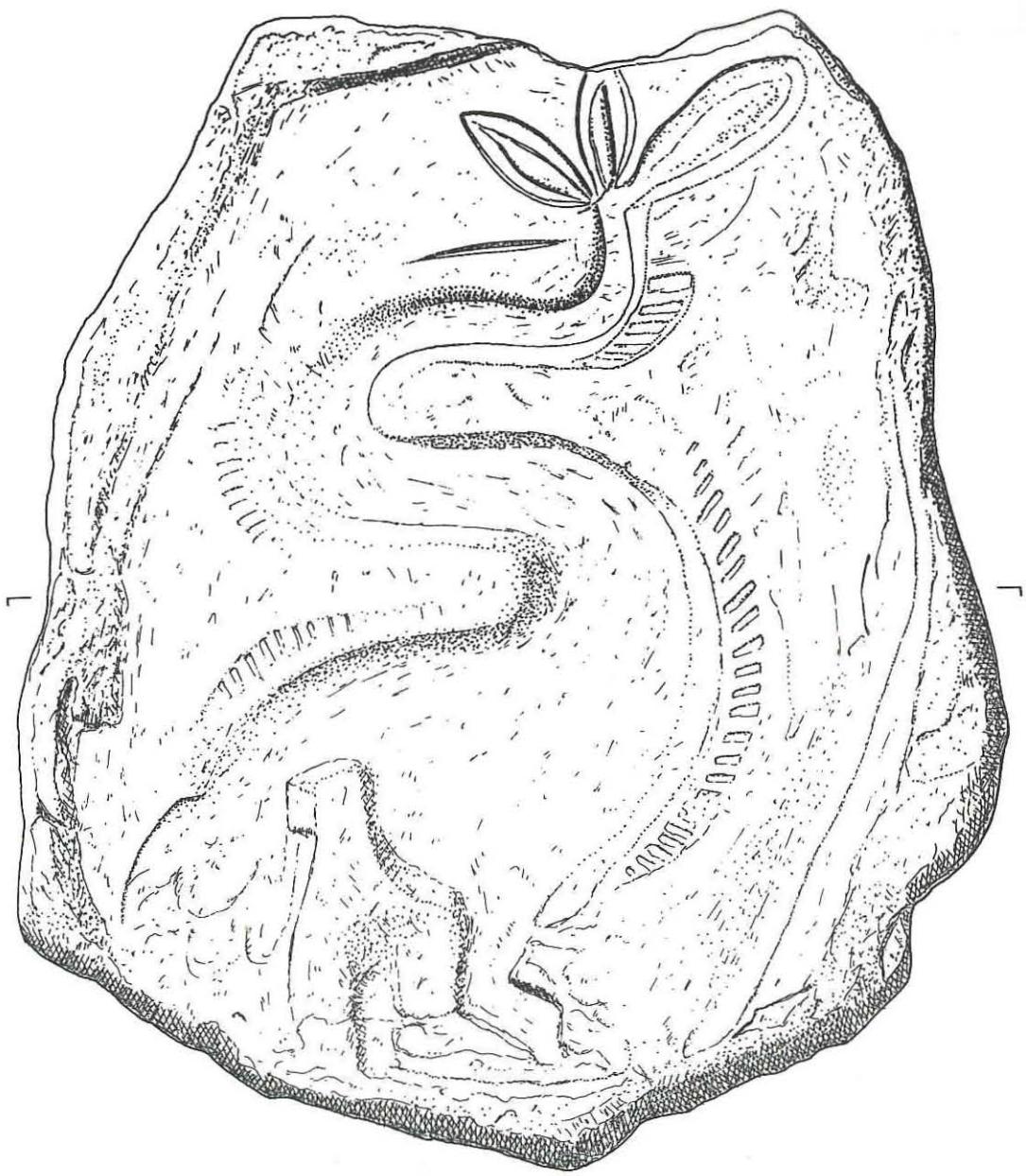
THE CLWYD-POWYS ARCHAEOLOGICAL TRUST

Plas Coch, Wrexham

EXCAVATIONS 1994-5



CPAT Report No 214

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EXCAVATIONS 1994-95

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Report for Cadw: Welsh Historic Monuments on excavations by Clwyd-Powys Archaeological Trust, Clwyd County Council and Wrexham Maelor Borough Council

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CONTENTS

INTRODUCTION

Salvage excavations were undertaken in advance of a large retail development at Plas Coch, Wrexham (SJ326517, fig. 1) which uncovered part of an extensive Romano-British settlement. The development covered an area of *c.* 3.56 hectares, the majority of which had already been machined to a level below which any archaeology survived by the time archaeologists were notified. It later became clear that metal detector finds had been recovered over a large part of the area some weeks prior to this.

During September and October 1994 an area of *c.* 1685m^2 (fig. 2, Area 1) was stripped by machine onto the surface of the archaeology in an area previously unaffected by the development, but surrounding a part of the site which had already been taken down to a lower level, substantially below the surface of the natural. The main evidence recovered consisted of a series of discontinuous, shallow ditches, which were presumably boundary markers, aligned mainly north-west to south-east, with others at right-angles to them (fig. 3). A corn drying kiln, two wells and a possible hearth were the only structural evidence for buildings, although a quantity of roofing tile was also recovered. In the northern part of the area a shallow recut ditch, roughly parallel to the boundary ditches, formed part of the south-west and south-east sides of an enclosure, with an entrance on the south-eastern side. Within the enclosure, a narrow linear slot ran parallel to the ditch, and may be associated with a palisade.

Further excavations were conducted during February 1995, concentrating on an area to the north-west of the earlier excavations (fig. 2, Area 2). Several ditches had been revealed in section, behind which an area *c.* 55 x 18m remained relatively undisturbed. The excavations revealed further boundary ditches and several postholes, although with no obvious indications of structures (fig. 4). Between this and the earlier site, features had previously been observed in section beneath a dump of hardcore (fig. 2, Area 3). Only a limited area was available for excavation, but this revealed the stone foundations for the corner of a building, possibly apsidal, which may be related to the enclosure identified previously.

The excavations uncovered a significant quantity of pottery, ranging in date from late 1st-early 2nd century to late 3rd-4th century. A definitive interpretation of the site is not possible from the evidence so far uncovered, although nothing appears to indicate a military association. The presence of the corn drier and boundary ditches suggests a civilian Romano-British settlement dependant on agriculture.

Both phases of excavation were undertaken jointly by staff from the Clwyd-Powys Archaeological Trust (CPAT), Clwyd County Council (CCC) and Wrexham Maelor Borough Council (WMBC), the latter under the supervision of Stephen Grenter and Bill Slater respectively. The finds were initially processed by staff of WMBC, with subsequent post-excavation analysis by CPAT. The work undertaken by CPAT during the excavations and post-excavation phases has been funded by Cadw: Welsh Historic Monuments.

A final phase of excavations was undertaken in relation to a new planning proposal, the work being undertaken as a contract funded solely by the developer. The work involved the complete excavation of features previously planned and sampled in Area 1 and the excavation of an area to the west of Area 3 (not shown in fig. 2), beneath the hardcore dump. The contract was awarded to Gifford and Partners, who conducted the excavations during September 1996, uncovering the partial plan of the building previously identified in Area 3, together with a continuation of some ditches from Area 2 and a few additional features in Area 1.

It has been agreed that a full publication will be co-ordinated by Stephen Grenter, County Archaeologist, Wrexham County Borough Council, to incorporate the results from all phases of excavation on the site, with the co-operation of CPAT and Gifford and Partners. The site archive and finds will eventually be stored by Wrexham Museum Service.

During the construction of the Sainsbury's Supermarket in 1991 there were reports that a coin hoard had been discovered by construction workers. However, although the reports would appear to be genuine, the hoard was never properly recorded and its exact contents remain unknown. The hoard provided the first clear indication of Roman settlement at Wrexham, although other finds were already known in the Wrexham area. The site lies 16km south-east of Chester, 8.5km south-west of the legionary tile-works and barracks at Holt (Grimes 1930), and 6km south-east of Ffrith, where a fairly extensive late 1st-early 2nd century settlement has been postulated (Blockley 1989, 163-4).

The Sainsbury's site was the first to be occupied on the retail park and when construction work began on additional areas during 1994 rumours again began to circulate regarding finds of Roman date being uncovered on the site. However, it was not until August 1994 that the Wrexham Museum Service and Clwyd

Archaeology Service were alerted to the discoveries, which it transpired were the result of metal detector investigations on the construction site. Many of the finds recovered at this time were subsequently handed to Wrexham Museum Service and included 36 coins (Appendix 2) ranging in date from Flavian to later 3rd century, but including a coin of Mark Antony (44-28 BC), as well as a number of brooches, not published here.

With the full co-operation of the developers, Gallifords Northwest, the initial rescue excavations were undertaken from late August to October 1994.

EXCAVATIONS (figs 3 and 4)

In general, the modern ploughsoil was removed by machine directly onto the surface of the natural glacial deposits, which varied from gravels to fine silt and clay. Although the majority of features identified may be assigned to the Roman period, there was also limited evidence of Bronze Age occupation as well as several post-medieval and modern features.

Prehistoric

The only evidence for prehistoric occupation came from Area 2, where two adjacent small irregular pits (282 and 285), both had small cobbles packed into the top. Pit 285 produced 871g of probable Bronze Age pottery, much of which was extremely fragmented. Analysis of soil samples revealed a quantity of hazelnut fragments and some spelt wheat from both pits. A further 6 sherds of Bronze Age pottery were recovered from the base of the modern ploughsoil (163). Although several finds of flint and chert were recovered, including a Neolithic or Bronze Age side and end scraper from Roman boundary ditch 3 and a utilized flake from post-medieval boundary ditch 82, they must all be considered residual finds.

Roman-British

The excavations produced evidence for several phases of Romano-British occupation, based largely on the alignments and relationships between the various linear ditches. However, the lack of any stratagraphic sequence has meant that the majority of features remain unphased. The excavated features may be broadly divided into linear ditches forming enclosures and field boundaries, structural evidence and miscellaneous features, each of which is described separately below, followed by a more general discussion of the evidence as a whole.

Enclosures

At the northern end of Area 1 two intercutting ditched features were identified defining separate phases of an enclosure cut by a modern pipe trench (104) with an entrance along the south-east side (pls 1-2). The earlier phase was represented by a shallow round-bottomed ditch (153), which was 1.20m wide and survived to a depth of 0.28m, filled by a dark brown sandy silt. The ditch survived only at the southern corner and along the south-east side, where it was butt-ended, presumably forming an entrance. Finds included a 2nd century dish or bowl and the head of an iron double-spiked loop (Find 1076). Along the south-west side evidence for the ditch had been removed by a later recut along the same line (106).

The second phase involved a recutting of the ditch to a more V-shaped profile, following a slightly different course at the corner and set up to 2m further to the south-east towards the butt-ended entrance. The recut (106 and 116) was generally 1.30m wide and survived to a depth of 0.36m, filled by a uniform brown sandy silt. Dating evidence consisted of sherds of Antonine samian, as well as late 3rd-4th century pottery. There was no surviving evidence for a bank associated with either phase.

If the enclosure were assumed to be rectangular with the entrance midway along the south-east side, then this would give a width of approximately 30m. However, excavations by Gifford and Partners to the west of Area 3 revealed a linear ditch running roughly at right-angles to ditch 106 which may be part of the same enclosure, giving dimensions of *c.* 50m by at least 43m, suggesting that the entrance was not midway along the south-east side.

Two postholes (133 and 135) with collapsed stone packing, including fragments of two querns (from 133), lay between ditches 106 and 116 on the south-west side of the entrance. Neither retained any indication of the size of the posts. Although there was no stratagraphic sequence, it would seem most likely that they are associated with the second phase, presumably forming part of a gated structure to either side of the entrance, lying immediately inside the ditch. The entrance itself retained a remnant of a rough stone surface

(145) beneath which lay several shallow scoops (201, 203, 205 and 207). A large roughly circular feature (137) lay just inside the entrance, but with no evidence for its relationship to the enclosure.

Within the enclosure a narrow right-angled slot (118 and 120) lay parallel to the first phase ditch, at a spacing of 1.20m along the south-west side and 3.80m along the south-east side. The slot became indistinct at the north-east end and was not clearly traced to the limit of excavation, possibly suggesting an entrance opposite that in the enclosure. A short section across slot 118 revealed it to be steep sided with a flat base, 0.46m wide, and cut 0.13m into the natural clay, with a fill of brown sandy silt. It is possible that this is foundation slots for a timber palisade set within the enclosure. However, evidence revealed by Gifford and Partners shows that a similar slot along the interior of what may be the north-west side of the enclosure converges with the enclosure ditch, suggesting that the enclosure ditch and slot may not be contemporary.

Area 2 also revealed a shallow ditched feature (85), 0.80m across and up to 0.43m deep, filled with brown sandy silt, but with no evidence of a recut, with a narrow parallel slot (251) up to 0.45m wide and 0.20m deep along the north-east side. The grey-brown silty clay filling slot 251 contained a significant quantity of rounded stones up to 0.30m across. Neither produced any dating evidence although ditch 85 did contain a small plain bronze brooch (find 1098). However, although these features are on a similar alignment to those in Area 1, it is clear that they are not on an identical line, suggesting the possibility that rather than being a continuation of the enclosure in Area 1, they may represent a separate but possibly related enclosure. The excavations conducted by Gifford and Partners adjacent to Area 3 revealed what appears to be a continuation of both enclosures.

Boundary ditches

A series of linear ditches were identified in Areas 1 and 2, representing at least two phases of presumed field boundaries. Modern cultivation and recent development meant that there was no surviving trace of banks associated with any of the ditches

The ditches in Area 2 follow two distinct alignments, but with no clear indication of their relationship. At the western end of the area ditch 79 followed a roughly north-south alignment. Three sections were excavated across the ditch, revealing a generally rounded profile up to 1.40m wide and 0.40m deep, filled with a dark brown sandy silt. Sherds of Antonine samian were recovered from the fill, together with a jar of Antonine-3rd century date and a late 1st-early 2nd century bronze brooch (find 1013).

Ditch 169 followed a more north-east to south-west alignment, becoming less distinct towards the south-west, and cut by ditch 85 and slot 251. The ditch had a generally rounded profile up to 0.85m wide and 0.40m deep, filled by a yellow-brown sandy silt and containing sherds of samian dated AD 100-120.

In the north-east corner of Area 2 a third ditch (280), much wider than the others, was aligned at right angles to ditch 169. This ditch had been cut through a large pit (256), and later recut to a width of up to 2.20m (fig. 5, 166). The earlier pit (256) was largely cut away by the ditch, but may have been *c.* 2.80m across and 1.20m deep, filled by a grey-brown gritty clay. The dating evidence for these features is rather similar, as well as varied, suggesting that there may have been some misinterpretation of the evidence during excavation. The earlier pit (256) contained samian dated to AD 170-200, mortaria from the first half of the 2nd century, as well as early to mid 4th century Black-burnished ware, while the ditch (280) contained samian of Flavian date as well as some dated AD 170-200 and late 3rd-early 4th century Black-burnished ware. The recut (166) contained samian of similar date range, together with mortaria dated AD 240-350, a coin of Marcus Aurelius (find 2020) dated AD 177-192 and mid 3rd to mid 4th century pottery.

A second broad ditch (162), similar to 280 and located immediately to the north-east, had been identified in an exposed section during the first phase of excavation. However, while its form and location suggested that it may have been parallel to 280 it lay beyond the limit of Area 2 and consequently this could not be confirmed.

Area 1 contained further ditches respecting the same general north-east to south-west alignment evident in Area 2 and presumed to represent a continuation of the system of field boundaries. The main boundary was aligned north-west to south-east and consisted of two phases. At the south-east end an entrance 3.80m wide was indicated by butt-ended ditches 58 and 95. Both ditches were *c.* 0.80m wide and 0.35m deep, filled largely by brown sandy silt and contained sherds of mid-late 2nd century samian and 3rd to 4th century pottery respectively. Later excavations undertaken by Gifford and Partners identified postholes (1079, 1081, 1083, 1092) at either side of the entrance which suggested a gate hung on the south-east side. To the north-west the boundary continued as ditch 9, which had a different form and was on a slightly different alignment. Although a relationship clearly existed between ditches 58 and 9, careful excavation failed to reveal its nature. Ditch 9 was both wider (1.50m) and deeper (0.66m), and extended for 12.40m, apparently butt-

ended at either end (pl. 3). The fills consisted of brown and grey-brown sandy silts. Finds included sherds of Antonine samian as well as mortaria dated AD 230-300 and early to mid 4th century Black-burnished ware, together with an iron stylus. The boundary continued to the north-west into the area already taken to a lower level by the developers. This section of the boundary showed two phases of development. Ditch 16 (1.20 x 0.40m) was aligned to ditch 58, while ditch 43 presented a different alignment suggesting a splayed entrance formed by this and ditch 9. Although the south-eastern end of both had been lost, the traces of both which still survived might suggest that they were butt-ended. The brown sandy silts filling both ditches were indistinguishable, making it impossible to determine the relationship between ditches 16 and 43, or the dimensions of the latter. The upper fill of ditch 16 contained a coin of Commodus dated AD 180-192 (find 1099), together with sherds of Antonine samian, mortaria dated AD 190-230 and AD 240-350, as well as early to mid 4th century Black-burnished ware.

A second boundary (3) up to 1.30m wide and 0.50m deep, filled by dark brown sandy silt, lay at right angles to ditch 58. The fill contained a significant quantity of mortaria ranging in date between AD 180 and 230, as well as sherds of samian dated AD 160-200 and other pottery of 3rd-to-4th century date. The ditch had been partly destroyed prior to excavation, but the position of a shallow butt-ended gully (31) suggests a continuation of the ditch to within 2.20m of ditch 9. The gap between the gully and ditch 9 might indicate the presence of a bank.

Structural evidence

Although there is clear evidence for Romano-British occupation on the site and within the immediate area, the excavations revealed little direct evidence for structures.

Towards the southern end of Area 1 a cluster of postholes (12, 18, 126, 128, 181, 183, 185, 187, 189, 192), some containing packers, surrounded a setting of stones (124) with evidence of burning, possibly indicating the presence of a hearth (pl. 4). The postholes ranged in diameter from 0.28m to 0.78m, with only one (189) retained evidence for the size of the post, which in this case was rectangular, measuring 0.30 x 0.25m. Some limited stratigraphy survived, consisting of a layer of firm sandy silt (142) within a shallow scoop (152) with some patches showing possible burning (141 and 143), which may suggest a floor surface. An earlier scoop (191) also showed some signs of burning within the fill. The only find consisted of a sherd of undated Black-burnished ware from scoop 191. It was not possible to identify a pattern amongst the postholes, and assuming that the belong to a structure, they may therefore represent more than one phase of construction. These features extend over an area of at least 25 x 12m, and are in close proximity to boundary ditch 3, suggesting a possible structure at right-angles to the ditch extending into the area already removed to a lower level.

To the north of the tentative structure a large pit (7) was half-sectioned revealing considerable slumping in the fills, which presumably included subsequent layers which had subsided into the feature, as well as some collapse of the sides (fig. 6). The upper fill (24) contained samian dated 160-200 and late 3rd to 4th century pottery. Lower fills contained a silver denarius struck in AD 79 (find 1000) and mid-to-late 2nd century pottery (26), as well as mortaria dated AD 140-180 and late 2nd to early 3rd century Black-burnished ware (25). This area had been machined before excavations began to a level up to 0.60m below the base of the natural. The fills were excavated to an edge of solid clay, which at the time appeared to represent the extent of the feature. However, when the area was investigated further by Gifford and Partners, it became clear that the feature was considerably larger, and that the clay was in fact the lining to a substantial well. Soil samples from various layers within the well produced evidence of cereal cultivation, consisting of emmer and spelt wheat, rye, barley and oats, as well as chaff and weed seeds.

A roughly circular feature (110) *c.* 1.38m in diameter, close to the eastern edge of Area 1 may be a second well. The feature, which had vertical sides, was only excavated to a depth of 0.95m, at which point further work became impractical. Finds included samian dated AD 90-110.

The remains of a corn-drying kiln (132, fig. 7) were excavated 5m south-west of ditch 16, aligned parallel to it. The kiln only survived below the surface of the natural, with no trace of the superstructure. The drying chamber (45), which lay at the north-west end, measured 2.50 x 1.60m and was cut 0.40m into the natural clay. A short flue connected this to the stokehole (74), which retained some of the stone lining (215) for the fire-pit. There was little evidence for burning and no trace of charred grain or flue other material to suggest what was being dried or what type of fuel had been used. The only dating consisted of sherds of samian from the second half of the 2nd century within the fill of the stokehole. A significant quantity of plant remains were recovered from the stokehole, dominated by wheat chaff with smaller amounts of grain (wheat, barley, rye and oats) and weed seeds. It would seem likely that these plant remains largely represent waste material used as fuel, for which heather, or possibly peat, as well as wood were also used. Relatively little plant

material was recovered from the drying chamber, although fragments of spelt wheat, rye and barley were all present.

During the initial phase of excavations an examination of exposed sections surrounding a further area of the development north of Area 1 revealed several features extending beneath a large dump of hardcore. These were examined by two small sondages during the second phase (Area 3), although the area available was severely limited by the hardcore dump. The excavations revealed the remains of cobbled foundations for a building extending beneath the hardcore (pls 5 and 6), the majority of which had already been lost to the development. The foundations consisted of shallow flat bottomed trenches (297 and 302) packed with rounded stones (298 and 303), on average around 0.25m across. Dating evidence consisted of sherds of 4th century Black-burnished ware as well as from a late 3rd to mid 4th century imitation Black-burnished ware dish. Although the full extent of the structure could not be revealed at this time, it was apparent that the building was aligned roughly north-east to south-west, with part of the north-west wall foundation surviving (303), together with the south-west corner (298). The remaining area beneath the hardcore was subsequently excavated by Gifford and Partners, revealing a rectangular building on stone cobble foundations with a later extension at the south-west end, together with an earlier timber phase.

The limited areas available for excavation meant that no relationship could be established between the building and the enclosure extending north beyond Area 1. Although the two features are on similar alignments, if it were assumed that the enclosure was rectangular with the entrance midway along the south-east side, then the building could not lie within it. However, since the northern part of the enclosure had already been lost, its form and extent are purely speculative.

Miscellaneous features

A number of features were excavated for which no interpretation has been possible. These included a number pits, one of which (56) produced a near complete form 37 Samian bowl, dated *c.* 155-175 AD (fig. 8), together with an adze hammer (find 1017) and a fragment of an iron nailed binding (find 1016). Adjacent to this was a second feature (14) mostly already destroyed by the developers, but with evidence for it having had edge-set stones as a lining around the base. Finds included sherds of mortaria dated AD 140-180. Pit 41 (2.05 x 1.08 x 0.40m) showed some evidence for insitu burning, although with no dating evidence, while pit 108 (1.78 x 0.80 x 0.65m) produced sherds of mortaria dated AD 240-350. Other undated features included a further seven pits (Area 1, 5, 22, 137, 149, 194; Area 2, 254, 275), four pits or postholes (Area 1, 47; Area 2, 264, 266, 268) and two shallow scoops (53, 130).

At the south-west corner of Area 1 a short length of gully (139) measuring 4.10 x 1.40 x 0.60m, butt-ended at either end and filled by brown sandy silt, produced sherds of a 2nd century greyware beaker, a 1st-2nd century redware bowl and a 1st to mid 2nd century triple vase. Three other short length of gullies were excavated, including 179, which had been cut by enclosure ditch 153, 112

When the development began a small pond close to the north-east corner of Area 2 (fig. 2) was filled and levelled. This gave no opportunity to examine the pond for environmental evidence or to determine the likely origins of the pond, which may conceivably have been extant during the Roman period and therefore possibly of some significance .

POST-ROMAN AND MODERN (shown in red in figs 1 and 2)

Several ditched features were identified which were associated with more recent, presumably post-medieval, field boundaries. In Area 2 ditch 82, would appear to coincide with a boundary depicted on Ordnance Survey 1st edition, surveyed in 1872 (Denbs. 28.7), as well as the Tithe Survey of Stansty Township, dated 1842. In Area 1, a shallow ditch (51) marked the alignment of a hedged boundary.

A number of modern service trenches cut through both areas (Area 1, 20, 104, 114, 196; Area 2, 307, 308, 309, 310, 311, 312).

THE FINDS

Prehistoric Pottery by Alex M. Gibson[1]

Pit 285 (286 & 287, Area 2)
871g of pottery was submitted to the writer for analysis. The majority of the material comprised small featureless and undecorated sherds in a light grey-brown fabric with abundant large calcined rock inclusions reaching up to 6mm across. The angularity of these inclusions indicate that they were deliberately crushed and added to the fabric as opening agents.

Where both surfaces survive, the fabric is in the region of 1mm thick. It is evenly and well-fired and has a slightly laminated texture resulting from the manufacturing process. Ring or coil-breaks are readily visible within the assemblage attesting the hand-building of the vessel.

The rim sherds which survive within the assemblage are everted and thickened with a rounded profile. Once again, coil or ring-breaks are evident, particularly on the interior of the rim indicating that the rim itself has been formed from a single coil. The diameter of the rim is difficult to estimate given the unevenness of the surviving sherds, but it may well have been in excess of 300mm.

The larger of the surviving body sherds suggest a bipartite vessel. Some sherds exhibit external concavity indicative of a shallow, possibly elongated, neck. Other thickening sherds suggest a straight body profile towards the base. these indicators would therefore suggest a large jar-like vessel with an everted rim, concave neck and straight, trunconic body.

Sherd evidence of this type without diagnostic decoration or formal features is notoriously difficult to date but nevertheless vessels of this shape and with similar fabric mixes may be well-paralleled in the middle and later Bronze Age assemblages of the Severn Valley and the Marches. Direct parallels may be found in the Breiddin material (Musson 1991) as well as amongst the local Middle Bronze Age material from Bromfield in Shropshire (Stanford 1982) and Four Crosses, Powys (Warrilow *et al.* 1986). Recently, similar material has been excavated from a house site at Glanfeinion, Powys (Britnell *et al.* forthcoming) providing C14 dates of *c.* 1400-1200 Cal BC.

While sufficient charcoal was recovered from amongst the sherds to provide an accelerator C14 date, this is not recommended in the present case since the pottery is so fragmentary. A date of between 1400 and 600 Cal BC would not be unexpected though the material may equally well lie outside this bracket.

Finer sherds with less coarse opening agents may well belong to a second vessel or else represent poor clay mixing in the same pot.

Soil layer 163 (base of modern ploughsoil, Area 2)
Six sherds (16g) in a fabric similar to the above, but finer and with redder outer surfaces. The sherds also contain large deliberately added opening materials and are similar in technological aspects to the material discussed above.

Flint by Alex M. Gibson

1. Side and end scraper in a grey mottled flint with dorsal cortex remaining. The bulb and striking platform are intact. The retouch is confined to the end and right hand side. It is steeply angled at the end and less so on the side. Both edges are badly damaged from use. The scraper is squat, measuring 29mm long and 28mm wide. Scrapers of this type are a long-lived tool type and consequently are difficult to date, having currency throughout the Neolithic and Bronze Age. Not illustrated. Fill of ditch 3 (4).
2. Utilised flake in black flint, triangular with traces of utilisation along one edge, although no retouch. Traces of the bulb are still visible on the pointed end. Not illustrated. Fill of ditch 82 (78).

A further six fragments of flint and 9 of chert were recovered, two of which show signs of possible working, while the remainder are probably natural.

Coins by Mark Walters[2]

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[1] Clwyd-Powys Archaeological Trust
[2] Clwyd-Powys Archaeological Trust

Four coins were recovered from the excavations, although metal detector finds from the site prior to the excavations recovered a further 36 coins (Appendix 2).

1. Ar denarius, Nerva, struck AD 97. Obverse, laureate bust right, IMP NERVA CAES AVG PM TRP COS III PP. Reverse, Clasped hands, CONCORDIA EXERCITVVM. Very slightly worn/very slightly worn. Diam. (max.) 17.5mm, die axis 6. Ref. RIC 2, RSC 1. Find 1000, fill of well 7 (26).
2. As, Commodus, AD 180-192, possibly a contemporary forgery. Obverse, laureate head, illegible. Reverse, Genius standing left holding patera and cornucopia, small figure at feet in left field, S-C in fields. Diam. (max.) 26mm, die axis 6. Ref. RIC 518. Worn/worn. Find 1099, fill of boundary ditch 16 (17).
3. As, Marcus Aurelius, AD 177-192, commemorative issue struck under Commodus. Obverse bare-headed bust to right, DIVVS M AN(TONINVS) PIVS. Reverse funeral pyre surmounted by Aurelius in quadriga, (CONSE)C(RATIO), S-C in fields. Diam. (max.) 30mm, die axis 5. Ref. copy as RIC 1366 (Sestertius). Worn/very worn. Find 2020, fill of ditch 166 (168).
4. Unidentifiable contemporary bronze coin, probably a radiate copy AD 276-282, or copy of 4th century. Obverse, illegible legend and offstruck, part of crude head to right. Reverse, eagle on standard or 'hand of god' presenting wreath from sky (a 4th century type), illegible legend. Diam. (max.) 11mm. Worn/worn for issue. Find 1023, fill of modern drain 104 (105).

Samian by Peter V. Webster[3] (fig. 8)

A complete list of all samian by context and source, with brief descriptions of larger decorated pieces will be found in the site archive. However, the relatively small number of sherds and the often poor quality of the samian recovered (reflecting adverse soil conditions) means that the collection is only considered in summary form here. The identifiable forms and sources are summarised in Table 1. This shows a relatively small number of sherds (16%) of South Gaulish importation from the period (*c.* AD 75-110), while the majority (73%) are of Central Gaulish (mainly Lezoux) manufacture, ranging in date from Hadrianic to the end of the 2nd century.

Table 1: Samian forms and sources (no. of sherds)

Form	South Gaul	Les Martres	Central Gaul	East Gaul	Total	Approx. Date range
18	2	-	-	-	2	75-95
18/31	5	2	-	-	7	90-120
18/31R	3	-	-	-	3	90-110
31	-	-	18	13	31	mid 2nd-mid 3rd
31R	-	-	9	-	9	160-200
33	-	-	13	1	14	150-200
36	1	-	3	-	4	
37	10	-	-	-	10	Flavian-110
37	-	1	-	-	1	100-120
37	-	-	35	-	35	Hadrian-190
38	-	-	8	-	8	Antonine
38	-	-	-	1	1	150-200
45	-	-	11	-	11	170-200
Bowl	1	-	2	-	3	
Curle 23	-	-	2	-	2	2nd century
Mortarium	-	-	2	-	2	170-200
Totals	22	3	103	15	143	

The excavations produced several sherds from decorated vessels, of which the following are of particular note:

1. Form 37, Central Gaul. Nearly complete but somewhat abraded bowl stamped by Cinnamus (see Stamp 1 below). The ovolo is Rogers B145 (Rogers 1974; Cinnamus ovolo 4 of S&S). The decoration is in the form of panels separated by beaded borders as follows:
   a) A large double-bordered medallion contains the stamp CINNAMI retrograde (cf. S&S, pl.169, first column, centre), the Venus, O.322 and the owl, O.2331. The corners of the panel contain small circles with the bottom centre occupied by the small snake-like ornament, S&S, fig. 47, 19 (Rogers U248).

[3] Department for Continuing Education, University of Wales, Cardiff

b) A dolphin (possibly O.2382) placed vertically over the mask, O.1214, itself over a stylised triple leaf (perhaps a finer imprint of S&S, fig. 47, 32).
c) The wreathed festoon, Rogers F40, is pendant from poorly defined astragali (possibly part of the poinçon) and contains a hare, probably O.2116. The whole panel is over:
d) A kneeling man, O.204, over triple acanthus leaves, probably Rogers K12.
e) The Pan, O.711a, over a poorly defined, stylised triple leaf of the same general type as that used in b) above.
f) As a), except that the name stamp is replaced by a bird, O.2297.

The panels are positioned a-b-c-d-e, followed by f-b-c-d-e repeated three times.

S&S illustrate similar work by Cinnamus without showing this exact design. The large medallion is closely similar to that in S&S pl.162, 59; the Pan appears similarly placed in a narrow panel S&S, pl.158, 21; and the hare appears in S&S pl. 157, 7. Hartley (1972, 49) suggests that ovolo 4 of Cinnamus came into use at approximately the same time as ovolo 1, an event he dates to *c.* AD 155. This would allow us to date the manufacture of the Plas Coch bowl to *c.* AD 155-175. Fill of pit 56 (103).

2. Not illustrated. Form 37, Central Gaul. A fragment from the lower part of a panel decorated bowl, divided by a neat but solid bead row. The panel to the left shows part of a sea horse, a smaller version of O.33, while that to the right has the lower part of a human figure, probably O.638. Both figures appear in the work of Casurius and could even be from the same mould as the fragment illustrated in S&S 1958, pl. 133, 20. The sea horse is illustrated by Stanfield (1935, pl. IX, 37). Fill of modern drain 104 (105), *c.* AD 160-195.

3. Not illustrated. Form 37, burnt and worn but probably Central Gaul. The very abraded design comes from the bottom of the decoration and shows a portion of a winding scroll, the lower lobe of which contains a double medallion placed above a running dog(?). The style is similar to that of S&S, pl. 167, 61, but this is not the Cinnamus dog used there. Antonine. Fill of boundary ditch 9 (10). Not illustrated.

4. Not illustrated. Form 37 Central Gaul. An abraded piece showing panel decoration divided by wavy line borders. The squarish ovolo with diagonally slashed tongue is not dissimilar to one used by Iullinus, but he does not use this type of border. The only panel with discernible decoration contains a fragment of a figure which may be O.571. Antonine. Fill of boundary ditch 16 (30).

5. Not illustrated. Form 37, Central Gaul. Fragment of a small bowl showing an ovolo, possibly Cinnamus ovolo 5 (S&S, fig. 47), over a border of large beads. Antonine. Fill of enclosure ditch 106 (107).

6. Not illustrated. Form 37, Les Martres-de-Veyre. Small fragment with fragmentary wreathed festoon, below a wavy line border with 9- or 10-petal rosette with disc centre masking a probable border junction. The Potter of the Rosette would be a possible maker. *c.* AD 100-120. Fill of boundary ditch 169 (170).

Samian Potters' Stamps by Brenda M. Dickinson[4]

1. Form 37, Central Gaul. Stamped CINNAMI retr. Cinnamus ii of Lezoux, Die 5b (Walke 1965, Taf. 39, 11). This common label stamp of Cinnamus occurs frequently both in Antonine Scotland and at forts on Hadrian's Wall, but is slightly more common in Scotland. This suggests a date of AD 155-175. Fill of pit 56 (103).

2. Form 31, East Gaul, stamped VICToRINVSF, with IN ligatured. Victorinus ii of Rheinzabern, Die 4q (Ludowici 1927, 233, a). Victorinus ii's plainware stamps occur at Niederbieber, a site founded in the late 2nd century, and his decorated ware is amongst the latest to have been made at Rheinzabern. Early-mid 3rd century. Fill of boundary ditch 16 (28).

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Mortaria by Kay F. Hartley[5] (fig. 9)
The assemblage of 97 sherds (5383g) is a considerable total to result from limited excavation on a minor settlement. The substantial size of the sherds is notable, as is the amount surviving of individual mortaria (e.g. six mortaria with 15% of rim surviving, one with 42% and another with 66%). If only rim sherds are considered, they represent a minimum of 20 vessels, 15 of which are attributable to the Mancetter-Hartshill potteries. One vessel is possibly from Chester, and four are from other sources in North Wales, the Cheshire Plain (including Wilderspool) and perhaps even Wroxeter (vessels from these other sources include two 'Raetian'-type mortaria, probably from Chester or Wilderspool). This small number from other sources can be increased to eight if vessels represented only by body or base sherds are counted. Probably two such mortaria are attributable to the legionary pottery at Holt. There are body and base sherds, too, in the Mancetter-Hartshill fabric which are not from the vessels represented by rim sherds, but it would be difficult to give an exact number.

All the mortaria which are not from Mancetter are 2nd century in date. This is not surprising since all the available evidence suggests that production of mortaria had ceased in all the workshops in North Wales and the Cheshire Plain by the end of the 2nd century. Mancetter-Hartshill mortaria only became common in North Wales and at Chester in the late 2nd to early 3rd centuries, and all fifteen vessels represented by the rim sherds are forms which were made after the practice of stamping ceased. One or two could possibly be very late 2nd century, but it is more likely that the earliest are of 3rd century date. At least five of the vesssels form a group, probably contemporary; all have a mixture of trituration grit which is so unusual for these potteries after the mid-2nd century that this is the first time when I have seen it in mortaria of a much later date (refer to fabric RO10v for details of grit). Three of the mortaria are triple-reeded and two are four-reeded; these are linked together by similarities in the style of reeding. None of the variant rim profiles present are likely to be earlier than AD 190, and if taken as a near contemporary group, it would have to be 3rd century, not earlier than AD 220-230. Crude versions of these forms were made after *c.* AD 180, but they were most commonly made in the early 3rd century. Of the remaining ten Mancetter-Hartshill mortaria, only one - a tiny hammerhead (not illustrated) - can safely be attributed to the 4th century, and seven could be either 3rd or 4th century. A detailed catalogue of the mortaria is housed with the site archive.

Mortaria fabrics/sources
Each sherd has been assigned to a fabric type according to the Clwyd-Powys Archaeological Trust's Roman Pottery Fabric Type Series, from which the following fabrics have been identified.

RO1 (example not illustrated) Holt, Denbighshire. A fine-textured orange fabric, normally fairly hard, powdery only after deterioration. Inclusions: rare to moderate well-sorted quartz and rare black or dark brown material. Trituration grit: white quartz, frequent and vari-sized. Self coloured.

RO10 Mancetter-Hartshill, a usually fine-textured, cream fabric, varying from softish to very hard, sometimes with pink core. Inclusions usually moderate, smallish, transparent and translucent white and pinkish quartz with sparse opaque orange-brown fragments and sometimes white clay pellets (re-fired pottery?). The range in fabric is, in fact, quite wide, from that with scarcely any inclusions to fabrics with a fair quantity and fabrics with hard, ill-sorted black inclusions. The trituration grit after the mid-second century consisted of hard red-brown and/or hard blackish, re-fired pottery fragments (D.P.S. Peacock and D.F. Williams *pers. comm.*) with only rare quartz and sandstone fragments. Earlier mortaria usually have a mixed trituration grit in which quartz and sandstone are normal components and some early 2nd-century mortaria probably have entirely quartz trituration grit.

RO10v This variant is covered in a sense by RO10; its unusual feature is that trituration grit which would be normal enough in early second century mortaria, has been used in mortaria dated to the early third century when trituration grit used in htese potteries was always composed of hard red-brown and/or blackish argillaceous material. The trituration grit in RO10v is composed mainly of various sandstones (including quartz sandstone) with fairly uncommon quartz, rare black and flint.

RO12 (example not illustrated) North Wales or Cheshire Plain. Orange-brown, often with a grey core; extreme examples may shade from a brownish-pink to soft grey or have a sandwich effect of brownish-grey with an inner core of orange-brown. Extreme examples of the fabric can be friable and ashy in texture. Although the fabric can have a powdery surface, there is usually enough sand in the clay to give a slightly abrasive quality. Inclusions: fairly frequent to moderate ill-sorted quartz, mostly sub-rounded, with rare red-brown sandstone and black material. Trituration grit: mainly angular, ill-sorted quartz often with a hackly fracture, occasional flecks of gold mica both alone and contained within the quartz; rare grits of hard black material. All known mortaria have traces of a cream slip.

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RO13 (example not illustrated) Wroxeter or perhaps the Cheshire Plain. Softish fine orange-brown to brownish-pink fabric with paler surface. Inclusions: moderate ill-sorted quartz, a little black material and rare red-brown material. Trituration grit: included quartz, red-brown sandstone and black material. Self-coloured or with a brown slip.

RO16 (example not illustrated) Probably Cheshire Plain or Wales. Moderately hard, fine, red-brown micaceous fabric. Inclusions: ill-sorted and sub-rounded quartz and rare red-brown material. Trituration grit: included quartz. Self-coloured.

RO26 (example not illustrated) North Wales or the Cheshire Plain. Moderately hard, abrasive, bright orange fabric. Inclusions: fairly frequent and well sorted small quartz as well as grey and black inclusions and gold mica. Trituration grit: mostly quartz with rare red-brown soft siltstone (?) and black material. Cream slip. Perhaps sometimes self-coloured.

RO29 Wilderspool. Hard orange-brown fabric with grey core. Slightly abrasive surface. Inclusions: abundant quartz. Trituration grit: mixed quartz and sandstone. This example had matt self-coloured slip in place of the red slip normal on a 'Raetian' form.

RO31 Probably from Chester. Orange-brown fabric with sufficient backround sand content to make it slightly abrasive. No slip survives on example but would have been either 'Raetian' red slip or self-coloured. Inclusions: fairly frequent, tiny to small, but ill-sorted, subrounded quartz, opaque black material (probably iron slag). Inclusions barely visible without magnification. Trituration grit: quartz and pale brown sandstone survives on sherd.

RO32 (example not illustrated) North Wales, possibly Holt. Very fine-textured, dark red fabric with well-defined blackish core. Self-coloured slip on sherd. Inclusions: moderate, ill sorted, but tiny, quartz, red-brown and black (both probably slag). Trituration: white quartz.

Catalogue of mortaria (fig. 9)

1. Diam. 23cm. (42% rim). Fabric RO10v. Mancetter-Hartshill potteries. About a third of this mortarium survives. Its triple-beaded upright rim is not far from being wall-sided; the finger-depression spout is slighter than in no. 2. The use of this form can be dated within the period AD 180-230 and it best fits a date in the early 3rd century. The trituration grit (red-brown and pale brown sandstone, quartz and grey material), is exceptional for these potteries after the middle of the second century, but there is no question of an earlier date. Fill of boundary ditch 3 (4).

2. Diam. 34cm. (66% rim). Fabric RO10. Mancetter-Hartshill potteries. The greater part of this mortarium survives; it was probably discarded not because of normal breakage but because it was so heavily worn that the centre of the base fell out. It is a hammerhead form with four large, fairly well-rounded beads and a well-formed, finger-depression spout. Four-beaded hammerheads were first made in the late 2nd century, but the optimum date for this example is early 3rd century, perhaps AD 200-230. The fabric is softish and much of the red-brown painted decoration on the rim has disintegrated. Fill of boundary ditch 3 (4).

3. Diam. 28cm (13% rim). Fabric RO10v. Mancetter-Hartshill potteries. A four-reeded, near upright rim. Mortarium with four reeds were first made in these potteries in the late 2nd century (AD 180-200), but they were very rare and the beads very convex and rounded until the 3rd century. Although they probably continued to be made as long as the industry continued, they were, like the triple reed, never common. When multi-reeded mortaria began to be made sometime in the first half of the 3rd century, probably *c.* AD 220, they rapidly overtook both triple- and four-reeded types in popularity, perhaps being easier to make. This example has exactly the same, unusual, trituration grit as no. 1 and may well be a contemporary product of the same potter. Fill of boundary ditch 3 (4).

4. (Not illustrated). Diam. 27 (8% rim). Fabric RO10v? (no trituration grit survives). A four-reeded mortarium of very similar type to no. 3, but from a different vessel. The bold, deeply moulded, widely separated reeds and upright form, which both mortaria have, are not common among Mancetter products and this example can probably be attributed to the same date and the same potter. Fill of boundary ditch 3 (4).

5. Diam. 27cms. (8% rim). Fabric RO10v. A triple-reeded, upright rim with the reeds moulded in the same way as nos 3 and 4 and probably made by the same potter or in the same workshop in the Mancetter-Hartshill potteries. *c.* AD 200-230. Fill of boundary ditch 3 (4).

6. Diam. 36cm. (19% rim). Fabric RO10. Mancetter-Hartshill potteries. An irregularly reeded hammerhead mortarium with double chevron design in red-brown paint on the rim. Worn. A fragment of the lower part of a finger-depression spout from this vessel survives (not shown in illustration). Probably 3rd century, certainly later than AD 230. Fill of boundary ditch 16 (17).

7. Diam. 32cm. (19% rim). Fabric RO 10v. No trituration survives on the badly eroded inner surface, but the softish fabric is so reminiscent of nos 1, 3, [4 and 5 and the upright triple-beaded rim of that of 4] that this can be attributed to the same workshop in the Mancetter-Hartshill potteries. AD 190-230. Fill of boundary ditch 16 (28).

8. Diam. 28cm. (18% rim). Fabric RO10? Mancetter-Hartshill potteries. Four-reeded hammerhead, with deep central groove. AD 230-300. The fabric is very similar to RO 10v, but in the absence of trituration there is nothing else to make any obvious link. Fill of boundary ditch 9 (10).

9. Diam. 26cm (13% rim). Fabric RO10. Mancetter-Hartshill potteries. Concave, multi-reeded hammerhead. AD 240-350. Fill of boundary ditch 16 (28).

10. Diam. 27cm (13.5% rim). Fabric RO10 (hard fired). Mancetter-Hartshill potteries. Multi-reeded hammerhead. AD 240-350. Fill of pit 108 (109).

11. Diam. 28cms (15% rim). Fabric RO10/10v. Mancetter-Hartshill potteries. Thin-walled mortarium with hammerhead rim lifted slightly outwards at the distal end, and slight finger-depression spout. The soft fabric is eroded but the multi-reeds were always lightly marked. Very little of the trituration material survives but what there is and the fabric could link this example to the mortaria in fabric RO10v, but this is certainly later. AD 240-350. Fill of ditch 166 (259).

12. Diam. 27cm. (20% rim). Fabric RO29. A 'Raetian' mortarium with traces of brown slip surviving on the flange. The most likely source is Wilderspool. Probably AD 140-180. Burnt. Fill of pit 14 and well 7 (15 & 25).

13. Diam. 27 (11% rim). Fabric RO31. This is a 'Raetian' type E rim with no slip surviving. Form, fabric and type would best fit manufacture at Chester in the first half of the 2nd century, though the form continued to be produced in the Antonine period. Fill of pit 256 (257).

14. (Not illustrated). Diam. 17 (10% rim). Fabric RO10. Mancetter-Hartshill potteries. Tiny smooth hammerhead form. AD 250/300-350. Unstratified.

Roman Coarse Pottery by Wendy J. Owen from comments by Peter Webster (figs 10-14)
Some 43.9kg (2236 sherds) of Roman pottery was recovered from the excavations. All the sherds were examined and fabrics were identified macroscopically, according to petrological inclusions, with the aid of a x8 hand lens, and by comparing sherds with the Clwyd-Powys Archaeological Trust's Fabric Type Series. The coarse ware fabrics have been put into six main groupings, discussed below, but a more detailed quantification, by individual fabrics, is housed in the site archive. Pottery illustrations are presented by fabric group and vessel form and offer a representative selection of the vessel forms found.

The majority of the sherds were recovered from the fills of ditches and gullies, accounting for 74% of the assemblage. Of the remainder, 13% came from pits, postholes, wells and other features, with only 3.5% from soil layers and 9.5% either unstratified or from modern contexts. This distribution reflects the general nature of the archaeology on the site where virtually no stratigraphic sequences survived and the majority of excavated features were boundary or enclosure ditches and gullies. Many of these features contained Roman pottery of a wide range of dates.

Fabric Groups
The following fabric groups have been distinguished. Table 2 shows a summary of the quantities recovered of each group, as well as the samian ware and mortaria.

Table 2: Summary of the Roman pottery (percentages shown in brackets)

Fabric group	**sherd no**		**weight (g)**	
Samian	169	(8%)	3126	(7%)
Mortaria	97	(4%)	5383	(12.5%)
Red wares	972	(43%)	15077	(34%)
Black-burnished ware	584	(26.5%)	7055	(16%)
Grey wares	251	(11.5%)	2334	(5.3%)
White wares	13	(0.5%)	114	(0.3%)
Colour-coated/Fine wares	35	(1.5%)	162	(0.4%)
Amphorae	115	(5%)	10717	(24.5%)
Totals	2236		43968	

Red wares
Severn Valley Ware forms a very large proportion (62%) of all the red wares recovered. The fabrics vary a little in their hardness, sand content and other inclusions, and some sherds are vesicular. This would seem to suggest more than one source of supply, the slightly sandier fabrics perhaps coming from a source on the edge of the Severn Valley production area. Several vessels appear to be 'seconds', partially overfired, partially reduced, with warped, not completely circular rims. At least one (no. 13) has been slightly dented before firing and also shows dunting, appearing as small surface cracks caused when a vessel is cooled too quickly after firing. Jars dominate the vessel forms, many of these having 'double rims' (as Webster 1976, no. 9), though unusual 'triple rims' (as nos 17-19) are particularly common in this assemblage, and there are also some frilled rims. The base of just one tankard was identified. One hemispherical bowl copying samian form 37 is probably from the Severn valley area. Several body sherds from vessels of uncertain forms show evidence of having been mended with lead rivets, perhaps indicating that a supply of these pots was not always readily available. The vast majority of the vessels in the assemblage are dated to the 3rd-4th century. It is particularly notable that a very limited range of Severn Valley Ware forms (mostly jars as Webster 1976, nos 9 -10) appears to have been supplied in quite considerable quantity during a short period of the site's history. This might perhaps suggest more intense occupation or greater prosperity during that period, or just an easily available supply from one particular source.

A lesser, but still considerable quantity of pottery (26% of red wares) occurs in 'Cheshire Plains fabric' (cf. Webster 1982,15), notable for the large amount of sandy filler it contains - probably a product of the local drift geology - and characteristic of sites on the Cheshire or Lancashire Plain. Most of the vessels are dated to the 1st or 2nd century, and forms identified include jars (one lid-seated and one wide-mouthed example), carinated and flanged rim bowls, a bowl imitating samian form 37, small pots resembling unguent pots and triple vases. Wilderspool dull brown colour-coated roughcast beakers, are represented by just 3 sherds.

It was anticipated that in view of its proximity (*c.* 8.5km) Holt might have supplied a certain amount of the oxidised pottery in the earlier period of occupation of the Plas Coch site. Grimes (1930) reports that pottery at Holt was abundant in the 2nd century and does seem to continue into the 3rd century, but notes that Holt lacks any developed 4th century cooking pot forms. However, a rapid examination of the Holt pottery at the National Museum of Wales, Cardiff, failed to confirm any of the oxidised fabrics from Plas Coch as Holt products, although some of the vessel forms do have their closest parallels at Holt. These include a colander (no. 30) in a crumbly red fabric with frequent small soft creamy white inclusions and a micaceous surface closely resembling Grimes fig. 72, 209. A carinated bowl with grooves on the rim (no. 41), a phallic-shaped patera handle (fig. 14 no. 79) and a frilled tazza-shaped vessel on a pedestal base (no. 27) also bear resemblance to examples at Holt, but these are mainly more unusual items. Sources for the small remainder of the red ware fabrics have not been identified. Only two fabrics stand out: a sparkly micaceous red fabric, generally fairly hard, with frequent soft pink-brown inclusions as well as some harder red-brown ones (possibly sandstone); another fairly hard orange-red fabric containing only a moderate amount of quartz and other occasional inclusions such as hard white (limestone?) and brown sandstone.

Flagons are not well represented in the assemblage: the very worn top of one flagon (no. 2) may possibly be late; one handle (no. 3) in the sandy Cheshire Plain fabric is presumed to be from a flagon but no flagon rims in this fabric have been identified with certainty, and cream slip typical of flagons survives on only one

body sherd. A further three body sherds with white slip occur in a fabric not dissimilar to the Severn Valley Wares.

Black-burnished ware
Black-burnished ware sherds account for 26.5% of the total pottery recovered, and make up a very large proportion (70%) of all the sherds in reduced fabrics recovered. All the sherds are of Category 1 fabric (BB1) - typically hard, rough, grey-black and with frequent quartz inclusions, although a good number of the burnt vessels have oxidised to a buff or orange colour. The date range of the vessels is from the mid/late2nd century into the mid 4th century, though it is notable that there are very many more vessels of mid-3rd and 4th century date than there are earlier ones. This is true of cooking pots, dishes and bowls. Vessel forms present include cooking pots, flanged dishes and bowls, plain rim dishes (dog dishes), bead and flange rim bowls, and a jug (represented by the handle). Several cooking pot sherds show evidence of having been mended with lead rivets, perhaps indicating that a supply of these pots was not always readily available.

Grey wares
A strikingly small quantity of grey ware sherds were recovered from the excavations, and of these a considerable number (around 65%) appear to be deliberate imitations of 2nd-century Black-burnished ware forms, perhaps supplied by a more local source. It is a possibility that these imitations filled a gap in the market when supply of genuine Black-burnished may have been intermittent or difficult to obtain. Their dating does appear to coincide with a period in the 2nd century when Black-burnished ware seems comparatively scarce on the site. Forms include flanged bowls and dishes, a bead and flanged rim bowl, jars, a jug and a handled beaker. Fabrics are mainly hard, fairly rough and sandy (though containing far less quartz than Black-burnished ware), grey-to-orange with darker grey burnished surfaces, but one fabric (RG40) stands out - wheel-thrown, smoother-textured, mid-grey throughout with burnished exterior surface.

The remainder of the grey wares occur mostly in sandier fabrics, some not dissimilar (except in colour) to the red Cheshire Plain fabric, above, and are presumed to be local. Vessel forms included jars, several with everted rim jars, a flanged and carinated bowl and two dishes. Dates range from late 1st/early 2nd century to 2nd/3rd century. A cordoned jar occurs in a very distinctive soft grey slightly vesicular fabric, containing inclusions of charcoal, presumably organic material charred during firing. Just one Malvernian vessel was recovered, a dish, probably of 2nd century date in grey-black, rough hard fabric with angular crushed rock inclusions. It has been suggested that vessels such as this may have been used as containers for transporting some commodity such as salt (Webster in Britnell 1989, 89), but the evidence so far is not conclusive.

White wares
White ware sherds were very scarce and account for only 0.5% of the pottery. No rim sherds were present, but the base of one flagon survives, and it is assumed that most of the small and fragmentary body sherds present also belong to flagons. Some of the fabrics are smooth creamy white, some soft and powdery, but some more sandy fabrics also occur. No sources have been identified.

Colour-coated wares and Fine wares
A small number of colour-coated sherds were recovered, and vessels from several different sources were identified:

Rhenish beakers - one indented - the Trier/Moselle northern version, decorated with dark brown colour coat and rouletting, 3rd-century.

Lezoux colour coated sherds, probably beakers, including one sherd from a dimpled beaker with rouletted decoration.

Nene Valley beakers (white fabric) with black, brown and orange-brown colour coats and a rouletted vessel, possibly a 'Castor box'.

Colour-coated sherds possibly from Oxford beakers, also the bottom parts of two beakers of uncertain source (possibly from Nene Valley or Oxford), both in a hard, fine, light orange fabric with no very obvious inclusions apart from occasional charcoal flecks, wheel thrown, with ochre - brown colour coats, one decorated with a horizontal band of honey colour, matching the interior colour coat.

Amphorae
Identified vessels include Dressel 20 South Spanish olive oil containers (76 sherds), a minimum of two vessels, no identifiable rims, but two basal spikes present; Gauloise 4 (Pélichet 47) South Gaulish wine amphorae (24 sherds); 5 sherds most likely from Dressel 2-4 Italian wine amphora, and 1 sherd probably from a fish sauce amphora, with long neck and long spike.

Catalogue of illustrated vessels (figs 10-14).

1. Gauloise 4 amphora. Fabric more sandy than is normal. Abrasive cream-coloured fabric. 1st-3rd century. Fill of boundary ditch 3 (4).
2. Flagon with small flange on neck in worn smooth buff-orange fabric with grey-brown core. Fill of boundary ditch 3 (4).
3. Handle in slightly sandy orange fabric, possibly from the Cheshire Plain. The form imitates a metal vessel with a thumb-stop Imitation metal vessels are present at Holt, cf. Grimes 1930, no. 121. Fill of boundary ditch 16 (28).
4. Small jar in sandy orange fabric, probably from the Cheshire Plain. Fill of boundary ditch 16 (28).
5. Small jar in Cheshire Plain orange sandy fabric. Fill of modern ditch 51 (52).
6. Small jar in pale orange sandy Cheshire Plains fabric. Slight traces of thin white slip externally. The vessel has been conjoined to another, now missing. The most likely restoration is as an element of a triple vase of Kaye's type 1 (Kaye 1914), as in an example from Wilderspool (Hartley and Webster 1973, no. 70). Possibly from Wilderspool, late 1st-mid 2nd century. Fill of gully 139 (140).
7. Small jar resembling an unguent pot. Fabric is pale orange-brown, smooth, quite hard, but very flaky. Fill of boundary ditch 16 (28).
8. Severn Valley jar with big roll rim in smooth pale orange fabric. Fill of pit 256 (257).
9. Severn valley jar decorated with cordon below neck and groove on shoulder. Smooth orange fabric with grey core. Cf. Webster 1977, no. 20, Antonine-3rd century. Fill of boundary ditch 79 (80).
10. Severn Valley ware jar, burnished on the rim. Smooth orange fabric with grey core, slightly micaceous. Cf. Webster 1976, no. 8, 3rd century. Fill of boundary ditch 9 (10 & 62).
11. Severn valley jar in smooth orange fabric with double rim decorated with slashes. Cf. Webster 1976, no.13, 3rd-4th century. Fill of ditch 166 (259).
12. Severn Valley Ware jar in smooth pale orange fabric with double rim, the surface worn and powdery. Similar to Webster 1976, no. 10, 3rd-4th century. Fill of ditch 166 (259).
13. Severn Valley Ware jar with double rim. The vessel is warped and dented, probably a second. Decorated with wide cordon below neck. Burnished on the exterior surface and inside the mouth. Fairly hard, smooth orange fabric. Form similar to Atkinson 1942, fig.46 C4 (late 3rd century) and Webster 1976, no. 9, late 3rd-4th century. Fill of boundary ditch 3 (4).
14. Severn Valley Ware jar. With double rim and double cordon decoration below neck. Worn soft orange fabric. Similar to Webster 1976, no. 9, 3rd-4th century. Fill of boundary ditch 95 (96).
15. Jar with double rim in reduced Severn Valley Ware. Shoulder decorated with grooves and wide cordon. Burnished. The fabric is hard-fired red-brown with grey surfaces. Fill of boundary ditch 95 (96).
16. Jar with frilled rim, decorated with two grooves below neck in smooth orange fabric with paler surface. A late Severn Valley form, cf. Webster 1976, no.13, 3rd-4th century. Fill of boundary ditch 3 (4).
17. Severn Valley Ware jar with triple rim, decorated with grooves and cordon. Smooth pale orange fabric. 3rd-4th century. Fill of boundary ditch 3 (4).
18. Severn Valley ware jar with triple rim, decorated with grooves and a wide cordon. The fabric is overfired hard smooth orange-red, with partially grey surfaces. 3rd-4th century. Fill of boundary ditch 95 (96).
19. Jar with triple rim. The rim is not circular. Decorated with a vague cordon below neck. Hard-fired smooth orange fabric, the exterior surface is partially grey. Fill of boundary ditch 3 (4).
20. Jar in light orange sandy Cheshire Plain fabric, worn and powdery surface. Fill of pit [306] (260).
21. Jar in red-brown slightly sandy fabric, source unknown. Fill of pit 256 (257).
22. Jar in pinkish brown fabric with grey core, smooth and micaceous. Much of the surface has flaked off, but burnishing evident on the rim. Although probably from a different source, the form is similar to Webster 1976, no. 22, 2nd-3rd century. Unstratified and fill of boundary ditch 9 (1 & 10).
23. Severn Valley wide mouthed jar in smooth orange fabric with grey core. A chunkier version of Webster 1976, no. 27, possibly late 3rd-4th century. Fill of well 7 (24).
24. Severn Valley wide mouthed jar in smooth orange fabric. Cf. Webster 1976, no. 27, late 3rd-4th century. Fill of enclosure ditch 106 (107).
25. Wide mouthed jar in Cheshire Plain orange sandy fabric. Cf. Hinchcliffe *et al.* 1992, no. 639, probably 2nd century. Fill of well 7 (24).
26. Wide mouthed jar, originally burnished, in Cheshire Plain light orange sandy fabric. Fill of pit 137 (138).
27. Bowl/tazza, the top incomplete, in Cheshire Plain orange sandy fabric. Similarly frilled types of vessel at Holt. Fills of well 7 (26 & 27).
28. Hemispherical bowl in slightly sandy orange fabric, probably from the Cheshire Plain. Fill of boundary ditch 16 (28).

29. Bowl in slightly vesicular pale orange fabric with grey core, probably from the Severn Valley. Fill of gully 139 (140).
30. Colander with burnished exterior surface, in smooth, hard. Pink-brown fabric containing very noticeable and frequent soft creamy inclusions. Similar to Grimes 1930, fig. 72, no. 209. Fill of boundary ditch 9 (68).
31. Flanged bowl in micaceous pink-brown fabric with grey core. Fill of well 7 (26).
32. Mortar-like bowl with worn surface, in smooth orange fabric with grey core. 1st-2nd century. Fill of pit [41] (76).
33. Bowl possibly from the Severn Valley decorated with double grooves. Smooth light orange fabric. Fill of boundary ditch 79 (273).
34. Hemispherical bowl copying the samian form 37 or 30, probably from the Severn Valley area. Pale orange smooth fabric. Unstratified, fills of well 7 and boundary ditches 16 and 43 (1, 17, 25 & 44).
35. Bowl. In sandy buff-orange fabric from Cheshire Plain. Possibly imitating a Black-burnished ware form of the 1st or 2nd century. Fill of gully 139 (140).
36. Flattened everted rim jar in sandy grey fabric. 1st-2nd century. Unstratified (123).
37. Flanged and carinated bowl in orange sandy Cheshire Plain fabric. 1st or early 2nd century. Fill of boundary ditch 16 (28).
38. Flanged and carinated bowl with burnishing on both interior and exterior surfaces. Grey-brown sandy fabric. Possibly Trajanic-Hadrianic. Unstratified (123).
39. Flanged bowl. Very sandy orange Cheshire Plain fabric. Fill of boundary ditch 16 (28).
40. Bowl decorated with double grooves. The rim looks as if it was intended for a lid. Very smooth pinkish-orange fabric, the surface quite worn. Possibly an edge-of-Severn-Valley hybrid of 3rd-4th century, not dissimilar to some Wroxeter vessels; also Grimes 1930, fig. 65, no. 88. Fill of boundary ditch 3 (4).
41. Carinated bowl with grooves on the rim. Worn orange sandy fabric. Cf. Grimes 1930, 217. Soil layer 163, Area 2.
42. Jar, Black-burnished ware. Fill of ditch 82 (78).
43. Jar, Black-burnished ware. Neck decorated with angled slashes. Cf. Gillam 1976, no. 2, mid 2nd century. Fill of boundary ditch 1 (28) 6.
44. Jar, Black-burnished ware. Cf. Gillam 1976, nos 5-7, late 2nd-mid 3rd century. Fill of boundary ditch 3 (4).
45. Jar, Black-burnished ware. Incised cross on underside of base. Cf. Gillam 1976, no. 7, early-mid 3rd century. Fill of boundary ditch 3 (4).
46. Jar, Black-burnished ware. Neck decorated with angled slashes. Cf. Gillam 1976, no. 7. Fill of boundary ditch 3 (4).
47. Jar, Black-burnished ware. Cf. Gillam 1976, nos 11-12, late 3rd-early 4th century. Fill of boundary ditch 3 (4).
48. Jar, Black-burnished ware. Cf. Gillam 1976, no. 10, late 3rd century. Fill of enclosure ditch 106 (107).
49. Smaller jar, Black-burnished ware. Cf. Gillam 1976, no. 12, early 4th century. Fill of boundary ditch 3 (4).
50. Jar, Black-burnished ware. Cf. Manning 1993 fig. 126, 21.5, early-mid 4th century. Fills of ditches 280 & 166 (253, 259).
51. Jar, Black-burnished ware. Cf. Gillam 1976, no. 13, early-mid 4th century. Fill of boundary ditch 16 (17).
52. Jar, Black-burnished ware. Rivet hole on shoulder. Cf. Gillam 1976, nos 13-14, early-mid 4th century. Fill of recut of ditch 166 (167).
53. Bowl, Black-burnished ware with intersecting arc decoration. Cf. Gillam 1976, nos 40-41, mid-late 2nd century. Fill of boundary ditch 16 (28).
54. Bowl, Black-burnished ware with very faint intersecting arc decoration. Cf. Gillam 1976, nos 35-41, mid-late 2nd century. Fill of well 7 (26).
55. Bead and flange bowl, Black-burnished ware with intersecting arc decoration. Cf. Gillam 1976, no. 49, early-mid 4th century. Fill of ditch 166 (168).
56. Bead and flange bowl, Black-burnished ware with intersecting arc decoration. Cf. Gillam 1976, nos 48-49, early-mid 4th century. Fill of pit 254 (257).
57. Plain rim dish with very faint decoration, probably intersecting arcs, Black-burnished ware. Cf. Gillam 1976, no. 74, possibly 3rd century. Fill of well 7 (26).
58. Plain rim dish with intersecting arc decoration, Black-burnished ware. Fill of well 110 (111).
59. Very shallow plain rim dish with intersecting arc decoration, Black-burnished ware. Cf. Gillam 1976, no. 80, mid-late 3rd century. Fill of boundary ditch 3 (4).
60. Plain rim dish with intersecting arc decoration, Black-burnished ware. Cf. Gillam 1976, no. 80, mid-late 3rd century. Fill of boundary ditch 3 (4).

61. Plain rim dish with rather pointed intersecting arc decoration, and also decoration on the underside of the base, Black-burnished ware. Cf. Gillam 1976, no. 81, late 3rd century although decoration is closer to no. 83, mid 4th century. Fill of boundary ditch 16 (28).
62. Plain rim dish with intersecting arc decoration, and also decoration on the underside of the base, Black-burnished ware. Cf. Gillam 1976, no. 79, 3rd-4th century. Fill of boundary ditch 3 (4).
63. Plain rim dish, Black-burnished ware. Possibly of the same date as the 4th-century cooking pot from this context. Fill of recut of ditch 166 (167).
64. Handled beaker imitating Black-burnished ware. Surface worn but possibly originally burnished. Hard, dark grey sandy fabric. 2nd century. Fill of gully 139 (140).
65. Handled beaker with burnished surfaces, probably imitating Black-burnished ware form. Fabric is slightly sandy pink-brown, with dark grey surfaces. Similar in form to Gillam 1976, no. 75, 2nd century. Fill of boundary ditch 3 (4).
66. Jar with burnishing and very faint, apparently very wide, lattice decoration imitating Black-burnished ware. Grey, very sandy abrasive fabric, possibly wheel-thrown. 2nd-3rd century. Fill of well 7 (99).
67. Jar with burnishing and panel of obtuse angle lattice decoration imitating Black-burnished ware. Fabric is pink-brown, slightly sandy, with burnished black surfaces. Similar to Gillam 1976, no. 9, mid-late 3rd century. Fill of boundary ditch 95 (96).
68. Jar, burnished except for panel of wide lattice decoration. Wheel thrown. Slightly sandy mid-grey fabric. Similar to Black-burnished ware jars of mid-late 3rd century. Fills of boundary ditch 16 and modern ditch 51 (28, 30 & 52).
69. Jar in light grey sandy fabric, with faint traces of burnishing on the surface. Possibly influenced by Black-burnished ware. 3rd century. Fill of boundary ditch 9 (67).
70. Flanged bowl, wheel thrown, imitating a 2nd-century Black-burnished ware form. Black, burnished surfaces, but sandy brown fabric with grey core. Second half of 2nd century. Fill of enclosure ditch 153 (154).
71. Flanged bowl, with burnished black surfaces imitating Black-burnished ware. Fabric is pink-brown, slightly sandy. 3rd century. Fill of boundary ditch 3 (4).
72. Flanged dish with wedge-shaped rim and lattice decoration Black-burnished ware imitation. Orange brown sandy fabric with grey surfaces. Possibly 2nd century. Fill of boundary ditch 79 (80).
73. Bead and flange rim dish with intersecting arc decoration imitating Black-burnished ware. Underside of base decorated with swirly loops. Hard grey sandy fabric with brown surfaces. Late 3rd-mid 4th century. Fill of recut of ditch 166 (258).
74. Jar in sandy pale grey fabric. 2nd-3rd century. Fill of modern ditch 51 (52).
75. Jar decorated with cordon below the neck. Fabric is pale grey, soft and vesicular, with some charred material as inclusions. Soil layer 163, Area 2.
76. Everted rim jar in sandy grey fabric with brown core. Late 1st-early 2nd century. Fill of foundation trench 297 for building in Area 3 (89).
77. Malvern dish with external burnishing in very hard dark grey-brown granular fabric . Cf. Peacock 1967, fig. 1, no.16. Unstratified (123).
78. Shallow bead rim dish imitating samian form 18/31. Worn, grey sandy fabric, possibly originally burnished. Late 1st-mid 2nd century. Fill of well 7 (24 & 25).
79. Phallic handle from a patera in smooth light orange fabric with a grey core of the form which in bronze normally has a ram's head (Catherine Johns[6], pers comm.). Examples of pottery ram's head handles were found at Holt (Grimes 1930, 174 and fig. 60 no. 4), although these were cast in two sections whereas this example has been thrown and modelled in one piece. Fill of boundary ditch 3 (4).
80. Pottery mould/stamp impression in red fabric with few inclusions. Possibly a dolphin, although no close parallels have been found. Fill of well 7 (97).
81. The rather worn head and shoulders of a female figure in a smooth orange fabric, perhaps originally ornamenting a jug as at Holt (Grimes 1930, fig. 57, nos 1-3). The figure appears to have been formed by pressing the clay into a mould. Fill of boundary ditch 95 (96).

Glass by Denise Allen[7]

Six fragments of Roman vessel glass were recovered, together with one melon bead and a further four fragments of post-medieval or modern date. Three, or possibly four, of the Roman fragments are from common 1st-2nd century bottles, while two joining rim fragments from a colourless beaker or jar show that other vessel forms were present, but they cannot be identified with certainty. None of the fragments are illustrated.

1. Prismatic bottle fragment in blue-green glass with large impurity. 1st-2nd century. Fill of well 7 (24).

[6] British Museum

[7] 8 Windsor Road, Andover, Hampshire

2. Bottle handle fragment in blue-green glass. 1st-2nd century. Fill of ditch 9 (10).
3. Prismatic bottle base fragment in blue-green glass. 1st-2nd century. Fill of corn drier stokehole (100).
4. Indeterminate fragment of blue-green bottle glass. Soil layer 78, Area 2.
5. Neck fragment of a bottle, jug or flask in blue-green glass. Possibly 1st-2nd century. Topsoil (277), Area 3.
6. Two joining rim fragments of a beaker or jar in colourless glass. Rim outflared and folded downwards and inwards, diam. *c.* 6cms. 1st-3rd century. Fill of ditch 9 (10).
7. Melon bead fragment in turquoise glass paste. 1st-early 2nd century. Topsoil (277), Area 3.

Bronze by Janet Webster[8] (fig. 15)

1. A small plain brooch in the Polden Hill with Dolphin Profile series. The type is defined and discussed in the Usk report (Manning, Price and Webster 1995, 74 in connection with nos 34-6). The Wrexham brooch has the characteristic humped head and straight profile of the type. Its surface is badly abraded but the semi-circular mouldings to either side of the head of the bow are evident and the bow is otherwise plain. It tapers, but the foot and part of the catchplate are lost. The short, almost semi-cylindrical side-wings had pierced terminals for the axis bar of the spring which was also secured by means of a rearward hook at the head to hold the external chord. From the rear the head of the bow, between the side-wings, is deeply hollowed.

   The type as a whole has a widespread distribution in southern and midland Britain with characteristic regional variants, of which this is one, evidenced in Wales and the west Midlands. The brooch is closely similar to an example from Caerwent, now in Newport Museum (Acc. No. D2.164). A brooch from the extra-mural settlement in Caerleon may also be cited (Boon forthcoming no.24). Two further examples from the same location are very similar but perhaps slightly more slender at the head (Boon forthcoming nos 23, 25) as is an example from Whitton (Jarrett and Wrathmell 1981, 169, no. 11, fig. 69).

   The type is not closely dated, occurring in Flavian deposits at Caerleon (Boon forthcoming, no. 25) and continuing in use in the early 2nd century. Find 1098, fill of ditch 85 (86).

2. Trumpet brooch in poor condition, damaged and badly abraded, but originally a fine example with enamelled ornament. The brooch had a spring mechanism for the pin: part of the pierced lug to support the axis bar of the spring and secure the internal chord remains at the rear of the head. The bow is not of a continuous curve in profile but is heavily arched at the head and thereafter straight. The upper bow carries evidence of enamel ornament but the design scheme is not wholly recoverable. There appear to be two large circular motifs, perhaps with subsidiary scrolls, defined by bronze walls and presumably inlaid with enamel of a colour not now discernible, each set in a field of dark blue enamel to either side of the median line of the upper bow. Further decorative detail is lost.

   The waist mouldings are carried round the back of the bow where they are less pronounced. The button appears to have been clasped between acanthus mouldings although these are largely worn away. The leg had a pronounced central rib, perhaps originally flanked by raised triangles of bronze to give the effect of a row of lozenges down the centre of the leg, with hollowing, perhaps for enamel insets, to either side. The brooch appears to have had a large foot knob, recurving to the front, but it is lost and the mouldings which link it to the lower leg are badly abraded. There is a narrow, elongated catchplate with the return lost.

   Trumpet brooches are thought to have evolved by the middle of the 1st century AD (Boon and Savory 1975, 50-7; Hattatt 1985, 105; Manning, Price and Webster 1995, 85) and continued in use until late in the 2nd century.

   The enamel decoration of this brooch, in so far as it can be discerned, seems to be derived from the oxhead motif as has been suggested for a series of non-inlaid relief scroll ornament trumpet brooches (Wheeler and Wheeler 1932, 76-7, no. 17, fig. 12) and for the opposed-crescent enamelled trumpet series (Hattatt 1987,125). If anything, the decoration of the Wrexham brooch seems closer to the non-inlaid relief scroll series (cf. an example from Whitton, Jarrett and Wrathmell 1981, 174, no. 21, fig. 70) than to the opposed crescent enamelled types (cf. an example from Usk, Manning, Price and Webster 1995, 86-7, no. 56, fig. 26). Unstratified, Area 2.

3. The brooch would seem to be a curious variant within the distinctive series variously known as Hull's Wroxeter Type, his Type 151 (Hull 1961, 46-47, fig. 3b), and Snape's Severn Type (Snape 1987,

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AA.5 XV, 309-312; 1993, 14, 2.4), with further discussion by Hattatt (1985, 111, no. 422, fig. 46; 1987, 145-7; 1989, 96-7).

The type is characterised by the U-shaped plate at the head, often equipped with a cast head-loop, by the lengthwise panel of enamelled ornament running down the upper bow and by the ornament at the waist, which may take various forms. In profile the brooches either have a smooth, pronounced curve throughout, or are P-shaped in profile with a marked recurve to the lower leg. The type is generally sprung with the spring held between twin lugs to the rear of the head or supported on a single central rearward lug, but hinged examples with the pivot bar housed in a cylindrical moulding at the rear of the head, also occur, particularly among Snape's northern sub-group. Fine examples of the type may be cited from Caerleon (Evans and Metcalf 1992, 109-110, no. 8) and Caerwent (Snape 1987, fig. 1c; Webster Newport Museum brooch catalogue, in prep.).

The Wrexham brooch has a narrow U-shaped plate at the head, no wider than the upper bow. A transverse groove embellished with a wavy line rib crosses the top of the U-shaped plate close to its upper edge. Beyond, a narrower extension carries a similar band of ornament and the stumps of the cast head-loop are visible above. To the sides of the U-shaped plate, twin pierced lugs project to support the iron axis bar of the tiny bronze spring with internal chord which is housed in a recess in the rear of the plate. In profile a pair of incised lines defines two narrow margins on the side edges of the U-shaped plate where it meets the bow.

The upper bow has a central rib running from the head to the pronounced knob at the waist. The rib is defined by incised lines and is flanked on each side by a narrow, similarly defined margin. To the outer side of each of these margins is a series of single deeply-indented scrolls which decorate the sides of the bow, running towards the foot. There is some trace of a median rib down the lower part of the leg. The indented scrolls have traces of a black inlay, the identity of which has not been established.

There is an associated fragment of bronze comprising a knob, similar to but smaller than that at the waist of the brooch, with attached mouldings. This fragment may represent the foot knob of the brooch, but if so it is not now possible to see how it joined the damaged leg. It is possible that it may be a fragment of the waist of another brooch, perhaps making an almost matching pair, especially given the presence, too, of a fragmentary piece of catchplate which does not appear to have belonged to the main brooch.

There can be little doubt from the overall form of the piece that the brooch belongs to the Wroxeter/Severn series. The P-shaped profile with a recurved foot is an established variation within the series cf. Snape's Vindolanda type (Snape 1987, fig. 1b) and Hattatt's example from Eye, Suffolk (Hattatt 1989, 96-7, no. 1538, fig. 47). The U-shaped plate at the head and its transverse ornament are typical, as is the spring arrangement, and several brooches within the series feature the same sort of knob ornament at the waist cf. Wilderspool (Thompson 1965, 82-3, no. 3, fig. 20) and Corbridge (Snape 1993, 35, no. 103, fig. 5).

The Wrexham brooch diverges from the main series in that it lacks the flat faced panel to the upper bow normally decorated with lengthwise cells of enamel inlay and has instead scroll ornament which runs down each side of the bow. Scroll ornament, albeit in a different form, also replaces the lengthwise panel of ornament on the upper panel of a large, silvered, somewhat atypical Wroxeter/Severn brooch from the Antonine Wall (Snape 1987, 311; Robertson 1970, 218, fig. 10 no. 7 and p. 233) although even here the front face of the upper bow is a flat panel, unlike the Wrexham brooch, the upper bow of which is of peaked ovoid cross section.

When Hull defined the type in his discussion of the Hucclecote brooch, he suggested, on the basis of the evidence then available to him, manufacture in the Wroxeter area (Hull 1961, 46-7, fig. 3b, where Hull refers inter alia to 4 examples from Wroxeter). More recently, Snape has identified a stylistically cohesive sub-group as the product of a small northern workshop, perhaps based on Corbridge, producing mainly for the northern market (Snape 1987; 1993, 35, no. 10.3). Recent finds from Wales and the Marches would seem to confirm the manufacture of the type in the Severn Valley area although in this corridor a wider range of stylistic variation occurs and a number of examples could be confused with, or could indeed be the products of Snape's northern factory. A brooch from Llys Faen, Clwyd, for example (Manley 1984, 105-6), is apparently identical to Snape's Vindolanda example and that from Wilderspool is identified by Snape as belonging to her northern group.

There seems little doubt that the Wroxeter type was the product of small-scale manufacture at a number of different centres all working to the same criteria and on the whole producing a very similar product. The Wrexham brooch is therefore even more interesting for its singularly atypical treatment. A late 1st century AD date of manufacture was suggested for the Caerleon Wroxeter brooch, with the type continuing into the 2nd century. Find 2017, fill of boundary ditch 79 (273).

4. Small, flat, tapered fragment of bronze, pierced at the end for suspension, with a narrow margin down each side, defined by an incised groove, the panel between being lightly faceted. Perhaps a toilet implement. Find 1025, fill of pit 137 (138).

Fragments of a brooch spring were also recovered, comprising part of the spring coil with the upper part of the pin and part of the chord. There are traces of iron within the spring coils, perhaps the remains of an axis bar to hold the pin mechanism in place either through securing by means of a central lug at the back of the brooch or on pierced disc terminals to side-wings or arms. Such spring arrangements were current from the mid-1st century into the 2nd century, but a later date cannot be ruled out as they occur for example on Knee and P-shaped types too. Find 1013, fill of boundary ditch 79 (81). Not illustrated.

Lead (fig. 15)

5. Lead weight or possible spindlewhorl, unstratified.

Ironwork (fig. 16) by W.H. Manning[9]

1. Adze-hammer, a common carpenter's tool. Rounded eye with short collar below. The hammerhead is rounded, while the adze-blade is turned through a sharp angle with straight sides which splay out to give a wide edge. Overall length 180mm. Similar to Manning's type B16 (Manning 1985, 18 and pl. 9). Find 1017, fill of pit 56 (103).
2. Possible hoop or reinforcement ring. The triangular cross-section might suggest that it came from a hub lining (cf. Manning 1985, 72, pl. 30 H35ff), but its diameter would be unusually large for such a fitting. One end intact, originally *c.* 130mm diam., up to 21mm wide, with tapering cross-section, max. thickness 4mm. Find 1048, fill of gully 112 (113).
3. Probably part of a knife, slightly tapering. Four fragments, three adjoining. Width max. 14mm. Unstratified (122).
4. Two fragment of a nailed binding. Find 1016, fill of pit 56 (103).
5. End of a binding or hinge with a nail hole. Length 30mm, width 26mm, thickness 2mm. Fill of ditch 166 (259).
6. Probably the flattened head of a double-spiked loop. Find 1076, fill of enclosure ditch 153 (154).
7. Flat sheet with well formed curved edge. Find 1012, fill of boundary ditch 16 (28).
8. Modelling tool? Similar to Manning's type 3 (Manning 1985, 31-2, and pl. 13). One blade surviving with tapering section, sides splaying slightly to blade tip. Other blade and handle missing. Max. length 61mm. Find 1026, unstratified (122).
9. Strip. Two fragments of a flat iron strip or band. Width 16mm, thickness 2mm. Fill of enclosure ditch 106 (107).
10. Stylus? Fragment of circular sectioned rod up to 4mm in diam., with three inlaid decorative bands. Find 1082, fill of well 7 (7).
11. Stylus, Manning's type 2 (Manning 1985, 85, pl. 35). Tip missing, simple flattened eraser and circular sectioned stem thickening to slight shoulder. Max. length 98mm. Find 1002, fill of boundary ditch 9 (10).

Worked Stone petrographic identification by David A. Jenkins[10] (fig. 17)

The fragments described below are all composed of a massive medium grain size Triassic sandstone with occasional small flakes of mica and feldspar.

1. Quern. Possibly the lower stone of a 'Roman type' rotary quern (Crawford and Roder 1955) with the upper surface mostly fractured and missing. Diam. *c.* 56cm, thickness up to 7.2cm, central hole *c.* 6cm diam. Fill of ditch 3 (4).
2. Quern. Two joining fragments, possibly from the lower stone of a 'Roman type' rotary quern (Crawford and Roder 1955), worn on the lower side. Diameter *c.* 32cm, thickness up to 4.7cm. Fill of posthole 133 (134).
3. Quern. Lower stone of a quern, upper surface worn and polished, central drilled pivot 2.7cm diam. and 2.1cm deep. Up to 30cm across and 4cm thick. Fill of posthole 133 (134).

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4. Architectural fragment. Linear incisions on one surface may be tool marks, or possibly indicate that the stone was used for sharpening implements. 29 x 23 x 11.5cm. Fill of boundary ditch 3 (4).

Roman Brick, Tile and Daub
A total of 131 fragments (11kg) of brick, 170 fragments (14.7kg) of tile and 462 fragments (7.3kg) of daub were recovered from the excavations. No diagnostic fragments were identified in the brick assemblage, while the tiles included fragments of box flue (5 fragments), tegula (15 fragments), and imbrex (9 fragments), including two complete tiles from ditch 166. The distribution of the finds shows a concentration within the fills of ditch 95 (which produced 24% of the assemblage by weight) and ditch 166 (which produced 25% by weight). However, the general distribution offers no useful information other than indicating the presence of a structure or structures within the immediate area.

Metallurgical residues
A total of 119 fragments (1.4kg) of various slags were recovered from the excavations, including some fragments of smithing hearth. However, the contexts and distribution were not of any apparent significance and the assemblage was not studied in any detail.

Medieval and Post-medieval Pottery
A single fragment from a jar of possible medieval date was recovered from the top of Roman boundary ditch 9 (10) in Area 1. A total of 48 sherds (733g) of post-medieval pottery was recovered from topsoil and post-medieval contexts. This small assemblage consisted predominantly of Buckley fine and coarse wares together with other Coal Measures redwares and local red earthenwares. Single sherds of Mottled Ware, Stoneware and possible Cistercian Ware were also recovered.

Charred Plant Remains by Astrid E. Caseldine and C.J. Barrow[11]
Excavations at Plas Coch, Wrexham, revealed part of a Romano-British settlement. The absence of any military evidence and presence of a corn drier and boundary ditches suggested a civilian settlement largely dependent on agriculture. Samples were taken for plant macrofossil analysis with the aim of recovering information about the nature of any agricultural and crop processing activity associated with the settlement. Any evidence gained would also contribute to a wider understanding of agriculture in Wales during the Roman period.

Sampling, processing and analysis
During the first phase of excavation samples were taken by Clwyd-Powys Archaeological Trust and Wrexham Museum Service from a range of features, including ditches, pits, a well and a corn drier. The samples were processed by flotation using 1mm and 250 micron sieves. The samples were sorted and identified in the Archaeology Department, University of Wales, Lampeter, using Wild M5 microscopes. Identification was by comparison with modern reference material and standard reference texts including Schoch *et al.* (1988) and Berggren (1969, 1981). The results are presented in Table 3. Nomenclature for plants other than cereals follows Stace (1991). Further environmental samples were taken by Gifford and Partners during a second phase of excavation, an assessment of which was carried out by Elizabeth Pearson (1997).

Cereal identification
Many of the grains were too poorly preserved to be determinable to species level and were therefore assigned either to an indeterminate group or a broad category such as *Triticum* sp. or *T. dicoccum*/*T. spelta*. Of the grain that was identifiable further most had the flat ventral surface typical of spelt (*T. spelta*), whilst a few grains had a dorsal ridge suggesting emmer (*T. dicoccum*), and a few had the more rounded appearance of bread wheat (*T. aestivum s. l.*). The glume width of the majority of the better preserved glume bases was wide and the glumes had the prominent nerves and curved appearance in transverse section of spelt. A few glume bases with a more prominent dorsal keel and weaker nerves resembled those of emmer The majority of the rachis fragments had longitudinal lines near the outer edge of the convex face, which is typical of hexaploid wheats such as spelt. As with the grain, a number of chaff remains were placed in intermediate or broader categories.

The barley (*Hordeum sativum*) either had the remains of lemmas and/or the angular appearance of hulled barley. The presence of twisted as well as straight grain indicated 6-row barley. This was confirmed by the presence of 6-row rachis but the presence of 2-row rachis demonstrated that 2-row barley was also present. Some grains had the typical 'bullet shape' of rye (*Secale cereale*). Oat (*Avena*) grains were present but the absence of identifiable floret bases meant that it was uncertain whether it was cultivated or wild.

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Results

Three samples (1033 from context 11 in pit 191; 1014 from context 94 in pit 41; and 1001 from context 30 in boundary ditch 16) failed to produce any charred plant remains other than wood charcoal, which all the samples contained. These samples are not included in Table 1. The assemblage from the site as a whole was dominated by wheat, mainly spelt wheat with small amounts of emmer and bread/club wheat. Small quantities of hulled barley, both 2-row and 6-row, rye and oats, either wild or cultivated, occurred occasionally. Weed seeds included larger seeds such as brome (*Bromus*) and smaller seeds such as docks (*Rumex*). Other remains included stems and shoots of heather (*Calluna vulgaris*), rhizomes of grasses (Poaceae) and bracken (*Pteridium aquilinum*) leaves.

Area 1

The richest sample was from the stokehole of the corn drier. It was dominated by wheat chaff, largely glume bases and rachis fragments, with smaller amounts of grain and weed seeds. Wheat, barley, rye and oat were all represented. The wheat was largely spelt although some emmer was possibly present. Some of the grain had germinated, and detached sprouted embryos were frequent. A possible fragment of broad bean (*Vicia faba*) was present. Heather remains also occurred. The kiln contained relatively little apart from wheat chaff, heather and rhizomes. The ditches contained a similar range of material, although in smaller quantities to that from the stokehole. Chaff, namely wheat glume bases, dominated. Wheat, barley and oat but no rye were recorded. Weed seeds were comparatively scarce, apart from docks which were quite frequent in one sample (1005). Brome occurred in small quantities in several samples. Heather remains and rhizomes of grasses were present in a number of samples. The well samples also produced a similar range of cereal material but with smaller amounts of chaff. One of the samples (1015) contained a small fragment which was possibly coriander (*Coriandrum sativum*). Weed seeds were scarce apart from in sample 1034 where docks were again frequent. Heather remains were quite common in a number of the samples. The assemblage from pit 36 was similar to that from the well and ditches although cereal, largely indeterminate, predominated. The final sample from Area 1, pit 152 was dominated by grain, mainly wheat, with very few chaff fragments or weed seeds. As in the stokehole sample, a number of the grains had germinated.

Area 2

The samples from the two pits contained very little apart from a quantity of hazelnut fragments in 282. Wheat was present but the other grains were indeterminable and no chaff was recovered. A seed of rowan (*Sorbus aucuparia*) occurred in 285. The only other sample from this area was from boundary ditch 79. The plant remains were relatively scarce but hazelnut fragments were quite frequent as were remains of heather. An emmer/spelt glume base and spelt grain were recorded.

Discussion

Crop processing activity

The earliest environmental evidence from the site comes from two small pits, 282 and 285, in Area 2 which yielded pottery suggesting a Bronze Age date for the pits. Grain and weed seeds were few and the grain was not referable beyond *Triticum* sp. (wheat), preventing any detailed discussion of agriculture or crop processing activity during the Bronze Age. Both pits contained hazelnut (*Corylus avellana*) fragments which were relatively frequent in 282. The occurrence of hazelnut fragments and a rowan seed is in keeping with evidence from other sites in Wales and the rest of Britain for the use of wild resources during the Bronze Age (Caseldine 1990a; Greig 1991), although it is possible that the plant remains from these pits are intrusive and later in date. The only other sample from this area was from the earlier phase of a presumed field boundary, boundary ditch 79. Grain, chaff and weed seeds were again scarce and hazelnut fragments frequent. However a cereal grain and a glume base were identifiable to *Triticum spelta* (spelt wheat), which is consistent with the finds of Antonine samian and a 3rd century Antonine jar and the suggested Roman date for the ditch. Similarly, the occurrence of heather remains is in keeping with the evidence from the Roman ditches in Area 1. The only weed present was wild radish (*Raphanus raphanistrum*) which is a weed of cultivation. The relatively high number of hazelnut fragments in the ditch may reflect contemporary activity or be residual.

The remaining samples are all from Area 1 and suggest a largely similar picture, essentially the by-products from crop processing, basically fine-sieving residues which were used as fuel. The assemblage from the corn drier is considered first as it provides some comparative evidence, suggesting that the origin of at least some of the material recovered from the well, pits and ditches may have been the corn drier.

Roman corn driers have been the subject of much investigation and the evidence has been reviewed by Veen (1989). From the composition of the charred plant assemblage found in them it is possible to get some indication of their use. At Plas Coch the evidence from the corn-drying kiln is too limited to draw any

conclusions about the function of the drier, particularly as the assemblage is probably the remnants of fuel originally from the stokehole. However the large assemblage from the stokehole does give some indication of the possible use, although the assemblage, as well as containing material possibly derived from the drying floor, almost certainly contains material which was used as fuel, which complicates the interpretation. The assemblage contains a large quantity of chaff, notably wheat glume bases and rachis, and this along with at least some of the weed seeds probably represents sievings from crop processing used as fuel. Further evidence that the assemblage includes material used as fuel is the presence of wood charcoal (either from the burning of wood or charcoal) and heather remains. The latter may have originated from the burning of peat rather than heather *per se*. There is documentary evidence for the use of chaff and straw together with wood and/or peat as fuel, especially for malting (Hillman 1982). Some of the seeds could also be derived from the peat and the hazelnuts could have been brought in with wood used as fuel.

Whilst the chaff and weed seeds may reflect the by-products of crop-processing used as fuel, the presence of grain may indicate the use or uses made of the drier, although it is possible, for reasons discussed below, that the grain could have been deliberately used as fuel and not be related to its function. It is unlikely that the assemblage was derived from the accidental charring of whole ears in the drying chamber as this would lead to the presence of carbonised glume bases in approximately equal quantities to spelt grains, half the number of rachis internodes, straw fragments and large numbers of weed seeds. In this case the glume bases outnumber the grains. This cannot be as a result of differential preservation as grain is more likely to survive than glume bases (Boardman and Jones 1990). It could be argued that the assemblage represents accidental charring of whole ears with additional chaff used as fuel, but a larger quantity of weed seeds would also be expected, depending on agricultural practices (see below), as well as more evidence of straw. It is more likely it could be from the parching of fully ripe spikelets prior to pounding to release the grain from the chaff. This would produce an assemblage without the larger straw nodes and large weed heads. Equally, in areas with wet summers, a similar assemblage would be produced by drying grain stored as semi-clean spikelets. The drying of fully processed grain prior to storage or milling would result in grains, small amounts of glume bases and weed seeds the same size as the grain, or grain without any chaff and weed seeds. It is therefore possible that part of the assemblage is derived from any one of these activities along with additional chaff from fine sieving residues. However, the presence of a small quantity of sprouted grain and relatively large amount of detached sprouted embryos suggests that the corn drier was used for drying to prevent spoilage prior to storage. Some brome seeds and possibly barley were also sprouted. Alternatively, the presence of glume bases, large weed seeds, sprouted grain and detached coleoptiles could be from the roasting of germinated grain to produce malt. However, if the corn drier was used for this rather than drying then it is likely that most of the grain would be germinated, as for example in the case of the spelt found in corn-driers at Catsgore, Somerset (Hillman 1982). In this instance this does not appear to be the case, although it is difficult to be certain about much of the very poorly preserved grain. At Tiddington, Warwickshire, Moffett (1986) has argued that, although the percentage of sprouted grain was relatively small, the presence of far more detached coleoptiles than grain in certain samples may indicate malting. At Dan-y-Graig in south Wales, sprouted grain was recorded but not in sufficient quantities to suggest malting and it was concluded that the most likely use of the structure was for drying (Caseldine 1990b). On balance, it seems most likely that the corn drier at Plas Coch was also used for drying clean grain, or grain within the spikelet, prior to storage, although the possibility of malting cannot be ruled out.

The presence of emmer, bread wheat, barley, rye and possible broad bean in the corn drier sample probably represents contaminants either from the field, whilst processing, or from an earlier use of the drier.

The results from the ditches are similar to those from the corn drier. Generally chaff predominates with smaller amounts of grain and weed seeds. The weed seeds and chaff are clearly the sievings from crop processing used as fuel, although this material is frequently used as animal fodder. The presence of heather again supports the former interpretation. It is possible that the remains represent material cleared out from the stokehole, but they could equally well be from hearth 124 or other fires or corn driers at the settlement. Although there is some variation in the frequency and composition of remains in the samples from well 7, in most of the samples cereal, chaff and weed seeds were relatively scarce apart from samples 1015 and 1034 where weed seeds were more frequent. Heather remains were abundant in one or two samples. Basically the samples consist of waste material used as fuel and are likely to originate from similar sources as the material in the ditches. There was no evidence for any waterlogged remains such as recorded, for example, from wells at Prestatyn (Jones 1989) or Caerleon (Caseldine and Busby 1993). Similar results were recorded by Pearson (1997) who also examined two contexts from well 7 and concluded the remains could represent fuel.

The final two samples from Area 1 are from pits. Pit 36 contained more cereal than chaff although the former was largely indeterminate. Seeds were relatively frequent and heather remains abundant. Again the sample is interpreted as crop processing residue used as fuel, with the cereal the result of either accidental

or deliberate charring. The last sample, from pit 152, differs from all the others from the site in that it is dominated by grain with few chaff remains and only weed seeds a similar size to the grain. This is clearly processed material prepared for storage or consumption. Although not all the grain has sprouted a good proportion *c.* 25-30% has, suggesting that this material had been discarded and thrown onto a fire because it had started to spoil. Alternatively, it could be from a crop that accidentally caught fire while being dried to prevent further spoilage. The sample is from a context (pit 152) that underlies and surrounds hearth 124. It presumably pre-dates the hearth although it is possible that that the charred material could have been raked out from the hearth and trodden into the surrounding context.

Palaeoeconomy, crop husbandry and the environment

Corn driers would have been used both at settlements producing the crop and bringing it in from elsewhere. The presence of glume bases and rachis fragments provide no clue as the grain could have been transported in spikelet form. The role of the settlement is therefore difficult to determine, although as suggested by Veen (1992) the division of settlement sites into only two types, consumer and producer, is too simplistic. However, the evidence suggests that arable farming played a significant role in the local economy, although whether this was purely at a subsistence level or whether a surplus was being produced is not certain. The investigation of more sites in the area might lead to a more precise interpretation of the agricultural significance of different types of site and their economic importance.

Spelt was clearly grown in the area and, as already mentioned, the other cereals may simply be present as contaminants of spelt crops, but it is possible that they are under-represented in the fossil record and that, for example, barley was more widely grown in the area. A possible fragment of *Vicia faba* suggests broad beans may have been grown locally and a possible fragment of coriander (*Coriandrum sativum*) suggests the use of flavourings and a more varied diet at the settlement.

The generally low incidence of small weed seeds could result from cleaning the spikelets with a coarse sieve/riddle, reaping high on the straw, thorough weeding, or a combination of any of these practices. Weeds of cultivation include brome, corn cockle (*Agrostemma githago*), scentless mayweed (*Tripleurospermum inodorum*), redshank (*Persicaria maculosa*), fat hen (*Chenopodium album*) and climbers such as black bindweed (*Fallopia convovulus*) and cleavers (*Galium aparine*), the last considered indicative of autumn sowing (Hillman 1981). A number of these weeds could also represent waste or disturbed ground. Docks are the most frequent weed seed present and could reflect grassland as well as cultivation or waste ground. Further evidence for grassland is the presence of small grasses (Poaceae) and ribwort plantain (*Plantago lanceolata*). Fairy flax (*Linum catharticum*) and bedstraws (*Galium* sp.) occur in dry grassland and in heathland and could have been brought in with heather or peat. On other sites it has been suggested (Hillman 1981; Veen 1992) that heath grass (*Danthonia decumbens*) may have been a weed of cultivation, but its presence here may be from the use of peat or heather. Wetter environments are suggested by the presence of sedges and rushes in the samples which could indicate the cultivation of, or cultivation close to, damp ground, but again the presence of heather in the samples could mean they were brought in with peat.

Comparison with other sites

Spelt is commonly recorded from Welsh sites of Roman date but at some sites bread wheat dominates (see Caseldine 1990a; 1991): for example, spelt dominated in samples from Caersws (Caseldine 1993; 1996) and Prestatyn (Jones 1989) but bread wheat dominated the assemblage from a Roman-British enclosure at Collfryn (Jones and Milles 1989). Elsewhere in Britain spelt also tends to dominate although bread wheat is frequent on a few sites (Greig 1991). Barley is found on most sites and was probably grown as a crop, but the importance of rye and oats is less certain.

Conclusions

Most of the plant remains represent the sievings from crop processing. The corn drier was probably used to dry grain to prevent spoilage, although the possibility of malting cannot be totally ruled out. One sample was clearly fully processed ready for storage or consumption but had been discarded because of sprouting. Spelt appears to have been the main crop grown in the area and the results are consistent with those from other parts of Wales and Britain.

Table 3 Charred plant remains from Plas Coch, Wrexham.

	AREA 1								
Feature	**Encl. Ditch**	**Bdry. Ditch**	**Bdry. Ditch**	**Bdry. Ditch**	**Bdry. Ditch**	**Bdry. Ditch**	**Bdry. Ditch**	**Bdry. Ditch**	**Gully**
	153	**58**	**58**	**16**	**95**	**9**	**9**	**3**	**139**
Context	**154**	**59**	**60**	**33**	**148**	**62**	**62**	**151**	**140**
Sample	**1032**	**1024**	**1004**	**1040**	**1027**	**1003**	**1005**	**1028**	**1029**
Taxa									
Cereals									
Triticum dicoccum - glume base (emmer)	-	-	-	-	-	-	-	-	-
T. cf. *dicoccum* - grain	-	-	-	-	-	-	-	-	-
T. cf. *dicoccum* - spikelet fork	-	-	-	-	-	-	-	-	-
T. cf. *dicoccum* - glume base	-	-	-	-	-	-	1	-	-
Triticum dicoccum/spelta - grain (emmer/spelt)	-	-	-	-	-	-	-	-	-
T. dicoccum/spelta - grain (sprouted)	-	-	-	-	-	-	-	-	-
T. dicoccum/spelta - grain (cf. sprouted)	-	-	-	-	-	-	-	-	-
T. dicoccum/spelta - spikelet fork	-	2	2	-	-	2	-	-	-
T. dicoccum/spelta - glume base	7	-	-	3	-	15	20	1	105
Triticum spelta - spikelet (spelt)	-	-	-	-	-	-	-	-	-
T. spelta - grain	-	5	-	-	-	-	2	-	6
T. spelta - grain (sprouted)	-	-	-	-	-	-	-	-	-
T. spelta - grain (sprouted - collapsed)	-	1	-	-	-	3	-	-	3
T. spelta - rachis	6	3	-	2	2	18	9	-	21
T. spelta - spikelet fork	2	-	-	-	-	5	-	-	4
T. spelta - glume base	15	42	15	-	6	19	11	1	145
T. cf. *spelta* - grain	2	-	1	-	1	-	-	-	3
T. cf. *spelta* - grain (sprouted - collapsed)	-	-	-	-	-	-	-	-	-
T. cf. *spelta* - rachis	-	-	3	-	-	4	2	-	5
T. cf. *spelta* - spikelet fork	-	-	-	-	-	4	1	-	1
T. cf. *spelta* - glume base	3	4	1	-	-	15	11	-	2
Triticum spelta/aestivum - grain (spelt/bread wheat)	-	1	-	-	-	-	-	-	2
Triticum aestivum s. l. - grain (bread/club wheat)	-	-	-	-	-	-	-	-	-
T. cf. *aestivum* s. l. - grain	-	-	-	-	-	-	-	-	-
Triticum sp. - grain	1	4	-	-	-	11	-	-	14
Triticum sp. - grain (sprouted)	-	-	-	-	-	-	-	-	-
Triticum sp. - grain (sprouted - collapsed)	-	-	-	-	-	1	-	-	3
Triticum sp. - rachis	-	2	-	-	-	2	-	-	-
Triticum sp. - spikelet fork	-	-	-	-	-	-	-	-	13
Triticum sp. - glume base	4	14	1	3	-	21	-	-	4
Triticum/Secale - grain (wheat/rye)	-	-	-	-	-	-	-	-	-
Secale cereale - grain (rye)	-	-	-	-	-	-	-	-	-
cf. *Secale cereale* - grain	-	-	-	-	-	-	-	-	-
Triticum/Hordeum - grain (wheat/barley)	-	-	1	-	-	-	-	-	-
Hordeum sativum - straight grain (hulled barley)	-	-	-	-	-	-	-	-	-
Hordeum sativum - twisted grain	-	-	-	-	-	-	-	-	2
Hordeum sativum - indet. grain	1	1	-	1	-	-	1	-	1

Hordeum sativum - indet. grain (sprouted - collapsed)	-	-	-	-	-	-	-	-	-
Hordeum sativum - detached embryo	-	-	-	-	-	-	-	-	-
Hordeum sativum 6-row - rachis	9	-	1	1	1	1	5	-	22
Hordeum sativum 2-row - rachis	1	-	-	-	-	-	-	-	7
Hordeum sativum indet. rachis	-	-	-	-	-	-	2	-	-
Hordeum/secale - rachis (barley/rye)	-	-	-	-	-	-	-	-	-
Avena sp. - grain (oats)	-	2	-	-	-	3	2	-	-
Avena sp. - grain (sprouted)	-	-	-	-	-	-	-	-	-
Avena sp. - floret base	-	-	-	-	-	-	1	-	-
Avena sp. - awn frag	-	-	-	-	-	1	2	-	-
cf. *Avena* sp. - grain (with lemma)	-	-	-	-	-	-	-	-	-
cf. *Avena* sp. - grain	1	-	-	-	-	-	3	-	-
Avena /Bromus (oat/bromes)	-	-	-	-	-	-	-	-	-
Avena/Poaceae (oat/large grass)	1	-	-	-	2	-	-	12	2
Cerealia indet.	14	40	3	6	-	31	21	-	61
Cerealia indet. (sprouted - collapsed)	-	-	-	-	-	-	-	-	-
Cerealia sp. - detached embryo (sprouted)	-	-	-	-	-	-	-	-	-
Cerealia sp. - detached embryo (un-sprouted)	-	-	-	-	-	-	1	-	1
Cerealia/Poaceae (cereal/large grass)	-	-	-	-	-	-	-	-	1
Cerealia/Poaceae - node	-	-	-	-	-	-	2	-	-
Other plant remains									
Ranunculus repens type (creeping buttercup)	-	-	-	-	-	-	1	-	-
Ranunculus sp. (buttercup)	-	-	-	-	-	1	-	-	-
Corylus avellana L. (hazel)	-	5	-	-	1	-	4	-	1
Chenopodium album L. (fat-hen)	-	-	-	-	-	-	-	-	-
Chenopodium sp. (goosefoots)	-	-	-	-	-	-	1	-	-
Chenopodium/Atriplex	-	-	-	-	-	-	-	-	-
Atriplex sp. (oraches)	1	-	-	-	-	-	-	-	-
Stellaria sp. (stitchworts)	-	-	-	-	-	-	-	-	-
Agrostemma githago L. (corncockle)	-	-	-	-	-	-	1	-	-
cf. *Agrostemma githago* L.	-	-	-	-	-	-	-	-	-
Caryophyllaceae sp. (pink family)	-	-	-	-	-	2	-	-	-
Persicaria maculosa Gray (redshanks)	1	1	-	-	-	-	-	-	-
Persicaria lapathifolium (L.) Gray (pale persicaria)	-	-	-	-	-	-	-	-	-
Polygonum aviculare L. (knotgrass)	-	-	-	-	-	-	-	-	-
Fallopia convolvulus (L.) A. Love (black bindweed)	-	-	-	-	-	-	-	-	-
Rumex acetosella L. (sheep's sorrel)	-	1	-	-	-	1	-	-	-

Rumex sp. (docks)	-	1	-	-	-	-	79	-	-
Viola sp. (violets)	-	-	-	-	-	-	-	-	-
Raphanus raphanistrum L. (wild radish)	-	-	-	-	-	-	1	-	-
Calluna vulgaris (L.) Hull flower heads (heather)	7	-	-	-	-	-	-	-	4
Calluna vulgaris (L.) Hull shoot frags	-	-	-	-	-	-	-	-	1
Calluna vulgaris (L.) Hull stem/root frags	30	90	2	-	-	21	-	-	79
Rubus sp. (brambles)	-	-	-	-	-	-	-	-	-
cf. *Rubus sp.*	1	-	-	-	-	-	-	-	-
Potentilla erecta (L.) Raeusch (tormentil)	-	-	-	1	-	-	-	-	4
Potentilla sp.	-	-	-	-	-	-	-	-	-
Aphanes arvensis L. (parsley piert)	-	-	-	-	-	-	-	-	-
cf. *Aphanes arvensis* L.	-	-	-	-	-	-	-	-	-
Sorbus aucuparia L. (rowan)	-	-	-	-	-	-	-	-	-
cf. *Vicia faba* L. (broad bean)	-	-	-	-	-	-	-	-	-
Vicia sp. (vetches)	-	-	-	-	-	-	-	-	-
Medicago lupulina L. (black medick)	-	-	-	-	-	-	-	-	-
Trifolium pratense L. (red clover)	-	-	-	-	-	-	-	-	-
Trifolium sp. (clovers)	-	-	-	-	-	1	-	-	-
Linum cartharticum L. (fairy flax)	-	-	-	-	-	-	-	-	-
cf. *Coriandrum sativum* L. (coriander)	-	-	-	-	-	-	-	-	-
Aethusa cynapium L. (fool's parsley)	-	-	-	-	-	-	-	-	-
Apium graveolens L. (wild celery)	-	-	-	-	-	-	-	-	-
Apium cf. *graveolens*	-	-	-	-	-	-	1	-	-
Apium sp. (marshworts)	-	-	-	-	-	-	-	-	-
Apiaceae sp. (carrot family)	-	-	-	-	-	-	5	-	-
Lamium sp. (deadnettles)	-	-	-	-	-	-	-	-	-
Galeopsis sp. (hempnettles)	-	-	-	-	-	-	-	-	-
Lamiaceae type (deadnettle family)	1	-	-	-	-	-	1	-	-
Veronica sp. (speedwell)	-	-	-	-	-	-	-	-	-
Plantago lanceolata L. (ribwort plantain)	1	1	-	-	-	-	-	-	-
Galium cf. *palustre* L. (common marsh bed-straw)	-	-	-	-	-	-	-	-	-
Galium aparine L. (cleavers)	-	-	-	-	-	-	2	-	-
Galium sp. (bedstraws)	-	-	-	-	-	1	-	-	1
Sambucus nigra L.	-	-	-	-	-	-	-	-	-

(elder)									
Tripleurospermum inodorum (L.) Shultz-Bip. (scentless mayweed)	-	-	-	-	-	-	-	-	-
Juncus sp. (rushes)	-	-	-	-	-	-	-	-	-
Juncus sp. seedheads	-	-	-	-	-	-	1	-	-
Luzula cf. *pilosa* (L.) Willd (hairy wood-rush)	-	-	-	-	-	-	-	-	2
Eleocharis palustris (L.) Roemer & Schultes/*uniglumis* (Link) Schultes (common spike- rush/ slender spike-rush)	-	1	-	-	-	-	-	-	-
Carex cf. *elongata* (elongated sedge)	-	-	-	-	-	-	-	-	-
Carex sp. - bi-convex (sedges)	-	1	-	-	-	-	-	-	-
Carex sp. - trigonous	-	-	-	-	-	1	-	-	-
Bromus sp. (bromes)	4	2	1	-	-	4	1	-	1
Bromus sp. (sprouted)	-	-	-	-	-	-	-	-	-
cf. *Bromus sp.*	-	6	1	-	-	3	10	-	25
cf. *Bromus* sp. (sprouted)	-	-	-	-	-	-	-	-	-
Danthonia decumbens (L.)DC. (heath grass)	1	-	1	-	-	-	2	-	5
cf. *Danthonia decumbens* (L.)DC	-	-	-	-	-	-	-	-	1
Poaceae sp. (grasses)	-	-	2	-	-	2	2	-	2
Poaceae sp. (small) (small grasses)	-	-	-	-	-	-	-	-	-
Poaceae sp. rhizomes	7	3	3	-	-	-	-	-	5
Pteridium aquilinum (L.) Kuhn (bracken) leaf frags	-	-	-	-	-	1	3	-	3
Equisetum sp. stem frags (horsetails)	-	-	-	-	-	-	-	-	-
Large rhizomes	-	-	-	-	-	-	-	-	-
Rhizomes	28	7	-	-	-	1	-	-	25
Leaf bud	3	-	-	-	-	-	-	-	-
cf. Moss frag.	-	-	-	-	-	1	-	-	-
Flowerhead indet.	-	-	-	-	-	1	-	-	-
Total number of items	152	240	38	17	13	197	211	14	587
Volume (litres)	10	10	6	4	10	6	2	10	10
Items/litre	15.2	24	6.3	4.25	1.3	32.8	105.5	1.4	58.7

Table 3 cont.

Feature	AREA 1 Well 7 (see fig. 6)							
Context	**24**	**26**	**26**	**27**	**97**	**99**	**99**	**99**
Sample	**1038**	**1034**	**1039**	**1039**	**1015**	**1019**	**1021**	**1026**
Taxa								
Cereals								
Triticum dicoccum - glume base (emmer)	-	-	-	-	-	-	-	-
T. cf. *dicoccum* - grain	-	-	-	-	-	3	-	-
T. cf. *dicoccum* - spikelet fork	-	-	-	-	-	2	-	-
T. cf. *dicoccum* - glume base	-	-	-	-	-	-	-	-
T. dicoccum/spelta - grain (emmer/spelta)	-	-	-	-	-	4	-	-
T. dicoccum/spelta - grain (sprouted)	-	-	-	-	-	-	-	-
T. dicoccum/spelta - grain (cf. sprouted)	-	-	-	-	-	-	-	-
T. dicoccum/spelta - spikelet fork	-	2	-	-	-	-	-	-
T. dicoccum/spelta - glume base	-	1	1	-	1	-	-	-
Triticum spelta - spikelet (spelt)	-	-	-	-	-	-	-	-
T. spelta - grain	-	1	-	-	-	3	-	-
T. spelta -grain (sprouted)	-	-	-	-	-	-	-	-
T. spelta - grain (sprouted - collapsed)	-	2	-	-	-	-	-	-
T. spelta - rachis	-	1	-	-	2	-	3	-
T. spelta - spikelet fork	-							
T. spelta - glume base	-	7	2	-	5	-	8	1
T. cf. *spelta* - grain	-	1	-	-	-	2	-	-
T. cf. *spelta* - grain (sprouted - collapsed)	-	3	-	-	1	-	-	-
T. cf. *spelta* - rachis	-	3	2	-	1	-	1	-
T. cf. *spelta* - spikelet fork	-	-	-	-	-	-	-	-
T. cf. *spelta* - glume base	1	1	-	-	-	-	-	-
T. spelta/aestivum - grain (spelt/bread wheat)	-	1	-	-	1	3	-	-
Triticum aestivum s. l. - grain (bread/club wheat)	-	-	2	-	-	-	-	-
T. cf. *aestivum* s. l. - grain	-	-	1	-	-	-	-	-
Triticum sp. - grain	-	1	-	-	-	2	-	-
Triticum sp. - grain (sprouted)	-	-	-	-	-	-	-	-
Triticum sp. - grain (sprouted - collapsed)	-	-	-	-	-	-	-	-
Triticum sp. - rachis	-	-	-	-	-	-	1	-
Triticum sp. - spikelet fork	-	-	-	-	-	-	-	-
Triticum sp. - glume base	-	12	4	-	-	-	-	-
Triticum/Secale - grain (wheat/rye)	-	-	-	-	-	-	-	-
Secale cereale - grain (rye)	-	-	-	-	-	1	-	-
cf. *Secale cereale* - grain	-	-	-	-	-	-	-	-
Triticum/Hordeum-grain (wheat/barley)	-	1	-	1	-	1	-	-
Hordeum sativum - straight grain (hulled barley)	-	1	-	-	-	-	-	-
Hordeum sativum - twisted grain	-	1	-	-	-	1	-	-
Hordeum sativum - indet. grain	1	7	-	-	1	1	1	-
Hordeum sativum - indet. grain	-	2	1	-	-	-	-	-

(sprouted - collapsed)								
Hordeum sativum - detached embryo	-	1	-	-	-	-	-	-
Hordeum sativum 6-row - rachis	-	4	1	-	-	-	-	-
Hordeum sativum 2-row - rachis	-	1	-	-	-	-	-	-
Hordeum sativum indet. rachis	-	1	-	-	-	-	-	-
Hordeum/secale - rachis (barley/rye)	-	1	-	-	-	-	-	-
Avena sp. - grain (oats)	-	2	9	-	-	1	-	-
Avena sp. - grain (sprouted)	-	-	-	-	-	-	-	-
Avena sp. - floret base	-	-	-	-	-	-	-	-
Avena sp. - awn frag.								
cf. *Avena* sp. - grain (with lemma)	-	1	-	-	-	-	-	-
cf. *Avena* sp. - grain	-	4	-	-	-	-	-	-
Avena/Bromus (oat/bromes)	-	-	-	-	-	-	-	-
Avena/Poaceae (oat / large grass)	-	2	-	-	-	-	-	-
Cerealia indet.	-	62	14			17	-	1
Cerealia indet. (sprouted - collapsed)	-	-	-	2	2	-	-	-
Cerealia sp. - embryo (sprouted)	-	-	-	-	-	-	-	-
Cerealia sp. - embryo (un-sprouted)	-	-	-	-	-	-	-	-
Cerealia/Poaceae (cereal / large grass)	-	-	-	-	-	-	-	-
Cerealia/Poaceae - nodes	-	-	-	-	-	-	-	-
Other plant remains								
Ranunculus repens type	-	-	-	-	-	-	-	-
(creeping buttercup)	-	-	-	-	-	-	-	-
Ranunculus sp. (buttercup)	-	-	1	-	-	-	-	-
Corylus avellana L. (hazel)	-	2	-	-	1	-	-	-
Chenopodium album L. (fat-hen)	-	14	-	-	-	-	-	-
Chenopodium sp. (goosefoots)	-	1	-	-	-	-	-	-
Chenopodium/Atriplex	-	16	-	-	-	-	-	-
Atriplex sp. (oraches)	-	-	-	-	-	-	-	-
Stellaria sp. (stitchworts)	-	-	-	-	1	-	-	-
Agrostemma githago L. (corncockle)	-	-	-	-	-	-	-	-
cf. *Agrostemma githago* L.	-	-	-	-	-	-	-	-
Caryophyllaceae sp. (pink family)	-	-	-	-	-	-	-	-
Persicaria maculosa Gray (redshanks)	-	1	-	-	-	-	-	-
Persicaria lapathifolium L. (Gray) (pale persicaria)	-	2	-	-	-	-	-	-
Polygonum aviculare L. (knotgrass)	-	-	-	-	1	-	-	-
Fallopia convolvulus (L.) A. Love (black bindweed)	-	-	-	-	-	-	-	-
Rumex acetosella L. (sheep's sorrel)	1	3	-	-	-	-	1	-
Rumex sp.	1	39	1	-	-	-	-	-

(docks)								
Viola sp.	1	-	-	-	-	-	-	-
(violets)								
Raphanus raphanistrum L.	-	-	-	-	-	-	-	-
(wild radish)								
Calluna vulgaris (L.) Hull								
flower heads	-	9	3	-	191	-	20	-
(heather)								
Calluna vulgaris (L.) Hull	-	-	5	-	320	-	4	-
shoot frags								
Calluna vulgaris (L.) Hull	11	240	17	-	120	-	52	25
stem/root frags								
Rubus sp.	-	-	-	-	-	-	-	-
(brambles)								
cf. *Rubus sp.*	-	-	-	-	-	-	-	-
Potentilla erecta (L.) Raeusch	-	1	-	-	1	-	-	-
(tormentil)								
Potentilla sp.	-	1	-	-	4	-	-	-
Aphanes arvensis L.	-	-	-	-	-	-	-	-
(parsley piert)								
cf. *Aphanes arvensis* L.	-	-	-	-	-	-	-	-
Sorbus aucuparia L.	-	-	-	-	-	-	-	-
(rowan)								
cf. *Vicia faba* L.	-	-	-	-	-	-	-	-
(broad bean)								
Vicia sp.	-	-	-	-	-	-	-	-
(vetches)								
Medicago lupulina L.	-	-	-	-	-	-	-	-
(black medick)								
Trifolium pratense L.	1		-	-	-	-	-	-
(red clover)								
Trifolium sp.	1	-	-	-	-	-	-	-
(clovers)								
Linum catharticum L.	-	-	-	-	-	-	-	-
(fairy flax)								
cf. *Coriandrum sativum* L.	-	-	-	-	1	-	-	-
(coriander)								
Aethusa cynapium L.	-	-	-	-	1	-	-	-
(fool's parsley)								
Apium graveolens L.	1	-	-	-	-	-	-	-
(wild celery)								
Apium cf. *graveolens* L.	-	-	-	-	-	-	-	-
Apium sp.	-	-	-	-	-	-	-	-
(marshworts)								
Apiaceae sp.	-	-	-	-	2	-	-	-
(carrot family)								
Lamium sp.	-	-	-	-	-	-	-	-
(dead nettles)								
Galeopsis sp.	-	-	-	-	-	-	-	-
(hempnettles)								
Lamiaceae type	-	-	-	-	-	-	-	-
(deadnettle family)								
Veronica sp.	-	-	-	-	-	-	-	-
(speedwell)								
Plantago lanceolata L.	-	9	-	-	-	-	-	-
(ribwort plantain)								
Galium cf. *palustre* L.	-	2	-	-	-	-	-	-
(common marsh-bedstraw)								
Galium aparine L.	-	-	-	-	-	-	-	-
(cleavers)								
Galium sp.	1	-	-	-	-	-	-	-
(bedstraws)								
Sambucus nigra L.	-	1	-	-	-	-	-	-
(elder)								

Tripleurospermum inodorum (L.) Shultz-Bip (scentless mayweed)	-	-	-	-	-	-	-	-
Juncus sp. (rushes)	-	13	-	-	-	-	1	-
Juncus sp. seedheads	-	5	-	-	-	-	-	-
Luzula cf. *pilosa* (L.) Willd (hairy wood-rush)	-	-	-	-	-	-	-	-
Eleocharis palustris (L.) Roemer & Schultes/*uniglumis* (Link) Schultes (common spike- rush/ slender spike-rush)	-	1	-	-	-	-	-	-
Carex cf. *elongata* (elongated sedge)	-	-	-	-	-	-	-	-
Carex sp. - bi-convex (sedges)	-	10	-	-	-	-	-	-
Carex sp. - trigonous	-	5	-	-	-	-	-	-
Bromus sp. (bromes)	-	9	3	-	1	-	-	-
Bromus sp. (sprouted)	-	-	-	-	-	-	-	-
cf. *Bromus sp.*	-	1	-	-	-	-	-	-
cf. *Bromus sp.* (sprouted)	-	-	-	-	-	-	-	-
Danthonia decumbens (L.) DC. (heath grass)	-	2	-	-	27	-	-	-
cf. *Danthonia decumbens* (L.) DC.	-	1	1	-	-	-	-	-
Poaceae sp. (grasses)	-	1	-	1	-	-	-	-
Poaceae sp. (small) (small grasses)	-	31	-	-	-	-	-	-
Poaceae sp. rhizomes	1	14	-	-	5	-	-	-
Pteridium aquilinum (L.) Kuhn (bracken) leaf frags	-	8	-	-	-	-	-	-
Equisetum sp. stem frags (horsetails)	-	-	-	-	1	-	-	-
Large rhizomes	-	-	-	-	2	-	-	-
Rhizomes	-	16	5	-	50	-	-	-
Leaf bud	-	-	-	-	-	-	-	-
cf. Moss frag.	-	-	-	-	-	-	-	-
Flower head indet.	-	-	-	-	-	-	-	-
Total number of items	21	585	73	4	743	41	91	27
Volume (litres)	4	10	2	3	10	0.5	5	7
Items/litre	5.25	58.5	36.5	1.3	74.3	82	18.2	3.9

Table 3 cont:

Feature	AREA 1 Kiln	Stoke-hole	Pit	Pit	AREA 2 Pit	Pit	Bdry. Ditch
	45	74	36	152	282	285	79
Context	101	155	38	142	283/4	286/7	80
Sample	1022	1031	1009	1030			
Taxa							
Cereals							
Triticum dicoccum - glume base (emmer)	-	-	2	-	-	-	-
T. cf. *dicoccum* - grain	-	-	-	3	-	-	-
T. cf. *dicoccum* - spikelet fork	-	-	-	-	-	-	-
T. cf. *dicoccum* - glume base	-	1	-	-	-	-	-
Triticum dicoccum/spelta - grain (emmer/spelta)	-	2	-	14	-	-	-
Triticum dicoccum/spelta - grain (sprouted)	-	2	-	-	-	-	-
Triticum dicoccum/spelta - grain (cf. sprouted)	-	-	-	1	-	-	-
T. dicoccum/spelta - spikelet fork	1	51	13	-	-	-	-
T. dicoccum/spelta - glume base	-	580	3	-	-	-	1
Triticum spelta - spikelet (spelt)	-	3	-	-	-	-	-
T. spelta - grain	-	-	1	98	-	-	1
T. spelta - grain (sprouted)	-	37	-	58	-	-	-
T. spelta - grain (sprouted - collapsed)	-	15	-	22	-	-	-
T. spelta - rachis	-	293	2	-	-	-	-
T. spelta - spikelet fork	-	23	-	1	-	-	-
T. spelta -glume base	2	490	-	3	-	-	-
T. cf. *spelta* - grain	-	10	2	1	-	-	-
T. cf. *spelta* - grain (sprouted - collapsed)	-	-	-	-	-	-	-
T. cf. *spelta* - rachis	-	-	-	-	-	-	-
T. cf. *spelta* - spikelet fork	-	2	1	-	-	-	-
T. cf. *spelta* - glume base	1	318	4	1	-	-	1
Triticum spelta/aestivum - grain (spelt/breadwheat)	-	7	-	-	-	-	-
Triticum aestivum s.l. - grain (bread/club wheat)	-	-	-	-	-	-	-
T. cf. *aestivum* s. l. - grain	-	-	-	-	-	-	-
Triticum sp. - grain	1	175	-	127	2	2	1
Triticum sp. - grain (sprouted)	-	6	-	7	-	-	-
Triiticum sp. - grain (sprouted - collapsed)	-	39	-	-	-	-	-
Triticum sp. - rachis	1	1	2	1	-	-	-
Triticum sp. - spikelet fork	-	-		-	-	-	-
Triticum sp. - glume base	8	8	-	2	-	-	2
Triticum/Secale - grain (wheat/rye)	-	1	-	1	-	-	-
Secale cereale - grain (rye)	-	1	-	1	-	-	-
cf. *Secale cereale* - grain	-	-	-	1	-	-	-
Triticum/Hordeum - grain (wheat/barley)	-	4	1	-	-	-	-
Hordeum sativum - straight grain (hulled barley)	-	5	-	1	-	-	-
Hordeum sativum - twisted grain	-	-	-	-	-	-	-
Hordeum sativum indet. grain	-	9	-	2	-	-	-
Hordeum sativum indet. grain	-	3	6	-	-	-	-

(sprouted - collapsed)							
Hordeum sativum - detached embryo	-	-	-	-	-	-	-
Hordeum sativum 6-row - rachis	2	13	2	-	-	-	-
Hordeum sativum 2-row - rachis	-	-	-	-	-	-	-
Hordeum sativum indet. rachis	-	-	-	-	-	-	-
Hordeum/secale - rachis (barley/rye)	-	-	1	-	-	-	-
Avena sp. - grain (oats)	-	-	4	-	-	-	-
Avena sp. - grain (sprouted)	-	1	-	-	-	-	-
Avena sp. - floret base	-	-	-	-	-	-	-
Avena sp. - awn frag.							
cf. *Avena* sp. - grain (with lemma)	-	1	-	-	-	-	-
cf. *Avena* sp. - grain	-	-	-	-	-	-	-
Avena /Bromus (oat/bromes)	-	-	-	2	-	-	-
Avena /Poaceae (oat/large grasses)	-	-	1	-	-	-	-
Cerealia indet.	2	202		-	-	-	-
Cerealia indet. (sprouted - collapsed)	-	21	48	-	3	7	6
Cerealia sp. - detached embryo (sprouted)	-	209	-	-	-	-	-
Cerealia sp. - detached embryo (un-sprouted)	-	26	-	-	-	-	-
Cerealia/Poaceae (cereal/large grass)	-	1	4	-	-	-	-
Cerealia/Poaceae - nodes	-	-	-	-	-	-	-
Other plant remains							
Ranunculus repens type (creeping buttercup)	-	1	-	-	-	-	-
Ranunculus sp. (buttercup)	-	-	-	-	-	-	-
Corylus avellana L. (hazel)	-	29	1	1	34	2	43
Chenopodium album L. (fat-hen)	-	-	-	-	-	-	-
Chenopodium sp. (goosefoots)	-	2	-	-	-	-	-
Chenopodium/Atriplex	-	-	-	-	-	-	-
Atriplex sp. (oraches)	-	-	-	-	-	-	-
Stellaria sp. (stitchworts)	-	-	-	-	-	-	-
Agrostemma githago L. (corncockle)	-	-	-	-	-	-	-
cf. *Agrostemma githago* L.	-	1	-	-	-	-	-
Caryophyllaceae sp. (pink family)	-	-	-	-	-	-	-
Persicaria maculosa Gray (redshanks)	-	-	8	-	-	-	-
Persicaria lapathifolium L. Gray (pale persicaria)	-	-	-	-	-	-	-
Polygonum aviculare L. (knotgrass)	-	-	-	-	-	-	-
Fallopia convolvulus (L.) A. Love (black bindweed)	-	1	-	-	-	-	-
Rumex acetosella L. (sheep's sorrel)	-	2	-	-	-	-	-

Rumex sp. (docks)	-	1	-	-	-	-	-
Viola sp. (violets)	-	1	-	-	-	-	-
Raphanus raphanistrum L. (wild radish)	-	1	-	-	-	-	1
Calluna vulgaris (L.) Hull flower heads (heather)	4	-	32	-	-	-	-
Calluna vulgaris (L.) Hull shoot frags.	-	-	1	-	-	-	-
Calluna vulgaris (L.) Hull stem/root frags.	33	17	125	2	-	-	2
Rubus sp. (brambles)	-	1	-	-	-	-	-
cf. *Rubus* sp.	-	-	-	-	-	-	-
Potentilla erecta (L.) Raeusch (tormentil)	-	1	3	-	-	-	-
Potentilla sp.	-	-	-	-	-	-	-
Aphanes arvensis L. (parsley piert)	-	1	-	-	-	-	-
cf. *Aphanes arvensis* L.	-	1	-	-	-	-	-
Sorbus aucuparia L. (rowan)	-	-	-	-	-	1	-
cf. *Vicia faba* L (broad bean)	-	1	-	-	-	-	-
Vicia L. sp. (vetches)	-	3	1	-	-	-	-
Medicago lupulina L. (black medick)	-	1	-	-	-	-	-
Trifolium pratense L. (red clover)	-	-	-	-	-	-	-
Trifolium sp. (clovers)	-	-	-	-	-	-	-
Linum catharticum L. (fairy flax)	-	1	-	-	-	-	-
cf. *Coriandrum sativum* L. (coriander)	-	-	-	-	-	-	-
Aethusa cynapium L. (fool's parsley)	-	-	-	-	-	-	-
Apium graveolens L. (wild celery)	-	-	-	-	-	-	-
Apium cf. *graveolens* L.	-	-	-	-	-	-	-
Apium sp. (marshworts)	-	1	-	-	-	-	-
Apiaceae sp. (carrot family)	-	2	-	-	-	-	-
Lamium sp. (dead nettles)	-	-	1	-	-	-	-
Galeopsis sp. (hempnettles)	-	1	-	-	-	-	-
Lamiaceae type (deadnettle family)	-	-	-	-	-	-	-
Veronica sp. (speedwell)	-	7	-	-	-	-	-
Plantago lanceolata L. (ribwort plantain)	-	3	-	-	1	-	-
Galium cf. *palustre* L. (common marsh bed-straw)	-	-	-	-	-	-	-
Galium aparine L. (cleavers)	-	-	-	-	-	-	-
Galium sp. (bedstraws)	-	2	-	-	-	-	-
Sambucus nigra L.	-	-	-	-	-	-	-

(elder)							
Tripleurospermum inodorum (L.) Shultz-Bip (scentless mayweed)	-	5	-	-	-	-	-
Juncus sp. (rushes)	-	8	-	-	-	-	-
Juncus sp. seedheads	-	2	-	-	-	-	-
Luzula cf. *pilosa* (L.) Willd (hairy wood-rush)	-	-	-	-	-	-	-
Eleocharis palustris (L.) Roemer & Schultes/*uniglumis* (Link) Schultes (common spike- rush/ slender spike-rush)	-	-	-	-	-	-	-
Carex cf. *elongata* (elongated sedge)	-	1	-	-	-	-	-
Carex sp. - bi-convex (sedges)	-	2	-	-	-	-	-
Carex sp. - trigonous	-	1	-	-	-	-	-
Bromus sp. (bromes).	1	75	-	-	-	-	-
Bromus sp. (sprouted)	-	9	1	-	-	-	-
cf. *Bromus* sp.	-	17	-	3	-	-	-
cf. *Bromus* sp. (sprouted)	-	3	1	-	-	-	-
Danthonia decumbens (L.) DC. (heath grass)	1	-	-	1	-	-	-
cf. *Danthonia decumbens* (L.) DC.	-	-	-	-	-	-	-
Poaceae sp. (grasses)	-	19	1	-	-	-	-
Poaceae sp. (small) (small grasses)	-	47	-	-	-	-	-
Poaceae sp. rhizomes	-	-	18	-	3	4	-
Pteridium aquilinum (L.) Kuhn (bracken) leaf frags	-	-	-	-	-	-	-
Equisetum sp. stem frags (horsetails)	-	-	-	-	-	-	-
Large rhizomes	-	-	-	-	-	-	-
Rhizomes	3	3	29	-	-	-	1
Leaf bud	-	-	-	-	1	-	-
cf. Moss frag.	-	-	-	-	-	-	-
Flower head indet.	-	-	-	-	-	-	-
Total number of items	60	2834	319	354	44	16	59
Volume (litres)	2	15	6	10	40	80	10
Items/litre	30	188.9	53.2	35.4	1.1	0.2	5.9

CONCLUSIONS

The earliest evidence for occupation within the excavated area consisted of sherds of Bronze Age pottery from a shallow pit (285) in Area 2. Further sherds of pottery and several flint and chert artefacts were recovered from the same general area, but were residual finds within a later boundary ditch and at the base of the ploughsoil. There was no indication of any other prehistoric activity or occupation.

The excavations have uncovered clear evidence for Romano-British occupation dating from the late 1st century AD to the 3rd or possibly 4th century. Although the excavated areas were of a significant size, the results can only provide a suggested interpretation of the evidence since it is clear that the occupation spread over a considerably larger area than that investigated and only partial plans of the major features were uncovered.

Based on the alignment of features and such relationships as existed, it is possible to determine at least two phases of occupation. The evidence suggests a rural settlement, possibly based around a farm or small group of farms, set within a landscape of regular fields delimited by bank and ditch boundaries. Although there was some evidence to suggest a building within the excavated areas, in the form of postholes and a possible hearth, no plan could be determined. However, the structural and artefactual evidence would appear to suggest a building of timber construction founded on earth-fast posts, with wattle and daub walls and tiled roof. A well and corn drying kiln found in close proximity are presumably associated features.

Charred plant remains, mostly representing sievings from crop processing subsequently used as fuel, give some indication of the palaeoeconomy and crop husbandry during the Romano-British period. The most significant sample came from the stokehole of the corn drier and was dominated by wheat chaff and heather. Although the evidence was too limited to be conclusive, it would seem likely that the corn drier was used for drying crops to prevent spoilage prior to storage. The assemblage as a whole was dominated by wheat, mainly spelt, but also including emmer and bread/club wheat, with hulled barley (both 6-row and 2-row) and oats also present. Since corn driers are likely to have been present within settlements producing the crop and those processing and consuming it, it is not possible to draw any further conclusion regarding the role of the settlement at Plas Coch. However, the evidence does suggest that arable farming played a significant role in the local economy.

The ditched and possibly palisaded enclosure, or enclosures, are of uncertain function, but could conceivably have surrounded small farms. It was not possible to determine whether the two enclosures were contemporary, or their likely relationship to the building set on cobbled foundations.

The dating evidence from the excavations as a whole was generally insufficient to provide close dating for individual features or phases, but does allow a broad dating of the occupation. Although there are a few sherds of late 1st century pottery as well as a coin of that period, the main occupation does not appear to have begun until the second half of the 2nd century. From this period onwards there is a range of pottery suggesting continuous occupation perhaps until the mid 4th century. The fact that the dating evidence recovered from the boundary ditches generally displayed a date range across the whole of this period might indicate that these features remained as land divisions throughout.

The regular agricultural landscape suggested at Plas Coch would appear to conform to Romano-British examples from elsewhere in Britain, as for example, at Dunston's Clump near Bawtry, Nottinghamshire. Here, aerial photography has revealed a landscape composed of ditched field boundaries running in roughly parallel lines, with other shorter ditches connecting them (Jones and Mattingly 1990, 251). At Stanwick a relatively modest villa has been uncovered set amongst a series of irregular sub-rectangular fields with at least three surrounding enclosures linked to trackways, each incorporating a number of buildings (Jones and Mattingly 1990, 246). Although villas are often considered to be the diagnostic feature of the Romano-British landscape, rural buildings of this type appear to have been slow to spread into this area, the nearest known example being at Tarporley, Cheshire, 27km to the north-east (Jones and Mattingly 1990, 241, fig. 7.6). At Plas Coch the excavated area revealed only a fragment of the field system, but the distance of 142m between two parallel boundary ditches (3 and 169) is equivalent to 4 *actus*, the standard unit for Roman land division, suggesting that a deliberate and regular land division existed.

The only evidence for later activity consisted of two former field boundaries, presumably post-medieval in origin, surviving as ditch 51 in Area 1 and ditch 82 in Area 2.

ACKNOWLEDGEMENTS

Supervision and recording was undertaken by the writers together with Stephen Grenter, Clwyd County Council, and Bill Slater and Karina Kucharski, Wrexham Maelor Borough Council. The excavations were made possible by the co-operation of Gallifords Northwest. Artefact drawings are by Brian Williams, with the exception of the pottery by Wendy Owen. Conservation of the finds was undertaken by Phil Parkes, School of History and Archaeology, University of Wales, College of Cardiff. Particular thanks are due to Bill and Jenny Britnell for their assistance in editing the report. Thanks are also due to Gerry Wait, Gifford and Partners for providing details of their excavations in Areas 1 and 3.

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APPENDIX 1

SITE ARCHIVE

Site Data

Context Record forms 1-306
Material Record forms 1000-2020

A1 site plans 1-15
A4 Site plans 100-138
Plan catalogue

Black and white negative films, contacts and archive prints nos 301-2, 306-11, 507-8 and 553

Colour Slide films no CS94/53-58, CS94/61 and CS95/65-7
Photographic catalogue

AutoCAD drawings
Penmap survey drawings

Finds

Box catalogue
Finds catalogues
Specialist reports and correspondence
x-radiographs

Prehistoric pottery 887g
Roman pottery, 2200 sherds (43673g)
Animal Bone, 51 fragments
Brick, Tile and Daub, 763 fragments (33036g)
Iron, 92 fragments
Silver, 1 coin
Copper Alloy, 3 coins, 3 brooches and 3 objects
Lead, 12 fragments inc. 1 weight
Flint/chert, 17 fragments
Glass, 12 fragments
Medieval, Post-medieval pottery, and clay pipe, 51 sherds (743g)
Metalworking debris, 39 fragments
Samples, 31
Worked Stone, 6 fragments

APPENDIX 2

METAL DETECTOR FINDS HANDED TO WREXHAM MUSEUM

by Mark Walters

A significant quantity of coins and other metalwork were recovered from the general development area by metal detector user, prior to excavations. These were reported to Wrexham Museum and the coins have been identified as follows: [CHECK CURRENT LOCATION]

Museum
Find no.

1. Sestertius, Faustina Senior, struck under Antoninus Pius AD 141-161. Obverse (D)IVA FAU-STIN(A) her draped bust r. Reverse, draped figure standing l., r. hand outstretched, spear/sceptre in l. hand, possibly (IVNO S-C), Juno standing l. holding patera and sceptre. Diam. 33m, die axis 12. Ref. as RIC. 1143.
2. Ae as, ? 1st/2nd century AD. Obverse and reverse illegible. Diam. 26mm.
3. Sestertius, Hadrian, AD 117-138. Obverse, his draped laureate head r., illegible legend. Reverse (AEQUITAS AVG) (S)-C in field, equity standing l. Diam. 29.5mm, die axis 6. Ref. as RIC. 743.
4. Ae as, Crispina, AD 177-180. Obverse, her draped head r., (CR)ISPI(NA) (AVGVSTA). Reverse, figure standing l. holding sceptre, illegible legend, but probably (VENUS FELIX). Diam. 29mm, die axis 12. Ref. as RIC. 686.
5. Ae as, Antoninus Pius, AD 138-161. Obverse, his laureate head r., (ANTININVS A)VG - PIVS (---). Reverse, draped female figure standing l., illegible legend. Diam. 23mm, die axis 11. Ref. as RIC. 1196.
6. Ae as, ? 1st/2nd century AD. Obverse and reverse illegible. Diam. 26.5mm.
7. Irregular radiate copy, Tetricus I, AD 276-286. Obverse, bearded radiate head r., offstruck on small flan. Reverse, crude figure standing l., (---)S before, offstruck on small flan. Diam. 12mm, die axis 2.
8. Sestertius, Hadrian, AD 117-138. Obverse, his draped laureate bust r., illegible legend. Reverse, illegible legend but either RESTITUTOR HISPANIAE or RESTITUTOR ORBIS TERRARUM S-C, Hadrian standing l. raising a kneeling figure. Diam. 29mm, die axis 5. Ref. as RIC. 954/594a.
9. Sestertius (irregular), Antoninus Pius, AD 138-161. Obverse, bearded draped head r., illegible legend. Reverse, female figure standing l. holding cornucopia with r. hand outstretched, S-C in field, crude legend and figure details. Diam. 28.5mm, die axis 10/11.
10. Sestertius, Trajan/Hadrian, AD 98-138. Obverse, head r. illegible legend. Reverse, fortune standing l. holding cornucopia and leaning on rudder. Diam. 32mm, die axis 6.
11. Dupondius, Faustina Junior, struck under Marcus Aurelius AD 161-180. Obverse, her draped bust r., (F)AUSTINA AVGVSTA. Reverse, Faustina standing l. amongst four children at her feet and holding two more in her arms, TEMPOR) - FELIC. S-C in field. Diam. 26mm, die axis 6. Ref. as RIC. 1675.
12. Ar denarius, Mark Antony, 44-28 BC. Obverse illegible. Reverse galley to r., illegible legend. Ref. as RSC.1. Mark Antony 26-65. Diam. 18mm.
13. Ae as, Domitian, AD 81-96. Obverse, his laureate draped, bust r., illegible legend. Reverse, victory adv. l. brandishing spear and leaning on shield, (----) (-)PQ(-) COS III (---), (S)-C in fields. Diam. 24mm, die axis 5.
14. Ae as, Flavian. Obverse, head to r. (----) AVG (-) TR(P) (C)OS VI (----). Reverse, figure standing l. leaning on shield, illegible legend, (S)-C in field. Diam. 22mm, die axis 6
15. Ar denarius, Trajan, struck AD 112-117. Obverse, his laureate head r. (IMP TRA)IANO AVG GER DAC (PM TR P COS VI). Reverse, draped figure l. holding cornucopia, r. hand outstretched, COS VI (-----). Diam. 19.5mm, die axis 7. Ref. as RSC.2.109.
16. Ae as, Faustina Junior, struck under Marcus Aurelius AD 161-180. Obverse, her draped head r., (FAUSTINA) AVG (----). Reverse, figure standing l., illegible legend. Diam. 24.5mm, die axis 6. Ref. as RIC. 1398.
17. Sestertius, Trajan, AD 98-117. Obverse, his laureate draped bust r., illegible legend. Reverse, Ceres (?) standing l. modius at feet, (SPQR) OPTIMO PRINC(IPI), S-C in field. Diam. 35mm, die axis 7. Ref. as RIC. 479
18. Ae dupondius, 1st/2nd century AD. Obverse and reverse illegible. Diam. 26mm.
19. Ae dupondius/as, 1st/2nd century AD. Obverse and reverse illegible. Diam. 23.5mm.
20. Sestertius, 1st/2nd century AD. Obverse and reverse illegible. Diam. 32mm.
21. Dupondius/as, ? 1st/2nd century AD. Obverse and reverse illegible. Diam. 26mm.
22. Dupondius/as, ? 1st/2nd century AD. Obverse and reverse illegible. Diam. 28mm.
23. Dupondius, Faustina Senior, struck under Antoninus Pius AD 141-161. Obverse her draped bust r., (DIVA) FAV(STINA). Reverse illegible. Diam. 28mm.
24. Core of Ar plated denarius. Obverse and reverse illegible. Diam. 20mm.

25. Sestertius/dupondius, ?AD 138-161. Obverse, bearded head r. (probably Antoninus Pius), illegible legend. Reverse illegible. Diam. 28mm.
26. Ar denarius. Obverse and reverse illegible. Diam. 19mm.
27. Dupondius, Domitian, AD 81-96. Obverse, his draped laureate bust r., illegible legend. Reverse illegible. Diam. 31.5mm.
28. Sestertius, ? 1st/2nd century AD. Obverse and reverse illegible. Diam. 33mm.
29. Ae as, Flavian, AD 79-96. obverse, head r., illegible legend. Reverse illegible. Diam. 26mm.
30. Sestertius/dupondius, ?AD 138-161. Obverse, bearded head r. (probably Antoninus Pius), illegible legend. Reverse illegible. Diam. 28mm.
31. Sestertius, Commodus, ?AD 177-192. Obverse, bearded head r., illegible legend. Reverse, female figure standing l., illegible legend. Diam. 30.2mm, die axis 6.
32. Dupondius/as, ? 1st/2nd century AD. Obverse and reverse illegible. Diam. 26mm.
33. Dupondius/as, ? 1st/2nd century AD. Obverse and reverse illegible. Diam. 26mm.
34. Dupondius/as, ? 1st/2nd century AD. Obverse and reverse illegible. Diam. 22.8mm.
35. Dupondius/as, ? 1st/2nd century AD. Obverse and reverse illegible. Diam. 26.5mm.
37. Ae as, ? 1st/2nd century AD. Obverse, possibly female head to r., illegible legend. Reverse illegible. Diam. 24mm.

Fig. 1 Location 1:25,000

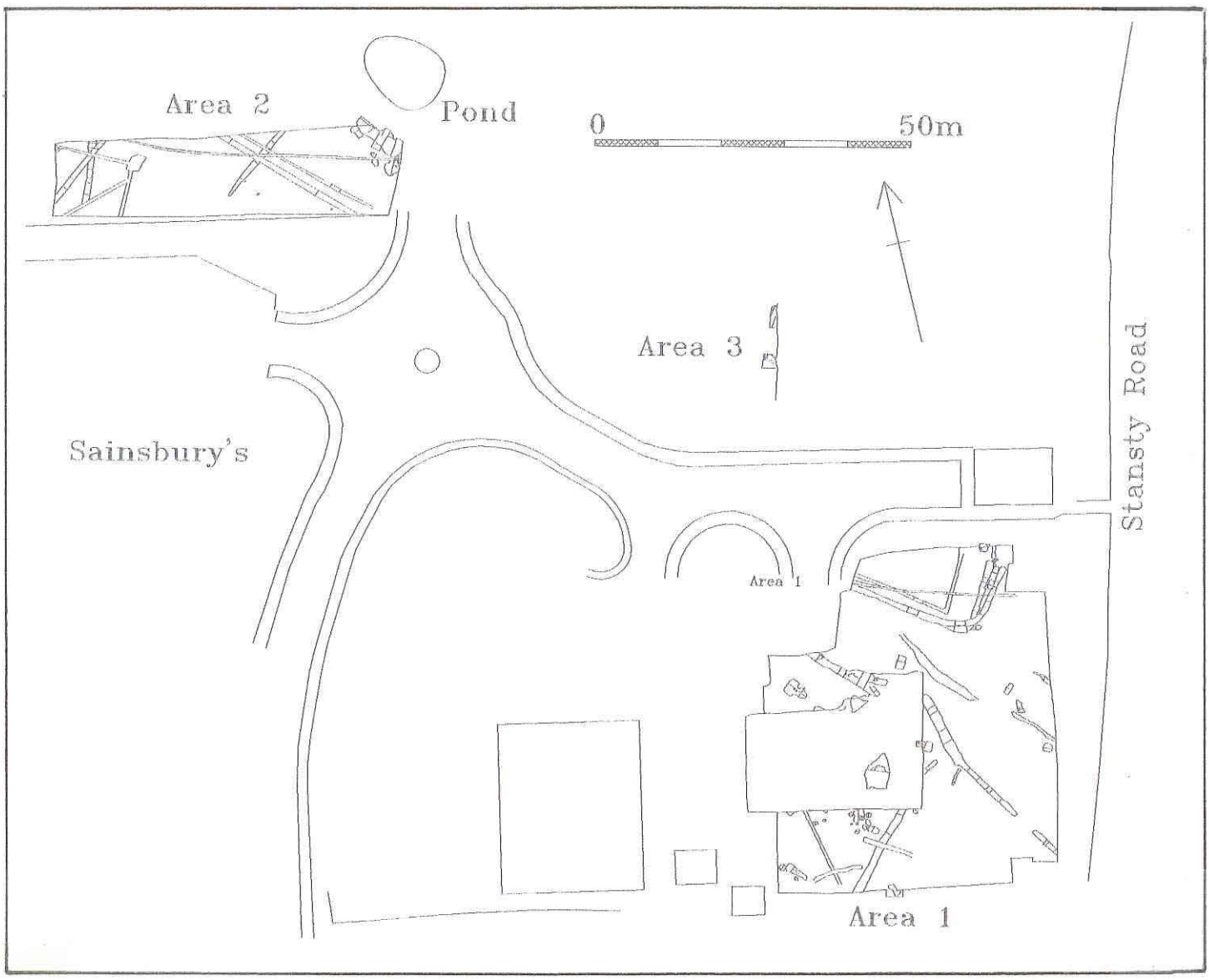
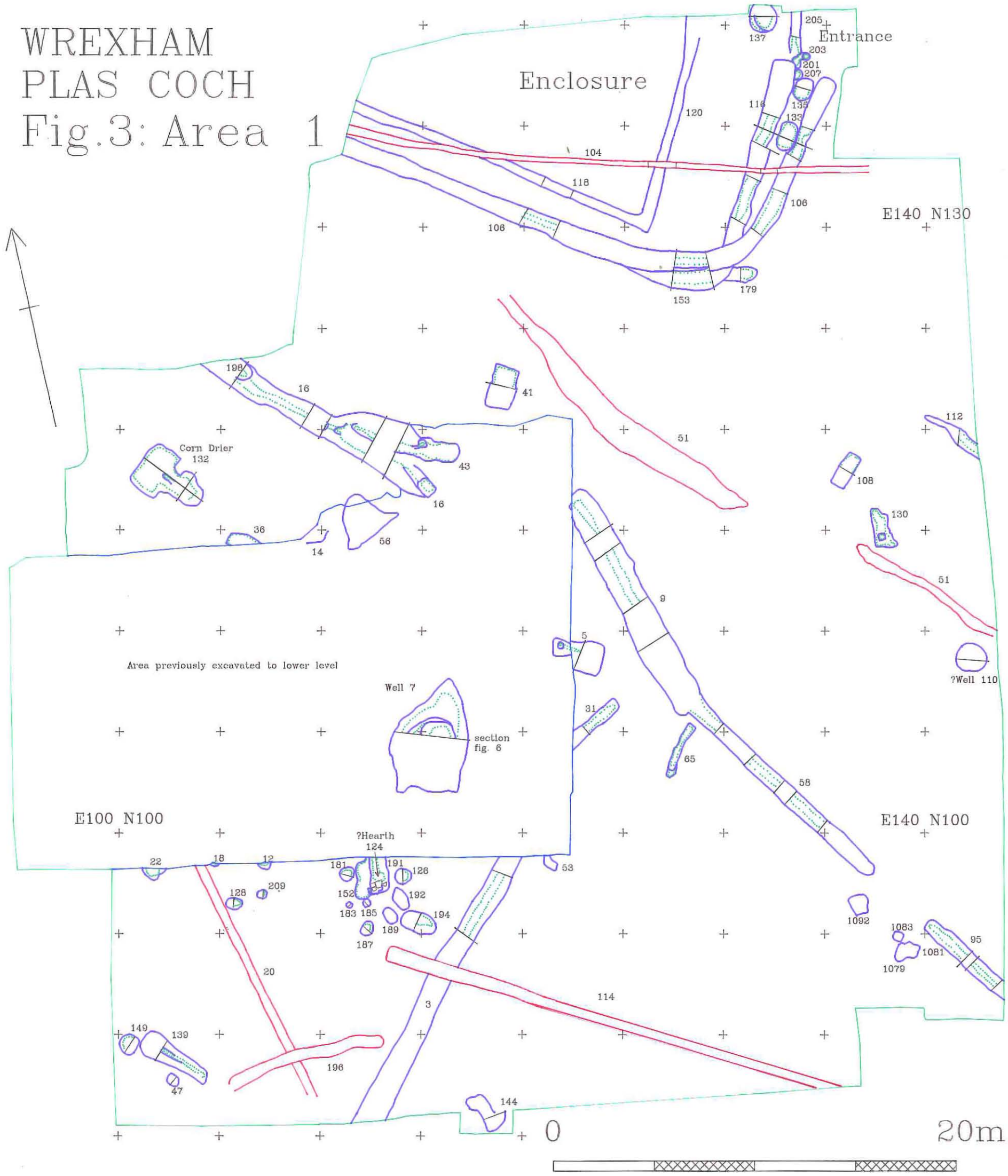


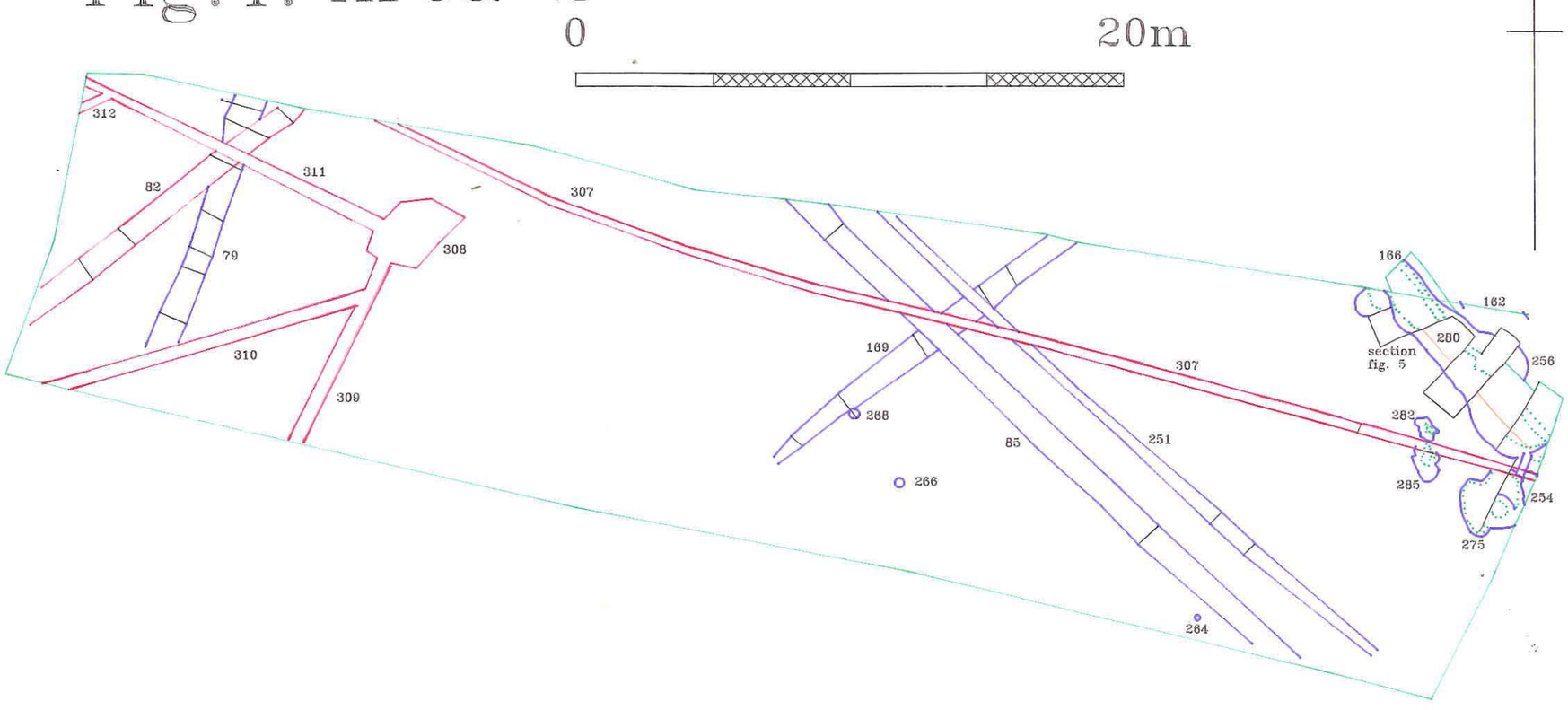
Fig. 2 Areas 1, 2 and 3, location, scale 1:1000

WREXHAM
PLAS COCH
Fig.3: Area 1



Wrexham Plas Coch

Fig.4: Area 2



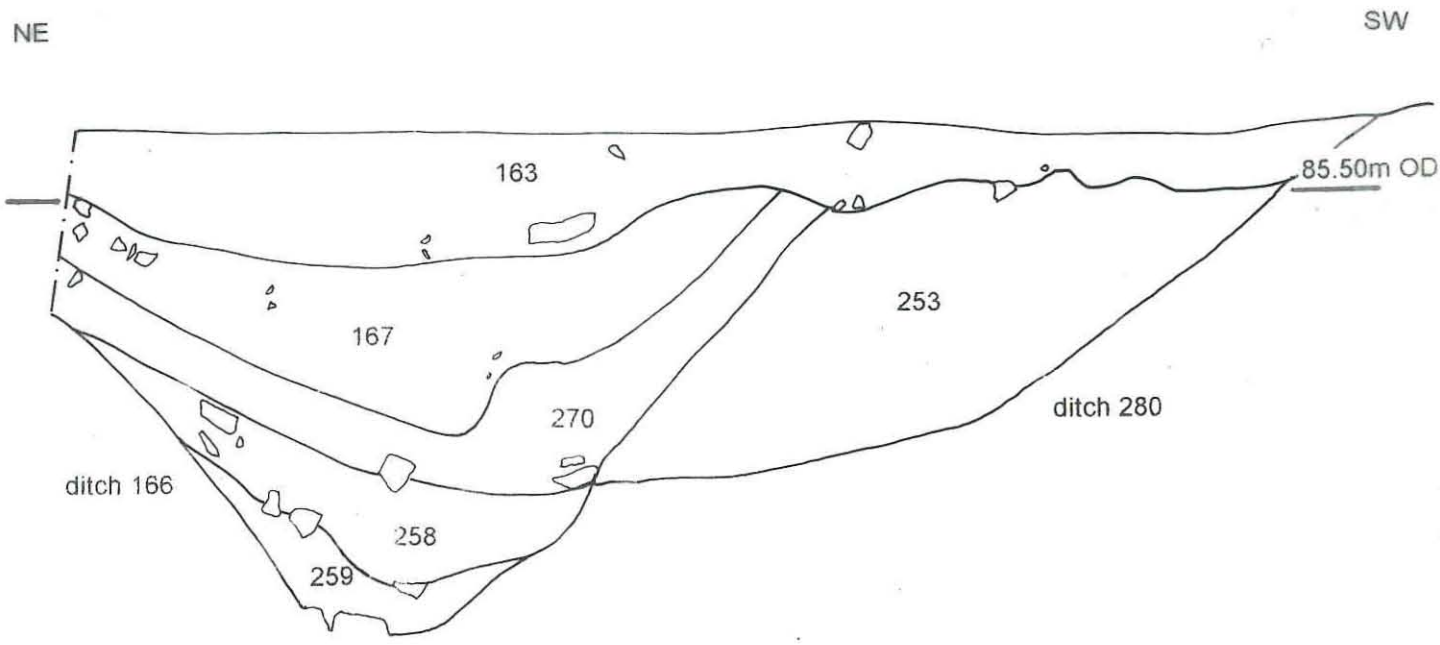


Fig. 5 Ditch 280 and recut 166, scale 1:20

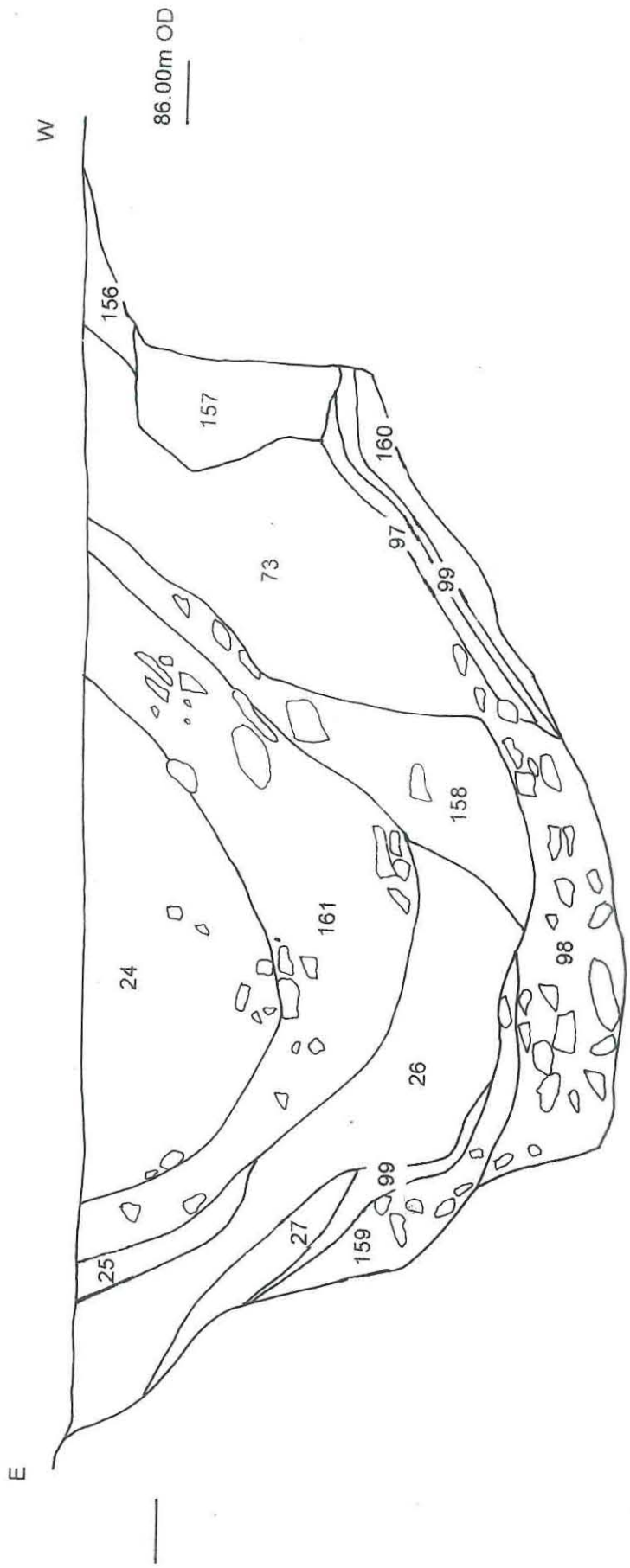


Fig. 6 Well 7, section, scale 1:20

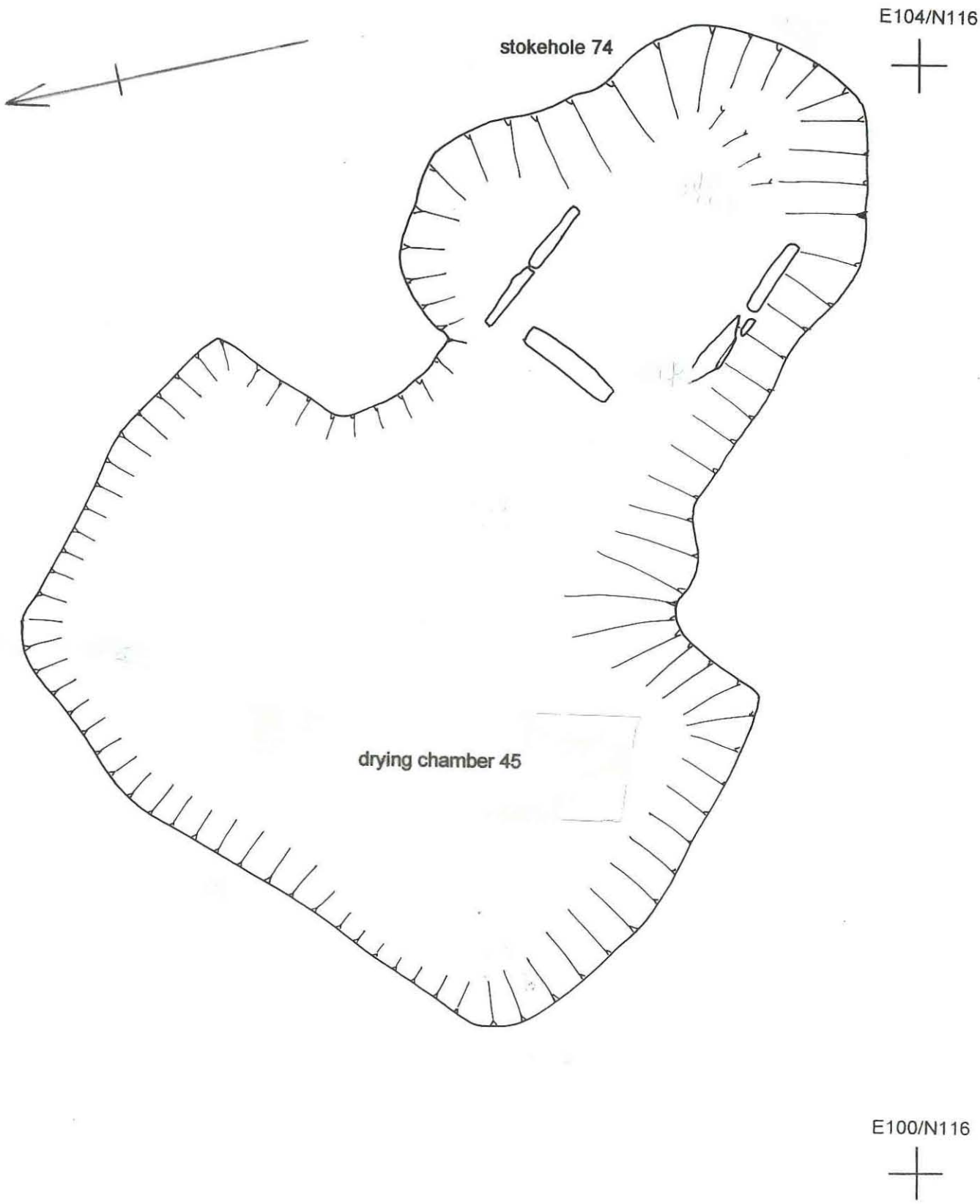


Fig. 7 Corndrier 132, scale 1:20

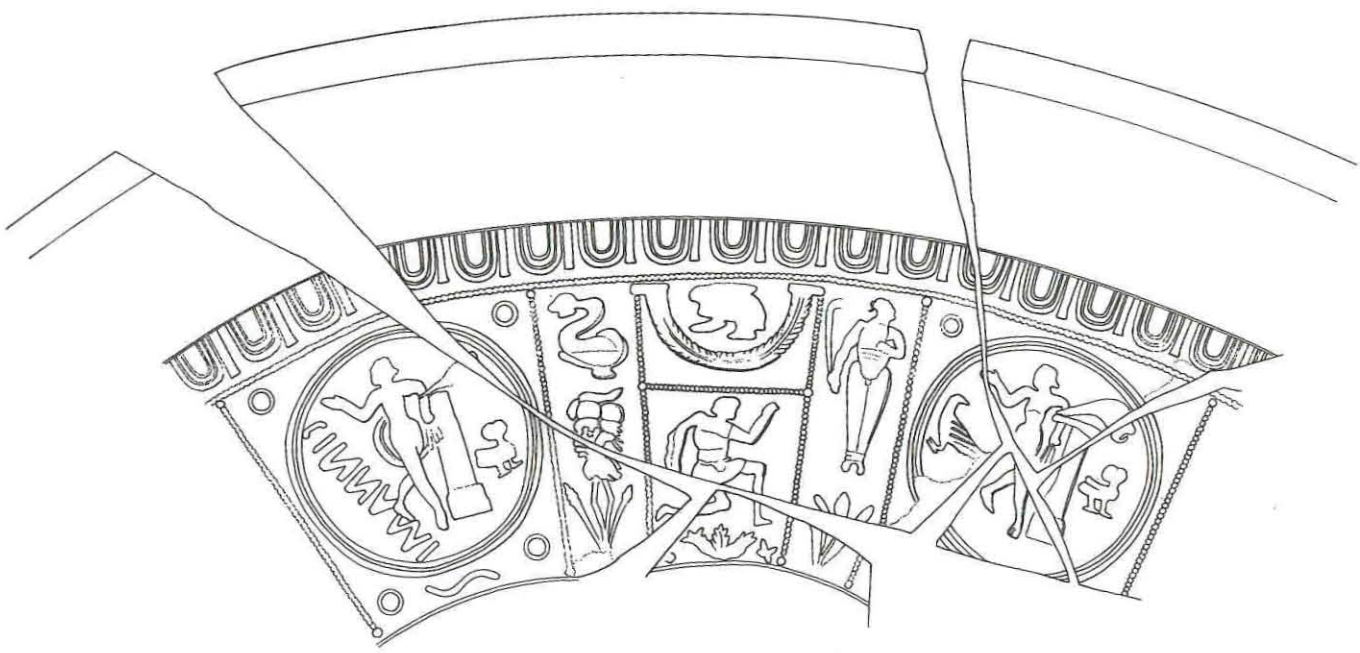


Fig. 8 Samian scale 1:2

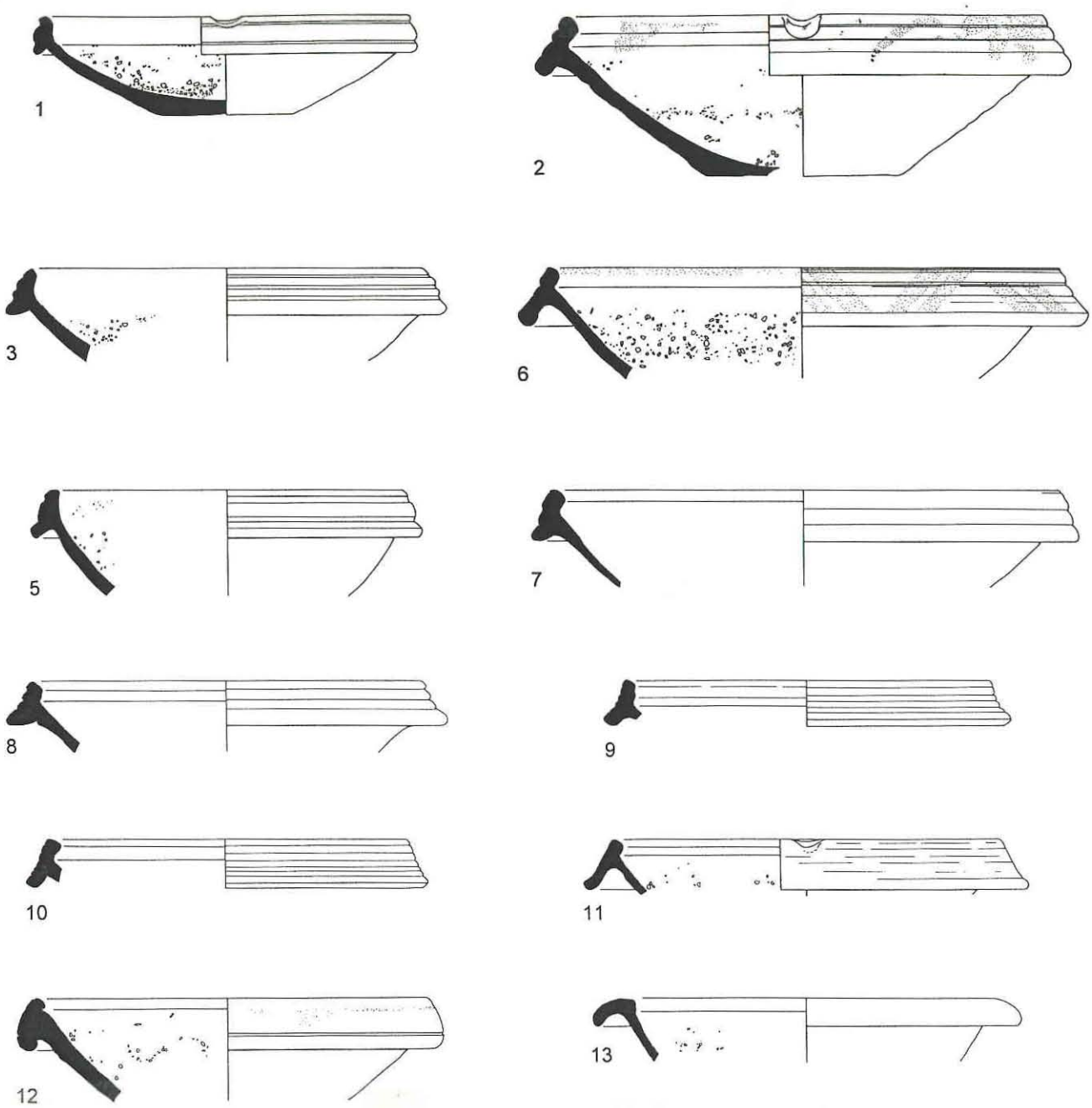


Fig. 9 Mortaria, scale 1:4

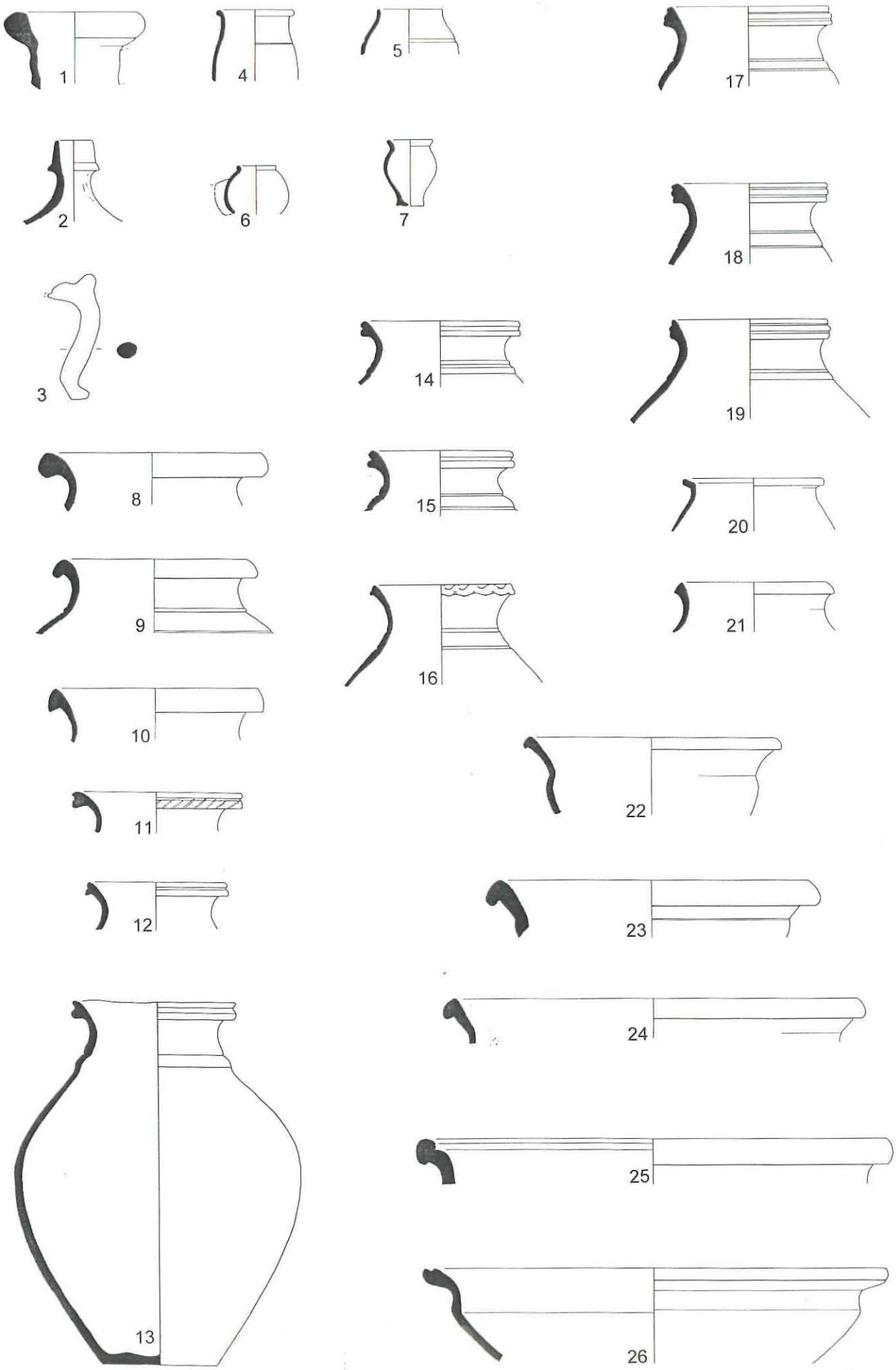


Fig. 10 Roman Coarse Pottery, scale 1:4

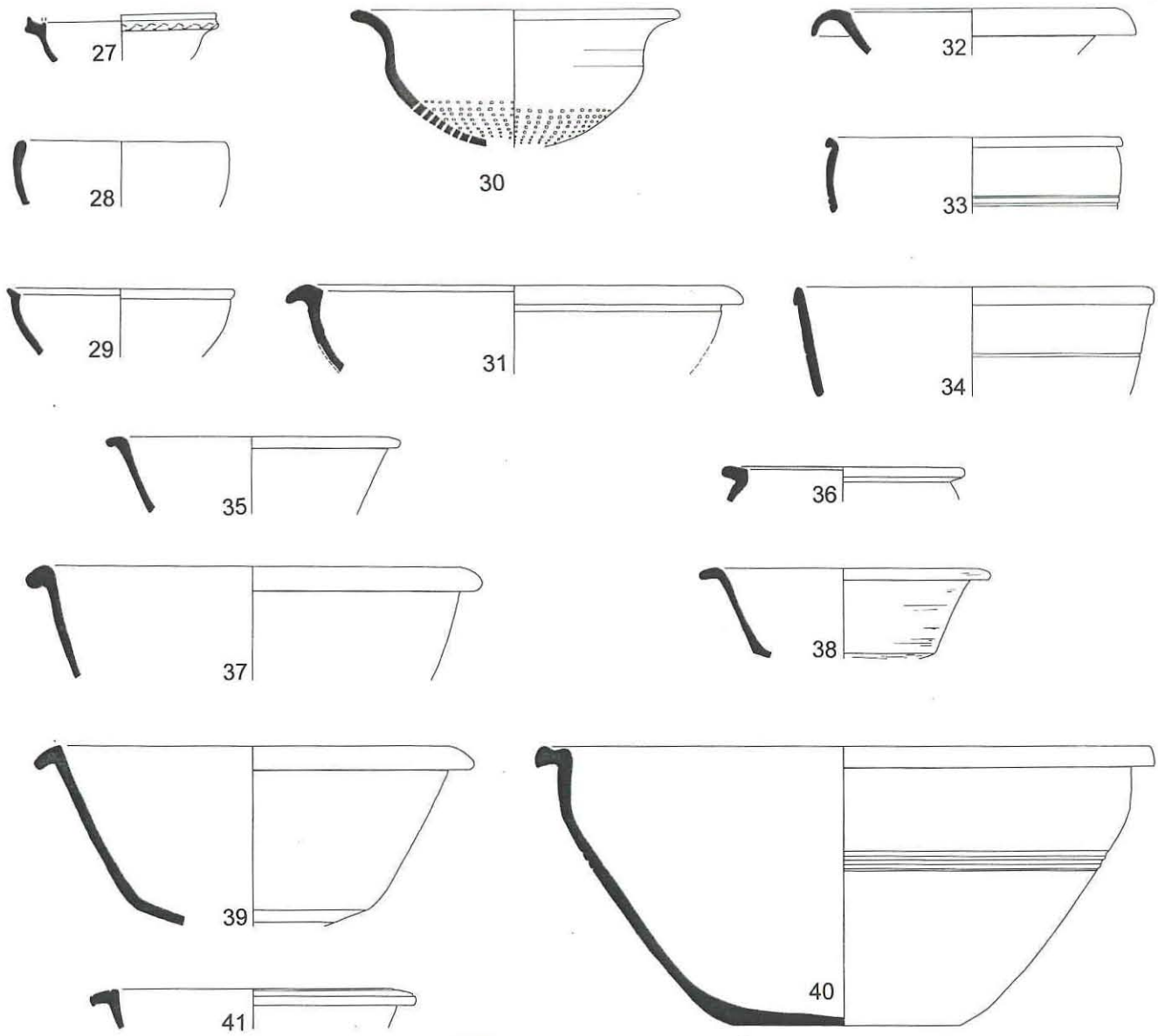


Fig. 11 Roman Coarse Pottery, scale 1:4

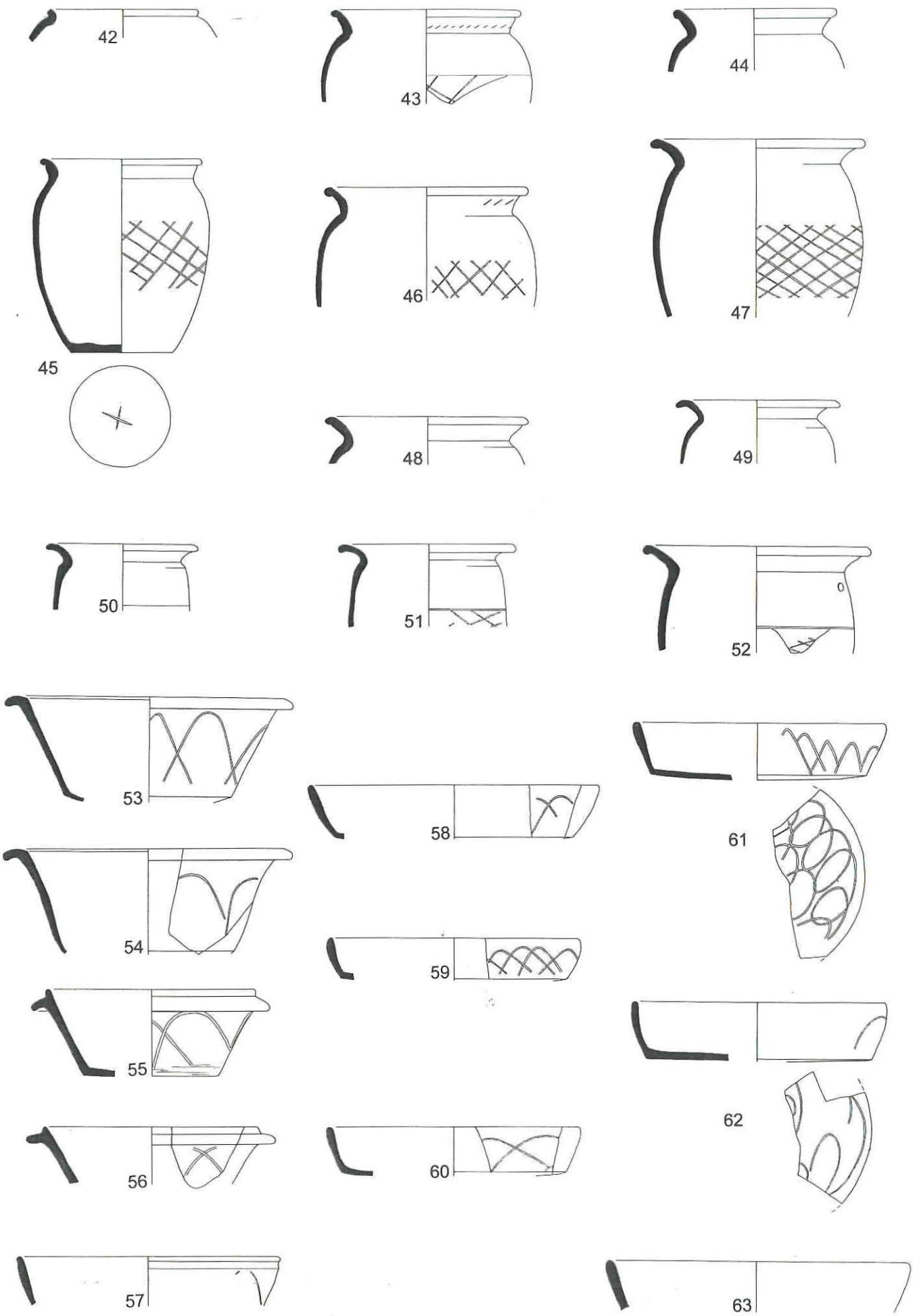


Fig. 12 Roman Coarse Pottery, scale 1:4

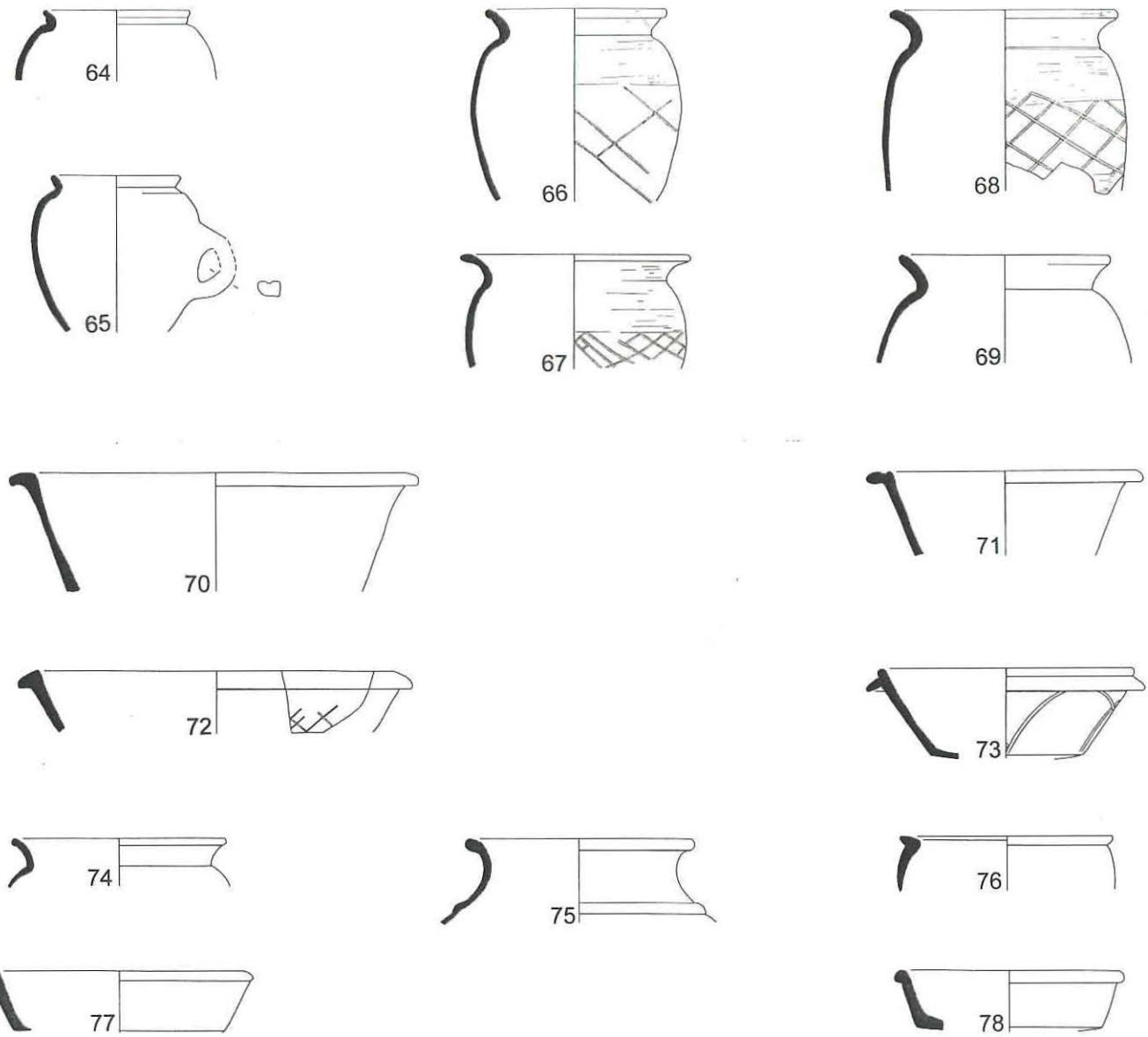
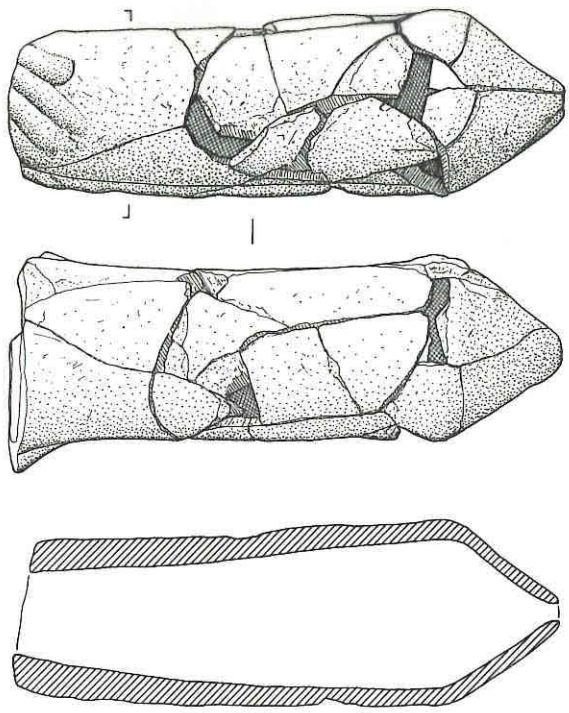
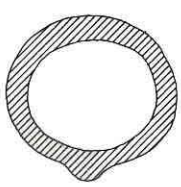
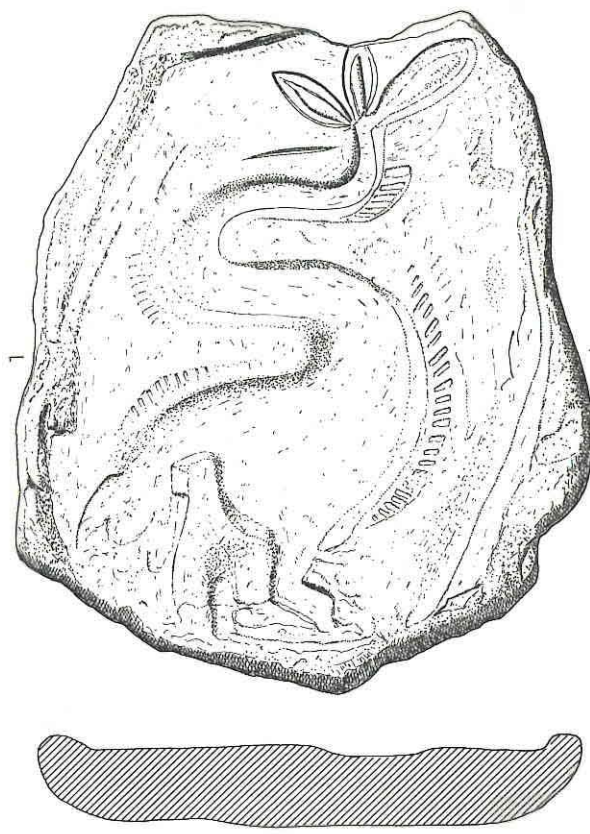


Fig. 13 Roman Coarse Pottery, scale 1:4



79





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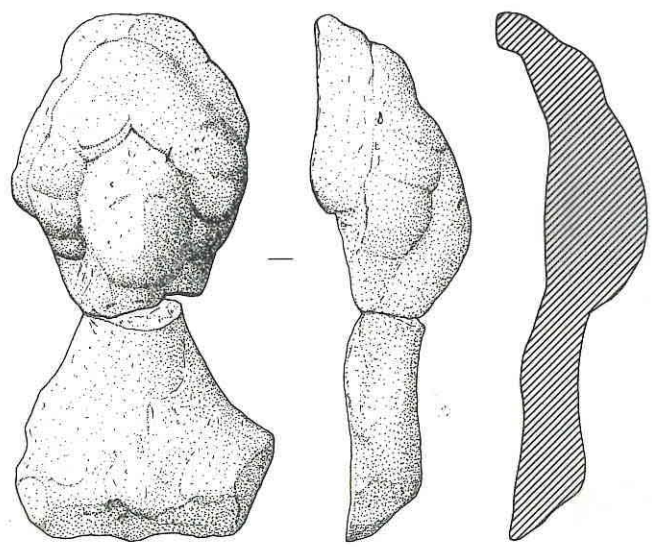

81

Fig. 14 Roman Coarse Pottery, scale 1:2

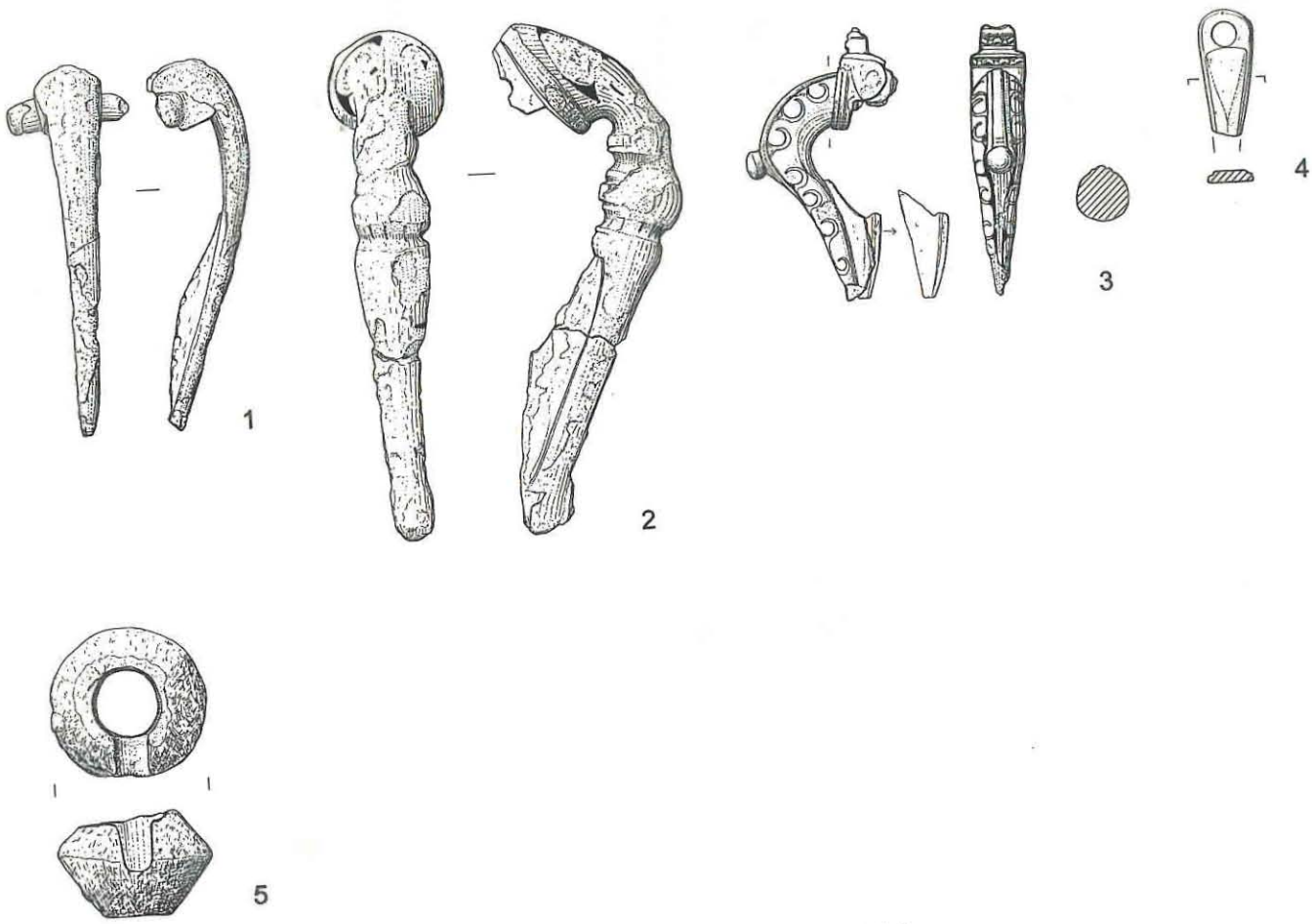

Fig. 15 Bronze and lead scale 1:1

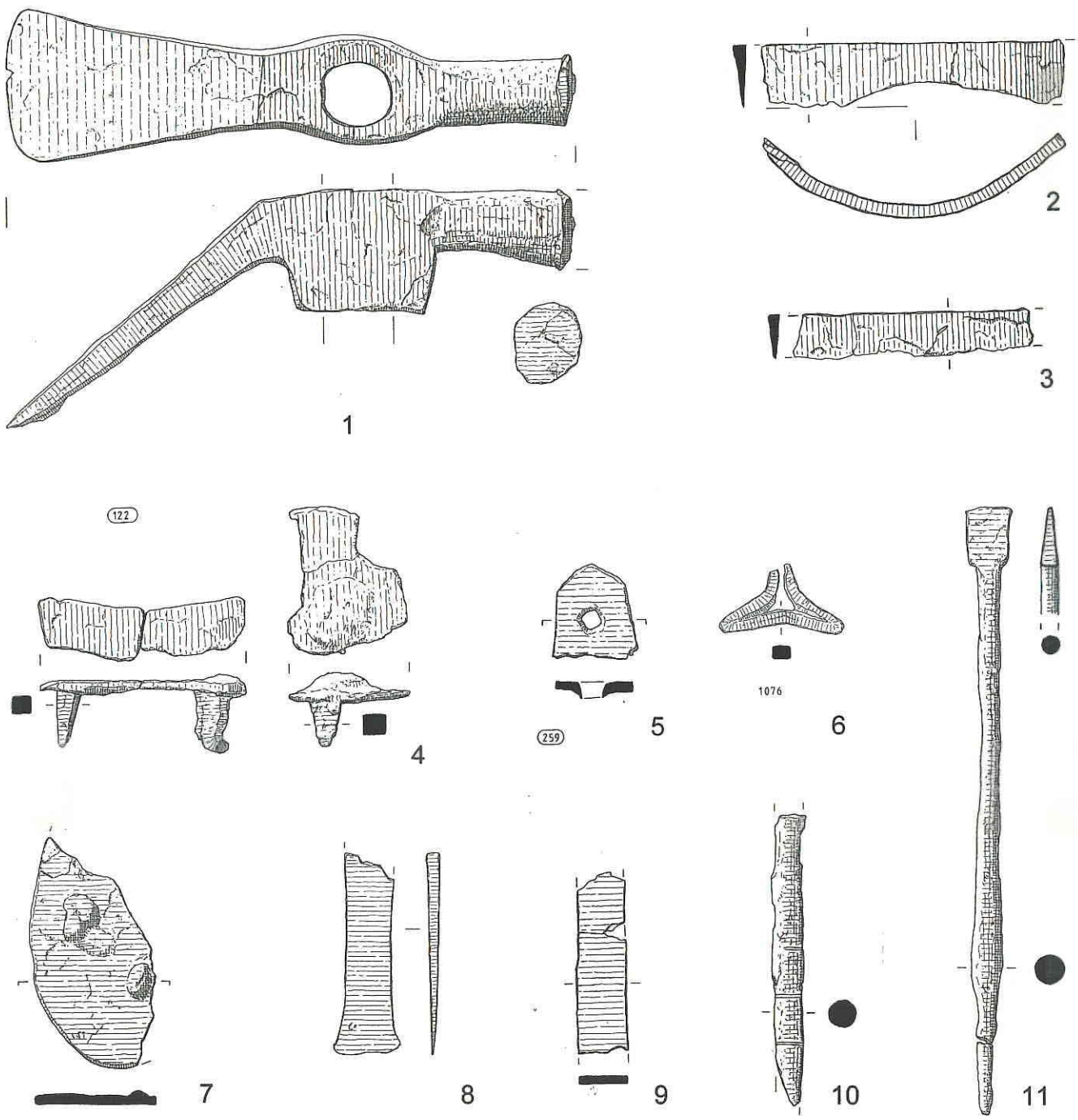

Fig. 16 Ironwork, scale 1:2, except 10 and 11, scale 1:1

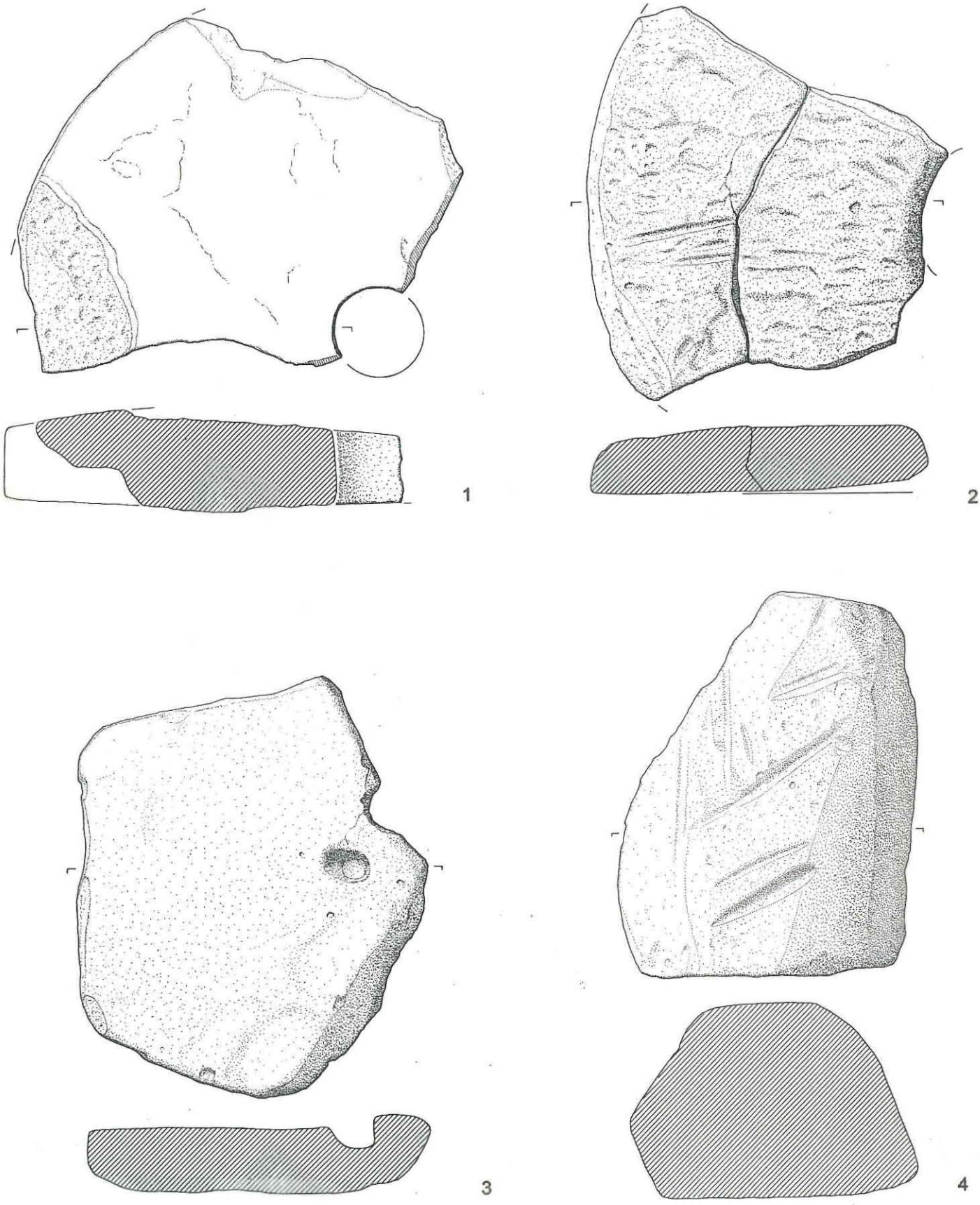

Fig. 17 Worked Stone, scale 1:4

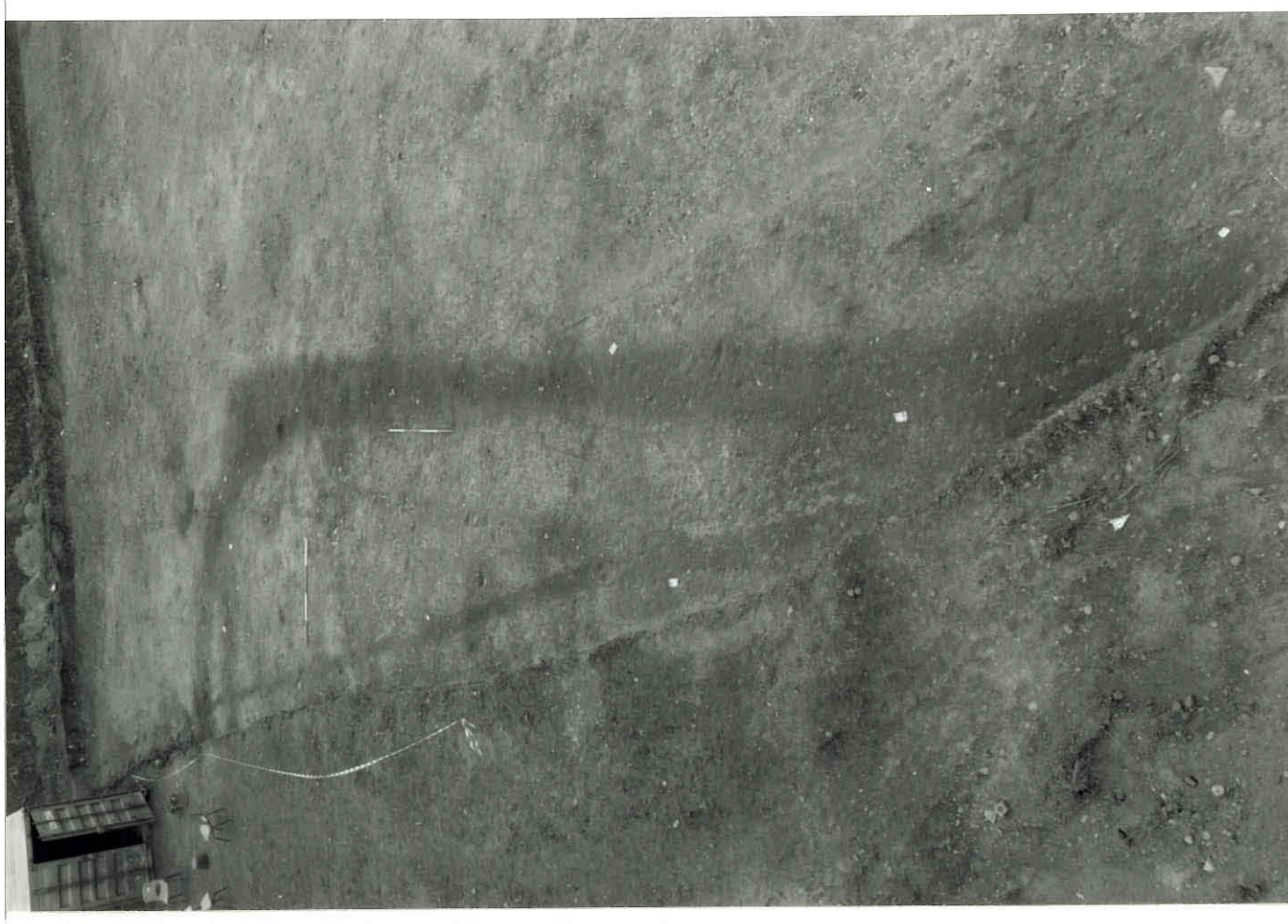

Plate 1 Enclosure ditches from the NW prior to excavation. Photo CPAT 308.4

Plate 2 Enclosure ditches 106, 153 and 116 from SW. Photo CPAT 311.23

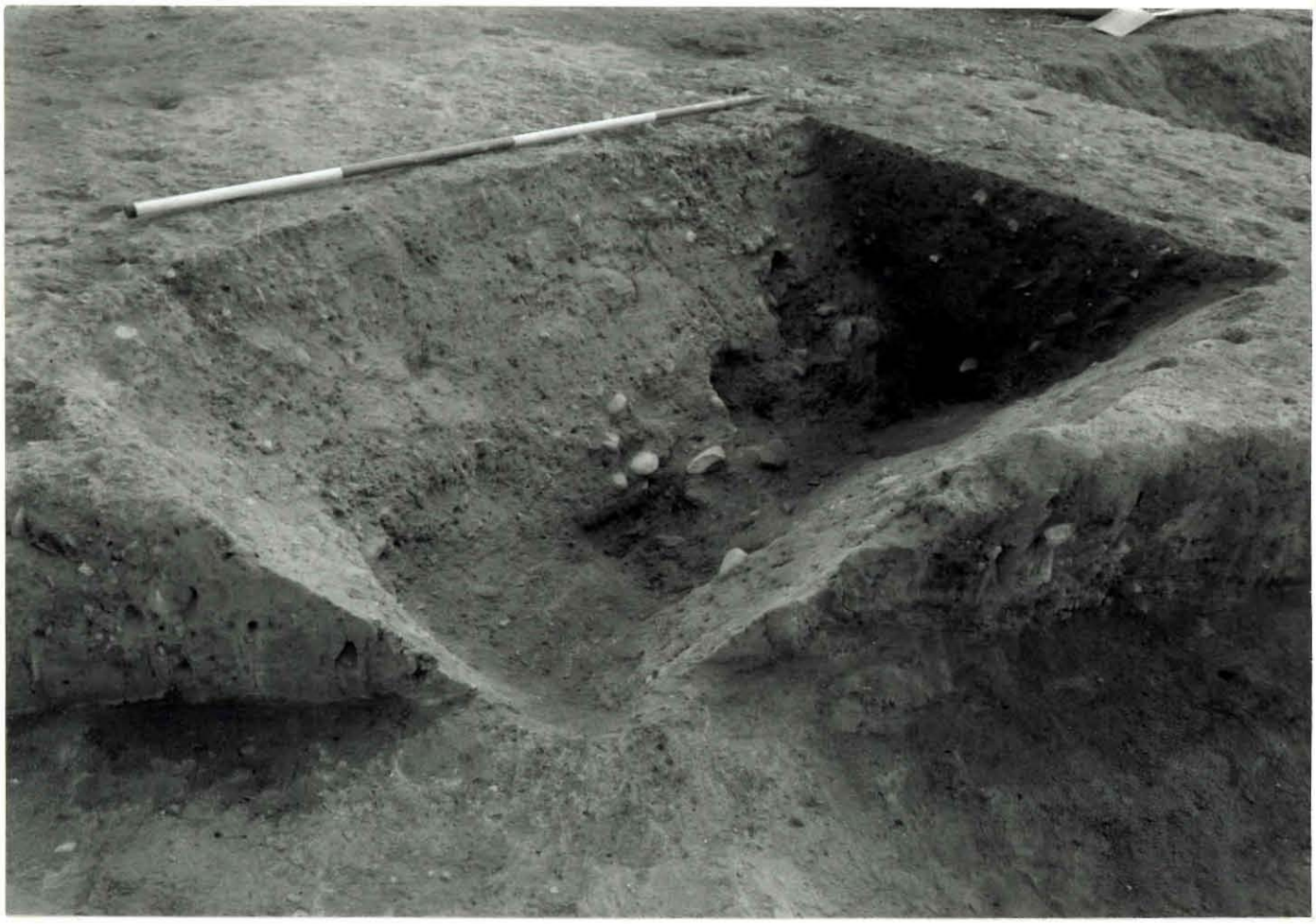

Plate 3 Boundary ditch 9 northern butt-end from NW. Photo CPAT 307.30a

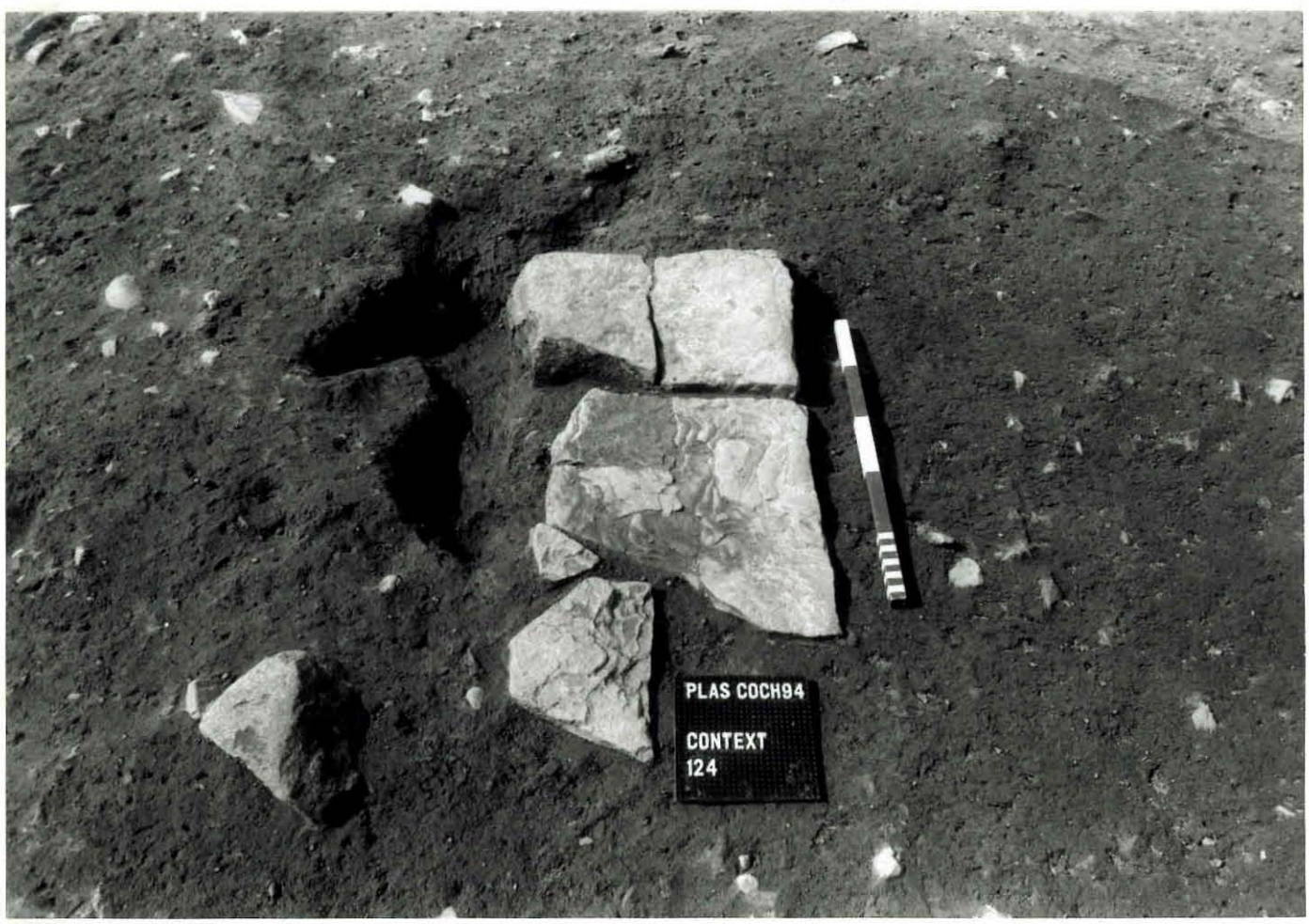

Plate 4 Possible hearth 124 from S. Photo CPAT 309.17

Plate 5 Cobble foundations 297/8 from NE. Photo WMBC 507.16

Plate 6 Cobble foundations 302/3 from SE. Photo WMBC 507.21