ANCIENT BUBBENHALL

Excavations at Glebe Farm Quarry and Waverley Wood Quarry, Bubbenhall, Warwickshire, 1992 - 2009

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SUMMARY

A programme of archaeological observation and excavation at two adjacent gravel quarries in Bubbenhall, Warwickshire, was carried out between 1992 and 2009 on behalf of Smiths Concrete Ltd.

At Glebe Farm Quarry evidence for Neolithic activity included a broad scatter of flintwork and occasional pottery sherds whilst an Early Bronze Age Food Vessel sherd was recovered from a pit.

Iron Age activity included a pit alignment and adjacent pit group as well as a sequence of linear ditches which were probably associated with a settlement otherwise only evident as residual pottery sherds in Roman features.

A poorly preserved late 1st-2nd century Romano-British farmstead included two roundhouses and other settlement features. In the 3rd century a further circular building was used alongside a rectangular building and a large open sided structure which were associated with a pottery kiln and field system. Quern stones and carbonised wheat and barley indicate an arable economy, although the absence of any surviving organic materials should not preclude the possibility of a mixed agriculture at the farmstead which was abandoned by the early-mid 4th century.

The pottery kiln represents an outlier to the industry identified at Wappenbury and Ryton-on-Dunsmore whose products were distributed across central Warwickshire and probably into Leicestershire and Northamptonshire.

Limited evidence for Anglo-Saxon activity in the area derived from a few pottery sherds found intrusively in a pit under a hedge line, and the entire site was overlain by medieval ridge and furrow field systems.

An evaluation of a proposed eastern extension to the adjacent Waverley Wood Quarry in 1996 followed by observation of topsoil stripping revealed only sparse archaeological remains. One feature however contained an interesting group of early – mid-1st century AD pottery suggestive of a late Iron Age/early Roman settlement in the vicinity.

1 INTRODUCTION

In 1988 Smiths Concrete Ltd applied for permission to extend their gravel quarry at Glebe Farm, Bubbenhall (Figs 1-2) and commissioned an archaeological survey of the proposed site prior to work being undertaken. The survey took the form of three days of fieldwalking in November 1988, during which no evidence of archaeological activity in the area was found (Warwickshire Museum 1989). It was decided, nonetheless, to recommend further examination of the area after the topsoil had been removed, as the surviving material remains from certain periods were likely to be so slight as to be missed by fieldwalking, and it was possible that early features had survived at a greater depth than that affected by recent ploughing.

A programme of fieldwork was therefore commissioned from Archaeology Warwickshire (formerly Warwickshire Museum Field Archaeology Projects Group), to include the observation of topsoil stripping from the extraction area. This was carried out in agreement with Smiths from September 1992, intermittently over a period of six years with further work undertaken between 2005 and 2009 (Palmer and Jones 1993; Rann 2005; Jones 2006, 2008; N Palmer 2007). Several areas of archaeological importance were identified during this work, including the remains of Iron Age and Romano-British settlement. Open area excavations, again financed by Smiths Concrete Ltd, were conducted over the most promising parts of the area of the proposed gravel extraction, the main seasons taking place in 1993, 1994, 1995, 1997 and 2009. This was supplemented by trial trenching to locate the extent of archaeological remains.

Work was undertaken in the Waverley Wood Farm area in 1996 and 1998. This report presents the results of the combined programme from 1993 to 2009.

2 LOCATION AND TOPOGRAPHY

The investigated sites were spread out over a large area in two distinct quarries (Fig 2), known from the previous landholdings as Glebe Farm Quarry (SP 3658 7189) and Waverley Wood Farm Quarry (SP 3650 7110). The quarries encompassed an area of approximately 100ha.

The sites were located on the gently sloping glacial Baginton Sand and Gravels overlying Mercia Mudstone at around 80-84m aod, overlooking the Avon valley to the north (BGS 1984). In the south-east part of the site the gravel was covered by Thrussington Till. The River Avon lies some 600m northwest of the northwest side of the quarry. There was a considerable variation in the geological natural subsoils across the investigated area. Towards the north-western edge of Glebe Farm Quarry, where the majority of the archaeological features were recorded, the natural was a reddish-brown clay interspersed with occasional patches of orange/red sand and grey gravel. The north-eastern part of the quarry was a fine sand. Further to the south east the orange/red sand became prevalent though changing to a tan colour or a greenish brown in places. Deep features cut through the clay to the north-west encountered gravel underneath, while further to the south-east the sand overlay the reddish-brown clay: the clay itself overlay gravel in the deepest features. Thus the overall sequence was a band of gravel overlain by bands of sand of varying hues in places overlain by a band of reddish brown clay.

3 AIMS AND METHODS

The archaeological strategy was to a large extent defined by the working practices and timetable of the gravel extraction company, and had to be based on flexible response, as no features were visible on the surface prior to topsoil stripping. This was carried out by a mechanical excavator under archaeological supervision using a toothless ditching bucket. The depth of the ploughsoil varied between 0.30-0.70m, the greater depth being recorded where it filled furrows from the medieval field system which covered the sites. The majority of the medieval plough furrows were fully emptied, and the ploughsoil removed down to the surface of archaeological deposits or geological natural, whichever appeared the sooner.

Following the recognition of archaeological features the areas (Fig 3) were cleaned by hand and all features planned, photographed and recorded using the standard Archaeology Warwickshire system. Only selective excavation of features took place, with linear features being sectioned at intervals (see Fig 4).

The aim of the excavation was to establish the extent of the archaeological remains in the area to be quarried and to examine their nature, date and significance prior to their total destruction by quarrying. The archaeological features (pits, postholes, ditches etc) were not always easily recognised as they were often filled with material little different from the surrounding geological natural.

All features cut geological natural unless otherwise stated. A number of features on closer investigation turned out to be of geological origin, or the result of root action or animal (most likely rabbit) disturbance. These have been mentioned in the text only where they impinge upon recognisable archaeological features or where there is some doubt as to their interpretation.

It would seem unlikely given the loose and fluid nature of the geological natural that negative features, once abandoned, would have remained open for any great length of time, so pottery (at least from the lower fills) could be expected to give a reliable *terminus post quem* for the abandonment of the feature, unless it had been disturbed by animal burrows, roots, or later ploughing, which might particularly affect the uppermost fills. Unfortunately few features had direct stratigraphical relationships. Most features only cut natural and were truncated by ploughing and erosion, though the amount of stratigraphy thus lost was difficult to quantify. At Glebe Farm, the features were better preserved to the west of the excavated area due to the upslope area to the east having suffered more from erosion through recent ploughing for the cultivation of wheat. There was only one layer recorded from all the excavated areas. This has made it difficult to discern a sequence of phases and to establish a relative chronology, so that the phasing and dating of features is often very tentative.

The majority of features encountered on the site were relatively shallow and had the rounded profiles typical of features cut into gravel sites. Detailed descriptions are only presented here if thought to be significant. Also, the majority of features were filled with brown sandy loam, or very similar variations, so detailed descriptions of individual fills have been omitted unless thought to be particularly significant, although they can be found in archive.

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

Significant archaeological remains have been recorded in the Bubbenhall area (Fig 1). Gravel extraction at Waverley Wood Farm and Wood Farm (Warwickshire Historic Environment Record MWA 7249), has intermittently exposed channel fills cut into the underlying Mercia Mudstone bedrock below the Thurmaston Member (Keen *et al* 2006, 2). These channels have been shown to belong to a pre-Anglian river known as the Bytham, which flowed from the Cotswold escarpment past Coventry and Leicester to join the Thames in East Anglia and draining much of the midlands. The river has long since been obscured by successive glacial episodes with the more recent fluvial deposits of the Rivers Avon and Sowe overlying it. This site is therefore now recognised as nationally important. A total of 70 stone artefacts have been recovered from the site including six of andesite, one flint, one rose quartz and 62 of

quartzite and it has been suggested that such a concentration was the result of fluvial action contemporary with the presence of humans who were making tools nearby. The assemblage includes a wide range of tools and working pieces in a variety of technologies and skill-levels, and has important ramifications regarding the precognitive processing abilities of early man. It is considered highly likely that the Bytham was one of the routes along which early hominins entered the region (Lang & Keen 2005).

Environmental data recovered from the ancient sediments included teeth and bones of straighttusked elephant (*Palaeoloxodon antiquus*), a tooth of a horse (*Equus ferus Boddaert*), a horn core of cf. Bison sp., the toe bone of a large cervid (deer), (possibly *Megaloceros giganteus*), shrew, water and pine voles and mole. Examination of the molluscs, ostracods, beetles, pollen and macrofossils preserved in the sediment provide a detailed picture of the surrounding landscape, showing that the river had meandered across a broad flood plain leaving abandoned loops that filled gradually with sediment. Reed swamps grew at the river's edge separated from the distant grassland by water meadows. Spruce and pine grew on higher ground at the edge of the plain. The climate was generally little different to that of today although there was a period of arctic-like severity (Shotton *et al* 1993).

Other archaeological finds known in the vicinity are very much younger and post-date the deposition of the Bubbenhall Sand and Gravel and the later emergence of the River Avon. Fragments of flint tools dating from the Mesolithic period (*c* 8500-4000 BC) were found residually in the 1960s and 1970s on excavations of later period sites to the west of Ryton Wood (HER MWA 6040; Bateman 1978). Further Mesolithic flint scatters have been found across Dunsmore, the raised gravel plateau that lies between the Rivers Avon and Leam to the east of Bubbenhall (Palmer 2002), although they are not common in this part of the county (Palmer forthcoming).

Evidence for Neolithic activity (*c* 4000-2500/2200) is also uncommon in the area, although a possible cursus of probable early/middle Neolithic date (*c* 4000-2900 BC) is implied by a pair of parallel ditch cropmarks at Ryton-on-Dunsmore (HER MWA 4280). Otherwise the record consists of occasional finds of flint axes (HER MWA 6057, MWA 5511) and other objects (HER MWA 5512) found on later period sites in the area (Bateman 1978).

There is no known Early Bronze Age (*c* 2500-1400 BC) activity in the immediate area, but the excavations at Ryton Wood revealed a middle Bronze Age (*c* 1400-1000 BC) cremation cemetery (*ibid*). The cemetery site may have retained its significance over a considerable time span as it was overlain by a sequence of inter-cutting enclosures during the mid-late Iron Age (*c* 400 BC – 43 AD) (Bateman 1978; Hingley 1996), perhaps as a ceremonial site (Palmer 2010a). A number of the cropmark enclosures and linear features in the vicinity probably indicate the settlements, farms and boundaries of the local population during the Later Bronze Age and Iron Age (c 1000 BC – 43 AD) (HER MWA 5352, MWA 4895, MWA 2836, MWA 5353, MWA 2835). A pair of intersecting pit alignments (HER MWA 2830) to the north of Ryton Wood probably reflect an initial phase of land division that dates from the early-middle 1st millennium BC (cf Palmer 2002).

The Fosse Way runs only 6 kilometres to the south of the quarry and parallel to the valley of the River Avon (Fig 1). Between the two a series of small rural settlements and farmsteads dating to the Roman period have been identified. Salvage recording west of Ryton Wood recovered Romano-British material including a coin, a brooch, quern stones and Samian

pottery (HER MWA 5686; Bateman 1978). A number of cropmark sites have also been confirmed as Romano-British by associated surface finds (HER MWA 4718, MWA 5686), others by partial excavation (HER MWA 4719, MWA 2839) including (see below) the site of a pottery kiln (HER MWA 4278). Further indications of Romano-British activity are provided by chance finds, such as a 4th century coin of the Emperor Constans from Bubbenhall village (HER MWA 5105).

The immediate area had its own local ceramic tradition in the Romano-British period, which can now be referred to as the Wappenbury / Ryton-on-Dunsmore / Bubbenhall industry as kilns producing similar greywares have been found in all these locations (see Evans below). A number of the other local cropmark sites are undated, although their forms suggest that most of them will also belong to the later prehistoric or Romano-British periods (HER MWA 2830, MWA 2835, MWA 2836, MWA 4717, MWA 4895, MWA 5353, MWA 5685; Webster and Hobley 1964). These are also shown on Figs 1 and 2.

By the time of the Domesday Survey of 1086 the modern pattern of parishes in the area had effectively been created. Bubbenhall's population at this time has been estimated at about 45 (VCH 1904, 329), and was held from Robert of Stafford by Alvric, who had also held it during the reign of Edward the Confessor. This entry shows that the settlement was of at least late Anglo-Saxon origin, though no other evidence for Anglo-Saxon settlement has been found. There are at least two claimants to the site of the water mill mentioned in the survey (MWA 2826, MWA 2841). The only above ground structure of medieval date to survive is the thirteenth century Parish church with its 12th-century font and 14th-century tower.

The Domesday Survey recorded abundant woodland in the parish, and most of the surviving woods in the area are of ancient origin (Bubbenhall Wood, Ryton Wood, Wappenbury Wood and Waverley Wood, Fig 2). Traces of the medieval field system around the village survive as ridge and furrow, which have been noted as earthworks (HER MWA 2833) and from excavation (HER MWA 7247), but much larger areas are visible on a recent air photograph (Geonex 160 92 013; 1:25000 Vertical, 1992).

The medieval open fields of Bubbenhall survived until 1726 when they were enclosed (VCH 1951, 46). The earliest surviving map of Bubbenhall (WRO Z414U) was drawn at this time. The pattern of farms and fields established after enclosure survived with little change down to the establishment of the Glebe Farm and Waverley Wood Quarries. The earliest detailed post-enclosure plans of the area, those of the Ordnance Survey 1st edition mapping of 1886, show a landscape which is almost identical to that shown on the 1:10,000 mapping of 1987, apart from the gravel quarries and the removal of a number of field boundaries.

5 THE EXCAVATIONS

The topsoil stripping across the quarry was regularly observed and the archaeological deposits identified were demarcated before a strategy for their recording could be compiled.

The first area examined was a small site recorded at Glebe Farm Quarry during topsoil stripping in 1992, referred to here as Area D (Fig 2). Although this produced no stratified finds, a hearth consisting of burnt pebbles and other features were excavated, proving that archaeological features survived across the site. On the basis of this, a larger apparent

concentration of archaeological features which had been revealed by topsoil stripping was examined in 1993, here referred to as Areas A and B forming an elongated, somewhat irregular area measuring some 80m x 10-18m, oriented south-west/north-east. Area C (1993) was initially conceived as another such large area, but due to a paucity of finds or features observed eventually consisted of two small separate sites to the north east of B, referred to here as C1 and C2 (see Fig 2). Area E was demarcated to investigate a large isolated feature to the south of Area B. The irregular and much larger Area F some 130m to the south of Area D was protected in order to investigate a group of features noted there.

A series of trial trenches (Evaluation Trenches 2-13, Evaluation Trench 1 was subsumed by Areas A and B) were opened up in 1993, each 25m long by 1.6m wide, the topsoil being removed by JCB. The excavations in Areas A and B had revealed the existence of Romano-British settlement activity while Areas C-F unearthed further evidence of dispersed activity in the area. The main purpose of Trenches 2-13 was therefore to establish how far east the settlement extended, if any associated activity of the Roman period could be identified and whether archaeological evidence for any other period was present in the area affected by future gravel extraction. The results from the trial trenches have been conflated with the later Area excavations (G and H, see below) which were opened to investigate the revealed features.

The irregular Area G was excavated in 1994 to investigate a group of features directly to the south of Area B. The larger Area H (1995) was roughly trapezoidal in shape, aligned north-west/south-east and measuring some 60m in length by 40m wide at its north west end and *c* 37m wide at its south east end. It was situated against the south-east edge of Area A/B stretching to within *c* 4m of the latter's north east end. Area J (1997) was also roughly trapezoidal in shape, aligned south-west/north-east and measuring some 62m in length by 31m wide at its north west end and *c* 36m wide at its south east end, the variation in width being due to the absence of any features beyond an apparent boundary ditch. It was situated parallel to and *c* 7-9m north east of the north east edge of Area H.

Observation was continued intermittently at Glebe Farm Quarry during 1997 and 1998, without important new finds being made. Between 2005 and 2009, archaeological observation was undertaken during the phased machine removal of the topsoil across the north-eastern extent of Glebe Farm. In September 2005 a single item of worked flint was recovered along with a small abraded sherd of Iron Age pottery and a couple of Romano-British sherds. Ridge and furrow was also recorded (Rann 2005, 87). In 2006 an undated pit which contained heat-cracked pebbles was examined, a single flint was recovered and evidence for ridge and furrow was noted (Jones 2006, 85). In the 2007 season a sizeable flint scatter was recovered along with a miniature Iron Age pot (N Palmer 2007, 67). In 2008 an undated ditch and further evidence for ridge and furrow was recorded (Jones 2008, 61).

Observation of topsoil stripping in May 2009, revealed a significant range of archaeological features which proved extremely difficult to define in the soft sandy soil. The near invisibility of these deposits bare testament to the possibility that other significant deposits may have been missed in the work undertaken between 2005 and 2008. However, it must be stressed here that if such deposits did exist and were subsequently destroyed without record, then they were very ephemeral and almost certainly extremely well camouflaged.

A series of trial trenches dug in 1996 at a proposed quarry extension at Waverley Wood Quarry (see Fig 1) revealed a single feature containing an interesting group of 1st century pottery. Otherwise this area was lacking in significant archaeological remains, and no more excavations were undertaken, though observation continued in 1998.

Phase 1 Neolithic and Early Bronze Age

Evidence for Neolithic activity in the form of humanly struck flints, was found across Glebe Farm in Areas B, G, H, J and K as well as in the areas observed in 2006-2008 (see below).

AREA H (1995) (Fig 5)

Several Neolithic pottery sherds (see Gibson below) were found residually in Phase 2 features.

AREA K (2009) (Figs 3 & 4)

A single feature in Area K was certainly attributable to this phase whilst a spread of residual pottery and flintwork implies activity of some consequence.

Pit **2558** was a shallow oval scoop 0.13m deep and 1.20m x 0.99m wide (Fig 4/AA). Its fill of dark reddish-brown sandy loam (**2559**) yielded a probable Early Bronze Age Food Vessel rim sherd (Fig 33/2). Adjacent pit **2560** (Fig 4/AA) yielded a few heat-cracked pebbles (hereafter HCP) and may have been contemporary. This pit had steep sloping sides 0.80m wide, a rounded base 0.55m deep and a widened rim 1.4m in diameter. It was filled with dark reddish-brown sandy loam with 5% gravel (**2561**).

Phase 2 Iron Age

Substantial evidence for Iron Age activity was found primarily in Areas H and K, but was also found sporadically in Area C2 as well as residually in Areas A and B.

PHASE 2A AREA H (1995)

A group of three ditches in Area H seem likely to represent a bounded trackway leading to, or from, a site either to the north-west, or, to the south-east, of the area examined. The features produced predominantly Iron Age material as well as a few sherds of residual Neolithic pottery and had leached and indistinct fills. The ditches yielded prehistoric pottery from their uppermost fills despite containing intrusive Roman and even in one case medieval sherds: the soft sandy ground the most likely explanation. The ditches which were aligned NW/SE had each been re-cut on at least one and possibly two occasions.

Ditch 2331 (Fig 5)

At the north-west end of the area examined, ditch **2331** (Fig 6/F, 6/G) (formed a curving L-shape aligned north-west to south-east then turning 90 degrees to the SSW where it had an uncertain relationship with ditch **2334** (Fig 6/H). An initial probably U-shaped cut *c* 2.3m wide and up to1.00m deep (Fig 6/F) at the north-west end had a flat bottomed slot cut *c* 0.18m deep into its the base. This section of the ditch produced 10 sherds of Iron Age pottery; the largest concentration from the ditches. The middle stretch of the exposed ditch (Section G) was cut with a deep narrow base although the two re-cuts were much more shallow. The second re-cut may have been intentionally backfilled, as also seems to have been the case with the other ditches.

Ditch 2329 (Figs 5 & 10; Plate 1)

Ditch **2329** (Fig 6/B, 6/C, 6/D, 6/E) lay some 4m to the south of **2331** having extended 28.5m south-east from the northernmost corner of Area H. Its north-east end was obscured a later feature **2333** (Fig 6/B) and the south-western edge had been re-cut (2329/2). The ditch had moderately steep sloping sides to a sub rounded base *c* 0.75m deep and was filled with a succession of sandy loam fills. The original ditch had been re-cut twice with other possible localised re-cuts probably necessitated by differential silting along its length. However, the final re-cut appears to have been deliberately backfilled. This latest fill produced mid-Iron Age pottery and also two Roman greyware sherds and a single medieval sherd, which are certainly intrusive.

Ditch 2334 (Fig 5)

Ditch **2334** (Fig 6/H) extended at least 30m from the south-east ends of both **2329** and **2331**. Its full extent was not recognised due to the homogeneity of the fill and the surrounding natural sand. It was at least 3.6m wide and originally at least 1m deep and it produced an intrusive Roman greyware sherd.

Other features (Fig 5)

Iron Age pottery was recovered from **2302** (Fig 6/A), a small sub-circular pit in the extreme southern corner of Area H. This was a round bottomed feature 0.41m-0.44m in diameter and 0.09m deep. No associated features were located within the vicinity though Iron Age pottery was recovered from the ploughsoil and topsoil in the area (**2201, 2201/1, 2200**) which may suggest the former presence of other features.

PHASE 2B AREA K (2009) (Figs 2 – 3)

This area included a pit alignment, a possible fence line and an area of settlement activity consisting of a shallow hollow and several pits.

Pit alignment (Plate 2)

A string of at least 37 closely spaced pits were aligned broadly east to west, stretching for some 108m across Area K. These features were indistinctly visible as very slight discolouration in the soft sand and as a result the alignment at either end was quarried away without record.

The pits appeared generally oval in plan, although many retained a rectangular (with rounded corners) appearance that it is thought likely that the oval shape was a result of weathering and erosion in the soft sand. The pits differed in size, the largest dimensions being 2.62 long by 2.45m wide and the smallest 1.01m by 1.0m; averaging 2.2m x 1.69m. The average depth of the 22 excavated examples was 0.58m although the shallowest was 0.28m and the deepest 0.76m.

Given the inherent instability of the sand into which the pits were cut, the surviving dimensions only reflect an eroded maximum; some revealed a weathering cone, evident as a flared rim above a steeper slope whilst others showed clear signs of slumped sides. Nevertheless the distance between the centres of the pits is a much less ambiguous statistic and can be directly compared with other excavated alignments. The range was between 1.60m and 5.0m averaging 2.88m.

The pits were filled with bands of sand and sandy loam indicative of relatively quick infilling from natural erosion and silting. None of the excavated examples revealed evidence for preferential infilling which might have indicated the presence of a former upcast bank.

Only two of the pits yielded Iron Age pottery (**2539** and **2568**) (Fig 4/B, 4/D), whilst two more (**2588** and **2596**) (Fig 4/G, 4/J) yielded both Roman and, coincidentally, residual Neolithic sherds. Of the seven pits that yielded heat-cracked pebbles (HCP), one was associated with Iron Age pottery (**2539**) and one with Neolithic pottery (**2674**) (Fig 4/R).

The frequency of Iron Age finds in such a short stretch of alignment is indicative of nearby settlement during the time in which the pits were still acquiring fill. By far the majority of the pottery and HCP came from the uppermost layers and as such does not indicate pre-alignment settlement in this Phase.

Possible fence line

A group of three small pits, possibly postholes, **2584**, **2586** and **2607** (Fig 4/T, 4/U, 4/V), were aligned along the southern edge of the pit alignment, **2584** and **2607** being 18m apart. It is quite possible that additional pits in this alignment existed but could not be discerned at surface level.

Activity area

Hollow **2576** (Fig 4/AB, AC; Plate 3) was irregularly shaped (5m x 4m) with an uneven base 0.18m deep. It was filled with a homogenous layer of reddish-brown sandy loam (**2577**) which yielded 42 sherds of pottery and charcoal from the uppermost 50mm across the hollow.

Some 10m to the WSW of hollow **2576**, amorphous hollow **2550** (Fig 4/AD) (1.60m long x 0.57m wide) had a flat base 0.10m deep and was filled with very dark greyish-brown/reddish-brown sandy loam (**2551**) and yielded 17 sherds of pottery.

Pit **2557** (Fig 4/X) lay 30m to the NNE of hollow **2576** and was sub-square (2.24m x 2.10m) with a flat base 0.15m deep, albeit truncated to the north by furrow **2563**. It was filled with dark greyish-brown/dark reddish-brown sandy loam (**2562**) which yielded four sherds of pottery.

Adjacent pit **2554** (Fig 4/Y) was sub-circular (1.3m x 1.4m) with moderately sloping sides and a flat base 0.23m deep. An earlier fill of dark brown/yellowish-brown sand (**2556**) some 0.10m thick was overlaid by dark greyish-brown sandy loam (**2555**) which yielded seven sherds of pottery.

Pit **2565** (Fig 4/W) was located just south of the western end of the pit alignment and directly underneath a post-medieval field boundary. It was sub-trapezoidal in plan (averaging 1.90m x 1.40m), albeit with rounded corners and it had near vertical sides and a flat base 0.64m deep (the drawn profile was somewhat arbitrarily positioned). Near vertical sides in such soft sand might suggest some kind of organic lining was used during the life of the pit although no actual evidence was recovered. A primary fill of dark greyish-brown sandy loam some 0.43m thick was charcoal-rich, particularly across the base (**2567**) being reminiscent of a dump of burnt material which also contained a range of both Late Iron Age and Romano-British pottery as well as fired clay (4.75kg), bone (28 fragments), and an iron object (SF 295). An overlying layer of dark reddish-brown sandy loam contained another mix of Late Iron Age and Romano-British pottery as well as a single sherd of Anglo-Saxon pottery, roof tile (1), fired clay (420g), animal bone (17 fragments), and occasional charcoal flecks (**2566**). In both contexts, the pottery bias is Iron Age and the Roman and Anglo-Saxon pottery is intrusive, presumably a result of lessivage through root action in the overlying boundary hedge.

Pit **2552** (Fig 4/Z), although undated, has been included within this phase due to its spatial proximity to the dated features. It was circular 0.58m in diameter with a concave profile 0.20m deep. It contained a single fill of dark greyish-brown sandy loam (**2553**).

PHASE 2C AREA C2 (1992) (Fig 7)

In Area C2, pit **33** (Fig 7/DL) yielded a single sherd of prehistoric pottery. Adjacent pit **24** (Fig 7/DO) and postholes **28** (Fig 7/DN), **42** (Fig 7/DM) and **25** remained undated but are grouped here by association. Gully **26** (Fig 7/DM) aligned north-east / south-west cut posthole **42**.

PHASE 2D MID-LATE 1ST CENTURY

Waverley Wood Quarry (1995) (Fig 8)

In 1995 a scheme to extend the Waverley Wood Quarry and Landfill site to the south west of Wood Farm and north east of Weston Fields Farm, centred around national grid reference SP

3685 7120, included some 4.1 hectares. An archaeological evaluation of the area in February-March 1996 with a series of 17 (30m x 1.6m wide) trial trenches revealed a single gully containing an interesting group of mid-late 1st century AD pottery.

The gully, **402** (Fig 8/A), located in Trench 4, was 5m long and had a gentle curve at its southern end. It was up to 0.70m wide with moderate-steep sloping sides to a flat base up to 0.30m deep. It contained 56 sherds of late Iron Age/early Romano-British pottery. The large size of the sherds and their un-abraded nature suggests that they had been deposited directly in the gully and that some activity may have been carried on here.

Phase 3 The Romano-British Farmstead (1992-3)

The main thrust of the 1992 and 1993 fieldwork was the excavation of a Romano-British farmstead and pottery kiln. Features were spread over an irregular area measuring some 180m south-west/north-east and up to 50m north-west/south-east. An early Romano-British phase (Phase 3A) was discernible, with at least one and possibly up to three roundhouses with associated pits, gullies and ditches. A later phase (Phase 3B) consisting of a series of rectilinear enclosure ditches and gullies was recorded, and the southern, eastern and northern extent of the farmstead was defined with some confidence. These ditches appeared to enclose areas of activity, including animal husbandry, clay extraction, a pottery kiln, and rectilinear structures. Very precise phasing is difficult due to the lack of stratigraphical relationships (most features cut geological natural only), however this has been attempted by the study of spatial distribution, feature morphology and pottery spot-dating. There was no evidence for continued occupation from the Iron Age, although as stated above, the axis of the settlement appeared to respect the Iron Age features.

PHASE 3A LATE 1ST-2ND CENTURY SETTLEMENT (Fig 10)

The earliest dated features were late 1st or early 2nd century AD. This consisted of at least two roundhouses and associated occupation features, representing a small, organically developed unenclosed farmstead.

Two sub-circular structures were identified in Areas B, G and H (Roundhouses 1-2). They were represented by curvilinear slots with projected diameters of *c* 9-11m, although in neither case did the complete circumference survive.

Roundhouse 1: Areas B and H (Fig 10; Plate 4)

Roundhouse 1 was defined by an intermittent slot with steep sides and a flat base (111) which described a roughly circular area *c* 10.5m diameter in Area B (Fig 11/O, 11/P) with an entrance to the east in Area H (**111, 2281**). In Area H (Fig 11/AN) it was recorded as a flat bottomed elliptical gully **2281** with shallow sloping sides which butt ended sharply to form the probable entrance facing east. The fill throughout was a very dark greyish brown sandy loam with occasional patches of charcoal, and contained pottery sherds. Set against the inner edge of the western side of the slot was a circular pit **160** (Fig 11/P) which contained 90 pottery sherds, almost certainly from a single vessel dated to the 2nd century. A possible

circular hearth **15**, containing stones and other burnt material was situated in the north-eastern half of the circuit. Hollow **23** contained a spindle whorl (Fig 31/4) and daub.

Two nearby features **2311** and **2322** (Fig 11/AQ) were possibly associated with the structure. **2311** was a small gully terminal which extended from the north-east some 1.5m and was by 0.47m wide with a rounded base 0.10m deep and filled with dark brown sandy loam. Feature **2322**, to the north, was 0.70m wide, at least 0.20m long, 0.08m deep and filled with brown/dark brown sandy clay loam containing occasional small pebbles and charcoal flecks.

North to south aligned ditches **2229** and **2228** (Fig 11/Z) extended across the entrance to Roundhouse 1, perhaps restricting the access to that from the south only. Their relationship remained uncertain but together they were 0.78m wide with moderately steep sloping sides to a flattish base 0.18m deep. Pottery dating from the 2nd century was recovered from the combined fill.

Posthole **2221** lay just 0.80m to the south-west of the southern end of **2229**. It was circular, 0.50m in diameter with steep sloping sides and a rounded base 0.14m deep. The eastern edge was disturbed by an irregular animal burrow **2220**.

2312 was an angular shallow sided feature, at least 0.70m across and 0.14m deep, with an irregular edge which is almost certainly root disturbance but which conjoins with a possible posthole **703** from Evaluation Trench 7. **2221** and **2312/703** may have been the remains of an associated fenceline.

A further sequence of gullies extended south-east from Roundhouse 1 and may have defined an additional activity area to the north. Gully **2239=2245** was replaced by gully **2335** (Fig 11/AC). The south-eastern end of gully **2339** and a small pit **2323** were obscured by an amorphous animal burrow, **2324**. Pit **2244** (Fig 11/AD) was an irregular flat bottomed feature with shallow sloping sides, *c* 1.30m across by 0.16m deep. Gully **2246** (Fig 11/AE) was an irregular feature 2.90m long and aligned NE/SW and may well have been associated with such an activity area.

Roundhouse 2 (Fig 10; Plate 5)

Roundhouse 2 was implied by two aligned curving gully slots **2255** and **2260** which formed the southern and western sides of a circular building perhaps 8 or 9m in diameter. Slot **2255** was 4.50m long, 0.40m wide by 0.12m deep (Fig 11/AF). The eastern end appeared to peter out as the surface gradually sloped away, whilst to the north-west end deepened into probable posthole **2256** (Fig 11/AG). The slot and posthole contained successive sandy loam fills which yielded pottery. Slot **2260** was 0.50m wide (Fig 11/AH) and 0.20m deep, but petered out to the north.

Clay extraction hollows and pits (Fig 10)

A group of shallow hollows appeared to be clay extraction pits, dug to exploit a seam of clay occurring at the surface in Areas B and H.

Pit **2259** (Fig 11/AH; Plate 6) abutted the western side of Roundhouse 2 in Area H and was polygonal in plan 2.8m by 2.5m wide by 0.21m deep. The earliest of its three fills contained a few clay lumps (**2259/3**). Pit **2277** (Fig 11/AL, AM), approximately 8.5m to the north-east, was also polygonal. It was 1.8m wide and at least 2.5m long although conceivably it extended into Area B as pit **12** (Fig 11/I).

Pit **2306** (Fig 11/AO) was an oval, at least 1.75m long by 1.3m and 0.13m deep (though it did not cut completely through the clay layer). It was cut to the north by **2226** (Fig 11/AO, Y) (1.35m by *c* 0.85m wide by 0.30m deep) and **2339** (Fig 11/Y) (0.6m diameter and 0.21m deep).

Pit **2234** (Fig 11/AA) was a polygonal feature 3.1m long by 1.25m wide and 0.24m deep, containing occasional small lumps of clay.

Hollow **2308** (Fig 11/Z) in the western corner of Area H was defined by an irregular patch of brown/dark brown very sandy loam 7m by 3m and up to 0.10m deep. It was cut by gullies **2228** and **2229**.

In Area B a morass of intercutting postholes and pits (**148-155**), (Fig 11/ R, S, T) and a possible gully **129** (Fig 11/Q) contained homogeneous fills and their relationships therefore remain unknown. Postholes **145** (Fig 11/Q), **149** (Fig 13/AW), **153**, and possibly the heavily disturbed **130** may have dated from Phase 3B.

Oven 128 (Fig 10)

Oven **128**, on the west side of clay extraction pits and postholes **148-155** comprised a sub-circular pit partly lined with burnt clay. It contained the most abundant charred plant remains from the site, consisting mainly of wheat chaff which may have been used as fuel in the oven (compare with the Phase 3B pit **1517** near the pottery kiln, see below and Monckton). A fragment of quern stone (SF 47) was also found in the fill of this feature.

Activity area (Area B) (Fig 10)

A group of features were located to the south-west of Roundhouse 1, including **100** (Fig 11/K), **101** (Fig 11/L), **102** (Fig 11/M), **165** (Fig 11/V), **166**, **167** (Fig 13/AX). The most substantial of these was pit **100** (Fig 11/ K), from which derived nearly 200 sherds, cleaned or partly cleaned grain, an iron ox goad (SF 46) and an iron hook (SF 74).

Oven or hearth **102** (Fig 11/M) was full of burnt clay and stones and also produced charred grain, most likely waste from food preparation (see Monckton below); it also contained fragments of mid-2nd century AD *mortaria.*

Boundary gully 11=417=1516 and associated features (Areas A & G) (Fig 12)

Gully **11** at the north-east end of Area A was aligned NW/SE and contained pottery of 1st-2nd century date. It aligned with **417/1516** in Area G (Fig 13/BF). This feature was broadly on

the same alignment as the Phase 2 Iron Age features. A short gully **55** (Fig 11/J) to the south of gully **11** also contained 1st-2nd century pottery and aligned with gully **92** and pit **173**.

Discussion

Roundhouses in the 'native' style dating from the 1st and 2nd centuries AD are known from Alcester, Tiddington, Crew Farm Kenilworth and from Salford Priors. These structures have survived as either penannular, or shorter 'banana' gullies, and occasionally as posthole buildings.

The sharp profiles and flat bases of the Bubbenhall slots seem unlikely to have remained if they had been dug as eaves-drip or drainage gullies, despite the fact that some occupation material (pottery, daub) was found inside them. They seem more likely to have contained wall planks, or given their widths (*c* 0.30-0.40m), upright posts which when removed allowed the slots to have filled with silt whilst preserving their profiles. These structures could also have had walls constructed of, or in-filled with, wattle and daub. The occurrence of daub in the roundhouse 1 gully **2281** (Fig 11/AN) and in the adjacent gullies supports this interpretation. Roofs were presumably thatched as there was no evidence for any other suitable material.

Little internal detail of any house was recognisable. The position of the door(s) remains uncertain, although in the case of roundhouse 1 an entrance to the south- east of slot **2281** in Area H is possible. The entrance to the roundhouse may have been on the south-western side of the structure. No convincing evidence for an external porch was recorded.

The circular feature (**15**) within the perimeter of roundhouse 1 may represent an hearth, and if this were the case it suggests that this structure at least was a domicile rather than for storage or other purposes. The pit (**160**) (Fig 11/P) containing the remains of a single greyware vessel set against the inner face of the wall of roundhouse 1 is also of interest if, as seems likely, it can be regarded as contemporary with the latter. The vessel may have been buried with its rim protruding, thus serving as, for example, a water repository within the round house, which would fit well with the presence of the hearth.

The occurrence of mid-3rd century pottery in ditches surrounding roundhouse 1 merely suggests that some of the drainage capabilities of the area were utilised even after the demise of the roundhouse.

The acidic nature of the Bubbenhall soils precludes the wide-scale preservation of organic material but the occurrence of at least some pottery-rich pits would seem to suggest that some pits were used for rubbish disposal. There was no evidence for grain silos as the pits were too shallow even taking into account some truncation through erosion and ploughing. A high proportion of the pits seem to have been dug for the extraction of clay, typically for construction (floors, walls, hearths, ovens, kilns etc) or for pottery making.

The postholes, hearth and rubbish pit to the south-west of roundhouse 1 seem to represent an ill-defined area of domestic activity, as do the morass of intercutting features to the north-east of roundhouse 1.

The evidence for this phase seems to represent an unenclosed farmstead, occupied in the late 1st century AD through to the late 2nd century.

PHASE 3B 3RD - 4TH CENTURY SETTLEMENT

Roundhouse 3 (Area G) (Fig 10)

Roundhouse 3 was located at the north-east end of Area G. It was defined by an elliptical gully *c* 0.09m deep and 0.30m wide (**1511**) (Fig 11/ X) aligned SE/NW, the north east terminal forming a butt end 0.50m wide. A further two postholes appeared to fall on the projected circuit (**1509** and **1508**). Posthole **1509** (Fig 11/ W), 3m to the north-west of **1511** was oval (0.55m x 0.40m by 0.15m deep). Posthole **1508** (Fig 13/BJ) was circular, 0.40m in diameter and 0.14m deep. All three features contained distinctive reddish brown fills.

Gullies associated with Roundhouse 1 (Fig 10)

Gullies 157, 17 and 117 skirted the northern side of the former Roundhouse 1 in a manner which suggests that they respected the area occupied by the building. There is no suggestion that it was in use. Gully **157** contained yellowish brown sandy loam fill quite different from the dark brown sandy loam fill of the earlier phase features. It yielded pottery dated to the early 3rd century. Gully **117** produced pottery dating from the mid 3rd century, while **17**, which appeared to cut **117**, produced pottery dating from the mid-late 3rd. These gullies produced a total of almost two hundred sherds.

Rectangular building 4 (Table 1) Fig 10 & 18

A sequence of features straddling Areas B and H define a rectangular building (13m x 8.80m) on a WNW/ESE axis dated by pottery (240AD+) from posthole **2298** (Fig 13/CF) and slot **2296** (Fig 6/B, E, 13/CG). Slot **21=2299** (Fig 13/AR) 3m and 6m long was *c* 0.52m wide by 0.14m deep with very steep sides and a flattish uneven base. Posthole **136** (Fig 13/AU) to the west of slot **21** formed the north-west corner and posthole **144** the south-west corner. Posthole **2291** (Fig 13/CD) formed the south-east corner. An internal partition was inferred from orthogonal slot **2297** (Fig 13/CE) which was 3m long *c* 0.50m-0.80m wide with steep sloping sides to a U-shaped base 0.05m-0.40m deep. A posthole at the junction of these slots (**2330**) (Fig 13/CG) contained a large fragment of *Tegula* (Plate VII) which may have acted as a post pad. A corresponding posthole in the southern wall line **2288** (Fig 13/ CC) contained a fragment of sandstone, which also possibly served as a post pad. In the eastern wall line, posthole **2298** (Fig 13/CF) aligned with the southern terminal of slot **2297** (Fig 13/CE) and to the south-west posthole **2279** (Fig 13/CA) may indicate the alignment of a further partition.

The building was constructed on a localised deposit of hard-packed clay, which although slightly raised, is thought to have been naturally occurring. This occurrence might explain why the structure survived in contrast to the truncated and eroded gravel surface.

On the south side of the building, posthole **2282** (Fig 13/CB-CE) lay on the internal dividing wall **2330-2297-2288** alignment. It lay next to a small stake hole **2283** and both could conceivably have been related to Building 4. Posthole **2290** lay within the footprint of Building 4 but need not have been related.

Structure 5 (Table 2) (Fig 10)

A series of postholes to the south of Building 4 seem likely to form an open sided structure aligned NE/SW some 17m long by 6m wide. The long south-eastern 'closed' side incorporated postholes **2268** (Fig 11/AK), **2254** (Fig 13/BT), **2310** & **2309** (Fig 13/CI), **2225** (Fig 11/Y) and **2223** with **2232** (Fig 13/BN) forming a short return to the north-west. The north-east gable end included **2264** (Fig 13/BW), **2263** (Fig 13/BV), **2318** (Fig 13/CK) and **2317** (Fig 13/CJ), whilst a short return from the north-west corner was no more than 4.5m long terminating at posthole **2258** (Fig 13/BU).

An irregularly shaped pit/gully **(58)** (Fig 13/AT) was noted in Area B adjacent to gully **8** (Fig 12). This yielded pottery dating to the late 3rd-4th century, and also contained, like pit **1517** in Area G (Fig 13/BK), charred wheat chaff. It is therefore probably contemporary with this pit and the kiln.

Boundary features

At least five parallel liner features on a NW/SE axis and two parallel crosswise NE/SW were recorded in Areas J, H A and B although they were conspicuously missing in all the excavated trial trenches. There is little doubt that these features represented the remains of a field or enclosure system although the exact layout and chronology remains speculative. The system may have expanded from the Phase 2 Iron Age features and the Phase 3A gully 11.

Aligned SW/NE, ditch **2276=2413** (Fig 10; 13/BX, BY) extended from a terminal in Area H some 47m north-east to a junction with crosswise ditch **2424** (Fig 16; 13/CN) in Area J. The ditch varied little along its length being V-shaped (*c* 1-1.20m wide and 0.10-0.40m deep) (Fig 16; 13/CO, CQ). Pottery was concentrated in the section adjacent to rectangular building 4.

Gully **141** (Fig 10; 13/AV) at the extreme north east end of Area B which contained a number of fragments of roof tile (*Tegulae*), and possibly gully **66** at the south end of Area A, seem likely to be of this phase.

104=169 (Fig 10; 13/AZ), **170**, posthole **(168)** (Fig 10; 13/AY) cut into its northern edge. Pottery varied from Iron Age to late 3rd-4th century. It probably represents an internal division demarcating Enclosures 2 and 3 (see Fig 10). It may have been related to postholes **165** and **167** (Fig 10; 11/V) adjacent and at 90 degrees to it, which had the same distinctive yellowish fill.

Ditch **2424=2402** (Fig 16) bounded a south-eastward extension to the enclosure system, perhaps extending across the entire enclosure complex. The north-east arm **2424** (Fig 13/CN, 17/CY), was at least 16m long with a moderately steep V-shaped profile, more rounded to the north-west (0.70m-1.8m wide by 0.31m-0.40m deep).

Ditch **2402** (Fig 16; 17/CW, CX, CY) was at least 46.5m long (recorded as 2219/2303/2304 in Area H) with a V-shaped profile 0.86m-1.4m wide by 0.26m-0.52m deep.

Posthole/pit **2328** (Fig 10; 13/CM) was located some 6m to the west of the rectangular building. This was a roughly circular feature of 1.32m diameter with moderately steep sides to a flattish/slightly rounded base 0.30m deep. Its primary fill 2328/2 was a brown sandy loam 0.10m thick containing occasional small pebbles, the result of silting, presumably after disuse. 2328/2 was overlaid by 2328/1, a dark brown sandy loam 0.20m thick containing frequent small pebbles, moderate charcoal flecks, occasional medium pebbles and pea grit and moderate clay lumps. Both fills contained quantities of Iron Age as well as later pottery dating from the early 3rd century. The west side of the feature was partly disturbed by a rabbit burrow which possibly explains the presence of residual Iron Age material.

The kiln and adjacent features by Jerry Evans

The pottery kiln (**6**) (Fig 12; 14/A, B, C, D; Plates 7 & 8) was located towards the south-western end of Area A. It was of the single chambered single flue variety. The structure was quite badly plough damaged and did not survive to the top of the flue arch and oven floor, its maximum depth being *c* 0.20m. The roughly pear shaped firing chamber was lined with clay varying from 0.9m to 0.22m thick. The kiln pit was 2.02m in length and 1.40m in width at the back and 0.85m adjacent to the flue arch. The floor of the kiln sloped down by 0.11m from its back to the flue arch. There was no flue as such and the stokehole directly abutted the kiln. The stokehole was *c* 1.53m long and a maximum of *c* 1.08m wide of sub-rectangular shape. It sloped down towards the kiln flue arch with its maximum depth here in a circular depression some 0.13m below the depth of the kiln floor at the flue arch. This, presumably, was the location of the fire.

The kiln and stokehole had a series of fills. The upper fill of the stokehole, 6/3, was a brown/dark brown (7.5YR 4/4) sandy loam with a few small rounded pebbles and occasional fragments of pink burnt clay and medium sized pebbles. This overlay 6/1, the upper fill of the kiln chamber of brown/dark brown (7.5YR 4/4) sandy loam with occasional small pebbles up to 0.14m thick. Kiln fill 6/1 overlay 6/2 a brown/dark brown (7.5YR 4/4) sandy loam with common reddish brown (5YR 4/4) clay lumps. This in turn overlay 6/4, the main fill of the kiln, a reddish brown (5YR 4/4) clay with a few large pebbles. The kiln fill 6/4 was overlain by the second fill of the stokehole, 6/5, a brown/dark brown (7.5YR 4/4) sandy loam with common black staining and some charcoal fragments. This stokehole fill and the kiln fill 6/4 both overlay 6/6, a black, presumably burnt, sand deposit which was around 0.03m deep across the kiln floor but around 0.09m deep around the flue arch and extended into the fire setting in the stokehole. The kiln structure itself seems to have been fashioned in two operations, first the laying of the kiln floor, 6/8, 0.06m deep, which was a reddish brown (5YR 4/3) clay with small gravel embedded in its surface burnt to a pinkish grey (5YR 6/1). Secondly the sides of the kiln pit were thickly lined with a reddish brown (5YR 4/3) clay from 0.09-0.20m thick.

The sequence and the lack of any *in situ* kiln furniture suggests, perhaps, that after the final firing the oven floor was taken up possibly to rescue any complete kiln pedestals and the resulting debris and fragments of the demolished oven wall thrown back into the kiln, with the stokehole then being backfilled with 6/5, layers 6/1-6/3 then being subsequent silting.

The kiln is dated by a BB1 insipient beaded and flanged bowl, B11.4 of early-mid 3rd century date from gully 8 and a reeded hammerhead mortaria m22.7 which dates after *c* AD 220.

Another feature which might have been associated with potting on the site is a pit, **7** (Fig 14/D). This was sub-rectangular *c* 3.40 x 2.60m but shallow with a maximum depth of around 0.16m and had a meandering gully **8**, around 5.80m long feeding into it from the east. This was cut into the natural sand, but morphologically parallels a pit and gully arrangement at Trent Vale, Staffs (Swan 1984, 45, fig V) where it was interpreted as having been used for clay levigation. Clearly this was not the case at Glebe Farm where it was cut into sand and was cut by the stokehole.

Adjacent pit **1517** (Fig 14/B) at the south end of Area G contained a concentration of wheat chaff (Monckton below) which conceivably was used as kindling for the kiln. Low concentrations of chaff do come from the kiln sample, although the layer sampled (**6/1**) was probably later silting rather than a primary fill. **1517** also contained a high concentration of tile, mainly tegulae fragments and pottery, presumably production waste. The relationship with internal pit **1520** remained uncertain.

Around 5m to the north-east of the kiln was a shallow pit **80** (Fig 11/J).

The kiln furniture

Some 1637 fragments, 76.383 kg, of fired clay fragments and kiln furniture were recovered from the kiln. These have been divided into fragments (Fig 15), probable oven floor, and two pedestal types (archive).

Illustrated Catalogue

1 A bar-like fragment, 50 x 63mm, length 120+mm, perhaps originating in a bar type construction framework in the course of building the oven floor. **6/1**

2 A large oven floor fragment with a flat upper surface pierced by a circular hole *c* 55mm in diameter. The lower surface is irregular; max thickness 75mm. There is a possible socket for a pedestal 50mm deep and at least 75mm wide in the outer edge of the fragment. 1675g. **6/3**

3 An oven floor fragment 120mm to 70mm thick, with a vent hole *c* 70mm in diameter, which has been repaired. **6/4**

4 An oven floor fragment with surfaces tapering from greater than 65mm to 45mm thick with an asymmetrical vent-hole of approximately 100mm in diameter. **6/4**

5 An oven floor fragment 58-45mm thick, with a vent-hole. **6/4**

6 An oven floor fragment, 80-55mm thick, with vent-hole 30mm in diameter, which suggests there were at least two sizes of vent hole used in the floor. **6/4**

7 A curving bar-like fragment, of sub-oval section 65 x 40mm and 140mm long. **6/4**

8 A bar-like fragment of circular section, *c* 52 x 50mm. Max surviving length 100mm. Height at end 37mm, width 55mm. **6/4**

9 A pedestal fragment with exterior smoothed with a circular-sectioned projection luted on to it, probably an over-plastered withy. **6/4**

10 Two joining pedestal base and side fragments with a smoothed exterior surface and an irregular interior one. Height 265+mm. Width 80+mm. Thickness 16-30mm. 900g. **6/4**

11 A pedestal fragment, thickness 20-26mm. **6/4**

12 An end fragment from the wall of a solid rectangular-sectioned pedestal. **6/4**

13 An oval sectioned bar-like oven floor fragment, 65 x 45mm, over 115mm in length, over-plastered. **6/4/1**

14 A hollow pedestal wall fragment with a circular sectioned projection, probably an over-plastered withy. Width 95mm. Projection length 23mm. Projection diameter 33mm. 250g. **6/4/2**

None of the kiln furniture recovered from the kiln was found *in situ*, and the final oven floor had been removed after the last firing, possibly to remove the pedestals. The kiln was back-filled with kiln furniture debris.

The kiln had a permanent vent-holed floor (Swan pers comm) and there is considerable evidence of repair to this, especially around the vent holes. The oven floor would have been constructed around over-plastered withies, and possibly built-up from bar-like rolls of clay. Two types of pedestal were present: Type A - hollow rectangular pedestals apparently formed by over-plastering around an object, perhaps a block of wood (Swan pers comm); and Type B - solid rectangular pedestals. Given the strong similarities between this kiln and kiln 1 at Wappenbury (Stanley and Stanley 1964), a three pedestal arrangement here is very likely. Mrs Swan points out that the firing pattern on the pedestal fragments suggests that their short sides faced the flue, an arrangement again similar to that at Wappenbury.

The Bubbenhall kiln shares the pear-shaped form of the Wappenbury kilns and the lack of flue is shared with Wappenbury kiln 1 (although kiln 3 by contrast had one), the fire-pit in the stokehole is also shared with Wappenbury kiln 1 (Stanley and Stanley 1964, fig 2).

The presence of two different pedestal types here suggests that the oven floor had been replaced at least once, and the number of pedestal fragments may suggest rather more often. Wappenbury kiln 1 had solid rectangular pedestals of Type B, it would seem likely however, that the original arrangement at Bubbenhall was with the Type A pedestals. Repair of these might well have resulted in their conversion to solid types, although there are no examples rccovered where this has certainly been done.

It was suggested above that contexts **6/1** and **6/2** of the upper kiln fill may have been later silting; the evidence of the kiln debris seems to reinforce this with average weights of 17.9g in **6/1** (n=220), 23.2g in 6/2 (n=231), compared with 73.8g in **6/4** (n=737). It is of note that context **7/1**, which stratigraphically precedes the kiln, also contained some 26 fragments of fired clay (363g), again suggesting earlier potting activity on the site.

The Bubbenhall kiln is not an isolated occurrence but is within 900m of the previously recorded kilns at Ryton-on-Dunsmore. Two kilns are noted by Swan, kiln 1, a destroyed kiln at SP 37447250 (Bateman 1978-7, 44) which is described by Swan, apparently following an informant, as 'similar to the Wappenbury kilns' (1984, M5.656) and, kiln 2, a probable kiln destroyed without record at SP 37367248. A further kiln seems likely to have been excavated on site 97B, SP 371725, (Bateman 1978-7, 31) .....'a large pit and gully; the pit nearly 3m across merged with a gully, curving from a narrow pointed end near to cremation pit CPH1, intersecting with pit H2 on its eastern edge, then widening to some 2m at the intersection with Enclosure B ditch. A quadrilateral area of burnt deep red clay, 0.05m to 0.08m thick had been laid in the gully/pit intersection. Several medium-size, rounded, burnt stones were set round the northern side of the clay, forming a kind of revetment. ... H2 is obviously an extraneous feature in the enclosure (of Iron Age date); the burnt clay and stones may mean that it was a hearth pit, and the gully may have been made to induce a good draught, but the general cleanness of both pit and trench must indicate a short period of use.....' The illustrated pottery from this appears to be a 1st century group (Bateman 1976-7, fig 19, nos 48-58) and if no 50 is a poor butt-beaker copy, a pre Flavian date might be appropriate. The siting of this kiln in a semi silted-up ditch intersection is typical of a developed sunken La Tene III type and the lack of kiln furniture would be unsurprising given the 'essential concept of portability' applied to such in kilns in this tradition.

Discussing the Bubbenhall kiln furniture Mrs Swan (*in litt.*) points out that 'these multiple small pedestals form a continuing tradition in the Midlands region (and offshoots beyond)', with examples in the Oxfordshire region, particularly Hanborough kiln 2, and locally at Hartshill kilns 8, 12, 17, 18, 33 and Mancetter kilns 1, and 2, with outliers, connected to Mancetter-Hartshill, at Cantley kilns 2 and 33.

Discussion

The later Roman period witnessed a change in construction technique in the form of rectangular Building 4. The eastern wall and the southernmost internal wall of the structure were also defined by a linear slot, within which the postholes were placed, making this post-in-trench construction (Booth, 1994, 159-160). The slots had probably been eroded away on the western side of the building, where the postholes were also less well preserved (the absolute heights of the bases of the load bearing posts were however almost identical).

The external postholes form a rectangle measuring roughly 13m x 9m divided into two symmetrical rectangles, the easterly of which was further subdivided. It is worth noting that the bases of the exposed load bearing postholes (**136**, **144**, **2279**, **2291**) (Fig 18) forming the corners of the two halves of the building were *c* 0.20m deeper than the intermediate ones. If as seems most probable there had been three rooms, the internal layout would have consisted of two small rooms within the eastern quarter of the building, with a single passageway dividing this from the large room taking up the western half. This might indicate a division of function between the two halves of the building.

An interpretation of the function of this substantial building and its various rooms is however difficult given the lack of diagnostic features (the only 'internal' feature was an irregular posthole/ gully **2299** in the corner of the south western room, which may have been of a different phase). It has already been noted that the concentration of roof tile in the adjacent

and parallel (drainage?) gully **141** and in posthole **2330** might indicate that this building had a tile roof, which would suggest that it was of some importance, perhaps living quarters (the two easternmost rooms?) rather than, or as well as, an agricultural function. The large quantity of pottery from the stretch of ditch **2279** adjacent to the building also suggests that this building had a domestic function. A different function could be ascribed to the large western room, separated from the smaller rooms by the passage, though what exactly took place here is uncertain. The keeping of animals would seem more probable than grain storage, as a raised floor is unlikely given the wide spacing of the posts. Again, there is not enough evidence to allow a confident interpretation of the function of this building and its components.

There were certainly more structures in Phase 3, for example the alignments of postholes to the south west of the building described above (though most of these may belong to fencelines) and the large postholes in Enclosure 2, but no convincing ground plans can be discerned.

The enclosure of an increasingly large area (Phase 3b) and its subdivision into different activity areas (ceramic production, pens, fields) from the mid 2nd century might indicate a degree of expansion and perhaps rationalisation in response to the development of regional markets such as that suspected at Princethorpe. The material level of the settlement does not however appear to have undergone a dramatic change, with relatively little fineware (see Evans below) or imported material in the ceramic assemblage, no coinage or prestige artefacts and no hard evidence of dwellings with any level of sophistication or comfort. Thus the archaeological evidence indicates that this was a low status farmstead producing for itself and with perhaps some surplus for the local market, post-conquest in its origins and not surviving into the last years of the Roman administration of Britain.

PHASE 3C: ROMAN

This phase consists of Roman features which could be either Phase 3A or 3B.

Possible grave

Pit **62** (Fig 12) was oval (1.8m by 1.2m and 0.35m deep), located at the south-west end of Area A. 25 iron nails were recovered from the north-west end of this feature. Given the acidic soil conditions of the area, these might represent all that remains of an inhumation burial.

Possible structure 6 (Fig 16)

Semi-circular banana gully **2422** (Fig 17/DD) and attendant posthole **2423** (Fig 17/DE) may indicate the footprint of a further structure in the centre of Area J. Gully 2422 was 5m long with steep sides 0.60m wide, a rounded base 0.20m deep, filled with brown sandy loam. Pit 2423 lay 1.5m to the west and had moderately steep sides 0.94m wide and a rounded base 0.27m deep. The fill was identical to 2422 and neither produced any finds.

Semi-circular pen (Area J) (Fig 16)

Gullies **2444** (Fig 17/DK) and **2407** (Fig 17/CZ, DF) combined to form an arcing boundary some 20m long and 10m wide. A V-shaped profile 0.55m wide and 0.25-0.30m deep it petered out to the south. A reddish-brown sand in the base was overlaid by brown sandy loam which contained burnt sandstone fragments and heat-cracked quartzite pebbles. Within the footprint was a single oval pit **2412** (Fig 17/DC) which had irregular sides and flat base (1.30m long by 0.58m wide and 0.23m deep).

A group of five postholes close by the south-western edge of Area J – **2432**, **2434**, **2436** (Fig 17/DI), **2428** (Fig 17/DG) and **2408** (Fig 17/DA) - could belong to a structure inside the pen, but there is little supporting evidence (Table 3).

Pits and postholes (Table 3)

A range of small pits were found across the site. Some conceivably were postholes, although no structural patterns could be discerned.

Gullies

Several short lengths of gully were recorded although none could be ascribed to a particular building or structure. Gully **802** (Fig 12; 13/BG) at the west end of Trench 8 was 0.45m wide and 0.13m deep. Gully **2326** (Fig 10; 11/AL) was 1m long by 0.56m wide and a rounded base 0.19m deep. Gully **403** (Fig 10) was 1.10m and 0.30m wide. Gully **2433** (Fig 16; 17/DH) had been disturbed by dumper tracks but yielded prehistoric and 240AD+ pottery. Gully **2266** (Fig 10; 11/AJ) was 0.72m long by 0.25m wide and a flat uneven base 0.12m deep.

Area F (1994) (Fig 20)

Two parallel ditches (**179**, **185**) approximately 8.5m apart and aligned WNW / ESE may have formed the entrance to an enclosure or trackway. Ditch **185** (Fig 21/EB, EC) was 5.25m long whilst ditch **179** (Fig 21/DX, DY) was at least 10m long. The true extent of these features may have been obscured in the natural here, which was alternate bands of fairly compact reddish brown and yellow sand and occasional orange/red clay, both overlying the sandy gravel.

Both ditches had uncertain relationships with pits with homogeneous fills along their lengths. Considerable quantities of Romano-British pottery was recovered from ditch 185 (719 sherds) and pit **186** (Fig 21/EB, EC) (186/1, 1112 sherds), though none was recovered from pit **1409** (Fig 21/EA). A patch of rubble overlying ditch 179 (**1411**) (not on plan) contained two fragments of rotary quern (SF 57, SF 60). Several pits and postholes are recorded in Table 4.

Area I (1995) (Fig 22)

Area I was located in the northern corner of the quarry. Romano-British gully **2002** (Fig 22/ED, EE), aligned north-west/south-east was 1m wide with shallow sloping sides and rounded base 0.10m deep. It was filled with dark yellowish brown sandy loam (2001/1, 2001/2, 2002/3). Concave pit **2003** (Fig 22/EE) was 0.80m wide and 0.12m deep filled with dark yellowish brown sandy loam (2003/1). Hollow **2001** (not on plan) yielded a sherd of Romano-British pottery.

AREA J (1996) (Fig 16)

Several large pits which cut through geological natural clay to the top of the underlying sand are likely to have been clay extraction pits.

Pit **2409** (Fig 17/DB) was roughly circular of *c* 3m diameter and 0.4m deep. Pit **2435** (Fig 17/DH) was a roughly oval 1.30m by 0.65m by 0.30m deep. vertical sided flat bottomed pit, The fill was a reddish brown very sandy loam containing occasional small pebbles, charcoal flecks and small sandstone fragments (**2435/1**). The pit was more regular in shape than those described above and it cut beyond the clay layer into the underlying sand.

Phase 4 Anglo-Saxon - Post-Medieval

A single sherd of Anglo-Saxon pottery was found intrusively in Area K (see Hancocks below).

RIDGE AND FURROW

In the medieval period the presently described site lay within the open fields of Bubbenhall. The remains of an east-west ridge and furrow system are visible on air photographs, and the remains of furrows were noted in all areas at Glebe Farm Quarry (Fig 4) and also to a lesser extent at Waverley Wood Quarry (see below).

The practice of ridge and furrow as an agricultural system dates from at least the late Anglo-Saxon period, but the example from Bubbenhall, whilst it may replace an earlier system, appears to be of medieval date.

At Bubbenhall the ridges didn't survive, having been ploughed out in the modern era, but the furrows in between had cut into geological natural, and so at Glebe Farm Quarry a regular pattern of parallel depressions around 9m apart provided evidence of the former layout. Others running parallel to the system, but at irregular intervals, suggest that the pattern of the ridges may have changed over time. It is worth noting that whilst the furrows destroyed some of the earlier features, it was the depth of the ploughed out ridges that preserved most of the remains of the Romano-British settlement.

Phase 5 Undated

AREA D (1992) (Fig 19)

Area D was located in the westernmost corner of Glebe Farm Quarry. Three shallow pits were identified, including one containing loose pebbles. Romano-British pottery was recovered from the overlying ploughsoil.

AREA E (1994) (Fig 19)

Area E at the south-east end of Trench 10 consisted of a single pit **1601** (Fig 19/DT, DU) some 3m long by 1m wide which contained two fragments of burnt sandstone and a depression thought likely to indicate where similar stone had been removed. Romano-British pottery (1st-3rd century) was found in the overlying ploughsoil (1603).

AREA F (1994) (Fig 20)

A series of gullies in the north-west corner of the area seem likely to relate to non-domestic activity, albeit of unknown date. Gully **1414** (Fig 21/DV) was aligned parallel to the nearby Romano-British ditches **185** and **179** and was 0.50m wide by 0.16m deep with shallow sloping sides to a flattish base. 2.40m long gully **1404** (Fig 21/DV) spurred off to the south and gully **1405** spurred to the north. Gully 1404 was 0.40m wide and 0.15m deep with a shallow V-shaped profile, whilst 1405 was 0.50m wide, only 0.8m deep with a flattish base. Gully **1415** (Fig 21/DW) aligned WSW/ENE close by the southern end of 1404. It was 0.40m to 0.95m wide with steep sides and a flattish base 0.30m deep.

AREA I (1996)

Observation of topsoil stripping associated with alterations to the storage banks on the north west edge of the quarry recorded medieval furrows and three field boundary ditches (**2101-2103**, not illustrated), all of which were on the same alignment. These were probably medieval or of more recent date.

6 MATERIAL EVIDENCE

The finds assemblage recovered from the excavations was relatively small. The worked flint provides a useful baseline for earlier prehistoric activity in the area, whilst the Neolithic pottery is an important adjunct to the local corpus. The acidic, well-drained nature of the soil made for poor survival of animal bone, only fragments of enamel from a large bovine tooth unearthed in one of the gullies (**17/1**) survived. No coins or other copper alloy objects (with the exception of a single piece of twisted wire and a buckle, the latter post-medieval in date) were found, and the iron assemblage is also small and functional, consisting of an ox goad, a possible knife, a small reaping hook and timber nails. Nevertheless, the pottery assemblages are of considerable interest, especially the products of the kiln. Samples taken from several

features also yielded a considerable amount of charred plant remains, allowing insights into the economic basis and environment of the Roman settlement. A number of quern stone fragments are also of intrinsic interest, and illustrate again the primarily agricultural function of the settlement, as well as (through their geological provenance) its trade links.

The Worked Flint Andrew Brown and Lynne Bevan

AREAS A - J Andrew Brown

Fieldwork resulted in the recovery of 114 flint artefacts, distributed as shown in Table 5. All but two of those pieces which retained some cortex bore the smooth and thin cortex of the gravel flint which is ubiquitous on the site.

Table 5 shows that the main concentration of flint artefacts was in Area H, although all areas except the very small Area E contained some examples.

With such a small collection, detailed analysis was not justifiable. However, two provisional observations should be made on the available evidence. Firstly, there was an intriguing, albeit slight, concentration of elaborate artefacts in Area G, extending into Areas A and H, comprising a bifacially-worked knife (Fig 23/6; SF 14), a discoidal core (Fig 23/7; SF 19), a probable hollow-based arrowhead (Fig 23/5; SF 103), and two probable and one possible *petit tranchet* derivative arrowheads (Fig 23/1, 2 & 4; SF 64, SF 18, and SF 115). All are consistent with a later Neolithic date, and if contemporary they could perhaps indicate some ceremonial focus nearby.

Secondly, in the north-east part of Area H and Area J, there was a relative concentration of flaking debris such as cores, preparation flakes and trimming flakes - all by-products of flake production - as well as a number of flakes, both unretouched and retouched. Technologically, these pieces were diverse in character, including some blade-like pieces with narrow, punctiform butt ends (eg SF 117, SF 131) witnessing skilled, controlled flaking and yet others (eg SF 124, SF 130) were squat in shape, with hinge fractures and broad, plain butt ends suggesting a less considered or less skilful technique of flaking. If the pieces are contemporary (and there is no firm evidence that they are not), they might represent settlement-related activities such as food or skin processing (the retouched pieces include scrapers, knives and an awl (Fig 23/8; SF 185) and well as another probable *petit tranchet* derivative arrowhead (Fig 23/3; SF 183). The presence of controlled core reduction, albeit amongst cruder reduction techniques, suggests that a date in the Later Neolithic would be appropriate, again assuming the material to be of one phase.

Conclusions

There is evidence of significant activity in the area in the Later Neolithic period. This activity may have been a mixture of domestic and ceremonial, although these types of activity may have been separated in space by 30-40m. Nevertheless, the distribution of flint artefacts was discrete, and the few flint finds from the nearby Waverley Wood quarry extension are of a quite different character (suggestions of Mesolithic character in the flint assemblage collected

during the evaluation and watching brief on the quarry extension for example). The Later Neolithic settlement of which the Glebe Farm Quarry flints and the few pottery sherds of the same period are perhaps the only surviving evidence, therefore, is likely to have been nucleated rather than being dispersed around the locality.

OTHER FLINT by Lynne Bevan

Glebe Farm (north of main excavation)

The flints from BB96 comprised a small blade core of Later Mesolithic-Early Neolithic date (SF 152, **2106**) and an undiagnostic flake. The flints from BB99 comprised a flake core of Late Neolithic-Early Bronze Age date (SF 202, **2501**), a core rejuvenation flake from a Neolithic blade core (SF 201, **2501**) and an undiagnostic flake.

Waverley Wood Extension

The small assemblage from Waverley Wood extensions consisted of 13 items, weighing 84 grams (Table 6). These comprised a retouched blade (SF 193), a retouched flake (SF 192) and eleven flakes and chunks ranging from under one gram to 35 grams in weight. The retouched items are not closely datable, although a Neolithic date seems likely for the blade, but two of the small flakes were core trimming flakes from narrow blade cores of probable Later Mesolithic-Early Neolithic date.

The Pottery Jerry Evans, Alex Gibson, Annette Hancocks and Scott Martin

NEOLITHIC POTTERY (AREAS A, H, I) Alex Gibson

Twelve sherds of possible Neolithic pottery were sent to the writer for comment. In addition, two sherds of local Iron Age fabrics were sent for comparison. The sherds were laid out by context and examined macroscopically with the aid of a x 10 hand lens where necessary.

Illustrated Catalogue (Fig 24/1)

1 Single abraded sherd in a soft friable fabric with some medium sized (less than 5mm) quartz inclusions. The outer surface is light brown, the inner black and the core also black. The sherd averages some 10mm thick and is undecorated. Possibly from the Peterborough Ware tradition (A **75**)

Unillustrated

2 Small quartz-filled sherd with a pink outer surface and black core. The inner surface is missing. The sherd may possibly be Neolithic given the similarity with sherds 3 and 4 below and the association of the latter with a Peterborough Ware rim (No 5) (I **2102/1**)

3 Small quartz-filled sherd with a pink outer surface and black inner surface. It averages 8mm thick. The sherd may possibly be Neolithic given the similarity with sherds 2 and 4 and its association with a Peterborough Ware rim (No 5). The fabric is gritty to the touch, however, and an Iron Age date is also possible (H **2331/1**)

4 Small quartz-filled sherd also with a pink outer surface and black inner surface and possibly from the same vessel as No 3 above. It averages 8mm thick. The sherd may possibly be Neolithic given the similarity with sherds 2 and 3 and its association with a Peterborough Ware rim (No 5). The fabric is gritty to the touch, however, and an Iron Age date is also possible (H **2331/1**)

5 Four abraded but conjoining sherds in a soft, soapy-textured grog-filled fabric. The sherds were repaired using HMG adhesive. The fabric is dark brown throughout and has a very smooth, almost polished inner surface. The rim is everted with a flat sloping top. The start of a concave neck is apparent. The rim top is decorated with six horizontal rows of twisted cord impressions. Internally, there is a deep lenticular fingernail impression on the neck below the rim but this appears to result from the forming of the pot rather than a deliberate attempt at decoration. A larger undecorated and abraded body sherd has a much lighter coloured outer surface but, given the similarity of the fabric, may be from the same vessel. The rim is from a Peterborough Ware vessel in the Mortlake substyle and may be dated to around 3000 Cal BC (H **2331/1**)

6 Small quartz-filled sherd with a pink outer surface and grey inner surface. It averages 8mm thick. The sherd may possibly be Neolithic given the similarity with sherds 2 and 3 and the association of the latter with a Peterborough Ware rim (No 5). The fabric is gritty to the touch, however, and an Iron Age date is also possible (H **2334/2**)

7 Sherd with a dark brown outer surface and black inner surface. The fabric is hard and well fired with a gritty texture. The inclusions measure up to 5mm across and the fabric is some 10mm thick. The sherd is probably Iron Age (I **2106**)

Discussion

Only sherds 1 and 5 can be assigned to the Neolithic with any degree of confidence. The other sherds appear too hard, well fired and gritty-textured to belong to the Peterborough tradition with which they share contexts and, given the residual nature of the Peterborough Ware pottery, they may well be Iron Age in date.

The Peterborough Ware rim is from a Mortlake style bowl and the decorated rim moulding and the profuse decoration thereon are typical of the type. The sherd is very abraded and the vessel clearly residual. A date of around 3000 Cal BC may be ascribed to this sherd on current chronology though refined dating of Peterborough Ware by substyle or region is not yet possible.

IRON AGE AND ROMAN POTTERY (AREAS A – F) Jerry Evans

Some 4978 sherds of pottery (62.221kg) were recovered from stratified deposits in Areas A - F. Much of the material had heavily eroded surfaces, although average sherd size is quite reasonable and post-depositional soil conditions are probably responsible for this.

The Roman site is clearly a fairly minor rural one, with little in the way of finewares and tablewares, and low quantities of decorated samian. Evidence of activity in the immediate pre-conquest period is restricted to a single pit in the Waverly Wood extension. There is no evidence of Roman activity before the Flavian period with pottery deposition not necessarily commencing before the Trajanic era.

Table 7 shows the quantities of pottery by ceramic phase. Ceramic phases broadly relate to the site phases, although ceramic phase 3 has been further subdivided in this report. Most material comes from features and deposits not closely phased, mainly from trenches C-F. The second largest amount of material comes from phase 3B features which include a, presumably domestic, building, and the pottery kiln and associated features. There is a notable drop in the quantity of material from ceramic phase 3C, this is also accompanied by a proportional drop in the quantity of tile (Table 7 below). Features of this phase consist of boundary ditches and a few postholes, pits and a corn drier in a semi-circular enclosure, and it seems clear that domestic occupation (and pottery production) had ceased on the excavated part of the site and had been replaced by agriculture.

Chronology

Ceramic phase 2A

Three contexts may be of Iron Age date, **2302**, **2329** and **2334**. **2302** contained a single sherd in fabric P21, which is middle Iron Age (A Hancock pers comm). **2329** contains sherds of middle Iron Age pottery (A.Hancock pers comm) P16 from **2329/20**, and another sherd, P17, from **2329/32**, both being upper ditch fills. There are also four sherds in P211 from **2329/31** of later Iron Age date. The upper fills of **2329** contain quantities of Roman pottery, **2329/1** including a sherd of Oxfordshire colour-coated ware dating to after AD240, three sherds of R11, two of R12 and two of R18, whilst **2329/25** contained a Mancetter mortarium bodysherd and a sherd of R12, and **2329/33** a sherd of R13, all presumably owing to later compaction of the fills and consequent silting. Context **2334** contained a sherd of Neolithic pottery (N03) from **2334/2**, a sherd of P351 from **2334/6** and a sherd of later Iron Age P211 from **2334/6**, there were also an intrusive Roman BB1 sherd from **2334/9**.

Ceramic phase 3A

Three samian sherds come from phase 3A, a Flavian-Trajanic Dr 27 from **2242**, a Central Gaulish bowl sherd from **2234**, and a Dr 27 or 35 bodysherd of Hadrianic-early Antonine date from **2260**. The site samian list does not necessarily suggest pottery deposition before the beginning of the 2nd century (see Willis below). There are a few sherds in the grog tempered, handmade fabric G12 which are probably later 1st-early 2nd century and some 20 sherds of

BB1 including a jar of, perhaps, later 2nd century date from **2234**. There is also a stamped Mancetter mortarium of early-mid 2nd-century date from **102**. Overall a Trajanic to later 2nd-century date range seems likely for the material from this phase. An intrusive sherd comes from **133** which contains an Oxfordshire colour-coated bodysherd (F51) dated after AD240.

Ceramic phase 3B

Nine samian sherds come from this phase, including a Central Gaulish Dr 31 and Dr 33, and also an East Gaulish Dr 38 and Dr 31 of later 2nd to early 3rd century date. Unusually there is a sherd of Campanian, black sand, amphora from **2298**, most probably from the 3rd century Arthur 82 form. The BB1 assemblage includes a jar of later 2nd to early 3rd century date [32:731] from **2276**, early-mid 3rd century incipient beaded and flanged bowls [68:423, 68:431] from **2328** and **8**, and later 3rd century or later developed beaded and flanged bowls from **61** and **2237**. Oxfordshire colour-coated ware (F51), AD240+, comes from **2298** and Nene Valley colour-coated ware of mid/late Antonine or later date first appears in **8**, **21**, **58**, **2299** and **2328**, with the sherd from **21** being a closed form which may well be 4th century.

There are a number of Mancetter mortaria from this phase, with reeded hammerhead types coming from **8, 303, 1517**, and **2276**, all of which should date after *c* AD220. There is also a mid-later 3rd century BB copy jar from **2299**. This phase clearly succeeds phase 3A. The material would tend to suggest that this dates from the second quarter of the 3rd century, particularly the kiln as this cuts context **7**. Overall the phase cannot start earlier than the later Antonine period and may all be 3rd century. Intrusive material comes from **2439** which includes medieval sherds of Chilvers Coton fabric C and Coventry sandy ware.

Ceramic phase 3C

This phase contained few sherds and cannot be closely dated. Three sherds of Oxfordshire colour-coated ware (F51), AD240+, come from **2407** and **2433**. There is also a Nene Valley dish [82:111] from **2424** which is probably 4th century, and a Mancetter reeded hammerhead mortaria of early 3rd to mid 4th century date from **2408**. A later 3rd to 4th century date range for the phase seems likely. Intrusive medieval Chilvers Coton C ware comes from **2402/3**.

Unphased Romano-British contexts

There are three main groups amongst the unphased contexts, **185**, **186** and **1603**. Context **185** includes an East Gaulish samian sherd and greywares which are probably 2nd- or 3rd-century. Context **186** includes five later 2nd- to 3rd-century BB copy jars. Context **1603** includes a sherd of Oxfordshire colour-coated ware (F51), AD240+, a BB1 incipient beaded and flanged bowl of early-mid 3rd-century date, and a later 2nd-century Mancetter mortarium, as well as an intrusive post-medieval sherd.

Iron Age pottery Ceramic phase 2A

Some 57 sherds of Iron Age pottery were recovered from Area H (Table 8). Comparison with the material from DIRFT, Crick (A Hancocks pers comm) suggests a range of early, mid, and later Iron Age material. Three contexts are dated to the Iron Age; 2302, a posthole, 2329, a ditch, and 2334, a further ditch. All of the material is handmade, and none of it would seem to overlap with the Phase 2D 1st century group from the Waverley Wood site. Most of the material is sand and quartz tempered, with some use of organics and little use of shell. Fabric P37 only occurs in phase 2 and could possibly be of 1st century AD date.

Illustrated catalogue (Fig 24/2-4)

2 Jar with fairly vertical, slightly outcurving rim, Fabric P18. (H **2201**)

3 Barrel jar with simple chamfered rim, Fabric P34 (C2 **33/2**).

4 Jar with fairly vertical rim, pushed down at the tip and decorated with slashes, Fabric P56, early Iron Age (Hancocks pers comm). (H **2201**)

Late Iron Age - Early Roman Pottery Ceramic phase 2D

Some 56 sherds were recovered from gully **402** and a single sherd from context **901**. Little can be said with certainty of the sherd from context **901**, it may be a Warwickshire class E fabric, in which case it should be of 1st century date. The material from **402/1** (Table 9) forms an interesting group, comprising perhaps three handmade, shell and grog tempered jars and a squat shouldered jar and a constricted-necked jar in a wheelmade, but rather crude, grog tempered ware, with two further constricted-necked jars in a sand tempered fabric of similar style to the latter. The best surviving shell and grog tempered jar is a very substantial fragment (Fig 25/1) and seems most unlikely to be residual in relation to the wheel-thrown grog tempered wares. Its basic form is clearly strongly linked to the situlate jars from Breedon-on-the Hill (Kenyon 1950, fig 3, no 8) to which Cunliffe (1995) assigns a 5th to 2nd/1st century BC date, although the groove on the top of the rim is not a feature of the Breedon vessels, but is found on a Claudio-Neronian jar from Leicester (Kenyon 1948, fig 36, no 22). It may be that this form was later influenced by the Northamptonshire channel rim jars, of which there are local copies at Leicester in the 1st century AD (Pollard 1994, fig 50, no 5, *c* AD1-70). Of the other shell and grog tempered rimsherds, one is of a barrel jar form with a beaded and grooved rim, perhaps a hybrid of barrel jar and channel rim jar form (Fig 25/2), and the other (Fig 25/3) is a barrel jar, a type also represented at Breedon (Kenyon 1950, fig 3, no 5). It would seem that the handmade class C fabrics are contemporary with the wheelmade grog tempered ware here.

Forms in the wheelmade grog tempered ware are of 'Belgic' tradition as might be expected. The squat, medium-mouthed high-shouldered jar (Fig 25/4) having general parallels in a vessel from Loughborough (Kenyon 1950, fig 14, no 7) and being common at Leicester (Pollards pers comm) and the constricted-necked jar (Fig 25/6) being fairly common amongst phase 1 material at Leicester (Pollard 1994, fig 50). The other constricted-necked jar (Fig

25/7) is of a harder fired, sand tempered wheelmade fabric (E421) which also probably belongs to the class E tradition.

The butt beaker in E71 (Fig 25/8) is in a soft sand tempered fabric which could be of post-conquest date. It seems likely that the handmade situlate and barrel jar traditions continued in production into the 1st century AD here continuing to act as cooking vessels, whilst new types perhaps tended to occupy other functions.

The exact date of the group is difficult to determine. The presence of class E fabrics suggests a date in the 1st century AD, and one which is pre-Flavian. However no fabrics are present which require a date after the Roman conquest, but they might not be present in a small pre-Flavian group such as this appears to be. The one sherd which could point to a post-conquest date is a storage jar bodysherd in fabric R31, which seems to be of Roman date in southern Warwickshire, but a pre-conquest origin for this fabric which seems to originate in the lower Severn Valley cannot be ruled out. A general date range of perhaps *c* AD 20-70 might be suggested.

Illustrated catalogue (Fig 25/1-8)

1 A situlate jar with short vertical rim, grooved on top, cf Breedon Hill (Kenyon, 1950) fig. 3, no. 8, and Leicester, Jewry Wall, pit 4 (Kenyon 1948, fig 36, no 22 in a black sandy fabric (Pollard pers comm)), Claudio-Neronian. Fabric C46.

2 A barrel jar with lightly beaded rim, grooved on top. Fabric C46.

3 A simple rimmed barrel jar, cf Kenyon (1950), fig. 3, no. 5. Fabric C46.

4 A 'Belgic' style squat medium-mouthed high-shouldered jar with everted rim. Fabric E251.

5 Four bodysherds from a cordoned jar with very unusual stamped herringbone decoration, Fabric E251. There are no parallels for this at Leicester (Pollard pers comm).

6 A constricted-necked jar with beaded rim and cordon beneath, Fabric E251.

7 A constricted-necked jar with outcurving, rising rim, Fabric E421.

8 A butt beaker rim with everted, straight, rising rim, Fabric E71.

Roman pottery (Areas A - H) Phase 3

The kiln products

Table 10 shows the fabric proportions in the locally produced wares by phase. Fabrics R11-R13 are all coarsely sand tempered greywares and probably form a continuum. They are visually indistinguishable from similar fabrics produced at Mancetter. They form the major part of the output, 64.9% of the phase 3A assemblage, 64.8% of phase 3B, and 55% of phase 3C. The other two fabrics are R18, a fairly clean fabrics with some fine vegetable voids, an oxidised core and black surfaces, and R52, a mid grey fabric with some moderate sand and some moderate grey grog, which are quite distinct from the R11-13 group. R18 appears to be

a constant element in production, whilst R52 seems commonest in the early 3rd century. The material recorded as R33 and R34 is probably a variant of R18 here.

Table 11 shows the functional breakdown of local products from phases 3A and 3B. This is very similar to the overall functional breakdown for these phases (Table 18 below) as might be expected since local products account for so much of the assemblage. Jars are the dominant class, along with some constricted-necked jars. Beakers seem to have been made on the site in small numbers, but not really used on it, whilst tablewares are barely present amongst the products, quantities being lower than in the assemblage as a whole. This is part of a general pattern in the industry (Stanley and Stanley 1964, 106) with the three kilns at Wappenbury producing at least 56%-68% jars.

The reason for this may well relate to the market being sought. This dispersed rural industry would seem to have been principally marketing over a fairly small rural hinterland, without any major urban markets. As such the rural sites it was serving will have principally wanted jars, which normally form a majority of assemblages on such sites.

Table 12 shows the occurrence of forms in the major local fabric groups from the site as a whole and Table 13 shows the overall occurrence of local form types by phase.

It is clear that the different fabrics are being used for a different range of products, with most jars coming in the coarsely sand tempered group, along with all of the few dishes and most of the few lids, but few of the wide-mouthed jars, beakers or bowls. The finer fabrics groups R18 and R52 are less common amongst the jars, with wide-mouthed jars, beakers and bowls being much more frequent than amongst the sandy fabrics, R52 being particularly commonly used for the wide-mouthed jars (which clearly had no cooking function). The distribution of vessel classes and fabrics would seem to suggest that the coarsely tempered jars and dishes were designed as cooking vessels, but not the bowls.

Table 13 unfortunately shows few clear chronological trends. A little more can be discerned by comparing the Bubbenhall material with that from Wappenbury (Stanley and Stanley 1964) and Ling Hall (Evans 2002). The Ling Hall material would seem to be of 2nd-century date and there is nothing from the site that need date later than *c* AD 160/80. At Wappenbury (Stanley and Stanley 1964) four kilns were excavated, the disuse of kiln 3 was dated by a coin of Postumus in the stoke-hole fill. Kiln 3, however, lacked beaded and flanged bowls, which were present in kilns 1 and 2, whilst a vague archaeomagnetic date from kiln 2 suggested a 4th-century date. Kilns 1 and 3 both included everted rimmed BB copy jars of later 3rd- to 4th-century date.

Only a single constricted-necked jar comes from Ling Hall, 3%, rising to 13% in phase 3A here and 17% in phase 3B, 12% in Wappenbury kiln 3 and 7% in kiln 1, 0% in kiln 2. This would seem to suggest the type appeared in the mid 2nd century, with production peaking in the first half of the 3rd and declining, or ending in the 4th.

The one really distinctive range of types to this industry is the jars C1.2-C1.4. These form 31% of the Ling Hall assemblage, 24% in phase 3A, 13.2% of phase 3B, is absent from kiln 3 at Wappenbury, but appears at 12% and 16% in kilns 1 and 2, giving a 2nd-4th century date range. Class C4 appears to be absent from Ling Hall, appears at Bubbenhall in phases 3A and 3B, and appears at Wappenbury in kilns 1 and 2 in small quantities, but is surprisingly absent

from kiln 3, which would seem to suggest a later 2nd to 4th century range. BB copy jars, class C5, should be intrinsically datable. C5.2 a Hadrianic-Antonine form appears at 8% at Bubbenhall, is absent from phase 3A, and appears in phase 3B at 2%, and is present at Wappenbury kiln 4, of perhaps 2nd century date, and probably is Hadrianic-Antonine. C5.3 of later 2nd-earlier 3rd century date appears in both phases at Bubbenhall, whilst later 3rd-4th century BB copies, C5.4, appear in phase 3A, and at 2% in kiln 2 and 9% in kiln 1 at Wappenbury. Class C10 appears at perhaps 5% at Ling Hall, 13% in phase 3A, 9% in phase 3B, and at 20% in kiln 3 and 33% in kiln 2 at Wappenbury, giving a 2nd-4th century range.

Similarly wide-mouthed jars seem to run throughout the range of production of the industry, comprising around 10% at Ling Hall and 38% in kiln 1 and 6% in kiln 2 at Wappenbury. Beakers are rare at Ling Hall, *c* 3%, and in phase 3A, 3%, but expanding to 12% in phase 3B. They are not listed at Wappenbury, and the carinated type, class E1, is only illustrated from kiln 4, suggesting it had come to an end by the mid 3rd century.

Flange rimmed bowls, H3.1, appear to have a Hadrianic to early 3rd century date range in BB1, they are the only bowl type at Ling Hall, and are found here in phase 3B and in kiln 3 at Wappenbury, but not in kilns 1 and 2, confirming that production had ceased by the later 3rd century. Incipient beaded and flanged bowls copying early-mid 3rd century BB forms, H4.1, appear in phase 3A and phase 3B, and are also found at Wappenbury. Developed beaded and flanged bowls, H4.2, appear at Bubbenhall in phase 3A/3B and are present at kilns 1 and 2 at Wappenbury, but not kiln 3, confirming the later 3rd-4th century date range of the type.

Simple rimmed and groove/bead rimmed dishes are curiously completely absent from Ling Hall, they appear in phases 3A and 3B here, and in kiln 3 at Wappenbury, but none are illustrated from kilns 1 and 2 there, which may suggest a 2nd-mid 3rd century range.

Lids are absent from Ling Hall and from phase 3A, appearing in phase 3B and in kiln 3 at Wappenbury, but none are illustrated from kilns 1 and 2, possibly suggesting a 3rd century date for these.

Illustrated catalogue

Kiln products - Fabrics R11-R13, R18, R33-R34, R52 (Figs 26-29, 1-104)

Class A, constricted-necked jars

A1.1 Constricted-necked jar with a flaring neck and bifid rim, perhaps later 2nd century or later. Fabrics R11-13. (1. H **2328/1** Fab R11)

A2.1 Constricted-necked jar with everted rising outcurving rim. Fabrics R11-13. The drawn example is very badly wastered. (2. H **2201** Fab R11)

A2.2 Constricted-necked, shouldered jar with everted rising thickened rim. Fabrics R11-13, R18/R33-34. (3. A **86**, Fab R11; 4. B **17/1**, Fab R11; 5. B **23/1**, R11; 6. H **2201**, R13; 7. G **1517/2/1**, Fab R13; 8. A **6/4**, R18)

A2.3 Constricted-necked, shouldered jar with everted, horizontal, slightly undercut rim. Fabrics R11-13, R18/R33-4, R52. (9. B **23/1**, Fab R11; 10. J **2407/1**, Fab R11; 11. J **2407/1**, Fab R11; 12. A **6/6**, Fab R12; 13. H **2228/1**, Fab R13; 14. B **104/1**, Fab R52)

A2.4 Constricted-necked jar with beaded rim, a form with some similarity to vases triconiques. Fabric R18/R33-34. (15. H **2276/6-7**, Fab R18)

A3.1 Constricted-necked jar with triangularly-sectioned, undercut rim, notched at the end. Fabrics R11-13. (16. H **2201**, Fab R11)

A4.1 Constricted-necked storage jar rim with everted, thickened, hooked rim, badly wastered. Fabrics R11-13, R18/R33-34, R52. (17. G **1525**, Fab R13)

A5.1 Constricted-necked jar with triple cordoned rim. Fabrics R11-13. (18. H **2328/1/1**, Fab R11)

Class B, Flagons and jugs

B1.1 Flask with vertical neck and short flaring rim. Fabrics R11-13. (19. J **2413**, Fab R11)

B2.1 Jug rim fragment with vertical shoulder and everted horizontal rim with handle attached immediately below rim. Fabrics R11-13, R52. (20. F **1413**, Fab R52)

Class C, Jars

C1.1 Jar with everted, rising rim, possibly a BB copy. Fabrics R11-13, R18/R33-34, R52. (21. F **186/1**, Fab R12; H **2276/1**, Fab R12).

C1.2 Jar with an everted rim and horizontal tip, possibly a BB derived copy, possibly early 3rd-century. Fabrics R11-13, R18/R33-34, R52. (23. F **186/1**, Fab R11; 24. B **100/1**, Fab R11; 25. B **100/1**, Fab R12

C1.3 Jar with everted, slightly undercut, beaded rim. Fabrics R11-13, R18/R33-34. (26. B **160/1**, Fab R12; 27. A **55/1**, Fab R12)

C1.4 Jar with everted, undercut rim. Fabrics R11-13, R52. (28. F 1413, R12; 29. B **100/1**, Fab R12)

C2.1 Globular jar with sharply everted rising rim with squared end. Fabrics R11-13. (30. A **6/2**, Fab R13)

C2.3 Bead-rimmed small globular jar. Fabric R52. (31. A **11/1**, Fab R52)

C3.1 Globular jar with triangular-sectioned double-beaded rim. Fabrics R11-13. (32. B **23/1**, Fab R11)

C3.2 Globular jar with triangular-sectioned flanged rim. Fabrics R11-13. (33. A **6/4, 6/6**, Fab R11)

C3.3 Shouldered jar with everted, triangular-sectioned rim and slight lid-seating. Fabrics R11-13, R52. (34. G **1519/1**, Fab R11)

C3.4 Jar with everted, lid-seated rim. Fabrics R18/R33-34, R52. (35. F 1413, Fab R18; 36. H **2201**, Fab R52)

C4.1 Fairly globular necked jar with everted, rising thickened rim. Fabrics R11-13, R18/R33-34, R52. (37. B **23/1**, Fab R11; 38. A **6/4**, Fab R13; 39. J **2435/1**, Fab R52; 40. H **2328/1**, Fab R52))

C4.2 Fairly globular necked jar with beaded undercut rim. Fabric R52. (41. T4 **401**, Fab R52)

C5.1 Small cooking pot/jar with everted, rising rim with cordon at base of rim, possibly a BB copy, perhaps 2nd-century. Fabrics R11-13, R18/R33-34, R52. (42. F **186/1**, Fab R11; 43. F **185/1**, Fab R33)

C5.2 Cooking pot with everted, rising rim, a 2nd-century BB copy. Fabrics R11-13, R18/R33-34. (44. B **23/1**, Fab R12)

C5.3 Cooking pot/jar with everted rim, perhaps a later 2nd- to early 3rd century BB copy. Fabrics R11-13, R52. (45. B **157/1**, Fab R12; 46. H **2216**, Fab R52)

C5.4 BB copy jar, mid-later 3rd century. Fabrics R18/R33-34. (47. H **2299/1**, Fab R18)

C6.1 Necked jar with triangularly-sectioned beaded rim, possibly a Southern Shell-tempered ware copy, perhaps later 3rd-4th century. Fabrics R11-13. (48. H **2201**, Fab R11)

C7.1 Medium-mouthed necked jar with everted, horizontal rim. Fabrics R11-13, R18/R33-34, Fabric R52. (49. H **2201**, Fab R13; 50. A **6/4**, Fab R52; 51. J **2409/1**, Fab R52)

C8.1 Medium-mouthed jar with everted, rising rim. Fabrics R11-13. (52. F **186/1**, Fab R11)

C8.2 Medium mouthed jar with everted, horizontal rim. Fabrics R11-13. (53. A **58/1**, Fab R11)

C9.1 Medium-mouthed jar with everted rim, beaded and undercut with squared end. Fabrics R11-13. (54. B **17/1**, Fab R11; 55. T5 U/S, Fab R11)

C9.2 Medium-mouthed jar with straight everted rim, undercut with squared end. Fabrics R11-13. (56. F **1413**, Fab R13)

C10.1 Medium-mouthed jar with everted, outcurving, rising rim. Fabrics R11-13, R18/R33-34. (57. F **186/1**, Fab R11)

C10.2 Medium-mouthed jar with outcurving, rising, thickened rim. Fabrics R11-13, R18/R33-34, R52. (58. A **7/1** Fab R11; 59. A **6/6**, Fab R11; 60. A **86**, Fab R18)

C10.3 Medium-mouthed necked jar with beaded rim. Fabrics R11-13. (61. H **2276/1**, Fab R12)

C11.1 Jar with ovoid-sectioned vertical rim decorated with a frilled cordon. Fabrics R11-13. (62. T3 **307/1**, Fab R11)

Class CM, wide-mouthed jars

CM1.1 Wide-mouthed necked jar with everted, slightly beaded rim, slightly lid-seated. Fabric R11-13. (63. F **1413**, Fab R11)

CM1.2 Wide-mouthed, necked jar with everted, rising, triangularly-sectioned beaded rim. Fabric R11-13, R18/R33-34, Fabric R52. (64. T6 **601**, Fab R13; 65. J **2424/1**, Fab R18; 66. B **20/1**, Fab R52)

CM1.3 Wide-mouthed jar with everted, rising rim. Fabric R52. (67. H **2320/1**, Fab R52)

CM2.1 Wide-mouthed jar with beaded rim. Fabrics R11-13. (68. H **2204/1**, Fab R11)

CM2.2 Wide-mouthed jar with thick, rounded, undercut rim. Fabrics R11-13, R18/R33-34. (69. E **1603**, Fab R11)

CM2.3 Wide-mouthed jar with beaded horizontal rim. Fabrics R11-13, R18/R33-34, Fabric R52. (70. F **185/1**, Fab R18; 71. G **1525**, Fab R18)

CM2.4 Wide-mouthed jar with beaded horizontal rim. Fabrics R18/R33-34. (72. F **1413**, Fab R18)

CM3.1 Wide-mouthed jar with everted, hooked rim. Fabrics R11-13, R52 (73. B **23/1**, Fab R52; 74. B **23/1**, Fab R11)

CM3.2 Wide-mouthed jar with downsloping, undercut rim. Fabrics R11-13, R52 (75. G **1511/1**, Fab R11; 76. B US, Fab R52)

CM3.3 Wide-mouthed jar with broad, everted, hooked rim. Fabric R52. (77. T4 US, Fab R52)

CM4.1 Wide-mouthed jar with everted rising wedge-shaped rim. Fabrics R11-13, R52. (78. **2246/1**, Fab R12; 79. F **185/1**, Fab R52)

Class E, beakers

E1.1 'Jar' beaker with beaded rim. Fabrics R11-13, R18/R33-34, R52. (80. H **2276/6-7**, Fab R11; 81. T4 **417/1**, Fab R11; 82. F **185/1**, Fab R52)

E1.2 'Jar' beaker with everted, outcurving rim. Fabrics R11-13. (83. H **2276/3**, Fab R12)

E1.3 'Jar' beaker with everted, rising, thickened rim. Fabrics R11-13, R52. (84. A **86**, Fab R11; 85. B **157/1**, Fab R52)

E1.4 Carinated 'jar' beaker with everted, rising rim. Fabrics R18/R33-34. (86. A **58/1**, Fab R18)

E2.1 Bag beaker with everted, straight, tapering rim. Fabrics R11-13. (87. H **2276/4-5**, Fab R11)

E2.2 Bag beaker with everted, tapering rim, probably 2nd- to mid 3rd-century. Fabrics R11-13, R18/R33-34, Fabric R52. (88. F **185/1**, Fab R52)

Class G, tankards

G1.1 Tankard with a straight, fairly vertical wall and beaded rim, probably 1st-2nd century. Fabrics R18/R33-34, R52. There is also a well wastered example. (89. F **185/1**, Fab R52)

Class H, Bowls

H1.1 Bowl with curving wall and short, stubby, everted rim. Fabrics R11-13. (90. F **185/1**, Fab R11)

H1.2 Hemispherical bowl, probably a Dr 37 copy, perhaps 2nd century. Fabric R52. (91. F **186/1**, Fab R52)

H1.3 Curving walled bowl with beaded rim. Fabric R52. (92. T3 **311/1**, Fab R52)

H2.1 Curving walled bowl with beaded rim, possibly a Dr 37 derived copy. Fabrics R11-13. (93. H **2201**, Fab R11)

H3.1 BB copy flange-rimmed dish, Hadrianic-early 3rd century. Fabrics R11-13. (94. F **186/1**, Fab R11; 95. F **1413**, Fab 12)

H4.1 Copy of a BB1 beaded and flanged bowl with low, clearly defined bead, early-mid 3rd century. Fabrics R11-13, R18/R33-34. (96. G **1511/1**, Fab R11)

H4.2 Developed beaded and flanged bowl, later 3rd-4th century. Fabrics R11-13, R18/R33-34. (97. B **17/1/1**, Fab R18)

Class J, dishes

J1.1 Flaring-walled grooved rim dish. Fabrics R11-13. (98. F **1413**, Fab R11)

J2.1 Straight walled dish with beaded rim. Fabrics R11-13. (99. A **58/1**, Fab R11)

J3.1 Flange rimmed dish, Hadrianic-early 3rd century. Fabrics R11-13. (100. H **2276/4-5**, Fab R11)

J4.1 Simple rimmed dish. Fabrics R11-13. (101. H **2272/1**, Fab R11)

Class L, Lids

L1.1 Straight walled lid with simple rim. Fabrics R11-13. (102. F **179/1**, Fab R12)

L2.1 Concave walled lid with everted rising rim. Fabrics R11-13, R52. (103. A **6/4**, Fab R12; 104. 704/1, R52)

Distribution

Using the records of sites recorded following the Warwickshire Fabric Type Series Wappenbury / Ryton / Bubbenhall products can be identified on a number of sites in the county.

To the west of the kiln site there are data from Crewe Farm (Booth unpublished), a mainly 2nd century assemblage, although there is some 1st and 3rd-4th century material. Here fabric group R01 (fabrics R01, R15, R42, R19, R21) represents around 23.9% of the assemblage, along with 1.3% of R18 and 3.2% of R52, giving a total of Wappenbury / Ryton / Bubbenhall fabrics at 28.4%. The forms represented in these fabrics nearly all fall comfortably within those of the kiln sites and an origin in the industry is fairly certain. Two other major reduced fabrics occurred at this site, R41, a moderately sand greyware, and R32, an organically tempered fabric, amounting to 14.0% of the assemblage, both of these also being present in quantity at Princethorpe.

To the south of Bubbenhall the first site from which there are quantified data is Princethorpe (Evans 1998). Here Wappenbury / Ryton / Bubbenhall products are present in 2nd century groups, but not in such quantities as might be expected. Fabrics R11, R18 and R52 make up 30.1% and 36.7% of the two larger 2nd century groups, but other reduced fabrics, R32, an organically tempered fabric and R41, a finer sand tempered greyware also make up 29.0% and 32.3% of these same groups. Further the form range in fabrics R11 and R52 does not match well with the Bubbenhall material, with numbers of rustic ware type jars, which might be better seen as Mancetter vessels, the fabrics of which are indistinguishable from the Bubbenhall / Ryton material. The R32 fabric group is also important at Ling Hall and presumably represents the products of another industry in this area. Given the levels of R32 and other apparently non-Bubbenhall material at Princethorpe it seems likely that this fabric has an origin very close to Princethorpe.

Further south down the Avon Valley at Tiddington (Booth 1996) fabrics R01/R11, R18, R19 and R52 are recorded. However, the R11 group may include some Mancetter material, and certainly includes a number of waisted, rustic ware jars which are probably Tiddington kiln products (Booth 1996). Fabric R01 is quite common, appearing on the site TD material in the early 2nd century and continuing until the end of the 4th. Booth notes fabric R52 first appears in the later 1st century on the site, continuing into the 3rd century, but surprisingly being apparently absent by the 4th, and also being present in much lower quantities than R01. The range of forms illustrated in fabric R01 and R19 on site TD includes BB copy jars,

constricted-necked jars, BB copy flange rimmed bowls, developed beaded and flanged bowls, wide-mouthed jars and lids, and occasional tankards, flagons, carinated beakers and a piecrust rimmed constricted-necked jar which might all be Wappenbury / Ryton / Bubbenhall products (Booth 1996, 213-5, 221-2, 227, 232, 234, 236, 238, 240, 251-2, 264, 266, 268-73, 275-6, 282, 284, 293, 304, 313-4, 325-6, 349, 352, 367, 370-1, 373, 377, 386, 392-8, 402, 412-413, 416-418, 420-1, 423-7, 430, 438, 440, 442, 444, 445-6, 450, 460, 462, 469-71, 477-8, 504, 506, 509, 521, 531, 547, 548-9, 555-6, 569, 578-82, 597, 603, 605, 607, 615-6, 623, 646-8, 652, 654, 685, 746, 753, 758, 763, 764, 769, 774, 777, 782, 795-7, 801-3, 807, 814-5, 822, 827, 832-3, 836, 859, 862, 866, 874-5, 879-882, 887, 890, 910-12, 914-15, 940, 942, 989, 1006-7, 1010, and 1012). There are in addition rustic ware jars which are not likely to be from Wappenbury / Ryton / Bubbenhall.

Quantitative data available from the report manuscript (Booth 1996) show R01 comprising 29.3% of phase 39, later 3rd-early 4th century, 19.1% of phase 41, early 4th century, 19.3% of phase 45, 4th century and 21.8% of phase 50, later 4th century, whilst the text suggests R01 was less common in the 2nd century.

Further south-west again, near the confluence of the Arrow and Avon valleys there are data from the farmstead and later villa site at Salford Priors (Evans 2000). Here fabrics R11, R18 and R52 all occur. The site is divided into four areas, D, C1, C2 and C3, and these have fairly restricted date ranges, with area D having mainly 1st century deposits, area C1 2nd century ones and areas C2 and C3 later 3rd-4th century ones. Table 14 shows the occurrence of these fabrics at Salford Priors.

Here Bubbenhall fabrics are pretty well absent in the 1st century, but appear in the 2nd and remain at similar levels in the later 3rd-4th century. A few of the forms here, particularly 2nd century ones do not fit well in the Bubbenhall range, but the vast majority of types, particularly from areas C2 and C3, fit into the Wappenbury / Ryton / Bubbenhall range of constricted-necked jars, wide-mouthed jars, necked jars and BB copies.

Along the road west from Tiddington towards Alcester is the minor rural site at Billesley Manor. Here levels (Table 15) are lower than at Tiddington, but rather higher than at Alcester or Salford Priors, as might be expected given a fall-off with distance from the kiln site.

At Alcester R01 is recorded at 8.6%, 7.2% and 9.4% by count in phases C, D, and E at the Baromix 1972 site (Ferguson 2001) which should span the 2nd century, although the rustic ware jars recorded in this fabric would appear more likely to be Tiddington vessels. At Alcester, Gas House Lane (Evans 1996) there are a series of good 3rd century sequences, without much residual material, and several late 4th century groups. Fabrics R01, R18 and R52 are all represented, and the total Wappenbury / Ryton / Bubbenhall proportion of the 3rd century assemblages varies from 0.5-5.5% by count with no chronological trend emerging. The late 4th century groups (Table 16) are different, showing a very high proportion of these fabrics at the beginning of the period, but one which declines consistently with time.

These data would suggest that some time, perhaps in the mid 4th century the level of these products at Alcester had risen considerably. Forms occurring at Alcester include a distinctive type C1.3 jar (Evans 1996, R01.3), necked jars, wide-mouthed jars, BB copies and the flange rimmed lid, L2.1 (Evans 1996, R18.8, and R52.10).

To the east of the kiln site there are data from Ling Hall, a small minor rural site probably mainly of 2nd century date. Here, north-east of Princethorpe, Wappenbury / Ryton / Bubbenhall fabrics are dominant, at 64.7%, but the organic fabric R32, found at 29% in Princethorpe, is present at 13.1%, again perhaps suggesting an origin for this in the vicinity of Princethorpe.

The fabric is also found in some quantity at DIRFT, Crick near Rugby (A Hancocks pers comm and personal examination).

It might be possible that some of the later greywares, fabric 30, at Towcester (Woodfield 1983) are products of this industry, although the emphasis on BB copy bowl and dish forms (Woodfield 1983, 80) does not fit well with this. Certainly the wide-mouthed jars and constricted-necked jar (Woodfield 1983, nos 235-9) would be possible Wappenbury / Ryton / Bubbenhall products. However, the fabric group R111 at Salford Priors might fit most of the Towcester group better. These fabrics appear at Towcester in the 2nd century, 0.3%, but do not become at all common until the later 2nd century, 6.5%,, rising to 9% by the end of the 4th century, which would fit the known profile of the industry and the later 4th-century peak at Alcester.

To the north of the kiln site there are no available data short of Leicester. There quantified data are not available but the more distinctive jars of class C1 appear to be present at Causeway Lane (Clark 1999, nos 151, 165 and 180) and at the West Bridge area (Pollard 1994, no 189) in later 2nd-3rd century contexts, although not very commonly. There are also vessels illustrated from Jewry Wall (Kenyon 1948, fig 27, nos 51-7; fig 21, nos 2 and 4; fig 24, nos 1-19) which fall within the Wappenbury / Ryton / Bubbenhall form range.

Other pottery from Areas A - J

Class A, Amphorae, 0.04%

Only two amphorae sherds were recovered from stratified deposits on the site, some 0.04% by count. This very low level is typical of basic rural sites, which rarely achieve 1% of amphorae. The only unusual feature of the material from Glebe Farm is that one of the sherds is in the Campanian 'black sand' fabric, probably from an Arthur 82, the container for high quality Campanian wine.

Class B, Black Burnished wares, 1.4%

BB1 appears on the site from phase 2 onwards, although levels of the fabric are low, 2.8% in phase 2, 2.5% in phase 2-3, 1.2% in phase 3a and 0.7% in phase 3b. The decline in BB1 levels is a consistent trend here, but one which defies the usual pattern of rising BB1 levels which generally peak in the north and midlands in the later 3rd century. This trend probably reflects the very strong competition with BB1 from the locally produced coarse sandy greywares, which were actually being produced here in the early 3rd century. BB1 levels here are higher than at Princethorpe (Evans 1998) 0.1% by count in context 1001 and 0.6% in context 1006, both of Hadrianic-Antonine date. It is of note that again BB1 levels at both

these rural sites are lower than at contemporary urban ones, with Leicester producing 20% (by maximum vessel count) of BB1 from the Hadrianic-early Antonine group at Bath Lane site 1 (Clamp 1985, 42, table 1) and 6.3% from a Hadrianic-early Antonine group from the West Bridge area (Pollard 1994, 78, table 8.II), whilst to the south-west the Alcester, Baromix sites produced levels of around 9% in the 2nd century and Alcester, Gas House Lane (Evans 1996) 20-40% in the 3rd. This again reinforces the picture seen in the vicinity of Alcester (Evans 2000) of higher urban BB1 levels than rural ones, not investigated by Allen and Fulford (1996), which is very probably explained by the urban marketing of BB1 (Hancocks et al 1998).

The comparatively high levels of BB1 as far north as Alcester and Leicester would seem to relate to land transport along the Fosse Way (Allen and Fulford 1996, Fig 1, and 244).

Table 18 shows the functional composition of the BB1 assemblage at Bubbenhall, the town of Alcester and a nearby rural site at Salford Priors. The data from Alcester conform to the usual pattern with about half the assemblage being cooking pots, but the Bubbenhall and Salford Priors data are quite different, with few cooking pots and high levels of tablewares.

It is clear that few tablewares were produced by the local kilns whereas cooking pots were in considerable quantities, and this competition presumably accounts for the pattern. It is of note that a similar pattern is seen in Buckinghamshire and Cambridgeshire (Hancocks *et al* 1998) on the eastern limit of BB1 distribution.

The BB1 forms give an idea of the chronological emphasis on the site, with 12 Hadrianic-earlier 3rd century forms, but only three later 3rd-4th century ones, although this is no doubt exacerbated by the decline in BB1 supply with time. BB1 incipient beaded and flanged bowls [B11.4] are generally rather rare types, dating to the early-mid 3rd century, here they outnumber the later developed beaded and flanged bowls which are usually much commoner. The equal numbers of incipient beaded and flanged bowls and flange rimmed bowls [B11.3] when the latter Hadrianic-early 3rd century type is generally so much commoner again emphasises pottery deposition in the early-mid 3rd century.

Class C, Shell-tempered ware, 2.3%

Small quantities of shell-tempered ware occur on the site. These appear in phase 2, at 1.9%, in phase 3a, at 5.4%, and in phase 3b, at 8.3%, demonstrating a clear trend of rising quantity with time. Most of the sherds have been assigned to the handmade group, C12, although the wheelmade variant C11 is definitely present. Their source is likely to be Harrold or possibly other production centres in the East Midlands. Small quantities of shell-tempered wares reached other sites in the region with 1.1% coming from the Hadrianic-Antonine group from Princethorpe (Evans 1998). Ten vessels are represented, all of them jars.

Class F, Colour-coated wares, 0.7%

Four colour-coated ware fabrics are represented on the site, F41, an oxidised black colour-coat, probably of 2nd-earlier 3rd century date, F51, Oxfordshire colour-coated ware, F52, Nene Valley colour-coated ware, and F63 and W23, probably Mancetter colour-coated ware.

They only amount to 0.7% of all the recorded pottery. F41 and F52 first appear in phase 2/3 and F51, non-intrusively in phase 3a. It is of note that both in phases 3a and 3b and in the total site collection Nene Valley ware outnumbers Oxfordshire material (68% to 26%), presumably reflecting the greater proximity of the Nene Valley kilns, and in contrast to the position in southern Warwickshire, where, at Alcester, Nene Valley wares are rare before the very late 4th century.

Class G, Gritted wares, 0.6%

A single fabric in this class is represented, G12, a handmade brown fabric with common grog inclusions, which is probably derived from the 'Belgic' class E tradition. It seems likely to date from the later 1st-early 2nd century, forming 0.6% of phase 2 material and 0.1% of phase 3a, when it was probably residual. It has also been recognised in the region at DIRFT (Hancocks pers comm) and Ling Hall (Evans 2002), and occasional pieces apparently of this fabric appear at Walton-le-Dale, which must be from 2nd century contexts. Sherds described as P36 from Princethorpe (Evans 1998) may also belong in this group.

Class M, Mortaria, 0.7%

Mortaria are present on the site from phase 2 (1.9%), when only Mancetter products are represented. Oxfordshire products appears in phase 3a in small quantities, and from the site as a whole there is also another whiteware fabric (M29), which may be Rhenish, and an oxidised flange fragment. Mancetter sherds represent 85% of recorded mortaria, with 13% being Oxfordshire products. Given the proximity of this site to the Mancetter kilns the presence of any Oxfordshire material might be surprising, in comparison the town at Alchester, on the edge of the Oxfordshire kiln area, only produced 1% of Mancetter mortaria. However, it is clear from evidence in the Alcester area, about equidistant between the kiln sites, that Oxfordshire material was much more successful than Mancetter in penetrating markets from the turn of the 3rd century (Evans 1996).

Class O, Oxidised wares, 2.5%

Oxidised wares make up a very small proportion of the assemblage, 2.5% of all the recorded pottery. Two groups seem to be present, small amounts of Severn Valley wares, which presumably have come up the Avon Valley, and other oxidised fabrics, most of which are probably Mancetter products. In phase 2 there were 1.9% of oxidised wares and 4.1% in phase 3a, of these 1.5% were Severn Valley wares and 0.4% Mancetter(?) in phase 2 and 2.9% Severn Valley and 1.2% Mancetter in phase 3a. The increase in the Severn Valley wares reflecting that found at Alcester in the 3rd century.

Class R, Other reduced wares, 0.9%

Four greyware fabrics from the site are probably not of local origin, R22, a grog tempered fabric, R32, a vegetable tempered fabric, and R81 and R83, fine, 'clean' greywares. The former two fabrics are only represented by a single sherd, the latter two representing 0.5% of

phase 2 and 0.4% of phase 3a. It is interesting that R32 is almost absent from this site, given that it is the commonest greyware at Princethorpe, 21.2% (Evans 1998), where Bubbenhall / Ryton type products are surprisingly rare, and is also common at Crewe Farm (Booth unpublished) and Ling Hall (Evans 2002). Given the striking difference between these two closely situated sites, but the penetration of Bubbenhall type material to much greater distances, it is tempting to suggest that the production site for the R32 group must have been located very close to the Princethorpe site.

Class S, Samian ware, 1.0%, Steven Willis with contributions by Brenda Dickinson

A total of 48 sherds of samian weighing 0.940kg was recovered during the fieldwork undertaken at Bubbenhall and reported here. Approximately 30 vessels are represented. This modest quantity is consistent with a rural site of this type. The samian assemblage covers a date range from *c* AD 70 to around AD 250, with the majority of items being Antonine and confidently assignable to the second half of the second century. A high proportion of the sherds are identifiable to form type. This is an indication of the condition of the sherds, which on the whole appear to be of comparatively large size and not particularly abraded. The condition of the sherds is noteworthy as samian assemblages from rural sites (including settlements) are often composed of highly fragmented and abraded pieces (cf Willis 1998); it is likely therefore that much of this samian was sealed in deposits not long after being broken, and is therefore less likely to be residual. Considering the assemblage by form type the almost complete absence of decorated samian is most unusual. Table 19 summarises the identifiable forms present.

Table 20 summarises the chronology of the assemblage. There are three vessels dating to the late 1st/early 2nd century, but the emphasis is clearly towards the mid and late 2nd century, with the likelihood that the majority belongs to the period *c*AD 150-200. Several East Gaulish vessels are present which may have arrived at the site late within the samian importing period, being potentially of 3rd century date (before *c*AD 250), though on the whole amongst this assemblage they appear to fit a late 2nd to early 3rd century date and most may be contemporary with the later Antonine Central Gaulish sherds. This component seems to comprise entirely of Rheinzabern products; this is not surprising as this was the main source of East Gaulish products in Britain from the later Antonine period (cf Bird 1993). It is now clear that the majority of rural sites in Roman Britain, as with the roadside settlements and small towns, received and consumed much more samian in the 2nd century than during the 1st century (Willis 1998), and hence in this respect the Bubbenhall samian assemblage is consistent with the provincial norm.

Considering the collection by vessel type the striking feature is the virtual absence of decorated vessels, which are primarily large bowls. Only one such vessel is present, being the Drag. 30 or 37 of Flavian-Trajanic date. Recent research (Willis 1997; 1998) has shown that decorated bowls, especially of Drag. 37 type, are a normal component of second century samian assemblages from rural sites. At Orton Hall Farm, Cambridgeshire, for instance, 11.5% of the samian from period 1 dated *c*AD 50-175 was decorated, and 22% amongst the period 2 group dated *c*AD 175-225/250; in site phase 8 (*c*AD 75-200) at Maxey, also Cambridgeshire, 21% was decorated; pit 31 (area C) at Woughton, Milton Keynes dated *c* AD 140-195 had a proportion of 19.5% decorated; while at Neatham, Hampshire, 14% of the samian dated to the period *c* AD 150-235 was decorated (Willis 1998). At Bubbenhall there is

no decorated ware amongst the assemblage after *c*AD 110. Hence the absence of decorated items (normally large bowls) at Bubbenhall is curious. This aspect apart the composition of the Bubbenhall samian assemblage by form type is consistent with the normal picture amongst a rural assemblage of this date with a high proportion of dishes, together with some cups and small bowls. No rare forms are present.

Class W, Whitewares, 0.4%

There are a few whiteware sherds from the site (0.4% of the recorded assemblage), reflecting the low numbers of flagons in the assemblage. They first occur in phase 3A, but all probably date to the 2nd century. Seven of the 28 sherds are identified with a Mancetter(?) fabric, the source of the others is unclear.

Functional analysis

Table 21 shows the functional analysis of the Glebe Farm site by phase, and also for three of the larger unphased groups.

The basic pattern from the site is one of high jar levels and very low quantities of tablewares, a typical pattern for a basic level rural site (Evans 1993). There is a general tendency for jar levels to fall with time, even on rural sites (Evans 1993), from an Iron Age jar dominated pattern to a more diverse Roman one. The Glebe Farm pattern generally conforms to this, although jar levels seem to rise again in phase 3B, which may reflect the cessation of domestic occupation on the site and its use for agricultural processing.

Mortaria are present on the site from phase 3A, and more generally in Warwickshire they are present on rural sites from the 2nd century at latest (Evans 2000), in contrast to the position in the south-east (Rush 1996).

Constricted-necked jars are generally common here, apparently becoming more frequent with time. The levels found here are much higher than those found on sites in southern Warwickshire. This is probably a regional variation, just as levels of wide-mouthed jars vary between regions. The function of these vessels is unclear; they would seem best suited as liquid containers, and in the north they would seem to have been used in this way (Evans 1993). Fairly high levels, 9%, of constricted-necked jars are also found at Princethorpe (Evans 1998).

Beaker levels are low in phase 3A, as is typical of rural sites (compare 3% at Crewe Farm), but rise in phase 3B. This probably reflects the production of beaker forms in the kiln rather than the greater use of these on the domestic site. As usual in northern Warwickshire tankards are very rare, the frequent distribution of these being restricted to the area with common Severn Valley wares and forming part of a Severn Valley regional tradition in the functional composition of assemblages (Evans 2001).

The groups from 185 and 186 are notable for very high jar levels, like phase 3B, and might represent peripheral areas not involved in domestic occupation, like phase 3B.

Finewares

Table 22 shows the fineware levels from the site by phase. Levels at Glebe Farm are consistently low and fall within the usual range for a basic level rural site of less than 3% (Evans 2000).

Conclusions

The origins of the farmstead would seem to be in the early 2nd century, the samian list lacking any certainly Flavian material and nothing in the coarsewares requiring a certainly 1st century date. Prior to this there are just two ditches and a posthole which might date to the Iron Age, but these do not contain material as late as the conquest, although there is a 1st century at Waverley Wood (Phase 2D).

All the ceramic indicators confirm that Bubbenhall was a basic level rural site, evidence coming from the finewares and the function figures and the low level of decorated samian ware.

Wappenbury / Ryton / Bubbenhall wares appear on the site from its inception. There is no evidence of production on the site, however, until the early-mid 3rd century. At this time pottery production is arranged in a separate enclosure, on the periphery of the site, which included a kiln and clay extraction pits. The arrangement of the kiln suggests, what might be surmised anyway, that pottery production was an ancillary activity to agriculture here. The kiln type is of the same basic type as those from Wappenbury, pear-shaped, and virtually flue-less, with a permanent vent-holed floor, constructed by over-plastering firebars resting on pedestals. There is only evidence of pottery production on the site, but the fragments of over-fired and distorted tile, suggest a tile kiln operating in the vicinity. Pottery production seems to have ceased here before the later 3rd century, and indeed domestic occupation seems to have ceased at this point as well, the final phase of the site being associated with agricultural processing in 'corn driers' but with little contemporary later 3rd-4th century pottery.

Wappenbury / Ryton / Bubbenhall wares seem to have had a distribution stretching north to Leicester, and south, down the Fosse Way and the Avon valley to Salford Priors and Alcester. To the north-west their distribution is probably constrained by that of Mancetter products, but since the fabrics cannot be visually distinguished and there are few excavated sites, little can be determined of this presently.

Ceramic Small finds

Fired clay discs (Fig 31/1-3)

1 A fragment from the circumference of a fired clay disc in a 'soapy' oxidised fabric with common large organics, *c* 1-5mm. Possibly a fired clay disc for baking unleavened bread/chappatis. Diam 300mm, RE 6%, Wt 27g. (H **2201**)

2 Fragment of a fired clay disc showing indications of burning on the flat underside and decorated with a groove and arrow motif around the upper circumference. Diam *c* 250mm. (**401**)

3 A fragment from the circumference of a fired clay disc in a 'soapy' oxidised fabric with abundant large organic temper voids *c* 1-10mm. Possibly a fired clay disc for baking unleaven bread/chappatis. Diam *c* 380mm, RE 5%, Wt 70g. (**2407/1**)

Other examples of these fired clay discs in sandy or organically tempered fabrics have been found in Warwickshire at Alcester (Evans 1996, 95; Ferguson 1994), Tiddington and Wasperton (Booth pers comm), and at Alchester (Evans 2001), in the Abingdon area (Booth pers comm), and at Farmoor in Oxfordshire (Sanders 1979). A large number, probably more than ten, have also recently been recovered from a site on the outskirts of Chesterton (pers inspection). They would seem to be intended for cooking, and some form of unleaven bread would seem the most obvious product, many show evidence of heating on the underside. Similar objects in a Malvernian fabric are also known in Herefordshire and Worcestershire (Jane Evans and Stephanie Rátkai pers comm).

Bubbenhall would appear to be about the northerly limit of the distribution of the type, Pollard (pers comm) points out that the type is entirely absent from Leicester. The distribution of these objects would appear to be confined to the West Midlands. (Perhaps the Balti has a longer local history than assumed!)

At present, although a continuing Iron Age tradition for these might be expected, no examples of these from Iron Age contexts are known to this author. The presence of the type, however, on so many rural sites would tend to suggest an indigenous practice, if perhaps one which only acquired a ceramic expression in the Roman period.

Fig 31/4-7

4 A spindle whorl fragment, Fabric R52, diam *c* 36mm. (B **23/1**)

5 Counter, Fabric R12. (F **185/1**)

6 Counter fragment, Fabric R12. (F **185/1**)

7 Crucible fragment (H **2201**)

IRON AGE POTTERY FOUND IN 2007 Scott Martin (Fig 32/1-2)

Two sherds representing two hand-made vessels in fabric P11 were recovered from the plough soil (context **2513**). The smaller of the two vessels (Fig 32/1) comprises a significant portion of a miniature vessel with the full profile surviving. It has a rim diameter of 60mm and a base diameter of *c* 50mm. The vessel has a height of 50mm. Internally, the shape and height of the vessel suggests that the vessel was formed using a thumb.

Miniature vessels appear to be largely unknown in non-Belgic Iron Age fabrics in the region. An example with a rounded base is known from Winnall Down, Hampshire (Hawkes 1985, fig 56.84), but was regarded as being such a simple form that parallels and accurate dating were not thought possible. Small numbers of miniatures are known in Belgic grog-tempered fabrics (cf. Thompson 1982, type S5), with examples recorded from Braughing and Prae Wood. The form is more common in the Roman period. The dating of non-Belgic wares in Warwickshire is problematical; the presence of a miniature vessel would on the face of it

confirm their continuation into the early Roman period given their apparent absence in securely dated contexts that are clearly pre-Roman.

The second (Fig 32/2) and most fragmentary of the two vessels is represented by the rim of a slack-profiled jar. Enough of the profile survives to suggest a vessel that is probably similar in form to Enderby form 3 (Elsdon 1992).

NEOLITHIC, IRON AGE AND ROMAN POTTERY (AREA K) Annette Hancocks

A total of 203 sherds (*c* 2.76kg) of pottery with an average sherd weight of 13.6g were recovered from excavations in Area K. The assemblage comprised mainly body sherds (*c* 87%); decorated body sherds (*c* 1%); rim sherds (*c* 9%) and base sherds (*c* 2%). The assemblage is primarily of Iron Age date (*c* 92%), with much smaller quantities of Neolithic / Early Bronze Age, Roman, Anglo-Saxon and Modern material. The quantification of the pottery recovered is detailed in Table 23.

Methodology

The material was recorded and coded according to a system devised by David Knight (1998) and in conjunction with the Prehistoric Ceramics Research Group guidelines for the analysis and publication of later prehistoric pottery (PCRG 1997). The minimum variables for the recording of later prehistoric pottery were adhered to. The assemblage was quantified in full by sherd count, weight (g), fabric, form, surface treatment and decoration. Only rim equivalents (EVEs) are published (Table 24), but percentages for bases are recorded in the archive. The level of abrasion was not recorded for individual sherds.

The assemblage includes a total of 18 rim forms. Of these one ovoid jar form derived from Phase 1 whilst a further Neolithic / Early Bronze Age globular form was found residually in Phase 2.

Of 12 Iron Age rims, 11 globular jar forms derived from Phase 2, including one unclassified vessel. One ovoid Iron Age jar form came from Phase 4. The small size of the assemblage, and the lack of large diagnostic pottery groups (see Table 23), base angles and decorated sherds have hindered any detailed analysis and interpretation. The majority of the assemblage was unoxidised (78%), with no correlation recognised between vessel colour and profile. Only four decorative techniques were observed and on just *c* 1% of the overall pottery assemblage. There is no distinct correlation between form and decoration as the sample size of rims available is small at just 18 rims within the whole assemblage.

The globular vessel forms had diameters in the range 100mm (4); 160mm (3); 200mm (4); 240mm (2) and 300mm (1), whilst the ovoid profiles were 150mm (1) and 160mm (1).

Fabrics

The fabric sherds were recorded to general fabric type, such as quartz, grog or shell-tempered, using a x8 hand lens. Where possible the assemblage was cross-referenced to the existing

Warwickshire Museum Iron Age and Romano-British fabric series.

Phase 1

Phase 1 consisted of a single sherd in fabric P13 whilst several other sherds in fabric P28 (5) and the flint-tempered decorated body sherd in fabric P85 were found residually in Phase 2 features.

Two of these sherds have detailed surface finishes and decoration: a highly decorated impressed ware rim, possibly a Food Vessel (Fig 32/2), with incised chevron patterning on internal and external surfaces and fine incised hatching on the rim surface from context **2559**. The degree of internal decoration is unusual and it remains possible that it is Peterborough Ware in the Fengate sub-style (Alex Gibson pers comm). Also a flint-tempered, decorated body sherd (Fig 33/5) from **2589**, poorly worn, but whipped cord impressed decoration surviving on the external surface. This is possibly in the Peterborough Ware tradition (Mortlake sub-style) or perhaps Food Vessel as Mortlake is usually (but mot universally) quartz tempered (Alex Gibson pers comm).

P85 Handmade soft friable fabric with occasional medium sized flint inclusions (less than 5mm). Whipped cord impressed decoration on the external surface. Light brown throughout and *c* 9mm thick. Either Peterborough Ware (Mortlake), or perhaps Food Vessel.

Phase 2

The largest fabric groups within the overall assemblage occur in the Phase 2 assemblage and are the gritted fabric G32 (*c* 32%) and grog-tempered fabrics P42 (22%); P31 (17%) and P43 (11%). There are also several intrusive fabrics of Roman date (G44, O21, RO1, S01 and Mort) which include grey ware, Samian, and Severn Valley wares and a mortarium. All but two decorated body sherds derived from a single isolated pit **2565** with a primary fill **2567** and secondary fill **2566**. All over burnish surface finish and decoration was exclusive to sherds recovered from these same contexts. This feature also accounted for *c* 59% of the overall ceramic assemblage and 56% of all rims recorded. In addition, a single decorated Saxon sherd (Fig 34/11) demonstrated comb impressed linear and stamped motifs with incised decoration on its external surface. Eleven sherds had internal sooting.

Phase 3

A single sherd of greyware fabric R22 derives from this phase. This sherd probably derived from a pot made in the kiln at Glebe Farm.

Phase 4

No pottery derived from this phase.

Period 5

A single Late Iron Age sherd recovered from the topsoil had finger-tipping on the external rim surface (Fig 33/2).

Illustrated forms

Fig 33/3-8, Fig 34/9-12, 15-16

1 P13 Handmade, ovoid neckless jar with rounded direct rim with finger-tipping on rim exterior diameter 160mm (8%). Phase 5 topsoil **2532**

2 P13 Food Vessel or Peterborough Ware (Fengate sub-style). Handmade, Ovoid, neckless jar with flattened lip and pinched out internally. Incised diagonal linear motif on rim and internal/external body and rim diameter 150mm (8%). Phase 1 pit fill **2559**.

3 P11 Handmade, Unclassified rim profile with concave neck and everted rounded rim diameter 90mm (6%). Phase 2 spread **2577**

4 P31 Handmade, Globular jar with upright neck and rounded direct rim, with sharp internal angle at base of rim; slight concavity at base of internal angle diameter 100mm (10%). Phase 2 spread **2577**

5 P85 Peterborough Ware (Mortlake sub-style) or Food Vessel. Handmade, decorated body sherd. Very poorly worn whipped cord impressed ware. Phase 2 pit fill **2589**

6 P28 Handmade, Globular jar with concave neck and everted rounded rim diameter 100mm (5%). Phase 2, pit fill **2675**

7/13 G32 Handmade, Globular jar with upright neck and rounded direct rim, with sharp internal angle at base of rim; slight concavity at base of internal angle diameter 240mm (5%). Phase 2 pit fill **2566/2567**

8/14 G32 Handmade, Globular jar with upright neck and rounded direct rim, with sharp internal angle at base of rim; slight concavity at base of internal angle diameter 200mm (5%). Phase 2 pit fill **2566/2567**

9 P31 Handmade, Globular jar with concave neck and everted rounded rim diameter 100mm (6%). Phase 2 pit fill **2566**

10/15 P31 Handmade, Globular jar with upright neck and flattened lip pinched out internally diameter 160mm (6%). Phase 2 pit fill **2566/2567**

11 AS1 Anglo-Saxon Handmade, decorated body sherd. Comb impressed, stamp impressed and incised decoration. Phase 2 pit fill **2566**

12 P42 Handmade, Globular jar with upright neck and rounded direct rim, with sharp internal angle at base of rim; slight concavity at base of internal angle diameter 100mm (18%). Phase 2 pit fill **2567**

16 G32 Handmade, Globular jar with upright neck and rounded direct rim diameter 200mm (29%). Phase 2 pit fill **2567**

Discussion

Phase 1

Peterborough Ware is generally considered rare in the West Midlands but the Bubbenhall assemblages amongst other recent finds, suggest that the tradition was far more widespread than was previously known. An assemblage of at least 11 vessels in the impressed ware Peterborough tradition was recovered from two sites straddling the River Avon at Church Lawford and King's Newnham (Gibson 2010). Small assemblages were recovered from Wasperton (Hughes & Crawford 1995) and Barford (Oswald 1969). These finds clearly demonstrate that the tradition was active along the Avon Valley in the few centuries either side of 3000 BC.

Food Vessels are extremely rare in the region, the only other known examples were excavated at Polesworth (Palmer 1992) and Hampton Lucy (Palmer 2010b).

Phase 2

An assemblage of 965 Iron Age sherds was recovered from a Mid-Late Iron Age settlement site found in the adjacent Wood Farm Quarry (Martin forthcoming). The Wood Farm assemblage is dominated by fabric P31 (63%) which despite only forming just 17% of the Area K assemblage, it was the third largest fabric group. This contrast with Glebe Farm Quarry (Areas A-J) where the fabric represented only 2% of the assemblage (Evans above). This marked difference in the deposition of fabric types may well be a reflection of the differing dates of the three assemblages.

Phase 3

Romano-British activity in Area K seems likely to have derived from the early 2nd to late 3rd/early 4th century Romano-British farmstead examined in Areas A-J, some 700m to the south-west.

Phase 4

The single Anglo-Saxon sherd is intriguing as it represents the only evidence of probable 5th-6th century date in the locale.

Roman Tile Jerry Evans

Some 105 fragments of tile (19.968kg) came from stratified Roman contexts on the site. Tegulae, floor tiles and some box-flue tiles are represented, but few imbrices. Tile occurs on the site from phase 3 and is commonest in phases 3A and 3B, representing 3.6% of the pottery by count in phase 3A, 3.4% in phase 3B, but only 1.4% in phase 3B, and 0.4% of the unphased Romano-British contexts. These figures imply a fairly low level of tile use in all

phases, which ceases with the end of domestic occupation in phase 3B. The very few imbrex fragments and the presence of box flue tiles and floor tiles seems to suggest occasional tile use as flat ceramic surfaces. None of the buildings in phase 3A could have received a tile roof, and whilst the rectilinear Building 4 could have had a tiled roof, there is insufficient tile concentrated in this phase to prove it.

Although Roman flat tiles and box flue tiles are present in small numbers there is no suggestion of any structure which they might come from and it seems most unlikely that there was any bath building in the immediate vicinity.

Perhaps nine tile fabrics are represented, although three are probably elements of a continuum, fabrics E, G and K. Table 24 shows the distribution of the fabric types in phases 3A and 3B.

Fabric B is the commonest type in phase 3A, but this is replaced by fabric A in phase 3B. Fabrics E, G and K form the second largest group together in both phases, followed by fabric C in phase 3 and fabric B in phase 3B. A small number of apparent wasters appear in fabrics C and G and K. None are associated with the pottery kiln area.

Fabric A is represented by tegulae, floor(?) tiles (32mm thick) and three box flue tiles with acute and square lattice keying, one of the tegulae having a nail hole. Flange types A (one) and B (seven) are represented (Fig 35, nos 1 and 2) and cutaway type 1 (no 3). Fabric B is represented by tegulae and floor(?) tiles (35-37mm thick). Flange type B (five) and cutaway 1 (one) are represented (not illustrated).

Fabric C is represented by tegulae, floor tiles (33-36mm thick) and a single possible imbrex.

Flange types D (seven) and L (one), Nos 5 and 6, are represented along with cutaway 5 (three, No 5). Fabric D is represented by tegulae, floor(?) tiles (32-36mm thick) and a boxflue tile. Flange types A(two) and N(one) are represented, Nos 7. Fabrics E, G and K are represented by tegulae, floor tiles (31-43mm thick), two imbrices and a possible box flue tile fragment with lattice scoring. Flange types A(one), No 9, D(one), No 10, F(two), No 11, K(four), No 8, O(one), No 12, and P(one), No 13, are present along with three examples of cutaway 5, No 12.

Catalogue of illustrated tile (Fig 35)

Fabric A

1 Bottom of a tegula with flange type A. (G 1517/1)
2 Bottom of a tegula with flange type B. (B 141/1)
3 Tegula with cutaway type 1. (B141/1)
4 Box flue tile fragment. (B 17/1)

Fabric C

5 Tegula with flange type D and cutaway type 5. (T4 408/1)
6 Tegula with flange type L. ((A 86)

Fabric D

7 Tegula with flange type N. (H 2249/1)

Fabric E

8 Tegula with flange type K and cutaway type 5. (T4 417/1)

Fabric G

9 Tegula with flange type A (J 2413).
10 Tegula with flange type D. (H 2259/1)
11 Tegula with flange type F. (H 2228/1)
12 Tegula with flange type O and cutaway type 5, slightly wastered. (H 2239/1)
13 Tegula with flange type P. (H 2330/1)

Discussion

Tile is present on the Glebe Farm site from phase 3A onwards. Most of the material is tegulae, with some floor tiles, from either pilae or more probably larger floor tiles, with very few imbrex fragments. There are no structures capable of taking a tile roof excavated from phase 3A, and the quantity of tile from phase 3B is similar to that in phase 3A, and scattered across the site rather than concentrated in the area of the building. The overall quantity of tile from the site is small. There seems, therefore, little reason to argue that the tile was used for roofing in either phase. Tile would seem to have been easily available since there are fragments from several wasters suggesting production in the vicinity, although not within the excavated area.

Small Finds by Joseph Elders

IRONWORK (Fig 36)

Evidence of animal husbandry and almost certainly ploughing comes in the form of an iron oxgoad (Rees Type I) recovered from a Phase 3A pit in Area A (SF 46, **100/1**). It consisted of a double coil 25mm in diameter, the tine was a flattened oblong in section and was broken after a length of 45mm with no sign of tapering, so this must have been a relatively large example, larger than the examples from Tiddington for example. The goad would have been used to stimulate the oxen into greater efforts at the plough (or cart) (Fig 36/1).

From the same pit came the blade of a small (152mm, Fig 36/2) but well preserved reaping hook (SF 39), with an oblong-rectangular section and a sharply hooked blade (Type 2, Manning 1985, 57, Pl 24, F46-48). Such tools were used to reap cereals by dragging the blade through the tightly held stalks, but the smaller examples such as this may have been used for a multitude of tasks, such as pruning and weeding. Close parallels are known from Romano-British sites in Dorset, Suffolk and Kent, and this common type is known to have originated in the Iron Age (for example at Hod's Hill, Dorset).

A broken segment (L 144mm) of a small knife was found in the base of a plough furrow cutting through the middle of round house 1. This might indicate that this utensil came from the round house, but there can be no certainty in this matter. The broken stub of the blade rises gently from the back and steps down from the base of the tang, so that a tentative

correlation with Manning's Type 23 (dated to the late Iron Age and early Roman period, with several comparable examples again from Hod Hill, Q66-70, Pl 56, Manning 1985) is possible. However, not enough of the badly corroded and broken blade was preserved to allow a definite identification (Fig 36/3).

A flat iron plate or bar (80mm x 40mm x 3mm) of uncertain function was found in posthole/pit **2249**, which may belong in Phase 3.

A fragment of rivetted iron plate (25mm x 10mm x2mm) with copper/bronze plating was recovered from posthole **2295**, which may have been a (door?) fitting from the Phase 3B rectangular building which lay close by. This posthole also produced a Type 1A nail (see below) as did posthole **2291**.

The remainder of the iron object assemblage was made up of a small number of nails (almost all unstratified), mostly Manning Type 1A timber nails. A concentration of 1A nails (25, none complete) was found in pit **62** in Area A, indicating perhaps the presence of structural timbers. This was thought to possibly represent the remains of a coffin burial, given the location of the pit outside the enclosed area, but this now seems unlikely as the nails were grouped near one edge of this irregularly shaped feature. Two complete Type 1B nails (l. 50mm, 60mm) and several fragments were found in rubbish pit 100 (see above), which tends to support the presence of a structure adjacent to this pit as postulated in the discussion of Phase 2. It is worth noting that only three fragments of nails were found in the whole of Area J, which was some distance away from the identifiable structures on the site and tends to confirm the interpretation of this area as fields and stock pens.

COPPER ALLOY

One piece of twisted copper alloy wire was found in the fill of feature **2234**, a pit dated to Phase 3 in the enclosed area to the south of Round house 1.

A buckle of post-medieval date was also recovered (Fig 36/7) from the topsoil in Area H.

DAUB

Fragments of daub were found in the foundation slot of, and in two gullies (**17, 23**) adjacent to, Roundhouse 1 in Area B. These may represent remnants of the wattle and daub walls of this structure. A large amount of fired clay was found in and around the pottery kiln (see kiln report).

COAL

A single lump of coal was found in **7/1**, the fill of the rake out pit for the pottery kiln stoke hole. If this represents fuel, this would be of some interest (see kiln report), though large amounts of charcoal and burnt wheat chaff were also found in and around the kiln, indicating the use of wood and chaff as fuel.

Catalogue

1 Iron oxgoad (B **100/1**, SF 46)
2 Weeding/reaping hook (A **14/1**, SF 39)
3 Knife blade and tang fragment
4 Flat plate or bar
5 Rivetted iron plate
6 Twisted copper alloy wire
7 Post-medieval buckle (F 1413, SF 53)

Quern Stones Nicholas Palmer and geological identifications by John Crossling, Jon Radley and Fiona Roe

Sixteen quern fragments were found during the excavations (Fig 37, 1-4, 7-9, 16). Nos 1-14 were rotary querns, while no 16 was a saddle quern or rubber. Six of the fragments (1-6) were of Millstone Grit from Derbyshire or Yorkshire, while eight (7-14) were of Old Red Sandstone conglomerate from the Forest of Dean/Penallt area. These are the two commonest sources of Warwickshire querns in the Roman and medieval periods, their relative proportions fluctuating mainly according to the distance of a site to the two sources.

There was also a single fragment (15) of May Hill sandstone, from Gloucestershire, north-east of the Forest of Dean. The distribution of querns in this material concentrates on Iron Age sites in Gloucestershire, Oxfordshire and Worcestershire. It is not common in Warwickshire, but examples are known, from Iron Age contexts at Marsh Farm, Salford Priors (Palmer 2010c) and Tiddington. This example was found in the vicinity of one of the dated Iron Age features and is likely also to have been Iron Age. Bubbenhall, Salford Priors and Tiddington are all close to the River Avon, and it is likely that May Hill querns and the Old Red Sandstone ones were brought to Warwickshire by river up the Severn and Avon.

The saddle quern (16) was in a micaceous, fine-grained sandstone, possibly Coal Measures sandstone. However this was a relatively unfinished item and could have been obtained locally from the gravel.

Three of the upper stones (1, 2 and 7) had stepped, central hoppers and traces of horizontal slots to take wooden handles. These features are quite commonly found on both Millstone Grit and Old Red Sandstone querns. No 3 had a raised lip around the central hopper which is a less common feature. No 4 shows the ridged tooling which is a feature of some Millstone Grit querns. Similar examples have been found locally at Coleshill (N Palmer 2006) and Tiddington (N Palmer unpublished).

The large majority of these querns were regionally traded items, and their presence, like that of the standard range of regional, national and international pottery found, shows how even a modest rural settlement was linked into regional and national trading systems during the Roman period.

Catalogue (Fig 37, 1-4, 7, 9, 16; unillustrated 5-6, 8, 10-15)

Millstone Grit

1 Upper stone, two non-joining fragments, probably Millstone Grit, extremely coarse, with sloping grinding surface, flat pecked top, horizontal handle groove and stepped central hopper. Diam 380mm. (F **1411**, SF 60).

2 Upper stone fragment, probably Millstone Grit, with sloping grinding surface and smooth pecked top with stepped central hopper and separate end of horizontal handle socket (Th 27mm). (J **2424/1**, SF 170).

3 Upper stone fragment, Millstone Grit, with sloping grinding surface, smooth sides and smooth pecked top with raised lip around central hole. Diam 450mm. (B **128/1**, SF 47).

4 Upper stone fragment, Millstone Grit, with sloping grinding surface and vertical sides, radial ridged tooling on top and vertical on side. Diam 420mm. (F **185/1**, SF 62).

5 Upper stone fragment, Millstone Grit, with curved/sloping grinding surface, worn unevenly, and flat top and sloping sides, both pecked. Diam 500mm. (G **1519/2**, SF 59).

6 Lower stone fragment, Millstone Grit, extremely coarse, with sloping grinding surface. (F **1413**, SF 66).

Old Red Sandstone

7 Upper stone fragment, Old Red Sandstone, with sloping grinding surface, horizontal handle slot (D 30mm) and stepped central hopper. (F **1411**, SF 57).

8 Upper stone fragment, Old Red Sandstone, with sloping grinding surface and roughish pecked top and steep sloping sides. Diam 350mm. (H **2234/1**, SF 146).

9 Lower stone fragment, Old Red Sandstone, with sloping grinding surface. Diam 380mm. (G **1517/2**, SF 67).

10 Lower stone fragment, Old Red Sandstone, with sloping, weathered grinding surface and flattish bottom. (G **1517/2**, SF 69).

11 Lower stone fragment, Old Red Sandstone, with sloping, weathered grinding surface and flattish bottom. (H **2201**, SF 147).

12 Lower stone fragment, Old Red Sandstone, quite thick (110mm) with sloping grinding surface and rough bottom. (H **2234/2**, SF 123).

13 ?Lower stone fragment, probably Old Red Sandstone, with ?flat grinding surface and flattish bottom. (H **2239/1**, SF 149).

14 Fragment, probably Old Red Sandstone, with ?flat grinding surface and flat top/bottom. (H **2249/1**, SF 148).

Other

15 Fragment, May Hill sandstone, with ?flattish grinding surface (H **2201**, SF 142).

16 Saddle quern fragment/rubber, fine grained micaceous, finely bedded, sandstone (possibly Coal Measures from Derbyshire, Staffordshire or Nottinghamshire) with shallow concave grinding surface. 200mm x 140mm, Th 53mm. (A **14/1**, SF 9).

Textile Imprint Penelope Walton Rogers

The imprint of a textile was noted on a fragment of fired clay (Plate 9) from the stokehole of the kiln (A **6/6**). The imprint measures 20 x 15mm, and the weave is 'tabby repp', that is, a plain weave with a ribbed effect. There are 12-14 threads per cm in one direction (possibly the warp) and 6-7 threads per cm in the other. The yarn is Z-spun in warp and weft, as is usual for Romano-British textiles.

Remains of an almost identical textile have been found not far away at the Roman farmstead at Ling Hall, Church Lawford, in a 2nd-century deposit (Walton Rogers, in Palmer 2002). The Ling Hall piece was thought to be the remains of a wool girdle and the same may be true of the Bubbenhall example. The Bubbenhall textile is certainly likely to have been made from wool, as ribbed linens are rare and there are no examples of Romano-British linens with thread-counts as low as 12 x 6 per cm. Some ribbed wool clothing fabrics are known (Vindolanda Inv no 4, for example, Wild 1977, 6), but most examples of this fabric-type are the narrow bands generally identified as girdles (Ibid.; Walton Rogers op.cit.).

How the textile came to be in contact with the clay is unclear. There are two depressions next to the imprint, which could be the kiln builder's knuckles. If that is the case, the textile may have been a fabric band wrapped around the hand for purchase, or the end of a girdle accidentally caught up during work. Coincidentally, there is an identical imprint - a tabby weave 12/Z x 6/Z - on a tile from Roman Wroxeter, Shropshire (Wild 1970, 95), which suggests that these textiles were commonly worn or used by artisans.

Charred Plant Remains Angela Monckton

INTRODUCTION

Soil samples were taken to recover evidence of crops, diet and activities on the site in the past. The features sampled included a round house, an oven and pits in the adjoining Areas B and H, a pit in Area G near the pottery kiln in Area A, a gully in Area F outside the main settlement, and pits and ditches in Area J at the edge of the settlement (Fig 38).

Each area was sampled so although sampling was not extensive, the samples provided some information about the distribution of remains on the site. Charred plant remains were found and included cereal grains and chaff together with the seeds of wild plants. The features sampled were considered to be broadly contemporary so the remains found are discussed together below.

METHODS

Samples were taken from 34 contexts in 29 features thought to have the potential to produce plant remains. Samples were usually of 15-25 litres in size but included some smaller samples from less extensive contexts. These were processed by water flotation decanting on a 0.85mm mesh sieve and the resulting flotation fractions (flots) air dried. The flots were submitted for assessment by Lisa Moffett of Birmingham University (Moffett 1997), except

those from Area J which were assessed by the author. Twelve flots were selected for analysis including the most productive samples from each area. The plant remains were sorted from the flots using a x10 stereo microscope and identified by comparison with modern reference material at Birmingham University. The plant remains were counted and recorded in Table 25, the names and order follow Stace (1991) and are seeds in the broad sense unless stated. Many of the cereal grains were broken and abraded so could not be identified further, the approximate number of grains represented by small fragments was estimated from the volume but were not included in the totals. Additional remains noted during the assessment (Moffett 1997) are marked (#) in the table. Additional information from those samples not selected for analysis is given in the text below, referred to as 'from scanned samples' Results from all the samples were summarised in Table 25. The distribution of samples was plotted with the concentration of plant remains expressed as items per litre of sediment (Fig 38).

In order to compare the samples with each other and with those from other sites the proportions of chaff (the glumes and spikelet forks which consist of two glumes), cereal grains and seeds were calculated (Table 25). This was done because the composition of the remains can indicate stages of cereal processing (Hillman 1984). The ratios of glumes to wheat grains, barley rachis to barley grains and weed seeds to total cereal grains were also calculated (Table 25) to assist with interpretation of the plant remains (van der Veen 1992).

RESULTS

Cereals

The charred cereal remains (Table 25) included both grains and chaff of wheat (*Triticum* sp.) and cultivated barley (*Hordeum vulgare*). Remains of wheat chaff (glumes and spikelet forks) were found with spelt (*Triticum spelta)* the most numerous but some chaff of emmer (*Triticum dicoccum*) was included. Both are glume wheats where the grains are held firmly in the chaff (glumes) and require several steps of processing to free the grain. Most of the identified wheat grains were of glume wheat (*Triticum dicoccum/spelta*) with a few grains identified as emmer because of their characteristic hump-backed shape (Jacomet 1989). A few short broad grains of wheat were also found, some of which had the imprint of the glumes characteristic of hulled wheat so most of these were thought to be short grains of spelt. A few grains of free threshing wheat were present identified by the short broad rounded grains, these were possibly bread wheat type (*Triticum* cf *aestivum*) but other types could not be excluded. Only the most characteristic grains and chaff were identified here because there is considerable overlap of characters between the types of wheat and distortion can occur on charring. Barley (*Hordeum vulgare*) of a hulled form was found with the occurrence of twisted grains indicating the presence of six-row barley. The few grains of oats (*Avena* sp) were present probably as a weed or contaminant of the cereals.

Other possible food plants

There is scanty evidence for other plants used as food. Fragments of hazel nutshell (*Corylus avellana*) were found in samples from **2281** and **2413** from the scanned samples (Table 25), a possible fruitstone was noted in the sample from 55 and a possible sloe stone fragment (cf

Prunus sp) in the sample from **2330**. Although these were not abundant in the samples, it is likely that such nuts and fruit were gathered and consumed.

Wild plants

The seeds of wild plants found were mainly the weeds of arable and disturbed ground probably weeds of the cereal fields which included those typical of autumn sown crops such as corn cockle (*Agrostemma githago*) and those more typical of spring sown crops such as fat-hen (*Chenopodium album*). This may be explained by wheat usually being autumn sown and barley as spring sown, however, many of the latter weeds are also typical of gardens and grow on disturbed ground such as may be found in and around settlements as well as in cultivated fields. The most numerous arable weed seeds were those of the large grasses (Poaceae) including brome grass (*Bromus* sp) which are often found with charred cereals. Leguminous weed seeds such as vetch and vetchling (*Vicia* or *Lathyrus*) were relatively abundant in one of the samples, these often grow in rough grassland or waste ground but can occur as arable weeds. Some of the plants such as sedges (*Carex* sp) and buttercup (*Ranunculus* sp) grow in damp conditions which may be found in some Areas of cultivated fields, field ditches or possibly have been brought to the site with fodder or plant material used as flooring or animal bedding. Grassland plants, which may possibly have been brought to the site with this type of material, included ribwort plantain (*Plantago lanceolata*) and clover type plants (*Lotus* or *Trifolium*), however these together with all the plants found could have been growing as weeds of cultivated land.

THE FEATURES SAMPLED

Samples were taken from all areas of the site as the excavation progressed (Fig 38). Areas A and G at the south of the site produced a few remains from gully 58, the samples from five contexts of the pottery kiln **6** contained mainly charcoal. Area G Pit **1517** contained abundant chaff in the sample. Areas B and H at the centre of the site contained the round house and a number of productive samples were found in these areas. Area B Pit **100** included cereal grains as the most abundant remains while the oven **128** at the northern edge of the enclosure produced a sample dominated by chaff. The samples from Area H yielded moderate amounts of remains, these were also dominated by chaff including a sample from ditch **2276** although little was found in the sample from the enclosure ditch **2330**. Area J, north of the enclosure, produced few remains from the samples (Table 26) which included small numbers of grains, chaff and weed seeds. In Area F, outside the enclosure, Gully **185** included grains, chaff and weed seeds, the latter were the most numerous remains in the sample (Table 25).

DISCUSSION

The cereals found consisted mainly of spelt wheat with a little emmer and possibly bread wheat together with barley which is the situation found on many sites of this date in the Midlands and the south of England (Greig 1991).

Two of the samples included a high proportion of wheat chaff. A sample from an Oven B **128** and a sample from a pit G **1517** contained numerous glumes forming 75% and 88% of the

remains respectively with a low proportion of cereal grains and seeds (Table 25). When compared with remains from the stages of cereal processing identified by Hillman (1981) these samples are similar to the waste from dehusking grain removed by fine sieving. The high ratio of glumes to wheat grains also indicates that this is dehusking waste (van der Veen 1992) because in the ear of wheat there is only one glume to each grain. The grains of the glume wheats are held firmly in the chaff after initial threshing which only breaks the ear into segments called spikelets. The spikelets then require parching by heat followed by pounding to free the grain. The waste is then removed using a fine sieve which retains the grain, the waste chaff and weed seeds together with occasional grains can be disposed of. However, this waste is a useful fuel or kindling and there is evidence that this waste was used as fuel for parching or drying cereals in the Roman period (van der Veen 1989). The remains found here may be from this use, possibly as fuel in the oven 128 or as spent fuel dumped in the pit **1517**. The composition of these samples compares with waste chaff used as fuel found at, for example, Tiddington (Moffett 1986). Although there is no evidence to indicate the purpose it was used for on this site it is clear from the presence of this waste product that dehusking and cleaning of wheat grain was being carried out.

The samples from **128** and **1517** (Table 26) also contain the cornfield weeds corn cockle, black bind weed (*Fallopia convolvulus*) and scentless mayweed (*Tripleurospermum inodorum*) which is common in the Midlands today. The weeds in these samples could grow on many types of soil including those which occur near the site, they were all also found at Salford Priors (Moffett and Ciaraldi 2000). Weed seeds are few in the sample from 128 as was the case at the site at Billesley Manor Farm (Monckton 2003) and compares with this finding at Catsgore (Hillman 1982). At Catsgore the small number of weed seeds was thought to be due to either pre-cleaning the spikelets with riddles or reaping high on the straw or weeding of the fields, one or more of these operations may have been performed. The sample from **1517** differs in having high numbers of vetch seeds so possibly this waste resulted from less careful processing or from a crop cultivated in a different field or different year. Many of these plants grow in grassy vegetation and other explanations are possible such as cultivation after fallow or cultivation succeeding a fodder crop. The seeds of the vetches found here are small and are therefore unlikely to be from cultivated vetch which has larger seeds. It may simply be that these remains are of a crop from a year when weeds were prevalent and not dealt with successfully.

There was a lower concentration of similar material in samples from the area surrounding the round house in Areas B and H, such as in samples from **2255, 2276** and **2281** possibly mixed with other waste. They may represent smaller scale processing of glume wheat for consumption. Glume wheat is thought to have been stored in spikelet form as the chaff protects the grain from damp and weevil attack (Hillman 1984). The cereal could then be parched, pounded and dehusked as required. These remains however, could represent a general scatter of waste from the larger batches processed and represented by the samples mentioned above. Samples which differ are two samples from Area B. Sample 100 is from a pit and contains a high proportion of grains with weed seeds (Table 26). The grains were dominated by barley (61% of identified grains) and the rest wheat, no wheat glumes or barley rachis fragments were present. The most numerous weed seeds were large grasses and other arable weeds including vetch. This may be waste from food preparation using cleaned grain because chaff is absent and the ratio of seeds to grain is low indicating cleaned cereal product (van der Veen 1992). However, the weed seeds are rather numerous so this may perhaps represent accidentally burnt grain mixed with waste, possibly from final cleaning of the cereal,

because some contaminants remain even after fine sieving of the grains. Hearth **102** has a smaller number of items including more cereal grains than chaff but is dominated by weed seeds, this may be waste from food preparation from the final hand sorting of the grain before use and including some accidentally burnt grains.

Distribution of samples

Considering the distribution of remains on the site, of the 14 contexts sampled within 25m of the round house in Areas B and H eight had abundant or moderate numbers of remains (Table 25) in addition the scanned samples from contexts of features **111, 1519, 2402** and **2328** were found to have a few cereal grains present (Table 26). The samples with moderate numbers of remains from these areas included waste from dehusking or from cleaning grain probably during food preparation. The pit **100** on Area B was rich in grain which probably represented remains from the use of cleaned or partly cleaned grain. The two features with the most abundant remains are the oven **128** on Area B about 20 metres north of the round house, and the pit **1517** on Area G was about 30m south of the round house (Fig 38). This suggests that cereal waste was used for fuel at the edge of the enclosure, perhaps near to places where dehusking was carried out.

The scanned samples from the pottery kiln in Area A had occasional cereal remains in flots which were mainly wood charcoal. The gully **58** from Area A had a small number of remains (Table 26) with a few grains, glumes and weed seeds probably part of the general scatter of charred waste. A scanned sample from the enclosure ditch 2330 produced a fruitstone fragment with a few cereal remains suggesting that it contained domestic waste. Area J samples produced few remains, and a sample from outside the enclosure from gully 185 in Area F (Table 26) also included a small number of remains similar to those from the sample from gully **58**. These Areas outside the enclosure contain only a scatter of a very low concentration of cereal waste.

CONCLUSIONS

Two samples, one from an oven and another from a pit, included a large number of charred cereal remains with abundant chaff showing that dehusking of glume wheat, mainly spelt was carried out on the settlement. The waste chaff was probably used as fuel or kindling in features at the edge of the enclosure possibly near to where dehusking was carried out. A group of samples from near the round house contained smaller amounts of similar waste and other samples with more grain than chaff were thought to be waste from food preparation. Samples from outside the enclosure contained few remains suggesting different functions for these areas.

The cereals found were wheat, mainly spelt with a little emmer and possibly occasional grains of bread wheat type, hulled barley, including six-row barley, was also found and barley dominated one of the samples. There was no evidence for large scale processing of grain and the wheat was probably processed in batches for consumption on the site. There were few weeds in most samples but a sample from pit **1517** contained relatively abundant leguminous weed seeds either showing cultivation of different fields for this crop or failure to deal with weeds at this time. The arable weeds found could all grow on soils such as those found in the

vicinity of the site and it is likely that the cereals were grown nearby. Some evidence for gathered food was found, showing that hazel nuts and possibly sloes were consumed.

7 DISCUSSION AND CONCLUSIONS

Neolithic Activity

It is now widely accepted that Neolithic and Early Bronze Age Britain was not uniformly settled by farming stonemason-astronomers (Thomas 1991) and that a varying amount of transience was practiced, either by herding sub-groups loosely tethered to a home range or even perhaps by whole family groups on a seasonal round (Whittle 1999). Domesticated crops, although clearly apparent in the archaeological record from as early as 4000 BC, do not figure across much of Britain at sufficient intensity to imply everyday use by everybody until much later in the second of first millennia BC (Richmond 1999), if ever! Implicit in these more refined models is the realisation that subsistence was based on an extended family unit comprising many individuals, as it was in the hunter gatherer past, rather than individual nuclear families, as it would be in the historic present.

The River Avon was a major artery and line of communication during the prehistoric period, and during 3rd-4th millennia BC its valley was a focus for Neolithic ceremonial activity, holding special meaning for local communities (Palmer 2010a). The presence of the putative cursus at Ryton, which if comparable to the others on the Warwickshire Avon gravels, quite possibly could have been the focus for a range of later ceremonial and funerary monuments spread along this part of the valley (*ibid*). Such a scenario would provide a suitable context for the Peterborough Ware pottery recovered from Glebe Farm Quarry. This ceramic tradition, ascribed to the Middle Neolithic, in the few centuries either side of 3000 BC, is found on both domestic and ceremonial sites, the nearest occurrences being in pits within a contemporary enclosure on the shoulder of the valley at Church Lawford some 10km to the NE (Palmer 2007, 2010a) and in a pit at Barford *c* 12km to the north-east (Oswald 1969).

The enigmatic occurrence of small amounts of Neolithic and Early Bronze Age pottery on sites across the region help fill in distribution plots of the relative pottery styles and the relative pottery dates, but provide little clue as to what occurred on those sites and by whom and for how long. What they do show is that there were many kinds of sites, used perhaps, for many kinds of activity and probably for many different reasons. We are left with a few bits of their pots and a few bits of flint. The interminable debate over Neolithic landscapes *v* treescapes offers little succor to model builders though it is possible that ever intensive woodland pasturage (Armstrong *et al* 2003) cleared more wild wood than flint axes ever would.

At this Bubbenhall site, the soft, easy draining sand subsoil may well have been a favoured locale for encampment but would perhaps have been less productive farmland due to the underlying acidic soil. A stop-off point on a seasonal round, or camp site within a woodland pasture are equally plausible explanations for the kind of durable finds that survive here.

Earlier prehistoric flint scatters are sufficiently common along the Avon valley and its tributaries to suggest fairly widespread utilisation in the Neolithic and Bronze Age periods yet the relatively low numbers recorded, when compared to those found on, for instance the chalk soils of Wessex (cf Richards 1990), suggest that either population densities were low or that sufficiently high quality raw material was difficult to acquire. We should not then be too dismissive of the low proportions and quantities found at Glebe Farm, which at the least must represent temporary or short-lived occupancy of the area. It is notoriously difficult to date small assemblages with few typological indicators and even when groups from closed contexts have been examined they rarely match those from surface scatters (cf Barfield et al 2010).

The Iron Age

AREA H DITCHES

The Iron Age ditches appear to indicate that some form of settlement existed in the vicinity although the nature and longevity of the occupation remains unknown. Of interest is the NW/SE alignment of the ditches which is retained throughout the Romano-British phase. This could imply that the ditches belonged to a extant system of fields or enclosures, perhaps ditchless and bounded by hedges. However, there are no convincing parallels for such a landscape in the county, or indeed in the wider region so far better to consider these ditches as isolated features associated with a discrete settlement. Quite why they were dug so deep will remain unknowable but it is worth speculating that as possible trackway ditches, they may have held a particular significance as the entry points for a domestic settlement as at Barford (cf Palmer 2010d) or even an apparent open space as at Ling Hall Quarry (Palmer forthcoming).

AREA K PIT ALIGNMENT

Pit alignments are now a widely recognised but surprisingly little understood archaeological phenomenon. Some, which may once have held large posts, date from the Neolithic, although, the majority of known examples date from the later prehistoric period (with a few of apparently Roman date; Ian Meadows pers comm). This later group are the more enigmatic as it has become abundantly clear that they were never intended to carry posts or any other superstructure, being conceived as lengths of open pits. It is to this latter group that the pit alignment at Bubbenhall belongs.

The pits were generally rectangular or oval in plan averaging 2.2m long by 1.69m wide and 0.58m deep, although having been dug through soft sand they could not have retained their original shape unless they were immediately backfilled. Clearly these pits were left to silt naturally as their fills exhibited the typical mixed strata common to most of the excavated pit alignments in the region (Palmer 2002), having lenses of redeposited natural and water-borne silts. Nevertheless the surviving dimensions suggest that the pits belong to the middle range of pits established at Ling Hall Quarry (after Palmer 2002) and given an average of 2.88m between centres, they fall at the more closely spaced end of the range. If the statistics elicited

from Ling Hall Quarry are indeed transferable, the alignment could date from the middle Iron Age.

The pit alignment may well have formed a boundary between landunits, and the evidence from Ling Hall Quarry suggests that the earliest alignments there were strung out between existing pioneer settlements (Palmer forthcoming). In this model the alignments are seen as lines of communication rather than a traditional barrier (cf Pollard 1996). However, the later alignments can often be seen to be dividing earlier landunits and it would be reasonable to suppose that their meaning developed and changed over time.

The relative frequency of pottery and HCP in the Bubbenhall pit alignment fills is only matched at Ling Hall Quarry by the alignments dug immediately adjacent to settlement complexes (Palmer forthcoming). The spread of pottery and HCP along the entire length therefore suggests that settlement could have been extensive.

This new alignment is one of a growing corpus known from the Avon's gravel terraces and the Dunsmore region, the majority only evident as cropmarks. None are known in their entirety, as they are subject to the vagaries of cropmark production and agricultural regimes during aerial survey, but they clearly represent boundary features. One nearby example (HER MWA 2838) appears to partition a landunit within a river loop: a common occurrence along the Avon; and an adjacent example (MWA 2829) is tangentially arranged to intersect with a loop. Two nearby examples constitute two crossed alignments (HER MWA 4990 and MWA 5352), an arrangement which is particularly prevalent in this part of the valley.

Waverley Wood Quarry 1st century AD

The solitary, but quite pottery-rich feature found at Waverley Wood indicates activity in the early-mid 1st century AD shortly before the farmstead at Glebe Farm Quarry was established.

The Roman Period

THE FARMSTEAD AT GLEBE FARM QUARRY

The farmstead at Glebe Farm Quarry appears to date from the late 1st or, more likely, early 2nd century AD. The settlement continued to be occupied until the early-mid 4th century; the reasons for its abandonment are unknown, there is no evidence for destruction as the cause. As is often the case with such rural sites the stratigraphic sequence was difficult, in places impossible, to establish and suggestions as to the contemporaneity or otherwise of the features are in many cases suspect.

The apparent absence of any boundary ditch in Phase 2 is of some interest. Unenclosed farmsteads are common in the Thames valley and elsewhere, and there are examples in Warwickshire at Salford Priors, Wasperton, Barford and Coleshill, but at Bubbenhall the farmstead may only have been unenclosed for a short time. Round house 2 and the Phase 3a enclosure ditch **2276/2413** certainly would seem to be mutually exclusive, so that the ditch was cut after the demolition of this round house at least. However, it is quite possible that

round house 1 remained in use (or possibly was built) later and is contemporary with the digging of this ditch and also the kiln, possibly into the 3rd century as is indicated by the dating for the pottery from the adjacent drainage gullies; however, definite stratigraphic proof of contemporaneity is again lacking due to the truncation of these features.

The Romano-British structures

Two types of structures were identified at the main excavation at Glebe Farm Quarry, circular structures evidenced by curvilinear slots interpreted as Round houses and at least one recognisable rectangular building evidenced by linear slots and postholes, appearing respectively in Phases 2 and 3. This progression from the curvilinear (native tradition) to the rectilinear (Roman, imported tradition) in the course of the 2nd and perhaps at Bubbenhall 3rd centuries AD may seem simplistic, but would appear nonetheless to apply here as at many other sites in Warwickshire and indeed Roman Britain, despite the existence of examples (though none are known in Warwickshire) of rectilinear structures in the pre-Roman period, for example in south eastern England. It is worth noting that there may well have been an overlap between the two styles at Bubbenhall and elsewhere.

In the apparent absence of storage pits (perhaps because of the loose nature of the natural?), above ground storage of grain at this site would seem logical. In Phase 2, one or more of the round houses may have been used for this purpose, though round house 1 seems more likely to have been a domicile if the hearth is contemporary. In Phase 3, the function of the large rectangular building is uncertain and grain storage is one possibility, though it is difficult to postulate a raised floor for this building. It is however also possible that the remains of the grain storage facilities have simply not survived.

Wood was the most readily available and most frequently used building material. Beyond remarking that the main type of wood was probably oak (certainly the width of the Phase 3 rectangular building would require this), there is no evidence from the site as to the variety or type of woodland exploitation as no suitable charcoal or waterlogged wood was recovered.

Stone was not used other than as packing in postholes and in hearths and ovens, the material used being local sandstone. Stone as a building material was more prevalent at some of the other sites in the area, such as Wasperton, Bidford Grange and Glasshouse Wood, though here as even at the small Roman town of Alcester buildings with stone foundations do not appear until the 3rd century.

The roofing material would probably have been a form of thatch in Phase 2, which has not survived. Roof tile was recovered from the excavations but only in relatively small quantities, which in Phase 2 were probably meant for other uses where fireproof material was required, such as the lining of kilns and hearths, while in Phase 3 it may also have been used as roof material, for example on the rectangular building.

The clay required for hearths, ovens, and building material was also available in pockets and layers at Bubbenhall and was definitely exploited, and was probably also used for producing the greyware pottery in the kiln. Turf may have been used, for example for banks or mass walls, but there is no proof of this.

For the most part the structural evidence from Bubbenhall mirrors that recovered from comparable excavated sites in the Avon valley.

The economy of the farmstead

The economy of the farmstead would seem to have been based on mixed agriculture. Wheat of the spelt or emmer varieties was grown, as well as barley. The presence of the quernstones, the reaping hook and burnt plant remains, with evidence for the processing of crops on site, affirms the cultivation of cereal crops for the use of the occupants. As noted above, grain could have been temporarily stored in the round houses (Phase 2) and the rectangular building (Phase 3), or alternatively in buildings and/or pits elsewhere which have not survived. Any excess produce would have presumably been sold at small local markets such as that suspected at Princethorpe (MWA 3106) on the Fosse Way.

The non-survival of animal bone means that we can only assume by analogy from similar sites that cattle, sheep and pigs would have been kept. The ox goad is proof of the use of animals, though in this instance probably kept for ploughing. The semi-circular pen(s) (if this interpretation is correct) in Enclosure 5 also indicate the keeping of stock, with the animals being presumably penned in at night where they could be guarded and let out to graze in the enclosed outfields during the day.

The pottery kiln was probably the source of much of the greyware pottery recovered from the site. It would have been of purely local importance supplying the farmstead itself and possibly some of the farmsteads in the vicinity, and in this sense is similar to Romano-British kilns from other sites in the area at Ryton-on-Dunsmore and Wappenbury, although the products of the latter probably had a wider distribution throughout central Warwickshire.

The development of the farmstead

This small farmstead was apparently of very low status. Comparable examples of small rural farmsteads in Roman Warwickshire come from a number of excavated sites, several of them from the Avon valley. A good local parallel is that of Crewe Farm, Kenilworth where a rectangular enclosure occupied by a round house directly overlaid by a rectangular building was excavated. At Bidford Grange a farmstead consisting of a series of enclosures was excavated, within which a number of round houses were replaced by rectangular buildings, with the encircling enclosures also being replaced by rectilinear ditches in the later Roman period (from the 3rd century AD). Other sites at Wasperton and Glasshouse Wood, Kenilworth are also comparable. The Wasperton excavations revealed a number of single enclosure Iron Age farmsteads succeeded by a series of multiple farm enclosures of Roman date; the multiple enclosure appears from aerial photography to have been the most common type of settlement on the Avon valley terraces.

The digging of the rectilinear enclosure ditches and 'zoning' of activities within the enclosed spaces undertaken at several of the sites mentioned above and occurring in Phase 3 at Bubbenhall (late 2nd/3rd century) might be interpreted as a more rigorous internal organisation of resources (and perhaps a reaction to increased pressure on good quality land?) in response to a larger market provided by the beneficial economic effects of Roman

administration, though there is no other evidence, for example an improvement in Phase 3 in the material wealth of the settlement as evidenced in the finds, from Bubbenhall to support this theory.

There appears not to have been any significant break in the occupation of the farmstead, which falls wholly within the Romano-British period. The farmstead was founded after the Roman Conquest and did not survive into the last half century of the Roman occupation of Britain, following which there is a large gap till the 13th century fields are laid out.

Post-Roman Activity

Relatively little post-Roman (Anglo-Saxon – Post-Medieval) activity was evident across the quarry, a scenario not uncommon along the Warwickshire Avon, or indeed across the wider region. The single decorated sherd of Anglo-Saxon pottery found can do no more than point to the possibility of nearby presence but does not clarify the nature of the activity.

Ridge and furrow is endemic across the county but rarely is it datable and given the absence of field boundaries the remnant furrows found at Bubbenhall are the only evidence for their alignment and spacing.

Conclusions

A broad date range of activity was found during the excavations and observations at the quarries in Bubbenhall. Of particular interest is the evidence for Neolithic and Early Bronze Age activity which can be added to the growing corpus of non-monumental material from the region which it is hoped will provide the basis for future research and synthesis.

The Iron Age pit alignment recorded in Area K is one of a number in the area which serve to demonstrate that the landscape was densely settled and divided prior to the Roman conquest. The ephemeral nature of the adjacent activity area only serves to show how susceptible such evidence is on sandy agricultural soils. The ditches found in Area H, whilst substantial endeavours in themselves, have likewise fared poorly in the sandy soils, and can only hint at the activity formerly associated with them.

The Romano-British farmstead at Glebe Farm Quarry is a good example of the type of settlement on which the majority of the population of Roman Britain would have lived, and is typical in form, scale and development of this area of Warwickshire in particular. The finds assemblage and the analysis of the burnt plant remains allow further insights into the economic basis of the occupants of small farmsteads in the region, which seems to have been modest compared with other areas of southern and central Britain, and typically based on a mixture of arable and pasture agriculture, with small scale 'cottage' industries.

The pottery kiln is an extremely important potential source for the study of the local pottery industry, including the technology involved and the distribution of its products.

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TABLES

1 Postholes associated with Building 4

Posthole No	Description	Dimensions	Section
136	Sub-circular with sloping sides and flattish base	0.40m wide x 0.15m deep	Section AU
144	Sub-circular with sloping sides and a rounded base	0.42m x 0.57m x 0.10m deep	Not drawn
2291	Rectangular but disturbed by natural feature with flat base	0.78m x 0.65m x 0.23m deep	Section CD
2330	Sloping sides and base	0.40m wide x 0.20m deep	Section CG
2288	Sub-circular with steep sides to a steep V shaped base	0.65m x 0.28m deep	Section CC
2298	Sub-square with near vertical sides and sloping base. Sub circular post-pipe 0.12m wide and a further 0.10m deep	0.90m0.47m deep	Section CF
2279	Circular with steep sloping sides and irregular flattish base	0.70m wide x 0.09m deep	Section CA
2282	Circular with steep sloping sides and flattish base	0.30m wide x 0.15m deep	Section CB
2283	Circular with steep sides and flat base	0.10m wide x 0.07m deep	Section CB
2290	Elongated oval with moderately sloping sides and flattish base with circular depression with vertical sides and flat base with limestone fragments post packing	0.48m wide by 0.07m deep (0.52m wide x 0.30m deep)	not drawn

2 Postholes forming structure 5

Posthole No	Description	Dimensions	Section
2268	Oval with moderate-steeply sloping sides and irregular base. Clay lumps in fill	0.53m long x 0.32m wide x 0.16m deep	Section AK
2254	Sub oval/rectangular with steep sides and flat uneven base.	0.75m long x 0.40m wide x 0.16m deep	Section BT
2310	Oval with moderately steep sides and rounded base	0.24m long x 0.12m wide x 0.08m deep	Section CI
2309	Oval with moderately steep sides and rounded base	0.44m long x 0.21m wide x 0.09m deep	Section CI
2225	Circular with shallow/moderately steep sloping sides and flattish base.	0.36m diameter x 0.05m deep	Section Y
2223	Oval, although the NW end was very shallow (0.03m deep), with steep sloping sides and a flat base	0.60m long x 0.45m wide (0.30m diameter) x 0.16m deep	Section BN
2232	Sub-rectangular with moderately steep sides to a flattish irregular base	0.55m long x 0.45m wide x 0.05m deep.	Section BN
2264	Oval with moderate-steeply sloping sides and irregular base. Clay lumps in fill	0.53m long x 0.32m wide x 0.16m deep	Section BW
2263= 503	moderately steep sides to a rounded base	0.60m long x 0.25m wide x 0.11m deep	Section BV
2318	Sub-oval with irregular sloping sides and base and it contained occasional small clay lumps	0.63m long x 0.46m wide x 0.11m deep	Section CK
2317	Oval with irregular sloping sides and flattish base	0.70m long x 0.40m wide x 0.22m deep	Section CJ

3 Unattributable pits and postholes

No	Description	Dimensions	Section
407/1510	Oval with sloping sides and flat base	1.40m long x 0.80m wide x 0.20m deep	Section BD
408/1504	circular with shallow sloping upper edges above more steeply sloping lower forming a V shaped base	0.30m wide x 0.08m deep	Section BE
410/1505	circular shallow sloping sides	0.30m wide x 0.08m deep	
411/1506	Oval with shallow sloping sides and flat base	0.50m long x 0.35m wide x 0.08m deep	
803	Oval with flat base	0.70m wide x 0.82m long x 0.04m deep	
806	Circular with rounded base	0.66m wide x 0.06m deep	not drawn
805	Sub-circular with steep/near vertical sides and rounded base	0.44m wide x 0.28m deep	Section BI
807	Sub-circular with flat base	0.40m wide x 0.08m deep	not drawn
808	Sub-circular with near vertical sides and rounded base	0.40m wide x 0.35m deep	Section BH
1521	Sub-circular with shallow sloping sides and flat base	1.40m x 0.65m x 0.15m deep	
1522	Oval with sloping sides and flat base	1.40m long x 0.80m wide x 0.20m deep	Section BM
1519	Sub-oval with shallow sloping sides and flat base possibly disturbed by animal/root action	1.60m x 1.00-1.50m wide x 0.30m deep	Section BL
2328	Circular with moderately steep sides and slightly rounded base. Contained Iron Age and early 3rd century pottery but was disturbed by an animal burrow	1.32m wide x 0.30m deep	Section CM
2301	Sub-circular with moderate-steep sloping sides and rounded base	0.38m wide x 0.14m deep.	Section CH
2278	Sub-circular with moderately steep sides and flattish base	0.66m wide x 0.17m deep	Section BZ
2327	Circular with steep sloping sides and rounded base	0.67m wide x 0.26m deep	Section AL
2320	Sub-circular with moderately steep sloping sides to a rounded base	0.74m wide and over 0.34m long x 0.13m deep	Section AM
2321	Sub-circular with sloping sides and an irregular base	0.44m x 0.21m x 0.08m deep	Section AM
2252	Oval with sloping sides and rounded base with late 2nd-3rd century pottery	0.65m long by 0.40m wide x 0.14m deep	Section BS
2266	Elongated with steep sloping sides and flat uneven base	0.72m long x 0.25m wide x 0.12m deep	Section AJ
2265	Elongated with steeply sloping sides	0.5m long x 0.33m wide x 0.07m deep	Section AI
2247	Oval with shallow sloping sides and rounded base	1m long x 0.75m wide x 0.12m deep	Section BP
2244	Oval with shallow sloping sides and irregular base	1.45m long x 1m wide x 0.16m deep	Section AD
2250	Oval with moderately steep sides and flattish rounded base	0.25m long x 0.20m wide x 0.12m deep	Section BR
2251	Circular with moderately steep sides and rounded base	0.16m wide x 0.08m deep	Section BR
2336	Circular with vertical sides and pointed base	0.10m wide x 0.10m deep	Section BR
2237	Circular with steep sloping sides and flattish irregular base	0.70m wide x 0.20m deep	Section BO
2238	Oval with irregular sloping sides and flattish base	0.80m x 0.60m x 0.14m deep	Section Z
2241	Sub-rectangular with flat base	0.32m x 0.30m x 0.05m deep	
2319=507	Circular with steep sloping sides and flattish	0.70m wide x 0.08m deep	Section CL

	base		
2233	Irregular sides and base	0.50m wide x 0.10m deep	
404	Circular	0.45m	
405	Circular	0.40m	
406	Circular	0.15m	
2440	Sub oval with near vertical sides located in the western corner of Area J	5.5m x 3.1m x 0.30m deep	Section CR
2439	Steep sided and flat bottomed	1.5m x 1.6m x 0.22m deep	
2432	Sub-circular with steep sides and flattish base	0.5m wide x 0.25m deep	
2434	Sub-circular with vertical sides and an irregular base	0.4m wide x 0.35m deep	
2437	Sub-circular with vertical sides and flat base	0.40m wide x 0.20m deep	Section DJ
2436	Sub-circular with moderately steep sides and irregular base	0.45m wide x 0.15m deep	Section DI
2428	Sub-square with steep irregular sides and a flattish base	0.65m wide x 0.65m deep	Section DG
2408	Sub-square with gently sloping sides and flattish base	0.85m wide x 0.10m deep	
2295	Irregular with flat base and sandstone post packing	0.21m wide x 0.10m deep	

4 Pits and postholes Area F

No	Description	Dimensions (m)	Section
186	sub oval with steeply sloping sides and a flattish base	1.25 x 0.40 deep	21 EB
1409	circular with steeply sloping sides and a sub rounded base	0.60 wide x 0.40 deep	21 EA
180	circular scoop with uneven base	0.80 wide x 0.05 deep	21 D2
1416	depression with shallow sloping sides and rounded base	0.50 wide x 0.13 deep	21 DX

5 Distribution of flint in Areas A - J

	Preparation flakes	Trimming flakes	Unretouched Flakes	Retouched pieces	Cores	Other	Total
Area A	-	-	6	2	2	-	10
Area B	-	-	4	3	-	1	8
Area C	-	-	-	1	1	-	2
Area D	-	-	3	-	-	1	4
Area E	-	-	-	-	-	-	-
Area F	-	1	3	1	1	-	6
Area G	-	1	2	-	-	-	3
Area H	2	5	23	8	6	-	44
Area I	-	2	1	1	-	1	5
Area J	1	5	13	7	-	1	27
Misc	-	-	2	1	-	2	5

NB: For definitions of categories see Brown 1995.

6 Flint assemblages from Waverley Wood extensions

Site Code	*Flake*	*Core*	*Scraper*	*Other Retouched*	*Total Wt (g)*
BB96	1	1	-	-	20
BB99	2	1	-	-	6
Total	*3*	*2*			*26*
BW 96	5	-	-	2	31
BW 98	6	-	-	-	53
Total:	*11*	-	-	*2*	*84*

7 Quantities of pottery by phase

	Pottery	*Tile as %* of pot
Phase 3A	20.1%	3.6%
Phase 3B	35.1%	3.4%
Phase 3C	2.9%	1.4%
Phase RB	41.9%	0.4%

8 Iron Age fabrics from Area H

P16	15	26%
P17	5	9%
P18	1	2%
P21	4	7%
P211	9	16%
P212	14	25%
P31	1	2%
P34	1	2%
P351	1	2%
P37	3	5%
P55	1	2%
P56	1	2%
P57	1	2%
	n=57	

9 Fabric occurrence in context 402

	% Count	*% Wt*
C46	26.8	56.5
E251	55.4	31.5
E421	12.5	6.0
E71	3.6	0.9
R31	1.8	5.2
	56	1473

10 Locally produced fabric occurrence by phase (by count)

Ceramic Phase	*Fabric*						
	R11	*R12*	*R13*	*R18*	*R34*	*R52*	*n*
3A	32.2	29.8	2.9	18.0	0.1	5.8	724
3A/B	40.0	17.7	5.8	6.1	1.1	19.5	277
3B	38.6	21.4	4.8	10.8	0.1	10.6	1752
3C	46.2	2.8	6.2	18.6	-	5.5	145

11 Functional analysis of locally produced pottery from the site
(by minimum numbers of rims)

	flagon	constricted necked jars	other jars	wide mouthed jar	beaker /cup	tankard	bowl	dish	mort-arium	lid	n
Phase											
3A	-	12	58	21	-	-	3	3	-	3	33
3B	1.3	14.4	56.0	9.0	8.5	-	2.7	2.0	-	6.5	153

12 The occurrence of locally produced forms by fabric

Form	*Fabrics*					
	R11-13 & R19		*R18, R33-R34*		*R52*	
	No	*%*	*No*	*%*	*No*	*%*
A00	2	0.5	-	-	-	-
A1.1	1	0.3	-	-	-	-
A2.1	2	0.5	-	-	-	-
A2.2	33	9.0	3	6.1	-	-
A2.3	18	4.9	2	4.1	5	6.9
A2.4	-	-	1	2.0	-	-
A3.1	1	0.3	-	-	-	-
A4.1	1	0.3	1	2.0	1	1.4
A5.1	1	0.3	-	-	-	-
	57	**15.5**	**7**	**14.3**	**6**	**8.3**
B1.1	3	0.8	-	-	-	-
B2.1	-	-	-	-	2	2.8
	3	**0.8**	**-**	**-**	**2**	**2.8**
C1.1	15	4.1	1	2.0	2	2.8
C1.2	57	15.5	2	4.1	1	1.4
C1.3	18	4.9	1	2.0	-	-
C1.4	14	3.8	-	-	1	1.4
C2.1	1	0.3	-	-	-	-
C2.3	-	-	-	-	1	1.4
C3.1	1	0.3	-	-	-	-
C3.2	3	0.8	-	-	-	-
C3.3	1	0.3	-	-	1	1.4
C3.4	-	-	1	2.0	1	1.4
C4.1	19	5.2	1	2.0	9	12.5
C4.2	-	-	-	-	4	5.6
C5.1	2	0.5	1	2.0	1	1.4
C5.2	6	1.6	1	2.0	-	-
C5.3	18	4.9	-	-	-	-
C5.4	-	-	1	2.0	-	-
C6.1	1	0.3	-	-	-	-

C7.1	7	1.9	1	2.0	3	4.2
C8.1	10	2.7	-	-	-	-
C9.1	2	0.5	-	-	-	-
C9.2	2	0.5	-	-	-	-
C10.1	12	3.3	1	2.0	-	-
C10.2	15	4.1	3	6.1	1	1.4
C10.3	1	0.3	-	-	-	-
C11.1	1	0.3	-	-	-	-
JAR	27	7.3	7	14.3	2	2.8
	233	**63.3**	**21**	**42.9**	**27**	**37.5**
CM1.1	2	0.5	-	-	-	-
CM1.2	3	0.8	1	2.0	5	6.9
CM1.3	-	-	-	-	1	1.4
CM2.1	1	0.3	-	-	-	-
CM2.2	5	1.4	1	2.0	-	-
CM2.3	2	0.5	4	8.2	3	4.2
CM2.4	-	-	1	2.0	-	-
CM3.1	5	1.4	-	-	9	12.5
CM3.2	1	0.3	-	-	1	1.4
CM3.3	-	-	-	-	2	2.8
CM4.1	1	0.3	-	-	1	1.4
CM000 1	0.3		-		-	
	21	**5.7**	**7**	**14.3**	**22**	**30.6**
E1.1	9	2.5	5	10.2	3	4.2
E1.2	1	0.3	-	-	-	-
E1.3	2	0.5	-	-	3	4.2
E1.4	-	-	1	2.0	-	-
E2.1	1	0.3	-	-	-	-
E2.2	7	1.9	1	2.0	1	1.4
E000	-	-	-	-	1	1.4
	20	**5.4**	**7**	**14.3**	**8**	**11.1**
G1.1	-	-	1	2.0	3	4.2
	-	**-**	**1**	**2.0**	**3**	**4.2**
H1.1	4	1.1	-	-	-	-
H1.2	-	-	-	-	1	1.4
H1.3	-	-	-	-	1	1.4
H2.1	1	0.3	-	-	-	-
H3.1	4	1.1	-	-	-	-
H4.1	2	0.5	1	2.0	-	-
H4.2	3	0.8	4	8.2	-	-
H000	-	-	1	2.0	1	1.4
	14	**3.8**	**6**	**12.2**	**3**	**4.1**
J1.1	2	0.5	-	-	-	-
J2.1	1	0.3	-	-	-	-
J3.1	2	0.5	-	-	-	-
J4.1	1	0.3	-	-	-	-
	6	**1.6**	**-**	-	-	-
L1.1	1	0.3	-	-	-	-
L2.1	11	3.0	-	-	-	-
LID	2	0.5	-	-	1	1.4
	14	**3.8**	**-**	**-**	**1**	**1.4**
N	**368**		**49**		**72**	

13 The occurrence of locally produced forms by phase

Form	*Phase 3A*		*Phase 3A/B*		*Phase 3B*	
	No	*%*	*No*	*%*	*No*	*%*
A1.1	-	-	-	-	1	0.7
A2.2	2	5	5	23	8	5.3
A2.3	3	8	1	5	15	9.9
A2.4	-	-	-	-	1	0.7
A5.1	-	-	-	-	1	0.7
B1.1	-	-	1	5	1	0.7
B2.1	-	-	-	-	1	0.7
C1.1	2	5	-	-	6	4.0
C1.2	6	16	2	9	15	9.9
C1.3	1	3	-	-	2	1.3
C1.4	2	5	2	9	3	2.0
C2.1	-	-	-	-	1	0.7
C2.3	-	-	-	-	1	0.7
C3.2	1	3	-	-	2	1.3
C3.3	-		-	-	1	0.7
C4.1	3	8	2	9	7	4.6
C4.2	-	-	-	-	1	0.7
C5.1	-	-	-	-	3	2.0
C5.2	-	-	-	-	3	2.0
C5.3	1	3	4	18	1	0.7
C5.4	-	-	-	-	1	0.7
C7.1	-	-	-	-	6	4.0
C8.1	1	3	-	-	3	2.0
C9.1	-	-	1	5	-	-
C10.1	2	5	1	5	3	2.0
C10.2	3	8	-	-	9	6.0
C10.3	-	-	-	-	1	0.7
C11.1	-	-	-	-	1	0.7
JAR	2	5	-	-	8	5.3
CM1.1	1	3	-	-	-	-
CM1.2	2	5	-	-	-	-
CM1.3	-	-	-	-	1	0.7
CM2.2	-	-	-	-	5	3.3
CM3.1	1	3	1	5	4	2.6
CM3.3	1	3	-	-	-	-
CM4.1	1	3	-	-	-	-
E1.1	-	-	-	-	10	6.6
E1.2	-	-	-	-	1	0.7
E1.3	1	3	-	-	2	1.3
E1.4	-	-	-	-	1	0.7
E2.1	-	-	-	-	1	0.7
E2.2	-	-	-	-	3	2.0
H1.3	-	-	-	-	1	0.7
H3.1	-	-	-	-	1	0.7
H4.1	1	3	-	-	2	1.3
H4.2	-	-	2	9	-	-
J1.1	-	-	-	-	1	0.7
J2.1	-	-	-	-	1	0.7
J3.1	1	3	-	-	1	0.7
LID	-	-	-	-	2	1.3
L2.1	-	-	-	-	7	4.6
N	**38**		**22**		**151**	

14 Wappenbury/Ryton/Bubbenhall fabrics at Salford Priors (% sherd count)

	Area			
	D	*C1*	*C2*	*C3*
R11	0.5	3.9	0.8	1.8
R18	-	1.4	0.2	-
R52	-	3.4	6.6	4.2
Total	0.5	8.7	7.6	6.0

15 Wappenbury/Ryton/Bubbenhall fabrics at Billesley Manor Farm (% sherd count)

	Phase 1 (Late 2nd-to Early 3rd-century	*Phase 2 (Mid 3rd-to mid 4th-century)*
R11	1.8	7.2
R18	-	0.5
R52	10.5	6.7
Total	12.3	14.4

16 Wappenbury/Ryton/Bubbenhall fabrics at Alcester, Gas House Lane in the later 4th century (% sherd count)

	Tr 5, Ph D c AD370-90	*Tr A, Ph D2 c AD380-90*	*Tr 2, Ph D c AD390+*
R01	2.4	2	4.0
R18	4.3	-	-
R52	25.0	10	1.2
Total	31.7	12	5.2

17 Wappenbury/Ryton/Bubbenhall fabrics at Ling Hall (% sherd count)

Fabric	%
R11(-13)	53.1
R18	3.0
R52	8.6
Total	64.7

18 Functional composition of BB1 at Bubbenhall, Salford Priors and Alcester, Gas House Lane

Site	*Other jars*	*Jugs*	*Bowls*	*Dishes*	*Beakers*	*Lids*	
Bubbenhall	21	-	58	21	-	-	n=19
Salford Priors	19.4	-	48.4	32.3	-	-	n=31 rims
Alcester	41.3	0.5	20.1	36.4	1.4	0.3	n=368 rims

19 The composition of the Bubbenhall samian (identifiable forms)

Type	*Form*	*South Gaulish*	*Central Gaulish*	*East Gaulish*	*Number of Vessels*
Cups	Drag 27	1	-	-	1
	Drag 27 or 35	-	1	-	1
	Drag 33	-	3	-	3
	Walters 80 or Lud Tx	-	1	-	1
Bowls	Drag. 30 or 37	1	-	-	1
	Unidentified Bowl	-	1	-	1
Small Bowls	Curle 11	-	1	-	1
	Drag. 38	-	2	-	2
	Drag. 31R	-	5	-	5
Dishes	Drag. 18/31R	-	1	-	1
	Drag. 31	-	5	1	6
	Drag. 32 or 36	-	-	1	1
	Unidentified Dish	-	1	2	3
Platters	Walters 79	-	1	-	1
Indeterminate	Dish or Bowl	-	1	1	2
Totals		**2**	**23**	**5**	**30**

20 The chronology of the Bubbenhall Samian

Period	*No of vessels*
Flavian-Trajanic	2
Trajanic-early Hadrianic	1
Hadrianic-mid Antonine	2
Hadrianic-Antonine	10
Antonine	2
Mid to late Antonine	5
Late Antonine	7
Mid Antonine–3rd-century	1
Late Antonine–3rd-century	5
First half of 3rd century	1

21 Functional analysis of pottery from the site (by minimum numbers of rims)

Phase	*Flagons*	*Constricted Necked Jars*	*Other Jars*	*Wide-mouthed Jars*	*Beaker*	*Tankard*	*Bowl*	*Dish*	*Mortarium*	*Lid*	*N*
3	-	9	52	17	2	-	7	9	2	2	46
3A-B	3	20	47	3	7	-	17	0	3	-	30
3A	1.1	13.0	50.3	8.9	8.9	-	7.1	2.4	3.0	5.3	169
3B	-	18	47	18	-	-	6	6	6	-	17
F 185	-	-	53	20	11	4	4	2	-	4	45
F 186	-	2	85	-	6	-	8	-	-	-	52
E 1603	-	8	54	-	8	8	15	-	8	-	13

22 Fineware levels by phase

Phase	*(% by count)*
3A	0.2
3A/3B	2.6
3B	1.8
3C	3.5
RB	0.2

23 Area K assemblage quantified by phase, date and fabric

	Phase	Fabric	Date	NOSH	Weight (g)	Rim EVE	Minimum Vessels
	1	P13	Neo / Early BA	**1**	**7**	**8**	**1**
	2	P85	Neo / Early BA	1	6	-	-
	2	P28	Neo / Early BA	5	25	5	1
	2	Mort	Roman	1	12	-	1
	2	G32	Iron Age	65	1530	78	7
	2	G44	Iron Age	3	33	-	-
	2	O21	Roman	1	114	-	-
	2	P11	Iron Age	3	18	6	1
	2	P31	Iron Age	35	406	31	5
	2	P34	Iron Age	12	148	-	-
	2	P42	Iron Age	45	257	18	1
	2	P43	Iron Age	23	120	-	-
	2	RO1	Roman	2	25	-	-
	2	Samian	Roman	1	1	-	-
	2	AS	Anglo-Saxon	1	5	-	-
Sub total				*198*	*2700*		*16*
	3	R22	Roman	**1**	**8**	-	-
	5	P13	Iron Age	1	21	8	1
	5	PM	Post medieval	2	20	-	-
Sub total				*3*	*41*		*1*
Total				**203**	**2756**		**18**

24 The occurrence of the tile fabrics by phase (by count and Wt)

	Phase 3A		**Phase 3B**	
Fabric	*%Count*	*%Wt*	*%Count*	*%Wt*
A	8	2	38	40
B	23	56	17	13
C	31	15	17	8
D	8	0.2	7	13
E	-	-	7	12
F	-	-	-	-
G	23	22	9	7
I	-	-	-	-
K	8	5	5	7
n=	26	4.535kg	58	11.904kg

25 Charred plant macrofossils

Area	A	B	B	B	B	F	G	H	H	H	H	J	
Feature No.	58	100	102	117	128	185	1517	2228	2255	2276	2281	2432	
Context/Sample No.	1/1	1/1	1/1	1/1	1/1	1/1	2/1	1/1	1/1	6/1	1/1	1/1	
Context type	Gu	Pit	H?	D	Ov	Gu	Pit	D	Gu	D	Pit	PH	
Century AD	2-3	2-3	2-3	2-3	2-3	2nd	3rd	2+	2-4	?3rd	2-3	2-3	
GRAINS													
Triticum cf *dicoccum*	-	-	-	-	-	5	-	-	-	-	-	-	Emmer
Triticum cf *aestivum*	-	-	-	-	-	1	-	-	-	-	-	-	Bread wheat type
Triticum sp.	1	54	4	1	42	1	49	2	2	-	9	-	Wheat
Triticum sp. germinated	-	-	-	-	-	-	2	-	-	-	-	-	Wheat
Triticum sp. tail grains	-	-	-	-	10	-	10	-	-	-	-	-	Wheat
Hordeum sp. hulled	-	60	3	-	-	-	3	2	-	1	-	-	Barley
Hordeum sp. hulled, twisted	-	9	-	-	3	-	-	-	-	-	-	-	Barley
Hordeum vulgare L.	1	17	-	-	4	1	2	-	-	1	-	-	Barley
Avena sp	-	-	1	-	3	-	3	-	-	1	#	-	Oat
Cereal indet.	6	171	6	9	159	4	69	9	3	4	26	2	Cereal
Cereal fragments (approx. no of grains)	(1)	(60)	(2)	(2)	(80)	-	(40)	-	(1)	(1)	(5)	-	Cereal fragments
Cereal/Poaceae	-	25	1	-	21	-	9	-	-	-	2	-	Cereal/Grass
Culm node large	-	-	1	1	-	-	1	-	-	2	-	-	Cereal stem
Culm base large	-	-	1	-	-	-	1	-	-	-	-	-	Cereal stem base
Cereal embryos	-	-	-	-	18	-	2	-	-	-	2	-	Cereal
Cereal sprouts	-	1	-	1	1	-	1	-	-	-	1	-	Cereal sprouts
CHAFF													
Triticum dicoccum Schubl. spikelet fork	-	-	-	-	1	-	1	-	-	1	-	-	Emmer
Triticum dicoccum Schubl. glume	-	-	-	-	6	-	2	-	-	-	-	-	Emmer
Triticum cf dicoccum glume	-	-	-	-	1	-	2	-	-	-	-	-	Emmer
Triticum spelta L. spikelet fork	-	-	-	-	11	-	18	-	1	1	-	-	Spelt
Triticum spelta L. glume	-	-	1	1	33	2	83	-	9	1	6	3	Spelt
Triticum cf spelta glume	-	-	1	-	49	1	67	1	3	4	4	-	Spelt
T. dicoccum/spelta spikelet fork	-	-	-	-	87	1	272	-	8	3	4	4	Glume wheat
T. dicoccum/spelta glume	4	-	3	8	902	5	1975	3	55	25	111	-	Glume wheat
T. dicoccum/spelta rachis	-	1	2	1	162	-	364	1	14	7	7	-	Glume wheat
Hordeum vulgare L. rachis	-	-	-	-	26	-	24	-	3	15	-	-	Barley
Cereal rachis	-	-	-	-	5	-	14	-	-	4	-	-	Cereal
Awns indet	-	-	-	-	-	-	-	-	+	+	-	-	Awns

Area	A	B	B	B	B	F	G	H	H	H	H	J	
Feature No.	**58**	**100**	**102**	**117**	**128**	**185**	**1517**	**2228**	**2255**	**2276**	**2281**	**2432**	
Context/ Sample No.	**1/1**	**1/1**	**1/1**	**1/1**	**1/1**	**1/1**	**2/1**	**1/1**	**1/1**	**6/1**	**1/1**	**1/1**	
Context type	**Gu**	**Pit**	**H?**	**D**	**Ov**	**Gu**	**Pit**	**D**	**Gu**	**D**	**Pit**	**PH**	
Century AD	**2-3**	**2-3**	**2-3**	**2-3**	**2-3**	**2nd**	**3rd**	**2+**	**2-4**	**?3rd**	**2-3**	**2-3**	
Triticum sp awns	-	-	+	-	-	-	-	-	-	-	-	-	Awns wheat
Avena sp. awns	-	-	-	-	+	-	-	-	-	-	+	-	Awns oat
WILD PLANTS													
Ranunculus subgen *Ranunculus*	-	-	-	-	-	-	-	-	-	1	-	-	Buttercup
Corylus avellana L.	-	-	-	-	-	-	-	-	-	-	#	-	Hazel nut shell
Chenopodium album type	-	2	2	-	11	2	-	-	-	-	-	-	Fat-hen
Chenopodium sp.	1	6	2	2	27	6	4	1	-	2	2	-	Goose foot
Atriplex sp.	-	1	-	-	-	-	-	-	-	-	-	-	Orache
Agrostemma githago L. capsule fragment	-	-	-	-	1	-	2	-	-	-	-	-	Corn cockle
Persicaria cf *maculosa*	-	-	-	-	3	-	-	-	-	4	#	-	Persicaria
Polygonum sp.	-	-	3	-	2	-	-	-	-	-	-	-	Knotweed
Fallopia convolvulus L.	-	2	-	1	1	-	1	-	-	-	-	-	Black Bindweed
Rumex sp.	1	2	5	-	1	4	2	-	2	1	2	-	Dock
Rumex acetosella L.	-	1	1	-	-	-	-	-	-	-	1	-	Sheep's-sorrel
Malva sp	-	-	-	-	-	-	-	-	2	-	-	-	Mallow
Raphanus raphanistrum L. pod fragment	-	-	-	-	-	-	-	-	-	1	#	-	Wild Radish
Brassicaceae	-	-	-	-	1	-	-	-	-	-	2	-	Cabbage family
Lotus/Trifolium	3	9	10	-	8	-	-	-	5	3	-	-	Trefoil/Clover
Vicia sativa ssp *nigra* (L.) Ehrh.	-	2	-	-	-	-	1	-	-	-	-	-	Common vetch
Vicia sp	-	-	-	-	-	-	101	-	-	-	-	-	Vetch
Vicia/Lathyrus	-	8	-	-	-	-	21	-	-	-	-	2	Vetch/Vetchling
Medicago/Melilotus/Trifolium	2	4	6	-	1	1	7	1	1	-	-	1	Medick/Melilot/Clover
Plantago lanceolata L.	-	-	-	-	-	1	-	-	-	-	-	-	Ribwort plantain
Tripleurospermum inodorum (L) Schultz-Bip.	-	1	-	-	10	-	1	-	-	1	-	-	Scentless mayweed
Luzula sp	-	-	2	-	-	-	-	-	-	-	-	-	Wood rush
Carex sp	1	-	4	-	1	-	-	-	-	-	1	-	Sedge
Arrhenatherum elatius (L) tuber	-	-	-	1	-	-	-	-	-	-	-	-	Onion couch grass
Bromus hordeaceus/secalinus	1	5	-	-	14	2	6	1	2	1	1	-	Brome grass
Danthonia decumbens (L.) DC	-	1	1	-	-	2	-	-	-	-	-	-	Heath grass

	Area	**A**	**B**	**B**	**B**	**B**	**F**	**G**	**H**	**H**	**H**	**H**	**J**	
	Feature No.	**58**	**100**	**102**	**117**	**128**	**185**	**1517**	**2228**	**2255**	**2276**	**2281**	**2432**	
	Context/ Sample No.	**1/1**	**1/1**	**1/1**	**1/1**	**1/1**	**1/1**	**2/1**	**1/1**	**1/1**	**6/1**	**1/1**	**1/1**	
	Context type	**Gu**	**Pit**	**H?**	**D**	**Ov**	**Gu**	**Pit**	**D**	**Gu**	**D**	**Pit**	**PH**	
	Century AD	**2-3**	**2-3**	**2-3**	**2-3**	**2-3**	**2nd**	**3rd**	**2+**	**2-4**	**?3rd**	**2-3**	**2-3**	
Poaceae large		2	24	4	1	43	2	65	1	6	4	16	-	Grasses
Poaceae medium		-	5	3	-	3	-	9	-	-	3	-	-	Grasses
Poaceae small		-	6	4	-	9	1	-	-	-	-	1	-	Grasses
Indetermined seeds		-	7	6	-	8	6	5	-	5	4	2	1	Seeds
OTHER														
Stem fragments		3	3	1	1	-	3	1	6	1	1	1	-	Stem
Root fragments		-	-	-	-	-	-	+	+	+	+	-	-	Roots
Thorns		-	-	1	-	-	-	-	-	-	-	2	-	Thorns
Buds woody		-	1	2	-	-	-	-	1	-	3	2	-	Tree/shrub buds
Tuber fragments		-	-	2	1	-	-	-	1	-	4	-	-	Tubers
Culm fragments small		-	2	1	1	-	-	1	-	-	2	-	-	Grass stem
Culm node small		-	-	-	1	-	-	1	-	-	3	-	-	Grass stem
	TOTAL	26	430	82	31	1688	51	3202	30	122	108	205	16	(Items)
	Vol sample	24	21	15	19	17	26	25	23	24	25	4	25	(Litres)
	Vol flot	80	27	15	24	140	5	84	20	54	13	37	24	(mls)
	% Sorted	50	all	all	all	25	all	25	all	50	all	25	all	(%)
	Items/litre	2.1	20.5	5.5	1.6	397	1.9	512	1.3	10	4.3	51.3	0.6	(Items/litre)
PROPORTIONS														
	GLUMES	-	0	6.8	-	75.5	-	87.9	-	75.2	55.6	66.5	-	%
	GRAINS	-	79.6	20.5	-	15.4	-	4.8	-	4.4	9.7	19.1	-	%
	SEEDS	-	20.4	72.6	-	9.1	-	7.3	-	20.4	34.7	14.4	-	%
RATIOS														
	Glumes: Wheat grains	-	0:110	0.7	-	6.2	-	21.7	-	13.4	30:0	3.5	-	
	Rachis: Barley grains	-	0:189	0:3	-	1.0	-	2.4	-	3:0	3.0	0:0	-	
	Seeds : All grains	-	0.3	5.3	-	0.7	-	1.7	-	4.6	3.6	0.8	-	

26 Summary of all charred plant remains samples by feature

Area	*Feature*	*Feature type*	*Sample vol lts*	*Flot vol mls*	*Chaff*	*Cereal Grains*	*Seeds*	*Nut/ Fruit*	*Total per sample*	*Items per litre*	*AV*
A	6	Pot kiln	120	117	+	+	-	-	<5	<0.1	1
A	15		20	45	-	-	-	-	-	-	0
A	17		20	7	-	fr	-	-	<5	0.3	1
A	55		20	7	-	+	+	fs	<5	0.3	1
A	58*	Gully	24	80	+	+	+	-	50 a	2.0	2
B	100*	Pit	21	27	-	+++	++	-	430	20.5	3
B	102*	H/Pit	15	15	+	+	++	-	82	5.5	3
B	128*	Oven	17	140	+++	+	+	-	6700 a	397	4
B	111		20	19	-	+	-	-	<10	0.5	1
B	117*	Ditch	19	24	+	+	+	-	31	1.6	2
F	185*	Gully	26	5	+	+	++	-	51	2.0	2
G	1517*	Pit	25	84	+++	+	+	-	12800 a	512	4
G	1519		20	5	+	+	+	-	<5	0.3	1
H	2228*	Ditch	23	20	+	+	+	-	30	1.3	2
H	2255*	Gully	24	54	++	+	+	-	240 a	10.0	3
H	2276*	Ditch	25	13	++	+	+	-	108	4.3	2
H	2281*	Pit	4	37	++	+	+	ns	800 a	200	4
H	2328		20	83	-	+	+	-	<5	0.3	1
H	2330	En.Ditch	20	11	-	+	+	fs	<5	0.3	1
J	2402	Ditch	23	7	-	fr	+	-	5	0.2	1
J	2407	Gully	20	16	+	+	+	-	6	0.3	1
J	2412	Pit	17	15	-	+	+	-	3	0.2	1
J	2413	Ditch	21	15	-	-	+	ns	3	0.1	1
J	2422	Gully	15	5	-	-	-	-	-	-	0
J	2424	Ditch	17	7	-	+	-	-	1	0.1	1
J	2428	PH	15	20	+	-	-	-	1	0.1	1
J	2432	PH	25	24	+	+	+	-	16	0.6	1
J	2435	Pit	18	25	+	+	+	-	16	0.6	1
J	2440	Pit	22	5	-	-	-	-	-	-	0

Key: Nut/ns = nutshell, fs = fruitstone fragment, fr = fragments.
* = analysed sample see Table 20, a = total calculated from part of the flot.
+ = few, ++ = moderate number, +++ = numerous.
En. Ditch = enclosure ditch, H/Pit = hearth or pit, PH = post hole.

Information for samples not analysed in areas A to H from the assessment by Lisa Moffett (Moffett 1997).

AV = Abundance value for Fig **1: 0 = none, 1 = <1, 2 = 1-5, 3 = 5-25, 4 = >25 items per litre of sediment.

APPENDICES

1 Iron Age and Roman Pottery Fabric Descriptions

IRON AGE (AREAS A – F)

P11 A handmade fabric with common moderate sand temper *c* 0.3mm and occasional large brown and white quartzite inclusions *c* 3-6mm. Fabric neutral 2. Gas House Lane (Evans 1996); Marsh Farm Quarry (Hancocks 2010); Tiddington (Booth 1996); Walton (Hancocks in press).

P13 A handmade fabric, black-brown, angular quartz inclusions. Tiddington (Booth 1996).

P16 A reduced handmade fabric with black core and orange-brown margins and surfaces, with common fairly fine sand temper *c* 0.2mm with occasional examples up to 0.5-1.0mm, and occasional rounded brown ironstone *c* 0.5-1mm. Mid Iron Age (A Hancocks pers comm).

P17 A reduced handmade fabric with black core and orange-brown to black margins and surfaces with common quartz inclusions *c* 1-2mm, some-common organics up to 3mm and some white stone inclusions *c* 3-5mm.

P18 A handmade reduced fabric with a black core and brown-black margins and surfaces with abundant moderate sand temper *c* 0.3mm. Later Iron Age (A Hancocks pers comm).

P21 A handmade reduced fabric with a grey-brown core, orange brown margins and black surfaces, with some-common angular white quartz *c* 1-5mm and common moderate sand temper *c* 0.3mm.

P211 A reduced handmade fabric with black core and black or brown margins and surfaces, with abundant granitic inclusions *c* 0.3-1mm and occasional examples up to 8mm, probably Caldicote granite (S Rátkai pers comm). DIRFT fabric GDVV4, later Iron Age (A Hancocks pers comm).

P212 A reduced handmade fabric with black core and brown margins and surfaces, with common sub-angular white quartz *c* 0.5-3mm, occasional vegetable temper up to 10mm and very occasional gold mica *c* 0.5mm. Mid Iron Age (A Hancocks pers comm).

P28 A reduced hand-made fabric with little sand temper *c* 0.4mm, some calcite *c* 2mm, and occasional sub-angular stone inclusions *c* 6mm, possibly sandstone. Salford Priors (Evans 2000, 122); Walton (Hancocks in press).

P31 A handmade reduced fabric with a black core, margins and black or brown surfaces, 'soapy', with common rounded brown ironstone *c* 1-4mm and occasional fine sand *c* 0.2mm.

P34 A reduced hand-made fabric with some large organic temper inclusions and some moderate sand temper *c* 0.3mm. Tiddington (Booth 1996); Salford Priors (Evans 2000, 122); Marsh Farm Quarry (Hancocks 2010); Ling Hall Quarry (Hancocks 2002); Walton (Hancocks in press).

P351 A reduced handmade fabric with dark brown core and brown margins and surfaces, with some-common angular dark brown ?grog inclusions *c* 0.5-1mm.

P37 A reduced? handmade fabric with grey core and pale brown margins and surfaces, with common shell temper up to 4mm and generally *c* 1mm, and common rounded orange inclusions *c* 0.3-0.5mm, probably grog. Later Iron Age (A Hancocks pers comm).

P42 A reduced hand-made fabric with large, clearly visible angular red grog pellets (up to 2mm). Some occasional organic voids (1mm diameter). Marsh Farm Quarry (Hancocks 2010).

P43 A reduced hand-made fabric with abundant brown-grey grog temper *c* 0.5-5mm. Salford Priors (Evans 2000)

P55 A handmade reduced fabric with black core and surfaces with common shell voids *c* 0.5-3mm and some-common subangular white quartz *c* 1-3mm.

P56 A handmade ?reduced fabric with black core and thick mid brown margins and surfaces, with common white granitic inclusions *c* 0.5-2mm. Possibly Caldicote granite (Rátkai pers comm). Early Iron Age (A.Hancocks pers comm).

P57 A handmade reduced fabric with dark grey core and dark grey to black or brown surfaces. It has a very 'soapy' texture and common fine shell temper voids up to 2mm, generally *c* 1mm, and occasional fine organics *c* 0.3mm. Later Iron Age (A Hancocks pers comm).

LATE IRON AGE – ROMAN TRANSITION

C46 A handmade fabric with grey-brown core and brown margins and surfaces with a 'soapy' texture, with common shell-temper voids *c* 0.5-2mm and some grey-brown grog *c* 2mm.

E251 A wheelmade reduced fabric with black core, margins and surfaces with a 'soapy' texture, with common grey and orange-brown angualr grog *c* 0.5-1.5mm.

E42 A wheelmade reduced fabric with black core, margins and surfaces, with common sub-rounded sand temper *c* 0.3-0.5mm.

E421 A wheelmade reduced fabric with a dark blue-grey core, light brown margins and dark grey surfaces with common-abundant sub-rounded sand *c* 0.4-0.5mm and some fine organics *c* 0.5-1mm.

R31 A hand-made reduced ware with common vegetable voids *c* 0.5-2mm.

E71 A soft wheelmade sandy fabric with orange core and buff-brown margins and surfaces, with common sand *c* 0.3-0.5mm and occasional ironstone *c* 0.3mm.

ROMAN

G32 A reduced hand-made fabric with common angular white quartz temper *c* 1-2mm. Salford Priors (Evans 2000).

G44 Malvernian metamorphic-tempered ware, Malvern Link, Worcestershire. A handmade fabric with common angular white-pink inclusions *c* 1-6mm and some black igneous inclusions 0.5-5mm, sometimes with black and gold inclusions which appear like iron pyrites. Malvernian, handmade (MAL RE A), (Tomber & Dore 1998); Gas House Lane (Evans 1996); Marsh Farm Quarry (Hancocks 2010).

Mort Mortaria (unspecific)

O21 Severn Valley ware with grey core and orange brown margins and surfaces, with abundant organic voids *c* 0.3-3mm. Gas House Lane (Evans 1996); Ling Hall Quarry (Evans 2002); Billesley Manor Farm (Evans 2003); Marsh Farm Quarry (Hancocks 2010).

R01 Reduced fabric with common coarsish sand temper *c* 0.4mm. Alcester, Gas House Lane (Evans 1996); Marsh Farm Quarry (Hancocks 2010).

R22 A reduced fabric with a dark grey core and grey margins and surfaces, with common-abundant sub-angular grey grog 2-0.5mm and occasional moderate sand *c* 0.3mm. Bubbenhall Glebe Farm Quarry (Evans above).

Samian (Unspecific)

ANGLO-SAXON

AS Handmade reduced throughout with common sub-angular quartz *c* 0.3-1.5mm and occasional organic temper voids up to 2mm long and *c* 8mm in thickness. Comb impressed, stamp impressed and incised decoration.

2 Iron Age Pottery Form Catalogue

P18 Jar with fairly vertical, slightly outcurving rim. (H 2201)

P34 Barrel jar with simple chamfered rim, (* 33/2).

P56 Jar with fairly vertical rim, pushed down at the tip and decorated with slashes, early Iron Age (Hancocks pers comm). (H 2201)

3 Roman Form Catalogue

Fabric B11

B11.1 26:733=32:731 A BB1 cooking pot jar with everted, rising rim, late 2nd-early 3rd century.
B11.2 26:734 A BB1 jar with everted rim, 3rd century.
B11.3 68:418 A BB flange rimmed dish or bowl, Hadrianic-early 3rd century.
B11.4 68:423=68:431 A BB1 beaded and flanged bowl with bead level with or below flange, early-mid 3rd century.
B11.5 68:433 A BB1 beaded and flanged bowl, perhaps mid-late 3rd century.
B11.6 68:441=68:442 A BB1 developed beaded and flanged bowl, later 3rd-4th century.
B11.7 82:111 A simple rimmed BB1 dish, Hadrianic or later.
B11.8 82:131 A simple rimmed dish with tapering rim, Hadrianic or later (not illustrated).

Fabric C11

A cooking pot jar with everted rim with squared end. Probably later 3rd-4th century. (17/1)

Fabric C12

C12.1 22:731 Jar with everted, rising rim.
C12.2 22:736 Jar with everted, rising flat-topped, wedge-shaped rim.
C12.3 P54 was C11 26:733 A cooking pot jar with everted rising rim.
C12.4 P64? 30:731 Jar with everted rising rim.
C12.5 P64? 30:736 Jar with everted, rising, slightly thickened rim.
C12.6 26:761 Jar with everted, hooked rim.

Fabric F41

F41.1 44:218 Vertical necked beaker with beaded rim, probably 3rd century.

Fabric F51, Oxfordshire colour-coated ware

F51.1 69:211 Fragmentary rim from an Oxfordshire C45/C55 bowl, AD 240-400 (Young 1977).

F52, Nene Valley colour-coated ware

F52.1 43:332 Bag beaker with slightly everted rim, later 2nd-early 3rd century.
F52.2 82:111 Simple rimmed dish, probably 4th century.

Fabric G12

G12.1? 39:743 A wide mouthed storage jar with everted, thick, horizontal rim.
G12.2 39:777 A wide-mouthed jar with everted, undercut rim.

M22.1 77:543 A curving flanged mortarium with bead slightly below flange, earlier 2nd century.
M22.2 71:536 Hook rimmed mortarium with bead above fairly straight flange, probably later 2nd century.
M22.3 71:563 Hook rimmed mortarium with bead above flange, later 2nd century.
M22.4 71:661 MISSING Beaded and flanged mortarium of thick hammerhead form, probably early 3rd century. Not illustrated.
M22.5 73:618=73:627 A hammerhead mortarium with thin, slightly cordoned flange joining the wall near the top of the flange. Diagonal brown paint stripes on flange. Early 3rd-mid 4th century.
M22.6 73:629 A hammerhead mortarium with thick grooved flange, perhaps 3rd century.
M22.7 73:632=73:617 A hammerhead mortarium with grooved concave flange, early 3rd-mid 4th century.

Fabric O12, Mancetter-Hartshill(?)

O12.1 42:214 'Jar' beaker with everted, thickened, horizontal rim.

Fabric O16, Mancetter-Hartshill(?)

O16?.1 42:211 'Jar' beaker with everted, beaded, slightly flattened rim.
O16.2 52:429 Bowl with everted horizontal rim with groove around the edge, perhaps 2nd century.

Fabric O23, Severn Valley ware

O23.1 61:211 A tankard with a fairly straight vertical wall and beaded rim, probably 1st-2nd century.
O23.2 67:444 A beaded and flanged dish, cf Webster 1977, no 66, 2nd-3rd century.

Fabric O36, Severn Valley ware

O36.1 37:765 A wide mouthed high shouldered jar with triangular, undercut rim, cf Webster 1977, nos 27-8, later 3rd-4th century.
O36.2 38:771 A wide mouthed jar with horizontal beaded rim, cf Webster 1977, no 50, later 2nd-later 3rd century.

Fabric R81

R81.1 42:712 Poppyhead beaker with cordoned shoulder and lozenge-shaped panels of barbotine dots. Early 2nd-century.

Fabric R83

R83.1 48:113 Vertical necked beaker.
R83.2 82:131 Simple rimmed dish with outsloping tapering rim. not illustrated.

W12.1 Flagon with beaded rim, internally ledged, with a single handle attached immediately below rim. Probably 2nd-century.

4 Pottery Fabric Descriptions

Class A - Amphorae

A21 Dressel 20, Baetican amphora; common limestone/chalk sand and silver mica, exterior sometimes white-slipped.
A23 Campanian 'black sand' amphora fabric, probably from an Arthur 82 type.

Class B - Black burnished wares

B11 BB1, Poole Harbour, Dorset (Williams 1977).

Class C, Shell-tempered wares

C12 [Coded P54] A reduced handmade fabric with black core and black-brown margins and surfaces, with abundant shell temper voids *c* 1-9mm. Probably late Iron Age (A Hancocks, pers comm).

Class F - colour-coated wares

F41 An oxidised black colour-coated ware, hard, with a dark grey core and orange margins, with occasional moderate sand *c* 0.3mm and common fine black ironstone *c* 0.1-0.3mm.

F51 Oxfordshire red colour-coated ware (Young 1977).

F52 Nene Valley colour-coated ware, parchment ware fabric (Howe *et al* 1980).

F63 A Mancetter colour-coated whiteware, with white core, margins and surfaces with a matt brown colour-coat on exterior, with some moderate sand *c* 0.3mm and occasional rounded red ironstone *c* 0.5mm.

Class G, gritted wares

G12 A handmade oxidised? fabric with a pale grey core and pale orange-brown margins and surfaces, with abundant angular white grog *c* 1-4mm and some black ?ironstone *c* 0.2-0.5mm.

Class M, mortaria

M22 Mancetter-Hartshill mortaria; white fabric with red and brown grog trituration grits.

M23 Oxfordshire white ware mortaria; white fabric with translucent, white, and pink quartz trituration grits (Young 1977).

M29 A whiteware mortarium fabric with abundant angular coarse sand *c* 0.5-1mm. Source; uncertain, either local, or just possibly Rhineland.

M71 Oxfordshire oxidised red colour-coated mortaria (Young 1977).

Class O, oxidised wares

O11 Mancetter(?) oxidised ware. An oxidised fabric with an orange core, margins and surfaces, 'soapy' with occasional fine sand *c* 0.1mm and common fine silver mica >0.1mm.

O12 Mancetter(?) oxidised ware. An oxidised fabric with mid grey core and orange margins and surfaces, with common sand *c* 0.1-0.5mm and some rounded brown ironstone *c* 0.2-0.3mm.

O16 Mancetter(?) oxidised ware. An oxidised fabric with abundant moderate sand temper *c* 0.3mm.

O23 Severn Valley ware; abundant very fine sand temper *c* 0.1mm. Visually similar to Cirencester fabric 108.

O24 Severn Valley ware; some moderate sand temper *c* 0.3mm and brown grog *c* 0.2-0.4mm and some ironstone *c* 0.3-2mm.

O27 Severn Valley ware; visually very similar to products of the Great Buckman's Farm and Newlands kilns in the Malvern Link complex. Common fairly fine limestone/chalk sand *c* 0.1-0.3mm.

O29 Severn Valley ware; common-abundant moderate sand temper *c* 0.3mm.

O36 Severn Valley ware; similar to fabric O21, but with less organic tempering. Some-common organic temper voids *c* 0.3mm and sometimes some white ?calcareous inclusions or grog inclusions.

O47 An oxidised fabrics with common fine organics *c* 0.2-0.5mm, common fine mica *c* 0.1mm, some fine sand *c* 0.2mm, and occasional large rounded red ironstone up to 2mm.

Class R, reduced wares

R11 A reduced fabric with common fairly coarse sand temper *c* 0.4mm.

R12 A coarse reduced ware tempered with abundant coarse sand *c* 0.4-0.5mm.

R13 A hard, overfired, reduced fabric, probably overfired R11, with common coarse sand temper *c* 0.3-0.5mm.

R18 A reduced fabric with brown core, grey margins and black surfaces, with occasional vegetable temper voids and some fine limestone/chalk sand.

R19 A reduced fabric with grey core and dark grey surfaces with abundant sub-rounded coarse sand *c* 0.5mm, similar to R12.

R22 A reduced fabric with a dark grey core and grey margins and surfaces, with common-abundant sub-angular grey grog).2-0.5mm and occasional moderate sand *c* 0.3mm.

R24 A reduced fabric with white core and margins and grey surfaces, possibly Nene Valley greyware, with occasional sand temper *c* 0.1mm and some very fine sand <0.1mm.

R32 A reduced fabric with common small vegetable voids *c* 0.3-0.5mm.

R33 A reduced fabric with red-brown core and black surfaces, with common fine calcareous sand inclusions *c* 0.2-0.4mm, some vegetable voids *c* 0.5-3mm, occasional dark brown ironstone *c* 0.5mm, and occasional sand *c* 0.2mm.

R34 A reduced fabric with some/common moderate sand temper *c* 0.3mm and common fine organic temper voids up to *c* 2mm.

R362 A handmade reduced fabric with a black core, margins and surfaces with occasional sand *c* 0.3-0.5mm and some-common fine organics *c* 0.2mm.

R52 A reduced fabric with some moderate sand temper, occasional black ironstone inclusions and some grey grog inclusions *c* 1-3mm.

R55 A reduced fabric with some-common sand temper *c* 0.1-0.25mm and occasional rounded brown ironstone *c* 0.5mm, and some rounded white inclusions *c* 0.1-0.2mm.

R81 A reduced fabric with a 'soapy' texture, blue-grey core and grey margins, with fine sand temper <0.1mm and occasional black ironstone.

R83 A reduced fabric with mid grey core, margins and surfaces, fairly 'clean' with some fine sand temper *c* 0.1mm.

Class S - samian wares

S10 South Gaulish samian ware.

S20 Central Gaulish (Lezoux) samian ware.

S30 East Gaulish samian ware.

S32 East Gaulish Rheinzabern samian ware.

Class W, whitewares

W12 Mancetter-Hartshill whiteware; a white fabric, sometimes with a pinkish core, with common moderate white and pink sand temper *c* 0.3mm and some moderate red ironstone.

W14 A whiteware with a white core, margins and surfaces with very occasional sand *c* 0.5mm and some brown ironstone(?) *c* 0.1mm and occasional ironstone(?) *c* 0.2-0.3mm.

W17 A whiteware with a buff core, margins and surfaces, with common sub-sounded sand *c* 0.2-0.3mm and very occasional red ironstone *c* 1-2mm. Possibly Mancetter.

W23 A whiteware with a pink core and white margins and surfaces, with a mid brown colour-coat on the exterior, with common fine sand *c* 0.1mm and occasional sand *c* 0.3mm. Probably Mancetter, cf fabric F63.

5 Pottery Fabric Occurrence Tables

* - intrusive

Phase 3A

Fabric	*% count*	*% Wt*	*%MV*	*%RE*	
B11	2.8	1.1	9	2.0	
F51*	0.1	0.1	-	-	
G12	0.6	0.4	-	-	
M22	1.9	6.6	2	3.5	
O16	0.3	0.1	-	-	
O23	0.3	0.1	-	-	
O24	0.4	0.2	-	-	
O27	0.1	0.3	-	-	
O36	0.7	0.1	-	-	
O47	0.1	0.1	-	-	
P21	0.3	0.0	-	-	
P37	0.4	0.1	-	-	
P54	1.9	0.3	2	-	
R11	32.2	28.5	36	30.6	
R12	29.8	33.0	26	37.4	
R13	2.9	1.2	6	1.9	

R18	18.0	22.4	11	14.4
R34	0.1	0.1	-	-
R52	5.8	4.7	6	9.5
R55	0.1	0.1	-	-
R81	0.4	0.2	2	0.7
R83	0.1	0.0	-	-
S10	0.1	0.0	-	-
S20	0.4	0.3	-	-
N	724	11765	47	1129

Phase 3A/B

Fabric	*% count*	*% Wt*	*%MV*	*%RE*
A21	0.4	0.1	-	-
B11	2.5	3.1	3	7.0
F41	0.4	0.1	3	4.1
F52	0.4	0.1	3	-
M22	0.7	0.8	3	2.6
O11	0.4	0.1	-	-
O36	0.7	0.3	-	-
P54	0.7	0.4	3	2.3
R11	40.0	49.7	53	68.1
R12	17.7	12.1	7	2.9
R13	5.8	7.6	3	0.3
R18	6.1	3.7	7	2.9
R22	0.7	0.4	-	-
R32	0.4	0.3	-	-
R34	1.1	2.1	3	3.2
R52	19.5	16.9	7	3.5
R83	0.4	0.1	-	-
S20	1.4	1.9	3	2.9
S30	0.4	0.0	-	-
W12	0.4	0.1	-	-
N	277	2979	30	342

Phase 3B

Fabric	*% count*	*% Wt*	*%MV*	*%RE*
A23	0.1	0.1	-	-
B11	1.2	1.4	3.5	1.6
F51	0.1	0.0	-	-
F52	0.9	0.4	-	-
G12	0.1	0.0	-	-
M22	0.4	1.5	2.9	1.5
M71	0.1	0.0	-	-
O11	0.1	0.0	-	-
O12	0.5	0.4	-	-
O16	0.5	0.2	-	-
O23	0.3	0.1	-	-
O24	0.1	0.0	-	-
O29	0.1	0.1	-	-
O36	2.4	1.7	0.6	0.2
P54	5.4	1.3	1.2	1.0
R11	38.6	39.1	39.3	34.7
R12	21.4	22.2	22.0	24.6
R13	4.8	7.3	3.5	6.4
R18	10.8	5.9	9.8	7.7
R24	0.1	0.1	-	-

R34	0.1	0.2	-	0.6
R362	0.1	0.0	-	-
R52	10.6	15.4	14.5	17.5
R81	0.3	0.1	-	-
R83	0.1	0.1	1.2	0.4
S20	0.6	1.6	1.2	3.5
S21	0.1	0.0	0.6	-
S32	0.1	0.0	-	-
W12	0.1	0.0	-	-
W17	0.1	0.0	-	-
W23	0.1	0.7	-	-
CCC*	0.1	0.0	-	-
COVS* 0.2	0.1	-	-	
N	1752	24190	73	329

Phase 3C

Fabric	*% count*	*% Wt*	*%MV*	*%RE*	
B01	0.7		0.3	-	-
F51	2.1		0.5	-	3.7
F52	0.7		2.4	6	3.8
G12	1.4		0.3	-	-
M22	2.1		0.9	6	2.8
O12	0.7		0.2	-	-
O36	0.7		0.2	-	-
P16	0.7		1.2	-	-
P31	0.7		0.2	-	-
P54	8.3		1.1	6	2.3
R11	46.2		68.4	39	39.9
R12	2.8		2.0	-	-
R13	6.2		4.3	6	4.1
R18	18.6		9.0	17	17.9
R52	5.5		0.2	22	25.7
R83	1.4		0.1	-	-
S20	0.7		0.2	-	-
CCC*	0.7		0.3	-	-
	145		2958	8	218

Phase RB

Fabric	*% count*	*% Wt*	*%MV*	*%RE*	
B01	0.4		0.5	0.8	1.3
F51	0.1		0.1	-	-
G12	0.6		1.9	-	-
M22	0.1		0.7	0.8	0.2
O12	0.7		0.2	0.8	0.4
O16	0.1		0.1	1.6	0.5
O23	0.1		0.2	0.8	0.4
O29	0.8		0.4	1.6	1.4
P21	0.1		0.1	-	-
P54	0.6		0.5	0.8	0.8
R11	25.6		17.1	14.0	10.3
R12	53.5		50.5	60.5	56.4
R13	0.1		0.5	1.6	1.4
R18	7.3		8.8	3.1	4.1
R19	0.1		0.1	0.8	0.4
R33	0.1		0.1	0.8	0.3

R52	8.8	15.9	11.6	21.7
R81	0.1	0.1	0.8	0.7
S30	0.1	0.0	-	-
W14	1.0	2.2	-	-
W17	0.1	0.0	-	-
Pmed*	0.1	0.1	-	-
M	2080	19922	129	3312

6 Pottery Form Incidence by Phase

[n] - RE value for rim

Phase 3A

Fabric	*Forms*
B11	B11.1[9] B11.7x2[1,1] B11.8[5]
M22	M22.1[39]Stamped
R11	A2.2[9] A2.3[14] C1.2x2[1,21] C1.4[19] C4.1x3[14,11,6] C10.1x2[13,21] C10.2x3[5,15,7] CM1.1[7] CM3.1[14] H4.1[3]
R12	C1.2x4[10,72,100,15] C1.3[13] C1.4[36] C3.2[8] C5.3[26] C8.1[6] CM4.1[19] J3.1[8]
R13	CM1.2[8]
R18	A2.2[6] A2.3x2[35,5] C1.1[12] JAR[5]
R52	C1.1[11] CM3.3[25] E1.3[21]
R81	R81.1[8]

Phase 3A/3B

Fabric	*Forms*
B11	B11.4[14]
C11	C11.1[8]
F41	F41.1[14]
F52	F52.1[1]
M22	M22.4[9]
R11	A2.2x5[12,8,7,12,7] B1.1[34] C1.2[9] C1.4[9] C4.1x2[1,7] C5.3x3[11,20,24] C9.1[17] C10.1[11]
R12	C1.4[5] C5.3[5]
R13	A2.3[1]
R18	H4.2x2[9,1]
R34	C1.2[11]
R52	CM3.1[12]
S20	DR31R[10]

Phase 3B (non kiln)

Fabric	*Forms*
B11	B11.1x2[8,10] B11.4[6] B11.6[15]
C12	C12.1[28]
M22	M22.7[14]
O36	O36.1[5]
R11	A1.1[10] A2.2x4[12,23,5,8] A2.3x5[13,12,3,10,29] A5.1[18] B1.1[10] C1.1x2[10,13] C1.2[12] C1.3[17] C1.4[12] C3.3[6] C4.1x2[12,8] C5.1[6] C10.1x2[10,10] C10.2x4[17,10,16,17] JAR[1] CM2.2x4[20,10,15,23] CM3.1x2[9,15] E1.1x3[25,12,10] E2.1[9] E2.2[1] J1.1[10] J3.1[8]

R12	C1.1x2[16,10]	C1.2x6[28,15,17,52,1,16]	C1.4x2[8,1]	C5.1[14]	C5.2x3[19,47,9]		
	C5.3[9]	C8.1[8]	C10.3[7]	E1.2[21]	E2.2x2[6,5]	H3.1[8]	H4.1[15]	L2.1x2[3,10]
R13	A2.2[18]	JAR[6]					
R18	A2.4[10	C1.2[45]	C1.3[17]	C5.4[15]	C10.2[9]	JAR[1]	CM2.2[9]	
	E1.1x4[12,34,10,15]	H4.1[3]					
R52	A2.3x4[15,17,30,1]	C1.1[7]	C2.3[11]	C4.1[15]	C5.1[19]	JAR[16]		
	CM1.3[8]	E1.3[13]	H1.3[5]	LID[13]				
R83	R83.2[5]							
S21	CU11[1]							

Phase 3B (kiln associated contexts)

Fabric	*Forms*					
B11	B11.4[14]	B11.5[1]				
C12	C12.3[6]					
M22	MORT[11]	M22.5[7]	M22.6[8]	M22.7[9]		
R11	A2.2[16]	A2.3[49]	C1.1[11]	C1.2x3[32,22,100]	C3.2x2[30,10]	
	C7.1x5[18,15,13,8,10]	C10.2x2[11,11]	C11.1[20]	JARx3[15,7,5]		
	E1.1x3[5,13,8]	J2.1[4]	LID[12]	L2.1x2[6,12]		
R12	A2.3x4[16,17,14,44]	C1.2x3[20,17,25]	C8.1[19,9]	C10.2[27]	2.1x2[4,32]	
R13	A2.2[12]	C2.1[10]	C4.1x2[37,10]			
R18	A2.2[63]	C10.1[3]	JARx2[1,1]	E1.4[11]		
R52	A2.3[26]	B2.1[22]	C1.2[7]	C4.1x2[10,7]	C4.2[32]	C7.1[8]
	C10.2[10]	CM3.1x2[15,8]	E1.3[20]	L2.1[27]		
R83	R83.1[7]					
S20	DR33[25]	WALT79[11]				

Phase 3C

Fabric	*Forms*					
C12	C12.1[5]					
F52	F52.2[8]					
M22	M22.5[6]					
R11	A2.1[12]	A2.2[10]	A2.3[30]	C4.1[17]	C10.1[7]	JAR[5]
R13	C9.2[9]					
R18	C10.2[17]	CM1.2[8]	CM2.3[14]			
R52	C4.1[25]	C4.2[4]	C7.1[20]	CM1.2[7]		

Phase RB

Fabric	*Forms*						
B11	B11.4[11]						
C12	C12.5[25]						
M22	M22.2[7]						
O12	O12.1[13]						
O16	O16.1[17]	O16.2x2[8,8]					
O23	O23.2[12]						
O29	JAR[5]						
R11	A2.3[7]	C1.2x2[81,13]	C4.1[6]	C5.1[8]	C10.1x3[14,21,27]	C10.2[18]	JAR[5]
	CM2.2[7]	E1.1x2[9,12]	E1.3[10]				
	H1.1x3[6,14,8]	H3.1[18]					
R12	C1.1x4[11,10,19,11]	C1.2x20[34,10,14,5,6,30, 7,18,17,14,13,48,17,10,9,15,					
	40,26,46,53]	C1.3x9[7,17,5,59,14,63,12,11,15]					
	C1.4x6[100,14,44,40,10,14]	C5.3x6[7,62,35,8,8]	C8.1x5[10,75,17,15,5]	C10.2[8]			
	JARx3[11,5,5]	E2.2x3[17,11,50]	H3.1[11]				
R13	A2.2[30]	A2.3[16]					
R18	C4.1[5]	CM2.3x2[12,13]	E2.2[10]				

R19	L2.1[12]				
R33	C5.1[8]				
R52	C4.1[10]	CM3.1[12]	CM2.3x3[2,16,13]	CM3.1[12]	CM4.1[21]
	E1.1x3[12,36,30]	E2.2[100]	G1.1x3[7,40,12]	H1.2[9]	
R81	R81.1[21]				

7 Tile Fabric Descriptions

A An orange-brown tile fabric, 'clean', with some voids, apart from very occasional brown ironstone *c* 2mm and occasional fine white inclusions >0.2mm.

B An orange tile fabric with a 'soapy' texture, occasional black rounded ironstone *c* 2mm and some rounded clay pellets *c* 1-4mm.

C A soft orange tile fabric with a rather 'soapy' texture, occasional voids, no visible temper.

D An orange tile fabric with common fairly fine sand temper *c* 0.2mm.

E An orange-red tile fabric with some rounded black ironstone *c* 0.2-1mm, some voids, and occasional rounded white inclusions *c* 0.1-0.2mm. Probably a variant of fabric G.

F An orange tile fabric with some fine sand *c* 0.2-0.3mm, and occasional white inclusions *c* 0.2-0.5mm. Possibly related to fabrics E and G.

G An orange-red tile fabric, often hard fired, sometimes with a reduced core, with some rounded black ironstone *c* 0.2-1mm and some fine white inclusions *c* 0.2mm. Fabric E is probably a variant of this.

I A soft orange tile fabric with occasional sand *c* 0.3-0.4mm, occasional rounded white inclusions *c* 0.2-0.5mm, and common angular pale brown sandstone inclusions *c* 4-12mm.

K An orange-brown tile fabric with common rounded orange and orange-brown clay pellets(/grog) *c* 1-1.5mm and some rounded white inclusions *c* 0.2-1mm.

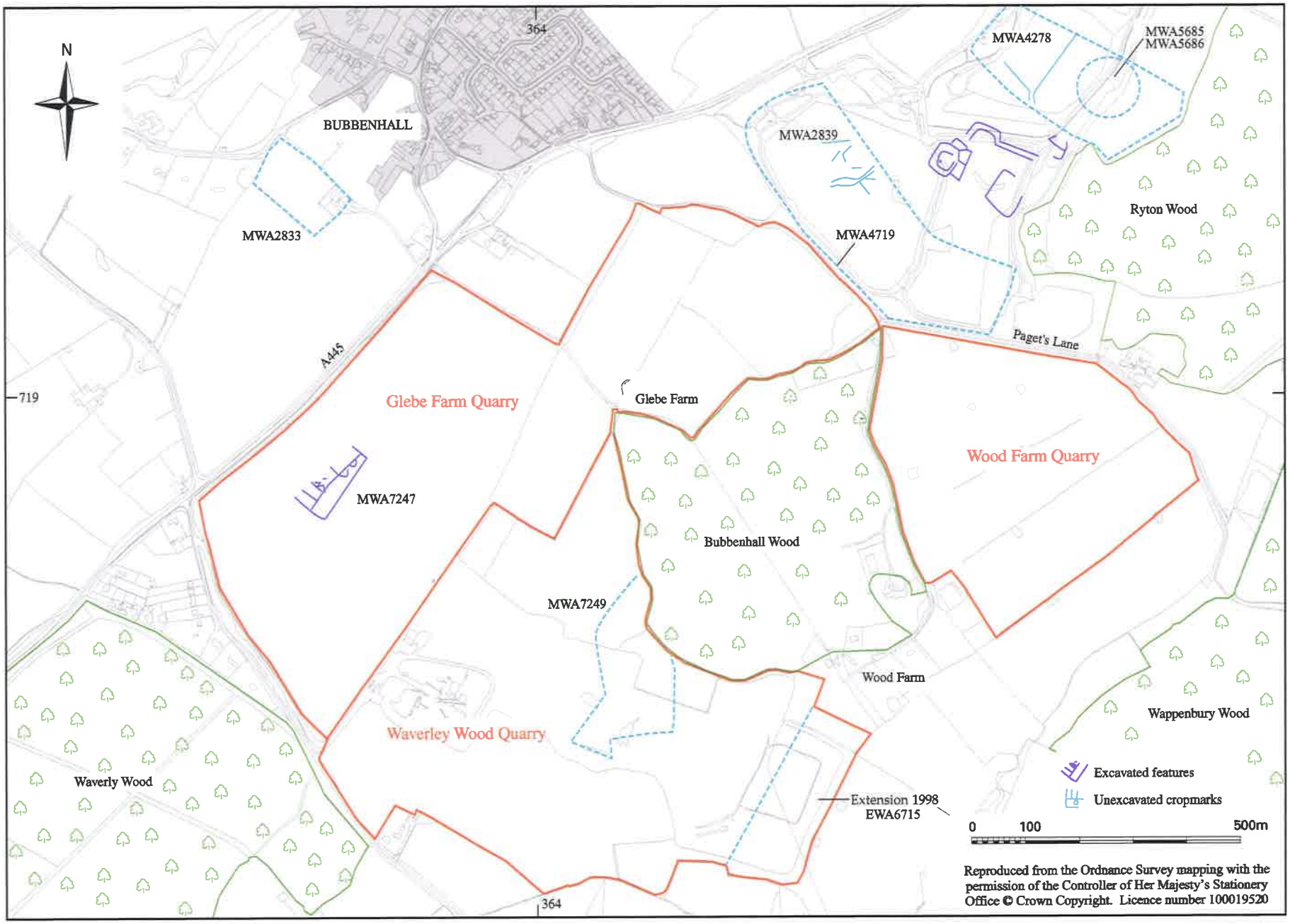


Fig 1: The Bubbenhall quarries and the locations of the sites

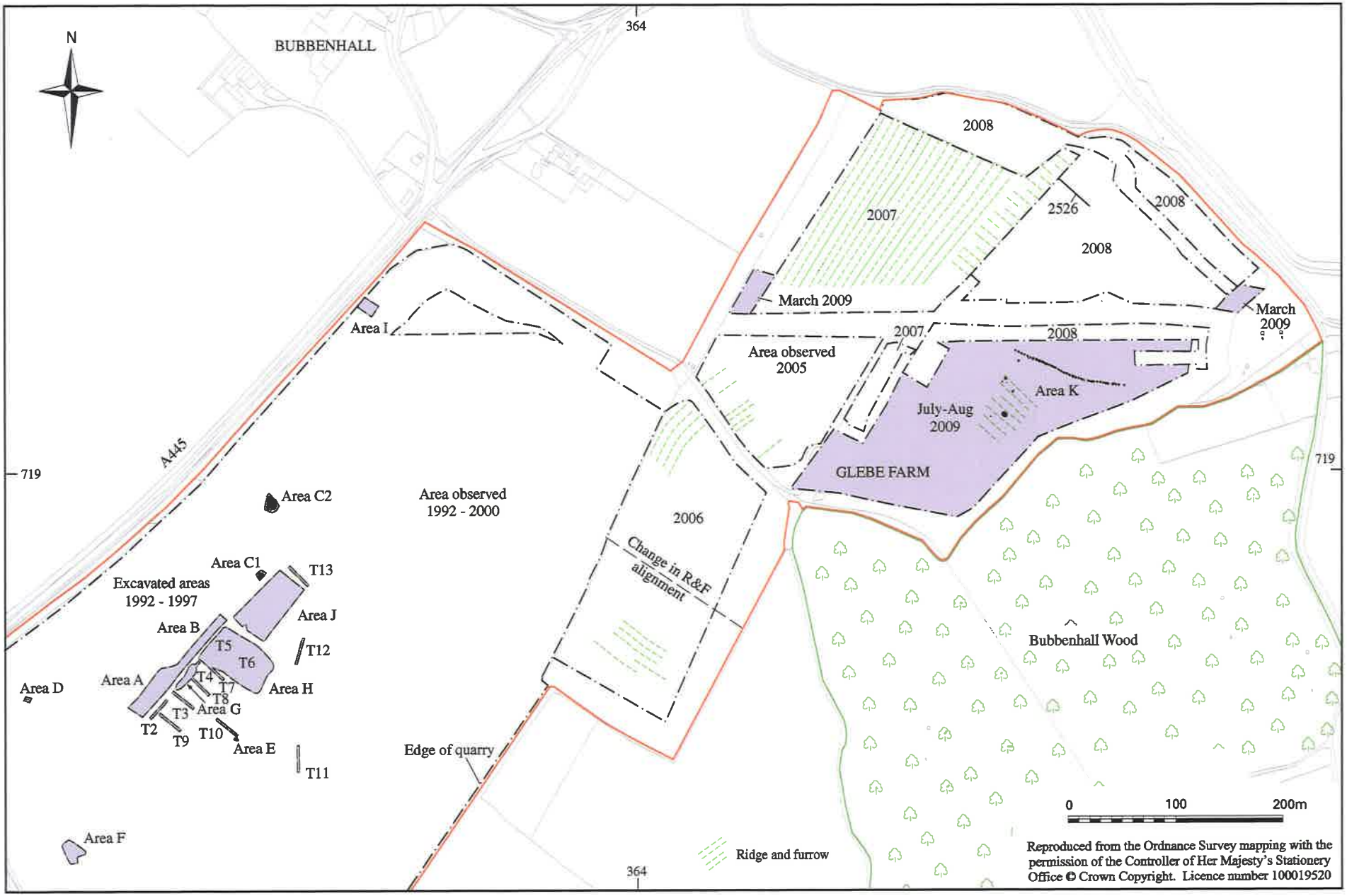


Fig 2: Glebe Farm Quarry: areas, trenches and ridge and furrow observed

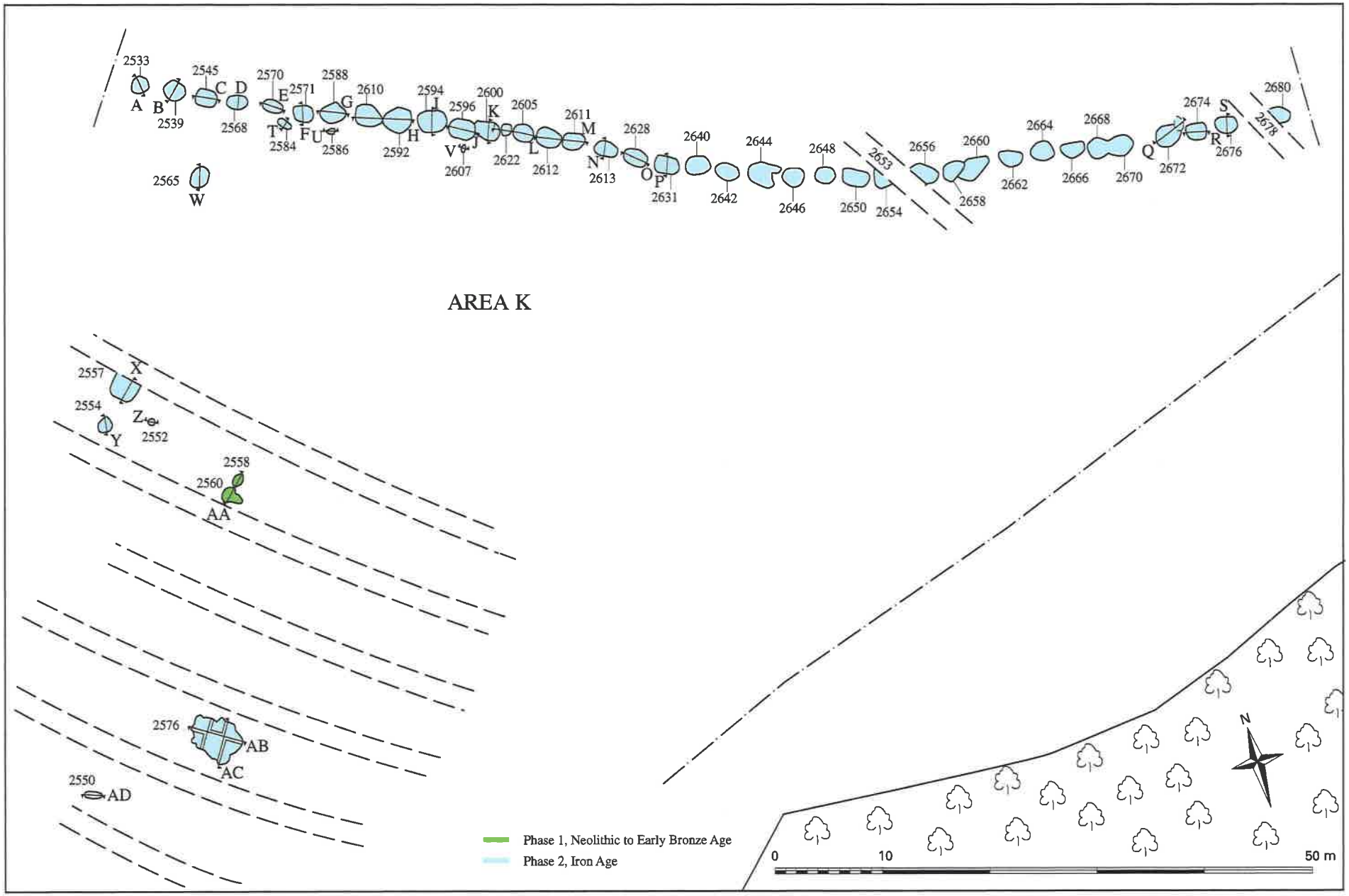
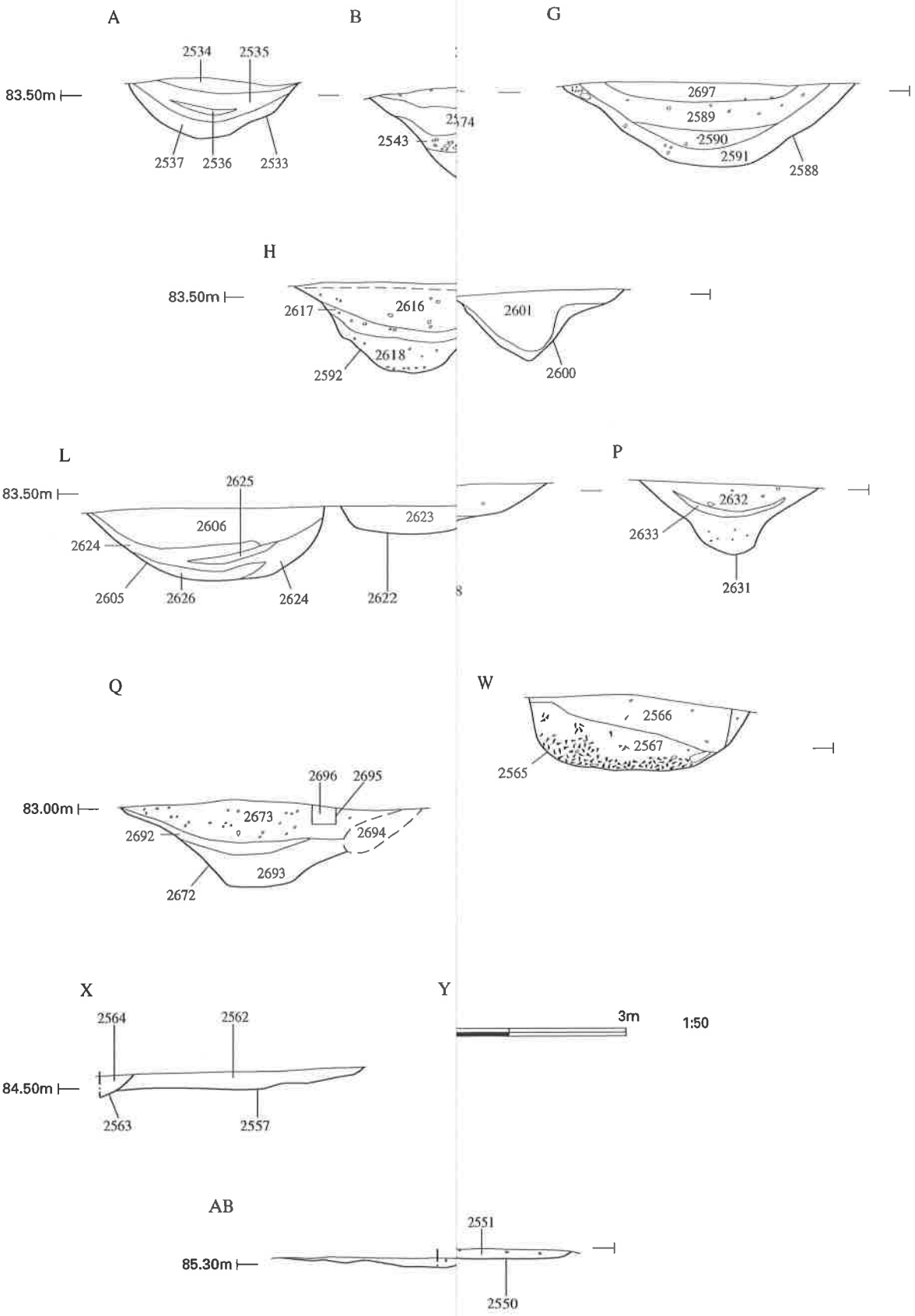


Fig 3: Neolithic and Iron Age features in Area K


A
B
G
83.50m
2534
2535
2537
2536
2533
2543
2574
2697
2589
2590
2591
2588
H
83.50m
2617
2616
2618
2592
2601
2600
L
P
83.50m
2625
2606
2624
2605
2626
2624
2623
2622
2632
2633
2631
Q
W
83.00m
2696
2695
2673
2692
2694
2693
2672
2566
2567
2565
X
Y
3m
1:50
84.50m
2564
2562
2563
2557
AB
85.30m
2551
2550

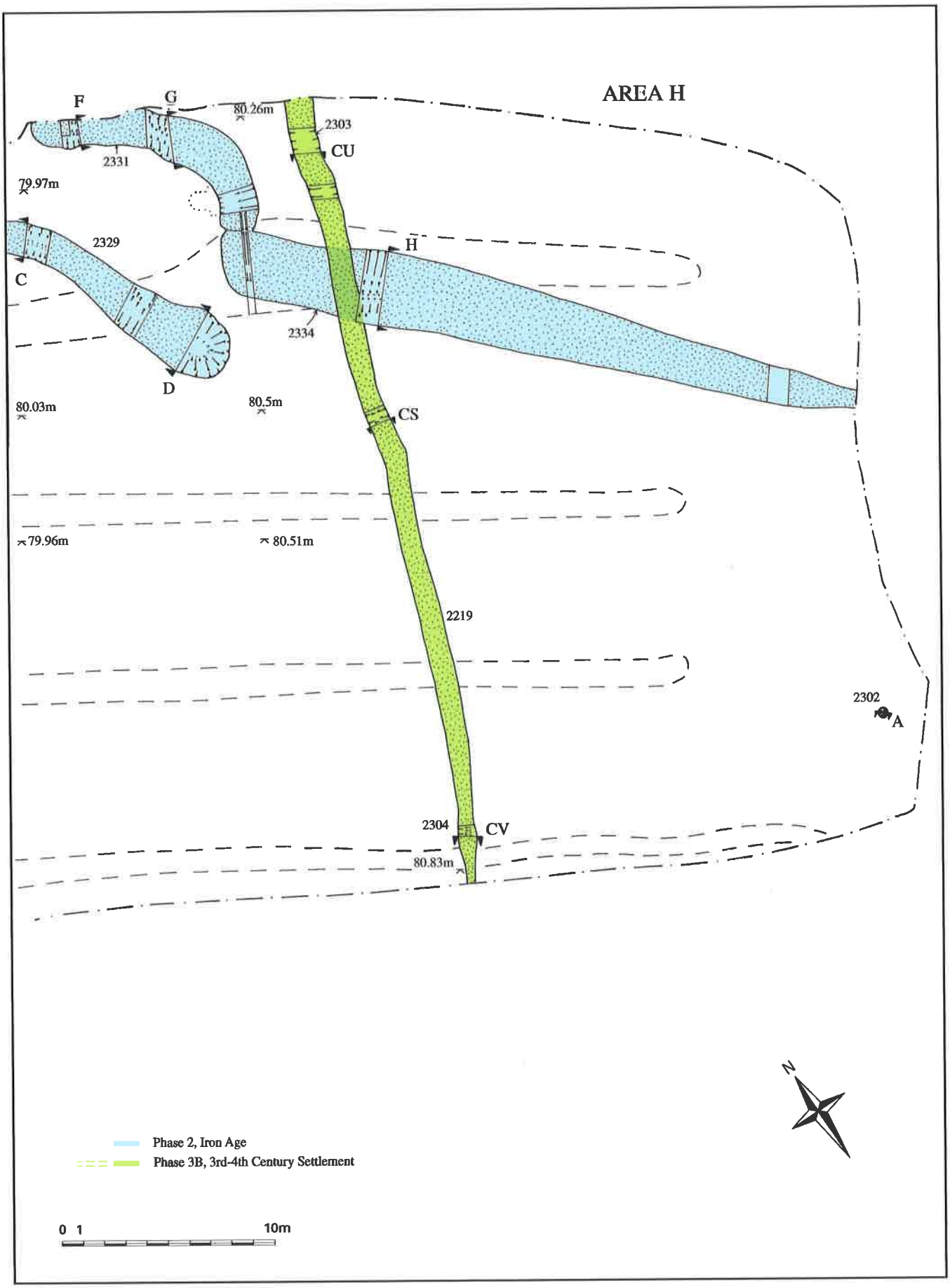


Fig 5: Iron Age features in Area H

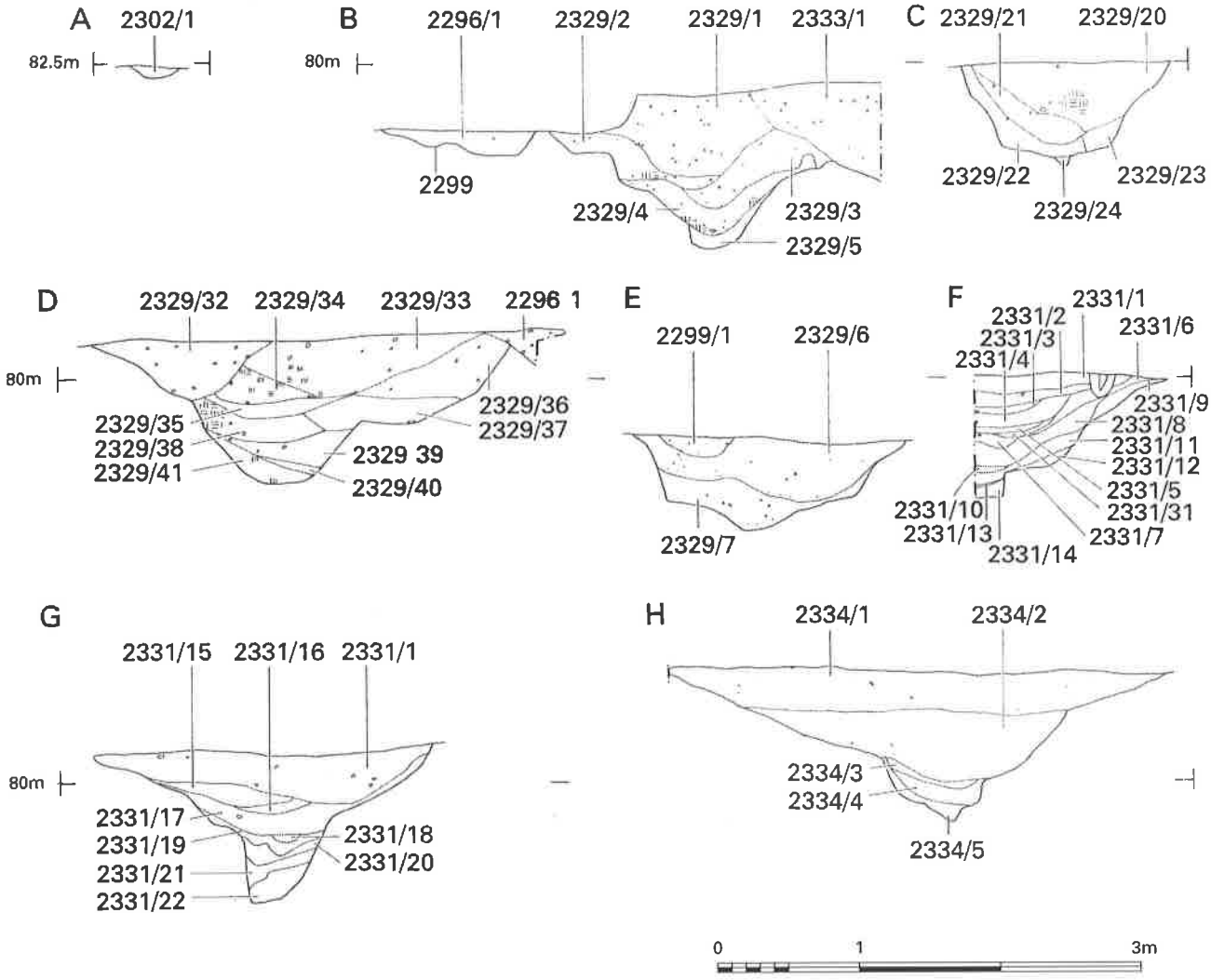


Fig 6: Area H sections A-H

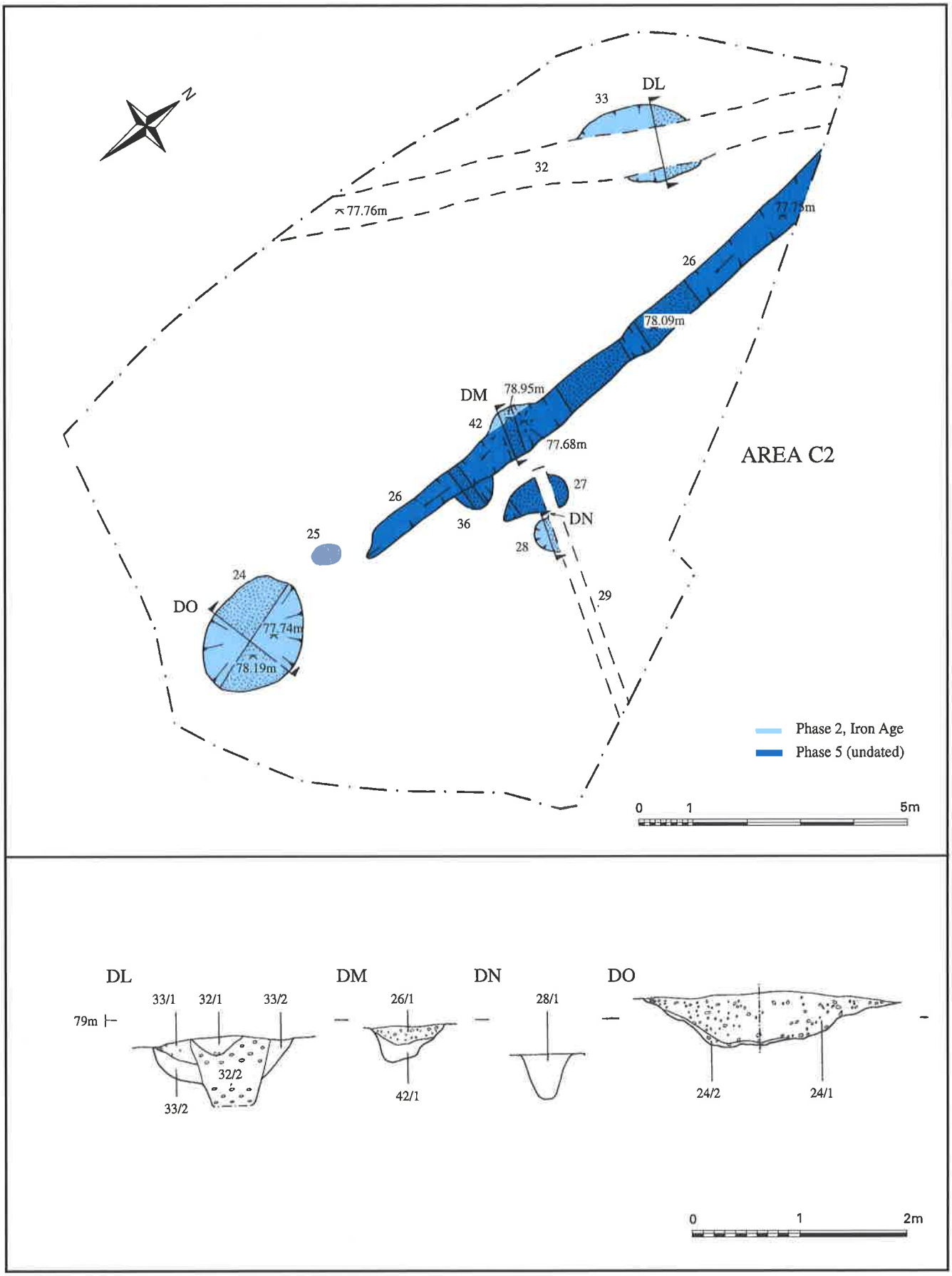


Fig 7: Iron Age features C2

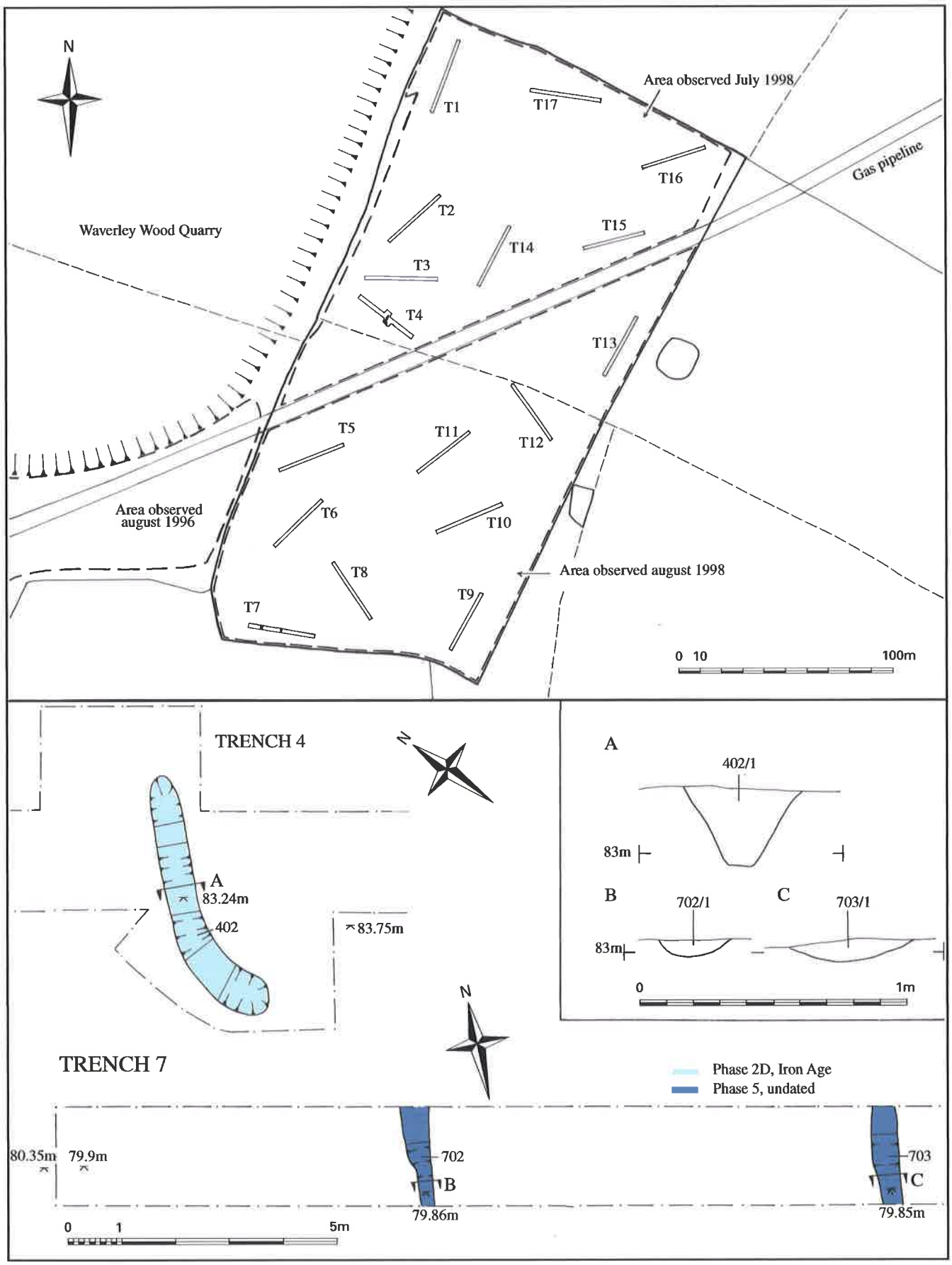


Fig 8: Waverley Wood Quarry extension trial trenches and sections

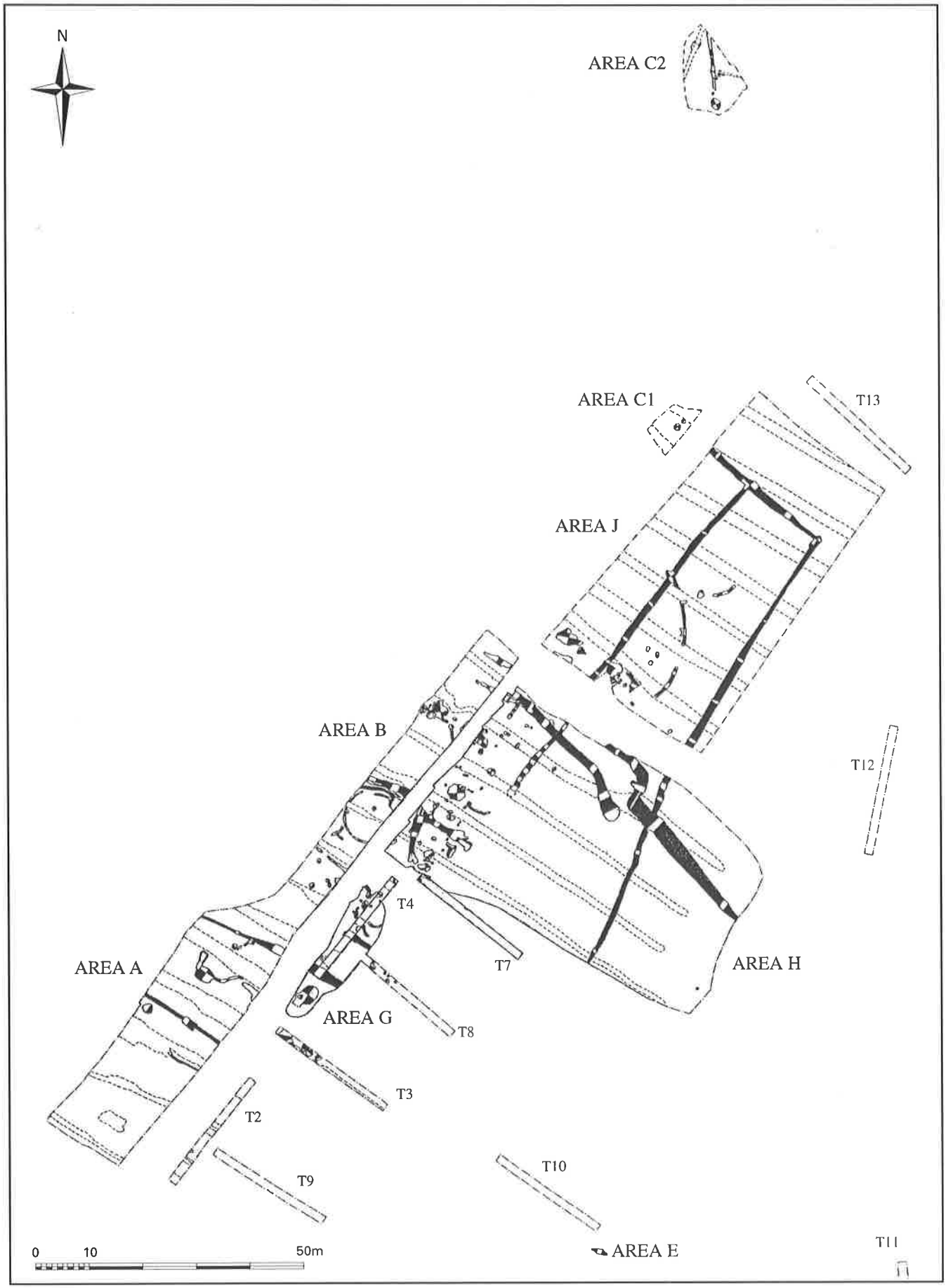


Fig 9: Iron Age and Roman features in Areas A-C, E,G and H

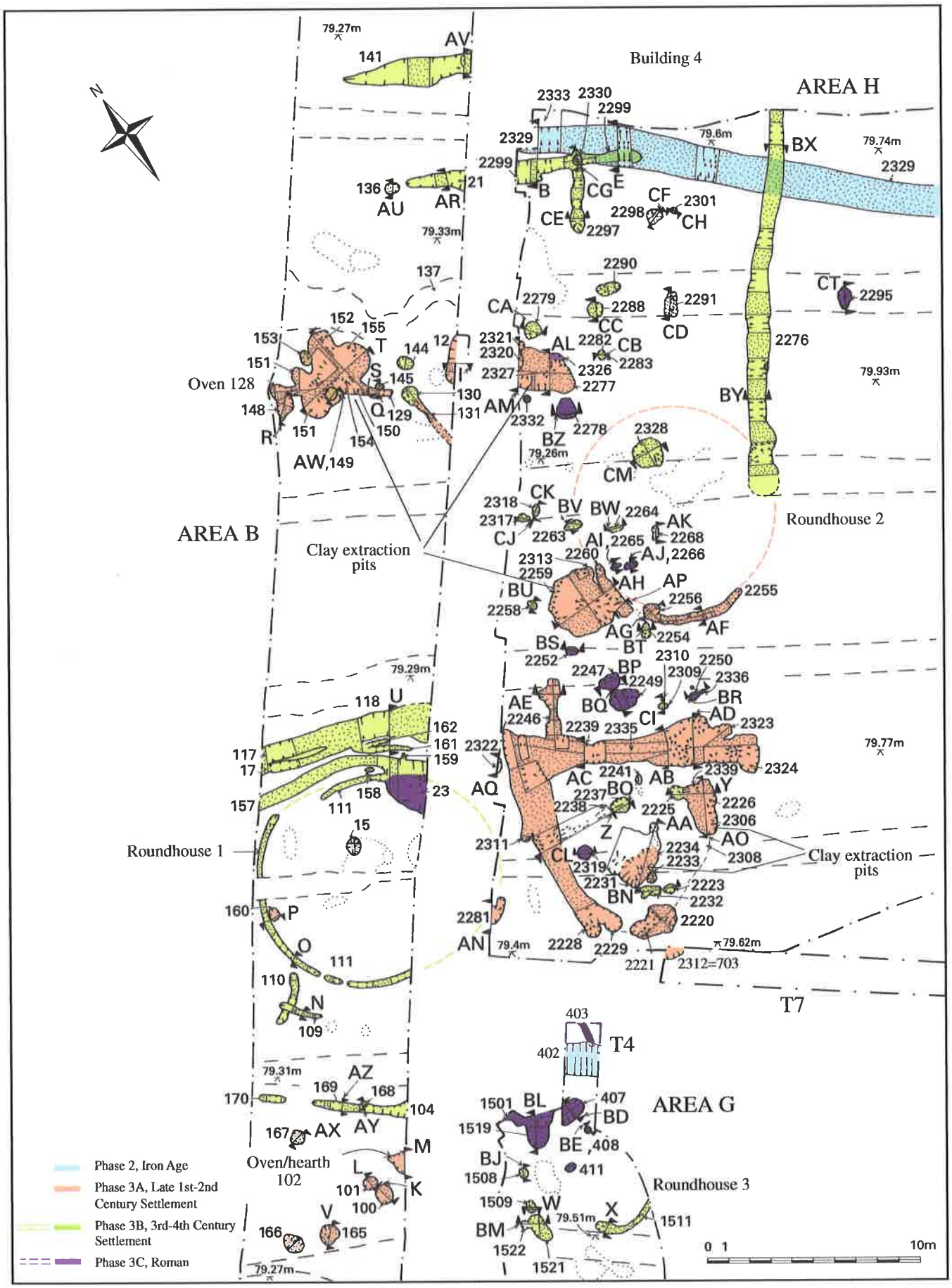


Fig 10: Roman features: Areas B, G and H

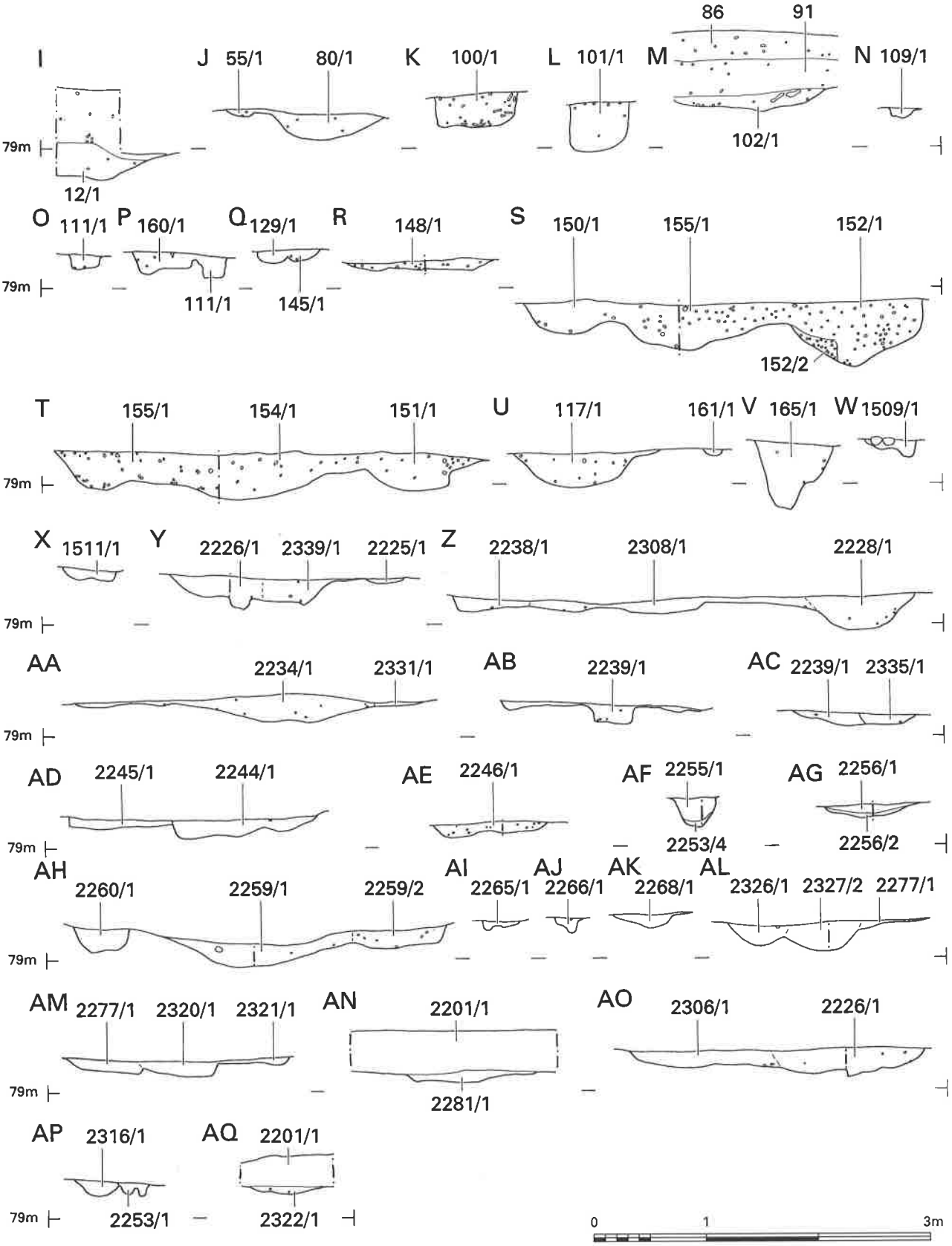


Fig 11: Sections I-AQ

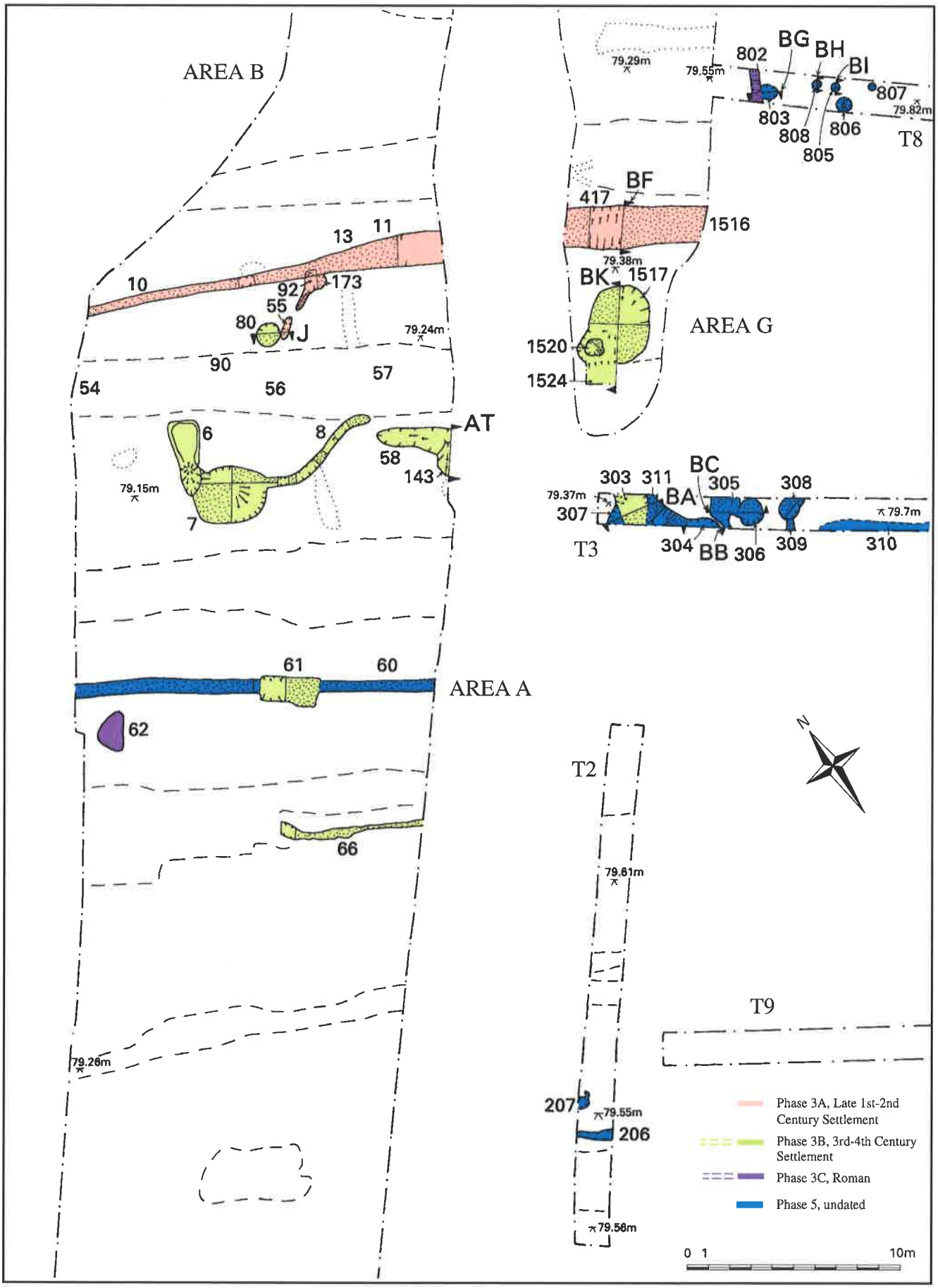


Fig 12: Roman features in Areas A and G

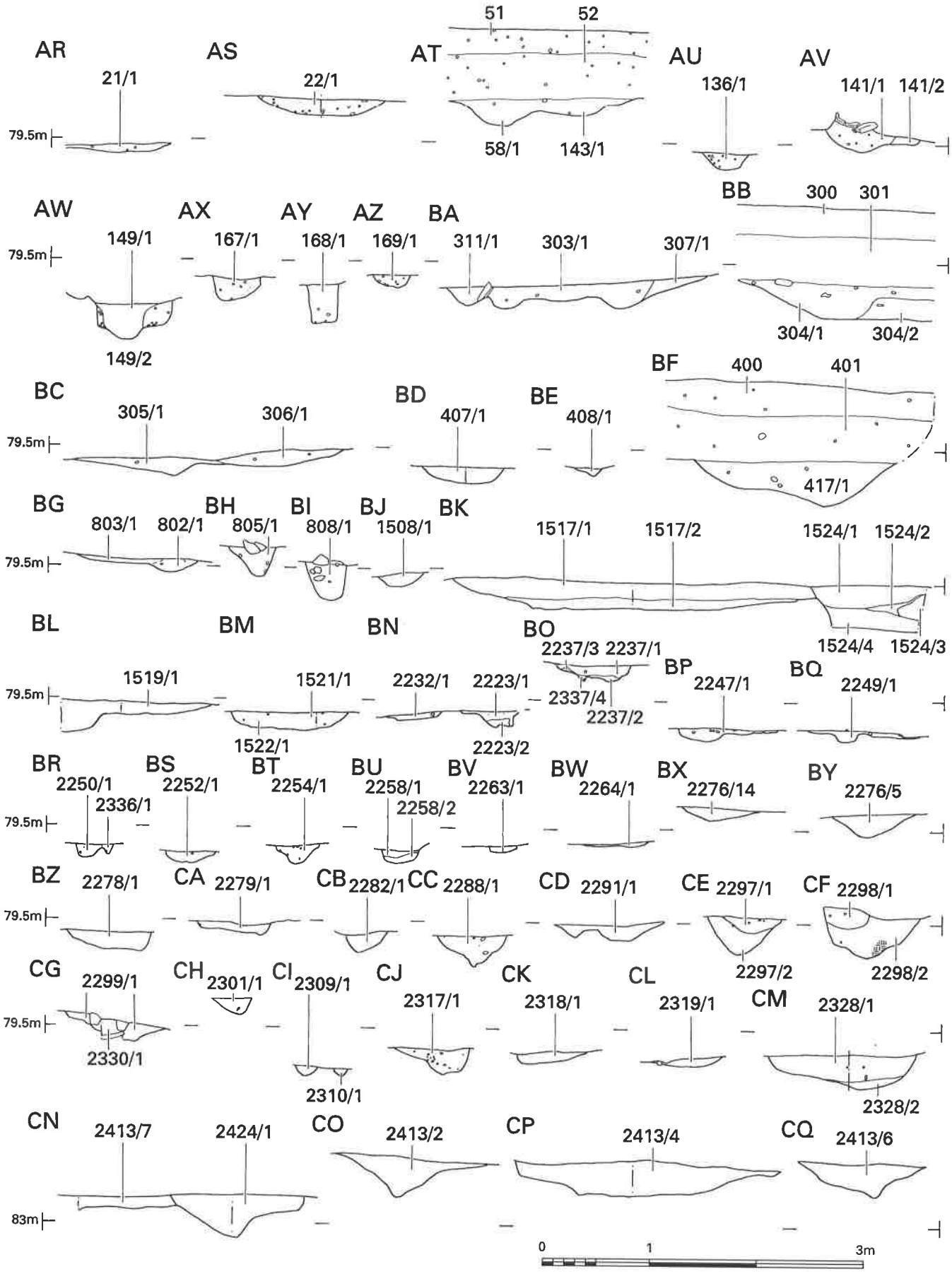


Fig 13: Sections AR-CQ

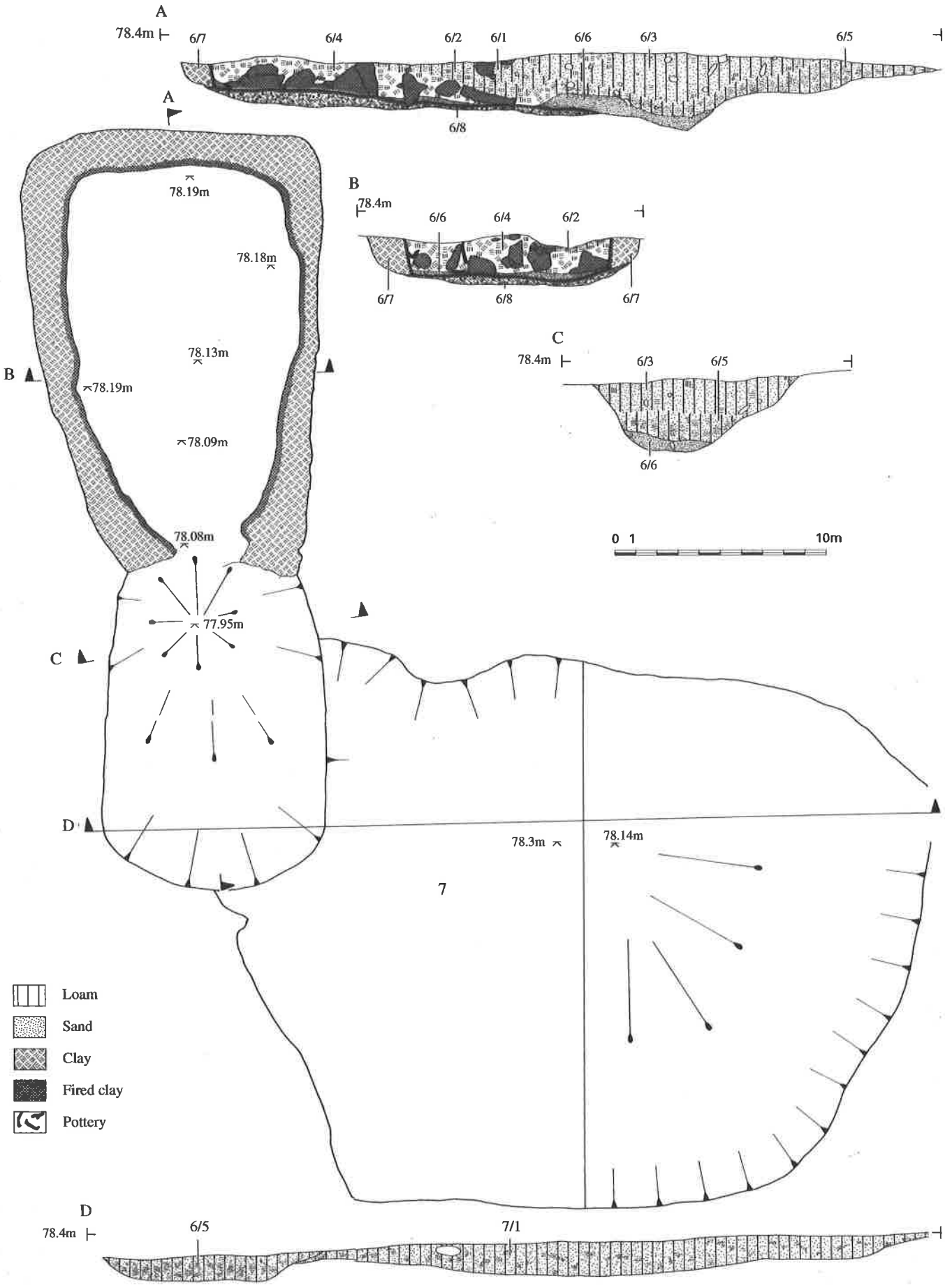


Fig 14: The pottery kiln

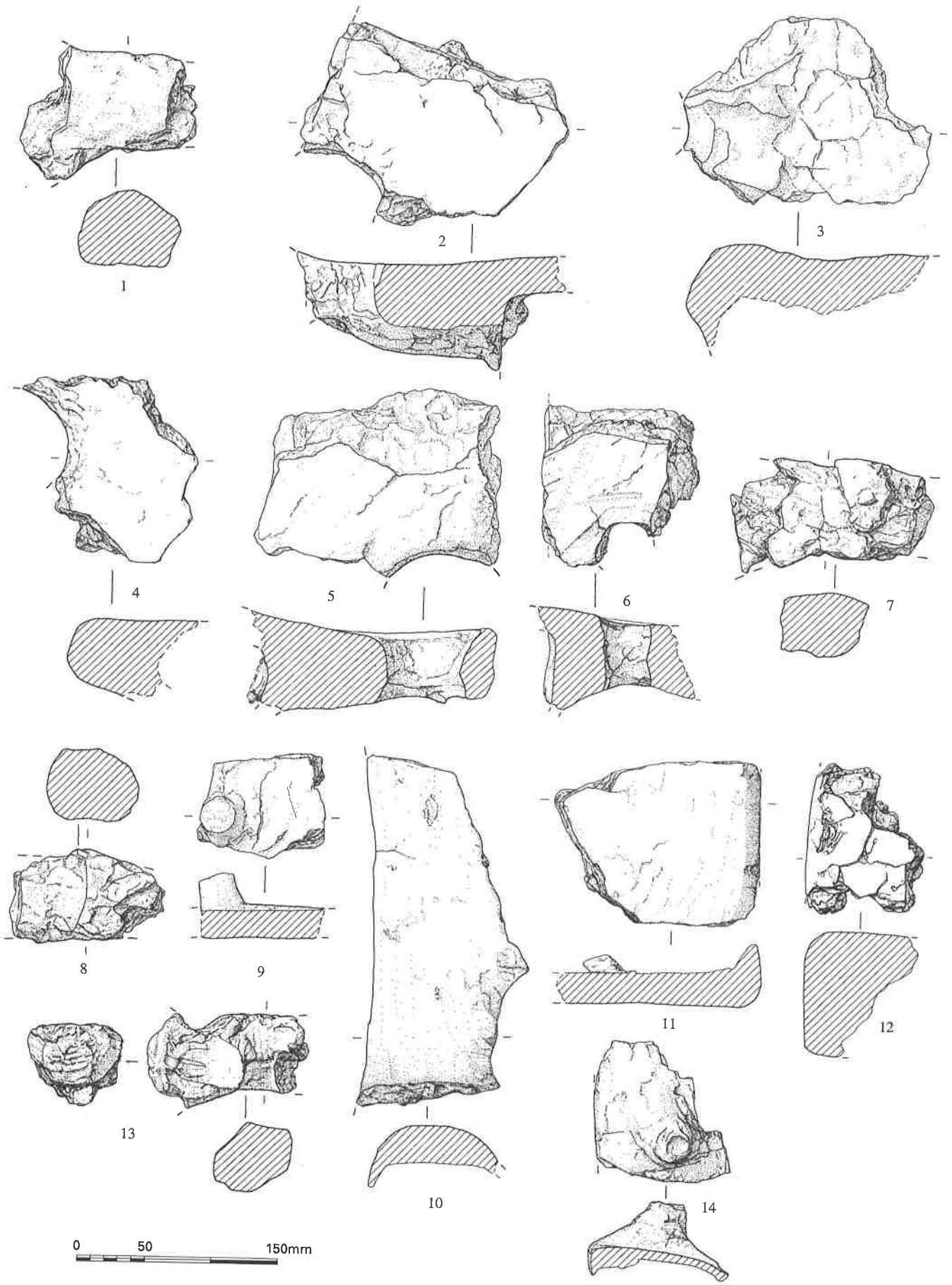


Fig 15: Kiln furniture 1-14

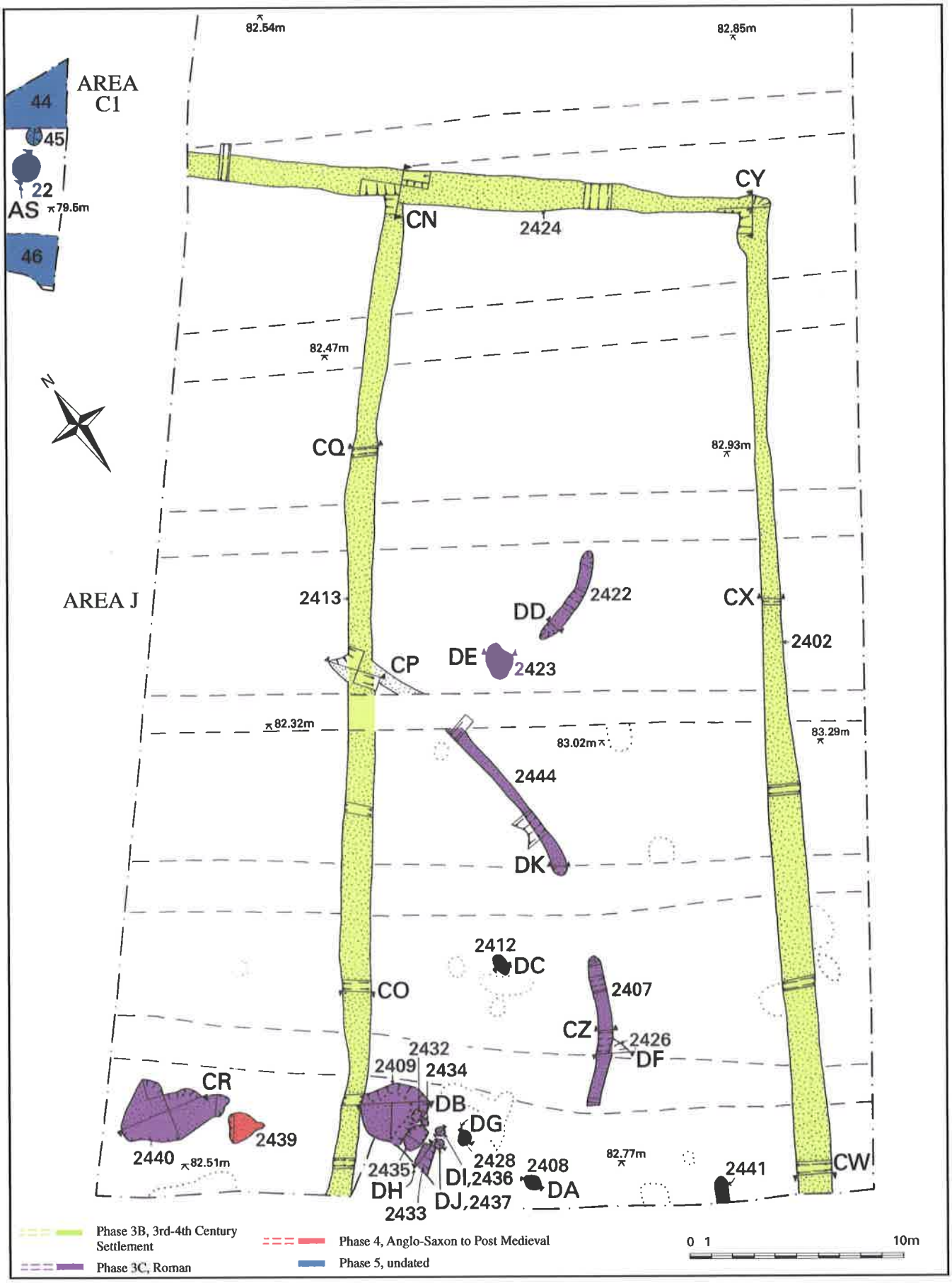


Fig 16: Roman features in Area J

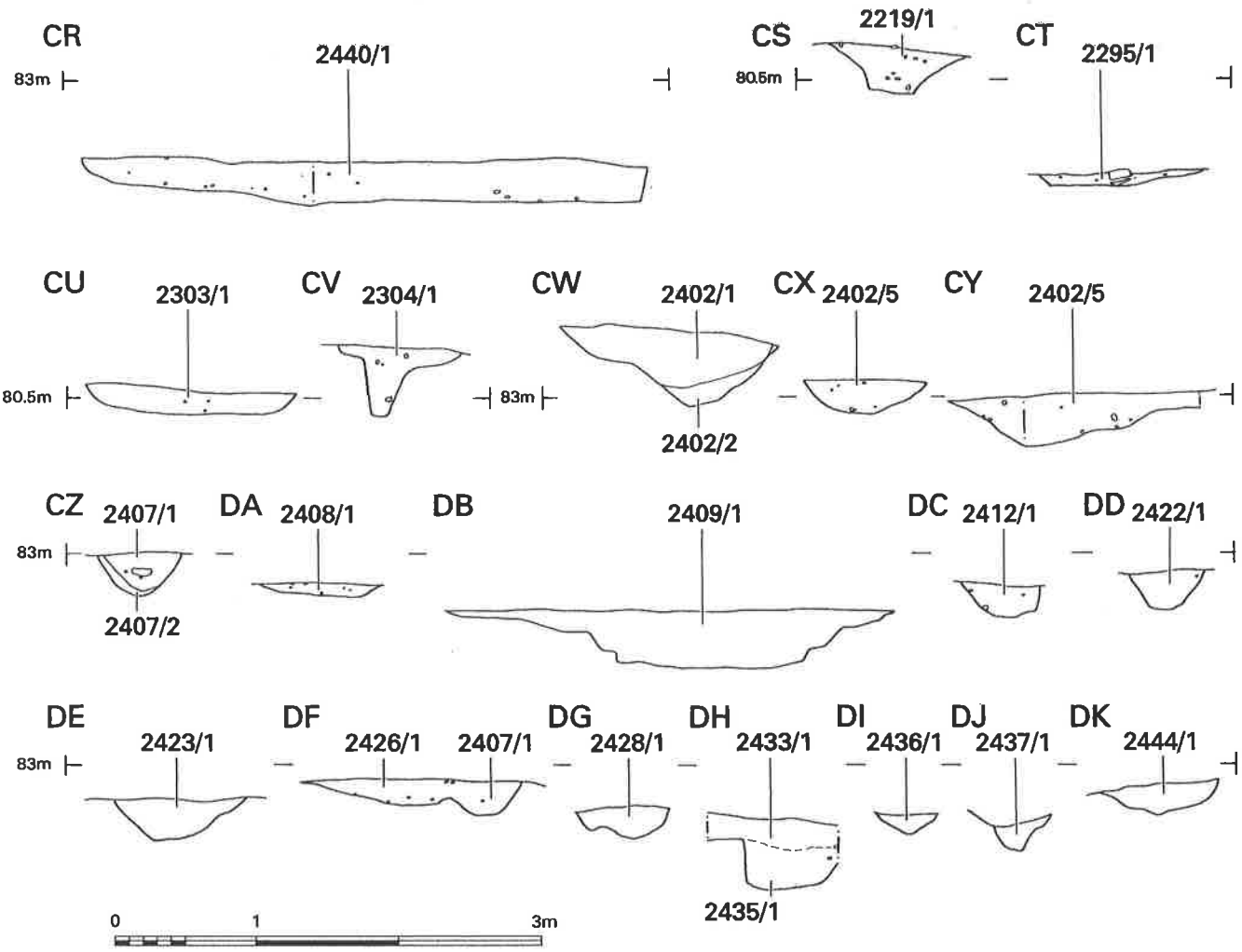


Fig 17: Sections CR-DK

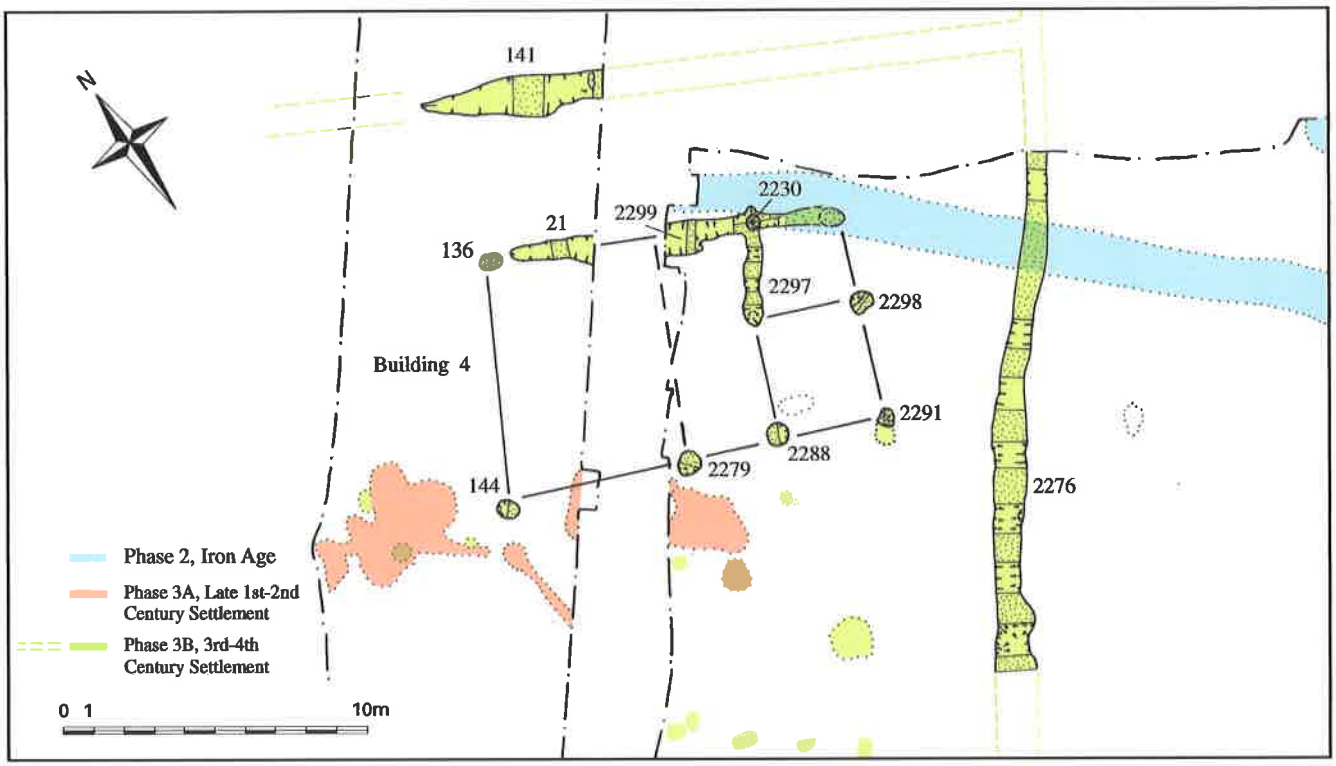


Fig 18: Rectangular building

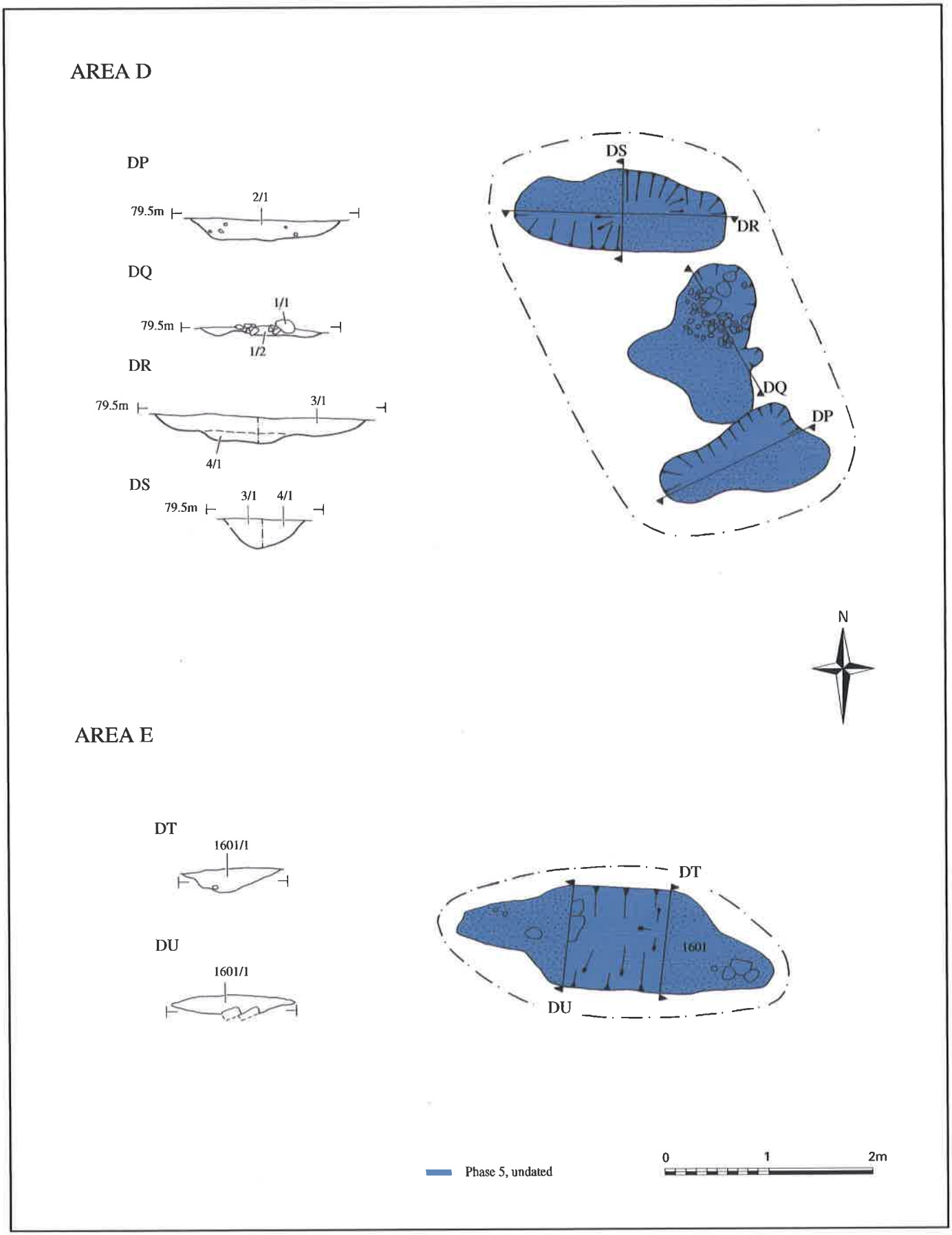


Fig 19: Areas D and E, plans and sections DP-DU

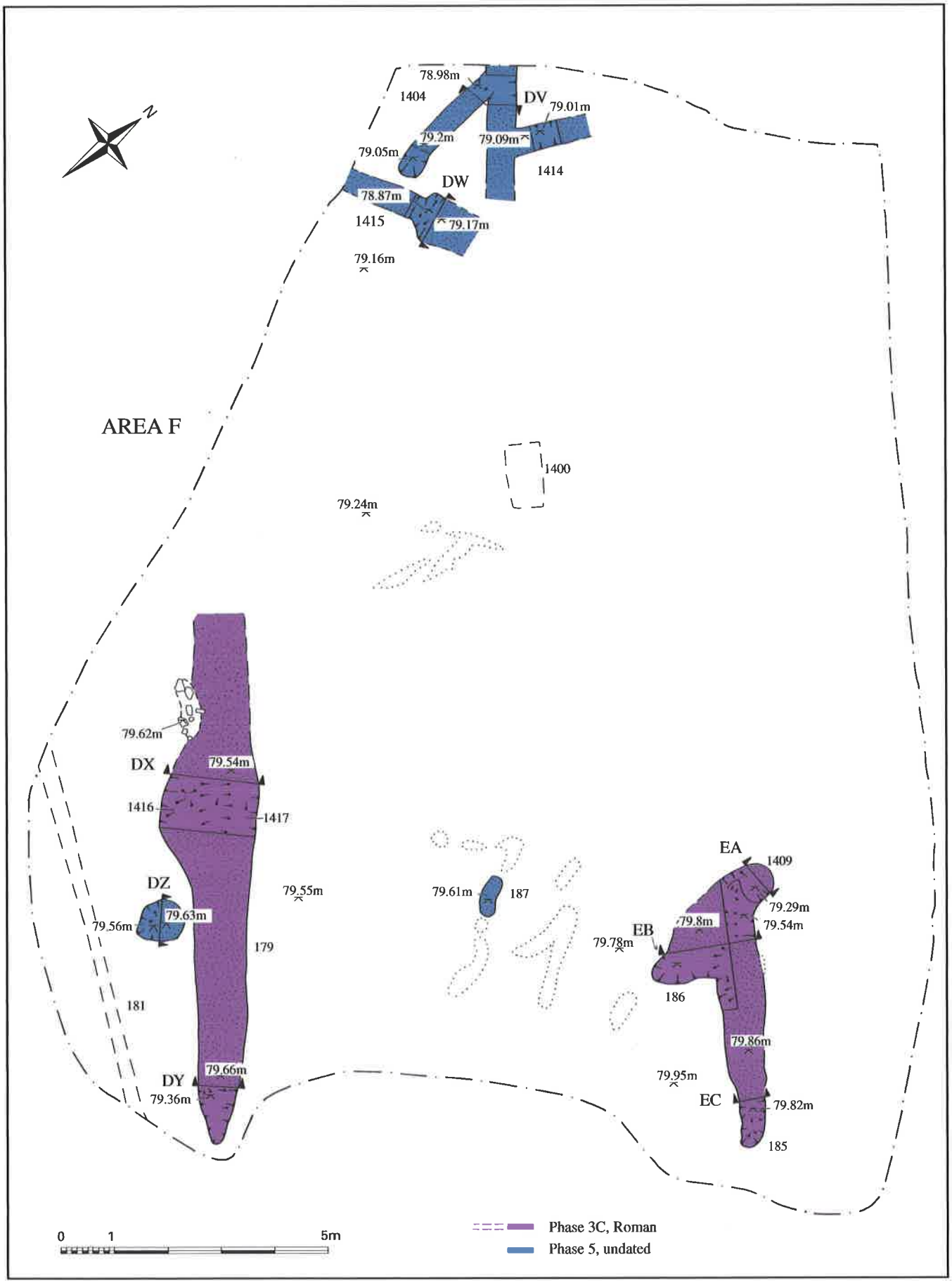

AREA F
78.98m
1404
DV
79.01m
79.2m
79.09m
79.05m
1414
DW
78.87m
1415
79.17m
79.16m
1400
79.24m
79.62m
DX
79.54m
1416
1417
DZ
79.55m
79.56m
79.63m
179
181
DY
79.66m
79.36m
79.61m
187
EA
1409
79.29m
79.8m
79.54m
EB
79.78m
186
79.86m
79.95m
EC
79.82m
185
0
1
5m
Phase 3C, Roman
Phase 5, undated

Fig 20: Area F

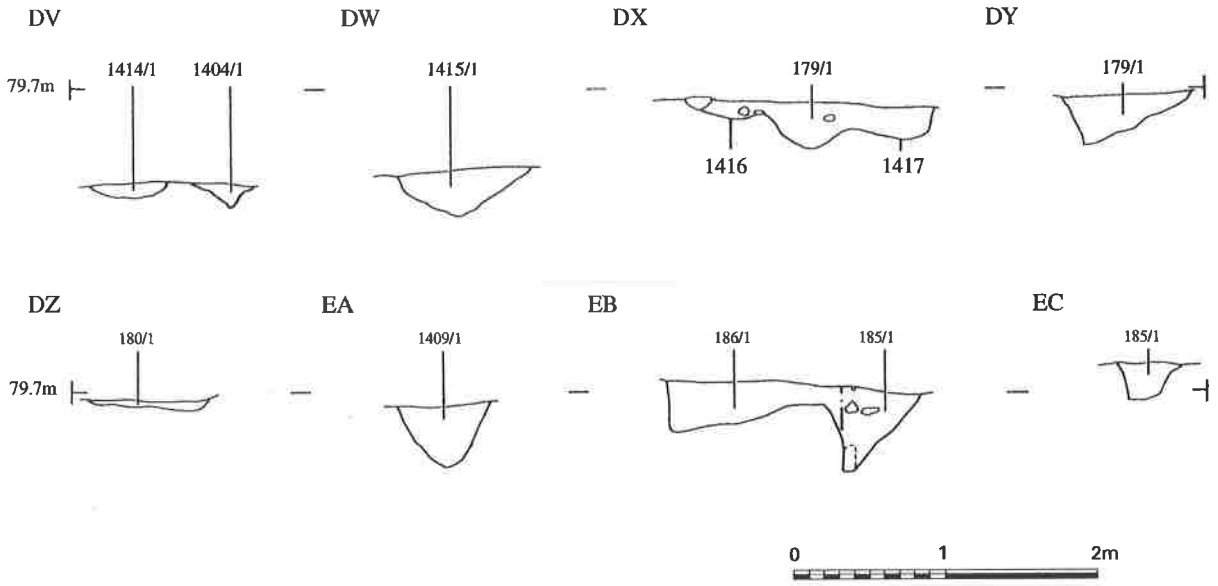


Fig 21: Area F, sections DV-EC

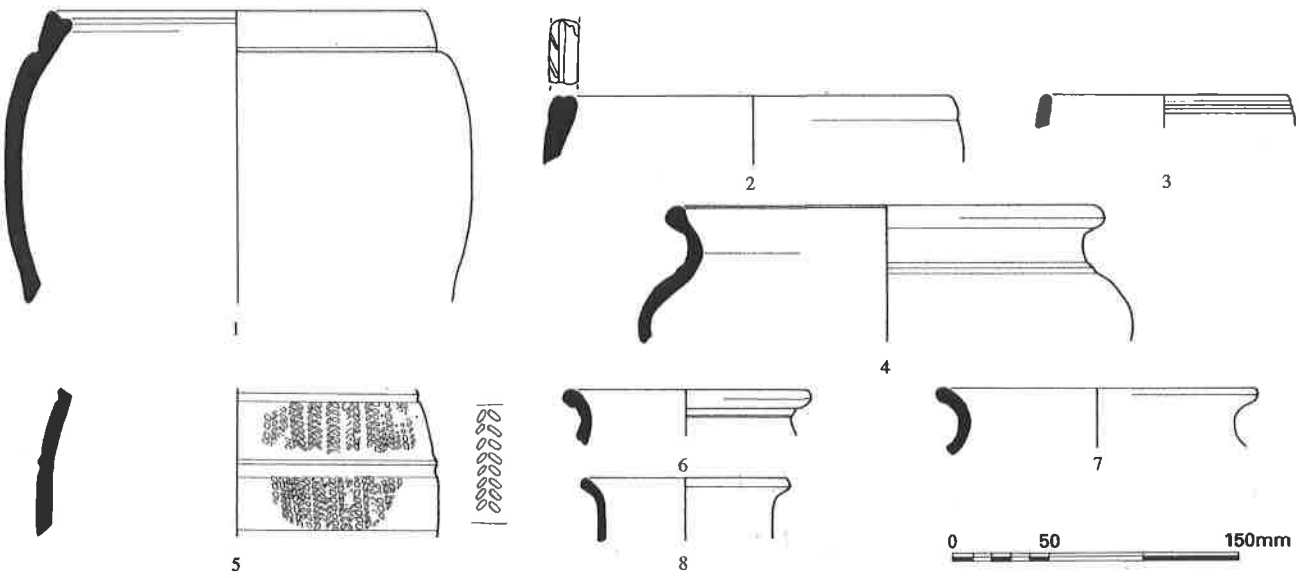


Fig 25: Late Iron Age/early Roman pottery from Waverley Wood Quarry extension 1-8

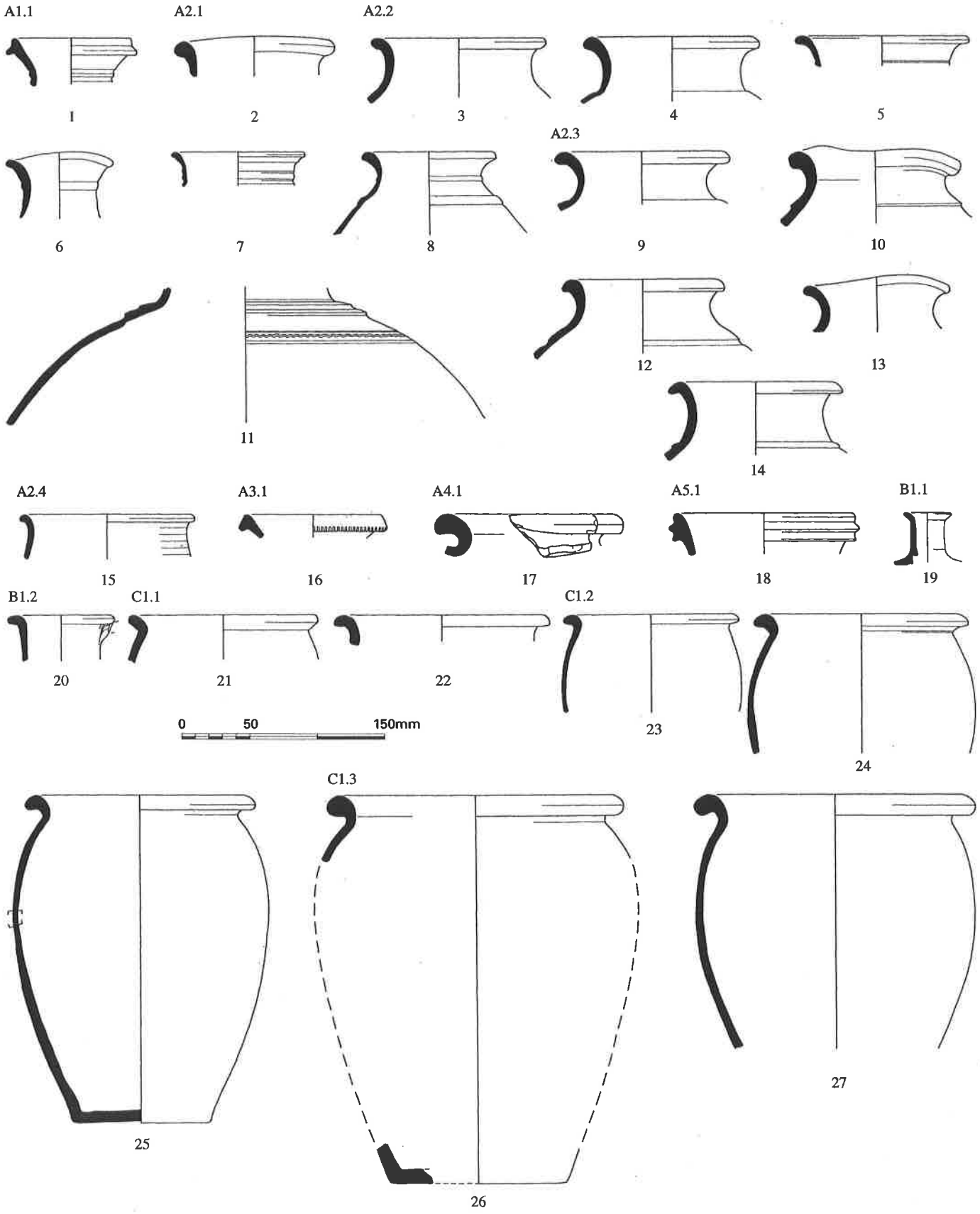


Fig 26: Roman pottery: kiln products 1-27, (Class A Constricted-neck jars, Class B Flagons and jugs, Class C Jars)

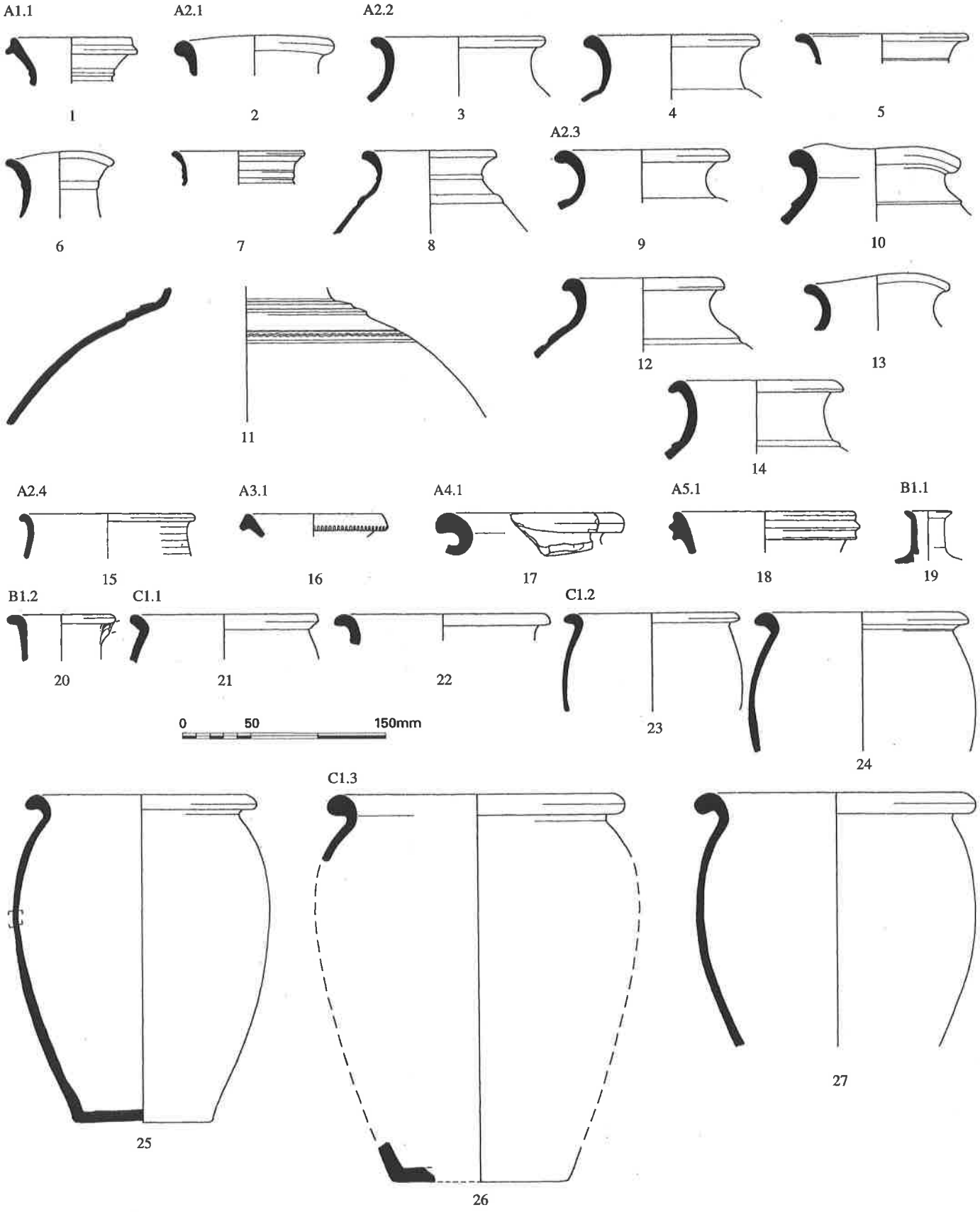


Fig 27: Roman pottery: kiln products 28-63 (Class C Jars cont, Class CM Wide-mouthed jars)

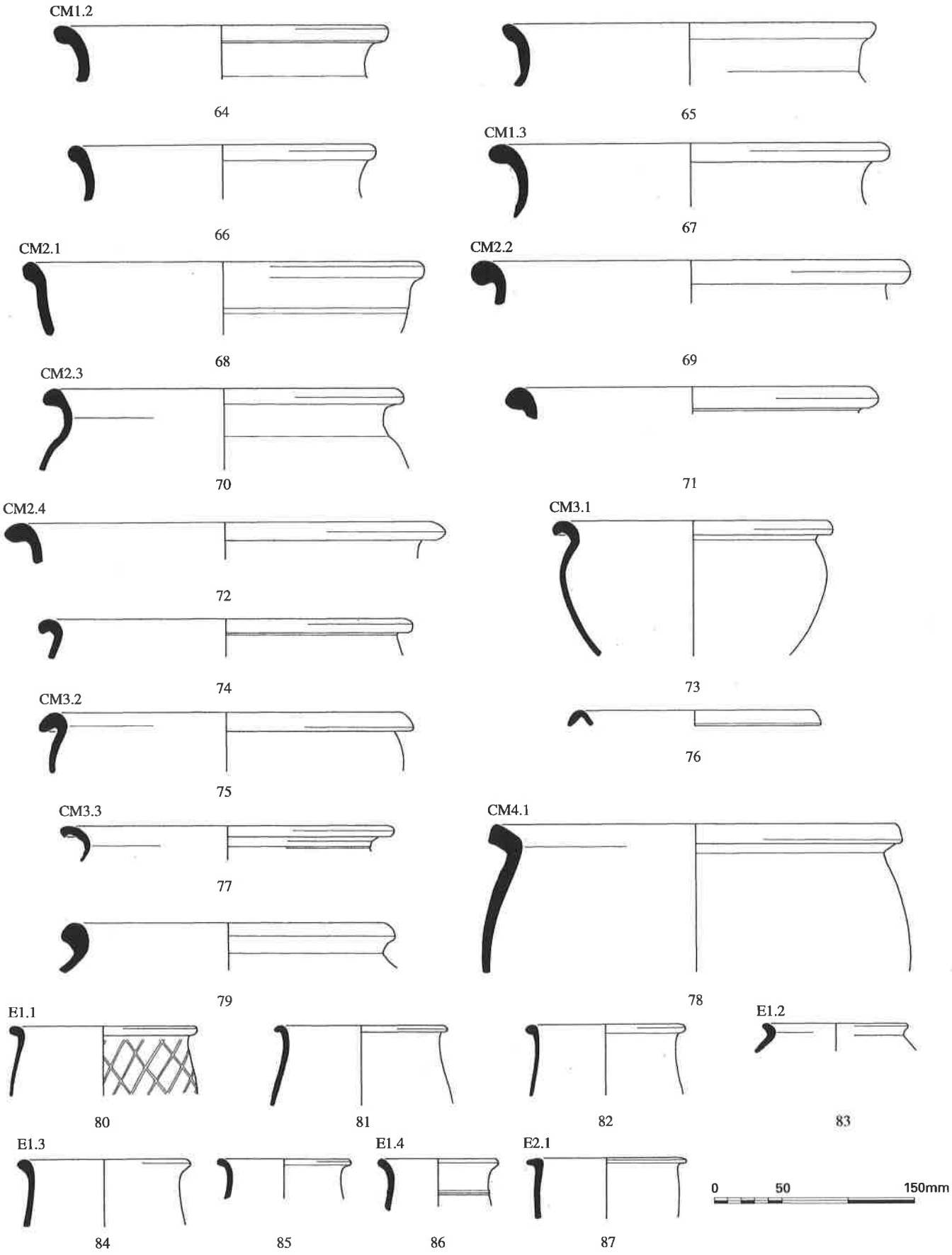


Fig 28: Roman pottery: kiln products 64-87 (Class CM Wide-mouthed jars, Class E Beakers)

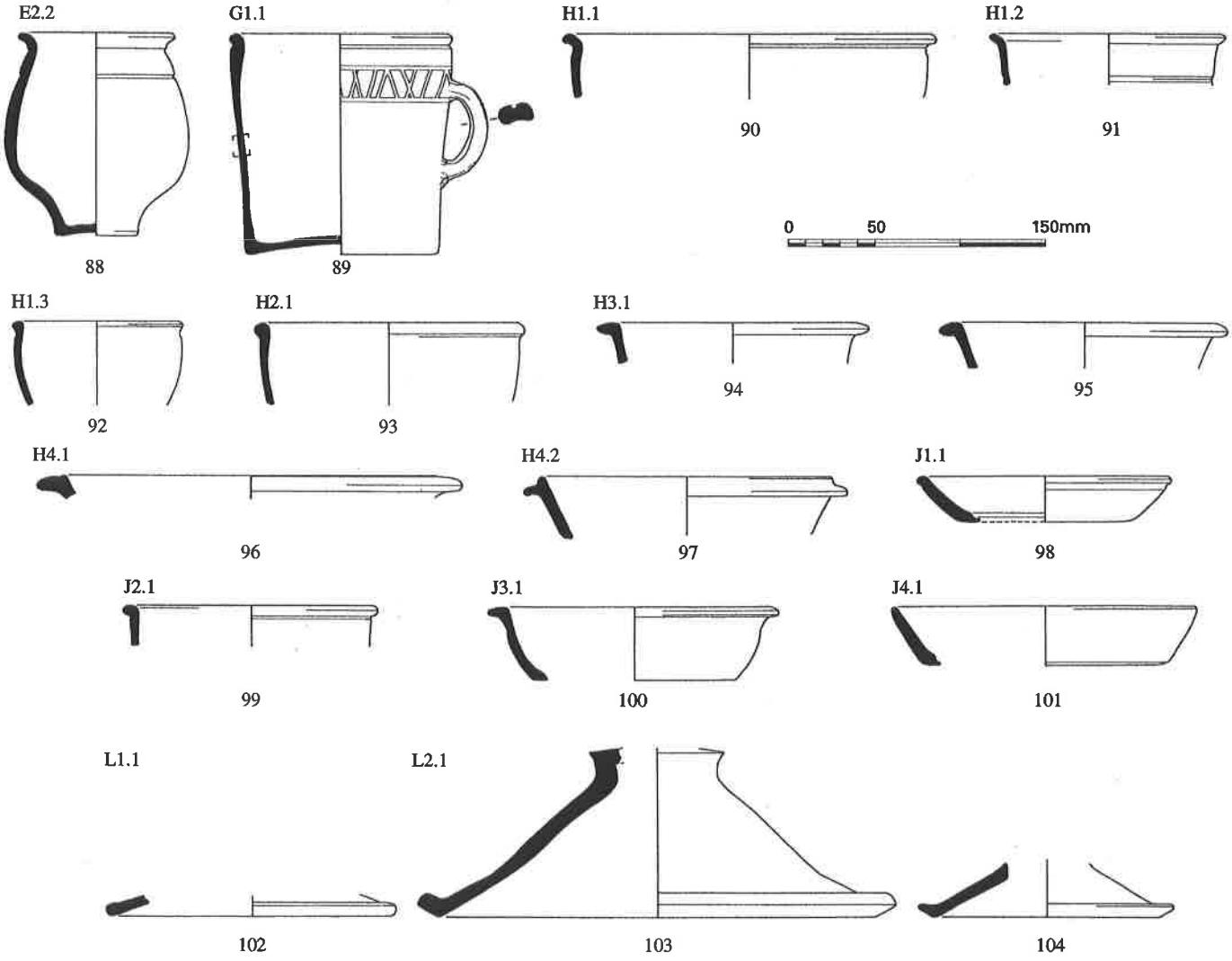


Fig 29: Roman pottery: kiln products 88-104 (Class E Beakers, Class G Tankard, Class H Bowls, Class J Dishes, Class L Lids)

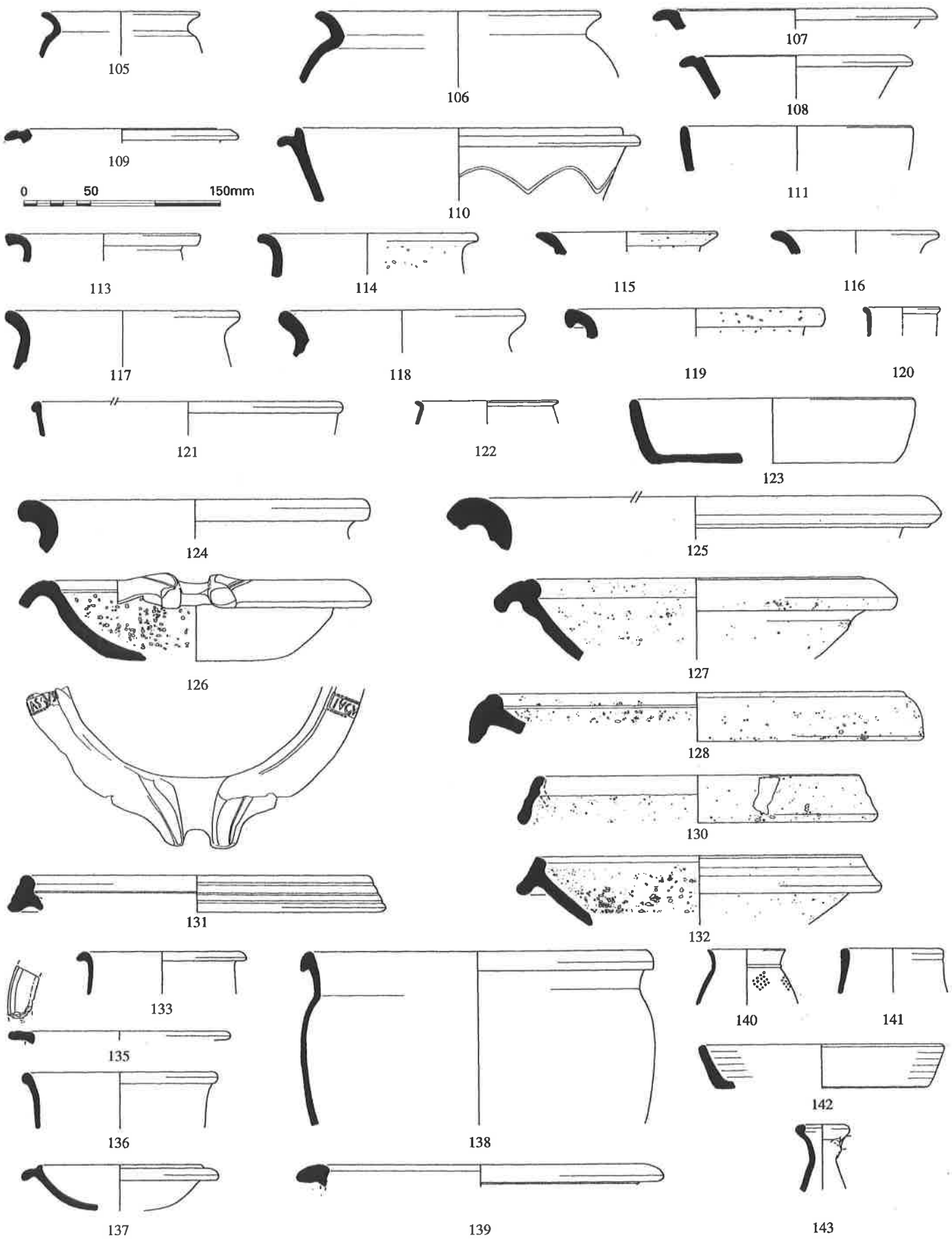


Fig 30: Roman pottery: non-local wares 105-143

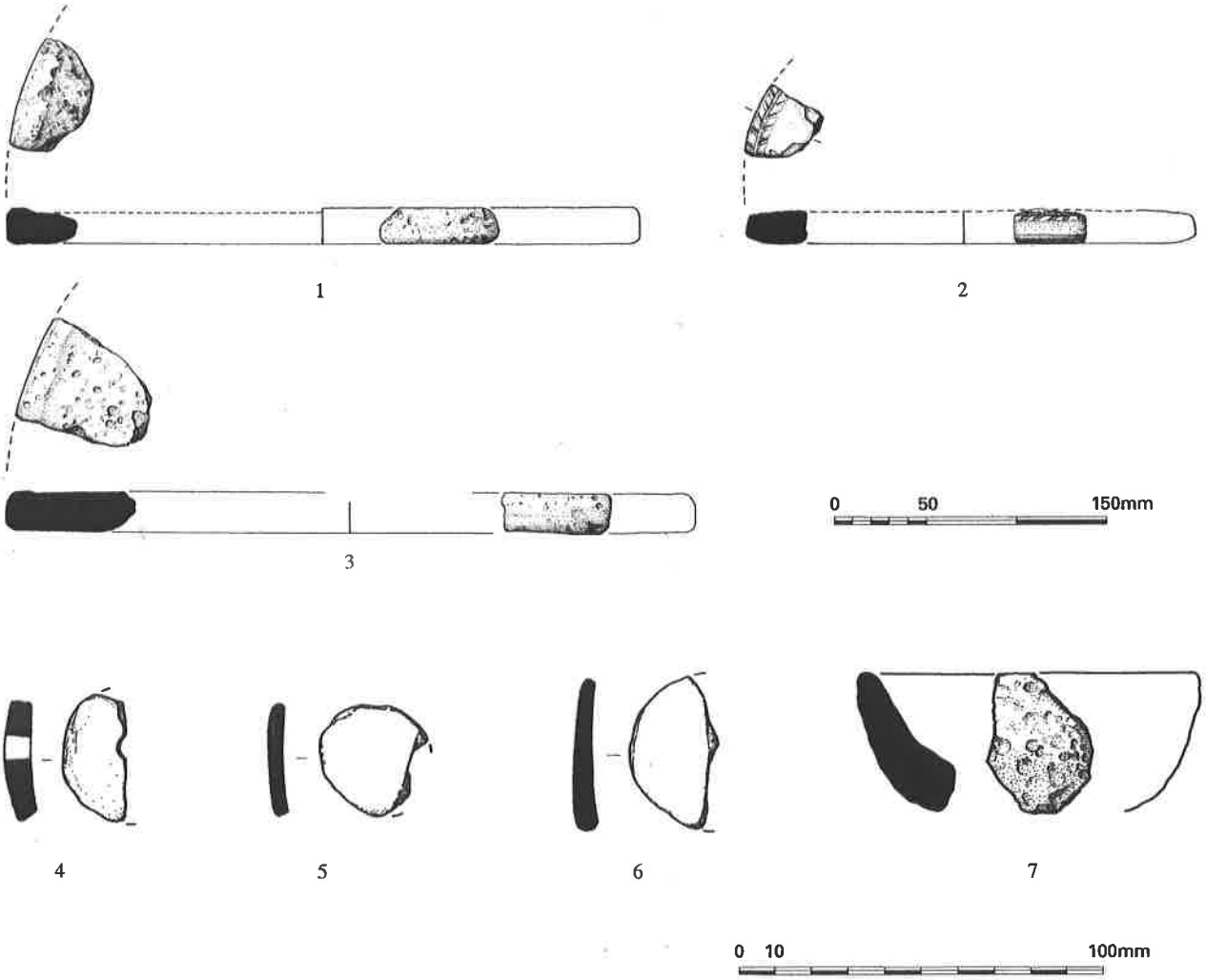


Fig 31: Ceramic objects 1-7

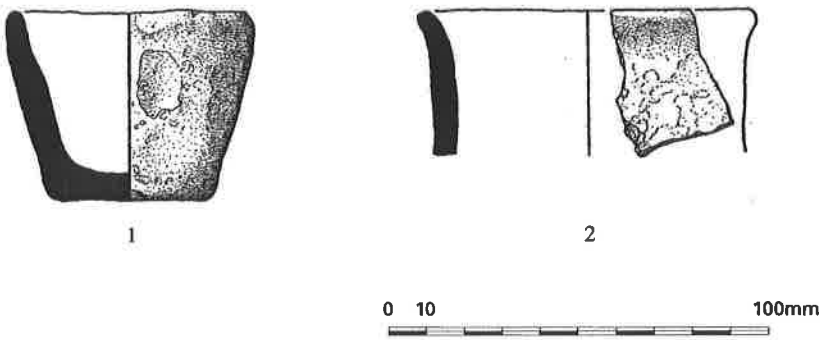


Fig 32: Iron Age and Roman pottery found in 2007 1-2

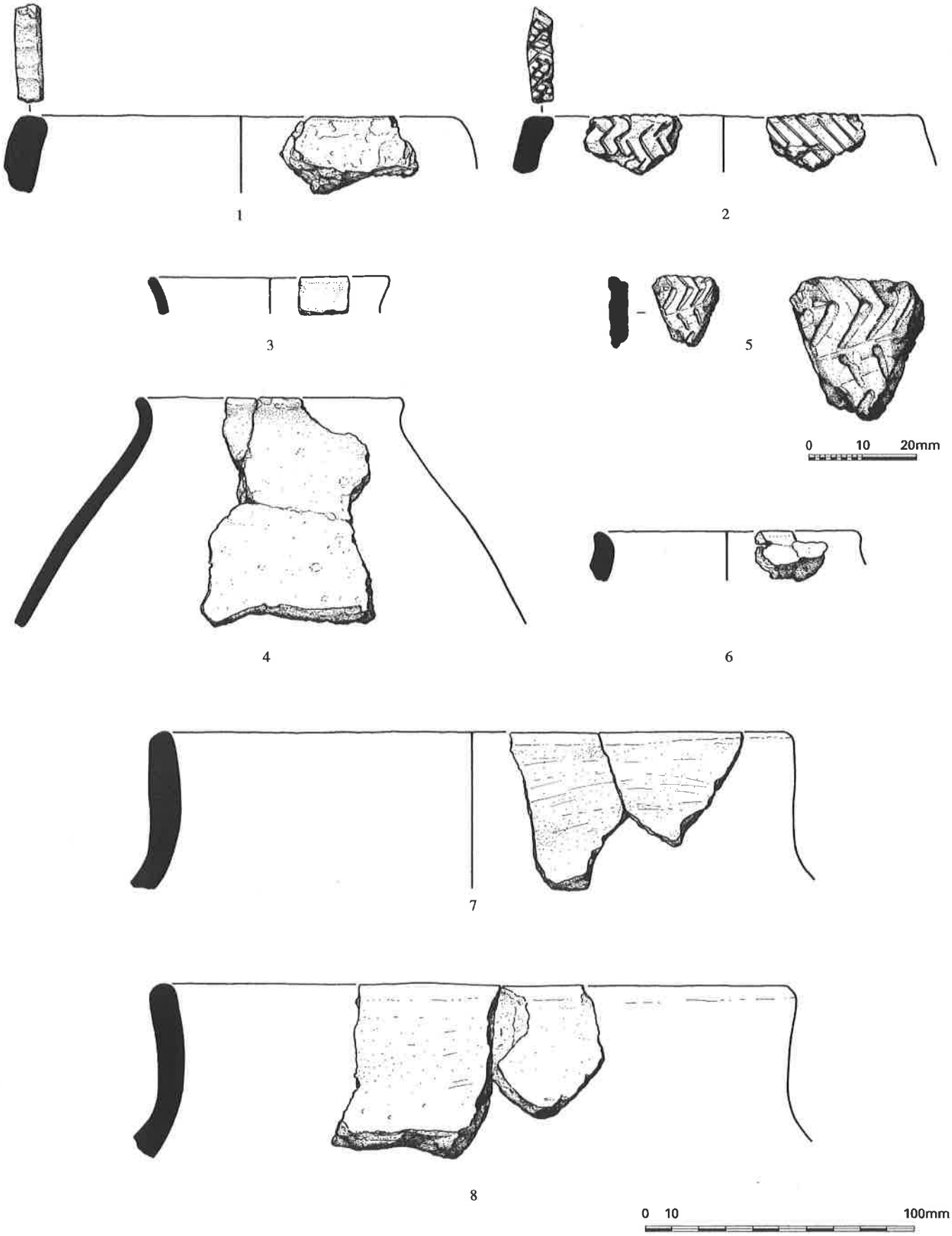


Fig 33: Neolithic and Iron Age and Roman pottery from Area K 1-8

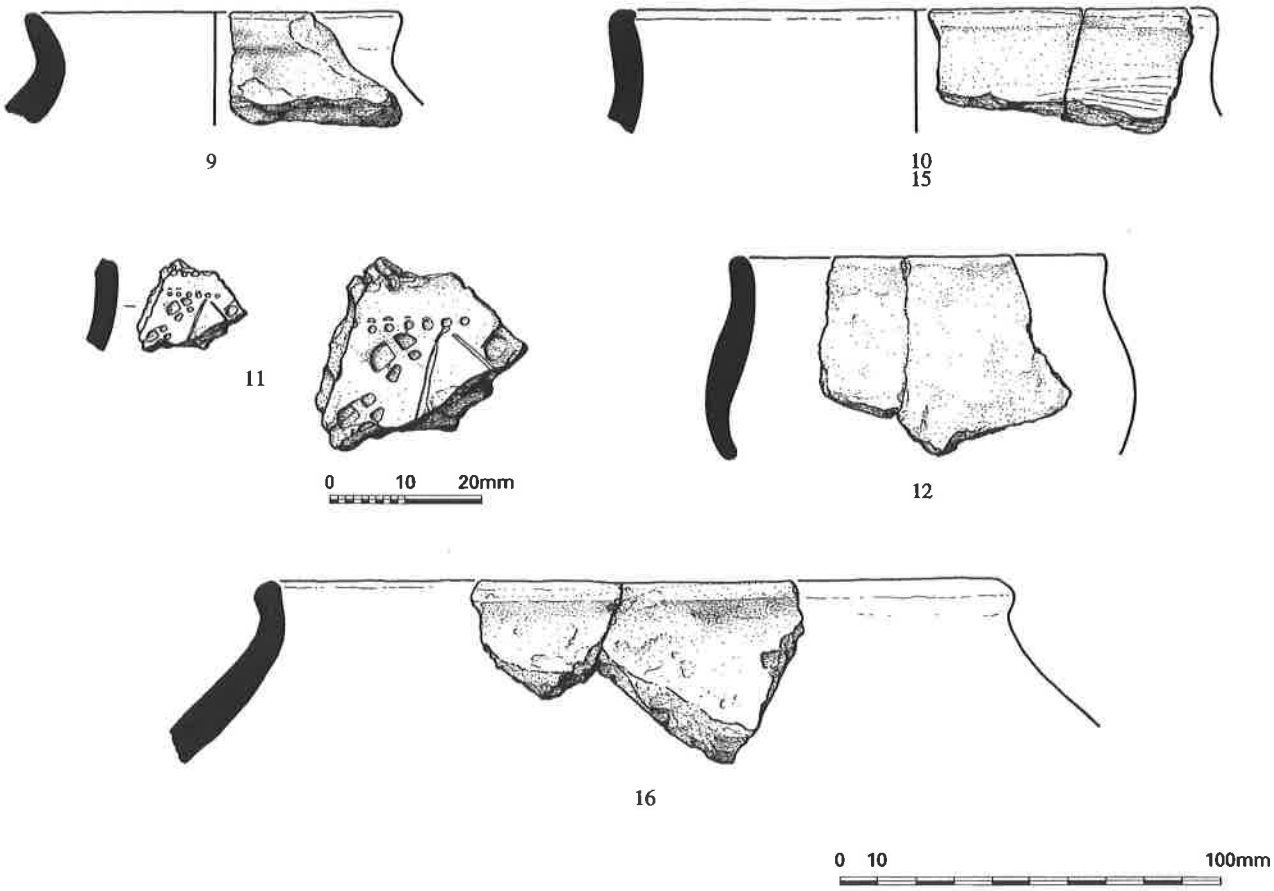


Fig 34: Iron Age and Saxon pottery from Area K 9-12, 15, 16

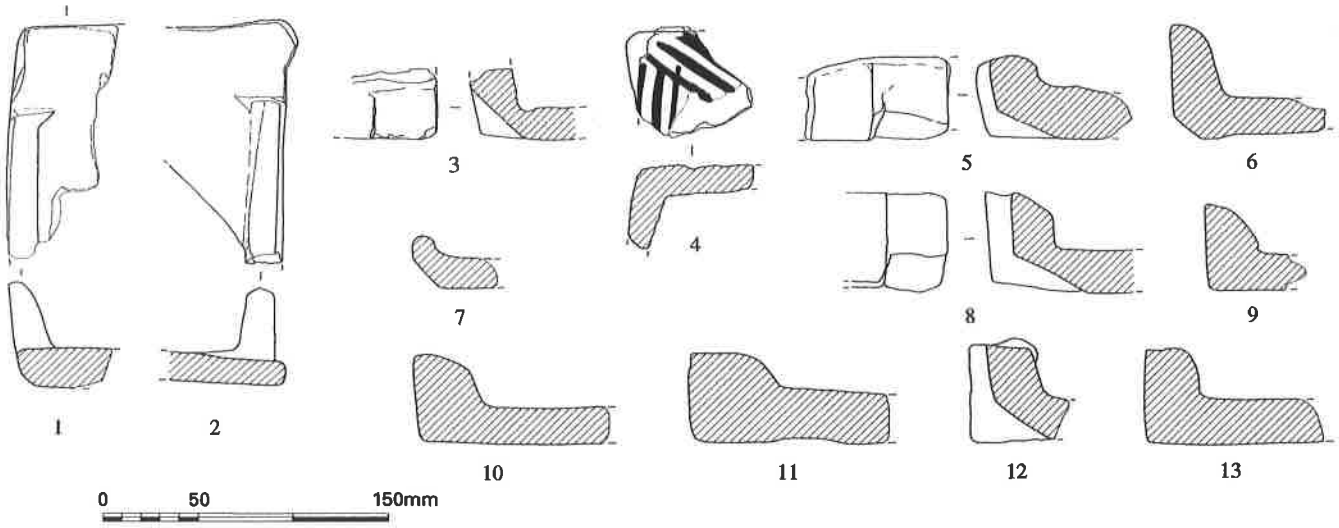


Fig 35: Roman tile 1-13

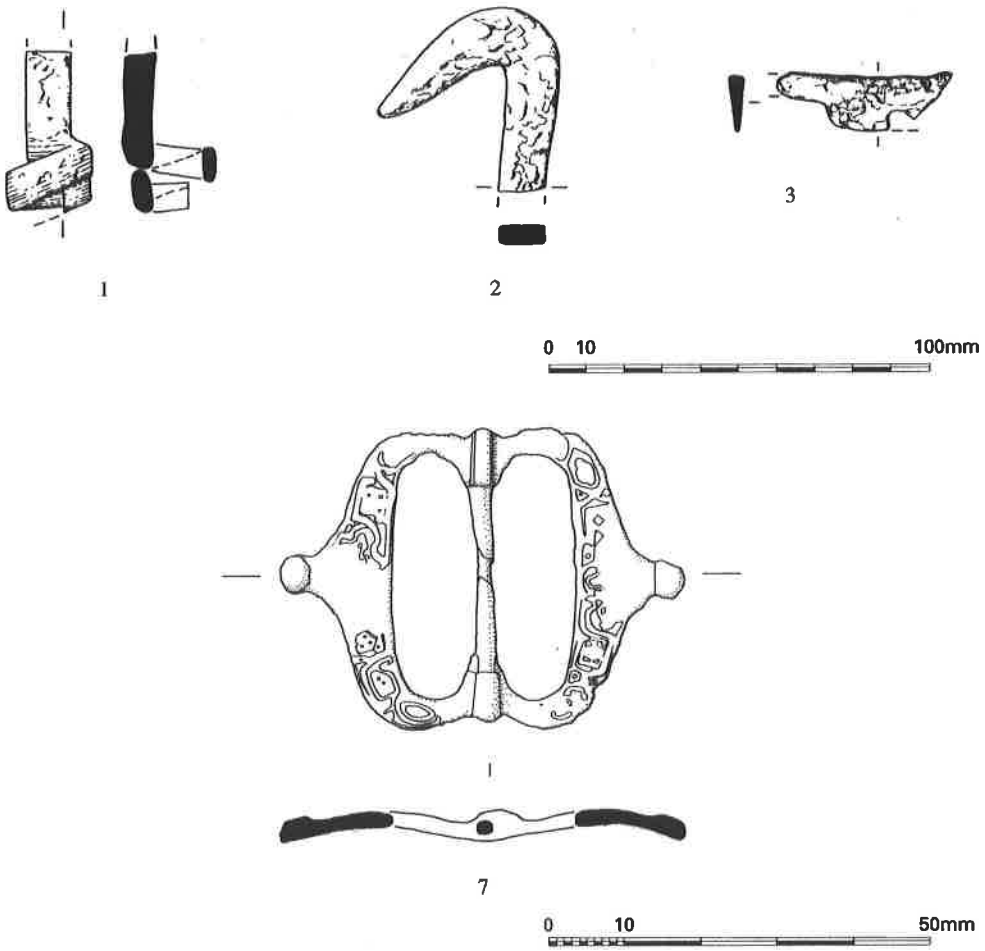


Fig 36: Iron and copper alloy objects 1-3, 7

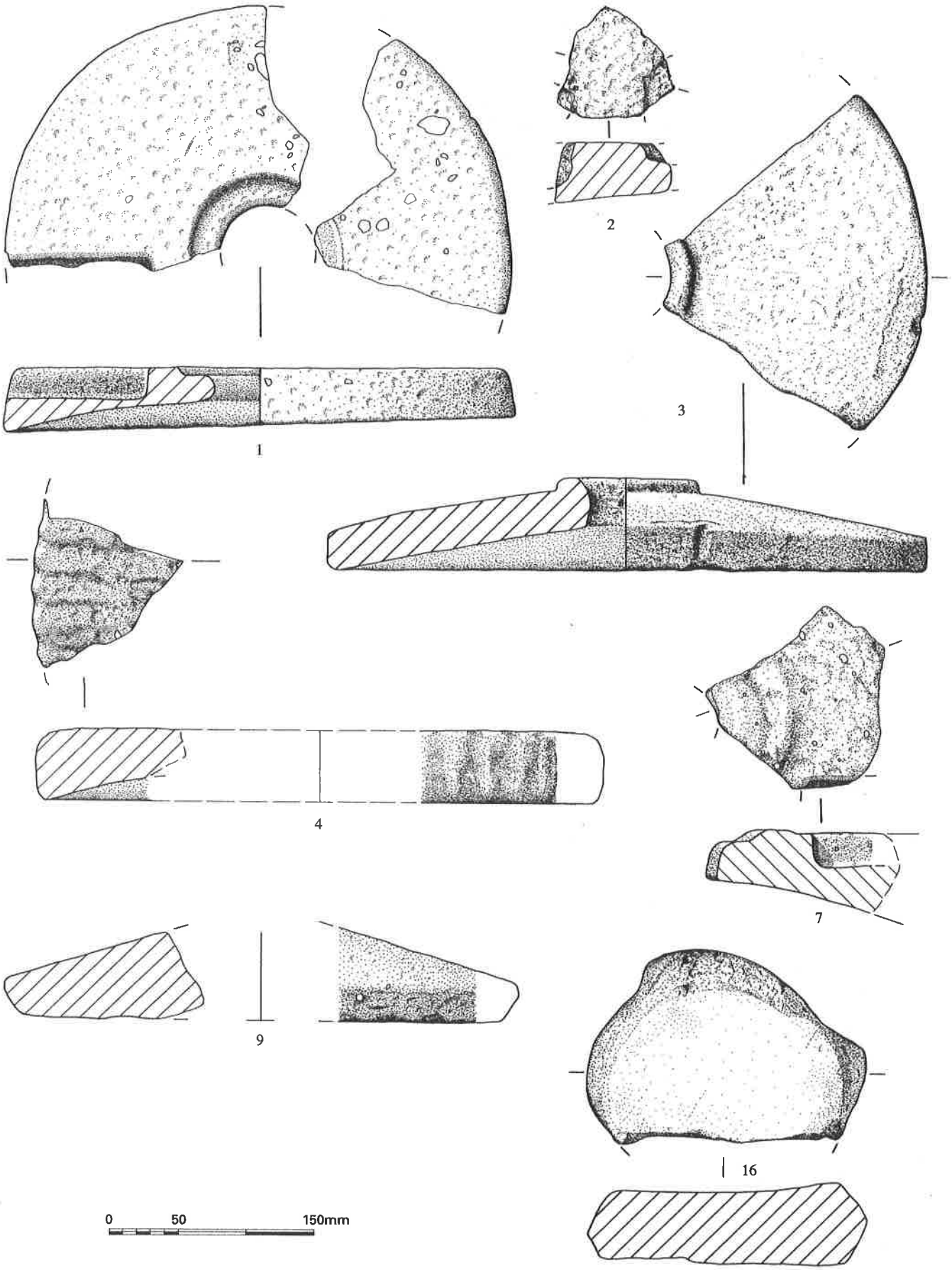


Fig 37: Quern stones 1-4, 7, 9, 16

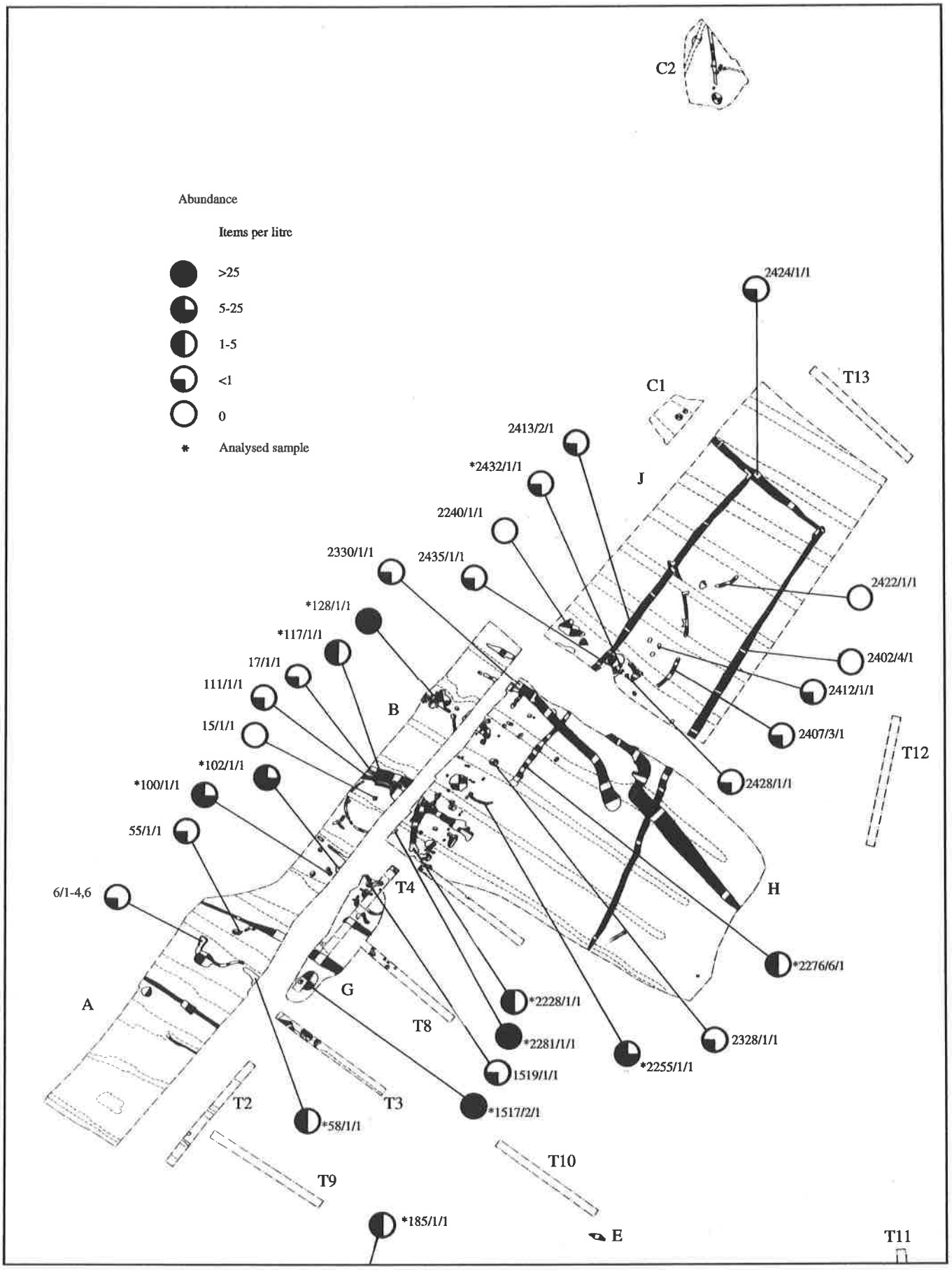


Fig 38: Charred plant remains distribution at Glebe Farm main excavation

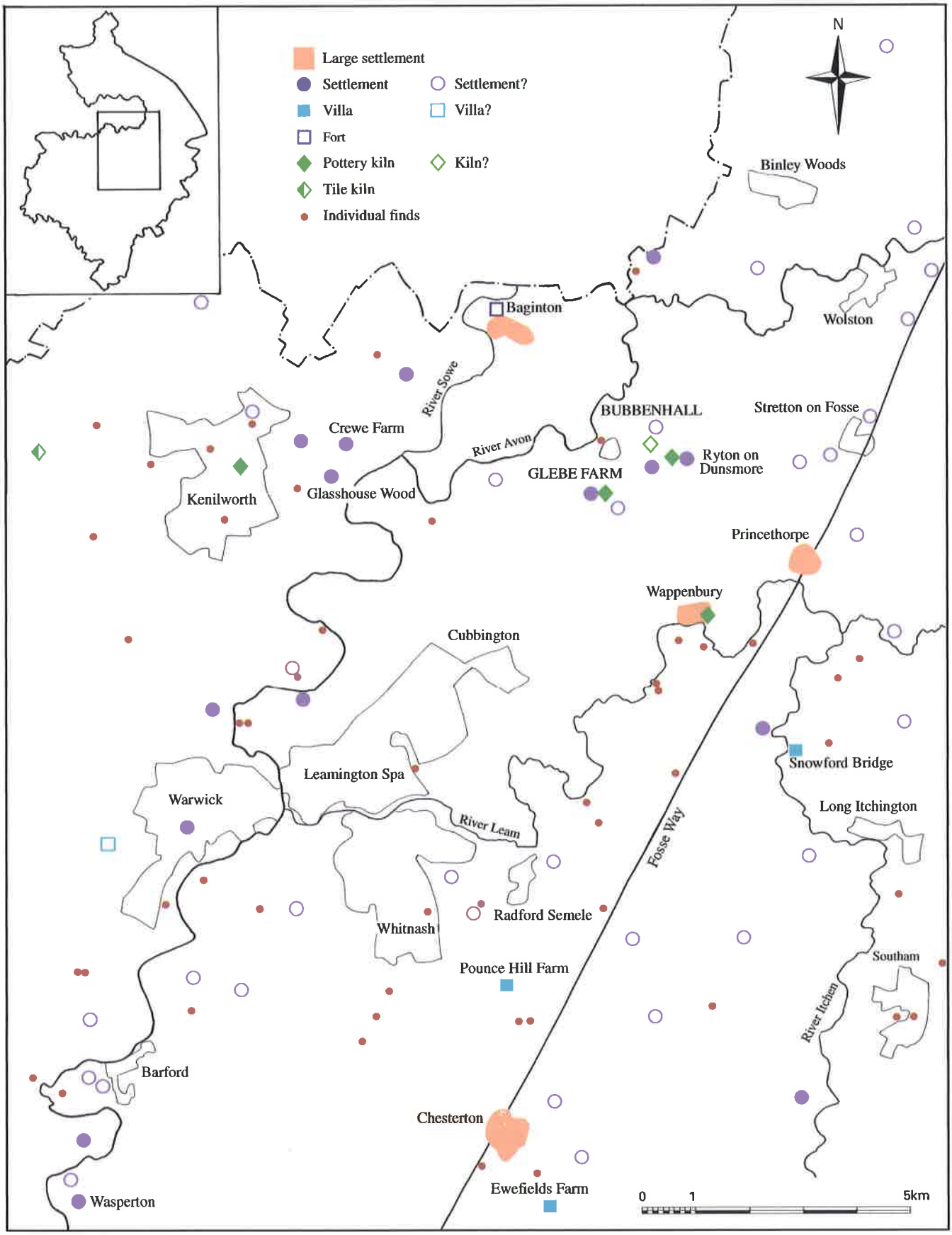


Fig 39: Central Warwickshire in the Roman period

Plate 1: Phase 2A Iron Age ditch 2329 terminal in Area H (1995)

Plate 2: Phase 2B Iron Age pit alignment in Area K (2009)

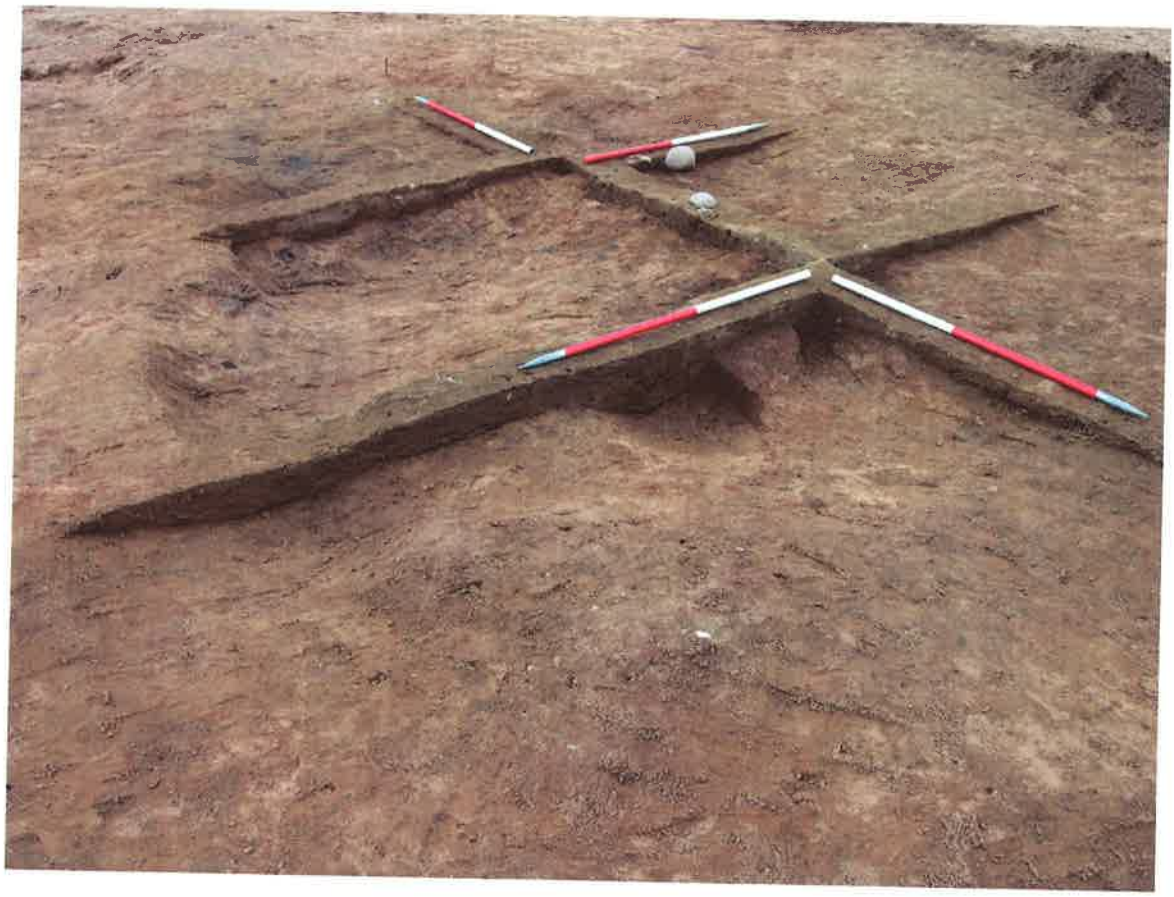


Plate 3: Phase 2B Iron Age hollow 2576 in Area K (2009)

Plate 4: Phase 3A Romano-British Roundhouse 1 in Area B (1993)

Plate 5: Phase 3A Romano-British Roundhouse 2 (gully 2255) in Area H (1995)

Plate 6: Phase 3A Romano-British clay extraction hollow 2259 in Area H (1995)

Plate 7: Phase 3B Romano-British pottery kiln 6 in Area A (during excavation 1993)

Plate 8: Phase 3B Romano-British pottery kiln 6 in Area A (1993)

Plate 9: Textile imprint on Roman pot sherd

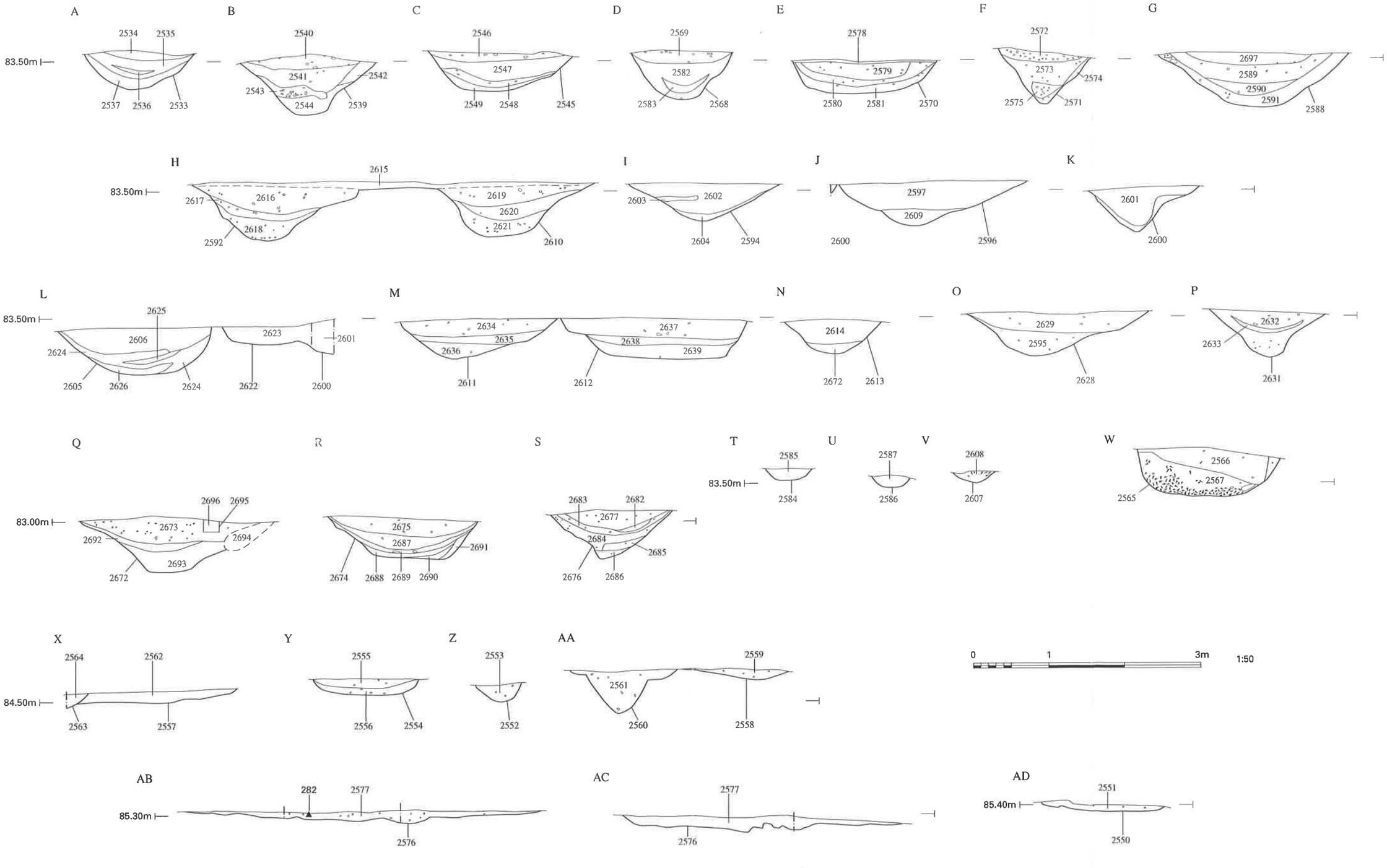


Fig 4: Area K, sections A-AD