwegian Ragstone hones that were imported in large numbers from the Telemark area of Norway from the Late Saxon period until perhaps as late as the early post-medieval period, although it may be an inferior product from the same source (Rees *et al* 2008, 325-6).

A second horseshoe fragment is unstratified and of a plain form that cannot be closely dated, and the same is the case for a hinged strap-plate fragment, probably from horse harness, and a number of iron nails.

Several small fragments of fired clay came from a number of scattered features. Some may be from shattered Iron Age loomweights, but none retain any distinctive features other than an external surface, usually very flat, and two have a chalk temper not seen in loomweights. They are more likely to derive from hearths or the superstructure of ovens, and to be of medieval or post-medieval date. A vitrified brick may be a kiln waster or may also be from a hearth.

Fragments from querns of Mayen lava, imported from the Eifel Hills in Germany, form the major part of the Area F assemblage. This type of quern first appeared among the material culture of the region at or soon after the Roman conquest, brought over by the army, who valued their comparative lightness due to the highly vesicular nature of the rock. A regular trade was established and continued until sometime in the later Roman period, when in Essex querns of Millstone Grit from the Pennines seem to have replaced those of lava, perhaps because they were more durable but also as they may have been cheaper because of lower transport costs. After a gap of several centuries, the trade in Mayen lava querns was re-established in the Middle Saxon period, and thereafter seems to have continued until the early post-medieval period (*CAR 2*, 75-6; *CAR 5*, 36-9). They were imported through major medieval entrepôts such as London, sometimes only partially shaped (Freshwater 1996), and both Ipswich and Colchester may have had a share in the trade, being well sited to receive vessels from the Rhine ports.

Given this double and prolonged period of import, there is some possibility that some of the Area F lava quern fragments are residual, but they are so numerous and so widely scattered that this seems unlikely when only one other object, the residual piece of Puddingstone quern, can positively be attributed to the Roman period. Where rim fragments survive, their diameter shows them to have been from rotary hand querns rather than the larger stones used in windmills. The high proportion of hand querns to other objects from Area F, even though they must have been deposited over a prolonged period and some may derive from just one broken stone, makes this medieval assemblage similar to that of the Period 2 Roman element of earlier excavations on the Birch Pit western extension site, where hand querns also formed a major part of the recovered material culture. This emphasis on grinding grain into flour may reflect a medieval rural way of life specific to this area that had its counterpart in the earlier period, while the absence of metal dress accessories and household equipment is a counterpart to the lack of consumer goods in the Roman assemblages from both the earlier excavations and Area G, and in marked contrast to the medieval and early post-medieval urban assemblages from Colchester (*CAR 5*; Cunningham & Drury 1985). It can perhaps be defined as low-status self-sufficiency, with a concentration on providing the daily necessity of bread without paying a professional miller for turning home-produced grain into flour, as was usual in the medieval period, where one miller usually ground the grain for all the inhabitants of a manor or parish. This in turn implies that the area was used for arable farming, with some surplus for sale or barter, as the friable nature of lava querns meant that some financial outlay was still necessary to replace broken stones. An alternative possibility is that the stones were used to grind malted grain for brewing, as ale was usually brewed by a household or small group of households

rather than commercially (Margeson 1993, 202). However, the absence of other domestic waste militates against this interpretation.

General small finds

Fig 16.4, SF 77. (729) L16/F445. Post-medieval pit/ditch. Fragment of an abraded shelly limestone mortar, with one external lug. Rim diameter approximately 160 mm, height 92 mm.

Fig 16.5, SF 76. (701) F412. Medieval pit. a) Fragment of a rectangular-section schist hone, reduced in width on one side towards one end. The surfaces are all worn; both ends are broken. Length 82 mm, section 20 by 11 mm; b) Iron knife blade fragments, with straight back and edge. Maximum length 124 mm, width 37 mm.

SF 67. (535) F282 Sx 1. Post-medieval ditch. Tapering fragment of copper-alloy sheet. Length 27 mm, maximum width 10 mm.

SF 64. (528) F279 Sx 1. Medieval ditch. Iron horseshoe branch fragment with the wavy outer edge of Clark's Type 2 (Clark 1995, 86) and two long countersunk nail holes, one still with the nail in place. The heel has a folded calkin. Length 72 mm.

SF 91. (678). Unstratified. Iron horseshoe branch fragment with plain heel. There is one rectangular nail-hole and the fragment has broken across another. Length 85 mm.

SF 65. (533) F280 Sx 1. Post-medieval ditch. a) Hinged iron strap-plate fragment with central rivet hole for attachment, probably the belt-plate from a harness buckle. Length 35 mm, width 28 mm; b) Curved tapering iron fragment, possibly part of a buckle loop. Length 32 mm, maximum width 11 mm; c) Iron sheet fragment, with two rivet holes. 23 by 20 mm.

Nails

(742) F444. Natural linear feature with intrusive medieval material in fill. Incomplete iron nail or holdfast with large square head, length 51 mm.

(704) F416. Medieval post-hole. Iron nail shank fragment. Length 42 mm.

(522) F280 Sx 1. Post-medieval ditch. Incomplete iron nail, length 45 mm, and nail shank fragment, length 44 mm.

(530) F280 Sx 1. Post-medieval ditch. Incomplete iron nail, length 32 mm, and two nail shank fragments, lengths 26 and 27 mm.

(536) F282 Sx 1. Post-medieval ditch. Iron nail shank fragment. Length 30 mm.

(520) F282 Sx 1. Post-medieval ditch. Plain clay tobacco pipe stem fragment. Length 43 mm, bore diameter 2 mm.

Brick and structural clay

(726) L16/F445. Post-medieval pit/ditch. Brick fragment with one external face very vitrified and the others slightly so. Maximum dimensions 101 by 68 by 52 mm.

(514) F273. Unphased pit/post-hole. Four fragments of fired clay in a sandy fabric with some small flint grit, fired to orange. Weight 25 g.

(517) F276. Post-medieval ditch. One fragment of fired clay in a sandy fabric with a flint pebble. The fabric has fired to orange with pale buff external surface. Weight 13 g.

SF 95. (524) F283. Medieval/post-medieval pit. Three fragments of fired clay in a sandy fabric with some vegetable tempering, uniformly fired to orange-buff. Weight 77 g.

SF 98. (540) F283. Medieval/post-medieval pit. a) Three fragments of fired clay in a sandy fabric with some small flint grit, fired externally to buff. Weight 111 g; b) Fragment of fired clay in a sandy fabric with some vegetable tempering, uniformly fired to orange-buff. Weight 29 g.

(539) F294. Medieval pit. Ten fragments in a sandy fabric with some small flint grit, fired to orange. Weight 44 g.

SF 66. (547) F298 Sx 1. Medieval ditch. One hard-fired fragment in a sandy fabric with some small flint grit, fired to orange with a buff-coloured external surface. Weight 27 g.

(547) F298 Sx 1. Medieval ditch. Two fragments in a sandy fabric with some small flint grit, fired to orange. Weight 13 g.

(554) F312. Medieval ditch. Six fragments in a sandy fabric with some small flint grit, fired to orange. Weight 19 g.

SF 96. (731) F441. ?Medieval pit. Eight fragments in a sandy fabric with some chalk tempering, fired to orange with some buff patches. One fragment has an orange external surface, two have a buff external surface. Total weight 115 g.

SF 97. (732) F442. ?Medieval pit. Nine fragments in a sandy fabric with some chalk tempering, fired to orange with occasional small buff patches. Weight 137 g.

SF 94. (717) F437 Sx 1. Late medieval to post-medieval ditch. Six fragments, fabric is sandy and vegetable-tempered with the occasional piece of large flint grit and has uniformly fired to orange-buff. Weight 61 g.

Rotary hand querns

Fig 16.6, SF 78. (733) F448 Sx 1. Post-medieval slot. Fragment of the upperstone from a Puddingstone beehive-shaped quern. The grinding surface is worn to a slight polish. Most of the edge is missing. Diameter approximately 260 mm, height 129 mm; maximum surviving diameter of hopper 52 mm.

Fig 16.7, SF 74. (538) F294. Medieval pit. One rim fragment and many non-fitting fragments from the lowerstone of a Mayen lava quern, with pecked and only slightly worn grinding surface. The edge is worn and irregularly shaped. Diameter approximately 320 mm, 29 mm thick at the rim. Total weight 3.411 kg.

SF 63. (555) F311. Medieval pit. Small abraded fragments of Mayen lava from a quernstone, with no worked surface surviving. Weight 208 g.

SF 90. (674) L14/F368. Medieval pit. Rim fragment from the lowerstone of a Mayen lava quern, with worn grinding surface. Diameter approximately 260 mm, 40 mm thick.

SF 92. (679) F374. Medieval pit. Tiny abraded fragments of Mayen lava from a quernstone, with no worked surface surviving. Weight 13 g.

SF 89. (681) F380 Sx 1. Medieval ditch. Abraded fragment of Mayen lava from a quernstone, with no worked surface surviving. Weight 151 g.

SF 79. (687) F392 Sx 1. Medieval ditch. Small fragment of a Mayen lava quernstone with worn grinding surface. Maximum dimensions 27 by 25 mm, 20 mm thick; weight 19 g.

SF 87. (713) F431. Medieval/post-medieval pit. Fragment of a Mayen lava quernstone with worn grinding surface. Maximum dimensions 86 by 62 mm, 33 mm thick.

SF 99. (714) F434. Medieval/post-medieval post-hole. Small fragment of Mayen lava from a quernstone, with no worked surface surviving. Maximum dimensions 34 by 28 by 17 mm.

SF 88. (723) F438 Sx 1. Medieval/late medieval ditch. Fragment a Mayen lava quernstone, with worn grinding surface. Maximum dimensions 145 by 125 mm, 66 mm thick.

SF 85. (721) F438 Sx 2. Medieval/late medieval ditch. Fragment from a Mayen lava quern, with worn grinding surface. Maximum dimensions 142 by 116 mm, 32 mm thick. The edges of this piece may have trimmed straight for use as paving.

SF 82. (722) F438 Sx 2. Medieval/late medieval ditch. Rim fragment from the lowerstone of a Mayen lava quern, with worn grinding surface. Diameter approximately 270 mm, 25 mm thick.

SF 81. (728) L17/F445. Post-medieval pit/ditch. Fragment from a Mayen lava quernstone, with worn grinding surface. Maximum dimensions 109 by 87 mm, 41 mm thick.

7.2 Worked flint

by A Wightman

Twenty-one flint pieces were recovered from these excavations. Only one of these pieces can be said with certainty to have been created by a mechanism other than human flint-working. There are five blades, three retouched flakes, six flakes, one thinning flake, three cores, one burnt flint, and one probable tool of convenience.

The five blades are all secondary or tertiary blades with numerous previous removals. None are classifiable as bladelets. Evidence of platform preparation is observable on three of the blades, suggesting a Mesolithic or Late Neolithic date for these pieces. One of these blades also exhibited characteristics of a soft hammer or indirect blow (ie a punch) being used to detach the blade. One of the blades (from F311) has abrupt retouch, almost scraper-like in appearance, down two-thirds of its left lateral edge. This blade is hard hammer-struck and is probably Late Neolithic in age. As the blades all came from within contexts undisturbed in modernity, the probable use-wear identified on two of the blades is unlikely to have been created by modern machinery.

Three retouched flakes have been identified in the assemblage. All three are tertiary with numerous previous removals. This indicates that the flakes used for the tools were acquired towards the end of the core-reduction sequence. One of the flakes (from F333, Sx 1) has a notch located on a convex lateral edge created using small abrupt retouch. A flake with a small area of semi-abrupt retouch was recovered from F367, and a crude denticulate on a broken flake with three small notches removed from the distal end was found in F340. None of these tools can be identified as belonging to any one prehistoric period and, with the exception of the notch, are probably expedient tools created for a specific function.

Five of the six unretouched flakes are secondary flakes and the sixth is a primary flake, most likely debitage from the earliest phase of the *chaîne opératoire*. Three of the secondary flakes show no signs of having been used and are most likely also debitage. The other two flakes appear to have edge damage. One of the flakes with edge damage (from F312) is quite large, and on the other (from F294) the damage has created a small notch (it is almost certainly not intentionally created). These two flakes were probably utilised as cutting tools. A seventh unretouched flake is the thinning flake from F367, probably from the thinning of an axe. As this is the only thinning flake from the site, it is assumed that it was imported to the site as a usable flake, probably during the Early Neolithic period.

Three small flake cores were recovered. A cube-shaped core (from F348, Sx 1) has sixteen removals and no more edges with angles suitable to detach further flakes. Similarly, the slightly flatter square-shaped core (from F320) has been heavily worked and lacks the potential for detaching further flakes. Both cores were also very small and would not have produced further flakes of a useful size. The use of more than two platforms that tend to be at different angles often results in these size and shaped cores and they are characteristic of the Early Neolithic period. The smaller and more irregular core from F367 had quite a few small flakes removed but also further faces that could have been utilised. However, a previous removal

exposed an area of rough, poor-quality flint which probably influenced the knapper's decision to abandon the core.

A piece of burnt flint which appears to have had a flake removed from its surface may have been worked but is too fire-damaged to say with any certainty. A large flint nodule or thermal flake with evidence of natural fracturing by frost ('pot-lid' fractures) has had numerous small-to-medium-sized flakes removed from it, in particular along one straight edge. Here the detachment of a line of flakes had formed a rough denticulated edge. However, the tool was not made on a flake but instead on a large flint nodule and is most likely a tool of convenience, hastily created to perform a specific task before being discarded. Such tools are traditionally assigned to the later prehistoric period (ie the Late Bronze Age and Iron Age); however, such a tool could have been created during any period and could be still used by farmers today, in particular in areas such as the Sussex Downs, when a sharp implement is required without delay.

Twelve of the flints were residual in medieval contexts, four in Roman contexts and two from a Late Iron Age/early Roman ditch. One flint which could be contemporary with the feature from which it was recovered was the tertiary flake with a denticulated edge from F340. This feature has been dated to the Late Bronze Age and there is nothing about the flint to suggest that it was not knapped in this period. One feature, the medieval pit F367, contained six of the flint artefacts recovered. The high density of flints in this context could suggest a focal area for prehistoric activity in this location, which has subsequently been disturbed by the excavation of a large pit in the medieval period. Any activity is most likely to have involved the use of stone tools rather than their production as no debitage was observed. Also the six artefacts found were made on three different varieties of flint. This could suggest that they were imported onto the site from different areas, although it is possible that they were made using flint nodules eroded from river gravels which are often quite mixed. Other than the high density of flint artefacts in this feature, no other significant spatial patterning is observable across the excavation area.

Most of the pieces recovered cannot be identified as belonging to a specific prehistoric period. Others, such as the well-made parallel-edged blades with dorsal scarring down the length of the blades, can only be ascribed to the period covering the whole Mesolithic period and the Early Neolithic period. The cube-shaped core and blade with ?scraper retouch down its lateral edge can be ascribed to the Early Neolithic period with greater confidence. These findings are comparable to the previous work undertaken on flint assemblages from elsewhere in Birch Pit by Hazel Martingell (CAT Report 383, section 8.2; CAT Report 485, section 7.2) and represents prehistoric activity in the landscape from possibly as far back as the Mesolithic to the Late Bronze Age.

Table 2: worked flint from the site.

Context	Site area	Finds no	Description	Dated
F283	Area F	540	Tertiary blade, very sharp edges, two previous removals, evidence for platform preparation.	Mesolithic/ Late Neolithic
F284 Sx 3	Area F	541	Secondary blade, seven previous removals (most of which would not have produced useful artefacts), prepared platform, no retouch. Created using a soft hammer.	Mesolithic/ Late Neolithic
F294	Area F	539	Secondary flake, three flake scars, a possible small notch and small area of retouch but more likely edge damage than retouch.	
F311	Area F	552	Retouched blade, secondary, three previous removals. Two-thirds of left lateral edge retouched with abrupt uniform retouch (scraper?).	Early Neolithic
F311	Area F	552	Secondary flake, one previous removal.	
F312	Area F	554	Secondary flake (notable size), five previous removals, edge damage but no retouch.	
F320	Area F	741	Small flake core, nine removals, tertiary (tiny spec of cortex), quite flat but square-shaped, evidence of failed removals.	?Early Neolithic

F330	Area G	586	Large flint nodule/thermal flake exhibiting frost-related 'pot-lid' fractures and one edge with what looks like large, rough retouch (resembles denticulated edge). Likely a tool of convenience.	
F331	Area G	580	Broken fragment (two pieces) that shows no evidence of having been humanly struck. No percussion characteristics or previous removals.	
F333 Sx 1	Area G	565	Retouched flake (tertiary, small) with two previous removals and small area of delicate retouch forming a shallow notch.	
F334 Sx 3	Area G	578	Secondary blade with three previous removals. Evidence of platform preparation and possible usewear.	Mesolithic/ Late Neolithic
F334 Sx 6	Area G	653	Primary flake. No previous removals, no signs of use. Made on a slightly red flint.	
F340	Area G	599	Retouched flake (tertiary, large) broken during knapping. Three previous removals, and three small notch removals on distal end creating a crude denticulated edge(?).	?Late Bronze Age (based on context)
F348 Sx 1	Area G	621	Small flake core, sixteen previous removals, tertiary (tiny speck of cortex), cube-shaped core.	Early Neolithic
F367	Area F	654	Secondary flake with one previous removal, red tinted flint, no signs of use.	
F367	Area F	654	Small secondary thinning flake (cortical platform) broken at the distal end. Five previous removals, red tinted flint, no signs of use.	?Early Neolithic
F367	Area F	654	Small secondary flake (cortex on platform), three previous removals, no signs of use. Made on a black flint.	
F367	Area F	654	Tertiary blade made on rough light grey flint. Four previous removals and possible evidence of usewear.	
F367	Area F	654	Retouched flake (tertiary, notable size) with platform preparation. Six previous removals, a broken right lateral edge and a hinge fracture. Small area of neat and long retouch on ventral face. Red tinge to flint.	
F367	Area F	654	Small probable flake core. Five successful previous removal, other small broken removals. Poor-quality black flint.	
F375	Area F	675	Burnt flint, possibility it has been humanly struck, hard to tell with burning damage.	

7.3 Heat-affected stone

by S Benfield

A total of 4,386 g of heat-affected stone, consisting of flint and sandstone/quartzite, was recovered. All of the stone had been split or fractured by heating. The stone came from contexts dated to the period of the Late Bronze Age (1,194 g) in Area G and the medieval period (3,192 g) in Area F. Heated stones are commonly recovered from prehistoric sites, but are not commonly associated with later periods. This could indicate that the heated stones recovered from the medieval features are residual; however, differences between the heated stones from the prehistoric and medieval contexts suggests that this is not the case.

There are distinct differences in the heat-affected stone recovered from the features of the two periods at the Birch Pit site (Table 3). The stones from the Late Bronze Age features include sandstone/quartzite which is absent from among the heat-affected stones from the medieval features, all of which are flints. The sandstone/quartzite pieces come from rounded small cobbles and, where diagnostic surfaces remain, it can be seen that the pieces of heat-affected flint from the Late Bronze Age features also derived from small rounded cobbles. In contrast, the heat-affected flint from the medieval features includes a number of large irregular pieces, up to about 1,000 g in weight, so that the average weight of the flint pieces from the medieval features is much higher than for the Late Bronze Age ones.

Table 3: breakdown of heat-affected stone by context date.

date of context	heated-affected stone type	no of pieces	weight (g)	average weight (g)
Late Bronze Age	sandstone/quartzite	4	991	248.0
Late Bronze Age	flint	9	203	22.5
medieval	flint	19	3192	168.0

The heat-affected stone from the Late Bronze Age features at the Birch Pit site can be compared with that recovered from prehistoric features at the Stanway site (Crummy *et al* 2007, 18-21). There, small cobbles of sandstone/quartzite were by far the most common heated stone type. As this stone type occurs much less commonly than flint in the underlying gravels, it had clearly been specially selected for its thermal properties.

The absence of sandstone/quartzite among the heat-affected stone from the medieval features at the Birch Pit site and the difference in the size and type of the flints which had been subjected to heating suggests that most, or all, are probably not residual prehistoric material. However, it should be noted that residual prehistoric finds, worked flint and pottery of Neolithic and Late Bronze Age date were recovered from Area F.

The heat-affected stones which can be dated to the Late Bronze Age, some of which had been specially selected for their thermal properties, are consistent with heated small cobbles commonly described as 'pot boilers'. The heated stones recovered from the medieval features comprise a range of shapes and sizes of flints, easily available to hand, which are possibly most likely to have become heated either accidentally or when used as part of a hearth.

7.4 Prehistoric pottery

by S Benfield

Introduction

A total of 376 sherds of prehistoric (pre-Belgic) pottery, weighing 3,769 g, was recovered during the excavation. All of this pottery is flint-tempered.

The prehistoric pottery fabrics (Table 4) follow those devised for the recording of prehistoric pottery in Essex (Brown 1988). The fabrics and form types recorded are listed below. All of the significant or diagnostic pottery has been numbered and illustrated (Figs 17-18). A full catalogue of the pottery is provided in the site archive.

Table 4: prehistoric pottery fabrics used in this report.

size of inclusions:

S-small (<1 mm),

M-medium (1-2 mm),

L large (>2 mm),

density of inclusions: 1 = <6 per square cm, 2 = 6-10 per square cm, 3 = >10 per square cm.

Fabric A	Flint S 2 well sorted
Fabric B	Flint S-M 2
Fabric C	Flint S-M with occasional L
Fabric D	Flint S-L 2 poorly sorted
Fabric E	Flint and sand S-M 2
Fabric V	Flint S-M 1

The average weight of the pottery sherds recovered from features dated as prehistoric varies between 8 g and 18.5 g, with an overall average of 10.5 g (Table 5). This can be contrasted with residual sherds from later-dated features, with an overall average sherd weight of just 5.0 g. This supports the identification of the features listed in Table 5 as being of prehistoric date. It should be noted that one of the features containing only prehistoric pottery (F354) had been severely truncated.

Based on the quantity of pottery (4 sherds, weighing 36 g) and average sherd weight (9.0 g), it is possible that the shallow pit F436 is also of prehistoric date. However, a small sherd of medieval pottery (weighing 3 g) was also associated with it and so the feature is presumed to be medieval.

Table 5: pottery from contexts dated as prehistoric and residual sherds showing quantity and average sherd weight.

context	feature type	site area	sherds	weight (g)	average sherd weight (g)
F285	pit	Area F	10	127	12.7
F335	pit	Area G	47	644	13.7
F340	pit	Area G	53	812	15.3
F354	pit (base)	Area G	14	260	18.5
F360	pit	Area G	220	1,765	8.0
<i>Totals and overall average sherd weight for above features</i>			344	3,608	10.5
residual	various		32	161	5.0

Discussion

The prehistoric pottery assemblage, although not large, is both interesting and significant. Most of the pottery from contexts dated as prehistoric (F335, F340, F354, F360) is of post-Deverel-Rimbury, Late Bronze Age type (Barrett 1980b).

Importantly, there is additional dating evidence for two of the Bronze Age features containing pottery, ie F340 and F360. A complete drum-shaped loomweight (SF 72) from F360 is dated to the Middle-?early Late Bronze Age and a complete bronze disc-headed pin from F340 (SF 68) can be dated to the 8th century BC (section 7.1). These indicate that, overall, this assemblage of pottery encompasses the period from the late Middle Bronze Age/early Late Bronze Age to the end of the Late Bronze Age. A few sherds from a small pit (F285) are probably earlier Neolithic in date.

Neolithic

The pottery from the small pit F285 (Area F) consists of a few small decorated sherds and a large body sherd. All the sherds are flint-tempered. One of the small sherds has indentations made with a small two-lobed object, possibly the end of a small bone (Fig 17.1). Other sherds and fragments (not illustrated) have small individual indentations. These sherds are probably part of a Neolithic decorated vessel. The large body sherd is from a rounded, thick-walled vessel and is possibly part of the same pot, although the surface is abraded and no decoration is visible on it. The pot is probably either earlier Neolithic Mildenhall ware or Peterborough ware. Mildenhall-style pottery appears from the mid-4th millennium BC (Gibson 2002, 72-3), with Peterborough ware generally dated to the 3rd millennium BC, but possibly dating to the early-mid 3rd millennium BC (Gibson 2002, 80-82).

?Middle-Late Bronze Age

Four features (F335, F340, F354, F360), all pits, produced finds of Middle or Late Bronze Age date. The pottery from these is essentially a post-Deverel-Rimbury assemblage of Late Bronze Age type (Barrett 1980b), although one large vessel from F360 (Fig 18.14) is possibly more easily paralleled with Middle Bronze Age Deverel-Rimbury pottery. Four sherds were also recovered from a shallow pit (F436) in Area F (assigned to Period 3), including the illustrated pot base (Fig 18.18).

In terms of the pottery, one of the most significant aspects of the dating is the almost exclusive use of flint-temper. From the end of the Late Bronze Age, through the Early Iron Age and the Middle Iron Age, there is an increasing use of sand-temper at the expense of flint in Essex (Sealey 2007, 50). Almost all of the pottery appears to be exclusively flint-tempered. This suggests that the assemblage is primarily Late Bronze Age. A Late Bronze Age date is also in accord with some of the manufacturing traits seen in some of the sherds themselves. A number of base sherds, from F335, F354 and F360, are heavily flint-gritted on the underside, and there are vertical finger-wipe marks on two sherds from F354 (Fig 18.12). Both of these traits are typical of pottery dating to the Late Bronze Age (Brown 2002, 60). The vessel forms which could be identified are dominated by rounded or shouldered open-mouthed bowls. Also, all the pot bases recorded in the assemblage are flat and

there are no pedestal or footring bases which appear on some Early Iron Age vessels. The pottery from pit F360 can be dated by the inclusion of a bronze disc-headed pin (SF 68) to at least the 8th century BC (section 7.1) and includes two, possibly three, decorated rim sherds (Fig 17.7-8, Fig 18.10).

There are two large vessels. One is a bucket-shaped vessel with a plain cordon and everted rim (Fig 17.5; F335). Similar cordoned vessels appear in assemblages dated to the Late Bronze Age in Essex (Brown 1995, fig 64 no 64 & fig 65 no 79) and can be identified as Class 1 jars (Barrett 1980b, 303).

The other large vessel (Fig 18.14; F360) is of particular interest. This vessel is difficult to parallel among published Late Bronze Age assemblages from Essex. Its large size could suggest some affinity with vessels in the Deverel-Rimbury tradition. Possible parallels, in the form of other large vessels in post-Deverel-Rimbury assemblages in Essex, are one vessel from Colchester Garrison (CAT Report 412) and another from Great Holts Farm (Brown 2003, fig 70, no 11). These may date to early in the Late Bronze Age ceramic sequence. However, the fabric description for these vessels indicates that they are relatively coarse pots, while the fabric and surface finish of the vessel from the Birch Pit site would appear to be much finer. Significantly, a complete drum-shaped loomweight (SF 72), and fragments from others of the same type, dated to the Middle-?early Late Bronze Age (section 7.1), were also recovered from this feature. As a complete loomweight this is unlikely to be an heirloom and almost certainly represents a deliberate placement within the pit (section 7.1). While this suggests a Middle Bronze Age date for the feature, other pottery recovered from it is of Late Bronze Age type (Fig 18.15-16) and one base sherd is heavily flint-gritted on the underside. Given this, a date at the beginning of or early in the Late Bronze Age period seems most appropriate for the feature.

It should be noted that, among the pottery dated to the Late Bronze Age, the assemblage from a large pit excavated in 2007 (F238) stands out as significantly different (CAT Report 485, section 7.3 & figs 15-18). The pit possibly represents a waterhole. Many of the pots from pit F238 consisted of rounded, or weakly-necked, bowls with a slack S-shaped profile (ie CAT Report 485, fig 116 nos 10-11, fig 17 no 18). Some of the pottery was burnished and could be described as fine ware, while one or two pots were small enough to possibly represent cups. Only one pot carried any form of decoration. Pottery of this type has not been clearly identified among that from the other features dated to the Late Bronze Age. The reason for this is not clear. It was considered that the difference might be chronological. The almost completely plain pottery from the pit might date early in the Late Bronze Age plain ware tradition (CAT Report 485, section 7.3). The pottery from the other features contains some decorative elements and might date to later in the same pottery tradition. However, it is now clear that, overall, the pottery recovered from the other Bronze Age features probably spans the whole of the Late Bronze Age (above). Also, of itself, this would not necessarily have explained the generally fine, or finer, pottery being associated with this pit. It can be noted that waterholes were commonly foci for the deposition of material in the Late Bronze Age (Cooke *et al* 2008, 52). The more finely-made bowls among the pottery from this possible waterhole might then indicate the remains of vessels associated with special consumption or, possibly, as finer pots, they were simply considered more suitable for selected deposition there.

Catalogue of selected sherds (Figs 17-18)

Pit F285

Fig 17.1 Seven small abraded sherds and fragments with small impressions from decoration on surface. One sherd (illustrated) has indentations made with a small two-lobed object, possibly the end of a small animal bone or comb; other small sherds or fragments (not illustrated) have small individual indentations. All the sherds have red-brown surfaces with dark-grey fabric. A large, thick flint-tempered body sherd also recovered from the pit may be part of the same pot. Probably earlier Neolithic decorated ware. Finds no 527, weight 127 g, Fabric D.

- Pit 335
Fig 17.2 Base sherd, grey-brown interior and fabric, patchy grey-brown and red-brown exterior. Finds no 564, weight 49 g, Fabric C.
Fig 17.3 Small body sherd with three horizontal decorative incised lines or grooves surviving above the carination, grey fabric and surfaces. Finds no 564, weight 2 g, Fabric E.
Fig 17.4 Small body sherd with single horizontal decorative incised line above carination, red-brown fabric and surfaces. Finds no 564, weight 7 g, Fabric B.
Fig 17.5 Four joining sherds from an urn with raised cordon below a slightly flaring rim. There are close-set shallow dimples around the interior of the rim which are either decoration or possibly finger impressions from forming the flared rim. Red-brown interior, dark grey fabric and exterior. Finds no 573, weight 219 g, Fabric C.
- Pit 340
Fig 17.6 Sherd from a necked jar or bowl with a flat-topped rim, two finger indentations in the groove of neck, possibly from construction rather than decoration. Finds no 608, weight 18 g, Fabric B.
Fig 17.7 Sherd from a necked bowl with finger-tip indented rim. Finds no 608, weight 16 g, Fabric B.
Fig 17.8 Sherd from a bowl with rounded, slightly undulating (?decorated) rim, the rim is slightly undercut internally, dark-grey interior and fabric, red-brown exterior surface. Finds no 608, weight 30 g, Fabric V.
Fig 17.9 Handle, incomplete, dark grey-brown. Finds no 599, weight 20 g, Fabric B.
Fig 18.10 Sherd with deep angular slashes into curving edge of rim, some damage to rim edge which is partly broken away; pale red-brown ?interior and fabric, dark grey ?exterior. Finds no 608, weight 20 g, Fabric C.
Fig 18.11 Sherd from a bowl with a flat-topped rim, upper part of the wall slightly flared and that part of the pot is burnished on the interior, grey-brown fabric and exterior, red-brown interior. Finds no 632, weight 60 g, Fabric V.
- Pit F354
Fig 18.12 Sherd from a rounded rim with vertical finger wipe-marks below, grey-brown surfaces and dark grey fabric. Finds no 634, weight 8 g, Fabric A.
Fig 18.13 Body sherd ?decorated with adjacent finger impressed dimples or finger pinch, red-brown exterior surface and dark grey fabric with grey-brown interior surface. Finds no 634, weight 8 g, Fabric B.
- Pit F360
Fig 18.14 Eleven sherds, most joining, with one group of seven and another group of four, from a bowl with swollen flat-topped rim, dark grey-brown exterior, very faint shallow grooves from finger pressure on the rim top, brown fabric and red-brown interior surface, also some black burnt smudges of organic matter in the fabric. Finds nos 658 and 676 (a number of other non-joining body sherds from finds nos 658 and 676 are also probably part of this vessel), weight 129 g, Fabric E (fine-medium flint with ?sand).
Fig 18.15 Sherd from a bowl with flaring flat-topped rim, dark-grey fabric and surfaces. Finds no 648, weight 5 g, Fabric C.
Fig 18.16 Small abraded rim sherd from a bowl with swollen flat-topped rim, dark-grey fabric and surfaces. Finds no 648, weight 11 g, Fabric C.
Fig 18.17 Two base sherds from the same pot (jar or bowl) abraded brown to red-brown surfaces, grey-brown fabric. Finds no 643, weight 46 g, Fabric D.

Pit F436

Fig 18.18 Sherd from a jar or bowl base with protruding foot, abraded, red-brown surface with grey-brown fabric and interior. Finds no 715, weight 13 g, Fabric C.

7.5 Late Iron Age and Roman pottery

by S Benfield

Introduction

In total, there was just over 11 kg (11,231 g) of Late Iron Age and Roman pottery from the excavation. The pottery was recorded using the Roman pottery fabric type series devised for *CAR 10* in which the fabrics are recorded as two-letter codes. The letter codes, together with the full fabric name, are set out in Table 6. Additional codes for Late Iron Age grog-tempered wares (Fabric GTW), Romanising coarse wares (Fabric RCW) and Rettendon-type wares (Fabric RET) have been introduced and these fabrics are described below. A fabric code has also been introduced for a few sherds in a hand-made organic-tempered ware, ie Fabric OTW. Where appropriate, the fabric code for the National Roman Fabric Reference Collection has been included (Tomber & Dore 1998). The pot forms were recorded, where possible, using the Camulodunum (Cam) pottery form-type series (Hawkes & Hull 1947; Hull 1958). Samian vessels are recorded using Dragendorff (Dr) form numbers, or other common form type references following those used in Webster 1996. The pottery fabrics and the vessel forms present in each site context were recorded for each finds number. The numbers of sherds were recorded and the identifiable pottery forms present for each fabric type. The total weight of pottery and a spot-date was recorded for each finds number. A full catalogue of the Late Iron Age and Roman pottery is provided below.

Fabrics and descriptions additional to *CAR 10* fabrics used in this report:

Fabric GTW

Late Iron Age grog-tempered wares. Generally thick sherds with patchy red-brown, brown or grey-brown surfaces. Fabric contains various quantities of crushed fired clay (grog).

Fabric OTW

Organic-tempered ware. Common-abundant fragments and streaks of burnt (black) organic material in the fabric, possibly dung. Rare fabric type at the Birch Pit site and probably only one pot represented in this fabric; the sherds are thick and hand made.

Fabric RCW

Romanising coarse ware. Sherd thickness is generally medium to thin. Surfaces are dark grey-brown. The fabric is grey-brown with red-brown margins and contains fragments of burnt organic matter and grog. The fabric sometimes has a tendency to laminate.

Fabric RET

Rettendon-type wares

Roman coarse ware, principally grey wares, tempered with various quantities of crushed burnt flint. The Rettendon ware is defined as a fabric type rather than as the product of any specific kiln or kilns (Going 1987, 10, fabric 48). Rare fabric type at the Birch Pit site.

Table 6: Roman pottery fabric codes and fabric names used in this report (after *CAR 10*).

Fabric code	Fabric name	National Roman Fabric Reference Collection fabric
AA	amphoras, all excluding Dressel 20 and Brockley Hill/Verulamium amphoras	
AJ	amphoras, Dressel 20	BAT AM 1, BAT AM 2
BA	plain samian forms	

Fabric code	Fabric name	National Roman Fabric Reference Collection fabric
SG	South Gaulish plain samian	LGF SA
MV	Les Martres-de-Veyre	
CG	Central Gaulish plain samian	LEZ SA 2
BX	mould-decorated samian	
SG	South Gaulish decorated samian	LGF SA
CG	Central Gaulish decorated samian	LEZ SA 2
CH	oxidised Hadham wares	HAD OX
DJ	coarse oxidised and related wares	
DZ	fine oxidised wares	
GB	BB2: black-burnished ware, category 2	COL BB2
GTW	grog-tempered wares	SOB GT
GX	other coarse wares, principally locally-produced grey wares	
HD	shell-tempered and calcite gritted wares	
HZ	large storage jars and other vessels in heavily-tempered grey wares	
GT	large storage jars with grog-temper	
KX	black-burnished ware (BB2) types in pale grey ware	
MQ	white slipped fine wares and parchment wares	
OTW	organic-tempered ware	
RCW	Romanising coarse ware	
RET	Rettendon-type flint-tempered ware	
UR	<i>terra nigra</i> -type wares	
TN	<i>terra nigra</i>	GAB TN 1

Date of the pottery associated with the features

A number of features contained pottery which of Late Iron Age or Roman date. These are considered in three groups below, ie features with pottery dated to the Late Iron Age; features with pottery dated to the early-mid Roman period; and features with pottery dated to the mid-late Roman period. A summary of the pottery spot-dating is set out in Table 7 and a list of vessel types and vessel form numbers in Table 8.

The Late Iron Age

The earliest dated pottery associated with the features is Late Iron Age. The pottery recovered from the enclosure ditches F331 and F337 is entirely of Late Iron Age type. The sherds from these features are grog-tempered, apart from a few hand-made sherds from the ditch F331 which were heavily tempered with streaks and fragments of a dark organic material, possibly dung.

The early-mid Roman period

The pottery from several features dates to the early or early-mid Roman period. The gully F333, the ditches F347, F348 and F363, and the small pit F267 contained pottery sherds that can be dated to the early Roman period of the 1st century or 1st-early 2nd century.

Pottery recovered from the base of the ditch F324 can be dated broadly as 1st-early 2nd century, but the most closely-datable pottery, including a butt-beaker and South Gaulish decorated samian bowl of form Dr 29, is probably pre-Flavian. Sherds associated with the upper fill of F324 can be dated to the 2nd century, with one sherd dated to the late 3rd-4th century.

Ditch F284 contained sherds with a date range of the 1st-2nd or possibly 3rd century. However, rim fragments from a bowl of form Cam 317 dated late 3rd-4th century at Colchester (Hull 1963, 187; *CAR 10*, 482-3) were also recovered from the surface of this feature. The fabric of this bowl appears to be probably oxidised Hadham ware (Fabric CH), which, at Colchester, also dates from the late 3rd-4th/4th century. If these fragments are not intrusive, then the upper fill of the ditch could date to the late Roman period. However, the identification of the fabric is not certain and it should be noted that bowls of similar form are also recorded among kiln products at

West Stow (West 1989, fig 58 no 229) where they are dated c AD 80-mid 2nd century (West 1989, 91-3).

Two other ditches (F330, F334) and a pit (F373) contained sherds dating from the 1st-mid 2nd century or 1st-2nd century, and pottery from ditch F342 can be dated to the 2nd century.

The mid-late Roman period

Only a few features produced pottery of mid-late or late Roman date, including pit F357 which contained pottery which can be dated to the early 2nd to mid-late 3rd century.

The small quantity of pottery that can be associated with the Roman oven F329 is probably of Antonine date or later, while one of the sherds could be of mid-late 3rd- to 4th-century date, but is not clearly so. Some pottery from a large pit (F339), located close to the oven F329, contained layers of charcoal. These layers, which can be dated to the late 3rd-4th, probably 4th century, possibly represent waste cleaned out from the oven during use.

In addition to pottery from the pit F339 and the few other late-dated or possible late-dated sherds from features noted above, late Roman pottery was recovered from only one other feature. This is ditch F346, which contained sherds that can be closely dated to the period of the late 3rd-4th/4th century.

Table 7: summary of Late Iron Age and Roman pottery spot-dating of Period 2 features.

context	feature type	pottery spot-date
F267	pit, possible cremation burial	Late Iron Age-early Roman
F284	ditch	most 1st-2nd/3rd century; 1 sherd possibly 4th century
F324	ditch	mostly 1st and early 2nd/2nd century, with 1 sherd mid-late 3rd to 4th century
F329	oven	probably 2nd century (?Antonine) or later, 1 sherd possibly mid-late 3rd-4th century
F330	ditch	1st-mid 2nd century
F331	ditch	Late Iron Age
F333	ditch	early Roman 1st-early 2nd century, with residual Late Iron Age
F334	ditch	1st-early 2nd/2nd century
F337	ditch	Late Iron Age
F339	pit	late 3rd-4th, probably 4th century
F342	ditch	2nd century
F346	ditch	late 3rd-4th/4th century
F347	gully	?late Iron Age, probably early Roman
F348	ditch	early Roman 1st-early 2nd century, with residual Late Iron Age
F357	pit	early 2nd to mid-late 3rd century
F363	ditch	Roman, 1st century
F373	pit	Roman, ?1st-2nd century

Table 8: pottery vessel types and numbered forms with the number of recorded individual identifications of each form in brackets.

vessel types	recorded numbered form types and number of recorded identifications in brackets
amphoras	Dressel ?7-11, Dressel 20
beaker	Cam 108 (2), Cam ?113, Cam ?119
bowl	Dr 29 (samian), Cam 212-217, Cam 218 (5), Cam 219, Cam 221, Cam 241/242 (2), Cam 299 (1-?), Cam 305B (2)
cooking pots/jars	Cam 259, Cam 266 (5), Cam 266 or 221(2), Cam 278
cup	Dr 15/17 (samian), Dr ?18/31 (samian), Dr 27 (samian), Cam 56 (<i>terra nigra</i>) (2)
dish	Cam 40A, Cam 317

flagon	Cam 154/155
flask	Cam 231 (2)
large storage jars	Cam ?271, Cam 271 (3), Cam 273,

Discussion

Significant quantities of Late Iron Age and Roman pottery have been recovered and reported on from excavations on adjacent areas of the site (CAT Report 383, section 8.4; CAT Report 485, section 7.4). This pottery was associated mainly with the Late Iron Age and Roman enclosure ditches and a small number of cremation burials. In this respect, only certain aspects of the assemblage which are new, or which are important in relation to the previous reports, will be discussed.

One aspect of the pottery assemblage is that it supports a distinct Late Iron Age period of occupation prior to the Roman period. This can be seen with the exclusively Late Iron Age pottery types recovered from the fill of the earliest enclosure ditch (F331). No significantly large parts of pottery vessels, here termed 'partial pots', were recovered from the Late Iron Age ditch fills, as were recovered from previous excavation areas (CAT Report 485, section 7.4). However, it should be noted that less of the Late Iron Age enclosure ditch survived for excavation in this area.

As with previous excavation areas, the ditch (F324) of the early Roman enclosure was found to contain some partial pots in the lower fill. These are from a Dr 29 samian bowl (Fig 19) and a butt-beaker. The butt-beaker has a graffito X on the base (Fig 20.1). These pots are probably pre-Flavian and support the pre-Flavian dating suggested for the pottery recovered from the lower fill of this same enclosure ditch in 2007.

In addition to the decorated samian bowl (above), plain samian vessels, which are pre-Flavian or can be dated to the early Roman period in the 1st century, have also been recovered from the ditch of the early Roman enclosure. There is a platter of form Dr 15/17 (F324; finds no 582), a form which declined in popularity during the Flavian period, and a samian cup of form Dr 27, which was recovered from a context dated as probably pre-Flavian (F324; finds no 631). A samian cup of form Dr 24/25, dated pre-Flavian, was also recovered during previous excavations from the ditch of the main Roman enclosure (CAT Report 485, section 7.4). These pottery vessels are for the table and Roman-style dining. In addition, other sherds from a number of vessels recovered from the early Roman enclosure ditch indicate Roman culinary practices here at an early date. There is a rim sherd from a Dressel 20 olive oil amphora of Claudio-Neronian form, from F324; and another amphora, probably a *salazon*, was recovered from ditch F348 (see below). During previous excavations, sherds from a mortarium of form Cam 195, with gritting over the rim and probably of pre-Flavian date, were recovered from the enclosure ditch, and also sherds that are possibly from a platter in Pompeian-red ware (CAT Report 485, section 7.4). The implication of this imported pottery from the enclosure ditch is that the Late Iron Age rural settlement here was of sufficient status and sufficiently integrated into the new order to be able to rapidly adopt aspects of Roman cuisine following the conquest, or was taken over by people using Roman cuisine. At some point later in the 1st century, these and quantities of other early Roman pottery, including partial pots, were deposited in the base of the early Roman enclosure ditch. This deposition appears to indicate some special or unusual event at the site. It can be noted that similar deposits of pottery which included freshly-broken vessels, and dating from the early Roman period (c AD 40-60), have been recovered from ditches at a site at Woodham Walter, Essex (Priddy & Buckley 1987, 39).

Small quantities of pottery that can be dated to the early Roman period of the 1st-early 2nd/2nd century were also recovered from ditches F334, F348 and F363, presumably field boundaries, to the north and east of the enclosure. However, the pottery from these features is mostly quite broken up and abraded. This suggests that it was deposited some time after it was discarded and may indicate that it results from manuring practices. It can be noted that some residual Late Iron Age pottery sherds were recovered from the fill of F348, and also that sherds from an amphora in Spanish fabric and with a hollow spike, possibly a *salazon* amphora of form Cam

186 (Dressel 7-11), was recovered from the fill close to the terminal of F348 (finds no 618). This amphora probably dates to the 1st-early 2nd century.

Late Roman pottery, dating from the 3rd and 4th centuries, was not common among the pottery recovered from the features in this part of the excavation. It is possible that the Roman oven is of late Roman date, if it is associated with the nearby pit F339, but it can only be dated as probably Antonine or later. However, these features, located inside the north ditch of the early Roman enclosure, suggest that the enclosure continued to function in some form into the mid-late Roman period, although the ditch along this part of the enclosure had probably mostly silted up to the top of the surviving archaeology level by the end of the 2nd century.

A small number of sherds of late Roman Rettendon-type ware, dated to the late 3rd-4th century (Going 1987, 10), were recovered from residual contexts in post-Roman features. These are a single abraded base sherd from F346 and the broken base of a jar recovered from F439. In total, these sherds weigh 145 g. Small numbers of sherds in this fabric have also been recovered during earlier excavations at this site (CAT Report 383, section 8.4). So far, no vessel form types have been identified. The occurrence of this fabric type at the Birch Pit site, even though it has only been found here in small quantities, is significant. This is because Rettendon-type ware is a fabric type centred on east central Essex (Going 1987, 10) and has so far not been recorded among assemblages from the large Roman town at Colchester, about 9.5 km to the north-east of the Birch Pit site. The closest-known source for this pottery to the Birch Pit site is a kiln at Inworth (Going 1987, 78) about 4.5 km to the south-west, near the Roman small town at Kelvedon.

Catalogue of illustrated sherds

- Fig 19** Dr 29 bowl, South Gaulish, Fabric BX(SG), 11 sherds, dated Claudio-Neronian. Partial pot, about 25% of pot present, several joining sherds, base missing. Upper part of lower zone of decoration includes upright pinnate leaves which are known to be used by MODESTVS and by MURRANVS - see Niblett 1985, fig 44 no 31 for possible comparison (Dannell 1985, 2:C2 no 31, dated c AD 50-65).
F324, lower fill, finds no 743. EVE 0.5, weight 110 g.
- Fig 20.1** Butt-beaker, Cam ?113 in fine sandy red fabric (CAR 10, Fabric DZ), graffito **X** on underside of base. Partial pot, base and lower body with a few other sherds.
F324 lower fill, finds no 631.
- Fig 20.2** Base with graffito >[broken off at sherd edge, almost certainly part of an **X** on the presumed underside of a bowl or dish, pale grey ware (Fabric GX), but possibly a black-burnished ware form (Fabric KX). Two joining sherds.
F324 Sx 2, upper fill, finds no 557.

Catalogue of Late Iron Age and Roman pottery

F267

finds no 512 (51 g)
Fabric GTW, 19 sherds, thin sherds, flaked and abraded; Fabric RCW, 1 sherd, abraded.
Pottery dated Late Iron Age-early Roman.

F280

lower fill, finds no 531 (26 g)
Fabric GX, 4 sherds.
Pottery dated Roman.

upper fill, finds no 525 (13 g)
Fabric GX, 2 sherds.
Pottery dated Roman.

F283

Finds no 540 (39 g)
1 Roman sherd; 1 unrecognised flinty concretion – prehistoric/natural?

F284

Sx 1, finds no 526 (16 g)
Fabric ?CH, abraded, 2 sherds from same dish, Cam 317; Fabric GTW, 1
sherd, abraded.
Pottery dated late 3rd-4th? century

Sx 2, finds no 532 (1 g)
Fabric DJ, 1 sherd.
Pottery dated 1st-2nd/3rd century

Sx 2, middle fill, finds no 534 (47 g)
Fabric HZ, 1 sherd
Pottery dated 1st-2nd/?3rd century

F298

finds no 690 (30 g)
Fabric GX, 2 sherds; Fabric HD, 1 sherd.
Pottery dated Roman 1st century

finds no 691 (70 g)
Fabric GX, 9 sherds from a base
Pottery dated probably Roman

F301, Sx 1, Finds no 550 (3g)
1 sherd, Roman (processed with the post-Roman pottery)

F324

finds no 581 (1,222 g)
Fabric DJ, 47 sherds, 45 from one ?flagon, 2 handle sherds from another;
Fabric GTW, 18 sherds, Cam 218 GX, 27 sherds; Fabric HZ, 1 sherd; Fabric
HZ(GT), 8 sherds; Fabric KX, 1 sherd, Cam 305; Fabric RCW, 18 sherds, Cam
218; Fabric UR(TN), 2 sherds, Cam 56.
Pottery dated 1st-early 2nd century, with 1 sherd mid-late 3rd to 4th century

mid-lower fill, finds no 590 (103 g)
Fabric HZ, 1 sherd
Pottery dated 1st-2nd/?3rd century

surface, finds no 610 (136 g)
Fabric DZ, 2 sherds, from a butt-beaker; Fabric GX, 5 sherds; Fabric HZ, Cam
259 with holes made post firing through the base.
Pottery dated possibly pre-Flavian, 1 sherd possibly late 1st-2nd century

Sx 2, upper fill, finds no 557 (124 g)
Fabric GX, 20 sherds, Cam 266, 1 sherd with part graffito, probably an **X** on
underside pot ?base sherd (illustrated Fig 20.2); Fabric HX, 2 sherds.
Pottery dated 1st- early 2nd/2nd century

Sx 2, upper fill, finds no 568 (853 g)
Fabric AA, 5 sherds, probably Dressel 20 (AJ); Fabric BA(MV) 2 sherds; Fabric
DJ, 5 sherds; Fabric GX, 81 sherds; Fabric HZ, 2 sherds.
Pottery dated early 2nd century, c AD 100-125

Sx 2, upper fill, finds no 585 (3 g)
Fabric BA(SG), 1 sherd; Fabric DJ, 1 sherd.
Pottery dated 1st century

Sx 2, middle fill, finds no 629 (37 g)
Fabric RCW, 3 sherds.
Pottery dated 1st century

Sx 3, middle fill, finds no 589 (326 g)
Fabric DJ, 1 sherd; Fabric GTW, 2 sherds, 1 sherd from large storage jar;
Fabric GX, 30 sherds, Cam 218; Fabric RCW, 4 sherds; Fabric UR(TN), 1
sherd, Cam 56.
Pottery dated 1st century, ?pre-Flavian

Sx 4, finds no 582 (208 g)
Fabric BA(SG), 2 sherds, Dr 15/17, ?18/31; Fabric GTW, 1 sherd, large
storage jar, Cam 271; Fabric RCW, 10 sherds, Cam 241/242.
Pottery dated late Flavian-Trajanic

Sx 4, lower fill, finds no 591 (116 g)
Fabric GX, 7 sherds, lid-seated jar, earliest dated similar type at Colchester
CAR 10 period ending AD 225 (**CAR 10**, 403) but at Chelmsford similar in grey
ware dated from the 2nd century, also a lid sherd.
Pottery dated ?2nd to 3rd-4th

Sx 4, lower fill, finds no 596 (132 g)
Fabric DJ, 1 sherd; Fabric GX, 4 sherds; Fabric HZ, 2 sherds.
Pottery dated 1st-2nd century

Sx 4, finds no 630 (41 g)
Fabric GTW/RCW butt-beaker with fern-leaf rouletting in red-brown, rim form
possibly Cam ?119; Fabric HZ(GT), 1 sherd.
Pottery dated Late Iron Age-early Roman

Sx 4, lower fill, finds no 743 (247 g)
Fabric BX(SG), 11 sherds, Dr 29 bowl; Fabric GX, 8 sherds (illustrated Fig 19);
Fabric GTW, 8 sherds.
Pottery dated c AD 43/50-70

Sx 5, middle-lower fill, finds no 590 (3,421 g)
Fabric DJ, 6 sherds; Fabric DZ, 1 sherd, Cam 108; Fabric GX, 50 sherds, Cam
108, Cam 218, Cam 212-217, wide-mouth bowl similar to **CAR 10**, Fabric GX
no 89 (Cam 218/221), Cam 221, Cam 231(2), Cam 241/242 and a lid; Fabric
HZ, 83 sherds, Cam 271.
Pottery dated 1st-early/mid 2nd century

Sx 6, upper fill, finds no 595 (12g)
Fabric GX, 2 sherds.
Pottery dated Roman

Sx 6, upper fill, finds no 624 (12g)
Fabric GX, 1 sherd.
Pottery dated Roman

Sx M1 (machined section), lower fill, finds no 631 (427 g)
Fabric AJ, 1 sherd, rim Claudio-Neronian; Fabric BA(SG), 2 sherds, Dr 27;
Fabric DZ, butt-beaker, Cam ?113 in red fabric, part pot, graffito **X** on base
(illustrated Fig 20.1); Fabric GX, 12 sherds, one base sherd with traces of
holes made post-firing
Pottery dated 1st century, probably Claudio-Neronian

surface, finds no 558 (54g)
Fabric GX, 5 sherds.
Pottery dated Roman, some sherds possibly 1st-2nd century

?F324 (L3)

finds no 560 (212g)
Fabric GX, 16 sherds, Cam ?271 in grey ware; Fabric HD, 1 sherd, temper
dissolved; Fabric HZ, 2 sherds.
Pottery dated Roman, ?1st-2nd/3rd century

F329

Sx A, finds no 575 (543 g)
Fabric GX, 9 small sherds; Fabric MQ, 2 sherds, white coat almost completely
abraded away; Fabric HZ, 1 sherd, rim, Cam 273.
Pottery dated Roman, probably 2nd century or later

Sx A, finds no 625 (57 g)
Fabric GX, 11 sherds; Fabric HZ, 1 sherd; Fabric ?KX, 1 sherd, ?part of a
broken flange from a Cam 305 bowl.
Pottery dated ?mid-late 3rd-4th century

Sx C, finds no 577 (32 g)
Fabric GX, 3 sherds, 2 in streak burnished grey ware Cam ?299 or
miscellaneous bowl.
Pottery dated Roman, ?Antonine-4th century

Sx C1, finds no 614 (4 g)
Fabric GX, 1 sherd.
Pottery dated Roman

Sx C2, finds no 661 (14 g)
Fabric GX, 1 sherd.
Pottery dated Roman

Sx C3, finds no 615 (18 g)
Fabric GX, 2 sherds; Fabric HZ(GT), 1 sherd.
Pottery dated ?early Roman

Sx C4, finds no 660 (11 g)
Fabric GTW, 2 sherds.
Pottery dated Late Iron Age

L4, finds no 641 (10 g)
Fabric GX, 1 sherd, possibly Fabric GB.
Pottery dated Roman, possibly 2nd-3rd century

L5, finds no 642 (5 g)
Fabric RCW, 1 sherd and fragments.
Pottery dated 1st century

F330

Sx 3, finds no 579 (30 g)
Fabric FJ, 1 sherd, Fabric GX, 4 sherds.
Pottery dated Roman, 1st-mid 2nd

F331

Sx 1, finds no 574 (204 g)
Fabric GTW, 10 sherds; Fabric OTW, 7 sherds.
Pottery dated Late Iron Age

Sx 1, finds no 580 (172 g)
Fabric GTW, 11 sherds including a rim probably from a ripple-shouldered bowl,
Cam 229; Fabric OTW, 5 sherds from one pot.
Pottery dated Late Iron Age

Sx 2, finds no 584 (24 g)
Fabric GTW, 3 sherds.
Pottery dated Late Iron Age

Sx 2, finds no 588 (42 g)
Fabric GTW, 8 sherds, rim from ripple-shouldered bowl, Cam 229.
Pottery dated Late Iron Age

Sx 4, finds no 602 (13 g)
Fabric GTW, 1 sherd, Cam 219.
Pottery dated Late Iron Age

F333

Sx 1, upper-middle fill, finds no 565 (168 g)
Fabric GX, 18 sherds, base and rims sherds from 2 bowls or jars, ?Cam 266;
Fabric HZ, 1 sherd.
Pottery dated Roman, ?1st-2nd/3rd century

Sx 1, middle fill, finds no 572 (19 g)
Fabric GTW, 2 sherds; Fabric RCW, 2 sherds.
Pottery dated Late Iron Age-early Roman

Sx 1, finds no 593 (24 g)
Fabric GTW, 3 sherds, Fabric RCW, 1 sherd.
Pottery dated Late Iron Age-early Roman

Sx 1, lower fill, finds no 594 (4 g)
Fabric GTW, 1 sherd.
Pottery dated Late Iron Age

Sx 1, finds no 619 (30 g)
Fabric RCW, 6 sherds, Cam 266 or 221; Fabric HZ, 1 sherd.
Pottery dated Roman, 1st century

Sx 1, middle-lower fill, finds no 639 (263 g)
Fabric GX, 1 sherd; Fabric HZ, 1 sherd; Fabric RCW, 20 sherds, Cam 266.
Pottery dated Roman, probably 1st century

Sx 1, finds no 562 (106 g)
Fabric GX, 13 sherds, probably most from one pot.
Pottery dated 1st-2nd century

F334

Sx 2, upper fill, finds no 563 (156 g)
Fabric GX, 34 sherds, very abraded, Cam 266.
Pottery dated Roman, ?1st century

Sx 4, finds no 636 (7 g)
Fabric ?RCW, abraded.
Pottery dated early Roman

F337 Sx 2, finds no 603 (1 g)
Fabric GTW, 1 sherd.
Pottery dated Late Iron Age

F338, finds no 598 (12 g)
Fabric ?KX, grey ware rim sherd, possibly from Cam 278 jar.
Pottery dated ?mid 2nd to mid-late 3rd century

F339 Sx 2, finds no 607 (59 g)
Fabric CH, 1 sherd; Fabric GX, 4 sherds; Fabric HZ, 1 sherd.
Pottery dated late 3rd-4th, probably 4th century

F342

Sx 1, finds no 604 (173 g)
Fabric BA(CG), 1 sherd; Fabric BX(CG) 1 sherd; Fabric DJ, 5 sherds including rim
from a large ring-neck flagon Cam 154/155; Fabric GX, 1 sherd; Fabric HZ, 6 sherds.
Pottery dated 2nd century

Sx 3, finds no 646 (173 g)
Fabric HZ, 1 sherd.
Pottery dated 1st-2nd/?3rd century

F346

Sx 1, finds no 640 (15 g)
Fabric CH, 1 sherd; Fabric GX, 3 sherds, Cam 268.
Pottery dated late 3rd-4th/4th century

Sx 2, finds no 616 (35 g)
Fabric GX, 1 sherd; Fabric RET, 1 sherd.
Pottery dated late 3rd-4th/4th century

Sx 4, (L11), finds no 626 (1 g)
Fabric ?DJ, 1 sherd.
Pottery dated ? 1st-2nd/3rd century

F347, finds no 663 (38 g)
Fabric GTW, 1 sherd; Fabric RCW, 1 sherd.
Pottery dated ?Late Iron Age, probably early Roman

F348

Sx 1, finds no 618 (427 g)
Fabric AA, from low on amphora body just above hollow spike, Spanish fabric
(not Haltern 70) type not identified, but probably Dressel 7-11.
Pottery dated 1st-?early/mid 2nd century

Sx 1, finds no 621 (1 g)
fragments: Fabric BA(SG) samian chip; and chip from a rouletted vessel with
dark coating, probably Gallo-Belgic.
Pottery dated Roman probably 1st century

Sx 1, finds no 622 (3 g)
Fabric RCW, 1 sherd.
Pottery dated Late Iron Age-early Roman

Sx 1, lower fill, finds no 635 (2 g)
Fabric GTW, 1 sherd.
Pottery dated Late Iron Age

Sx 2, finds no 620 (18 g)
Fabric GTW, 1 sherd; Fabric HZ(GT), 1 sherd.
Pottery dated probably Late Iron Age

Sx 3, finds no 647 (170 g)
Fabric GX, 21 sherds, abraded.
Pottery dated Roman, ?1st-2nd/3rd century

Sx 4, lower fill, finds no 666 (30 g)
Fabric DJ, 21 sherds, abraded.
Pottery dated 1st-2nd century

F357, finds no 637 (13 g)
Fabric GB, 2 sherd from a sandy plain-rimmed bowl, probably Cam 40A, very abraded.
Pottery dated early 2nd to mid-late 3rd century

F363, finds no 652 (36 g)
Fabric RCW, 5 sherds.
Pottery dated Roman 1st century

F373, finds no 677 (92 g)
Fabric GX, 11 sherds.
Pottery dated Roman, ?1st-2nd century

F375, finds no 675 (10 g)
Fabric GX, 1 sherd.
Pottery dated Roman, possibly 1st-2nd century

F387, Finds no 686 (6g)
2 sherds, Roman (processed with the post-Roman pottery)

F396, finds no 689 (13 g)
Fabric GX, 1 sherd; Fabric RCW, 3 sherds.
Pottery dated Roman

F397 Finds no 694 (3g)
1 sherd Roman (processed with the post-Roman pottery)

F401 Sx 1, finds no 695 (1 g)
Fabric ?HD, 1 sherd, shell ?dissolved.
Pottery dated Roman

F439, finds no 719 (110 g)
Fabric RET, 5 sherds, jar base in flint-tempered grey ware.
Pottery dated late 3rd-4th century

U/S, finds no 542 (5 g)
Fabric GTW, 1 sherd.
Pottery dated Late Iron Age

7.6 The post-Roman pottery *by H Brooks*

Description of pottery

The post-Roman pottery amounted to 429 sherds weighing 6,662g. This was in 61 finds bags recovered from 47 archaeological contexts.

Post-Roman pottery fabrics are after *CAR 7*. Fabrics present include: Fabric 9 (Thetford ware); Fabric 13 (early medieval sandy ware); Fabric 20 (medieval sandy

grey ware); Fabric 21a (Colchester-type ware); Fabric 35 (Mill Green ware); Fabric 40 (post-medieval red earthenware or PMRE); Fabric 40a (Metropolitan slipware); Fabric 46 (tin-glazed earthenware or TGE); Fabric 48d (modern ironstone); and Fabric 50 (Staffordshire-type slipware). A list of fabrics by context is given in the catalogue below.

Medieval wares (Fabrics 9, 13, 20, 21, 21a, 35) account for 312 sherds weighing 596g, and post-medieval wares (Fabrics 40, 40a, 46, 48d, 50) for 132 sherds weighing 2,066g.

The medieval and post-medieval fabrics recorded for each feature are set out in Table 15 and Table 16, Appendix 3.

Comment

The largest components of this group were Fabric 13 (187 sherds, 2,299g) which constitutes 34% of the group by weight; Fabric 40 (117 sherds, 1,926g, 29%); Fabric 20 (95 sherds, 1590g, 24%); and Fabric 21a (23 sherds, 272g, 4%). The other fabrics were in very small groups, and are not significant.

This group shows that there was a significant level of activity on this site in the 12th and 13th centuries. At a superficial level, the pottery indicates that later activity (on a more limited basis) probably spanned the 15th-17th centuries. However, there are probably no strong grounds, on the basis of the ceramic evidence, to suggest a gap in activity or occupation in the 14th century. It is just as likely that there was continuity of occupation, with perhaps a lull in activities involving ceramics.

This group of pottery is, in some ways, typical of rural assemblages from around Colchester, in that it consists primarily of medieval coarse wares, local Colchester-type ware, and post-medieval red earthenware (Fabrics 13, 21a and 40 respectively), but has little or no German stonewares and tin-glazed earthenwares.

There are other comparable groups of pottery from rural medieval sites in Essex. The Abbotstone site nearby had a timber building and an associated group of 5.8 kg of medieval and post-medieval pottery (CAT Report 312), whereas the medieval farmstead at Stebbingford in Essex had nearly 43 kg (Walker 1996). The different sizes of the excavated areas is of course important here, but in general it can be said that the 6.6 kg of pottery from the Birch Pit site is more in keeping with small-scale activity (perhaps a small rural settlement, or a single building?) rather than with a farmstead of the Stebbingford type.

Catalogue of post-Roman pottery

F276

Finds no 517
1 sherd Fabric 20, 3g
Pottery dated 13th century

F278 Sx 1

Finds no 518
1 sherd Fabric 13, 26g
Pottery dated 12th century

F280 Sx 1

Finds no 519
4 sherds of Fabric 13, 15g
1 sherd Fabric 20, F1 rim (c 1100), 11g
2 sherds Fabric 21a, 47g
4 sherds Fabric 40, 13g
Pottery dated 17th-18th centuries (with residual)

F280 Sx 1

Finds no 525
2 sherds of Fabric 20, 5g
1 sherd Fabric 21a, 2g
1 sherd Fabric 40 (black-glazed ware), 3g
Pottery dated 17th century

F280 Sx 1

Finds no 531
1 sherd Fabric 20, 4g
3 sherd Fabric 40, 14g
1 sherd Fabric 48d, 3g
Pottery dated 19th-20th centuries

F280

Finds no 531
4 sherds of Fabric 13, 26g
Pottery dated 12th century

F282 Sx 1

Finds no 520
1 sherd Fabric 40a (Metropolitan slipware) bowl rim, 92g
1 sherd Fabric 46 (TGE), 14g
4 sherds Fabric 13, 43g
1 Roman sherd, 33g
Pottery dated 17th-18th centuries

F282 Sx 1

Finds no 521
1 sherd of Fabric 20, 7g
1 sherd of Fabric 40 (black-glazed ware), 8g
1 unrecognised sherd, possibly PMRE, 25g
Pottery dated 17th-18th centuries

F282 Sx 1

Finds no 536
1 spall of Fabric 40, 1g
1 Roman sherd, 10g
Pottery dated 17th-18th centuries

F282 Sx 1

Finds no 537
1 sherd of Fabric 40, 3g
2 sherds of Fabric 50 (slipware), 21g
Pottery dated 18th-19th centuries

F294

Finds no 539
1 unrecognised sherd, 3g

F296

Finds no 543
2 sherds of Fabric 13, including a partially-thumbed base, 116g
1 Roman sherd, 60g
Pottery dated 12th century

F296

Finds no 543
2 sherds of Fabric 13, 116g
1 sherd Fabric 13 or possibly Fabric 9 (Thetford ware), 60g
Pottery dated 11th-13th centuries

F296

Finds no 740
3 sherds of Fabric 13, 61g
8 sherds Fabric 20, 2 vessels including a partially-thumbed base, and a cooking-pot rim, flat-topped Cotter Group A (late 12th-13th century; *CAR 7*), 425g.
1 sherd Fabric 40, 57g
Pottery dated 17th-18th centuries (with residual)

F296 Sx 2

Finds no 740
1 sherd Fabric 13, 18g

5 sherds Fabric 20, including a B2 flat-topped rim, 144g
Pottery dated late 12th-mid 13th century

F298 Sx 1

Finds no 547

2 sherds Fabric 20, 61g, including a cooking-pot rim as *CAR 7*, fig 58.3
Pottery dated 13th century

F299

Finds no 546

2 sherds Fabric 20, 3g
Pottery dated 13th century

F301 Sx 2

Finds no 688

3 sherds of Fabric 13, including a flat-topped rim, 37g
Pottery dated 12th-13th centuries

F302 Sx 1

Finds no 544

2 sherds Fabric 13, 13g
Pottery dated 12th century

F302 Sx 2

Finds no 708

1 base sherd, Fabric 13, 55g
Pottery dated 12th century

F303

Finds no 545

26 sherds of Fabric 13, including a flat-topped bowl rim, 279g
1 sherd Fabric 21 with green glaze, 2g
Pottery dated 12th-14th centuries

F308 Sx 2

Finds no 707

8 sherds of Fabric 13, 90g
Pottery dated 12th century

F309

Finds no 548

2 sherds of Fabric 13, 7g
1 sherd Fabric 20, 11g
Pottery dated 13th-14th centuries

F309

Finds no 710

16 sherds of Fabric 13, including a plain, flat-topped rim, 68g
Pottery dated 11th-12th centuries

F310

Finds no 551

2 sherds of Fabric 13, 4g
Pottery dated 12th century

F311

Finds no 552

3 sherds Fabric 13, 34g
7 sherds Fabric 20, including a comb-slashed handle, 89g
2 sherds Fabric 21a, 11g
Pottery dated 13th-14th centuries

F312

Finds no 554

1 sherd Fabric 13, 3g
(2 residual prehistoric or Roman sherds?)
Pottery dated 12th century

F312

Finds no 698
3 sherds of Fabric 13, 57g
Pottery dated 12th century

F320

Finds no 741
12 sherds Fabric 13, hefty jar, 285g
2 sherds Fabric 20, 25g
Pottery dated 12th-13th centuries

F325

Finds no 559
1 sherd Fabric 13, 24g
Pottery dated 12th century

F367

Finds no 654
4 sherds of Fabric 13, 19g
Pottery dated 12th century

F367

Finds no 656
11 sherds of Fabric 21a, some with striped slip painting, 150g
Pottery dated 14th-15th? century

F368-L14

Finds no 673
1 sherd Fabric 13, 24g.
3 sherds Fabric 20, including a rim/handle of large jar with slashed handle, as
CAR 7, fig 64.41, 272g
Pottery dated mid 14th century

F370 Sx 1

Finds no 665
1 sherd Fabric 13, 13g
1 sherd Fabric 20, 34g
Pottery dated 12th-13th centuries

F374

Finds no 671
2 sherds of Fabric 13, 22g
13 sherds Fabric 20, including a flat-topped rim as *CAR 7*, fig 64.40, 166g
1 sherd Fabric 13 but very sandy – possibly a Fabric 21, 21g
Pottery dated 12th-13th centuries

F374

Finds no 671
1 sherd Fabric 21a, 21g
1 sherd Fabric 13, 5g
14 sherds Fabric 20, 160g
Pottery dated 12th-14th centuries

F375

Finds no 675
5 sherds of Fabric 20, 62g
Pottery dated 13th century

F379

Finds no 682
1 sherd Fabric 20, 10g
Pottery dated 13th century

F380 Sx 1

Finds no 680
1 sherd Fabric 20, 6g
Pottery dated 13th century

F383

Finds no 684
1 sherd of Fabric 13, 3g
Pottery dated 12th century

F386 Sx 1

Finds no 685
2 sherds Fabric 20, 2g
1 Roman sherd, 2g
Pottery dated 13th century

F392

Finds no 687
1 sherd of Fabric 13, 2g
Pottery dated 12th century

F398

Finds no 692
2 sherds of Fabric 13, 24g
5 sherds Fabric 20, 31g
Pottery dated 12th-13th centuries

F400

Finds no 693
1 sherd Fabric 20, 12g
Pottery dated 13th century

F400 Sx 1

Finds no 697
1 sherd Fabric 20, 2g
Pottery dated 13th century

F411

Finds no 699
4 sherds of Fabric 20, including a flat-topped rim, 32g
Pottery dated 12th-13th centuries

F412

Finds no 700
1 sherd Fabric 20, 27g
Pottery dated 13th century

F413

Finds no 702
9 sherds of Fabric 13, including a simple everted rim, 107g
Pottery dated 11th-12th centuries

F419 Sx 1

Finds no 705
2 sherds Fabric 20, 4g
1 Roman base, 13g
Pottery dated 12th century

F425

Finds no 709
1 sherd Fabric 21a, glazed, 4g
Pottery dated 14th-15th centuries

F436

Finds no 715
1 sherd of Fabric 13, 3g
Pottery dated 12th century

F437 Sx 1

Finds no 717
8 sherds Fabric 13, 140g
1 sherds of Fabric 20, 9g
Pottery dated 12th-13th centuries

F438

Finds no 722
10 sherds Fabric 13, 82g
1 sherds of Fabric 9 (Thetford ware?), 26g
Pottery dated 11th-12th centuries

F439

Finds no 719
2 sherds of Fabric 13, 32g
1 sherd Fabric 21, plain red handle with green glaze, 26g
Pottery dated 13th century +

F440

Finds no 720
1 sherd Fabric 40, 3g
Pottery dated 17th-18th centuries

F441

Finds no 731
4 sherds Fabric 13, 83g
2 sherds Fabric 20 or 35, 63g
Pottery dated 12th-14th centuries

F442

Finds no 732
10 sherds of Fabric 13, 113g
Pottery dated 12th century

F444

Finds no 724
3 sherds of Fabric 13, 31g
4 sherds Fabric 20, 22g
Pottery dated 12th-13th centuries

F444

Finds no 725
1 sherd Fabric 13, 2g
Pottery dated 12th century

F445/L17

Finds no 727
18 sherds of Fabric 40 including 1 black-glazed, 409g
1 sherd of Fabric 35 (Mill Green ware), 16g
1 sherd of Fabric 46 TGE, 10g
Pottery dated 17th-18th centuries

F445/L16

Finds no 726
1 sherd of Fabric 35, 7g
Large group from at least 3 vessels: 84 sherds Fabric 40, including rim from large jar with external flanged rim, 1,388g
Pottery dated 17th century

F447

Finds no 730
1 sherd Fabric 13, 3g
Pottery dated 12th century

F448 Sx 2

Finds no 734
1 sherd of Fabric 40, 2g
Pottery dated 17th-18th centuries

F449

Finds no 735
1 spout from large pitcher, impressed dots on end surface, Fabric 13, 111g
Pottery dated 12th century

F449

Finds no 736
21 sherds of Fabric 13, 154g.
5 glazed sherds Fabric 21a, some with (early) overall white slip, 37g
Pottery dated 13th-14th centuries

F450

Finds no 738
1 sherd of Fabric 20, 12g
Pottery dated 13th century

7.7 Roman and post-Roman tile and brick *by S Benfield*

7.7.1 Roman tile from the oven F329

A number of large pieces of Roman roof tiles (*tegulae*) were recovered from the oven F329, which had been used in its construction. In the descriptions of the *tegula* tiles, the terms used by Warry are followed (Warry 2006). Also, the front of the tile is considered to be the end with the lower cutaways. The right and left sides of the tile are considered to be the sides corresponding to left and right when viewed looking from the front of the tile. The removal of part of the tile flange at the back of the tile is referred to as the upper cutaway.

The tile had been used to line the flue channel. This had been achieved by breaking the *tegulae* along their length and placing the tile pieces with the flanged edge facing inwards along the sides of the flue. Only one tile had been placed differently, with its front end facing into the flue channel. The tile lining survived to a height of two courses and all the surviving *in situ* tiles had been laid face up.

Three tiles were found to be complete or could be reconstructed so that a measurement of length or width could be recorded. Several tile pieces were from the front edge of the tiles and had lower cutaways and the tiles appear to group into a small number of types based on the form of the tile. The *tegula* lower cutaway types and the body thickness are thought to be useful indicators of date. For this reason, this tile has been catalogued separately. In total, the tile amounted to some 25 kg by weight and 19 individual *tegula* tiles could be recognised. It was noted that the surfaces of a number of the tiles were in a distinct dull reddish-brown colour.

One *tegula* tile piece (finds no 576) was found to have had a hole made through the body pre-firing, presumably to allow fixing. This hole is located about 55 mm back from the edge of what is probably the central back of the tile (Warry 2006, 102). The hole is roughly square at the top, on the tile surface, about 10 mm across. It is angled down away from the edge and the exit point in the underside of the tile indicates that it could accommodate a nail shaft up to about 5 mm across. The tile body is 20 mm thick.

7.7.1.1 Discussion

The majority of the *tegula* tiles recovered from the oven have a body which is between 16 mm and 20 mm thick. A small number are between 23 mm and 24 mm thick. The difference in thickness represents two groups which divide between the *tegula* types. *Tegula* Types 1, 2, 4 and 7 consist of tiles in the 16 mm-20 mm range. Between them these Types contain 15 of the 19 individual identified tiles. The thicker group, between 23 mm-24 mm, consisting of *tegula* Types 3, 5 and 6, contains only four of the individual identified tiles. While the sample is very small, this suggests that the thinner-bodied tiles (20 mm or less) were predominant among those used in the construction of the oven.

It has been noted among tiles from well-dated contexts at the Co-operative Society stores site, in Long Wyre Street, Colchester, that *tegula* tiles with a thickness of less than 20 mm only began to appear in Period 5, dated to the late 2nd century (Brooks 2004). However, it should also be noted that some tiles with a body thickness of 20 mm occurred in the previous period (Period 4), dated mid-late 2nd century. At the St Mary's hospital site in Colchester, *tegulae* associated with a building burnt in the Boudican revolt, although only recorded within banded ranges of tile thickness, are dominated by tiles which are over 25 mm thick (CAT Report forthcoming). It seems that while a mid 2nd-century date for the appearance of

lighter *tegulae* (having a thickness of 20 mm or less) is not proven, it is entirely possible if not probable.

The lower cutaways on the tiles from the oven are all of Warry Types C5, D15 or C5/D1 (Warry 2006, fig 1.3). Types C5 and D15 are similar, the difference being that the angled cut is situated at a lower point on the vertical part of the cutaway in Type D15 than Type D5. Both these appear among the thinner and the thicker tile groups from the oven, ie *tegula* Types 1, 2, 3, 4 and 7. Warry suggests that Type C lower cutaways should date to c AD 160-260 (Warry 2006, 63). However, while they are certainly the predominant type within the period, there is evidence that they started earlier, being recorded in Boudican deposits in Colchester (Crummy 1994; footnote in Warry 2006) and on 1st-century *tegulae* in London (E Black pers comm, source Dr Ian Betts, MoLAS). Warry suggests that Type D lower cutaways should date to c AD 240-380 (Warry 2006, 63). It can be noted that the complete length of the two measurable *tegula* tiles, at 403 mm and 395 mm, is also consistent with others which have lower cutaway Types C and D and which are shorter in length than earlier-dated tiles (Warry 2006, fig 3.31). Also nail-fixing holes, of which there is one example from the oven, are also much more common among later-dated tiles, increasing dramatically on tiles with lower cutaways of Types C and D (Warry 2006, 103 & fig 6.11)

Overall, dated tiles from other sites suggest that the tiles use in the oven at the Birch Pit site should date to at least the mid 2nd century and some could date as late as the mid 3rd or 4th century. The fact that they are roof tiles which were possibly salvaged and re-used indicates an even later date for the oven itself, and overall a 3rd- or 4th-century date seems likely.

7.7.1.2 Catalogue of numbered *tegula* types from the oven F329 (Fig 21)

Tegula Type 1

Pieces from a minimum of 6 tiles (finds nos 576, 661, 662, 670).

Two joining pieces form the whole right side of one tile (finds nos 661-662).

This tile is 403 mm long and the average body thickness is 17 mm. There is a lower cutaway of Type C5 (40 mm long; Fig 21.1) and at the back there is an upper cutaway (80 mm long). Pieces from a minimum of five other tiles can be grouped as Type 1. Between them they include one other lower cutaway of Type D15 (50 mm long; Fig 21.2), but on the left side of the tile, and with vertical faceting on the cut face, probably indicating that it was cut by a wire. There are also four upper cutaways; three left side, measuring about 50 mm each, and one right side measuring 48 mm. The lower cutaways are similar to those on *tegula* Type 3.

The fabric of the tile pieces in this group is generally slightly sandy but fairly smooth in the break, colour varies from orange-brown to dull reddish-brown and pale reddish-brown.

Measured tile body thickness: 17 mm, 18 mm, 18 mm, 19 mm, 20 mm, 21 mm (average 18.8 mm)

Tegula Type 2

Pieces from a minimum of three tiles (finds nos 576, 670).

Three joining pieces form the whole right side of one tile (finds no 670). This tile is 395 mm long and the average body thickness is 17 mm. There is a lower cutaway of Type C5/D1 (57 mm long; Fig 21.3) with vertical faceting on the cut face, probably indicating that it was cut by a wire. There is also an upper cutaway (50 mm long). Pieces from a minimum of two other tiles can be assigned to Type 2. These include one other identical right side lower cutaway of Type C5/D1 (50 mm long) and one other right side upper cutaway (45 mm long).

The fabric of the tile pieces in this group is generally slightly sandy and orange-brown to dull reddish-brown in colour.

Measured tile body thickness: 17 mm, 18 mm, 19 mm, 20 mm (average 18.4 mm).

Tegula Type 3

Complete front half of 1 tile only (finds no 670; Fig 21.4).

Width of tile 312 mm, lower cutaways Type C5 (length 42 mm), tile body thickness 23 mm. Tile is discoloured and has dark staining across front from heating. The lower cutaways are similar to those on *tegula* Type 1.

Tegula Type 4

Similar to *tegula* Type 7, with similar front cutaway, but broader and less square cross-section to the flange.

Front right side of one tile only in three pieces (finds no 576).

Lower cutaway Type D15 (length 45 mm; Fig 21.5) with vertical faceting on the cut face probably indicating it was cut by a wire. The tile body thickness is 16 mm. The lower cutaway is similar to those on *tegula* Type 7.

The fabric is slightly sandy and orange-brown in colour.

Tegula Type 5

Similar flange shape to *tegula* Type 4, but thicker body and lower flange.

one tile piece (finds no 576; Fig 21.6).

Fabric colour dull reddish-brown

Tegula Type 6

Similar flange shape to *tegula* Type 1, but thicker body .

Three tile pieces from two tiles (finds no 576; Fig 21.7).

Bodies of each tile 23 mm and 24 mm thick.

The fabric of one tile is slightly sandy and reddish-brown in colour in colour, the other tile has been over-fired to a brown- or blue-grey surface colour.

Tegula Type 7

Pieces from a minimum of five tiles (finds nos 576, 661, 669).

There are 2 lower cutaways of Type C5 (40 mm & 35 mm long; Fig 21.8) with vertical faceting on the cut face probably indicating that it was cut by a wire.

There is also one right side tile back and, unusually, there is no upper cutaway present on this tile.

The fabric of the tile pieces in this group is generally slightly sandy and orange-brown to reddish-brown in colour. The lower cutaways are similar to that on *tegula* Type 4.

Measured tile body thickness: 16 mm, 17 mm, 20 mm, 20 mm, 20 mm (average 18.6 mm).

7.7.2 Other Roman tile and brick

Approximately 4 kg (3,978 g) of Roman tile and brick were recovered from contexts other than the oven F329 (Table 9). Of this, just under 2 kg (1,922 g) came from contexts dated to the Roman period, while the remainder was residual in later-dated contexts. One *tegula* flange was recovered from ditch F324 (finds no 614) with a body thickness of 18 mm. The flange could not be matched with any of the *tegula* types identified from the oven F329.

Table 9: Roman tile and brick (not from F329).

F or L no	finds no	context dated	no	body thickness (mm)	wt (g)	description, measurements and notes
F296	740	post-medieval	1		198	large flaked tile piece, probably Roman
F324	582	Roman	2		67	abraded brick or tile fragments
F324	614	Roman	2	18	779	<i>tegula</i> , two ?joining fragments of red-brown fabric, flange, back cut-down 40 mm long, no match with <i>tegula</i> types from F329
F330	596	Roman	1	21	38	<i>tegula</i>
F334 Sx 2	563	Late Iron Age/ Roman	7	30	688	brick, joining pieces, 30 mm thick, one edge only surviving, T-shaped finger wipe mark on surface, sandy red-brown fabric
F339	601	Roman	1		30	brick or tile fragment abraded
F346 Sx 2	616	Roman	2	20	89	tile fragment, 20 mm thick
F346	640	Roman	1	25	68	tile fragment, 25 mm thick
F346	644	Roman	1	25	55	<i>tegula</i> , 25 mm thick

F or L no	finds no	context dated	no	body thickness (mm)	wt (g)	description, measurements and notes
F346 Sx 3	677	Roman	1	20	95	tile fragment, 20 mm thick
F367	654	medieval	1	28	153	tile or brick fragment, 28 mm thick, residual
F367	654	medieval	1	35	59	brick fragment, 39 mm thick, residual
F373	677	Roman	1		13	tile fragment, residual
F374	671	medieval	1	35	790	brick corner, 35 mm thick, largest surviving length 120 mm, residual
F398	692	medieval	1	18	188	tile fragment, 18 mm thick, residual
F431	712	medieval/post-medieval	1		51	tile fragment, residual
F438	722	medieval	1		37	brick or tile fragment abraded, residual
F445	726	post-medieval	3	24	348	<i>tegula</i> , 24 mm thick, residual
F449	736	medieval	1	15	85	<i>tegula</i> back, right side with cut-down, 15 mm thick, residual
F449	736	medieval	1	40	147	Roman brick, 40 mm thick, residual

7.7.3 Post-Roman tile and brick

Just over 10 kg (10,454 g) of post-Roman tile and brick was recovered. The recognisable or measurable pieces amongst this are unfroged red bricks (of which more than one size is present), one piece of brick in a cream fabric, and fragments of peg-tiles. There is one piece from an unfroged glazed brick F445 (finds no 726). Measurements of the bricks and peg-tiles were recorded in inches. Almost all of this tile and brick came from features dated to the post-medieval period (Table 10). Apart from a few abraded fragments of post-Roman brick associated with pit F368, which are presumably intrusive, all of the post-Roman brick and tile was recovered from features dated as post-medieval. The only tile or brick recovered from features dated to the medieval period (apart from F368) consists of residual Roman pieces.

Table 10: post-Roman tile and brick.

Note: measurements of the bricks and tiles are in inches; where only one measurement is present this records the thickness, and a second measurement, where present, records the width.

F or L no	finds no	context dated	no	wt (g)	description, measurements and notes
F276	517	post-medieval	4	34	brick or tile fragments
F280	519	post-medieval	3	242	peg-tile (0.5 inch thick)
F280	519	post-medieval	1	575	red unfroged brick (4 x 2 inches)
F280	519	post-medieval	2	275	brick or tile fragments
F280	523	post-medieval	1	50	peg-tile (0.5 inch thick)
F280	523	post-medieval	1	773	red unfroged brick (4 x 2 inches)
F280	523	post-medieval	2	100	brick or tile fragments
F280	531	post-medieval	1	71	peg-tile (0.5 inch thick)
F280	531	post-medieval	10	278	brick or tile fragments
F280	537	post-medieval	1	41	peg-tile (0.5 inch thick)
F280	537	post-medieval	1	443	red unfroged brick (1.5 x 4 inches)
F280	537	post-medieval	5	259	brick or tile fragments
F280	716	post-medieval	1	280	peg-tile (0.5 inch thick)
F282	520	post-medieval	2	224	peg-tile (0.5 inch thick)
F282	520	post-medieval	4	269	other brick or tile fragments
F282	521	post-medieval	1	92	peg-tile (0.5 inch thick)
F282	521	post-medieval	4	127	brick or tile fragments
F282	536	post-medieval	1	29	peg-tile (0.5 inch thick)
F282	536	post-medieval	6	10	brick or tile fragments
F296	740	post-medieval	1	143	red brick fragment

F or L no	finds no	context dated	no	wt (g)	description, measurements and notes
F296	740	post-medieval	2	22	brick or tile fragments
F330	596	Roman	1	29	thin tile, probably intrusive
F333	639	Roman	2	32	peg-tile (0.5 inch thick), intrusive
F346	640	Roman	1	59	?peg-tile or ?agricultural drain (0.5 inch thick), intrusive
F359	641	post-Roman	1	145	pale (cream) fabric brick (2.25 inches)
F368	673	medieval	5	107	soft red brick or tile fragments abraded
F370	664	post-medieval	10	375	red brick fragments
F370	665	post-medieval	4	30	brick or tile fragments abraded
F434	714	medieval/post-medieval	4	15	brick or tile fragments abraded
F444	742	natural feature	1	622	red unfrogged brick (4 x 2 inches), intrusive
F444	742	natural feature	1	431	brick corner, (1.5 inches) longest surviving side 4 inches
F444	742	natural feature	1	400	brick, overfired (2 inches), intrusive
F445	726	post-medieval	1	71	peg-tile (0.5 inch thick)
F445	726	post-medieval	1	999	red (brown) unfrogged brick (3.75 x 1.75 inches)
F445	726	post-medieval	1	589	red unfrogged brick (4 x 1.5 inches)
F445	726	post-medieval	1	24	peg-tile (0.5 inch thick)
F445	726	post-medieval	1	484	red unfrogged brick (2.25 inches)
F445	726	post-medieval	1	495	unfrogged glazed? brick (2 x 3.75 inches)
F445	727	post-medieval	1	697	red unfrogged brick (2 inches)
F445	727	post-medieval	1	404	red unfrogged brick (1.75 inches)
F445	727	post-medieval	1	73	peg-tile (0.5 inch thick)
F448	734	post-medieval	1	28	brick or tile fragment, abraded
F448	734	post-medieval	1	8	thin ?peg-tile (7/16ths of an inch thick)

7.8 Glass

by H Brooks

Only a small quantity of glass was recovered (Table 11). There are fragments from one, possibly two Roman vessels. One is a pillar-moulded bowl dated to the second half of the 1st century AD (F324, finds no 570). The other is possibly part of the handle of a Roman glass flask (F274, finds no 516). The remainder of the glass is dated as post-medieval or modern.

Table 11: glass recorded by feature.

context	finds no	feature type	other dated finds and notes	context dated as	glass description, date and comments
F274	516	pit		?Roman	1 tiny fragment (1g) of a tightly folded handle from a pale green Roman ?flask
F280	537	ditch, = Area D F174	pottery: 17th-18th centuries and 19th-20th centuries with earlier residual	post-medieval	1 body fragment (14g) from a 17th-/18th-century green wine bottle (onion weathering to gold colour on exterior).
F324	570	enclosure ditch east, = Area D F144	pottery: 1st-2nd century, 1 sherd 4th century	Roman	8 body fragments from a blue/green pillar-moulded bowl (16g). Pillar-moulded bowls of this type were manufactured in the second half of the 1st century AD (CAR 8, 16). Although it is

context	finds no	feature type	other dated finds and notes	context dated as	glass description, date and comments
					possible that these bowls remained in use for a time, it is highly likely that this one was manufactured, used, broken and lost in the 1st century or perhaps early 2nd century.
F348	621	ditch	pottery: 1st-early 2nd century with residual Late Iron Age	early Roman	1 body sherd from clear glass 20th-century bottle, with raised lettering 'IO' or number 10; intrusive in this context.
F359	641	linear	filled with orange-brown gravel	modern	Base of 20th-century clear glass bottle. 21g
F445	726	pit/ditch		post-medieval	2 body sheds from 18th/19th-century green wine bottle (18g). 1 fragment from ?19th-/20th-century green beer bottle?
L17	727	fill	fill of linear F445, sealed by L16	post-medieval	1 base sherd from green 17th-/18th-century wine bottle (19g). 1 sherd from ?19th-century green bottle (8g)

7.9 Faunal remains by A Wightman

7.9.1 Introduction and summary

In total, 190 pieces of bone, weighing a total of 1,124 g, were recovered from nineteen features. The bone was hand-collected from Roman, medieval and post-medieval contexts, including pits, ditches and enclosure ditches.

The bone from the site is generally in a poor condition and it is also quite fragmentary. Taphonomy, in the form of preservation bias, coupled with the small sample size, mean that few conclusions can be drawn from the assemblage. The bone fragments from the older contexts were in a worse state of preservation than those from later features highlighting the increase in bone decomposition over time. It is probable that most of the bone from each period derives from butchering and food waste although decomposition of the cortical surface of the bone has removed any potential evidence of meat-processing. Domestic animals were present in the landscape from the Roman period through to post-medieval times, and probable evidence of hunting in the medieval period was found in the form of a *cervidae* antler. The Roman enclosure ditch (F324) is likely to have had a lot of bone deposited in it, based on the high frequency of fragments in this feature despite the poor condition of the bone.

Methodology

All the bone was examined to determine range of species and elements present. Each bone was inspected to determine if evidence of bone-, horn- or antler-working was present in the assemblage. Evidence of butchering and any indications of skinning, horn-working and other modifications was recorded. When possible, a record was made of ages and any other relevant information, such as pathologies. Counts and weights were taken and recorded for each context. All information was input directly into a Microsoft Works Spreadsheet for analysis. Measurements were not taken for the bones as there would have been too little data for any meaningful interpretation. Bones of sheep and goats were recorded as *ovis* based on the greater frequency of this species in this area, but horn-cores, metapodials and deciduous fourth premolars (DPM4) of sheep or goat were distinguished between the two species. The side of the body from which the bones were derived was noted. The zones of the bone that were represented by the fragment and the zone on which

butchery marks occurred were recorded using the methodology devised by D Serjeantson (Serjeantson 1996).

Characteristics of the often-neglected indeterminate fragments were also recorded. Fragments were separated into size classes according to their maximum length, and the bone fragment type (diaphysis, cancellous, etc) was recorded; however, details about the freshness of the bone when broken based on the fracture angle, outline and texture were not recorded as the poor preservation of the bone was not conducive to these methods of analysis.

The analysis was carried out following a modified version of guidelines by English Heritage (Davis 1992) and specific texts dealing with butchered animal bone remains (see references below). A catalogue of the assemblage is included in the site archive.

7.9.2 The assemblage by period

Late Iron Age and Roman

A Late Iron Age ditch (F331) in Area G contained two tiny fragments of bone weighing a combined 0.2g.

Most of the fragments of animal bone recovered came from Roman contexts (79%). The bone from these contexts was generally poorly preserved, notably more so than the bones from later contexts. In Area G, animal bones came from a pit (numerous small unidentifiable fragments) and the two Roman enclosure ditches. The largest sample of bone from the site (55% of the fragments) came from the enclosure ditch F324, and consisted mainly of very small unidentifiable fragments of mammal long-bone. Some bone from this context was distinguishable as *bos* and the fragments not ascribable to a species were primarily identified as coming from large mammal long bones. Teeth remains were common, and axial bone was present but rare. Some of the fragments appeared to be burnt, although it was difficult to tell due to the poor level of bone preservation. This also made distinguishing butchery marks impossible. The assemblage from the enclosure ditch F333 was smaller but similar in characteristics to the assemblage from F324. A possible Roman pit from Area F contained a large fragment of *equus* metacarpal with the smaller metacarpal II and IV bones fused onto it, as well as frequent small fragments of long bone only identifiable as large mammal. The bone from this context was flaky and poorly preserved.

Medieval

Four pits and one ditch in Area F which date to the medieval period contained animal bone. Again the quantity of animal bone from these contexts was small (1-6 fragments per context). Remains of *bos* were most common, in particular teeth. A medium mammal radius, the antler of a *cervidae* and the scapula of a *canidae* were also recovered. The remains were generally in a poor state of preservation (with the exception of the *canidae* scapula) and no evidence of butchery was identified.

Post-medieval

Animal bone was recovered from six post-medieval contexts, all in Area F, consisting of three ditches, one pit, one pit/ditch and one gully/slot. The quantity of animal bone recovered from these contexts was small (1-7 fragments per context). Three species, ie *bos*, *sus* and *equus*, were identified (each in different contexts), along with unidentifiable large and medium mammal bones. The bones were mainly long bones with one *equus* tooth and one *sus* metacarpal. The bone was generally in good condition and either butchered (mainly cut-marks some chop-marks) or burnt.

Other

A pit (F269) which contained no dating evidence from Area F had in its fill a well-preserved large mammal rib exhibiting cut-marks. The condition of the bone was most similar to those from post-medieval contexts. F444, which has been suggested to be a natural linear feature, had fragments of well-preserved *bos* humeri in its fill.

Discussion and conclusions

The bone from the Birch Pit site is generally in a poor condition, often exhibiting cortical surfaces that are quite powdery and flaking, and also being quite

fragmentary. Tooth and bone fragments were often in very small pieces and often partially reduced to powdery remains. Tooth fragments survive better at Birch than bone fragments; hence their high frequency across the assemblages.

General patterns were observable within the bone of different periods, although the small sample size and significant affect of a taphonomic factor (variable preservation) means that they are likely to be of little significance. The dominance of *bos* and large mammal in the Roman contexts, for example, may be significant, although similarly it may just be because the larger, thicker bones of this species survive better than the bone of smaller species. The frequency of certain elements and levels of fragmentation within each assemblage would similarly be affected by preservation bias.

The main difference between the assemblages was the condition of the bone. The bone from the post-medieval contexts was better preserved than the bone from the medieval contexts, and significantly better than the bone from the Roman contexts. This simply highlights how bone decomposition increases over time in the soils of this area.

Butchery evidence was only noted on bones from post-medieval contexts, most likely because of the poor bone preservation and damage to the cortical surface on the bones from the earlier contexts. It is probable that most of the bone from each period derives from butchering and food waste. A high frequency of burning was noted; however, this is more likely to relate to the better resistance to decomposition of burnt bone rather than a real pattern of frequent burning at the site.

The presence of domestic animals in the landscape during the Roman period (*bos*), medieval period (*bos*) and post-medieval period (*bos*, *sus* and *equus*) can be ascertained from the assemblages. No *ovis* bones were identified, but this is not taken to suggest their absence in this landscape. Hunting is likely to have taken place in the area during the medieval period, based on the presence of a *cervidae* antler (most likely red deer, with no signs of working) and the *canidae* scapula which appears to have come from a *vulpes* (though a small domestic dog is not out of the question). The quantity of animal bone surviving in the Roman enclosure ditch of Enclosure 1, despite the poor level of preservation, suggests that a significant amount of bone was likely to have been deposited in the ditch in this period in a number of locations (bone was found in numerous sections excavated through the feature).

Glossary of terms used

appendicular - appendage or anything attached to a major part of the body

axial - bones in the head and trunk of the body

bos - cattle

cancellous - spongy osseous bone tissue with low density and strength but high surface area that fills inner cavity of bone.

canidae - of the biological family of the dog

cervidae - deer

diaphysis - hard, dense shaft of long bone

equus - genus of animals including horse

ovis - sheep species

sus - pig species

vulpes - fox

7.10 Environmental remains

by Val Fryer

Introduction and method statement

During these excavations, features of Bronze Age, Roman, medieval and post-medieval date were recorded. Samples for the retrieval of the plant macrofossil assemblages were taken from Bronze Age pit F335, early Roman enclosure ditch F324, late Roman pit F339, Roman oven F329, Roman cremation deposit F267, medieval ditch F298, and medieval/post-medieval ditch F437, and a total of twelve samples was submitted for assessment.

The samples were processed by manual water flotation/washover and the flots were collected in a 300-micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16, and the plant macrofossils and

other remains noted are listed in Table 17 (Appendix 4). Nomenclature within the table follows Stace (Stace 1997). All plant remains were charred.

The non-floating residues were collected in a 1 mm-mesh sieve and sorted when dry. All artefacts/ecofacts were retained for further specialist analysis.

Results

Cereal grains/chaff, seeds of common weeds or nutshell fragments were present, mostly at a low to moderate density, within all twelve samples. Preservation was variable; most grains were severely puffed and distorted, possibly as a result of combustion at very high temperatures, and accurate identification was not possible. However, a small number of other grains were well preserved. The macrofossils within a number of the assemblages were also heavily coated with silt particles and grit.

Oat (*Avena* sp.), barley (*Hordeum* sp.) and wheat (*Triticum* sp.) grains were recorded, with wheat occurring most frequently. Spelt wheat (*T. spelta*) glume bases were present with the assemblage from pit F339 (samples 33 and 34) and were abundant within the fill of oven F329 (sample 30). A single possible pea (*Pisum sativum*) seed from ditch F437 (sample 36) was the only non-cereal crop plant remains recorded.

Weed seeds were extremely scarce, with most occurring as single specimens within an assemblage. All were of common segetal taxa including brome (*Bromus* sp.), small legumes (Fabaceae), black bindweed (*Fallopia convolvulus*), and grasses (Poaceae). Two minute fragments of possible hazel (*Corylus avellana*) nutshell were recorded within the assemblages from pit F335 (sample 31) and pit F339 (sample 35). Charcoal/charred wood fragments were common or abundant throughout. However, other plant macrofossils were extremely scarce, comprising pieces of charred root or stem and two charred buds.

Fragments of black porous and/or tarry material, many of which were probable residues of the combustion of organic remains at very high temperatures, were present in all but samples 30 and 37. Other remains occurred infrequently, but did include fragments of bone (some of which were burnt), small pellets of burnt or fired clay, and a single globule of white vitreous material. A table listing all of the charred plant macrofossils and other remains from the environmental sampling is contained in the appendices (Table 17, Appendix 4).

Discussion

The assemblages are generally very small (<0.1 litres in volume), and it is likely that most are derived from low densities of scattered or wind-blown refuse. In only three instances (samples 26, 36, 37) does it appear likely that discrete deposits of burnt or charred material are represented, and it is assumed that the material from sample 30 represents an *in situ* layer of oven waste.

The assemblages from Bronze Age pit F335 (samples 31 and 32) are almost entirely composed of charcoal/charred wood, with a single cereal grain and a piece of hazel nutshell being the only other plant remains recorded. It would, therefore, appear most likely that both assemblages are principally derived from spent fuel or midden waste, much of which may have accidentally accumulated within the pit fills. Similarly, the assemblages from the early Roman enclosure ditch F324 (samples 27, 28, 29) are probably largely composed of scattered refuse, although the assemblage from sample 29 does contain a moderate number of barley grains and large (>10 mm) charcoal fragments are recorded from sample 28. Oat, barley and wheat grains are present within all three assemblages from late Roman pit F339 (samples 33, 34, 35), possibly indicating material derived from either cereal-processing/storage waste or domestic hearth detritus.

Sample 30 was taken from the base of a large oven-like feature with a tile-lined flue (F329). Although small, the assemblage contains a high density of spelt glume bases, possibly indicating that the feature was either used for cereal-processing (ie parching) or used processing waste as part of its fuel. However, the density of material is too low for accurate interpretation.

Sample 37 was taken from an unurned cremation burial deposit of possible early Roman date. As is common with such deposits, the assemblage is largely composed of charcoal/charred wood fragments, almost certainly indicating that wood was the

principal component of the funeral pyre. However, root/stem fragments are also relatively common along with small grass seeds, and it would appear most likely that uprooted dried plant material was utilised as kindling to ignite the pyre. The single wheat grain is almost certainly an accidental inclusion within the deposit.

The two medieval/post-medieval assemblages (samples 26 and 36) contain little other than charcoal. However, it is possibly of note that both also contain legumes. An increased occurrence of legume seeds is common within many medieval deposits, and is thought to be indicative of the rotational cropping of pulses to increase soil fertility.

Conclusions

In summary, the assemblages are small and from a variety of contexts and, therefore, provide little data about the functioning of the site at any given time. However, it would appear that cereals (principally wheat) were being grown and possibly processed on or near the site throughout the Roman period and that the medieval farmers were employing new cropping regimes to improve the productivity of their fields.

Although two assemblages (samples 30 and 34) do contain a sufficient density of material for quantification (ie 100+ specimens), the range of material present is limited, and analysis of two samples in isolation would add little or nothing to the overall interpretation of the site or its component features.

7.11 Miscellaneous other finds

The miscellaneous finds listed below (Table 12) have not been retained.

Table 12: list of miscellaneous other finds.

find type	Feature/Layer no	finds number	context dated	description	number of significant pieces	weight (g)
charcoal	F324	590	Roman	very small fragments	3	0.4
shell	F269	515	not dated	oyster shells (10) and fragments	10	190.0
shell	F282 (Sx 1)	536	post-medieval	oyster shell (1) plus fragments	1	13.0
shell	F308 (Sx 2)	707	medieval	oyster shell fragment	1	2.0
shell	F437 (Sx 1)	717	late medieval/post-medieval	oyster shell fragments	2	3.0
wood	F330 (Sx 3)	579	early Roman	small piece of recent wood - intrusive.	1	1.7

8 Discussion

Discussion of much of the archaeology has already been made in previous reports (CAT Report 383, section 9; CAT Report 485, section 8.2), and only significant additions or changes to the previous discussion and conclusions are presented here.

8.1 Period 1: prehistoric

The earliest recognised activity on the site consists of a number of discarded pieces of worked flint. Some of these could date to the Mesolithic period, but they are possibly Neolithic, and a number of others are more certainly Neolithic in date. These flints are all residual finds from later-dated features. A few decorated pottery sherds, recovered during the present excavation from a small pit, could be earlier Neolithic in date, but this is not certain.

The Middle Bronze Age (c 1,500-1,100 BC) is represented by a ring-ditch (Fig 3, RD) which can probably be dated this period (CAT Report 383, 6), a complete drum-shaped loomweight (SF 72) recovered from a pit (F360), and a few pieces of pottery which could date to the Middle Bronze Age (CAT Report 383, 16; CAT Report 485, 18; this report, section 7.4). About 1 km to the north-east of the present site there is also a small number of ring-ditches associated with Middle Bronze Age cremation burials (CAT Report 289; CAT excavation 2003 on Fig 1).

A much larger number of features and finds can be dated to the period of the Late Bronze Age (c 1,100-700 BC). The features consist of pits, including a possible waterhole, while the finds from them include significant quantities of pottery and a complete bronze disc-headed pin (SF 68).

The nature of the activity here during the Middle and the Late Bronze Age is difficult to interpret.

The ring-ditch (CAT Report 383, 6), if it is of Bronze Age date - which seems most likely - suggests a ritual, probably burial site in the Middle Bronze Age. The pits, containing pottery and some other finds, almost certainly represent traces of a settlement on this area, although no evidence of any buildings which can be dated to this period has been recovered. Based on the dating of finds from the pits, the settlement probably began at or near the end of the Middle Bronze Age, but was primarily Late Bronze Age in date. It is referred to below simply as 'Late Bronze Age', reflecting the dating of the pottery assemblage as a whole. The ring-ditch was situated within the area over which the pits representing this settlement have been found. As a probable ritual monument, which must have been known or visible, the settlement here would seem to diminish or annul its original social context. This might indicate that the ring-ditch was not Middle Bronze Age, or not a ritual or funerary feature. However, there was a Bronze Age ring-ditch in close proximity to the Middle Bronze Age settlement at the LTCP site at Stansted in Essex (Cooke *et al* 2008, 54-6 & fig 4.27). It may be that, rather than inhibiting settlement, the presence of this ring-ditch was in some way a focus for the Late Bronze Age settlement here.

The furthest distance between any two of the Late Bronze Age pits was over 300 m, although most that have so far been located were within an area about 200 m across. These were, for the most part, isolated features. That these represent a settlement here is supported by the presence of a large pit, possibly a waterhole (CAT Report 485, 6). When this possible waterhole pit was open it would, based on experience when excavating the site, almost certainly have retained and filled with surface water. Waterholes have been suggested as key diagnostic features of settlement sites in the Bronze Age (Cooke *et al* 2008, 52). The area over which the pits are known to occur shows that this settlement could have been quite extensive, although how closely contemporary most of the pits are is not known. However, finds from two pits - a loomweight from F360 and a bronze pin from F340 - suggest that they date from the late Middle or the early Late Bronze Age and from the end of the Late Bronze Age respectively. It is possible therefore, that the pits could represent localised shifts over time of a small settlement.

The finds of the loomweight (SF 72) and the bronze pin (SF 68) are of particular interest as both are complete objects. Both came from the fill of small pits. The loomweight was whole and would still have been usable. Although slightly bent, the pin appears to be perfectly functional and was still a valuable object when put into the ground as the metal could certainly have been recycled. These two objects can be explained as selected deliberate deposits. Selected objects, exemplified by finds of metalwork, were used of in the context of ritual acts involving permanent deposition in prehistory, commonly into water or into the fill of pits (section 7.1). These objects were often deliberately damaged or broken to make them suitable as offerings. At the Birch Pit site, the pin certainly, and the loomweight most probably, indicate that the filling of at least one, and probably of two of the pits, include objects deposited as a ritual act.

The small number of the pits recorded from this period suggests that these were not a common feature of the settlement, although most are shallow, being heavily truncated, and more pits may once have existed. As such, it seems possible that they might represent the deliberate creation of contexts into which selected deposits could be made, with the exception of a large pit which may have functioned as a waterhole (above). It has been noted that waterholes were also commonly foci the

deposition of material in this period (Cooke *et al* 2008, 52), and a large quantity of Late Bronze Age pottery was recovered from the waterhole feature at the Birch Pit site (CAT Report 485, section 7.3).

Unfortunately it remains the case that very little evidence regarding the economy, in terms of the farming regime, has been recovered for the Late Bronze Age settlement. No ditches of this period have so far been located at the Birch Pit site and the landscape appears, therefore, not to have been physically parcelled up, and may have been generally open in terms of man-made boundaries. In this respect, it can be noted that the underlying surface geology of the area is primarily clay, which is heavy and difficult to dig. The only archaeologically identified features which might have been visible in the surrounding landscape remain the small burial monuments of the ring-ditches to the north-east of the settlement (CAT Report 289), and the possible small ring-ditch within the area of the settlement itself (CAT Report 383, section 7.2). The most obvious inference, in terms of farming, from the apparently open aspect of the landscape, is that it probably represents a predominance of stock husbandry. The possible waterhole feature and the loomweight support this conclusion. However, some level of mixed farming seems likely. Cereals are represented by a single carbonised spelt glume base, indicating a locally-grown crop, which came from a pit (CAT Report 485, section 7.8) and a burnt cereal grain from F335 (section 7.10). Also, there is a large worn sandstone piece, probably originally a prehistoric saddle quern, which had been re-used as a post base (CAT Report 383, 15-16 and fig 10).

8.2 Period 2: Late Iron Age and Roman

The primary ditches of the enclosed area which forms the focus of the site in this period, referred to as Enclosure 1 (Fig 3), represent the earliest identifiable boundaries recorded within the area of the western extension at the quarry. The first phase of the enclosure here can be confidently dated to the Late Iron Age. There are, however, a number of problems in interpretation concerning the layout of the site in the Late Iron Age and the Roman periods. Part of the problem of interpretation results from the fact that while Enclosure 1 is a clear bounded spatial focus for the settlement from the Late Iron Age onwards, it is only clearly defined throughout Period 2 on the north and west sides. There are no clear boundaries in some phases on either the east or on the south sides of this enclosed area.

Almost no features have been located west of Enclosure 1. The base of a small pit (F274; Fig 3) contained a small piece of Roman glass (section 7.8, Table 11) and may be of Roman date. However, the west side of the enclosure appears to mark the extent of the main concentration of Roman archaeology in that direction. This approximates to the west edge of the known surface spread of Roman finds (Fig 2).

The Late Iron Age and early Roman enclosure

In the Late Iron Age, Enclosure 1 was, for the most part, a clearly-defined space bounded by a ditch on the north, west and south sides. However, the east side of the enclosure in this phase, presuming it was entirely an enclosed area, has not been located. The north and west sides of the enclosure were retained into the early Roman period when a new ditch was dug along their line, but the south side was not provided with a new ditch. Rather, ditches were dug a short distance beyond the west ditch of the enclosure, probably representing a droveway (DR 1, Fig 3) added to the outside of the enclosure. Later, this possible droveway was replaced by a more regularly laid out droveway (DR 3, Fig 3). The ditches making up the possible droveway (DR 1) extended beyond the line of the south ditch of Enclosure 1. The south side of the enclosure, as laid out in the Late Iron Age, thus appears to have become redundant. A droveway (DR 5; Fig 3) was also added to the outside of the north-east part of the enclosure. It was in the early Roman period that the east side of the enclosure can be traced, as a ditch, for the first time. But this ditch, or one on the same alignment, extended south for an unknown distance beyond the area of the enclosure itself and so, in effect, it appears to have become a field boundary at some point. This ditch also formed one side of a droveway (DR 3, Fig 3) within the enclosure in the early Roman period. However, this droveway (DR 3), unlike the others, was internal to the enclosure ditch and it is clear that there could not have been an internal bank to the enclosure here.

While the east side of the enclosure can be identified, the south side is less clearly defined. There are short lengths of shallow ditches on the east side of the enclosure which extended west, towards the south end of the driveway on the west side (DR 1). These did not extend very far westward and, in themselves, do not appear to have defined the south side of Enclosure 1. However, there were numerous small pits or pots-holes in the south half of Enclosure 1, and it is noticeable that these did not extend beyond the projected line of these ditches, so some form of boundary is implied here. About 50 m to the south of the line marked by these ditches there was a more physical boundary, marked by two lengths of shallow ditch aligned east-west. Apart from the ditch which continued the line of the east side of the enclosure (above), these were the furthest south of the identified Roman ditches. However, one of these lengths of ditch, attributed to Phase 1b, extended for an unknown distance to the west beyond the line of the west side of the enclosure and in effect it is, or appears to have become, a field boundary.

This suggests that the area which can be described as Enclosure 1 was predominantly open along much of its south side or, if marked at all, the south side consisted of a shallow ditch or ditches which have been entirely ploughed away. Assuming this to represent the south side of Enclosure 1, then the enclosure appears to have opened onto a long rectangular area extending to the west, defined on its south side by the east-west field boundary ditch about 50 m to the south of the enclosure. In the absence of any distinct activity within this area, it is probably best described as a field or paddock.

The Late Roman enclosures

Previously the interpretation of the site, during the late Roman period, favoured significant changes having been made to its overall layout (CAT Report 383, 9; CAT Report 485, section 7.3). It was thought that at least part of Enclosure 1 was replaced by ditches forming part of a field system (CAT Report 383, 30 & fig 4b right), and that possibly a new enclosure - referred to as Enclosure 3 - was laid out over the former area of the driveways on the west side (DR1 & DR 2; Fig 3; CAT Report 485, fig 4b right). South of Enclosure 1, a new enclosure was laid out, referred to as Enclosure 2. While all these features could, based on pottery associated with the fills, be dated to the mid-late Roman period, overall they are better interpreted within a framework which retains the overall focus of space that is Enclosure 1 (Fig 3).

The two ditches thought to comprise another enclosure, ie Enclosure 3, almost certainly do not represent parts of a unified feature. One of these, ie the ditch forming the east side can, more reasonably, be assigned to Period 3. Rather than being partly or wholly replaced, the internal area of Enclosure 1 itself seems to have been retained as a focus of activity into the late Roman period, as almost all the individual late Roman features have been located within it. Also, based on the location of an agricultural oven (F329) and a large pit (F339) relative to the north ditch of the enclosure, this part of Enclosure 1 was probably defined by an internal bank in the late Roman period.

Outside Enclosure 1, to the north-east, there was an L-shaped ditch which contained late Roman pottery in its fill. One length of this ditch continued the line of the outer ditch of the north-south driveway (DR 5, Fig 3) and was clearly aligned with it. Another length appears to have been positioned to form one side of another driveway (DR 6, Fig 3), alongside an earlier ditch (dated to Phase 1b) just to the east. It can be noted that compacted gravel metalling was located in the corner of this late (L-shaped) Roman ditch. While this might have derived from the surface of the driveway (DR 6), it did not occur in any other sections cut across its fill and it may represent a separate causeway across the ditch corner. The presence of this ditch, forming a driveway here (DR 6), suggests that it formed part of an enclosed area just outside of the north-east part of Enclosure 1 in the late Roman period.

Enclosure 2 was a new enclosure, added in the mid-late Roman period. It was laid out in the rectangular paddock or field immediately south of Enclosure 1 and, like the late Roman ditch forming a trackway above, also appears to have made use of an earlier phase ditch, in this case to form its south side. Pottery from the new ditches dug for Enclosure 2 indicates that they remained at least partly open features into the late Roman period.

That these ditches dated to the mid-late Roman period, were aligned in, or made use of earlier dated boundaries, indicates that the earlier boundaries were still functioning parts of the landscape. This appears to be the case for most of the boundaries established in the earliest phases of the site and argues strongly that Enclosure 1 remained a defined spaced which was the focus of the site through the Late Iron Age and the Roman periods.

Other aspects of the site in Period 2

No clear plans of any building have been recovered, although some features or groups of features may probably represent traces and locations of former buildings.

Two linear features excavated in 2007 (Area D, F186 & F187; CAT Report 485, fig 2a), located just south of the north entrance to Enclosure 1, might possibly represent the corner of a building (Fig 3, B1). The small quantity of finds recovered from them suggested a possible early Roman date, so they may be contemporary with the entrance. Their position and alignment suggest that they represent wall foundations, in this case probably ground-beams, of a rectangular building situated on the west side of a track leading through the north entrance. Another rectangular building may be represented by a straight length of gully and a number of possibly associated post-holes (Fig 3, B2; CAT Report 485, 6.3.4 & fig 4b right). The features associated with this possible building are dated to the mid-late Roman period.

Also there were a number of lengths of ditch which could be associated with buildings. A short length of curving ditch, which was excavated in 2007 and which contained a sherd of Roman pottery, may represent part of the gully associated with a round-house (CAT Report 485, section 6.3.3, fig 2a F161). Another, short curving length of ditch (F64) was excavated in 2005 (CAT Report 383, fig 2a) and also contained some Roman pottery; it could represent another, but only a very small part of this feature could be recorded. Gully F347 (described above), located just to the west of the oven and which contained Late Iron Age and early Roman pottery might, also represent part of a round-house gully, although it is rather straight (Fig 2a).

It is possible that ditch F284 at the east end of Area F, in conjunction with a number of cremation burials located close to it, indicates a significant boundary. This ditch had not been encountered previously and appears to be probably of early-mid Roman date. A badly disturbed cremation burial, probably of 1st-century date, was located just to the west of it. Previously a number of Roman cremations were also recovered just to west of its projected alignment (CAT Report 385, section 7.3.2).

8.2.2 Economy and material culture in Period 2

The evidence for the site economy indicates a mixed farming base. The layout of the site reflects a concern with stock management, certainly from the early Roman period onward. It is noticeable that, during the Late Iron Age and into the early Roman period, there appears to have been greater access to Enclosure 1 with entrances on the west and north sides. However, from the early Roman period, these entrances were blocked and movement was directed around the enclosure along the ditched driveways. The field boundaries north of Enclosure 1 also appear to date from the early Roman period. The overall plan of the site gives the impression that Enclosure 1 was situated between two differently utilised areas of land, the one to the north being divided into fields and the other to the south being more open. Unfortunately very little bone was recovered as it is very poorly preserved at the site and animal remains that can be associated with the Late Iron Age and Roman farm are little more than a list of species (CAT Report 385, section 8.8; CAT Report 483, section 7.7). These, in no particular order, are: cattle, pig, sheep or goats, horse (*equus*) possibly including a pony (CAT Report 385, 42) and Red deer. Of the bone fragments identifiable to species, cattle are the most numerous. The Red deer bones (CAT Report 483, table 5) indicate the hunting of wild animals.

While there is evidence of crop husbandry in the form of cereal crop-processing waste and domestic cereal-processing equipment (hand querns) has been recovered (CAT Report 383, sections 7.1 & 7.8), the discovery of an agricultural oven also indicates that the settlement was based on a mixed farming regime. The oven, which almost certainly dates to after the mid-late 2nd century and probably to the 3rd-4th century, can be seen to have operated at relatively low temperatures as

there was no vitrification along its flue. The heating chamber was a large rectangular feature. This was quite truncated and there was an absence of any structural material which could be associated with it, unlike the flue which was tile-lined. Environmental samples from the flue contained burnt cereals and cereal-processing waste, mainly Spelt wheat glume bases, although this may well represent fuel residue rather than crops being processed in the oven itself (section 7.10).

It can be noted that very few metal objects have been recovered from the Roman site. Among these, there are no metal objects which can be identified as toilet instruments or items of personal adornment. Only two coins have been recovered; one late Roman (CAT Report 383, 13) and one 2nd century (section 7.1).

8.3 Period 3: medieval

Pottery dating suggests that the majority of the medieval features were laid out in the 12th and 13th centuries. The earliest features appear to have defined at least two roughly square areas, between about 25 m to 30 m across, referred to as Enclosure 4 and Enclosure 5 (Fig 3). These seem to represent some form of stock enclosures alongside a droveway (Fig 3, DR 7), located on the east side of them. There appears to have been controlled access passages, defined by paired shallow ditches and by post-holes, either between the droveway and parts of the enclosures or between the enclosures themselves. These were located along the north side of Enclosure 4 and between Enclosure 4 and Enclosure 5. These passages were only up to about 2m across and suggest a desire for close control over livestock. It is tempting to link these enclosures with sheep husbandry, especially as sheep remains have previously been associated with post-Roman features at the Birch Pit site (CAT Report 383, section 8.8).

It is not known for how long either of the two enclosures was retained. Once established, the boundaries could have been long-lived, with fence lines and hedges established along the sides of the shallow ditches. There are indications that the north enclosure (Enclosure 4) may have been relatively short-lived. At some point this enclosure appears to have been sub-divided, or possibly replaced, by a smaller enclosed area in its north-east corner. Also, a small number of broad pits were dug in this area. The purpose of the pits is not clear. They did not contain large quantities of broken or discarded finds (ie rubbish), but are perhaps best thought of as rubbish-pits. Where there was a relationship between the ditches and the pits, the pits cut the ditches. Most of the pottery from these pits spans the 12th-13th/14th century, although one contained sherds dated as 14th-15th century. It seems, therefore, that they could date to late in the period of the medieval settlement.

No clear evidence of any buildings was located, although some groups of features might conceivably represent parts of buildings. However, the quantity of pottery recovered along with some finds of quern stones shows that there was a medieval settlement here or in the immediate area. It is possible that some of the lengths of ditch could represent wall trenches and some of the post-holes could represent the locations of post-built walls. The most obvious examples are ditch F306 with the post-holes F327, F414, F415, F416 and F421, and the line of elongated pits F303, F304 and F305 to the south of them (Fig 2c). Similar below-ground features that can be seen to have been parts of medieval buildings have been recorded elsewhere in Essex (Medlycott 1996, fig 27). However, a building formed from these features would require a roofing span of nearly 10 m which appears, without evidence for additional support or internal divisions, to be overly large and unlikely. Speculatively, the area devoid of features enclosed by ditches F297, F299 and F300 (Fig 2c) could also represent the site of a building, the physical remains of which have been entirely removed.

It is possible that the larger quantity of pottery dating to the 12th and 13th centuries could represent a distinct phase of settlement on the site, although the site was clearly not abandoned at the end of that time, as pottery of 14th-century date and later attests to continued activity. However, many sites across England saw either a reduction in occupation or abandonment from the late 14th century (Platt 1978, 129-31).

Little in the way of material relating to the site economy was recovered. Among a very small amount of animal bone, cattle (*bos*) was identified most commonly. A number of pieces and fragments of Mayen lava hand quernstones were recovered from medieval features (section 7.1). Environmental samples produced little

significant material other than charcoal, although these contained legumes, and an increase in legume seeds is common within medieval deposits (section 7.10).

8.4 Post-medieval to modern

There is no clear division between the later medieval period and the early post-medieval period of the 16th-17th/18th centuries. The number of features that can be dated to the early post-medieval period, as for the late medieval period, is sparse. Possibly the earliest of these features is a ditch containing pottery dated to the 15th-16th centuries (F437; Fig 2c), which appears to relate to the position of, or partly re-cuts, some of the medieval dated ditches. In Area C, just to the south of the medieval features in Area F, three pits containing pottery of late 16th- to 17th-century date are indicative of a settlement here at that time (CAT Report 383, section 7.4 & fig 2). Also, the small number of features in Area F with 17th- to 18th-century pottery also contained building materials such as pieces of unfrosted brick and peg-tile. This suggests continuity between the medieval settlement and settlement in the early post-medieval period. It can be noted that bones from a number of sheep which were in poor condition were recovered from post-medieval pits, dated to the late 16th-17th centuries, during one of the previous excavation stages (CAT Report 385, 26).

It would appear that the greatest change in the landscape occurred at some point in the post-medieval period. During that period there was more emphasis on open areas of fields and the loss of smaller enclosures and ditched droveways, which possibly signalled a change of emphasis away from livestock and more towards arable.

Some of the ditches of Phase 1 join with some that were extant features in the excavation Areas. Some ditches assigned to Phase 1 have had later ditches dug alongside them that were also extant in the excavation Areas, or had been filled in, but contained finds of post-medieval date. Many of these are shown as extant features on the 1881 edition of the Ordnance Survey (OS). Features identified as post-medieval during the current excavation were concentrated at the south end of the Phase 1 droveway (DR 7, Fig 3) in Area F.

In Area H, two of the three post-medieval features identified are represented on the 1881 map and are part of a lane which connected to Maldon Road.

9 Further work

This is the final report on the work undertaken in 2008, ie the Stage 4 extraction area of the western extension to the quarry. While the main focus of the Roman settlement appears to have been excavated, the areas excavated are not the full extent of the known archaeology in this part of the quarry. Both the Roman features and recorded surface spreads of Roman finds are known to extend beyond the limits of the present excavation (Fig 1; CAT Report 8, appendix), and, in addition, significant remains of prehistoric and medieval to early post-medieval date have also been revealed in this part of the quarry. The recording of the extent and nature of the remaining archaeology will need to be addressed in any future expansion of the quarry.

10 Archive deposition

The paper and digital archive is held by the Colchester Archaeological Trust at 12 Lexden Road, Colchester, Essex CO3 3NF, but it will be permanently deposited with Colchester and Ipswich Museums under accession code COLIM 2004.316.

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Note: all CAT reports, except for DBAs, are available online in .pdf format at <http://cat.essex.ac.uk>

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13 Glossary

Bronze Age	prehistoric period defined by the introduction and use of metal (bronze) in Britain, c 2,000-700 BC
bund	discrete piles of stored overburden soil removed prior to mineral extraction
EDM	electronic distance measuring
EHER	Essex Historic Environment Record, held by ECC
feature	an identifiable thing like a pit, a wall, a drain, a floor; can contain 'contexts'
Iron Age	prehistoric period defined in Britain by the introduction and use of iron, c 700 BC-AD 43
Late Bronze Age	c 1,000-700 BC (see Bronze Age above)
layer	distinct or distinguishable deposit of soil
medieval	period from AD 1066 to Henry VIII
Mesolithic	period of late hunter-gatherers, c 8,000-4,000 BC
Middle Bronze Age	(see Bronze Age above) c 1,500-1,000 BC
modern	period from the 19th century onwards to the present
natural	geological deposit undisturbed by human activity
Neolithic	period which saw the introduction of farming practices into Britain, c 4,000-2,000 BC
NGR	National Grid Reference

peg-tile	rectangular thin tile with peg-hole(s) used mainly for roofing, first appeared c 1200 and continued to present day, but commonly post-medieval to modern
post-medieval Roman	after Henry VIII to around the late 18th century period of assimilation of Britain as part of the Roman Empire, c AD 43-410
struck flint flake	distinctive flakes removed by blows to a flint core, can either be utilised or discarded as waste
<i>tegula</i>	flat Roman roof tile with upright flanges along both sides
worked flint	any flint, discarded waste or used piece, which has been worked as part of the process of producing usable flint pieces or tools

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14 Appendices

Appendix 1

Table 13: numbered features, with attribution to general date with dated finds and notes.

Note: finds nos F232 and F234 (Area D) = corrections for CAT Report 483.

context	located on Area	same context as Area D	feature type	dated finds and notes	context dated as
(F232)	Area D			ditch	Late Iron Age or early Roman
(F234)	Area D			ditch	post-Roman
F267	Area F		pit	cremation ?burial contained burnt bone fragments and pottery dated early Roman	early Roman
F268	Area F		pit		
F269	Area F		pit		
F270	Area F		pit		
F271	Area F		pit		
F272	Area F		natural/pit		
F273	Area F		pit/post-hole		
F274	Area G		pit		?Roman
F275	Area F		?natural		
F276	Area F		ditch	pottery: 13th century	post-medieval
F277	Area F		ditch		post-medieval
F278	Area F		ditch	same feature as F281; pottery: 12th century	medieval
F279	Area F		ditch	same feature as F318?	medieval
F280	Area F	F174	ditch	pottery: 17th-18th centuries and 19th-20th centuries with earlier residual	post-medieval
F281	Area F		ditch		medieval
F282	Area F		ditch	pottery: 17th-18th centuries and 18th-19th centuries	post-medieval
F283	Area F		pit	pottery: Roman	probably medieval or post-medieval
F284	Area F		ditch	pottery: 1st-2nd/3rd century, 1 sherd ?4th century	Roman
F285	Area F		pit	pottery: ?Neolithic	prehistoric, ?Neolithic
F286	Area F		natural		
F287	Area F		natural		
F288	Area F		ditch		medieval
F289	Area F		natural		
F290	Area F		natural		
F291	Area F		natural		
F292	Area F		natural		
F293	Area F		natural		
F294	Area F		pit		medieval
F295	Area F		pit		probably medieval or post-medieval
F296	Area F		pit	pottery: 17th-18th centuries with much earlier residual 11th-13th centuries and 12th-13th centuries	post-medieval
F297	Area F		ditch		medieval
F298	Area F		ditch	pottery: 13th century	medieval
F299	Area F		ditch	pottery: 13th century	medieval
F300	Area F		ditch		medieval
F301	Area F		ditch	pottery: 12th-13th century	medieval
F302	Area F		ditch	pottery: 12th century	medieval
F303	Area F		pit	pottery: 12th-14th centuries	medieval
F304	Area F		pit		medieval
F305	Area F		pit		medieval
F306	Area F		ditch		medieval
F307	Area F		ditch		medieval
F308	Area F		ditch	pottery: 12th century	medieval
F309	Area F		ditch	pottery: 11th-12th centuries and 13th-	medieval

context	located on Area	same context as Area D	feature type	dated finds and notes	context dated as
				14th centuries	
F310	Area F		pit	pottery: 12th century	medieval
F311	Area F		pit	pottery: 13th-14th centuries	medieval
F312	Area F		ditch	pottery: 12th century	medieval
F313	Area F		ditch		medieval
F314	Area F		natural?		
F315	Area F		ditch		medieval
F316	Area F		ditch		medieval
F317	Area F		ditch		medieval
F318	Area F		ditch	same feature as F279?	medieval
F319	Area F		post-hole		medieval
F320	Area F		natural	pottery: 12th-13th centuries, ?intrusive	
F321	Area F		?natural/ post-hole	Cut by F311	?medieval
F322	Area F		pit		medieval
F323	Area F		ditch	re-numbered F437, F438	
F324	Area G	F144	enclosure ditch east	pottery: 1st-2nd century, 1 sherd 4th century	Roman
F325	Area F		post-hole	pottery: 12th century	medieval
F326	Area F		ditch		medieval
F327	Area F		post-hole		medieval
F328	Area F		post-hole		medieval
F329	Area G		oven	large oven with tile-lined flue; pottery: Antonine or later, 1 sherd ?late Roman; tile is dated ?mid 2nd century to mid 3rd century and ?mid 3rd-4th century; tile late 2nd century+	mid-late Roman, probably late 2nd/early 3rd-4th century
F330	Area G		ditch	pottery: 1st-mid 2nd century	early Roman
F331	Area G		ditch	pottery: Late Iron Age	Late Iron Age
F332	Area F		ditch		medieval
F333	Area G	F241?	enclosure ditch west	pottery: 1st-early 2nd century with residual Late Iron Age	early Roman
F334	Area G		ditch	pottery: 1st-early 2nd/2nd century, ?intrusive	Late Iron Age/ early Roman
F335	Area G		pit		Late Bronze Age
F336	Area G		land drain		modern
F337	Area G		ditch	Late Iron Age	Late Iron Age/ Roman
F338	Area G		land drain	cuts F329, pottery: mid 2nd to mid-late 3rd century	modern
F339	Area G		pit	pottery: late 3rd-4th, probably 4th century	late Roman
F340	Area G		pit	prehistoric (Late Bronze Age) pottery, also contained copper dress-pin	Late Bronze Age
F341	Area G		enclosure ditch north		Roman
F342	Area G	F180	ditch	pottery: 2nd century	Roman
F343	Area G		land drain		modern
F344	Area G	?F250	enclosure ditch west		Late Iron Age/ Roman
F345	Area G		stake-hole?		?Roman
F346	Area G	F181	ditch	pottery: late 3rd-4th/4th century	late Roman
F347	Area G		gully or ditch	pottery: early Roman	?early Roman
F348	Area G		ditch	pottery: 1st-early 2nd century with residual Late Iron Age	early Roman
F349	Area G		pit		
F350	Area G		post-hole		?Roman
F351	Area G		stake-hole		?Roman
F352	Area G		pit		
F353	Area G		pit		
F354	Area G		pit base?	prehistoric pottery in trace of pit base or disturbed from feature	Late Bronze Age
F355	Area G		pit	some heated stone pieces	?prehistoric
F356	Area G		pit or clearance feature	charcoal in silt patch	
F357	Area G		pit	pottery: early 2nd to mid-late 3rd century	?mid-late Roman

context	located on Area	same context as Area D	feature type	dated finds and notes	context dated as
F358	Area G		pit		
F359	Area G		linear	filled with orange-brown gravel	modern
F360	Area G		pit	prehistoric (Late Bronze Age) pottery, also a whole Middle Bronze Age loomweight and loomweight piece(s)	Late Bronze Age
F361	Area G		pit		
F362	Area G		pit		?Roman
F363	Area G		ditch	pottery: 1st-century Roman	early Roman
F364	Area G		?post-hole		?Roman
F365	Area G		clearance feature	charcoal in silt patch	
F366	Area G		pit	pottery: 13th century	?Roman
F367	Area F		pit	pottery: 12th century and 14th-15th centuries	medieval
F368	Area F		pit		medieval
F369	Area F		pit		medieval
F370	Area F		ditch	pottery: 12th-13th centuries	post-medieval
F371	Area G		land drain		modern
F372	Area F		?natural/pit		
F373	Area F		pit	pottery: ?1st-2nd century	?early-mid Roman
F374	Area F		pit	pottery: 12th-14th centuries	medieval
F375	Area F		pit	pottery: 13th century	medieval
F376	Area F		?natural/pit		
F377	Area F		?natural/pit		
F378	Area F		ditch		medieval
F379	Area F		pit	pottery: 13th century	medieval
F380	Area F		ditch	pottery: 13th century	medieval
F381	Area F		ditch		medieval
F382	Area F		ditch		medieval
F383	Area F		pit	pottery: 12th century	medieval
F384	Area F		?natural/pit		
F385	Area F		ditch		medieval
F386	Area F		ditch		medieval
F387	Area F		?natural/pit		
F388	Area F		?natural/pit		
F389	Area F		?natural/pit	possible clearance feature	
F390	Area F		?natural/pit		
F391	Area F		ditch	possibly part of F312	?medieval
F392	Area F		ditch	pottery: 12th century	medieval
F393	Area F		pit		?medieval
F394	Area F		ditch		medieval
F395	Area F		pit		medieval
F396	Area F		pit		medieval
F397	Area F		natural	natural silt patch or silt-filled hollow	
F398	Area F		pit	pottery: 12th-13th centuries	medieval
F399	Area F		pit		medieval
F400	Area F		ditch	pottery: 13th century	medieval
F401	Area F		ditch		medieval
F402	Area F		ditch		medieval
F403	Area F		natural	disturbance or burrow?	
F404	Area F		natural/hollow	natural silt patch or filled hollow	
F405	Area F		post-hole		medieval
F406	Area F		?post-hole		medieval
F407	Area F		post-hole		medieval
F408	Area F		pit	see F398	medieval
F409	Area F		post-hole/ stake hole		medieval
F410	Area F		pit or post-hole		medieval
F411	Area F		pit	pottery: 12th-13th centuries	medieval
F412	Area F		pit	pottery: 13th century	medieval
F413	Area F		pit	pottery: 11th-12th centuries	medieval
F414	Area F		post-hole		medieval
F415	Area F		post-hole		medieval
F416	Area F		post-hole		medieval
F417	Area F		post-hole/ stake hole		medieval
F418	Area F		pit		medieval

context	located on Area	same context as Area D	feature type	dated finds and notes	context dated as
F419	Area F		ditch	same phase as F307? pottery: 12th century	medieval
F420	Area F		ditch		medieval
F421	Area F		post-hole		medieval
F422	Area F		post-hole		medieval
F423	Area F		post-hole		medieval/ post-medieval
F424	Area F		ditch		medieval/ post-medieval
F425	Area F		post-hole	pottery: 14th-15th centuries	medieval?
F426	Area F		post-hole		medieval
F427	Area F		post-hole		
F428	Area F		post-hole		medieval
F429	Area F		?post-hole		medieval
F430	Area F		pit/post-hole		medieval/ post-medieval
F431	Area F		pit		medieval/ post-medieval
F432	Area F		pit		medieval/ post-medieval
F433	Area F		post-hole		medieval/ post-medieval
F434	Area F		post-hole		medieval/ post-medieval
F435	Area F		post-hole		medieval/ post-medieval
F436	Area F		pit	pottery: 12th century (sherd) with ?residual Late Bronze Age	?medieval
F437	Area F	?F176	ditch	pottery: 12th-13th centuries (Area D F176 pottery dated 15th-16th centuries)	late medieval/ post-medieval
F438	Area F	?F176	ditch	pottery: 11th-12th centuries	medieval/l ate medieval
F439	Area F		pit	pottery: 13th century+	?medieval
F440	Area F		post-hole	pottery 17th-18th centuries	post-medieval
F441	Area F		pit	pottery: 12th-14th centuries	?medieval
F442	Area F		pit	pottery: 12th century	?medieval
F443	Area F		ditch	terminus	?medieval
F444	Area F		?natural	large silt-filled linear feature; intrusive pottery recovered is 12th-13th centuries	
F445	Area F		pit/ditch		post-medieval
F446	Area F		pit		?medieval
F447	Area F		pit	pottery: 12th century	medieval
F448	Area F		slot	pottery: 17th-18th centuries	post-medieval
F449	Area F		pit	pottery: 12th century and 13th-14th centuries	medieval
F450	Area F		pit	pottery: 13th century	medieval
F451	Area F		ditch		medieval/ post-medieval
L3	Area G		upper ditch fill		
L4	Area G		upper fill	upper fill of F329b oven flue channel	Roman
L5	Area G		fill	baked fill in F329b oven flue channel	Roman
L6	Area G		upper fill	upper fill of pit F339	late Roman
L7	Area G		upper fill	upper fill of pit F339	late Roman
L8	Area G		upper fill	upper fill of pit F339	late Roman
L9	Area G		mid fill	mid fill of pit F339	late Roman
L10	Area G		lower fill	lower fill of pit F339	late Roman
L11	Area G		upper fill	upper fill of ditch F346 (Sx 2)	late Roman
L12	Area G		lower fill	lower fill of ditch F346 (Sx 2)	late Roman
L13	Area G		fill	baked soil in base of F329b oven flue channel	Roman
L14	Area F		fill	fill of pit F368	medieval
L15	Area F		fill	fill of pit F368, sealed by L14	medieval
L16	Area F		fill	fill of linear F445	post-medieval
L17	Area F		fill	fill of linear F445, sealed by L16	post-medieval

Appendix 2:

Table 14: heat-affected stone by context.

Feature/ Layer no	finds number	context date	description	number of pieces	weight (g)
F279 Sx 1	529	medieval	burnt flint	1	39
F335	564	Late Bronze Age	burnt flint	6	91
F335	564	Late Bronze Age	burnt quartzite	1	57
F340	608	Late Bronze Age	burnt flint	1	14
F340	609	Late Bronze Age	burnt quartzite - piece from a rounded stone cobble	1	340
F360	649	Late Bronze Age	burnt flint	2	98
F360	649	Late Bronze Age	burnt quartzite - two large pieces probably from one stone cobble	2	594
F367	654	medieval	burnt flint - 1 large piece plus 6 other smaller pieces, heated and burnt but not heavily crazed	7	1,137
F374	671	medieval	burnt flint - one shattered stone and other pieces, heated and burnt but not heavily crazed	6	132
F383	684	medieval	burnt flint – two natural heat-produced flakes	2	8
F436	715	medieval	burnt flint	1	29
F449	737	medieval	burnt flint - large pieces, heated and burnt but not heavily crazed	2	1,847

Appendix 3:

Table 15: medieval pottery fabrics by context.

context	bag (finds no)	Fabrics											
		9 qt	9 wt	13 qt	13 wt	20 qt	20 wt	21 qt	21 wt	21a qt	21a wt	35 qt	35 wt
F276	517	0	0	0	0	1	3	0	0	0	0		
F278 Sx 1	518	0	0	1	26	0	0	0	0	0	0		
F280	531	0	0	4	26	0	0	0	0	0	0		
F280 Sx 1	519	0	0	4	15	1	11	0	0	2	47		
F280 Sx 1	531	0	0	0	0	1	4	0	0	0	0		
F280 Sx 1	525	0	0	0	0	2	5	0	0	1	2		
F282 Sx 1	520	0	0	4	43	0	0	0	0	0	0		
F282 Sx 1	521	0	0	0	0	1	7	0	0	0	0		
F292 Sx 2	740	0	0	1	18	5	20	0	0	0	0		
F296	543	1	60	2	116	0	0	0	0	0	0		
F296	543	0	0	2	116	0	0	0	0	0	0		
F296	740	0	0	3	61	8	425	0	0	0	0		
F298 Sx 1	547	0	0	0	0	2	61	0	0	0	0		
F299	546	0	0	0	0	2	3	0	0	0	0		
F301 Sx 2	688	0	0	3	37	0	0	0	0	0	0		
F302	708	0	0	1	55	0	0	0	0	0	0		
F302 Sx 1	544	0	0	2	13	0	0	0	0	0	0		
F302 Sx 2	708	0	0	1	55	0	0	0	0	0	0		
F303	545	0	0	26	279	0	0	1	2	0	0		
F308 Sx 2	707	0	0	8	90	0	0	0	0	0	0		
F309	710	0	0	16	68	0	0	0	0	0	0		
F309	548	0	0	2	7	1	11	0	0	0	0		

context	bag (finds no)	Fabrics											
		9 qt	9 wt	13 qt	13 wt	20 qt	20 wt	21 qt	21 wt	21a qt	21a wt	35 qt	35 wt
F310	551	0	0	2	4	0	0	0	0	0	0	0	0
F311	552	0	0	3	34	7	89	0	0	2	11		
F312	698	0	0	3	57	0	0	0	0	0	0		
F312	554	0	0	1	3	0	0	0	0	0	0		
F320	741	0	0	12	285	2	25	0	0	0	0		
F325	559	0	0	1	24	0	0	0	0	0	0		
F367	654	0	0	4	19	0	0	0	0	0	0		
F367	656	0	0	0	0	0	0	0	0	11	150		
F370 Sx 1	665	0	0	1	13	1	34	0	0	0	0		
F374	671	0	0	1	5	14	160	0	0	1	21		
F374	671	0	0	3	43	13	166	0	0	0	0		
F375	675	0	0	0	0	5	62	0	0	0	0		
F379	682	0	0	0	0	1	10	0	0	0	0		
F380 Sx 1	680	0	0	0	0	1	6	0	0	0	0		
F383	684	0	0	1	3	0	0	0	0	0	0		
F386 Sx 1	685	0	0	0	0	2	2	0	0	0	0		
F392	687	0	0	1	2	0	0	0	0	0	0		
F398	692	0	0	2	24	5	31	0	0	0	0		
F400	693	0	0	0	0	1	12	0	0	0	0		
F400 Sx 1		0	0	0	0	1	2	0	0	0	0		
F411	699	0	0	0	0	4	32	0	0	0	0		
F412	700	0	0	0	0	1	27	0	0	0	0		
F413	702	0	0	9	107	0	0	0	0	0	0		
F419 Sx 1	705	0	0	0	0	2	4	0	0	0	0		
F425	709	0	0	0	0	0	0	0	0	1	4		
F436	715	0	0	1	3	0	0	0	0	0	0		
F437 Sx 1	717	0	0	8	13	1	9	0	0	0	0		
F438	722	1	26	10	82	0	0			0	0		
F439	719	0	0	2	32	0	0	1	26	0	0		
F441	731	0	0	4	83	2	63	0	0	0	0		
F442	732	0	0	10	113	0	0	0	0	0	0		
F444	724	0	0	3	31	4	22	0	0	0	0		
F444	725	0	0	1	2	0	0	0	0	0	0		
F445/L16	726	0	0	0	0	0	0	0	0	0	0	1	7
F445/L17	727	0	0	0	0	0	0	0	0	0	0	1	16
F447	730	0	0	1	3	0	0	0	0	0	0		
F449	736	0	0	21	154	0	0	0	0	5	37		
F449	735	0	0	1	111	0	0	0	0	0	0		
F450	738	0	0	0	0	1	12	0	0	0	0		
L14	673	0	0	1	24	3	272	0	0	0	0		
4,596			86		2,299		1,590		26		272		23
312		2		187		95		1		23		2	

Table 16: post-medieval pottery fabrics by context.

context	bag (finds no)	Fabrics											
		40 qt	40 wt	40a qt	40a wt	46 qt	46 wt	48d qt	48d wt	50 qt	50 wt		
F280 Sx 1	519	4	13										
F280 Sx 1	531	3	14						1	3			
F280 Sx 1	525	1	3										
F282 Sx 1	520	0	0	1	92	1	14						
F282 Sx 1	521	2	33			0	0						
F282 Sx 1	537	1	3			0	0				2	21	
F282 Sx 1	536	1	1			0	0						

F296	740	1	57			0	0				
F440	720	1	3			0	0				
F445/L16	726	84	1388			0	0				
F445/L17	727	18	409			1	10				
F448 Sx 2	734	1	2								
totals	2,066	0	1,926	0	92	0	24	0	3	0	21
	132	117	0	1	0	2	0	10	0	2	

Appendix 4:

(Table 17 - see below.)

Table 17 charred plant macrofossils and other remains from the environmental samples.

Sample no	31	32	27	28	29	33	34	35	30	37	26	36
Finds no	566	583	567	592	624	605	613	612	645	513	553	718
Feature no	F335	F335	F324	F324	F324	F339	F339	F339	F329	F267	F298	F437
Layer no					L7	L7	L9					
Feature type	Pit	Pit	E. ditch	E. ditch	E. ditch	Pit	Pit	Pit	?Oven	?Crem	Ditch	Ditch
Date	BA	BA	R1-2	R1-2	R1-2	LR	LR	LR	R	R	M	M/PM
Cereals and other food plants												
<i>Avena sp. (grains)</i>						xcf	xcf		xcf			xcf
<i>Hordeum sp. (grains)</i>					xx	xcf		xcf				
<i>Pisum sativum L.</i>												xcf
<i>Triticum sp. (grains)</i>				xcf	xcf	x	xx	xcf	x	x		
(glume bases)						xx						
(rachis internodes)						x						
<i>T. spelta L. (glume bases)</i>						x	x		xxx			
Cereal indet. (grains)		xcf		x	x	x	xxx	x	x		x	x
Herbs												
<i>Bromus sp.</i>			xcf				xcf	xcf	x			
Fabaceae indet.					x							
<i>Fallopia convolvulus (L.) A. Love</i>							x					
Small Poaceae indet.						x						
Large Poaceae indet.						x		x				
Tree/shrub macrofossils												
<i>Corylus avellana L.</i>	xcf							xcf				
Other plant macrofossils												
Charcoal <2mm	xxxx	xxxx	xxx	xxxx	xxxx	xxx	xxxx	xxx	xxx	xxxx	xxxx	xxxx
Charcoal >2mm	xx	x	xx	xxxx	xx	x	xx	x	xx		xxx	xxx
Charcoal >5mm				xx								
Charred root/stem			x				x			x		
Indeterminate buds					x			x				
Other remains												
Black porous 'cokey' material	x			x	x	xx	xx	x			x	x
Black tarry material		x	x									
Bone	x			x		xb				xxb		x xb
Burnt/fired clay					x							
Mineralised concretions				xx	xxxx			xxx	xx	xxx		
Pot			xcf									
Vitrified material					x							
Sample volume (litres)	20	20	20	20	20	20	20	20	10	20	20	20
Volume of flot (litres)	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.2	0.2
% flot sorted	100%	100%	100%	100%	100%	100%	100%	100%	100%	50%	50%	50%

concentrations of Roman surface finds

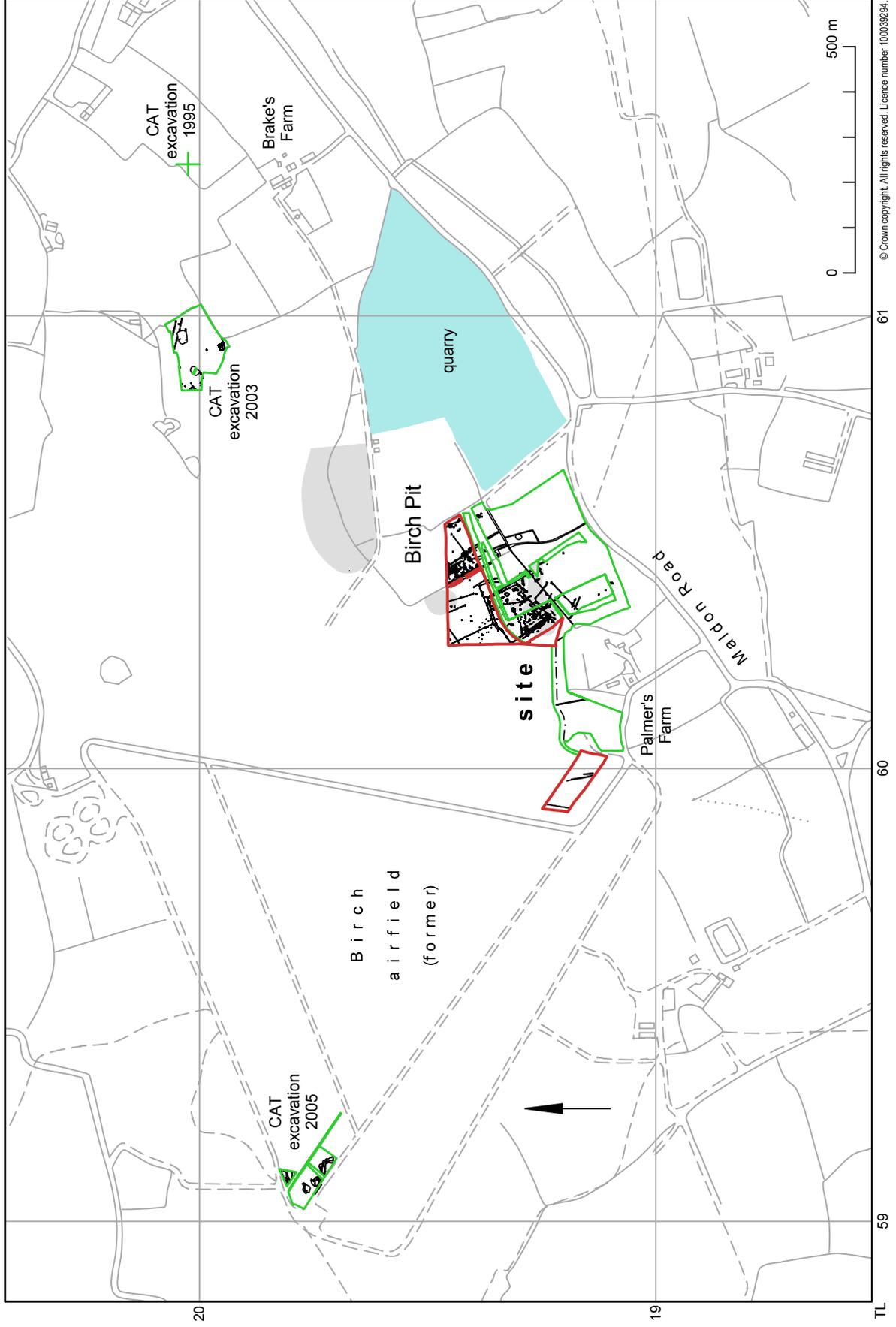
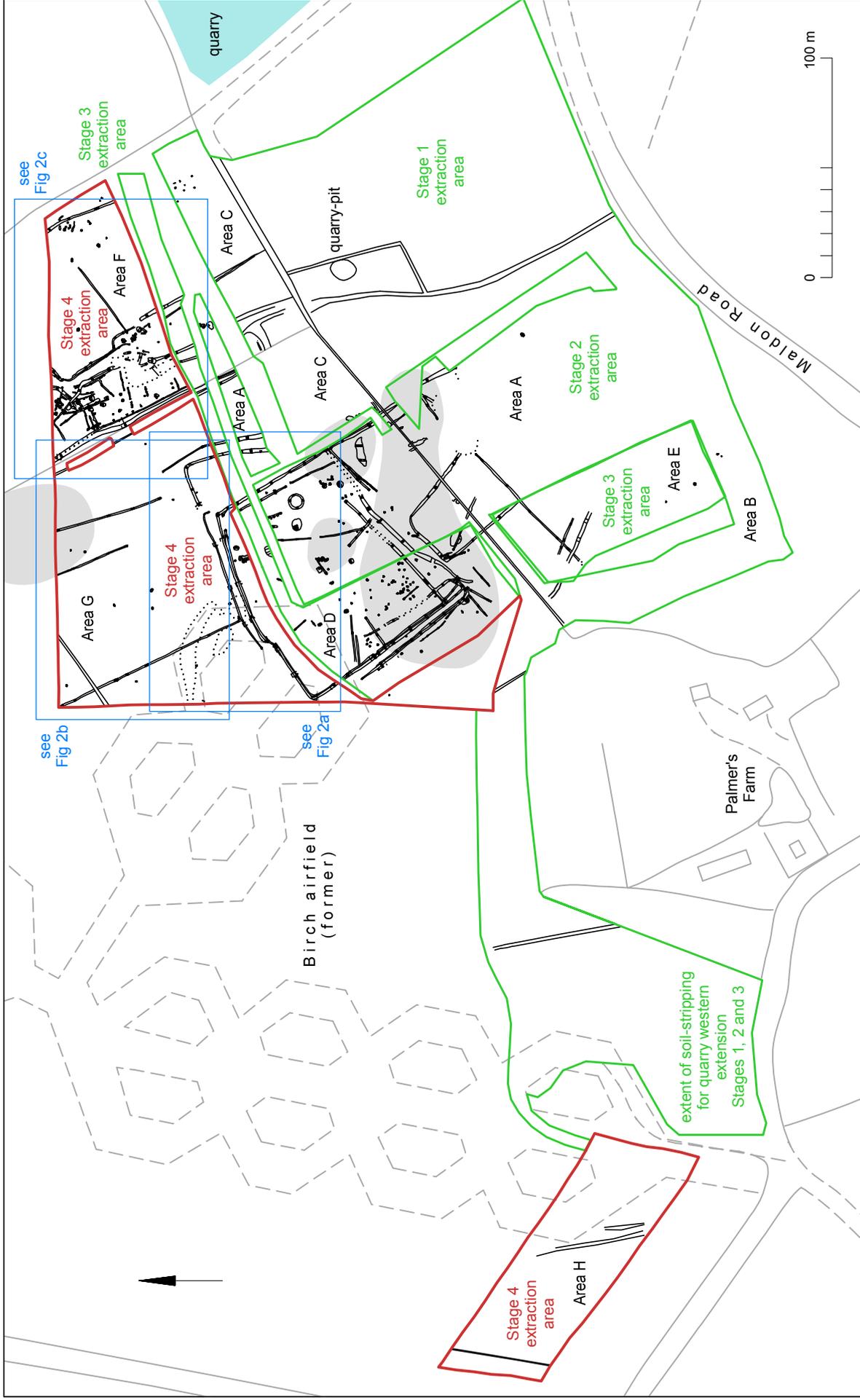


Fig 1 Site location and locations of previous excavations in the surrounding area.

concentrations of Roman surface finds



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Fig 2 Areas covered by archaeological watching briefs and excavations, showing the Stage 4 (2008) extraction areas.

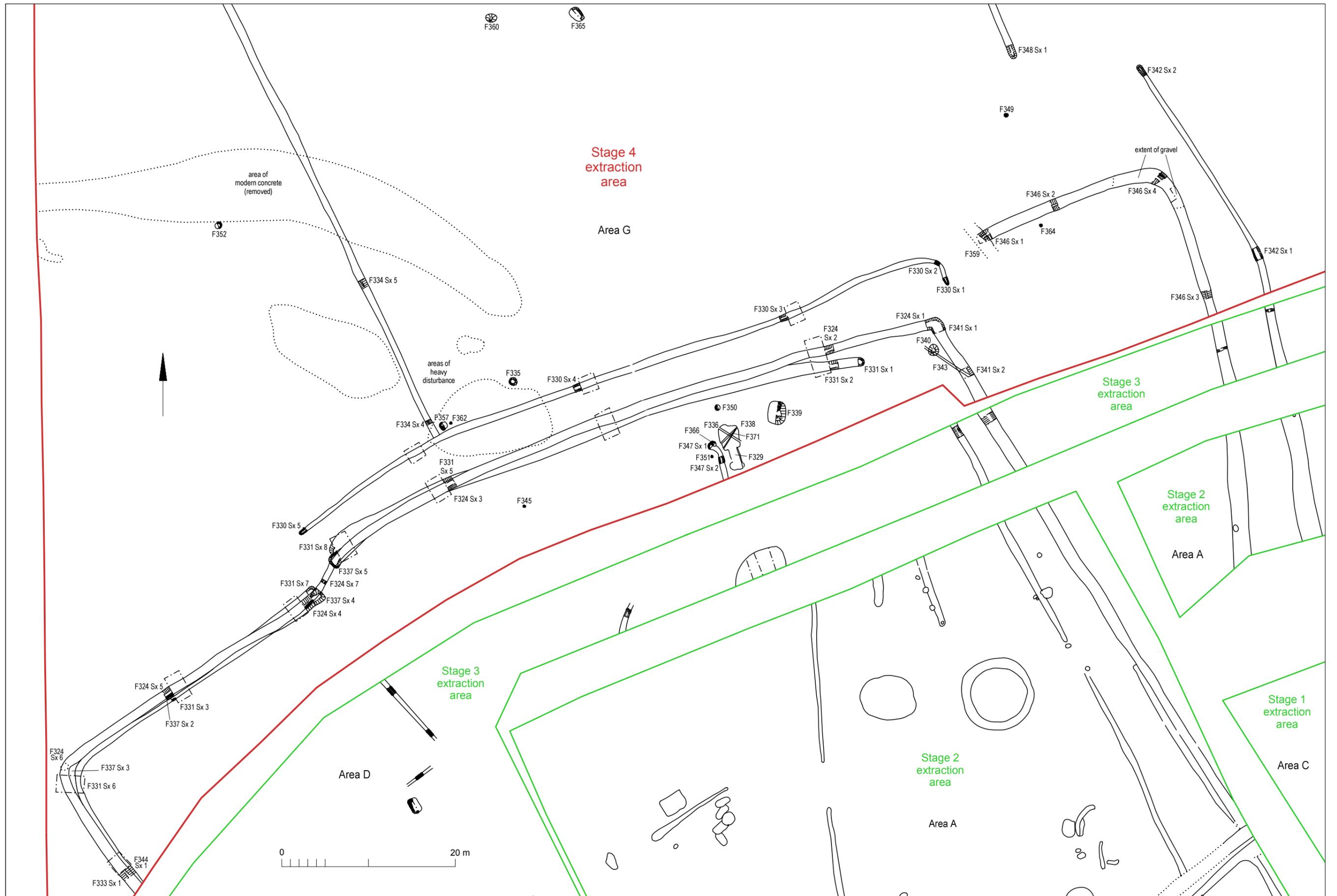


Fig 2a Area G (inset to Fig 2).

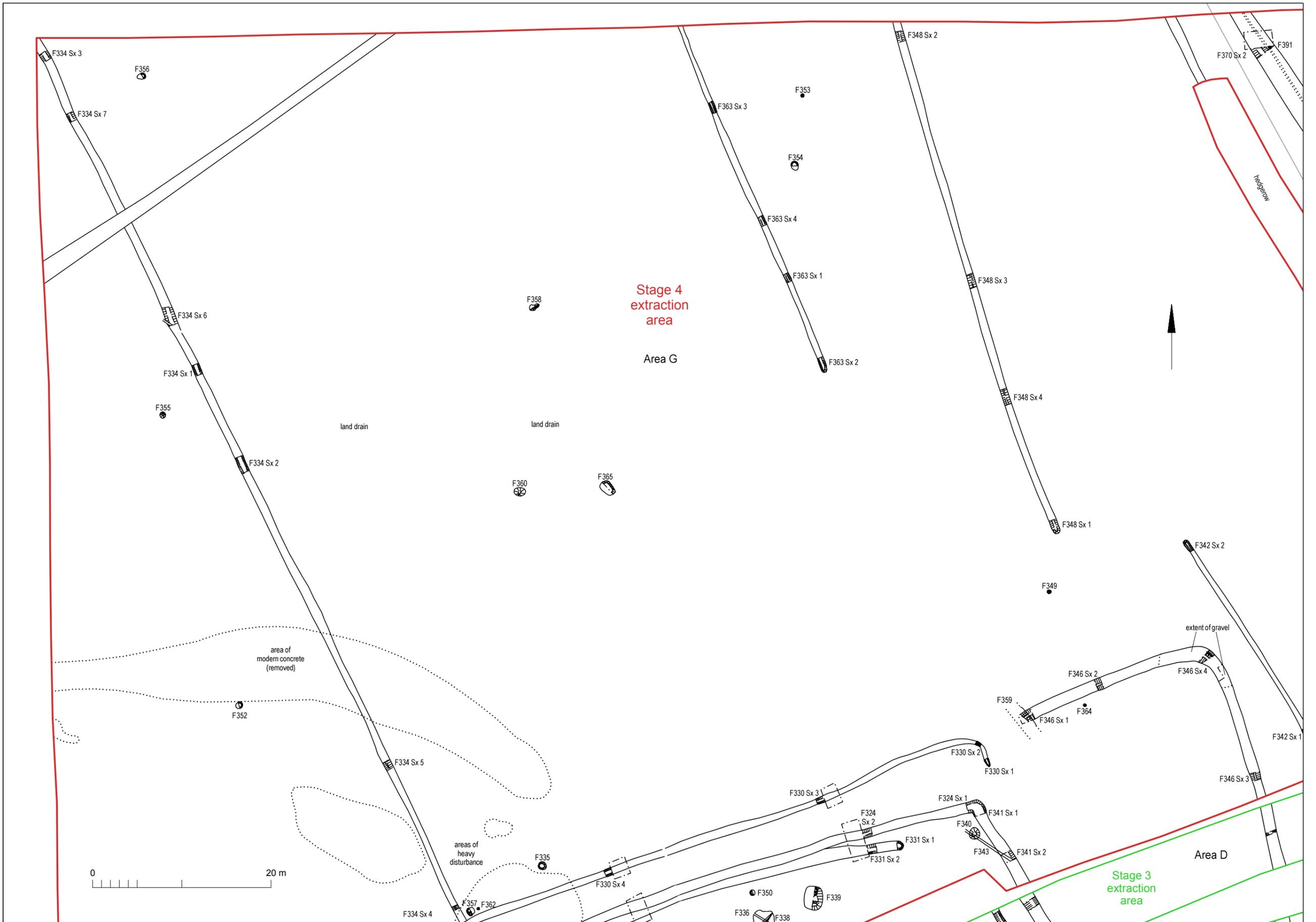


Fig 2b Area G (inset to Fig 2).

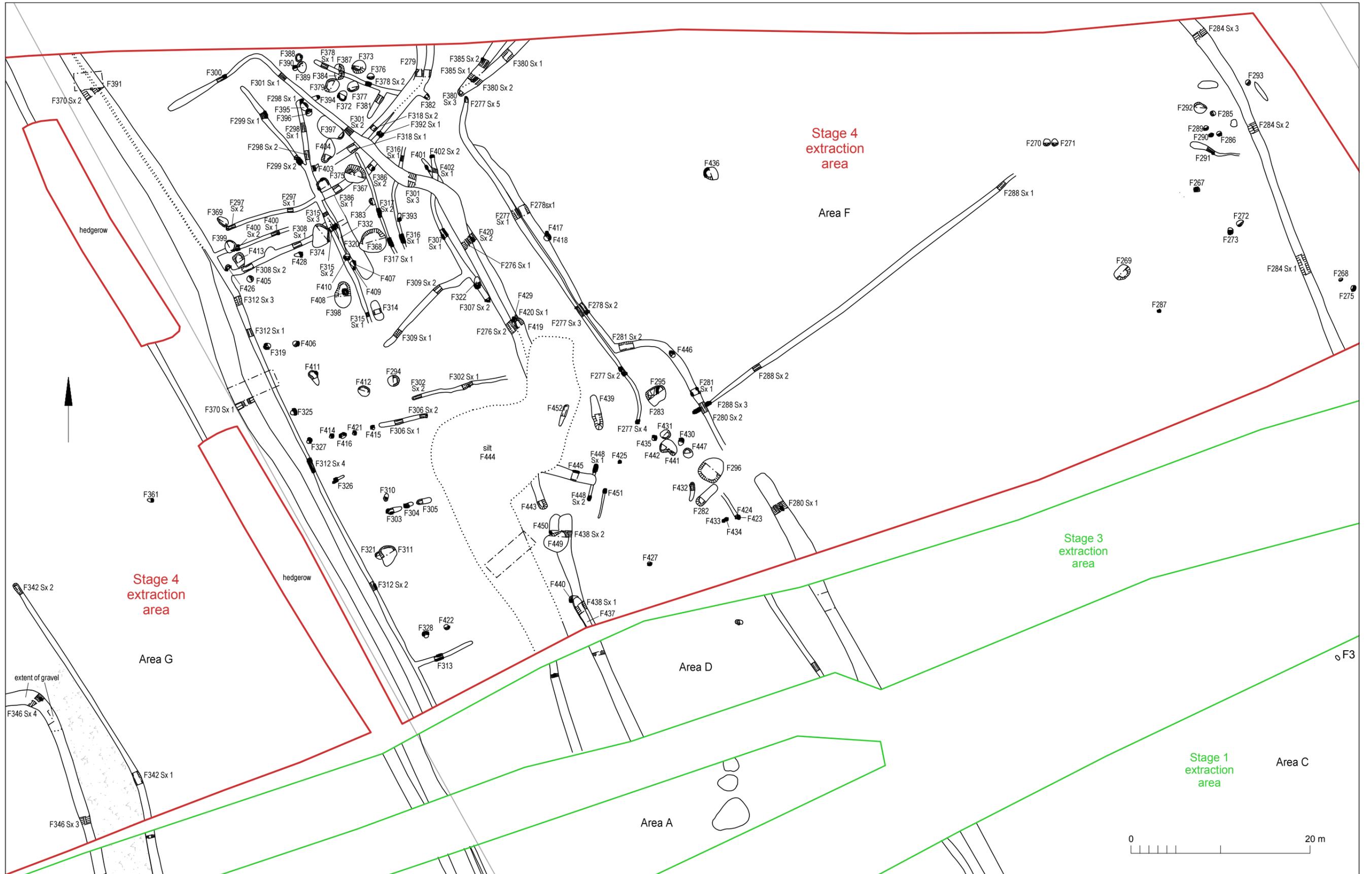


Fig 2c Area F (inset to Fig 2).

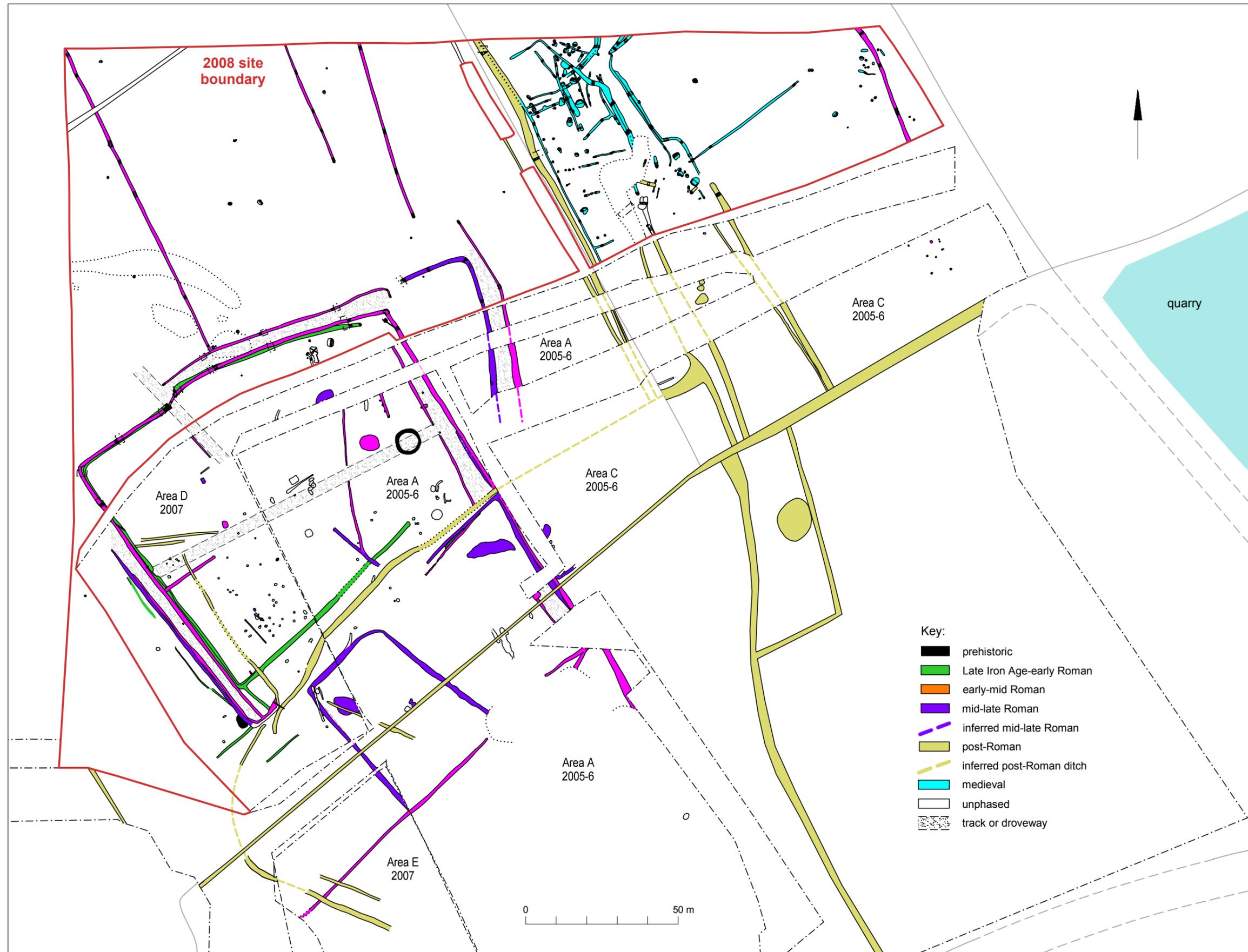
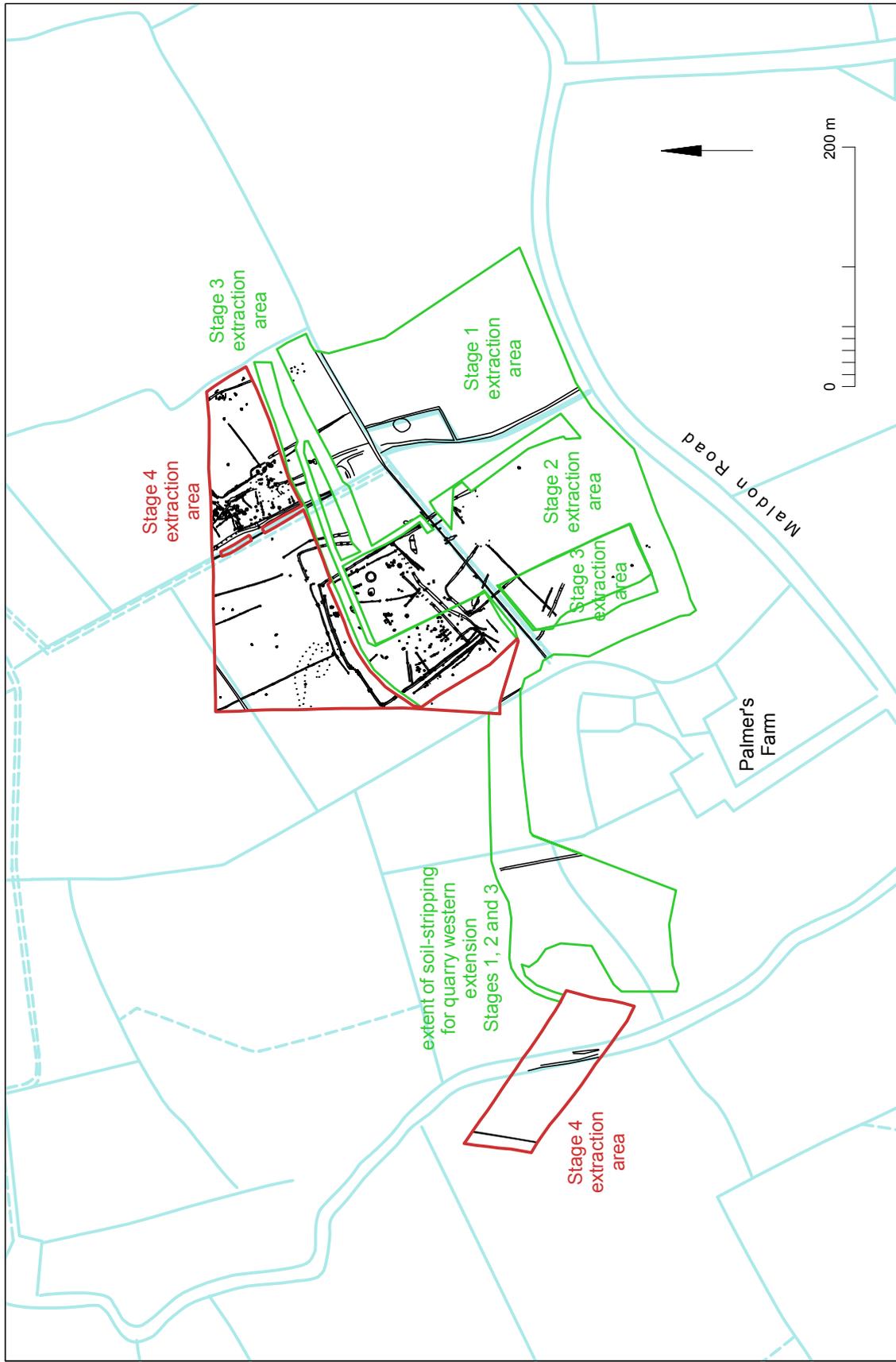


Fig 3 Phasing of features, including adjusted phasing for the 2004 and 2005-6 excavation areas.



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Fig 4 Excavations overlaid on the 1881 Ordnance Survey map.

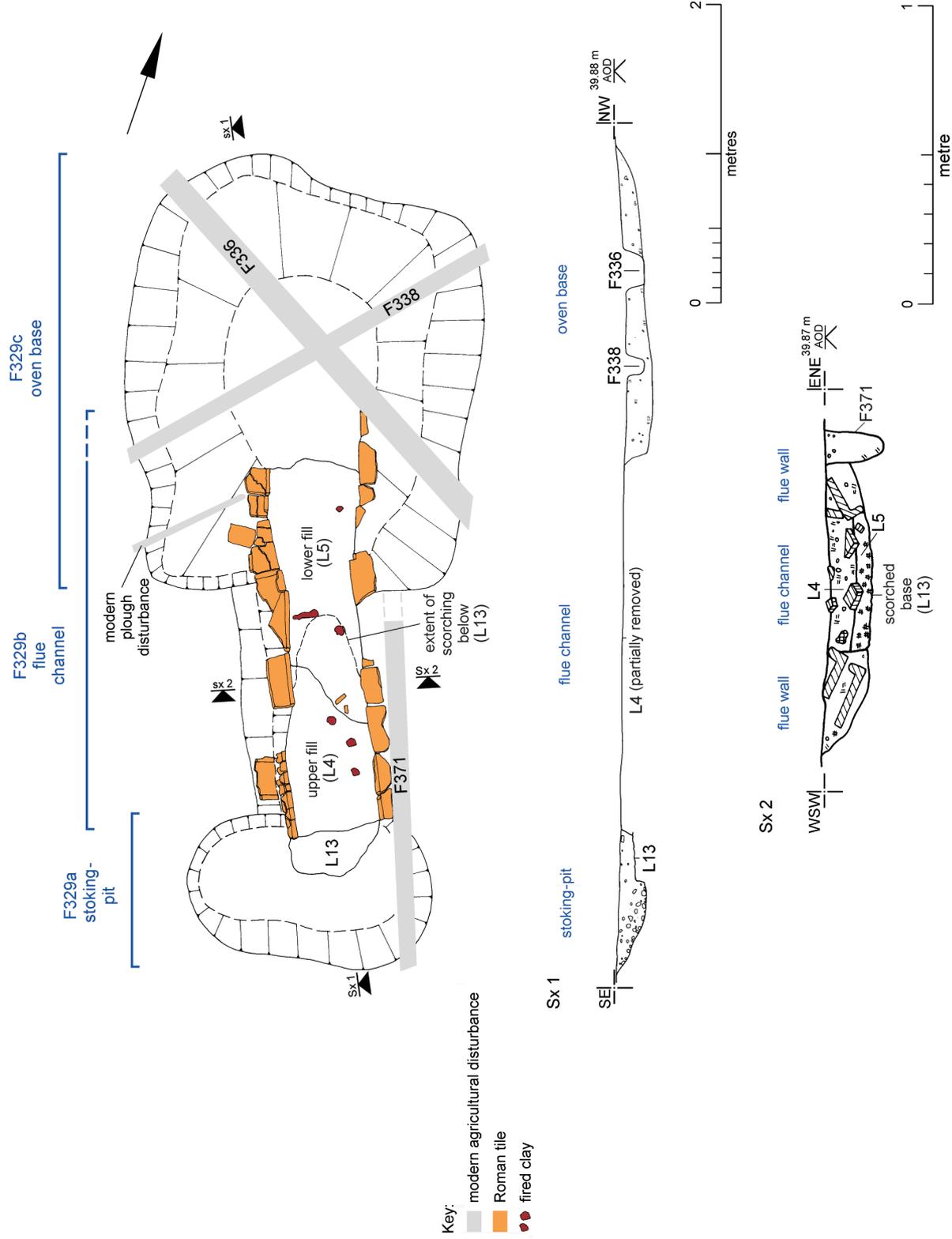


Fig 5 Roman oven F329: plan and sections.

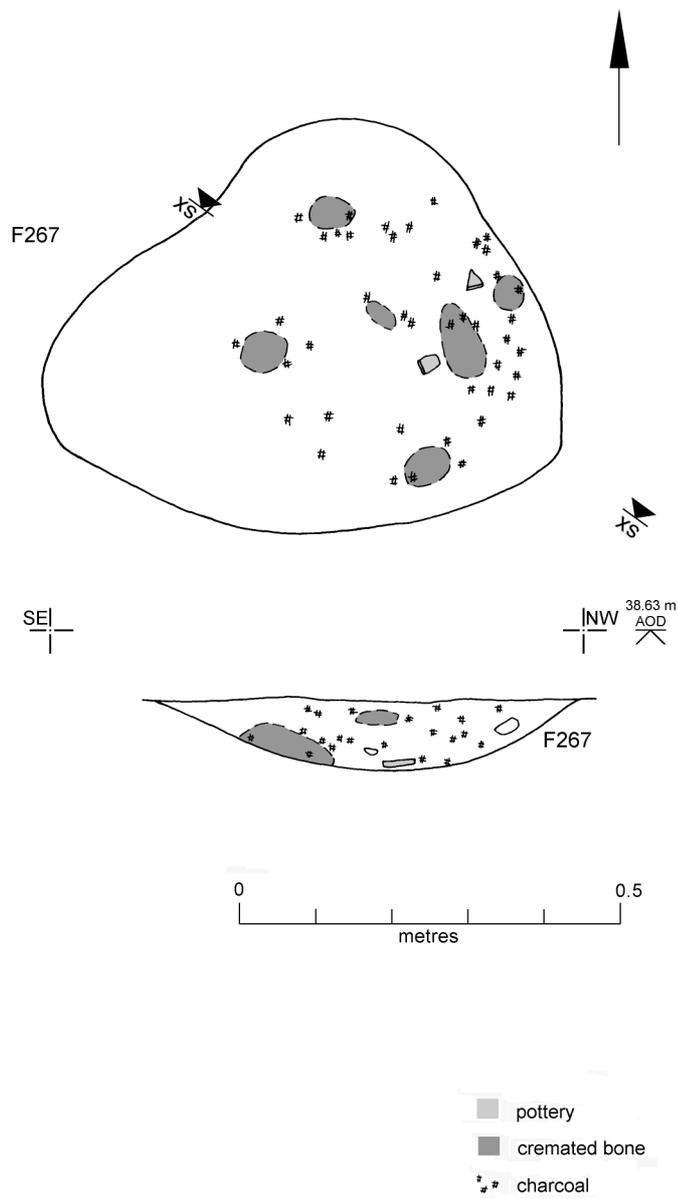


Fig 6 Area F East: Roman cremation burial F267 - plan and section.

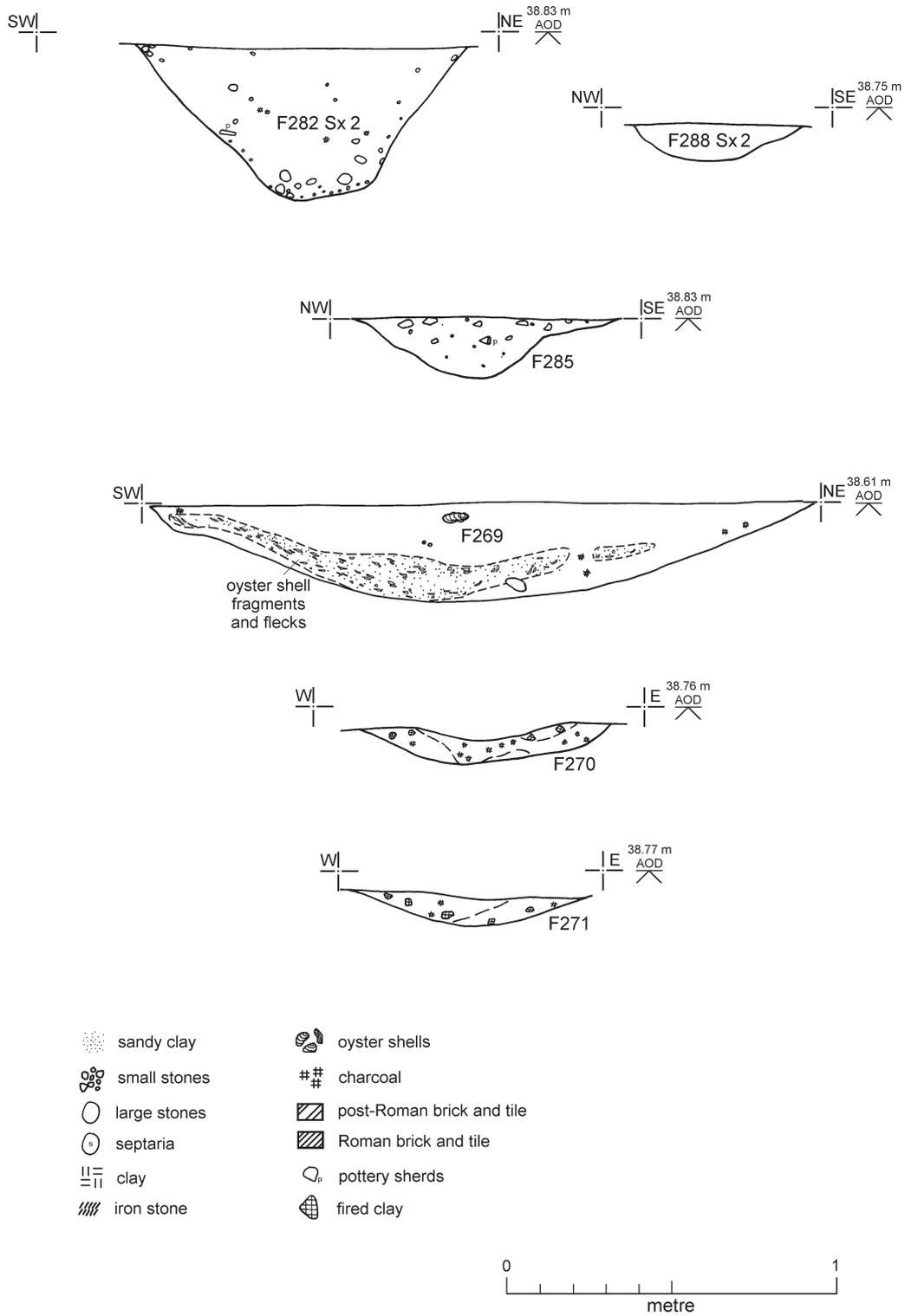


Fig 7 Area F East: Roman ditch (F284 Sx 2), medieval ditch (F288 Sx 2), prehistoric pit (F285), and undated pits (F269, F270, F271) - sections.

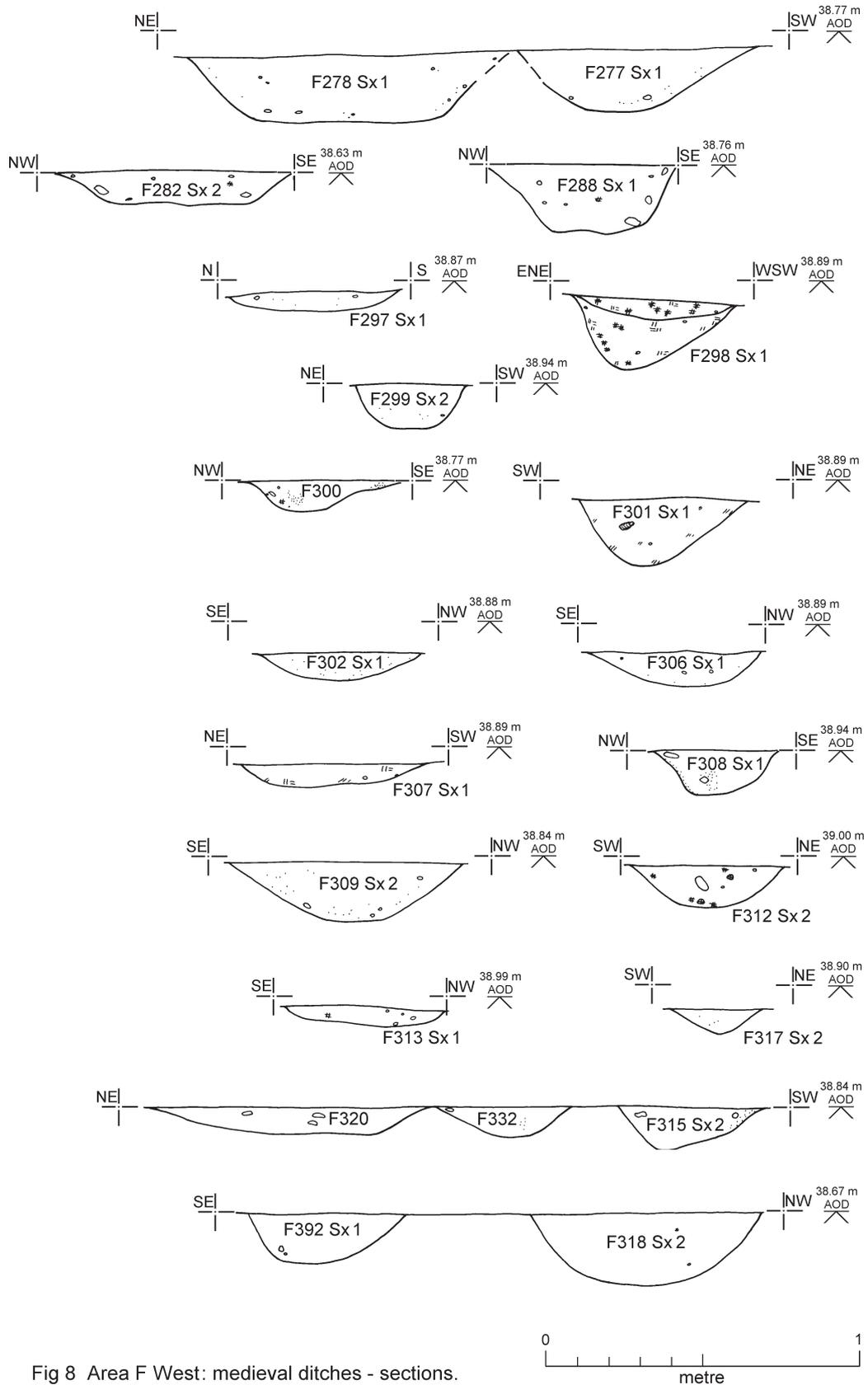


Fig 8 Area F West: medieval ditches - sections.

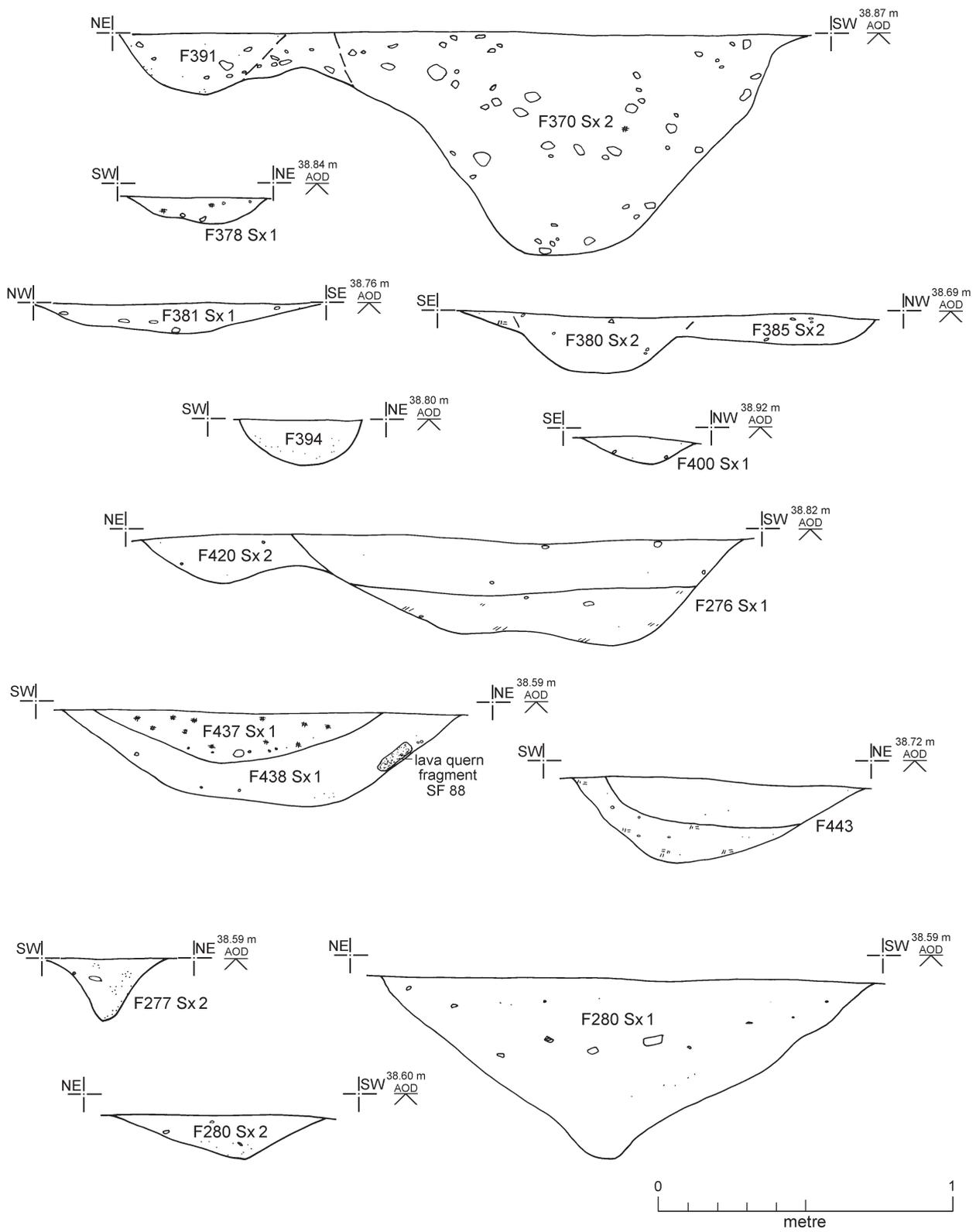


Fig 9 Area F West: medieval ditches (F378 Sx 1, F380 Sx 1, F381 Sx 1, F385 Sx 2, F391, F400 Sx 1, F420 Sx 2, F437 Sx 1, F438 Sx 1, F443), post-medieval ditches (F276 Sx 1, F277 Sx 2, F280 Sx 1, F280 Sx 2), and post-medieval pit (F370 Sx 2) - sections.

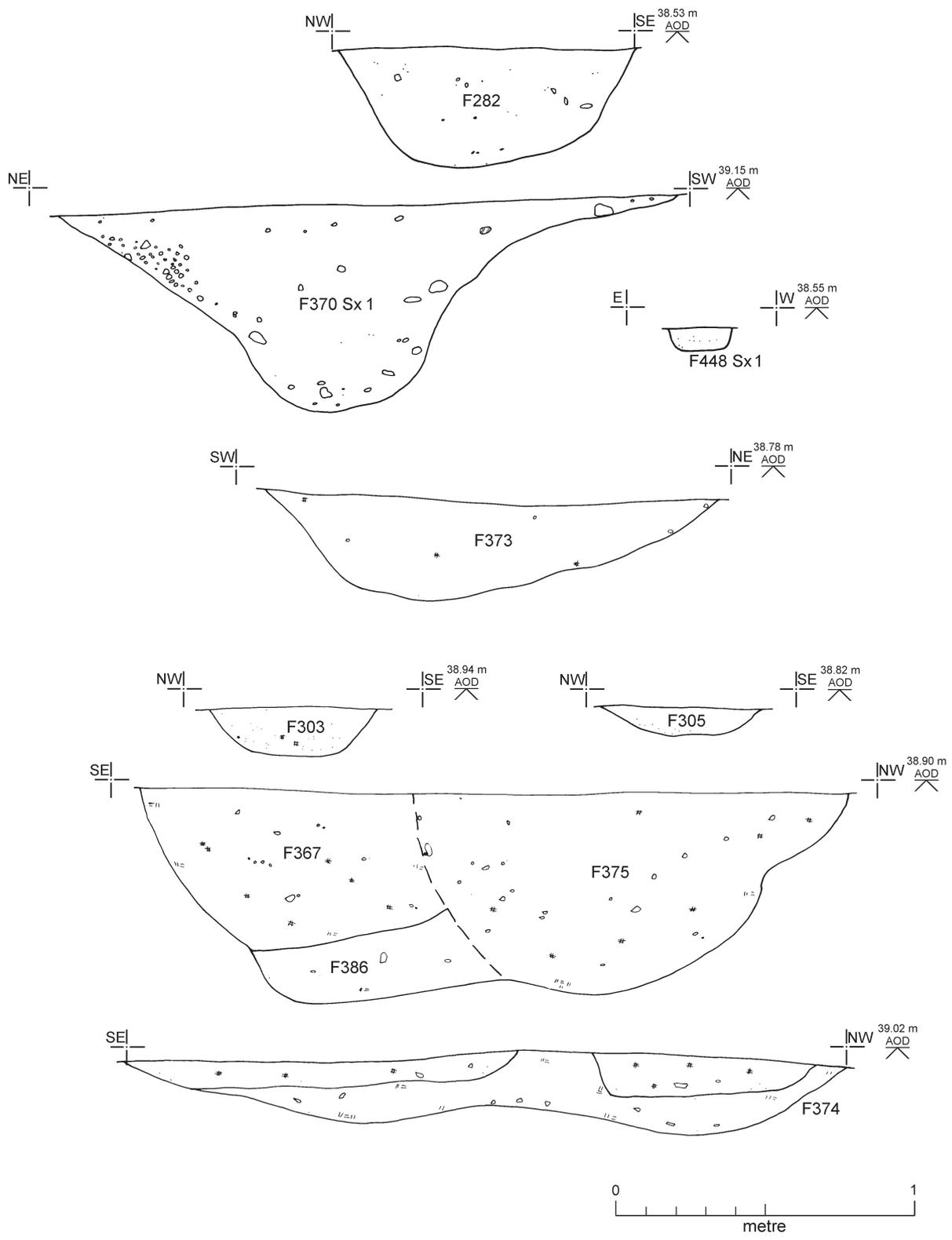


Fig 10 Area F West: medieval ditch (F386), post-medieval ditches (F282, F370 Sx 1, F448 Sx 1), Roman pit (F373), and medieval pits (F303, F305, F367, F374, F375) - sections.

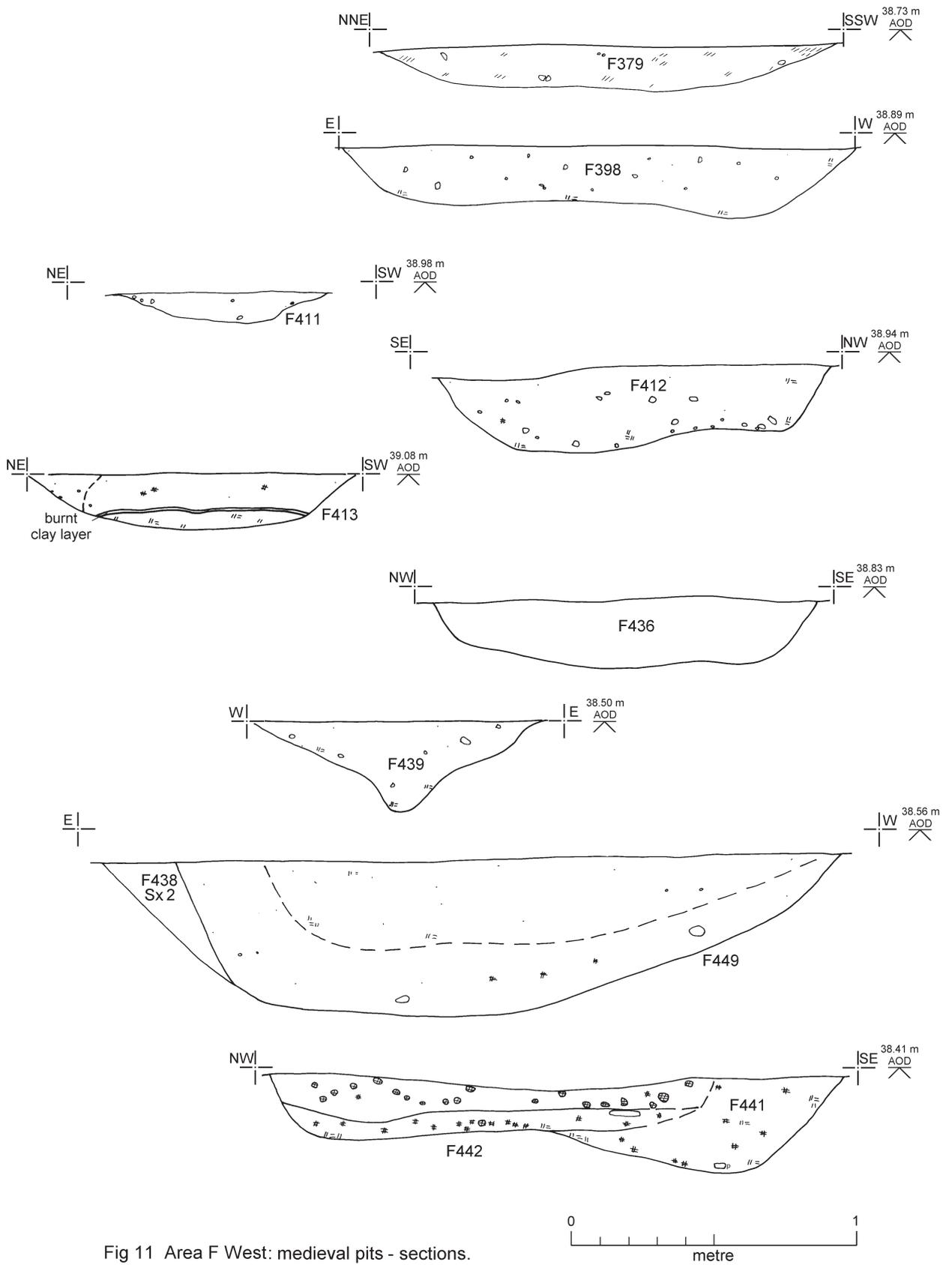


Fig 11 Area F West: medieval pits - sections.

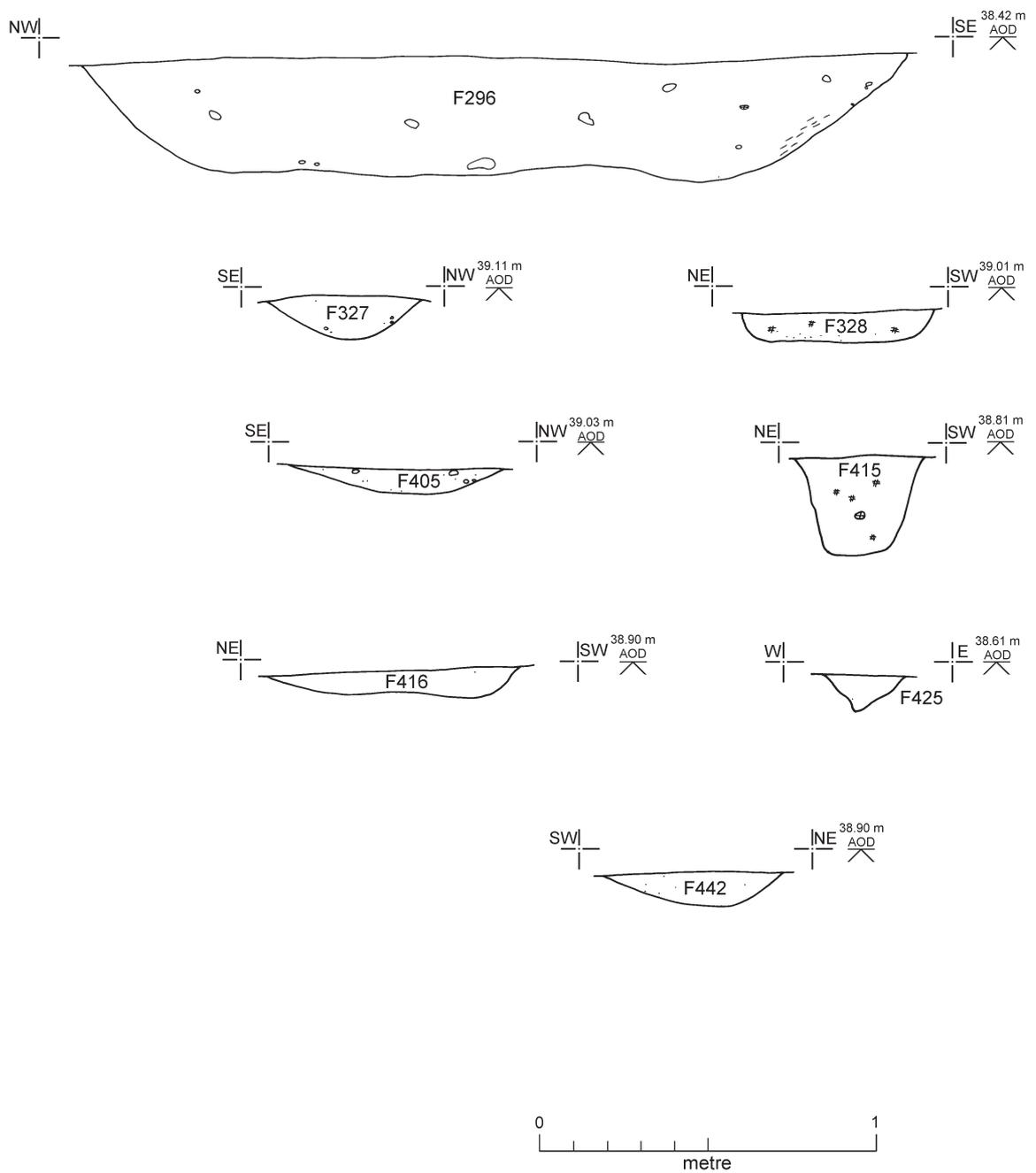


Fig 12 Area F West: post-medieval pit (F296) and medieval post-holes (F327, F328, F405, F415, F416, F422, F425) - sections.

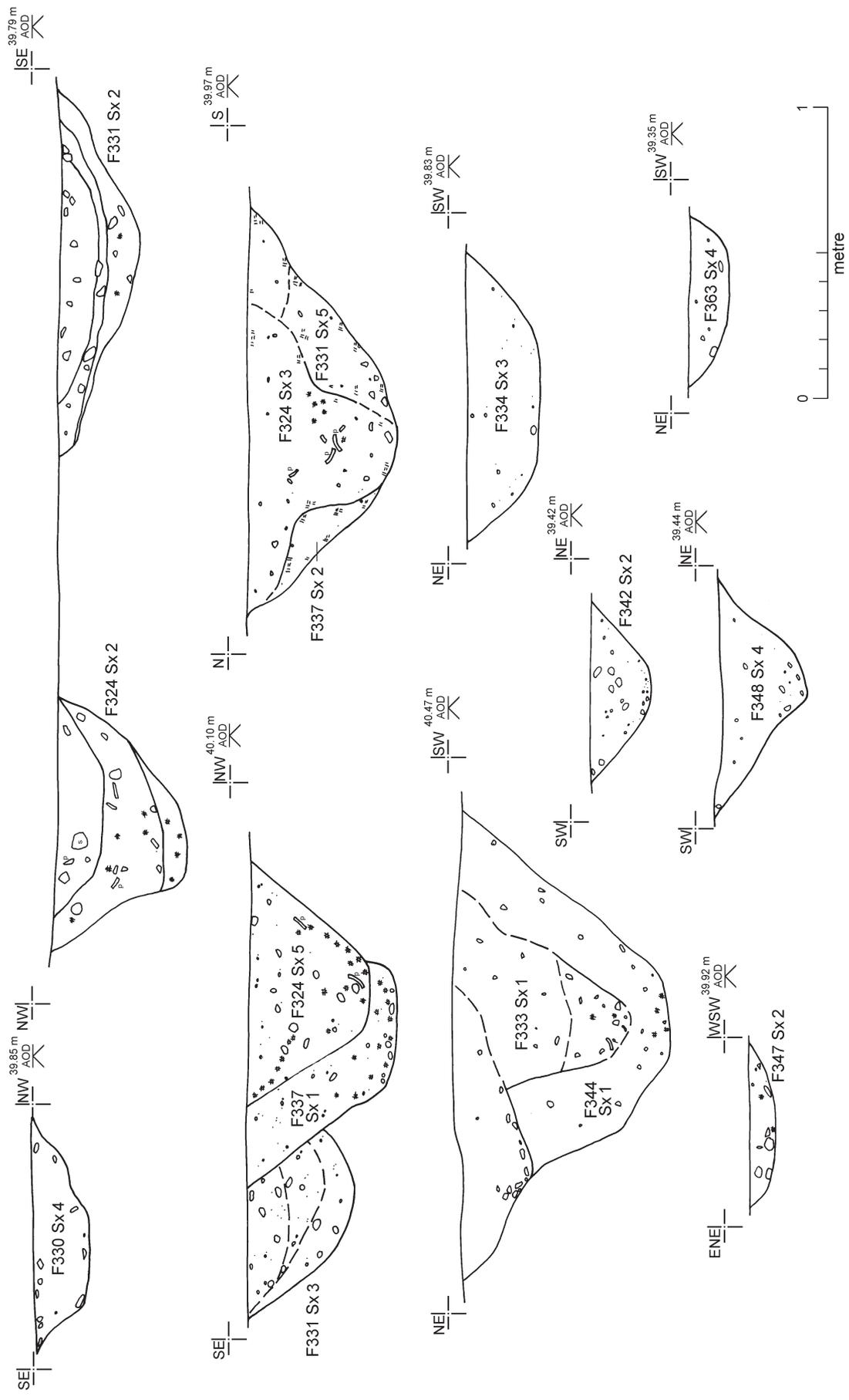


Fig 13 Area G : prehistoric and early Roman ditches (F330 Sx 4, F324 Sx 2, F324 Sx 3, F324 Sx 5, F331 Sx 2, F331 Sx 3, F331 Sx 5, F337 Sx 2, F337 Sx 2, F342 Sx 2, F342 Sx 2, F348 Sx 4, F363 Sx 4) - sections.

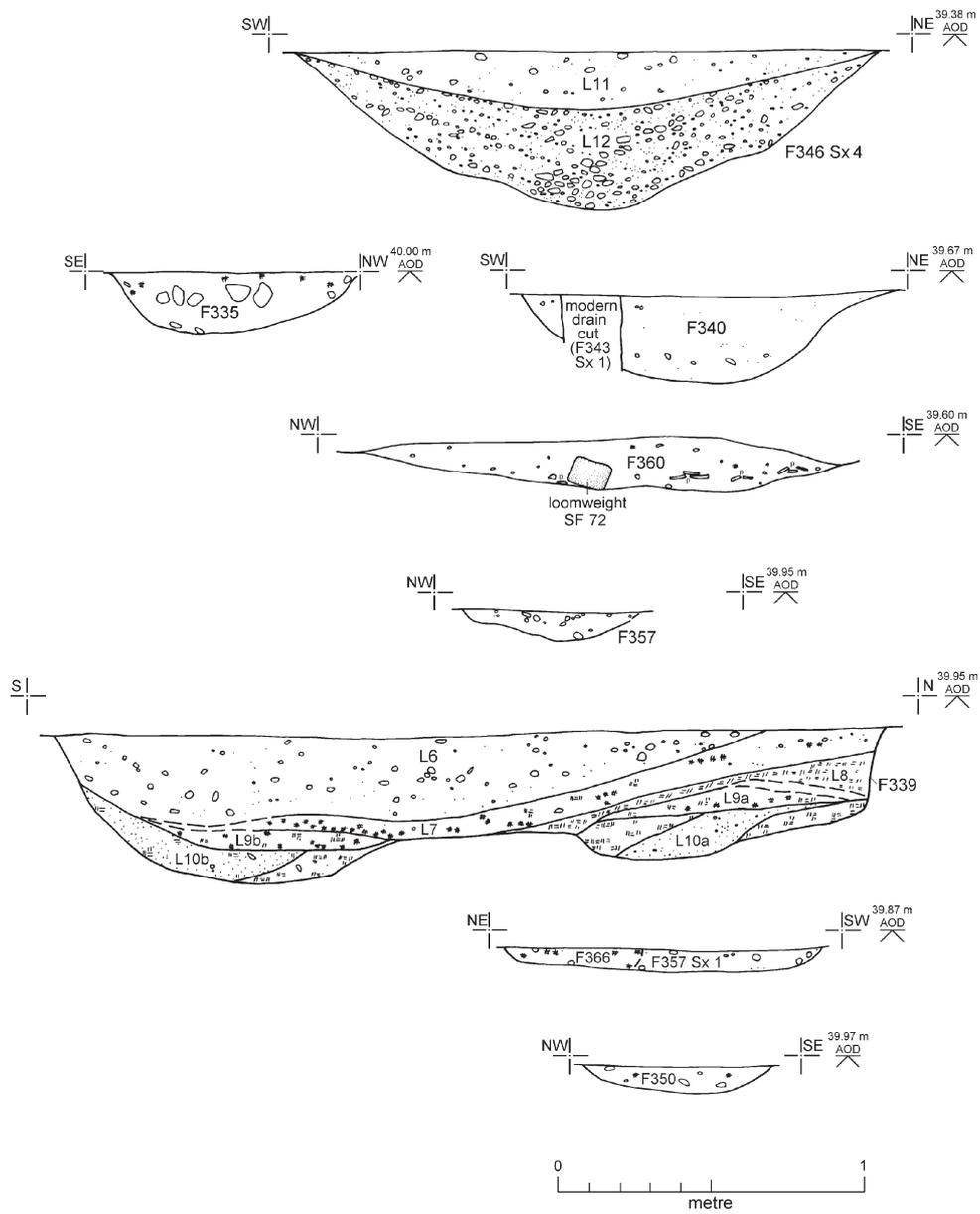


Fig 14 Area G: Roman ditches (F346 Sx 4, F347 Sx 1), prehistoric pits (F335, F340, F360), Roman pits (F339, F357, F366), and Roman post-hole (F350) - sections.

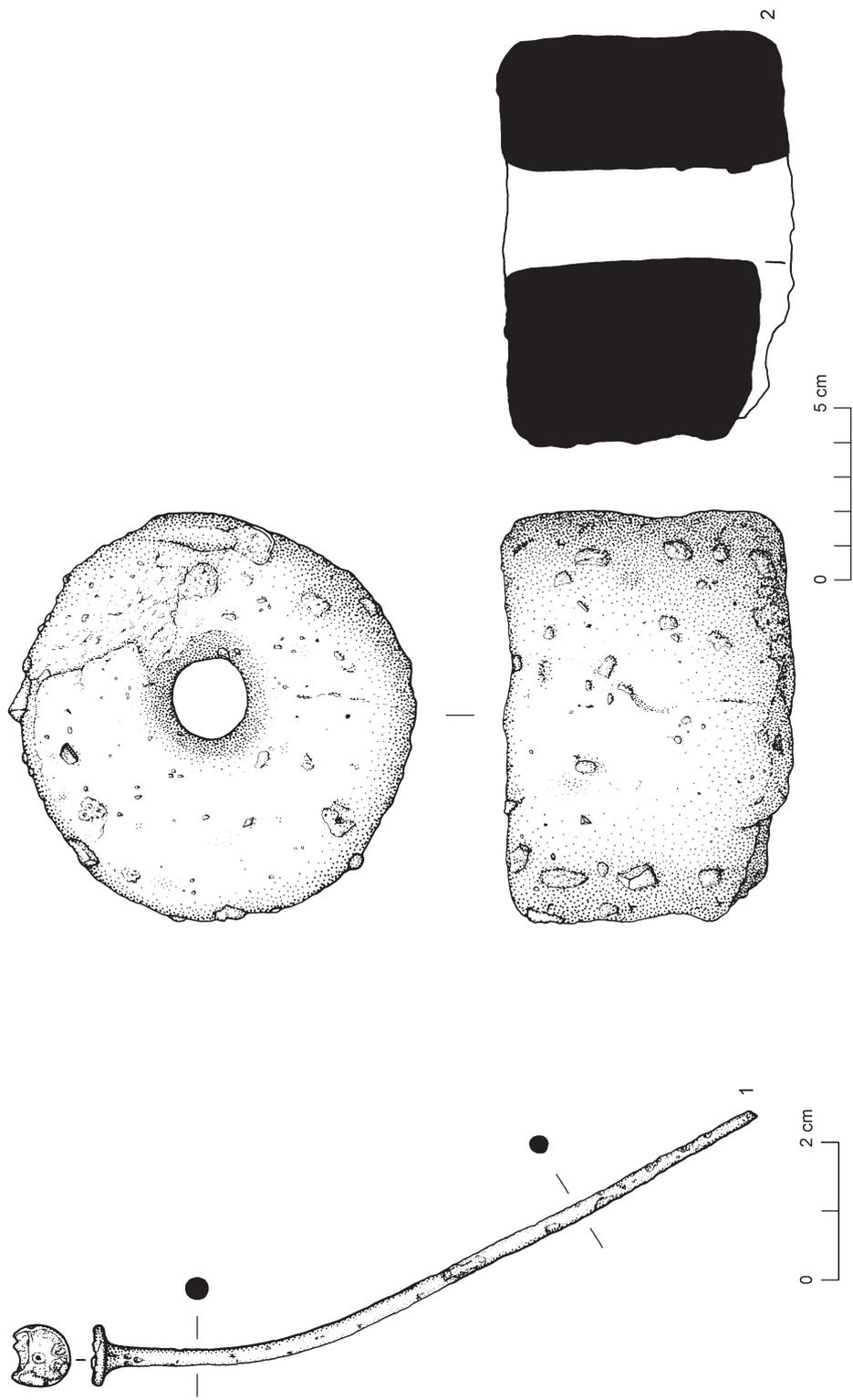


Fig 15 Bronze Age small finds (no 1 scale 1:1, no 2 scale 1:2).

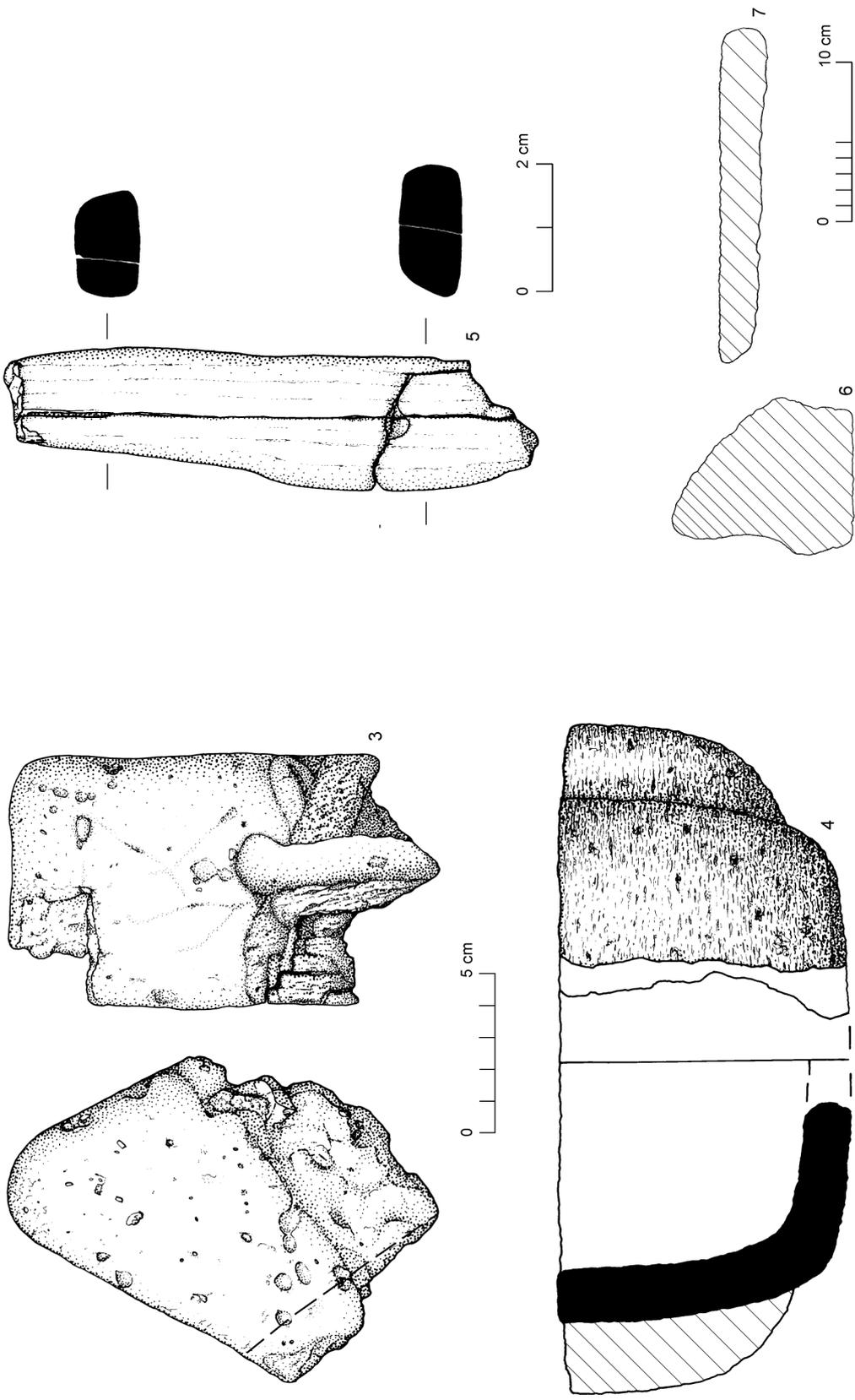


Fig 16 General small finds (nos 3-4 scale 1:2, no 5 scale 1:1, nos 6-7 scale 1:4).

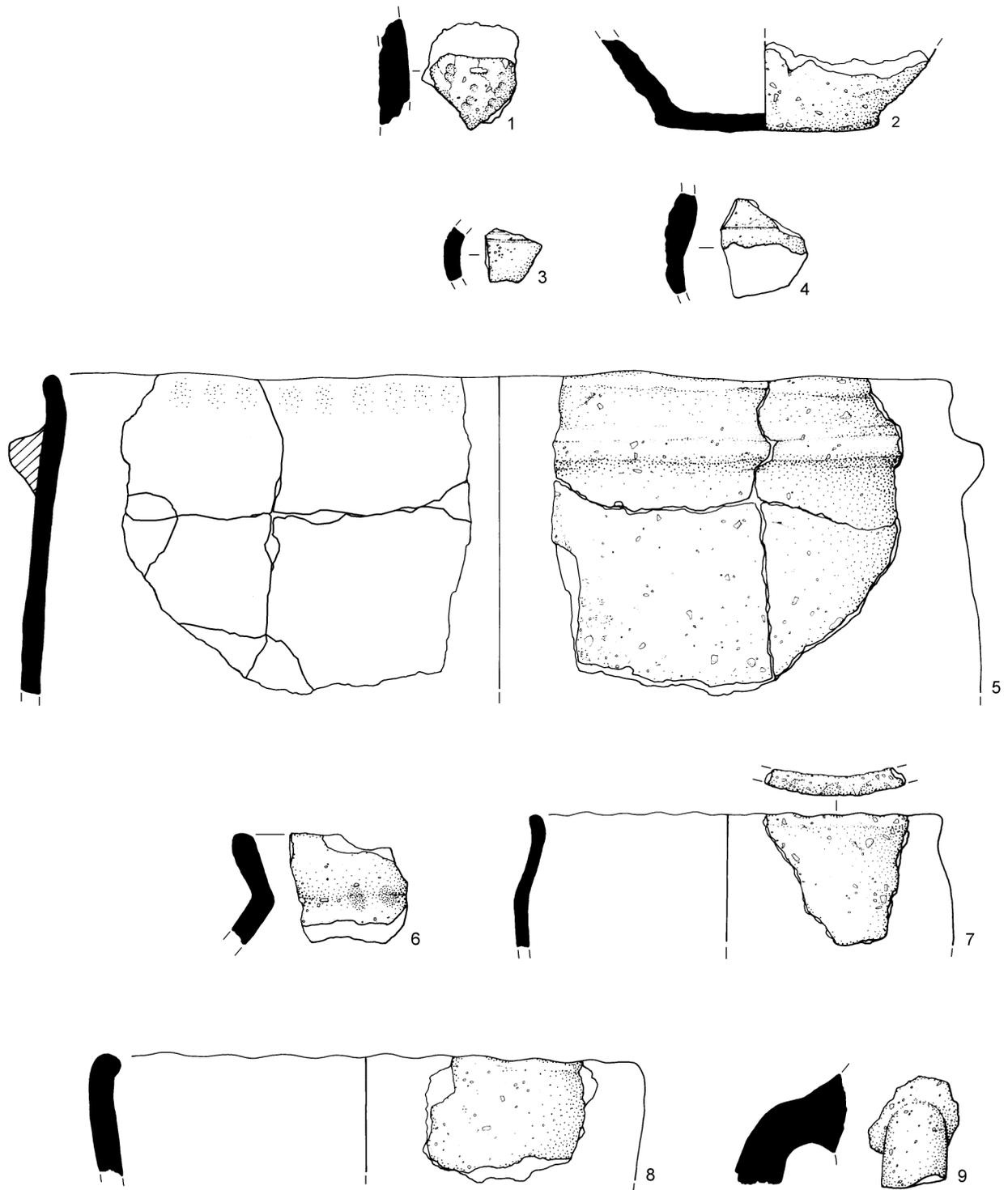


Fig 17 Prehistoric pottery (scale 1:4).

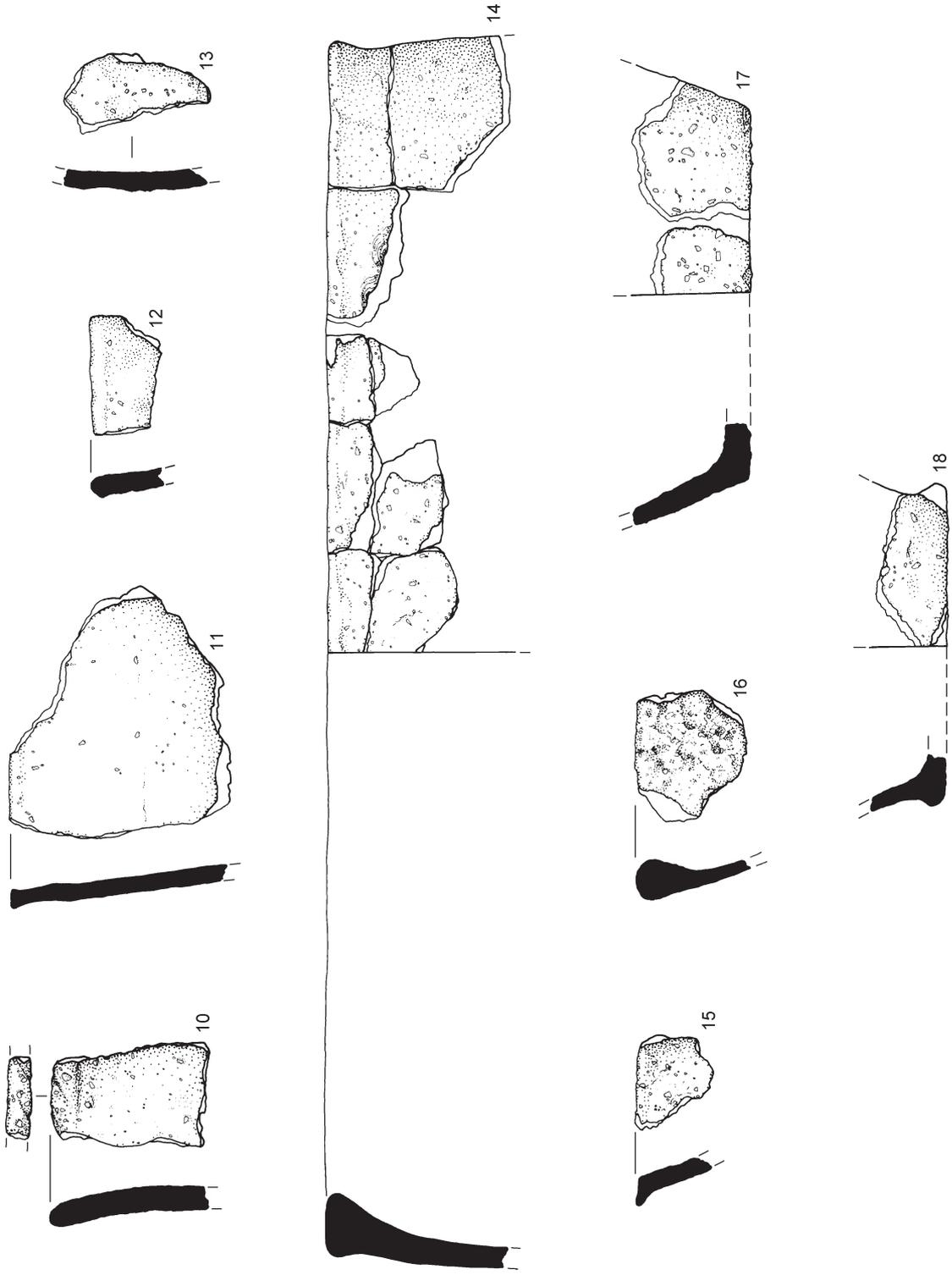


Fig 18 Prehistoric pottery (scale 1:2).

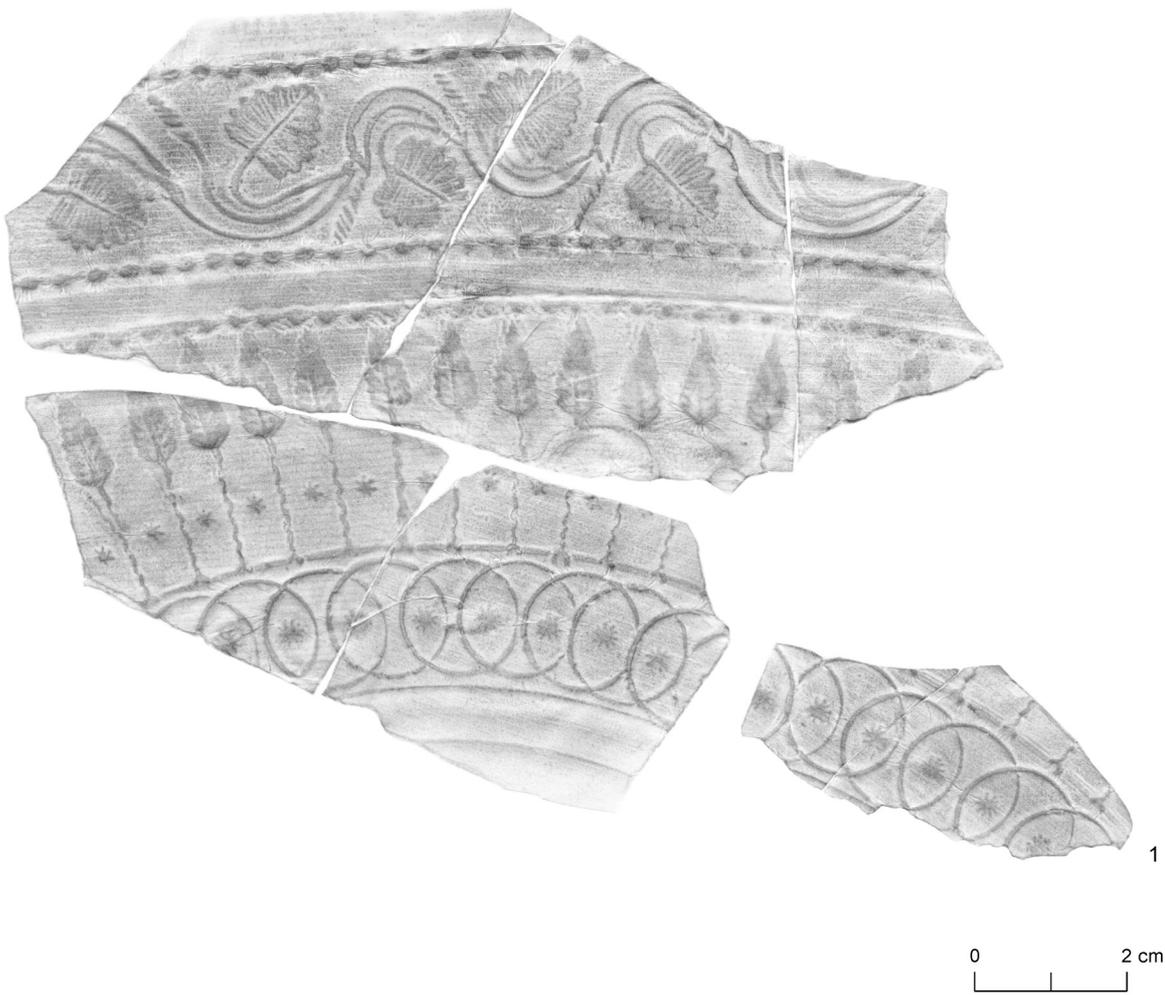


Fig 19 Decorated South Gaulish samian (scale 1:1).

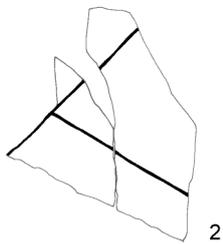
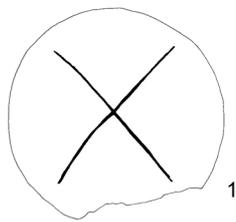


Fig 20 Graffiti on Roman pottery.

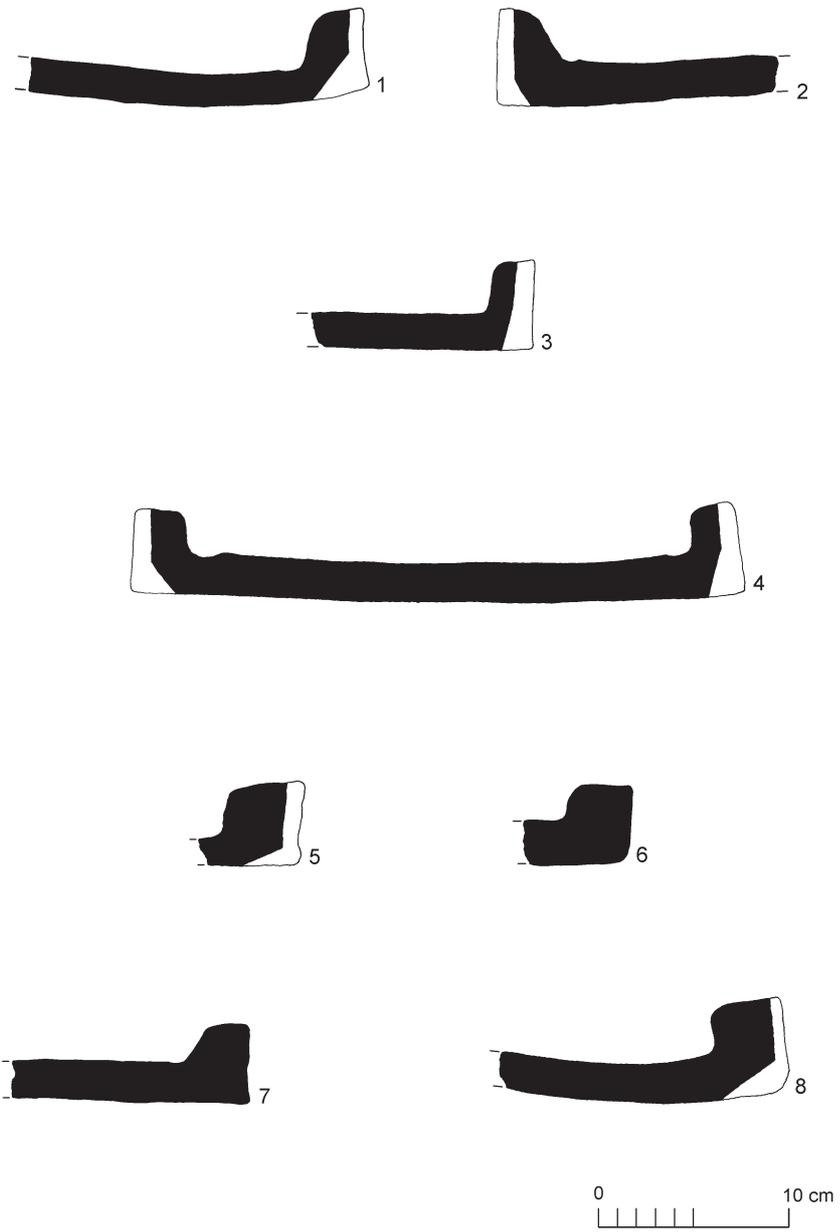


Fig 21 Profiles of Roman tiles from the oven F329 (scale 1:4).

Essex Historic Environment Record/ Essex Archaeology and History

Summary sheet

Site address: Stage 4 western extension, Birch Pit, Maldon Road, Colchester, Essex	
Parish: Birch	District: Colchester
NGR: TL 924 194 and TL 919 191	Site code: CAT project code - 08/10f Museum accession code - COLIM 2004.316 ECC HEM code - BIBP 08
Type of work: Excavation	Site director/group: Colchester Archaeological Trust
Date of work: 9th October-4th November 2008	Size of area investigated: 3.4 hectares and 0.8 hectares
Curating museum: Colchester and Ipswich Museums	Funding source: Developer
Further seasons anticipated? Yes	Related EHER nos: 11548, 11577, 11582, 11924
Final report:	CAT Report 523 and summary in <i>EAH</i>
Periods represented:	Neolithic, Middle-Late Bronze Age, Roman, medieval and post-medieval
<p>Summary of fieldwork results: <i>Archaeological recording and excavation were carried out at Birch Pit in 2008, ahead of the expansion of the extraction area on the western side of the quarry-pit. These follow on from excavations carried out between 2004 and 2007. The 2008 excavation was undertaken adjacent to the north and west of the areas excavated in 2007, in two areas (Area F and Area G) which were divided by an extant hedge line. Area G included part of an area showing a surface spread of Roman finds denoting a Roman settlement.</i></p> <p><i>The prehistoric period is represented by finds of ?Mesolithic, Neolithic, Middle Bronze Age and Late Bronze Age date. A few worked flints are of ?Mesolithic and Neolithic date, while a few sherds of pottery from one small pit can be dated as probably Neolithic. The finds of Middle Bronze Age and Late Bronze Age date are more substantial. Primarily of Late Bronze Age date, these finds were associated with a small number of pits and included pottery, a whole drum-shaped loomweight and a complete disc-headed bronze pin.</i></p> <p><i>The northern part of a Late Iron Age and Roman enclosure was located in Area G. In the Late Iron Age there was an entrance here. A driveway was added to the north side of the enclosure in the early Roman period.</i></p> <p><i>Within the enclosure was an oven with a tile-built flue. The oven was situated back from the edge of the enclosure ditch sufficient for an internal bank to have been present. Some probable early Roman sherds are associated with the oven structure while sherds from the abandoned fill can be dated to the mid-late and the late Roman period. The pieces of roof tiles used in its construction indicate a date after the mid 2nd century. Close to the oven was a large pit of late Roman date containing charcoal-rich layers which may be associated with the oven.</i></p>	

There were several field ditches to the north and east of the enclosure, which probably originated in the early Roman period. The field ditches were all aligned approximately north-south, and there were no east-west sub-divisions indicating fields or paddocks.

The most surprising aspect of the excavation was the location of an area of medieval settlement and early post-medieval features in Area F. The existence of the medieval site was not known. The medieval archaeology consists of what are interpreted as two or more small enclosures, defined by shallow ditches and post-holes (some probably representing fencing) on the west side of a ditched driveway. These enclosures probably relate to stock management. Some of the features could represent parts of one or more buildings, but there was no certain evidence for buildings or other structures. Several large medieval pits appear to post-date one of the enclosures. The pottery from the medieval features spans the period of the 11th/12th to 15th centuries, but most is of 12th- and 13th-century date. It is not clear if the quantity of early dated pottery represents a separate or more intensive phase of the settlement.

A small number of pits and ditches of post-medieval date were located in a small part of Area F. Some of these, dated to the 16th-17th/18th centuries, relate to the layout of the medieval features and settlement probably continued here into the early post-medieval period. Some of these ditches join ditches which form part of the modern landscape. A significant change in the landscape took place in the 19th-20th centuries with a division into larger arable fields.

While there is no direct continuity, the overall orientation of the post-Roman and modern field system, as represented by the ditches, is similar to the orientation of the land divisions of the Roman period. There appears to be some continuity between some of the medieval and early post-medieval features, and also with parts of the modern landscape, which is reflected in some of the modern field boundaries.

Previous summaries/reports: CAT Report 383, CAT Report 485

Keywords: Bronze Age, Late Iron Age, Roman, medieval, post-medieval

Significance: **

Author of summary:
S Benfield

Date of summary:
August 2010